AO 120 (Rev. 08/10)

TO:	Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
2:22-cv-00166	May 20, 2022	Eastern District of Texas

PLAINTIFF	DEFENDANT
Zilkr Cloud Technologies, LLC	Cisco Systems, Inc.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	9,210,254	12/8/2015	Zilkr Cloud Technologies, LLC
2	9,883,048	1/30/2018	Zilkr Cloud Technologies, LLC
3	9,883,047	1/30/2018	Zilkr Cloud Technologies, LLC
4	9,998,607	6/12/2018	Zilkr Cloud Technologies, LLC
5			

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

PETITION TO ACCEPT UNINTENTIONALLY DELAYED PAYMENT OF MAINTENANCE FEE IN AN EXPIRED PATENT (37 CFR 1.378(b))

Patent Number	Issue Date	Application Number	Filing Date	Docket Number (if applicable)
9883047	30-Jan-2018	15094920	08-Apr-2016	

CAUTION: Maintenance fee (and surcharge, if any) payment must correctly identify: (1) the patent number and (2) the application number of the actual U.S. application leading to issuance of that patent to ensure the fee(s) is/are associated with the correct patent. 37 CFR 1.366(c) and (d).

Applicants claims the following fee status:

(◉) Small Entity

( ) Micro Entity

( ) Regular Undiscounted

Applicants selects the following :

(◉) 3 1/2	( ) 7 1/2	( ) 11 1/2

PETITION FEE
The petition fee required by 37 CFR 1.17(m) (Fee Code 1558/2558) must be paid as a condition of accepting unintentionally delayed payment of the maintenance fee.

MAINTENANCE FEE (37 CFR 1.20(e)-(g))
The appropriate maintenance fee must be submitted with this petition.

STATEMENT

The delay in payment of the maintenance fee for this patent was unintentional.

Petitioner is reminded that a delay resulting from a deliberately chosen course of action or a change in circumstance is not an unintentional delay.

Petitioner is further reminded that a person seeking reinstatement of an expired patent should not make a statement that the delay in payment of the maintenance fee was unintentional unless the entire delay was unintentional, including the period from discovery that the maintenance fee was not timely paid until payment of the maintenance fee. For example, a statement that the delay in payment of the maintenance fee was unintentional would not be proper when the patentee becomes aware of an unintentional failure to timely pay the maintenance fee and then intentionally delays filing a petition for reinstatement of the patent under 37 CFR 1.378. See MPEP 2590.

NOTE: Where the petition under 37 CFR 1.378 is filed more than two years after the date the patent expired for nonpayment of the maintenance fee, the United States Patent and Trademark Office requires an additional explanation of the circumstances surrounding the delay that establishes the entire delay was unintentional. This requirement is in addition to the requirement to provide a statement that the entire delay was unintentional. See *Clarification of the Practice for Requiring Additional Information in Petitions Filed in Patent Applications and Patents Based on Unintentional Delay*, 85 FR 12222 (March 2, 2020). See MPEP 711.03(c)(II)(C)-(F) for additional guidance on the information required to establish that the entire delay was unintentional.

PETITIONER(S) REQUEST THAT THE DELAYED PAYMENT OF THE MAINTENANCE FEE BE ACCEPTED AND THE PATENT REINSTATED

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

37 CFR 1.378(c) states: "Any petition under this section must be signed in compliance with 37 CFR 1.33(b) ."

I certify, in accordance with 37 CFR 1.4(d)(4) that I am

- (●) An attorney or agent registered to practice before the Patent and Trademark Office who has been given power of attorney in this application.
- ( ) An attorney or agent registered to practice before the Patent and Trademark Office
- ( ) A sole patentee
- ( ) A joint patentee; I certify that I am authorized to sign this submission on behalf of all the other patentees as evidenced by the power of attorney in the application
- ( ) A joint patentee; all of whom are signing this e-petition
- ( ) The assignee of record of the entire interest that qualifies as an authorized party under 37 CFR 1.33(b)

Attorney			
A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature			
Signature	/Michael W. Piper/		
Name	Michael W. Piper	Registration Number	39800

Electronic Patent Application Fee Transmittal

Application Number:	15094920
Filing Date:	08-Apr-2016
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Filer:	Michael W. Piper/Jennifer Wiebusch
Attorney Docket Number:	4503-00600

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
MAINTENANCE FEE DUE AT 3.5 YEARS	2551	1	1000	1000
PET. DELAY PYMT MAINTAIN PATENT IN FORCE	2558	1	1050	1050
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**2050**

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Patent No. 9883047
Issue Date: January 30,2018
Application No. 15094920
Filed: April 8,2016
Attorney Docket No. 4503-00600

:
:DECISION GRANTING PETITION
:UNDER 37 CFR 1.378(b)
:

This is a decision on the electronic petition, filed February 11,2022 ,under 37 CFR 1.378(b) to accept the unintentionally delayed payment of the 3.5 year maintenance fee for the above-identified patent.

The petition is **GRANTED**.

The maintenance fee is accepted, and the above-identified patent reinstated as of February 11,2022 . This decision also constitutes notice that the fee has been accepted. An electronic copy of the petition and this decision has been created as an entry in the Image File Wrapper. Nevertheless, petitioner should print and retain an independent copy.

Telephone inquiries related to this electronic decision should be directed to the Electronic Business Center at 1-866-217-9197.

Electronic Acknowledgement Receipt	
EFS ID:	44980993
Application Number:	15094920
Patent Number:	9883047
Confirmation Number:	8448
Petition Issued Date:	February 11,2022
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Customer Number:	30652
Filer:	Michael W. Piper/Jennifer Wiebusch
Filer Authorized By:	Michael W. Piper
Attorney Docket Number:	4503-00600
Receipt Date:	11-FEB-2022
Filing Date:	08-APR-2016
Time Stamp:	18:12:30
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$2050
RAM confirmation Number	E20222AI12252681
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	ePetition Request Form	petition-request.pdf	47976 eb1242d5b44b843d1fb752658d4ad8d15158242f	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	40391 9a552434cbd86862b882ae743244e0f60f652fb2	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	88367		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/094,920	01/30/2018	9883047	4503-00600	8448

30652 7590 01/10/2018

CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Evin A. Hunt, Austin, TX;
Zilkr Cloud Technologies, LLC, Houston, TX;
Omar Paul, Austin, TX;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Zilkr Cloud Technologies LLC.	§	
		§	
Inventors:	Evin A. Hunt, et al.	§	
		§	Group Art Unit: 2656
Serial No.:	15/094,920	§	
		§	Examiner: El-Zoobi, Maria
Filed:	April 8, 2016	§	
		§	Confirmation No.: 8448
For:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	§	

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF EFS-WEB TRANSMISSION

Pursuant to 37 C.F.R. §1.8, I hereby certify that this correspondence:

1. **Part B Issue Fee Transmittal; and**
2. **this Certificate of Transmission Under 37 C.F.R. 1.8**

is being electronically transmitted from within the Central Time Zone to the Commissioner for Patents via the EFS web server on:

December 15, 2017.
Date

/Michael W. Piper/
Michael W. Piper

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

30652 7590 10/02/2017
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/094,920	04/08/2016	Evin A. Hunt	4503-00600	8448

TITLE OF INVENTION: MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	01/02/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
EL-ZOOBI, MARIA	2656	379-114050

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Zilkr Cloud Technologies LLC
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Austin, TX

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☑ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☑ Issue Fee
☑ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 50-1515 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
☐ Applicant certifying micro entity status. See 37 CFR 1.29
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
☐ Applicant asserting small entity status. See 37 CFR 1.27
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
☐ Applicant changing to regular undiscounted fee status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Michael W. Piper/ Date 2017-12-15
Typed or printed name Michael W. Piper Registration No. 39,800

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Electronic Patent Application Fee Transmittal

Application Number:	15094920
Filing Date:	08-Apr-2016
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Filer:	Michael W. Piper/Laura Dean
Attorney Docket Number:	4503-00600

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
UTILITY APPL ISSUE FEE	2501	1	480	480
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**480**

Electronic Acknowledgement Receipt	
EFS ID:	31228731
Application Number:	15094920
International Application Number:	
Confirmation Number:	8448
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Customer Number:	30652
Filer:	Michael W. Piper
Filer Authorized By:	
Attorney Docket Number:	4503-00600
Receipt Date:	15-DEC-2017
Filing Date:	08-APR-2016
Time Stamp:	22:46:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$480
RAM confirmation Number	121817INTEFSW00006550501515
Deposit Account	501515
Authorized User	Michael Piper
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	ZLKR_4503_00600_Certificate_of_Transmission.pdf	68243 4f5af3d79f12fe63a9f73c6aadda6623ddec3772	no	1
Warnings:					
Information:					
2	Issue Fee Payment (PTO-85B)	ZLKR_4503_00600_Part_B_Issue_Fee_Transmittal.pdf	555369 d86ab1b5f24570b9a3d832910d33526216b439f0	no	1
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32311 0d39fc935005162b23f7d64d10c84dd9f83c9d80	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	655923		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/094,920	04/08/2016	Evin A. Hunt	4503-00600	8448

30652 7590 11/07/2017

CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024

EXAMINER
EL-ZOOBI, MARIA

ART UNIT	PAPER NUMBER
2656	

MAIL DATE	DELIVERY MODE
11/07/2017	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

correct ***Notice of Allowability***	**Application No.** 15/094,920	**Applicant(s)** HUNT ET AL.	
	Examiner MARIA EL-ZOOBI	**Art Unit** 2656	**AIA (First Inventor to File) Status** Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *10/30/2017*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-20*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☒ Other *X-RUSH*.

/MARIA EL-ZOOBI/ Primary Examiner, Art Unit 2656	11/6/2017

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	15094920
Filing Date	2016-04-08
First Named Inventor	Evin Hunt
Art Unit	2656
Examiner Name	El-zoobi, Maria
Attorney Docket Number	4503-00600

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9742926	B2	2017-08-22	Hunt	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20060050688	A1	2006-03-09	Panagopoulos et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.E/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15094920
	Filing Date	2016-04-08
	First Named Inventor	Evin Hunt
	Art Unit	2656
	Examiner Name	El-zoobi, Maria
	Attorney Docket Number	4503-00600

	1	Office Action dated July 27, 2017, Application No. 15/094,433, filed April 8, 2016, (4503-00400).	
	2	Office Action dated September 11, 2017, Application No. 15/094,917, filed April 8, 2016 (4503-00500).	
	3	Notice of Allowance dated October 11, 2017, Application No. 15/094,924, filed on April 8, 2016 (4503-00700).	

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/MARIA EL-ZOOBI/	Date Considered	11/06/2017

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2016-04-08
	First Named Inventor	Evin Hunt
	Art Unit	2656
	Examiner Name	El-zoobi, Maria
	Attorney Docket Number	4503-00600

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Elexis A. Jones/	Date (YYYY-MM-DD)	2017-10-27
Name/Print	Elexis A. Jones	Registration Number	66,274

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.E/

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.E/

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	15094920
Filing Date	2016-04-08
First Named Inventor	Evin Hunt
Art Unit	2656
Examiner Name	El-zoobi, Maria
Attorney Docket Number	4503-00600

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9742926	B2	2017-08-22	Hunt	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20060050688	A1	2006-03-09	Panagopoulos et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

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EXAMINER SIGNATURE

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Signature	/Elexis A. Jones/	Date (YYYY-MM-DD)	2017-10-27
Name/Print	Elexis A. Jones	Registration Number	66,274

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	15094920
Filing Date:	08-Apr-2016
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Filer:	Elexis Ashley Jones/Laura Dean
Attorney Docket Number:	4503-00600

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	90	90
		Total in USD ($)		**90**

Electronic Acknowledgement Receipt

EFS ID:	30778115
Application Number:	15094920
International Application Number:	
Confirmation Number:	8448
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Customer Number:	30652
Filer:	Elexis Ashley Jones
Filer Authorized By:	
Attorney Docket Number:	4503-00600
Receipt Date:	27-OCT-2017
Filing Date:	08-APR-2016
Time Stamp:	11:56:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$90
RAM confirmation Number	102717INTEFSW00013797501515
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	ZLKR_4503_00600_102717_IDS.pdf	1035193 f03a578cd4dca15115e06e90172f60be899d3b8b	no	4
Warnings:					
Information:					
2	Non Patent Literature	00400_OA_072717.pdf	293311 0fde858ff1032283571e219ce27c4ace169f942b	no	9
Warnings:					
Information:					
3	Non Patent Literature	00500_OA_091117.pdf	281191 22308b68dd539620cd44f6afe7ee1f48f98a16fd	no	8
Warnings:					
Information:					
4	Non Patent Literature	00700_NOA_101117.pdf	444129 93c7058001efd0b3bc10327e9a1ab3719ae58415	no	9
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	30617 43c0f6b347590eb603398f8b71a5e6e0405e5d57	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	2084441		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

30652 7590 10/02/2017

CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024

EXAMINER
EL-ZOOBI, MARIA

ART UNIT	PAPER NUMBER
2656	

DATE MAILED: 10/02/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/094,920	04/08/2016	Evin A. Hunt	4503-00600	8448

TITLE OF INVENTION: MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	01/02/2018

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PTOL-85 (Rev. 02/11)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

30652 7590 10/02/2017
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/094,920	04/08/2016	Evin A. Hunt	4503-00600	8448

TITLE OF INVENTION: MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	01/02/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
EL-ZOOBI, MARIA	2656	379-114050

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29
  NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27
  NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status.
  NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/094,920	04/08/2016	Evin A. Hunt	4503-00600	8448

30652 7590 10/02/2017

CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024

EXAMINER	
EL-ZOOBI, MARIA	
ART UNIT	PAPER NUMBER
2656	

DATE MAILED: 10/02/2017

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 02/11)

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/094,920	Applicant(s) HUNT ET AL.	
	Examiner MARIA EL-ZOOBI	Art Unit 2656	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *8/8/2017*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-20*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MARIA EL-ZOOBI/ Primary Examiner, Art Unit 2656	9/26/2017

DETAILED ACTION

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Allowable Subject Matter

2. Claims 1-20 are allowed.

3. The following is an examiner's statement of reasons for allowance: {sending, by the unified services platform system, an activation request for the group plan to the third party application service provider system, receiving an activation response from the third party application service provider system; associating the service with each telephone number of the plurality of telephone numbers; providing access to the service for each telephone number based on the associating; receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system; sending, by the unified services platform system, a second activation request for the service to the second third party application service provider system; receiving a second activation response from the second third party application service provider system; associating the second service with the first telephone number; and providing access to the second service for the first telephone number based on the associating}.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIA EL-ZOOBI whose telephone number is (571)270-3434. The examiner can normally be reached on 9-5.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 5712727499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARIA EL-ZOOBI/
Primary Examiner, Art Unit 2656

Notice of References Cited	Application/Control No. 15/094,920	Applicant(s)/Patent Under Reexamination HUNT ET AL.	
	Examiner MARIA EL-ZOOBI	Art Unit 2656	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2011/0130168 A1	06-2011	Vendrow; Vlad	H04M1/57	455/556.1
*	B	US-2012/0099571 A1	04-2012	Staykoff; Constantin	H04L41/50	370/338
*	C	US-2010/0158230 A1	06-2010	DHAWAN; Vishal	H04M1/2478	379/201.02
*	D	US-8,509,226 B1	08-2013	Murphy; Chris	H04L12/6418	370/352
*	E	US-2008/0304644 A1	12-2008	Mishra; Richard	H04L29/06027	379/201.12
*	F	US-2006/0050686 A1	03-2006	Velez-Rivera; Carlos Javier	H04M3/493	370/352
*	G	US-2002/0154755 A1	10-2002	Gourraud, Christophe	H04M3/436	379/210.02
*	H	US-5,771,282 A	06-1998	Friedes; Albert	H04M15/00	379/111
*	I	US-2015/0052009 A1	02-2015	Ketchell, III; Paul John	G06Q30/0633	705/26.8
*	J	US-9,025,753 B2	05-2015	Moore; Richard G.	H04L29/06	379/142.07
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	15094920
	Filing Date	2016-04-08
	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5771282		1998-06-23	Friedes	
	2	8509226	B1	2013-08-13	Murphy et al.	
	3	9025753	B2	2015-05-05	Moore et al.	
	4	9210254	B2	2015-12-08	Hunt	
	5	9210276	B2	2015-12-08	Hunt et al.	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020101858	A1	2002-08-01	Stuart Thro W. et al.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.E/

EFS Web 2.1.17

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2016-04-08
	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

	2	20020141420	A1	2002-10-03	Sugiarto	
	3	20020154755	A1	2002-10-24	Gourraud	
	4	20050135576	A1	2005-06-23	Gilles et al.	
	5	20050213567	A1	2005-09-29	Mullins Samuel R. et al.	
	6	20060015467	A1	2006-01-19	Morken et al.	
	7	20060050686	A1	2006-03-09	Velez-Rivera et al.	
	8	20080004972	A1	2008-01-03	Ghanma	
	9	20080304644	A1	2008-12-11	Mishra et al.	
	10	20090125409	A1	2009-05-14	BARTON	
	11	20100158230	A1	2010-06-24	DHAWAN et al.	
	12	20110130168	A1	2011-06-02	Vendrow et al.	

EFS Web 2.1.17

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.E/

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	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

	13	20110179176	A1	2011-07-21	Ravichandran et al.	
	14	20120099571	A1	2012-04-26	Staykoff	
	15	20150052009	A1	2015-02-19	Ketchell Paul John	
	16	20160065730	A1	2016-03-03	Hunt	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	WO2015054531	WO	A1	2015-04-16	ORISHA HOLDINGS, LLC		

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Office Action dated May 18, 2015, Application No. 14/087,768, filed November 22, 2013 (4503-00101).	
	2	Notice of Allowance dated August 4, 2015, Application No. 14/087,768, filed November 22, 2013 (4503-00101).	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.E/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15094920
	Filing Date	2016-04-08
	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

	3	Notice of Allowance dated June 14, 2013, Application No. 13/600,844, filed August 31, 2012 (4503-00300).	
	4	Notice of Allowance dated August 11, 2015, Application No. 13/964,496, filed August 12, 2013 (4503-00301).	
	5	Foreign Communication from a Related Counterpart - International Search Report and Written Opinion, dated March 19, 2015, PCT/US14/59959, filed on October 9, 2014 (4503-00200).	
	6	Foreign Communication from a Related Counterpart Application, International Preliminary Report on Patentability dated April 21, 2016, PCT/US14/59959, filed on October 9, 2014 (4503-00200).	
	7	HUNT, Evin, "Unified Services Platform Using a Telephone Number as the Common Subscriber Identifier," filed October 9, 2013, Provisional Application No. 61/888,856 (4503-00100).	
	8	HUNT, Evin, et al., "Unified Services Platform Using a Telephone Number as a Common Subscriber Identifier," filed April 8, 2016, Application No. 15/094,433 (4503-00400).	
	9	HUNT, Evin, et al., "Event Triggers for Performing Multiple Services from a Single Action," filed April 8, 2016, Application No. 15/094,917 (4503-00500).	
	10	OMAR, Paul, et al., "Providing Individual Service Functionality Using Specific Actions," filed on April 8, 2016, Application No. 15/094,924 (4503-00700).	

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/MARIA EL-ZOOBI/	Date Considered	09/26/2017

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.E/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Andrew M. Metrailer/	Date (YYYY-MM-DD)	2016-07-11
Name/Print	Andrew M. Metrailer	Registration Number	67,353

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.E/

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1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.E/

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15094920	HUNT ET AL.
	Examiner	Art Unit
	MARIA EL-ZOOBI	2656

CPC- SEARCHED		
Symbol	Date	Examiner
H04M 1/56	9/26/2017	M.EL

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
379	142.07,201.02	9/26/2017	M.EL
370	352	9/26/2017	M.EL

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES		
Search Notes	Date	Examiner
inventor name search	9/26/2017	M.EL

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
455	556.1	9/26/2017	M.EL

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15094920	HUNT ET AL.
	Examiner	Art Unit
	MARIA EL-ZOOBI	2656

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/03/2017	09/26/2017							
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	19	÷	=							
	20	÷	=							

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	15094920
	Filing Date	2016-04-08
	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

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EFS Web 2.1.17

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15094920
	Filing Date	2016-04-08
	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

	1	Final Office Action dated February 9, 2017, Application No. 14/931,644, filed November 3, 2015 (4503-00102).	
	2	Notice of Allowance dated April 18, 2017, Application No. 14/931,644, filed November 3, 2015 (4503-00102).	
	3	Restriction Requirement dated April 21, 2017, Application No. 15/094,433, filed April 8, 2016, (4503-00400).	
	4	Restriction Requirement dated May 1, 2017, Application No. 15/094,917, filed April 8, 2016 (4503-00500).	
	5	Office Action dated April 17, 2017, Application No. 15/094,924, filed on April 8, 2016 (4503-00700).	

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EXAMINER SIGNATURE

Examiner Signature	/MARIA EL-ZOOBI/	Date Considered	09/26/2017

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2016-04-08
	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Andrew M. Metrailer/	Date (YYYY-MM-DD)	2017-05-09
Name/Print	Andrew M. Metrailer	Registration Number	67,353

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

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1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

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BIB DATA SHEET

CONFIRMATION NO. 8448

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/094,920	04/08/2016 RULE	379	2656	4503-00600

APPLICANTS
Zilkr Cloud Technologies, LLC, Houston, TX;

INVENTORS
Evin A. Hunt, Austin, TX;
Omar Paul, Austin, TX;

**** CONTINUING DATA ************************
This application is a CON of PCT/US2014/059959 10/09/2014
which is a CON of 14/087,768 11/22/2013 PAT 9210254 *
and claims benefit of 61/888,856 10/09/2013
(*)Data provided by applicant is not consistent with PTO records.

**** FOREIGN APPLICATIONS ************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
04/25/2016

Foreign Priority claimed	35 USC 119(a-d) conditions met	Verified and Acknowledged	Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
❑ Yes ☑ No	❑ Yes ❑ No	/MARIA EL-ZOOBI/ Examiner's Signature	❑ Initials	TX	22	20	3

ADDRESS
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024
UNITED STATES

TITLE
MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS

FILING FEE RECEIVED	FEES: Authority has been given in Paper	
730	No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	❑ All Fees ❑ 1.16 Fees (Filing) ❑ 1.17 Fees (Processing Ext. of time) ❑ 1.18 Fees (Issue) ❑ Other _____ ❑ Credit

BIB (Rev. 05/07).

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Number	15094920
Filing Date	2016-04-08
First Named Inventor	Evin A. Hunt
Art Unit	2656
Examiner Name	El-Zoobi, Maria
Attorney Docket Number	4503-00600

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20160227031	A1	2016-08-04	Hunt et al.	
	2	20160227032	A1	2016-08-04	Paul et al.	
	3	20160227043	A1	2016-08-04	Hunt et al.	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

If you wish to add additional Foreign Patent Document citation information please click the Add button [Add]

NON-PATENT LITERATURE DOCUMENTS [Remove]

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	FAIPP Pre-Interview Communication dated November 18, 2016, Application No. 14/931,644, filed November 3, 2015 (4503-00102).	

If you wish to add additional non-patent literature document citation information please click the Add button [Add]

EXAMINER SIGNATURE

Examiner Signature	/MARIA EL-ZOOBI/	Date Considered	09/26/2017

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Signature	/Andrew M. Metrailer/	Date (YYYY-MM-DD)	2017-01-27
Name/Print	Andrew M. Metrailer	Registration Number	67,353

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	15094920	HUNT ET AL.
	Examiner	**Art Unit**
	MARIA EL-ZOOBI	2656

CPC						
Symbol					**Type**	**Version**
H04M		15	/	49	F	2013-01-01
H04M		3	/	2209	I	2013-01-01
H04M		3	/	42297	I	2013-01-01
H04M		3	/	42263	I	2013-01-01
H04M		7	/	0024	I	2013-01-01
H04M		2203	/	557	A	2013-01-01
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H04L		61	/	106	I	2013-01-01
H04M		1	/	2473	I	2013-01-01
H04M		15	/	68	I	2013-01-01
H04M		15	/	765	I	2013-01-01
H04M		2203	/	4509	A	2013-01-01

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/MARIA EL-ZOOBI/ Primary Examiner.Art Unit 2656	9/26/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15094920	HUNT ET AL.
	Examiner	**Art Unit**
	MARIA EL-ZOOBI	2656

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
379	142.07	H	0	4	M	1 / 56						
CROSS REFERENCE(S)												
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)											
370	352											

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 20	
/MARIA EL-ZOOBI/ Primary Examiner.Art Unit 2656 (Primary Examiner)	9/26/2017 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15094920	HUNT ET AL.
	Examiner	**Art Unit**
	MARIA EL-ZOOBI	2656

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	17	17												
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14	14														
15	15														
16	16														

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/MARIA EL-ZOOBI/ Primary Examiner.Art Unit 2656	9/26/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Zilkr Cloud Technologies LLC.	§	
		§	
Inventors:	Evin A. Hunt, et al.	§	
		§	Group Art Unit: 2656
Serial No.:	15/094,920	§	
		§	Examiner: El-Zoobi, Maria
Filed:	April 8, 2016	§	
		§	Confirmation No.: 8448
For:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	§	

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

RESPONSE TO RESTRICTION REQUIREMENT

Commissioner:

In response to the Office Action dated May 5, 2017, requiring the election of a single invention for prosecution on the merits, the Applicant hereby elects to prosecute the invention of Group I, claims 1-7, drawn to a method of provisioning a service for use with a group plan, classified in class 370, subclass 352, and identifies claims 1-20 as being encompassed within the elected invention. This election is made **WITHOUT TRAVERSE**. In view of this election, please amend the above-identified application as follows:

Amendments to the **Claims** are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 12 of this paper.

Electronic Patent Application Fee Transmittal

Application Number:	15094920
Filing Date:	08-Apr-2016
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Filer:	Michael W. Piper/Jennifer Wiebusch
Attorney Docket Number:	4503-00600

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 1 month with $0 paid	2251	1	100	100
Miscellaneous:				
		Total in USD ($)		**100**

Electronic Acknowledgement Receipt	
EFS ID:	29999326
Application Number:	15094920
International Application Number:	
Confirmation Number:	8448
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Customer Number:	30652
Filer:	Michael W. Piper
Filer Authorized By:	
Attorney Docket Number:	4503-00600
Receipt Date:	08-AUG-2017
Filing Date:	08-APR-2016
Time Stamp:	00:35:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$100
RAM confirmation Number	080817INTEFSW00007911501515
Deposit Account	501515
Authorized User	Michael Piper
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	ZLKR_4503_00600_Certificate_of_Transmission.pdf	68357 78a87c88cff2560e5e7bdbd6766802d489fd3eac	no	1
Warnings:					
Information:					
2		ZLKR_4503_00600_Response_to_Restriction_Requirement.pdf	118599 5e914d8f037618563c466939e0306fed52d178d9	yes	13

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Applicant Arguments/Remarks Made in an Amendment	12	13
Claims	2	11
Response to Election / Restriction Filed	1	1

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	31001 ad8a07cef9ff74635973d780dbd5d2329449814e	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	217957		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Zilkr Cloud Technologies LLC.	§	
		§	
Inventors:	Evin A. Hunt, et al.	§	
		§	Group Art Unit: 2656
Serial No.:	15/094,920	§	
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		§	Confirmation No.: 8448
For:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	§	

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF EFS-WEB TRANSMISSION

Pursuant to 37 C.F.R. §1.8, I hereby certify that this correspondence:

1. **Response to Restriction Requirement; and**
2. **this Certificate of Transmission Under 37 C.F.R. 1.8**

is being electronically transmitted from within the Pacific Time Zone to the Commissioner for Patents via the EFS web server on:

August 7, 2017.
Date

/Michael W. Piper/
Michael W. Piper

REMARKS

In the Office Action dated May 5, 2017, a Restriction Requirement was issued requiring Applicant to make an election between the inventions of Group I, claims 1-7, drawn to a method of provisioning a service for use with a group plan, classified in class 370, subclass 352, OR Group II, claims 8-13, drawn to a method of billing for a service provided to the members of a group, classified in class 705, subclass 26.8, OR Group III, claims 14-20, drawn to a method of using a rules to allocate usage of a service between personal and group accounts, classified in class 379, subclass 93.01.

Status of the Claims

Claims 8-10 and 13-20 are currently amended.

Claims 1-7, 11, and 12 remain as originally presented.

Claims 1-20 are currently pending following this response.

Election

In response to the Restriction Requirement, Applicant hereby elects to prosecute the invention of Group I, claims 1-7, drawn to a method of provisioning a service for use with a group plan, classified in class 370, subclass 352. Claims 8-10 and 13-20 are amended herein, and with the amendments to these claims, Applicant hereby identifies claims 1-20 as being encompassed within the elected invention. This election is made **WITHOUT TRAVERSE**.

Applicant reserves the right to file one or more divisional applications directed to the subject matter defined by the unelected invention of Group II, claims 8-13, drawn to

a method of billing for a service provided to the members of a group, classified in class 705, subclass 26.8, and Group III, claims 14-20, drawn to a method of using a rules to allocate usage of a service between personal and group accounts, classified in class 379, subclass 93.01.

Conclusion

Consideration of the foregoing remarks and reconsideration of the application is respectfully requested by Applicant. No new matter is introduced by way of this response. It is believed that the grounds for restriction raised in the Office Action dated May 5, 2017 have been fully addressed. If any fee is due as a result of the filing of this paper, please appropriately charge such fee to Deposit Account Number 50-1515 of Conley Rose, P.C. If a petition for extension of time is necessary in order for this paper to be deemed timely filed, please consider this a petition therefore.

If a telephone conference would facilitate the resolution of any issue or expedite the prosecution of the application, the Examiner is invited to contact the undersigned at the telephone number given below.

Respectfully submitted,

Date: August 7, 2017

/Michael W. Piper/
Michael W. Piper
Reg. No. 39,800

ATTORNEY FOR APPLICANT

CONLEY ROSE, P.C.
5601 Granite Parkway, Suite 500
Plano, Texas 75024
(972) 731-2288
(972) 731-2289 (facsimile)

***Listing of the Claims*:**

1. (Original) A method of provisioning a service for use with a group plan, the method comprising:

receiving, by a unified services platform system, a subscription request for a service for a group plan, wherein the group plan comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, and wherein the service is provided by a third party application service provider system;

sending, by the unified services platform system, an activation request for the group plan to the third party application service provider system,

receiving an activation response from the third party application service provider system;

associating the service with each telephone number of the plurality of telephone numbers;

providing access to the service for each telephone number based on the associating;

receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system;

sending, by the unified services platform system, a second activation request for the service to the second third party application service provider system;

receiving a second activation response from the second third party application service provider system;

associating the second service with the first telephone number; and

providing access to the second service for the first telephone number based on the associating.

2. (Original) The method of claim 1, further comprising:

receiving billing and settlement information associated with each of the telephone numbers.

3. (Original) The method of claim 2, wherein the billing and settlement information comprises routing information for routing charges incurred through use of the service, wherein the routing information routes the charges incurred to a group administrator for the group plan.

4. (Original) The method of claim 1, wherein an API of the third party application service provider system is incompatible with an API of the network provider system.

5. (Original) The method of claim 4, wherein the API of the third party application service provider system is integrated with the unified services platform system, and wherein API of the network provider system is integrated with the unified

services platform system, and wherein the third party application communicates with the network provider system through the unified services platform system.

6. (Original) The method of claim 1, further comprising:

receiving, by the unified services platform system, a second subscription request for a second service for the group plan, wherein the second service is provided by a second third party application service provider system, wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system;

sending, by the unified services platform system, a second activation request for the group plan to the third party application service provider system,

receiving a second activation response from the third party application service provider system;

associating the second service with each telephone number of the plurality of telephone numbers; and

providing access to the second service for each telephone number based on the associating.

7. (Original) The method of claim 1, further comprising:

invoking the service in response to a triggering event associated with a first telephone number of the plurality of telephone numbers.

8. (Currently Amended) [[A]] The method of ~~billing for a service provided to the members of a group, the method~~claim 1, further comprising:

~~receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber,~~ wherein [[the]] each telephone number of the plurality of telephone numbers is provided by a network provider system, ~~and wherein the service is provided by a third party application service provider system;~~

~~associating the service with each telephone number of the plurality of telephone numbers;~~

receiving billing and settlement information from the third party application service provider system for each telephone number of the plurality of telephone numbers;

generating billing routing information based on the billing and settlement information, wherein the routing information forwards billing charges for the services associated with the service to a group administrator;

associating the billing routing information for the service with each telephone number of the plurality of telephone number;

generating chargeable event data in response to a use of the service by one or more of the subscribers;

forwarding the chargeable event data to the group administrator based on the billing routing information;

~~associating a second service with a first telephone number of the plurality of telephone numbers,~~ wherein the second service is not associated with the group plan, ~~wherein the second service is provided by a second third party application service provider system~~; and

routing billing charges for the second service to ~~a first~~the subscriber associated with the first telephone number.

9. (Currently Amended) The method of claim 8, wherein the unified services platform system communicates with the third party application service provider system through a first integrated interface, wherein the unified services platform system communications with the second third party application service provider system through a second integrated interface, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein the integrated interface and the second integrated interface are incompatible with the provider integrated interface.

10. (Currently Amended) The method of claim 8, further comprising:

associating a third service with the first telephone number of the plurality of telephone numbers, wherein the third service is associated with the group plan, and wherein the routing information forwards billing charges for the third service to the group administrator.

11. (Original) The method of claim 8, wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data to the unified services platform system, and forwarding the chargeable event data from the unified services platform system to the network provider system.

12. (Original) The method of claim 8, wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data from the third party application service provider system to the network provider system.

13. (Currently Amended) The method of claim 8, wherein generating the chargeable event data is based on a triggering event associated with a [[first]] telephone number of one or more of the subscribers.

14. (Currently Amended) [[A]] The method of ~~using a rules engine to allocate usage of a service between personal and group accounts, the method~~claim 1, further comprising:

~~receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, wherein the service is provided by a third party application service provider system, and wherein the telephone numbers are provided by a network provider system;~~

associating the service with each telephone number of the plurality of telephone numbers, wherein the telephone numbers are provided by a network provider system;

receiving billing and settlement information from the third party application service provider system for each telephone number;

generating a billing policy store comprising a plurality of rules for charging for the service, wherein the rules define a relationship between a usage conditions of the service and payment by at least one of, the subscriber, or the group plan;

generating billing routing information based on the billing and settlement information and the billing policy store, wherein the billing routing information forwards billing charges for the usage associated with the service to at least one of the subscriber or the group plan based on the usage conditions;

generating a charge for the service in response to a use of the service under usage conditions by one or more of the subscribers; and

routing the charges to at least one of the subscriber or the group plan using the billing routing information.

15. (Currently Amended) The method of claim 14, wherein the plurality of rules specify payment by the group plan when the service is used within a predefined usage condition, wherein the usage condition comprises a time of day, a day of the week, a month of the year, a holiday schedule, or any combination thereof.

16. (Currently Amended) The method of claim 14, wherein the plurality of rules specify payment by the group plan when the service is used within a predefined usage condition, wherein the usage condition comprises a geographic location or a geographic area.

17. (Currently Amended) The method of claim 14, wherein the plurality of rules specify payment by the group plan when the service is used within a predefined usage condition, wherein the usage condition comprises a type of network connection, a specific network interface point, or any combination thereof.

18. (Currently Amended) The method of claim 14, wherein the plurality of rules specify payment by the group plan when the service is used within a predefined

usage condition, wherein the usage condition comprises one or more predefined triggering events.

19. (Currently Amended) The method of claim 14, wherein a first subscriber associated with [[a]] the first telephone number of the plurality of telephone numbers is provided network services through the network provider system, wherein group plan is provided network services through a second network provider system, and wherein routing the charges to at least one of the subscriber or the group plan comprises routing the charges to at least one of the first subscriber through the network provider system or the group plan through the second network provider system.

20. (Currently Amended) The method of claim 14, further comprising:

associating a ~~second~~ third service with each telephone number of the plurality of telephone numbers, wherein the ~~second~~ third service is provided by a second third party application service provider system;

receiving second billing and settlement information from the second third party application service provider for each telephone number; and

generating second billing routing information based on the second billing and settlement information and the billing policy store, wherein the second billing routing information forwards billing charges for the usage associated with the ~~second~~ third service to at least one of the subscriber or the group plan based on a second set of usage conditions, wherein the

second set of usage conditions are different than the usage conditions for the service.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	15094920
Filing Date	2016-04-08
First Named Inventor	Evin A. Hunt
Art Unit	2656
Examiner Name	El-Zoobi, Maria
Attorney Docket Number	4503-00600

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15094920
	Filing Date	2016-04-08
	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

	1	Final Office Action dated February 9, 2017, Application No. 14/931,644, filed November 3, 2015 (4503-00102).	
	2	Notice of Allowance dated April 18, 2017, Application No. 14/931,644, filed November 3, 2015 (4503-00102).	
	3	Restriction Requirement dated April 21, 2017, Application No. 15/094,433, filed April 8, 2016, (4503-00400).	
	4	Restriction Requirement dated May 1, 2017, Application No. 15/094,917, filed April 8, 2016 (4503-00500).	
	5	Office Action dated April 17, 2017, Application No. 15/094,924, filed on April 8, 2016 (4503-00700).	

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15094920
	Filing Date	2016-04-08
	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Andrew M. Metrailer/	Date (YYYY-MM-DD)	2017-05-09
Name/Print	Andrew M. Metrailer	Registration Number	67,353

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	29161632
Application Number:	15094920
International Application Number:	
Confirmation Number:	8448
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Customer Number:	30652
Filer:	Andrew M. Metrailer
Filer Authorized By:	
Attorney Docket Number:	4503-00600
Receipt Date:	09-MAY-2017
Filing Date:	08-APR-2016
Time Stamp:	17:37:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	ORSH_4503_00600_050917_IDS.pdf	1035234 f97967ef3111e3ce09328f46f7894f3840b22a0f	no	4

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4	Non Patent Literature	00400_RR_042117.pdf	199254 a599e07759fe7d5117c82b5abce64337d053f799	no	6
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Information:					
5	Non Patent Literature	00500_RR_050117.pdf	193896 ab46cffab5779cd8b4f0be305e583215fcf05f79	no	6
Warnings:					
Information:					
6	Non Patent Literature	00700_OA_041717.pdf	419381 50ca8b1251f6304d038e4dd04986a174e835eeb6	no	12
Warnings:					
Information:					
			Total Files Size (in bytes):	2712476	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/094,920	04/08/2016	Evin A. Hunt	4503-00600	8448

30652 7590 05/05/2017

CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024

EXAMINER
EL-ZOOBI, MARIA

ART UNIT	PAPER NUMBER
2656	

MAIL DATE	DELIVERY MODE
05/05/2017	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 15/094,920	Applicant(s) HUNT ET AL.	
	Examiner MARIA EL-ZOOBI	Art Unit 2656	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *2* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/8/2016*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☐ Claim(s) _____ is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☐ Claim(s) _____ is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☒ Claim(s) *1-20* are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Election/Restrictions

Restriction to one of the following invention is required under 35 U.S.CC. 121:

1. Claims 1-7 are directed to {a method of provisioning a service for use with a group plan}, classified 370/352.

2. Claims 8-13 are directed to {a method of billing for a service provided to the members of a group}, classified in 705/26.8.

3. Claims 14-20 are directed to {a method of using a rules engine to allocate usage of a service between personal and group accounts}, classified 379/93.01.

The inventions are distinct, each from other because of the following reasons: The inventions require a different field and search strategies.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 1 01 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In

either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIA EL-ZOOBI whose telephone number is (571)270-3434. The examiner can normally be reached on 9-5.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 5712727499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARIA EL-ZOOBI/
Primary Examiner, Art Unit 2656

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15094920	HUNT ET AL.
	Examiner	Art Unit
	MARIA EL-ZOOBI	2656

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/03/2017								
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/094,920	04/08/2016	Evin A. Hunt	4503-00600

CONFIRMATION NO. 8448

30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024

POA ACCEPTANCE LETTER

OC000000089553866

Date Mailed: 03/01/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/27/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/yteferra/

PTO/AIA/80 (07-12)
Approved for use through 11/30/2014. OMB 0651-0035
U.S. Patent and Trademark Office; U.S DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

☒ Practitioners associated with Customer Number: 30652

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

☒ The address associated with Customer Number: 30652

OR

☐

Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address: Zilkr Cloud Technologies, LLC
2051 S. Lamar Blvd.
Austin, TX 78704

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be Filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	2/2/2017
Name	Omar Paul	Telephone	
Title	CEO		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Zilkr Cloud Technologies, LLC

Application No./Patent No.: 15/094,920 Filed/Issue Date: 2016-07-11

Titled: MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS

Zilkr Cloud Technologies, LLC, a Corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☑ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

   1. From: Evin A. Hunt; John Abraham; David W To: Shango, LLC

      The document was recorded in the United States Patent and Trademark Office at
      Reel 041100, Frame 0112, or for which a copy thereof is attached.

   2. From: Shango, LLC To: Orisha Holdings, LLC

      The document was recorded in the United States Patent and Trademark Office at
      Reel 041119, Frame 0870, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: Orisha Holdings, LLC To: Aquifer Innovations, LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 041119, Frame 0938, or for which a copy thereof is attached.

4. From: Aquifer Innovations, LLC To: Zilkr Cloud Technologies, LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 041119, Frame 0984, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature	2/2/2017 Date
Omar Paul Printed or Typed Name	CEO Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	28467945
Application Number:	15094920
International Application Number:	
Confirmation Number:	8448
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Customer Number:	30652
Filer:	Michael W. Piper
Filer Authorized By:	
Attorney Docket Number:	4503-00600
Receipt Date:	27-FEB-2017
Filing Date:	08-APR-2016
Time Stamp:	17:59:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	ZLKR_4503_00600_Certificate_of_Transmission.pdf	68896 9d8656e645be83f7f8d806a242390c1725437275	no	1

Warnings:

Information:					
2	Power of Attorney	ZLKR_4503_00600_POA.pdf	64323 b3bf2a4849534f7cac1e56e90cef73e3e30442d9	no	2
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	ZLKR_4503_00600_373_c_Statement.pdf	87209 f8e4fd0a3647ff4300c370283582bb4e7c861a7d	no	3
Warnings:					
Information:					
		Total Files Size (in bytes):	220428		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Zilkr Cloud Technologies LLC.	§	
		§	
Inventors:	Evin A. Hunt, et al.	§	
		§	Group Art Unit: 2656
Serial No.:	15/094,920	§	
		§	Examiner: El-Zoobi, Maria
Filed:	April 8, 2016	§	
		§	Confirmation No.: 8448
For:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	§	

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF EFS-WEB TRANSMISSION

Pursuant to 37 C.F.R. §1.8, I hereby certify that this correspondence:

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2. **Statement under 37 CFR 3.73(c); and**
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Date

/Michael W. Piper/
Michael W. Piper

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	15094920
Filing Date	2016-04-08
First Named Inventor	Evin A. Hunt
Art Unit	2656
Examiner Name	El-Zoobi, Maria
Attorney Docket Number	4503-00600

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20160227031	A1	2016-08-04	Hunt et al.	
	2	20160227032	A1	2016-08-04	Paul et al.	
	3	20160227043	A1	2016-08-04	Hunt et al.	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							

EFS Web 2.1.17

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2016-04-08
	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	FAIPP Pre-Interview Communication dated November 18, 2016, Application No. 14/931,644, filed November 3, 2015 (4503-00102).	

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Examiner Signature		Date Considered	

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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	Filing Date	2016-04-08
	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Andrew M. Metrailer/	Date (YYYY-MM-DD)	2017-01-27
Name/Print	Andrew M. Metrailer	Registration Number	67,353

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	28187655
Application Number:	15094920
International Application Number:	
Confirmation Number:	8448
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Customer Number:	30652
Filer:	Andrew M. Metrailer
Filer Authorized By:	
Attorney Docket Number:	4503-00600
Receipt Date:	27-JAN-2017
Filing Date:	08-APR-2016
Time Stamp:	17:02:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	ORSH_4503_00600_012717_IDS.pdf	1035250 91cdd3df7fc59ebd08529065a0c54d74b7694414	no	4

Warnings:

Information:					
2	Non Patent Literature	00102_FAIPC_111816.pdf	140755 75740d3703bc43d1b3cc5457231d9b0ed6165edf	no	4
Warnings:					
Information:					
			Total Files Size (in bytes):	1176005	

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New Applications Under 35 U.S.C. 111

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New International Application Filed with the USPTO as a Receiving Office

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/094,920	04/08/2016	Evin A. Hunt	4503-00600

CONFIRMATION NO. 8448

30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024

PUBLICATION NOTICE

OC000000084861743

Title:MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS

Publication No.US-2016-0227045-A1
Publication Date:08/04/2016

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	15094920
Filing Date	2016-04-08
First Named Inventor	Evin A. Hunt
Art Unit	2656
Examiner Name	El-Zoobi, Maria
Attorney Docket Number	4503-00600

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5771282		1998-06-23	Friedes	
	2	8509226	B1	2013-08-13	Murphy et al.	
	3	9025753	B2	2015-05-05	Moore et al.	
	4	9210254	B2	2015-12-08	Hunt	
	5	9210276	B2	2015-12-08	Hunt et al.	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020101858	A1	2002-08-01	Stuart Thro W. et al.	

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	First Named Inventor	Evin A. Hunt
	Art Unit	2656
	Examiner Name	El-Zoobi, Maria
	Attorney Docket Number	4503-00600

	2	20020141420	A1	2002-10-03	Sugiarto	
	3	20020154755	A1	2002-10-24	Gourraud	
	4	20050135576	A1	2005-06-23	Gilles et al.	
	5	20050213567	A1	2005-09-29	Mullins Samuel R. et al.	
	6	20060015467	A1	2006-01-19	Morken et al.	
	7	20060050686	A1	2006-03-09	Velez-Rivera et al.	
	8	20080004972	A1	2008-01-03	Ghanma	
	9	20080304644	A1	2008-12-11	Mishra et al.	
	10	20090125409	A1	2009-05-14	BARTON	
	11	20100158230	A1	2010-06-24	DHAWAN et al.	
	12	20110130168	A1	2011-06-02	Vendrow et al.	

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	13	20110179176	A1	2011-07-21	Ravichandran et al.	
	14	20120099571	A1	2012-04-26	Staykoff	
	15	20150052009	A1	2015-02-19	Ketchell Paul John	
	16	20160065730	A1	2016-03-03	Hunt	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	WO2015054531	WO	A1	2015-04-16	ORISHA HOLDINGS, LLC		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Office Action dated May 18, 2015, Application No. 14/087,768, filed November 22, 2013 (4503-00101).	
	2	Notice of Allowance dated August 4, 2015, Application No. 14/087,768, filed November 22, 2013 (4503-00101).	

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	Attorney Docket Number	4503-00600

	3	Notice of Allowance dated June 14, 2013, Application No. 13/600,844, filed August 31, 2012 (4503-00300).	
	4	Notice of Allowance dated August 11, 2015, Application No. 13/964,496, filed August 12, 2013 (4503-00301).	
	5	Foreign Communication from a Related Counterpart - International Search Report and Written Opinion, dated March 19, 2015, PCT/US14/59959, filed on October 9, 2014 (4503-00200).	
	6	Foreign Communication from a Related Counterpart Application, International Preliminary Report on Patentability dated April 21, 2016, PCT/US14/59959, filed on October 9, 2014 (4503-00200).	
	7	HUNT, Evin, "Unified Services Platform Using a Telephone Number as the Common Subscriber Identifier," filed October 9, 2013, Provisional Application No. 61/888,856 (4503-00100).	
	8	HUNT, Evin, et al., "Unified Services Platform Using a Telephone Number as a Common Subscriber Identifier," filed April 8, 2016, Application No. 15/094,433 (4503-00400).	
	9	HUNT, Evin, et al., "Event Triggers for Performing Multiple Services from a Single Action," filed April 8, 2016, Application No. 15/094,917 (4503-00500).	
	10	OMAR, Paul, et al., "Providing Individual Service Functionality Using Specific Actions," filed on April 8, 2016, Application No. 15/094,924 (4503-00700).	

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CERTIFICATION STATEMENT

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Andrew M. Metrailer/	Date (YYYY-MM-DD)	2016-07-11
Name/Print	Andrew M. Metrailer	Registration Number	67,353

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: MICHAEL W. PIPER
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, STE. 500
PLANO, TX 75024

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	19 MAR 2015
Applicant's or agent's file reference: 4503-00200	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US2014/059959	International filing date *(day/month/year)*: 09 October 2014
Applicant: ORISHA HOLDINGS, LLC	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   How? Directly to the International Bureau of WIPO preferably through ePCT or on paper to, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may **submit comments on an informal basis on the written opinion of the International Searching Authority** to the International Bureau. These comments will be made available to the public after international publication. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established.

   Shortly after the expiration of **18 months from the priority date, the international application will be published** by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90*bis*.1 and 90*bis*.3).

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for **entry into the national phase** before those designated Offices. In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months. For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

   Within 19 months from the priority date, the applicant may request that a supplementary international search be carried out by a different International Searching Authority that offers this service (Rule 45*bis*.1). The procedure for requesting supplementary international search is described in the *PCT Applicant's Guide*, International Phase, paragraphs 8.006-8.032.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450	Authorized officer Blaine R. Copenheaver
Facsimile No. 571-273-3201	Telephone No. PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2014)

DOCKETED
PR
3/24/15

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: MICHAEL W. PIPER
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, STE. 500
PLANO, TX 75024

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Applicant's or agent's file reference 4503-00200	Date of mailing *(day/month/year)* **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2014/059959	International filing date *(day/month/year)* 09 October 2014
Applicant ORISHA HOLDINGS, LLC	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   How? Directly to the International Bureau of WIPO preferably through ePCT or on paper to, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
   - ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.
   - ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may **submit comments on an informal basis on the written opinion of the International Searching Authority** to the International Bureau. These comments will be made available to the public after international publication. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established.

   Shortly after the expiration of **18 months from the priority date, the international application will be published** by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90*bis*.1 and 90*bis*.3).

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for **entry into the national phase** before those designated Offices. In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months. For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

   Within **19 months from the priority date, the applicant may request that a supplementary international search be carried out** by a different International Searching Authority that offers this service (Rule 45*bis*.1). The procedure for requesting supplementary international search is described in the *PCT Applicant's Guide*, International Phase, paragraphs 8.006-8.032.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2014)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 4503-00200	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2014/059959	International filing date *(day/month/year)* 09 October 2014	(Earliest) Priority Date *(day/month/year)* 09 October 2013
Applicant ORISHA HOLDINGS, LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☒ **Unity of invention is lacking** (see Box No. III)

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the drawings to be published with the abstract is Figure No. 1

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/059859

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See Extra Sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/059959

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04L 12/66 (2015.01)
CPC - H04L 12/66 (2014.12)
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04L 12/66; H04M 3/42 (2015.01)
USPC - 370/352; 379/90.01, 219, 242

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - H04L 12/66; H04M 3/42136, 3/42144, 3/42153, 3/42161 (2014.12) (keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase, Orbit, Google Patents, Google Scholar.
Search terms used: network provider, unified, API, convert, translate, telephone number

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ~ Y	US 2011/0130168 A1 (VENDROW et al.) 02 June 2011 (02.06.2011) entire document	8-15, 37-40 ..... 16-36, 41-47, 53, 55-58, 61-80
Y	US 2010/0158230 A1 (DHAWAN et al.) 24 June 2010 (24.06.2010) entire document	16-20, 28, 36, 79
Y	US 8,509,226 B1 (MURPHY et al.) 13 August 2013 (13.08.2013) entire document	1-7,21-36, 44-46, 48-69, 73-80
Y	US 2012/0099571 A1 (STAYKOFF) 26 April 2012 (26.04.2012) entire document	41-80
Y	US 2006/0050686 A1 (VELEZ-RIVERA et al.) 09 March 2006 (09.03.2006) entire document	1-7
Y	US 2002/0154755 A1 (GOURRAUD) 24 October 2002 (24.10.2002) entire document	1-7
Y	US 5,771,282 A (FRIEDES) 23 June 1998 (23.06.1998) entire document	43, 48-53
Y	US 2008/0304644 A1 (MISHRA et al.) 11 December 2008 (11.12.2008) entire document	2-6, 61-80

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
12 February 2015	19 MAR 2015
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/059959

Continuation of Box No. III:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-7, drawn to a method of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform.
Group II, claims 8-40 and 61-80, drawn to a method comprising invoking and responding to a triggering event.
Group III, claims 41-60, drawn to a method comprising associating the service with each telephone number of the plurality of telephone numbers.

The inventions listed as Groups I, II and III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: receiving a provider API interfaces for a network provider system; and integrating the provider API interface with the unified services platform API interface as claimed therein is not present in the invention of Groups II and III. The special technical feature of the Group II invention: invoking and responding to a triggering event as claimed therein is not present in the invention of Groups I or III. The special technical feature of the Group III invention: associating the service with each telephone number of the plurality of telephone numbers as claimed therein is not present in the invention of Groups I or II.

Groups I, II and III lack unity of invention because even though the inventions of these groups require the technical feature of establishing a plurality of service accounts for a corresponding plurality of application service provider systems, wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services; receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface, this technical feature is not a special technical feature as it does not make a contribution over the prior art. Specifically, US 2006/0050686 A1 (VELEZ-RIVERA et al.) teach establishing a plurality of service accounts for a corresponding plurality of application service provider systems (venders are billed for time used in the channels [the system would maintain account information for the vendor], para. 0139). Further, US 8,509,226 B1 (MURPHY et al.) teach wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services (user 345 activates telephone number 320 which originates from vendor 305, telephone number 320 may be processed by resellers 325 and 335 in order to become available to and activated by user 345, user 345 may utilize telephone number 320 for VoIP service for any length of time, col. 9 lines 47-51, 63-64); receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235, 240, col. 6 lines 8-16), integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Murphy to incorporate the above features in the invention of Velez-Rivera. The motivation would have been to increase adaptability (Velez-Rivera, para. 0006).

Since none of the special technical features of the Group I, II or III inventions are found in more than one of the inventions, unity of invention is lacking.

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: MICHAEL W. PIPER
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, STE. 500
PLANO, TX 75024

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	19 MAR 2015
Applicant's or agent's file reference 4503-00200	FOR FURTHER ACTION See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2014/059959	09 October 2014	09 October 2013

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04L 12/66 (2015.01)
CPC - H04L 12/66 (2014.12)

Applicant ORISHA HOLDINGS, LLC

1. This opinion contains indications relating to the following items:

- [x] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [x] Box No. IV Lack of unity of invention
- [x] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to th IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	12 February 2015	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2014/059959

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

a. (means)

☐ on paper

☐ in electronic form

b. (time)

☐ in the international application as filed

☐ together with the international application in electronic form

☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No
PCT/US2014/059959

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:

   ☒ paid additional fees.

   ☐ paid additional fees under protest and, where applicable, the protest fee.

   ☐ paid additional fees under protest but the applicable protest fee was not paid.

   ☐ not paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

   ☐ complied with.

   ☒ not complied with for the following reasons:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-7, drawn to a method of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform.
Group II, claims 8-40 and 61-80, drawn to a method comprising invoking and responding to a triggering event.
Group III, claims 41-60, drawn to a method comprising associating the service with each telephone number of the plurality of telephone numbers.

The inventions listed as Groups I, II and III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: receiving a provider API interfaces for a network provider system; and integrating the provider API interface with the unified services platform API interface as claimed therein is not present in the invention of Groups II and III. The special technical feature of the Group II invention: invoking and responding to a triggering event as claimed therein is not present in the invention of Groups I or III. The special technical feature of the Group III invention: associating the service with each telephone number of the plurality of telephone numbers as claimed therein is not present in the invention of Groups I or II.

Groups I, II and III lack unity of invention because even though the inventions of these groups require the technical feature of establishing a plurality of service accounts for a corresponding plurality of application service provider systems, wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services; receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface, this technical feature is not a special technical feature as it does not make a contribution over the prior art. Specifically, US 2006/0050686 A1 (VELEZ-RIVERA et al.) teach establishing a plurality of service accounts for a corresponding plurality of application service provider systems (venders are billed for time used in the channels [the system would maintain account information for the vendor], para. 0139). Further, US 8,509,226 B1 (MURPHY et al.) teach wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services (user 345 activates telephone number 320 which originates from vendor 305, telephone number 320 may be processed by resellers 325 and 335 in order to become available to and activated by user 345, user 345 may utilize telephone number 320 for VoIP service for any length of time, col. 9 lines 47-51, 63-64); receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235, 240, col. 6 lines 8-16), integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Murphy to incorporate the above features in the invention of Velez-Rivera. The motivation would have been to increase adaptability (Velez-Rivera, para. 0008).

Since none of the special technical features of the Group I, II or III inventions are found in more than one of the inventions, unity of invention is lacking.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

   ☒ all parts.

   ☐ the parts relating to claims Nos. .....

Form PCT/ISA/237 (Box No. IV) (July 2011)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2014/059959

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-7, 16-36, 41-80	YES
	Claims	8-15, 37-40	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-80	NO
Industrial applicability (IA)	Claims	1-80	YES
	Claims	None	NO

2. Citations and explanations:

Claims 8-15, 37-40 lack novelty under PCT Article 33(2) as being anticipated by Vendrow et al., hereinafter referred to as Vendrow.

Regarding claim 8, Vendrow discloses a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of invoking a third party service during a communication event (users can submit their telephone number 155 to service manager 134 to access virtual PBX and other call management services including third party services to provide call features such as call handling, para. 0076-0077), the method comprising: receiving, by a policy and rules engine executing on a processor system, a first indication of an incoming communication for a telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], services manager 130 includes provisioning manager 132 that can operate to configure configuration data 144 [policies and rules] to provide a subset of virtual PBX services in association with user account 145, implemented using computing device 1000 with processor 1002, para. 0050, 0076, 0110, 0161); identifying, by the policy and rules engine, a first triggering event associated with the incoming communication for the telephone number based on the first indication (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would identify the call screening service policy in connection with incoming calls], para. 0076, 0110); invoking, by the policy and rules engine, a first service associated with the telephone number in response to the first triggering event, wherein the first service is provided by a first third party application service provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would invoke the call screening service in response to receiving the call], service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as screening rules [the service would be a third party service], para. 0076-0077, 0110); performing, in response to invoking the first service, a first action based on the first triggering event, wherein the first action is performed by the first third party application service provider system (the call screening rules can be configured to forward incoming calls with identifiable and recognizable call identification telephone numbers directly to the user [the service would be performed when a call is received], para. 0110); receiving, by the policy and rules engine, a second indication of a second incoming communication for the telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [the service manager would receive an indication for the incoming call for the user telephone number], services manager 130 includes provisioning manager 132 that can operate to configure configuration data 144 [policies and rules] to provide a subset of virtual PBX services in association with user account 145, implemented using computing device 1000 with processor 1002, para. 0050, 0076, 0093, 0161); identifying, by the policy and rules engine, a second triggering event associated with the second incoming communication for the telephone number based on the second indication (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [the service manager would identify the call forwarding service policy in connection with incoming calls], para. 0076, 0093); invoking, by the policy and rules engine, a second service associated with the telephone number in response to the second triggering event, wherein the second service is provided by a second third party application service provider system, wherein the second third party application service provider system is different than the first third party application service provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [the service manager would invoke the call forwarding service in response to receiving the call], service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as call forwarding and screening rules [the two service would be provided by different third party service providers], para. 0076-0077, 0093); pperforming, in response to invoking the second service, a second action based on the second triggering event, wherein the second action is performed by the second third party application service provider system (call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [call forwarding would be performed when an incoming call is received], para. 0093); and

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handling the communication using the telephone number (the call screening rules can be configured to forward incoming calls with identifiable and recognizable call identification telephone numbers directly to the user, call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user, mobile device 102 includes interface 101 configured to receive inbound calls [the call to the user telephone number would be facilitated], para. 0038, 0093, 0110).

Regarding claim 37, Vendrow discloses a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of using a policy store to generate multiple events (services manager 130 includes provisioning manager 132 that can operate to configure configuration data 144 [policies and rules] to provide a subset of virtual PBX services in association with user account 145, services include caller ID rules and call screening rules [multiple events], para. 0050, 0077), the method comprising: generating, by a processor system, a policy store comprising a plurality of rules for invoking a plurality of services associated with a telephone number, wherein the rules define a relationship between a triggering event and one or more actions to be performed by a service (services manager 130 includes provisioning manager 132 that can operate to configure configuration data 144 [policies and rules] to provide a subset of virtual PBX services in association with user account 145, the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual, implemented using computing device 1000 with processor 1002, para. 0050, 0078, 0161), wherein the plurality of services are provided by third party application service provider systems, wherein the triggering event is based on a communication event provided by a network provider system (users can submit telephone number 155 to service manager 134 to access a subset of virtual PBX services, service manager 134 enables integration between communication services to provide third party services such as caller ID rules and transcription [triggering event is an incoming telephone call which would be provided by a network provider system], para. 0076-0077, 0079), and where the policy store is generated by a unified services platform system in communication with the network provider system and the third party application service provider systems (service manager 134 enables integration between communication services including third party services using a universal platform, para. 0077); receiving an indication of a first triggering event based on a communication event associated with the telephone number (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID [the service manager would receive an indication for the incoming call for the user telephone number], para. 0110); matching, by the processor system, the first triggering event with one or more actions in the policy store (the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID [the processor would recognize the rule for checking a caller ID and screening calls accordingly], para. 0078, 0110); identifying, by the processor system, two or more services of the plurality of services based on the matching (the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID [the processor would identify the caller ID service and call screening service], para. 0078, 0110); generating routing information for each of the two or more services identified based on the matching (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID, service manager 134 enables integration between communication services using a universal platform including third party services, services include caller ID rules and call screening rules [based on the identification of the caller ID and call screening services the universal platform would identify routing data for the third party services that provide these features], para. 0077, 0110); and routing communication event information to each of the two or more services of the plurality of services using the routing information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID, service manager 134 enables integration between communication services using a universal platform including third party services, services include caller ID rules and call screening rules [the universal platform would route the call data to the third party services for fulfillment], para. 0077, 0110).

Regarding claim 9, Vendrow discloses wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof (the universal platform can integrate with SIP protocol to provide call features such as call handling [a service would be invoked upon receiving a SIP message associated with call handling], para. 0077).

Regarding claim 10, Vendrow discloses wherein the action comprises transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof (services include caller ID rules [obtaining customer information], para. 0077, 0122).

Regarding claim 11, Vendrow discloses wherein performing the action occurs before handling the communication (service manager 134 can be configured to store configuration parameter data 122 and responsive to such data TSP system 130 can be implemented by a user to control inbound calls before, during, or after reaching mobile device 102, para. 0040).

Regarding claim 12, Vendrow discloses wherein performing the action occurs after handling the communication (service manager 134 can be configured to store configuration parameter data 122 and responsive to such data TSP system 130 can be implemented by a user to control inbound calls before, during, or after reaching mobile device 102, para. 0040).

Regarding claim 13, Vendrow discloses wherein performing the action occurs during handling the communication (service manager 134 can be configured to store configuration parameter data 122 and responsive to such data TSP system 130 can be implemented by a user to control inbound calls before, during, or after reaching mobile device 102, para. 0040).

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Regarding claim 14, Vendrow discloses wherein handling the communication comprises routing the incoming communication to a device associated with the telephone number, wherein the communication comprises a voice call, a text message, an internet communication session, or any combination thereof (the call screening rules can be configured to forward incoming calls with identifiable and recognizable call identification telephone numbers directly to the user, call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user, mobile device 102 includes interface 101 configured to receive inbound calls [a voice call to the user telephone number would be facilitated], para. 0038, 0093, 0110).

Regarding claim 15, Vendrow discloses wherein receiving the indication comprises: receiving the first indication at a unified services platform system (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], service manager 134 can enable integration between various communication services using a universal platform, para. 0077, 0110); and wherein performing the action comprises routing incoming communication data from a network provider system to the third party application service provider system, wherein the network provider system supplies the telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would invoke the call screening service in response to receiving the call], service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as screening rules [the service would be a third party service], the universal platform can collect user information to effectuate the integration process with other service providers [would provide the telephone number to the third party service], para. 0076-0077, 0110, 0114).

Regarding claim 38, Vendrow discloses wherein routing the communication event information comprises: routing the communication event information to a first service of the two or more services using the routing information, wherein the first service generates first service data based on the communication event information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules [the incoming communication data would be sent to the third party service to determine the caller ID], para. 0077, 0110); and routing the first service data to a second service of the two or more services using the routing information, wherein the second service generates second service data based on the first service data (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110).

Regarding claim 39, Vendrow discloses further comprising: routing the communication event to the first service with the communication event information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules [the incoming communication data would be sent to the third party service to determine the caller ID], para. 0077, 0110); and routing the communication event to the second service with the first service data (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110); and routing the communication event with the second service data to a communication device associated with the telephone number (the call screening rules can be configured to forward incoming calls with identifiable and recognizable caller IDs directly to the user [the user would receive the call as well as the indication that the caller ID was recognizable], para. 0110).

Regarding claim 40, Vendrow discloses wherein routing the communication event information comprises: routing the communication event information to a first service of the two or more services using the routing information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules and transcription [the incoming communication data would be sent to the third party services to determine the caller ID], para. 0077, 0079, 0110); and routing the communication event information to a second service of the two or more services using the routing information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules and transcription [the incoming communication data would be sent to the third party services to transcribe the call content], para. 0077, 0079, 0110), wherein the communication information is routed to the first service and the second service in parallel (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules and transcription [the incoming communication data would be sent to the third party services to determine the caller ID and transcribe the call content in parallel as neither depends upon the processing results of the other], para. 0077, 0079, 0110).

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Claims 16-20 lack an inventive step under PCT Article 33(3) as being obvious over Vendrow in view of Dhawan et al., hereinafter referred to as Dhawan.

Regarding claim 16, Vendrow teaches a method (methods for enabling integration between various communication services using a universal platform, para. 0004) for a third party service performed during a communication event (users can submit their telephone number 155 to service manager 134 to access virtual PBX and other call management services including third party services to provide call features such as call handling, para. 0076-0077), the method comprising: receiving, by a unified services platform system, an indication of an incoming communication for a telephone number from a network provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number, the call would originate from a network provider system], service manager 134 can enable integration between various communication services using a universal platform, para. 0076-0077, 0110); identifying, by a processor system, a triggering event associated with the incoming communication for the telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would identify the call screening service policy in connection with incoming calls], implemented using computing device 1000 with processor 1002, para. 0076, 0110, 0161); invoking, by the processor system, a service associated with the telephone number in response to the triggering event, wherein the service is associated with a third party application service provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would invoke the call screening service in response to receiving the call], service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as screening rules [the service would be a third party service], para. 0076-0077, 0110); performing, in response to invoking the service, an action associated with the service based on the triggering event, wherein the action is performed by the third party application service provider system (the call screening rules can be configured to forward incoming calls with identifiable and recognizable call identification telephone numbers directly to the user [the service would be performed when a call is received], para. 0110); receiving a message from the third party application service provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would receive messages from the third party service providers], para. 0114); and routing the message to the network provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would provide messages to the network provider system], para. 0114); the service performed by the third party application service provider system (service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as screening rules [the service would be a third party service], para. 0077); but lacks the teaching a method of billing a customer, a billing message, wherein the billing message comprises chargeable event data; wherein the network provider system bills a subscriber associated with the telephone number for the service performed. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches a method (method to provide users with access to services, para. 0019) of billing a customer (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0118); a billing message, wherein the billing message comprises chargeable event data (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the bill would include chargeable event data], para. 0118); wherein the network provider system bills a subscriber associated with the telephone number for the service performed (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

Regarding claim 17, Vendrow teaches routing data from the network service provider system to the third party application service provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would provide messages between the network service provider and the third party service provider], para. 0114); but lacks the teaching further comprising: receiving payment from the subscriber. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches further comprising: receiving payment from the subscriber (the system is configured to receive a payment from the called parties, para. 0113). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

Regarding claim 18, Vendrow lacks the teaching wherein the billing message is generated in response to performing the action. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches wherein the billing message is generated in response to performing the action (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

Regarding claim 19, Vendrow teaches a message is received by the network provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would provide messages to the network service provider], para. 0114); but lacks the teaching wherein the billing message is received. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches wherein the billing message is received (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the called parties would receive the bill], para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

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Regarding claim 20, Vendrow teaches further comprising: invoking a second service associated with the telephone number in response to the triggering event, wherein the service is associated with a second third party application service provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [the service manager would invoke the call forwarding service in response to receiving the call], service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as call forwarding and screening rules [the two service would be provided by different third party service providers], para. 0076-0077, 0093); performing, in response to invoking the service, a second action associated with the second service based on the triggering event, wherein the action is performed by the second third party application service provider system (call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [call forwarding would be performed when an incoming call is received], para. 0093); receiving a second message from the second third party application service provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would receive messages from the third party service providers], para. 0114); and routing the second message to the network provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would provide messages to the network provider system], para. 0114); the service performed by the third party application service provider system and the second third party application service provider system (service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as screening rules [both services would be third party services], para. 0077); but lacks the teaching a billing message, wherein the second billing message comprises chargeable event data for performing an action; wherein the network provider system bills the subscriber associated with the telephone number for the service performed. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches a billing message, wherein the billing message comprises chargeable event data for performing an action (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the bill would include chargeable event data], para. 0116); wherein the network provider system bills the subscriber associated with the telephone number for the service performed (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0116). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

Claims 21-27, 29-35 lack an inventive step under PCT Article 33(3) as being obvious over Vendrow in view of Murphy et al., hereinafter referred to as Murphy.

Regarding claim 21, Vendrow teaches a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of creating a plurality of service actions in response to a communication event (call screening rules can be configured to forward incoming calls [second service action] with identifiable and recognizable caller IDs [first service action] directly to the user, para. 0110), the method comprising: receiving, by a processor system, an indication of an incoming communication for a telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], implemented using computing device 1000 with processor 1002, para. 0076, 0110, 0161), and wherein a plurality of services associated with a plurality of third party service systems are associated with the telephone number, wherein the plurality of services are invoked by at least one triggering event associated with the telephone number (users can submit telephone number 155 to service manager 134 to access a subset of virtual PBX services, service manager 134 enables integration between communication services to provide third party services such as caller ID rules and call screening rules, para. 0076-0077); identifying, by the processor system, a triggering event associated with the incoming communication for the telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the service manager would identify the caller ID service in connection with incoming calls], para. 0076, 0110); invoking a first service of the plurality of services in response to the triggering event (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the service manager would invoke the call screening service in response to receiving the call], para. 0076, 0110); sending incoming communication information to the first service, wherein the incoming communication information comprises at least a portion of the information associated with the incoming communication, and wherein the first service generates first service data in response to the incoming communication information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules [the incoming communication data would be sent to the third party service to determine the caller ID], para. 0077, 0110); routing the first service data to a second service of the plurality of services (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110); and invoking the second service of the plurality of services in response to routing the first service data to the second service, wherein the second service generates second service data (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the second third party service would apply the call screening rules based on the caller ID data], para. 0077, 0110); but lacks the teaching wherein the telephone number is provided by a network provider system. Murphy is in the field of multi-tenant service management (title) and teaches wherein the telephone number is provided by a network provider system (SaaS 200 may be configured to allow telephone origination services to be aggregated, col. 6 lines 26-28). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

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INTERNATIONAL SEARCHING AUTHORITY

International application No.
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Regarding claim 29, Vendrow teaches a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of creating a plurality of service actions in response to a communication event (call screening rules can be configured to forward incoming calls [second service action] with identifiable and recognizable caller IDs [first service action] directly to the user, para. 0110), the method comprising: receiving, by a processor system, an indication of an communication for a telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], implemented using computing device 1000 with processor 1002, para. 0078, 0110, 0161), and wherein a plurality of service provided by a plurality of third party service systems are associated with the telephone number, wherein one or more of the plurality of services are invoked by at least one triggering event associated with the telephone number (users can submit telephone number 155 to service manager 134 to access a subset of virtual PBX services, service manager 134 enables integration between communication services to provide third party services such as caller ID rules and transcription, para. 0076-0077, 0079); identifying, by the processor system, a triggering event associated with the communication for the telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the service manager would identify the caller ID service in connection with incoming calls], para. 0076, 0110); invoking two or more services of the plurality of services in response to the triggering event (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [first service], commercialized software provides automated transcription of voicemail messages [second service, would be triggered by the same phone call where the call goes to voicemail], para. 0076, 0110, 0129); sending communication information to each of the two or more services, wherein the communication information comprises at least a portion of the information associated with the communication (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules and transcription [the incoming communication data would be sent to the third party services to determine the caller ID and transcribe the call content], para. 0077, 0079, 0110); receiving first service data from a first service of the two or more services (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules [the incoming communication data would be sent to the third party service to determine the caller ID which would be provided to the user], para. 0077, 0110); receiving second service data from a second service of the two or more services (commercialized software provides automated transcription of voicemail messages [the transcription would be provided to the user, para. 0129]; and handling the communication (calls with unrecognizable caller IDs are forwarded to the voice mailbox of the user, para. 0112); but lacks the teaching wherein the telephone number is provided by a network provider system. Murphy is in the field of multi-tenant service management (title) and teaches wherein the telephone number is provided by a network provider system (SaaS 200 may be configured to allow telephone origination services to be aggregated, col. 6 lines 26-28). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claims 22, 30, Vendrow teaches wherein the processor system forms a portion of a unified service platform system, wherein unified services platform system communicates with the plurality of third party service systems through a plurality of integrated interfaces, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein one or more of the plurality of integrated interfaces are incompatible with the provider integrated interface (service manager 134 can enable integration between communication services using a universal platform, the universal platform can integrate SIP, POP3, SMS, and third party protocols and services [the universal platform would communicate with third party services and network providers and would communicate using protocols that are not compatible with the provider], para. 0077).

Regarding claim 23, Vendrow teaches wherein the second service generates the second service data using at least a portion of the first service data (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110).

Regarding claim 24, Vendrow teaches further comprising: forwarding the first service data and the second service data to a device associated with the telephone number (services include transcription and synchronizing message communication via SMS [both services would generate data regarding an incoming call and forward it to the device], para. 0079).

Regarding claim 25, Vendrow teaches wherein the services comprise one or more actions performed by social media software, customer relationship management software, call and message translation software, file sharing software, file management software, contact management software, voicemail software, messaging software, call recording software, contact matching software, messaging storage software, call notification software, or any combination thereof (services include voice messaging, para. 0055).

Regarding claim 26, Vendrow teaches further comprising: sending the incoming communication to the first service (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules [the incoming communication data would be sent to the third party service to determine the caller ID], para. 0077, 0110); routing the incoming communication from the first service to the second service (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110); and routing the incoming communication to a device associated with the telephone number (the call screening rules can be configured to forward incoming calls with identifiable and recognizable caller IDs directly to the user, para. 0110).

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Regarding claim 27, Vendrow teaches wherein receiving the indication of the incoming communication comprises: receiving the indication at a unified services platform system from the network provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call], service manager 134 enables integration between communications services using a universal platform [the universal platform would receive the call data to route the data to the third party service], para. 0076-0077, 0110).

Regarding claim 31, Vendrow teaches wherein sending the communication information to each of the two or more services occurs in parallel (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules and transcription [the incoming communication data would be sent to the third party services to determine the caller ID and transcribe the call content in parallel as neither depends upon the processing results of the other], para. 0077, 0079, 0110).

Regarding claim 32, Vendrow teaches wherein handling the communication comprises routing the incoming communication to a device associated with the telephone number, and wherein the communication comprises an incoming voice call, an outgoing voice all, an incoming text message, an outgoing text message, an outgoing network connection request, or any combination thereof (calls with unrecognizable caller IDs are forwarded to the voice mailbox of the user, para. 0112).

Regarding claim 33, Vendrow teaches further comprising combining the first service data and the second service data to form a combined data set; and sending the combined data set to a device associated with the telephone number (calls with unrecognizable caller IDs are forwarded to the voice mailbox of the user, commercialized software provides automated transcription of voicemail messages [when the user checks his voicemail he will be provided with a combined data set including the transcribed voicemail and an indication of the unrecognizable caller ID, the data would be combined for a single call instance and provided to the device], para. 0112, 0129).

Regarding claim 34, Vendrow teaches further comprising: routing the first service data to a third service of the plurality of services (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to a third third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110); and invoking the third service in response to routing the first service data to the third service, wherein the third service generates third service data (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the third third party service would apply the call screening rules based on the caller ID data], para. 0077, 0110).

Regarding claim 35, Vendrow teaches wherein the indication is received at a unified services platform system, and wherein the unified services platform system sends the communication information to each of the two or more services (service manager 134 enables integration between communication services including third party services using a universal platform, para. 0077).

Claims 41-42, 47 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Vendrow.

Regarding claim 41, Staykoff teaches a method (a method of grouping and orchestration of multiple services coming from various platforms, para. 0087) of provisioning a service for use with a group plan (multi-service network center 10 has the ability to determine the profile of a group of users, the user profile includes the definition of white and black lists and service profiles, para. 0140, 0174-0175), the method comprising: receiving, by a unified services platform system, a subscription request for a service for a group plan (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received], community charging service provides community pricing and billing [the request would refer to a group plan], para. 0130, 0203, 0216), wherein the group plan comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber (multi-service network center 10 has the ability to determine the profile of a community of users, the profile includes a phone number, multi-service network center 10 bills a large community of subscribers, para. 0174-0175, 0216), and wherein the service is provided by a third party application service provider system (multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services, para. 0146, 0154, 0194); sending, by the unified services platform system, an activation request for the group plan to the third party application service provider system (users subscribe to any service using multi-service network center 10, community charging service provides community pricing and billing [the request would refer to a group plan], multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [the network center would forward the request to the third party service to fulfill service], para. 0203, 0216); associating the service with each telephone number of the plurality of telephone numbers (multi-service network center 10 has the ability to determine the profile of a community of users including its usage profile related to at least one service [the service would be associated with each profile based on the subscription], para. 0174); providing access to the service for each telephone number based on the associating (multi-service network center 10 has the ability to determine the profile of a community of users including its usage profile related to at least one service [access to the subscribed service would be provided], the services requested by end-users are subject to control and billing, para. 0174, 0201); receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received, there would be a plurality of services], multi-service network center 10 as the ability to determine the profile of a user or a community of users including a phone number and its usage profile related to at least one service [a user could have both an individual and community profile], para. 0130, 0174, 0203), wherein the second service is provided by a second third party application service provider system (multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [there are a plurality of third party service platforms], para. 0146, 0154, 0194);

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sending, by the unified services platform system, a second activation request for the service to the second third party application service provider system (users subscribe to any service using multi-service network center 10, multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [the network center would forward the request to the third party service to fulfill service], para. 0203), associating the second service with the first telephone number (multi-service network center 10 has the ability to determine the profile of a user including his usage profile related to at least one service [the service would be associated with the profile based on the subscription], para. 0174); and providing access to the second service for the first telephone number based on the associating (multi-service network center 10 has the ability to determine the profile of a user including his usage profile related to at least one service [access to the subscribed service would be provided], the services requested by end-users are subject to control and billing, para. 0174, 0201); but lacks the teaching receiving an activation response from a service provider system; and receiving a second activation response from a service provider system. Vendrow is in the field of universal call management (title) and teaches receiving an activation response from a service provider system (activation manager 131 can be configured to activate user account 145 once user account 145 has been provisioned with configuration data defining a subset of virtual PBX services, test/validation manager 137 validates a telephone number provided as user ID 218a by making a call to the telephone number associated with phone 160 [receiving a validation call functions as an activation response of service], para. 0052); and receiving a second activation response from a service provider system (activation manager 131 can be configured to activate user account 145 once user account 145 has been provisioned with configuration data defining a subset of virtual PBX services, test/validation manager 137 validates an email address used as user ID 218a where an email message is sent to the email address to validate that the email address can be implemented as an extension [receiving a validation email functions as an activation response of service], para. 0052). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Regarding claim 42, Staykoff teaches further comprising: receiving billing and settlement information associated with each of the telephone numbers (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216).

Regarding claim 47, Staykoff lacks the teaching further comprising: invoking the service in response to a triggering event associated with a first telephone number of the plurality of telephone numbers. Vendrow is in the field of universal call management (title) and teaches further comprising: invoking the service in response to a triggering event associated with a first telephone number of the plurality of telephone numbers (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], para. 0076, 0110). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Claims 54, 59-60 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Murphy.

Regarding claim 54, Staykoff teaches a method (a method of grouping and orchestration of multiple services coming from various platforms, para. 0087) of using a rules engine to allocate usage of a service between personal and group accounts (multi-service network center 10 has the ability to determine the profile of a user or a community of users, the profile includes phone numbers and at least one service [the multi-service network center functions as a rules engine that allocates services among account profiles including individual and group accounts], para. 0174), the method comprising: receiving, by a unified services platform system, a subscription request for a service associated with a group (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received], community charging service provides community pricing and billing [the request would refer to a group plan], para. 0130, 0203, 0216), wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber (multi-service network center 10 has the ability to determine the profile of a community of users, the profile includes a phone number, multi-service network center 10 bills a large community of subscribers, para. 0174-0175, 0216), wherein the service is provided by a third party application service provider system (multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services, para. 0146, 0154, 0194); associating the service with each telephone number of the plurality of telephone numbers (multi-service network center 10 has the ability to determine the profile of a community of users including its usage profile related to at least one service [the service would be associated with each profile based on the subscription], para. 0174); receiving billing and settlement information from the third party application service provider system for each telephone number (billing is done by multi-service network center 10 or by specialized external platforms [the service would provide billing data], multi-service network center 10 is configured to host third party services, para. 0194, 0206); generating a billing policy store comprising a plurality of rules for charging for the service, wherein the rules define a relationship between a usage conditions of the service and payment by at least one of the subscriber or the group (a specific procedure for external billing is specified in the service logic [rules for charging] when creating the service and is triggered in real time during the user session [the service logic would be implemented as a billing policy store], para. 0202); generating billing routing information based on the billing and settlement information and the billing policy store, wherein the billing routing information forwards billing charges for the usage associated with the service to at least one of the subscriber or the group based on the usage conditions (network browser 15 communicates via a link 261 with a charging module 26 and via a link 251 with a billing module 25, in this way the services and content requested by a single end-user are generally subject to control and billing [the services would be billed according to determined billing rules enforced by the billing module], para. 0201); generating a charge for the service in response to a use of the service under usage conditions by one or more of the subscribers (a specific procedure for external billing is specified in the service logic when creating the service and is triggered in real time during the user session [a charge would be generated during the session], para. 0202); and routing the charges to at least one of the subscriber or the group using the billing routing information (network browser 15 communicates via a link 261 with a charging module 26 and via a link 251 with a billing module 25, in this way the services and content requested by a single end-user are generally subject to control and billing [the user would be billed], para. 0201); but lacks the teaching wherein the telephone numbers are provided by a network provider system.

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Murphy is in the field of multi-tenant service management (title) and teaches wherein the telephone numbers are provided by a network provider system (SaaS 200 may be configured to allow telephone origination services to be aggregated, col. 6 lines 26-28). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Staykoff. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 59, Staykoff as modified lacks the teaching wherein a first subscriber associated with a first telephone number of the plurality of telephone numbers is provided network services through the network provider system, wherein group is provided network services through a second network provider system, and wherein routing the charges to at least one of the subscriber or the group comprises routing the charges to at least one of the first subscriber through the network provider system or the group through the second network provider system. However, Staykoff teaches group network services (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216) and routing data between networks (a network gateway is a platform or a set of intermediate processes and platforms that allows communicating with elements of heterogeneous networks, para. 0137). Furthermore, providing specific network route for data was well known in the art and the specifics would have been a matter of design choice. Therefore it would have been obvious to incorporate the above features onto the invention of Staykoff. The motivation would have been to provide a routing scheme useful to the application.

Regarding claim 60, Staykoff teaches further comprising: associating a second service with each telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system (users subscribe to any service using multi-service network center 10, multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [the network center would forward the request to the third party service to fulfill service], multi-service network center 10 has the ability to determine the profile of a user including his usage profile related to at least one service [the service would be associated with the profile based on the subscription], para. 0174, 0203); receiving second billing and settlement information from the second third party application service provider for each telephone number (billing is done by multi-service network center 10 or by specialized external platforms [the service would provide billing data; there would be a plurality of services], multi-service network center 10 is configured to host third party services, para. 0194, 0206); and generating second billing routing information based on the second billing and settlement information and the billing policy store, wherein the second billing routing information forwards billing charges for the usage associated with the second service to at least one of the subscriber or the group based on a second set of usage conditions, wherein the second set of usage conditions are different than the usage conditions for the service (network browser 15 communicates via a link 261 with a charging module 26 and via a link 251 with a billing module 25, in this way the services and content requested by a single end-user are generally subject to control and billing [each service request by an end user is subject to billing, different services would be billed according to their own terms], para. 0201).

Claims 1, 7 lack an inventive step under PCT Article 33(3) as being obvious over Murphy in view of Velez-Rivera et al., hereinafter referred to as Velez-Rivera, and further in view of Gourraud.

Regarding claim 1, Murphy teaches a method (methods for managing VoIP services, col. 1 lines 57-58) of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform (the VoIP system management software application may allow reseller 155 to configure the components of the VoIP network platform [network provider] to route and treat calls for the users, reseller 205 may utilize the multi-tenant software as a service [SaaS] 200 to interface to external vendors, such as SIP trunking vendors 230, hosted PBX vendors 235, and telephone number vendors 240 [the vendors function as application developer systems]; vendor APIs may be built-in to the SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 5 lines 10-13, col. 6 lines 5-13), the method comprising: wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services (user 345 activates telephone number 320 which originates from vendor 305, telephone number 320 may be processed by resellers 325 and 335 in order to become available to and activated by user 345, user 345 may utilize telephone number 320 for VoIP service for any length of time, col. 9 lines 47-51, 63-64); receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235, 240, col. 6 lines 8-16), integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13); and integrating the API interface with the unified services platform API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the API interface (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment [the various APIs would be integrated with the SaaS unified interface], SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235 and 240 [the APIs are otherwise incompatible], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 10-18); but lacks the teaching establishing a plurality of service accounts for a corresponding plurality of application service provider systems; and receiving a provider API interfaces for a network provider system. Velez-Rivera is in the field of application development (title) and teaches establishing a plurality of service accounts for a corresponding plurality of application service provider systems (venders are billed for time used in the channels [the system would maintain account information for the vendor], para. 0139). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Velez-Rivera to incorporate the above features in the invention of Murphy. The motivation would have been to increase adaptability (Velez-Rivera, para. 0008). Gourraud is in the field of third-party service provider applications (abstract) and teaches receiving a provider API interfaces for a network provider system (network-operator-provided services can use internal-service APIs 308 to access capabilities of the network entities, each of call server 402 and call server 404 support internal-service APIs 308 [the provider API interface would be provided], para. 0054). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Gourraud to incorporate the above features in the invention of Murphy. The motivation would have been to reduce costs (Gourraud, para. 0002).

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Regarding claim 7, Murphy lacks the teaching further comprising: receiving, at the unified services platform, billing routing information from the plurality of application service provider systems; and integrating the billing routing information with the network provider system. However, Murphy teaches integrating data with the network provider system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13). Velez-Rivera is in the field of application development (title) and teaches further comprising: receiving, at the unified services platform, billing routing information from the plurality of application service provider systems (venders are billed for time used in the channels [the system would maintain billing routing data for the vendor], para. 0139). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Velez-Rivera to incorporate the above features in the invention of Murphy. The motivation would have been to increase adaptability (Velez-Rivera, para. 0006).

Claims 48-52 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Friedes, and further in view of Murphy.

Regarding claim 48, Staykoff teaches a method (a method of grouping and orchestration of multiple services coming from various platforms, para. 0067) of billing for a service provided to the members of a group (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216), the method comprising: receiving, by a unified services platform system, a subscription request for a service associated with a group (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received], community charging service provides community pricing and billing [the request would refer to a group plan], para. 0130, 0203, 0216), wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber (multi-service network center 10 has the ability to determine the profile of a community of users, the profile includes a phone number, multi-service network center 10 bills a large community of subscribers, para. 0174-0175, 0216), and wherein the service is provided by a third party application service provider system (multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services, para. 0146, 0154, 0194); associating the service with each telephone number of the plurality of telephone numbers (multi-service network center 10 has the ability to determine the profile of a community of users including its usage profile related to at least one service [the service would be associated with each profile based on the subscription], para. 0174); receiving billing and settlement information from the third party application service provider system for each telephone number (billing is done by multi-service network center 10 or by specialized external platforms [the service would provide billing data], multi-service network center 10 is configured to host third party services, para. 0194, 0206); associating billing routing information for the service with each telephone number of the plurality of telephone number (multi-service network center 10 has the ability to determine the profile of a user including a phone number and the duration of connection, a specific procedure for external billing is specified in the service logic when creating the service and is triggered in real time during the user session [the bill would be routed to the proper user], para. 0174, 0202); generating chargeable event data in response to a use of the service by one or more of the subscribers (services and content requested by a single end-user are subject to control and billing, para. 0201); associating a second service with a first telephone number of the plurality of telephone numbers, wherein the second service is not associated with the group (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received, there would be a plurality of services], multi-service network center 10 as the ability to determine the profile of a user or a community of users including a phone number and its usage profile related to at least one service [a user could have both an individual and community profile], para. 0130, 0174, 0203), wherein the second service is provided by a second third party application service provider system (multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [there are a plurality of third party service platforms], para. 0146, 0154, 0194); and routing billing charges for the second service to a first subscriber associated with the first telephone number (multi-service network center 10 has the ebility to determine the profile of a user including a phone number and the duration of connection, a specific procedure for external billing is specified in the service logic when creating the service [there would be a plurality of services] and is triggered in real time during the user session [the bill would be routed to the proper user], para. 0174, 0202); but lacks the teaching wherein the telephone number is provided by a network provider system; generating billing routing information based on the billing and settlement information, wherein the routing information forwards billing charges for the services associated with the service to a group administrator; and forwarding the chargeable event data to the group administrator based on the billing routing information. Friedes is in the field of billing multiple services on a single account (title) and teaches generating billing routing information based on the billing and settlement information, wherein the routing information forwards billing charges for the services associated with the service to a group administrator (each wireless telephone station 20 has a unique telephone wireless for call routing and billing purposes, to render an aggregate bill all telephone numbers common to a single subscriber are cross referenced to a single account number associated with that subscriber, col. 2 lines 51-53, col. 4 lines 13-19); and forwarding the chargeable event data to the group administrator based on the billing routing information (a subscriber having multiple lines receives an aggregate bill, col. 4 lines 53-57). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Friedes to incorporate the above features in the invention of Staykoff. The motivation would have been to provide aggregate billing (Friedes, col. 1 lines 48-57). Murphy is in the field of multi-tenant service management (title) and teaches wherein the telephone number is provided by a network provider system (SaaS 200 may be configured to allow telephone origination services to be aggregated, col. 6 lines 26-28). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Staykoff. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

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Regarding claim 49, Staykoff teaches wherein the unified services platform system communicates with the third party service system through a first integrated interface, wherein the unified services platform system communications with the second third party service system through a second integrated interface, wherein the unified services platform system communicates with the network provider system through a provider integrated interface (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], multi-service network center 10 is configured as a hosting platform hosting applications and external or third party services [the unified platform would communicate with third party platforms and provider systems], para. 0130, 0194), and wherein the integrated interface and the second integrated interface are incompatible with the provider integrated interface (a network gateway is a platform or set of intermediate processes and platforms that allows communicating with elements of heterogeneous networks, para. 0137).

Regarding claim 50, Staykoff teaches further comprising: associating a third service with the first telephone number of the plurality of telephone numbers, wherein the third service is associated with the group (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 (a subscription request would be received, there would be a plurality of services), multi-service network center 10 as the ability to determine the profile of a community of users including a phone number and its usage profile related to at least one service [the service would be a group service], para. 0130, 0174, 0203); but lacks the teaching wherein the routing information forwards billing charges for the third service to the group administrator. Friedes is in the field of billing multiple services on a single account (title) and teaches wherein the routing information forwards billing charges for the third service to the group administrator (each wireless telephone station 20 has a unique telephone wireless for call routing and billing purposes, to render an aggregate bill all telephone numbers common to a single subscriber are cross referenced to a single account number associated with that subscriber, col. 2 lines 51-53, col. 4 lines 13-19). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Friedes to incorporate the above features in the invention of Staykoff. The motivation would have been to provide aggregate billing (Friedes, col. 1 lines 48-57).

Regarding claim 51, Staykoff teaches wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data to the unified services platform system, and forwarding the chargeable event data from the unified services platform system to the network provider system (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], multi-service network center 10 is configured as a hosting platform hosting applications and external or third party services [the unified platform would communicate with third party platforms and provider systems], the community charging service allows telecom operators to manage the sessions of communities of significant size [the billing data would be routed to the network provider via the unified platform], para. 0130, 0194, 0216).

Regarding claim 52, Staykoff teaches wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data from the third party application service provider system to the network provider system (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], multi-service network center 10 is configured as a hosting platform hosting applications and external or third party services [the unified platform would communicate with third party platforms and provider systems], the community charging service allows telecom operators to manage the sessions of communities of significant size [the billing data would be routed to the network provider via the unified platform], para. 0130, 0194, 0216).

Claims 70-72 lack an inventive step under PCT Article 33(3) as being obvious over Vendrow in view of Mishra, and further in view of Staykoff.

Regarding claim 70, Vendrow teaches a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of actions within services provided by a third party application service providers (service manager 134 enables integration between communication services using a universal platform, the universal platform can integrate with third party services to provide call features including caller ID rules and call screening rules, para. 0077), the method comprising: establishing, on a unified services platform system, a plurality of service accounts for a corresponding plurality of application service providers (service manager 134 enables integration between communication services using a universal platform, the universal platform can integrate with third party services to provide call features including caller ID rules and call screening rules [would include registering the third party services with the universal platform], para. 0077); a service for each of the plurality of application service providers, wherein the service comprises one or more actions, wherein the actions comprise responses to triggering events occurring for a telephone number (service manager 134 enables integration between communication services using a universal platform, the universal platform can integrate with third party services to provide call features including caller ID rules and call screening rules, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the incoming call functions as a trigger], para. 0077, 0110); one or more actions for each service for each of the plurality of application service provider systems (service manager 134 enables integration between communication services using a universal platform, the universal platform can integrate with third party services to provide call features including caller ID rules and call screening rules [third party services perform actions], para. 0077); storing an indication of the triggering event, the corresponding action, and the response (interactions between individual users on one or more platforms can be tracked in a single conversation history as a threaded interface within the service [the triggering event is the initial communication, the subsequent interactions between the users function as the corresponding action and response], para. 0077); and individual actions associated with each of the services associated with the plurality of application service provider systems (service manager 134 enables integration between communication services using a universal platform, the universal platform can integrate with third party services to provide call features including caller ID rules and call screening rules [third party services perform actions], para. 0077); but lacks the teaching identifying actions within services; receiving a definition of a service; receiving one or more definitions of the one or more actions; testing each triggering event and corresponding action in a test environment to generate a response; and identifying individual actions associated with each of the services.

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Mishra is in the field of telecommunication service management (title) and teaches identifying actions within services (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, the product model stores entities defining the elementary services provided by the network, a product consists of several such elementary services [the elementary services function as actions and would be identified in the product catalogue], para. 0077, 0084); receiving a definition of a service (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, para. 0077); receiving one or more definitions of the one or more actions (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, the product model stores entities defining the elementary services provided by the network, a product consists of several such elementary services [the elementary services function as actions and would be identified in the product catalogue], para. 0077, 0084); and identifying individual actions associated with each of the services (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, the product model stores entities defining the elementary services provided by the network, a product consists of several such elementary services [the elementary services function as actions and would be identified in the product catalogue], para. 0077, 0084). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Vendrow. The motivation would have been to reduce confusion (Mishra, para. 0005). Staykoff is in the field of multiservice networks (title) and teaches testing each triggering event and corresponding action in a test environment to generate a response (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, para. 0157). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Staykoff to incorporate the above features in the invention of Vendrow. The motivation would have been to prevent network congestion (Staykoff, para. 0008).

Regarding claim 71, Vendrow teaches wherein the individual actions comprise one or more of transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [obtaining contact information], para. 0076, 0110).

Regarding claim 72, Vendrow teaches wherein the triggering events comprises one or more of a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof (the universal platform can integrate with SIP protocol to provide call features such as call handling [a service would be invoked upon receiving a SIP message associated with call handling], para. 0077).

Claims 28, 36 lack an inventive step under PCT Article 33(3) as being obvious over Vendrow in view of Murphy, and further in view of Dhawan.

Regarding claim 28, Vendrow teaches routing first information and second information to the network provider system (the universal platform can collect user information to effectuate the integration process, there are a plurality of call features including caller ID rules and call screening rules [information associated with each feature would be routed to the network provider system], para. 0077, 0114); but lacks the teaching further comprising: generating first billing information for the first service based on invoking the first service; generating second billing information for the second service based on invoking the second service; and wherein the network provider system bills a subscriber associated with the telephone number. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches further comprising: generating first billing information for the first service based on invoking the first service (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0116); generating second billing information for the second service based on invoking the second service (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, alternate routing service 400 might also include a routing system 406 [second service], para. 0118-0119); and wherein the network provider system bills a subscriber associated with the telephone number (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the bill would be provided to the subscriber], para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

Regarding claim 36, Vendrow teaches routing first information and second information to the network provider system (the universal platform can collect user information to effectuate the integration process, there are a plurality of call features including caller ID rules and call screening rules [information associated with each feature would be routed to the network provider system], para. 0077, 0114); but lacks the teaching further comprising: generating first billing information for the first service; generating second billing information for the second service; and wherein the network provider system bills a subscriber associated with the telephone number. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches further comprising: generating first billing information for the first service (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0116); generating second billing information for the second service (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, alternate routing service 400 might also include a routing system 406 [second service], para. 0118-0119); and wherein the network provider system bills a subscriber associated with the telephone number (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the bill would be provided to the subscriber], para. 0116). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

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Claim 43 lacks an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Vendrow, and further in view of Friedes.

Regarding claim 43, Staykoff as modified lacks the teaching wherein the billing and settlement information comprises routing information for routing charges incurred through use of the service, wherein the routing information routes the charges incurred to a group administrator for the group plan. Friedes is in the field of billing multiple services on a single account (title) and teaches wherein the billing and settlement information comprises routing information for routing charges incurred through use of the service, wherein the routing information routes the charges incurred to a group administrator for the group plan (each wireless telephone station 20 has a unique telephone wireless for call routing and billing purposes, to render an aggregate bill all telephone numbers common to a single subscriber are cross referenced to a single account number associated with that subscriber, col. 2 lines 51-53, col. 4 lines 13-19). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Friedes to incorporate the above features in the invention of Staykoff. The motivation would have been to provide aggregate billing (Friedes, col. 1 lines 48-57).

Claims 44-46 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Vendrow, and further in view of Murphy.

Regarding claim 44, Staykoff as modified lacks the teaching wherein an API of the third party application service provider system is incompatible with an API of the network provider system. Murphy is in the field of multi-tenant service management (title) and teaches wherein an API of the third party application service provider system is incompatible with an API of the network provider system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment [the various APIs would be integrated with the SaaS unified interface], SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235 and 240 [the APIs are otherwise incompatible], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 10-18). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 45, Staykoff lacks the teaching wherein the API of the third party application service provider system is integrated with the unified services platform system, and wherein API of the network provider system is integrated with the unified services platform system, and wherein the third party application communicates with the network provider system through the unified services platform system. Murphy is in the field of multi-tenant service management (title) and teaches wherein the API of the third party application service provider system is integrated with the unified services platform system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13), and wherein API of the network provider system is integrated with the unified services platform system, and wherein the third party application communicates with the network provider system through the unified services platform system (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235, 240 [the third party application and the network provider function as different venders], col. 6 lines 8-16). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 46, Staykoff teaches further comprising: receiving, by the unified services platform system, a second subscription request for a second service for the group plan, wherein the second service is provided by a second third party application service provider system (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received, there would be a plurality of services], multi-service network center 10 as the ability to determine the profile of a community of users including a phone number and its usage profile related to at least one service [the service would be a group service], para. 0130, 0174, 0203); sending, by the unified services platform system, a second activation request for the group plan to the third party application service provider system (users subscribe to any service using multi-service network center 10, multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [the network center would forward the request to the third party service to fulfill service], para. 0203), associating the second service with each telephone number of the plurality of telephone numbers (multi-service network center 10 has the ability to determine the profile of a community of users including their usage profile related to at least one service [the service would be associated with the profile based on the subscription], para. 0174); and providing access to the second service for each telephone number based on the associating (multi-service network center 10 has the ability to determine the profile of a community of users including their usage profile related to at least one service [access to the subscribed service would be provided], para. 0174); but lacks the teaching wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system. Vendrow is in the field of universal call management (title) and teaches receiving a second activation response from the third party application service provider system (activation manager 131 can be configured to activate user account 145 once user account 145 has been provisioned with configuration data defining a subset of virtual PBX services, test/validation manager 137 validates an email address used as user ID 218a where an email message is sent to the email address to validate that the email address can be implemented as an extension [receiving a validation email functions as an activation response of service], para. 0052). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004). Murphy is in the field of multi-tenant service management (title) and teaches wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment [the various APIs would be integrated with the SaaS unified interface], SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235 and 240 [the APIs are otherwise incompatible], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 10-18). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

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Claims 55-58 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Murphy, and further in view of Vendrow.

Regarding claim 55, Staykoff teaches wherein the plurality of rules specify payment by the group when the service is used (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216); but lacks the teaching when the service is used within a predefined usage condition, wherein the usage condition comprises a time of day, a day of the week, a month of the year, a holiday schedule, or any combination thereof. Vendrow is in the field of universal call management (title) and teaches when the service is used within a predefined usage condition, wherein the usage condition comprises a time of day, a day of the week, a month of the year, a holiday schedule, or any combination thereof (the automated responses can be customized by the user based on any number of criteria that include time of day, para. 0106). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Regarding claim 56, Staykoff teaches wherein the plurality of rules specify payment by the group when the service is used (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216); but lacks the teaching when the service is used within a predefined usage condition, wherein the usage condition comprises a geographic location or a geographic area. Vendrow is in the field of universal call management (title) and teaches when the service is used within a predefined usage condition, wherein the usage condition comprises a geographic location or a geographic area (the automated responses can be customized by the user based on any number of criteria that include GPS location, para. 0106). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Regarding claim 57, Staykoff teaches wherein the plurality of rules specify payment by the group when the service is used (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216); but lacks the teaching when the service is used within a predefined usage condition, wherein the usage condition comprises a type of network connection, a specific network interface point, or any combination thereof. Vendrow is in the field of universal call management (title) and teaches when the service is used within a predefined usage condition, wherein the usage condition comprises a type of network connection, a specific network interface point, or any combination thereof (the automated responses can be customized by the user based on any number of criteria that include originating platform). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Regarding claim 58, Staykoff teaches wherein the plurality of rules specify payment by the group when the service is used (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216); but lacks the teaching when the service is used within a predefined usage condition, wherein the usage condition comprises one or more predefined triggering events. Vendrow is in the field of universal call management (title) and teaches when the service is used within a predefined usage condition, wherein the usage condition comprises one or more predefined triggering events (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the incoming call functions as a trigger], para. 0076, 0110). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Claims 61-69, 73-74 lack an inventive step under PCT Article 33(3) as being obvious over Vendrow in view of Mishra et al., hereinafter referred to as Mishra, further in view of Staykoff, and further in view of Murphy.

Regarding claim 61, Vendrow teaches a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of combining partial functionality across a plurality of applications to create a new service (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110), the method comprising: receiving, by a unified services platform system, data for each of a plurality of application service provider systems (service manager 134 enables integration between communication services using a universal platform [the universal platform would receive data from communication services], para. 0077); wherein actions comprise responses to triggering events occurring for a telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the incoming call functions as a trigger], para. 0076, 0110); storing an indication of the triggering event, the corresponding action, and the response (interactions between individual users on one or more platforms can be tracked in a single conversation history as a threaded interface within the service [the triggering event is the initial communication, the subsequent interactions between the users function as the corresponding action and response], para. 0077); identifying individual actions associated with each of the services associated with the plurality of application service provider systems (provisioning manager 132 can operate to configure configuration data 144 to provide a subset of virtual PBX services in association with user account 145, the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual, para. 0050, 0078);combining two or more individual actions from different services provided by different application service provider systems (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations [second action] depending upon the caller ID of the callers [first action], third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110);

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but lacks the teaching a definition of a service; receiving one or more definitions of actions for each service for each of the plurality of application service provider systems; testing each triggering event and corresponding action in a test environment to generate a response; and forming a new service based on the combining. Mishra is in the field of telecommunication service management (title) and teaches a definition of a service (the services provided by telecommunication service 10 and used by end-users 30 are defined in terms of a set of telecommunication products, para. 0071); receiving one or more definitions of actions for each service for each of the plurality of application service provider systems (the services provided by telecommunication service 10 and used by end-users 30 are defined in terms of a set of telecommunication products which are managed by a product management system 100, product management system 100 maintains a product model 102 representing available products and technologies used in their implementation, para. 0071). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Vendrow. The motivation would have been to reduce confusion (Mishra, para. 0005). Staykoff is in the field of multiservice networks (title) and teaches testing each triggering event and corresponding action in a test environment to generate a response (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, para. 0157). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Staykoff to incorporate the above features in the invention of Vendrow. The motivation would have been to prevent network congestion (Staykoff, para. 0008). Murphy is in the field of multi-tenant service management (title) and teaches forming a new service based on the combining (reseller 205 may utilize multitenant SaaS 200 residing in the cloud to add third-party services to its various service offerings and white-brand and sell those third-party services as if they were their own, col. 5 lines 54-57). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 62, Vendrow teaches wherein the individual actions comprise one or more of transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [obtaining contact information], para. 0076, 0110).

Regarding claim 63, Vendrow teaches wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof (the universal platform can integrate with SIP protocol to provide call features such as call handling [a service would be invoked upon receiving a SIP message associated with call handling], para. 0077).

Regarding claim 64, Vendrow teaches wherein combining the two or more individual actions comprises combining the two or more individual actions by the unified services platform system (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, service manager 134 enables integration between communication services using a universal platform, the universal platform integrates with third party services to provide call features including caller ID rules and call screening rules [the call data would be communicated between services using the universal platform], para. 0077, 0110).

Regarding claim 65, Vendrow teaches wherein combining the two or more individual actions further comprises: receiving, by the unified services platform system, data associated with a telephone number to combine the two or more individual actions (provisioning manager 132 can operate to configure configuration data 144 to provide a subset of virtual PBX services in association with user account 145, the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual [actions as associated with the user account], users can submit telephone number 155 to service manager 134 to access a subset of virtual PBX services, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [two individual actions], para. 0050, 0076, 0078, 0110); generating, by the unified services platform system, routing and integration data for the two or more individual actions (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, service manager 134 enables integration between communication services using a universal platform, the universal platform integrates with third party services to provide call features including caller ID rules and call screening rules [the call data would be communicated between services using the universal platform], para. 0077, 0110); and activating the service for the subscriber, wherein the new service includes the routing and integration data generated by the unified services platform (activation manager 131 can be configured to activate user account 145 once user account 145 has been provisioned with configuration data defining a subset of virtual PBX services, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, service manager 134 enables integration between communication services using a universal platform, the universal platform integrates with third party services to provide call features including caller ID rules and call screening rules [the call data would be communicated between services using the universal platform, para. 0052, 0077, 0110); but lacks the teaching a request from a subscriber; and activating the new service for the subscriber. Mishra is in the field of telecommunication service management (title) and teaches a request from a subscriber (a user can request products by way of product orders using an order processing system 40, para. 0072); and activating the new service for the subscriber (portfolio management process 108 generates a set of products that specify product features for the end-user, para. 0179). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Vendrow. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 66, Vendrow lacks the teaching further comprising: publishing the new service in a catalog available to a plurality of subscribers. Mishra is in the field of telecommunication service management (title) and teaches further comprising: publishing the new service in a catalog available to a plurality of subscribers (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, para. 0077). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Vendrow. The motivation would have been to reduce confusion (Mishra, para. 0005)

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International application No.
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Regarding claim 67, Vendrow teaches wherein the new service comprises a first individual action based on a first trigger and a second individual action based on a second trigger (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the first action is the caller ID service based on the incoming call trigger, the second action is the call screening based on the caller ID data trigger], para. 0077, 0110).

Regarding claim 68, Vendrow teaches wherein the second trigger comprises a response generated by the first individual action (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the first action is the caller ID service based on the incoming call trigger, the second action is the call screening based on the caller ID data trigger], para. 0077, 0110).

Regarding claim 69, Vendrow teaches further comprising: receiving a selection of the two or more of the individual actions, wherein combining the two or more individual actions from different services occurs in response to receiving the selection of the two or more individual actions (provisioning manager 132 can operate to configure configuration data 144 to provide a subset of virtual PBX services in association with user account 145, the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual [actions can be selected by the user], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the two individual actions would be combined], para. 0050, 0078, 0110); but lacks the teaching publishing the individual actions in a catalog. Mishra is in the field of telecommunication service management (title) and teaches publishing the individual actions in a catalog (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, para. 0077). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Vendrow. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 73, Vendrow as modified lacks the teaching wherein two or more of the plurality of application service provider systems have different APIs, and wherein the different APIs are not compatible with each other. Murphy is in the field of multi-tenant service management (title) and teaches wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment [the various APIs would be integrated with the SaaS unified interface], SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235 and 240 [the APIs are otherwise incompatible], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 10-18). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 74, Vendrow teaches further comprising: enabling two or more of the individual actions to work together by providing a common interface using the unified services platform system, wherein the two or more individual actions are provided by at least two different application service provider systems (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations [second action] depending upon the caller ID of the callers [first action], the universal platform can integrate third party services to provide call features that include caller ID rules and call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110).

Claims 75-78, 80 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Murphy, further in view of Mishra, and further in view of Vendrow.

Regarding claim 75, Staykoff teaches a method (a method of grouping and orchestration of multiple services coming from various platforms, para. 0087) of developing and testing a new application service through a unified services platform (telecommunications operators have access to this architecture to conduct functional and load testing of external systems, multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], para. 0157), the method comprising: establishing a plurality of service accounts for a corresponding plurality of application service provider systems (multi-service network center 10 is configured as a "hosting" platform hosting applications and external or third party services, third parties access securely the functionality of creating and activating applications and services [the third parties would be assigned a service account for secure access], telecommunications operators are permitted to develop network services operated by third parties, para. 0194); testing each triggering event and corresponding action for each service in a test environment to generate a response (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, para. 0157); and providing access to each service within a working environment after performing the testing (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, creation and activation of services includes testing, validation, versioning and deployment of services, para. 0157, 0211); but lacks the teaching receiving a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating each of the plurality of API interfaces with a unified services platform system API interface; receiving a definition of a service for each of the plurality of application service provider systems; receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, wherein the actions comprise responses to triggering events occurring for a telephone number. Murphy is in the field of multi-tenant service management (title) and teaches receiving a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating each of the plurality of API interfaces with a unified services platform system API interface (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of the vendors [the APIs would be received from the vendors], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 5-21). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Staykoff. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Mishra is in the field of telecommunication service management (title) and teaches receiving a definition of a service for each of the plurality of application service provider systems (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, para. 0077); receiving one or more definitions of actions for each service for each of the plurality of application service provider systems (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, the product model stores entities defining the elementary services provided by the network, a product consists of several such elementary services [the elementary services function as actions and would be identified in the product catalogue], para. 0077, 0084). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Staykoff. The motivation would have been to reduce confusion (Mishra, para. 0005). Vendrow is in the field of universal call management (title) and teaches wherein the actions comprise responses to triggering events occurring for a telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID [the incoming call functions as the trigger], para. 0076, 0110). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Regarding claim 76, Staykoff teaches after testing (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, creation and activation of services includes testing, validation, versioning and deployment of services, para. 0157, 0211); and the definition of the plan (a specific procedure for external billing is specified in the service logic when creating the service and is triggered in real time during the user session, para. 0202); but lacks the teaching further comprising: publishing the definition of the service and the one or more definitions of actions for each application service provider in a provisioning catalog. Mishra is in the field of telecommunication service management (title) and teaches further comprising: publishing the definition of the service and the one or more definitions of actions for each application service provider in a provisioning catalog (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, the product model stores entities defining the elementary services provided by the network, a product consists of several such elementary services [the elementary services function as actions and would be identified in the product catalogue], para. 0077, 0084). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Staykoff. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 77, Staykoff lacks the teaching further comprising: receiving an API interface for a network provider system; and integrating the API interface for the network provider system with the unified services platform system API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the API interface for the network provider system. Murphy is in the field of multi-tenant service management (title) and teaches further comprising: receiving an API interface for a network provider system (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of the vendors [the APIs would be received from the vendors], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 5-21); and integrating the API interface for the network provider system with the unified services platform system API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the API interface for the network provider system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment [the various APIs would be integrated with the SaaS unified interface], SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235 and 240 [the APIs are otherwise incompatible], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 10-18). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Staykoff. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 78, Staykoff teaches testing in the test environment (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, para. 0157); but lacks the teaching further comprising: the integration of each of the plurality of API interfaces for the plurality of application service provider systems with the unified services platform system API interface; and the integration of the API interface for the network provider system with the unified services platform system API interface. Murphy is in the field of multi-tenant service management (title) and teaches further comprising: the integration of each of the plurality of API interfaces for the plurality of application service provider systems with the unified services platform system API interface; and the integration of the API interface for the network provider system with the unified services platform system API interface (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of the vendors [the APIs would be received from the vendors], SaaS 200 may include translation mechanisms to translate the various APIs to a common API [the application service providers and network providers would integrate to the common interface], col. 6 lines 5-21). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Staykoff. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 80, Staykoff lacks the teaching wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof. Vendrow is in the field of universal call management (title) and teaches wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof (the universal platform can integrate with SIP protocol to provide call features such as call handling [a service would be invoked upon receiving a SIP message associated with call handling], para. 0077). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2014/059059

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Claims 2-6 lack an inventive step under PCT Article 33(3) as being obvious over Murphy in view of Velez-Rivera, further in view of Gourraud, and further in view of Mishra.

Regarding claim 2, Murphy as modified lacks the teaching further comprising: receiving a definition of a service and a plan for each of the plurality of application service provider systems. Mishra is in the field of telecommunication service management (title) and teaches further comprising: receiving a definition of a service and a plan for each of the plurality of application service provider systems (the services provided by telecommunications service 10 and used by end-users 30 are defined in terms of a set of telecommunications products which are managed by a product management system 100, product management system 100 maintains a product model 102 representing available products and technologies, a user can request products by way of product orders using an order processing system 40 [the user would receive the definitions and plans in the product model], para. 0071-0072). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Murphy. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 3, Murphy lacks the teaching further comprising: receiving one or more definitions of actions for the service, wherein the actions comprise responses to triggering events occurring with a telephone number. Mishra is in the field of telecommunication service management (title) and teaches further comprising: receiving one or more definitions of actions for the service, wherein the actions comprise responses to triggering events occurring with a telephone number (the services provided by telecommunications service 10 and used by end-users 30 are defined in terms of a set of telecommunications products which are managed by a product management system 100, product management system 100 maintains a product model 102 representing available products and technologies, a user can request products by way of product orders using an order processing system 40 [the user would receive the service definitions], the Videophone product is a natural enhancement to a VoIP serve based on delivering Videophone to the end-user's home computer [the definition of the Videophone would include the action of providing video with VoIP service when triggered by the user of the telephone], para. 0071-0072, 0473-0474). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Murphy. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 4, Murphy lacks the teaching further comprising: publishing, after integrating each of the plurality of API interfaces with the unified services platform, the definition of the service, the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog. However, Murphy teaches after integrating each of the plurality of API interfaces with the unified services platform (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13). Mishra is in the field of telecommunication service management (title) and teaches publishing the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog (the services provided by telecommunications service 10 and used by end-users 30 are defined in terms of a set of telecommunications products which are managed by a product management system 100, product management system 100 maintains a product model 102 representing available products and technologies, a user can request products by way of product orders using an order processing system 40 [the user would receive the definitions and plans in the product model], product model 102 is made up of a product catalogue 104 and a service catalogue 106, para. 0071-0072, 0077). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Murphy. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 5, Murphy lacks the teaching further comprising: receiving, from the network provider system, a selection of one or more services from the plurality of the application services provider systems; and publishing the selection of the one or more services in a services catalog, wherein the services catalog is accessible by one or more subscribers of the network provider system. Mishra is in the field of telecommunication service management (title) and teaches further comprising: receiving, from the network provider system, a selection of one or more services from the plurality of the application services provider systems (portfolio management process 108 allows products available to the end-user to be created, the products are defined in terms of the set of capabilities represented by the service components, changes to product catalogue 104 are typically frequent [the available services would be selected; where the network provider system and application services provider systems are interpreted as types of entities], para. 0212-0213); and publishing the selection of the one or more services in a services catalog, wherein the services catalog is accessible by one or more subscribers of the network provider system (the services provided by telecommunications service 10 and used by end-users 30 are defined in terms of a set of telecommunications products which are managed by a product management system 100, product management system 100 maintains a product model 102 representing available products and technologies, a user can request products by way of product orders using an order processing system 40 [the would be published to the end-users], product model 102 is made up of a product catalogue 104 and a service catalogue 106, para. 0071-0072, 0077). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Murphy. The motivation would have been to reduce confusion (Mishra, para. 0005).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2014/059959

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Regarding claim 6, Murphy lacks the teaching further comprising: receiving a request for associating at least one service from the plurality of application service provider systems with a telephone number of a subscriber; associating the telephone number with the at least one service; and invoking the at least one service in response to a communication event with the telephone number. However, Murphy teaches a telephone number of a subscriber (user 345 activates telephone number 320 which originates from vendor 305, telephone number 320 may be processed by resellers 325 and 335 in order to become available to and activated by user 345, user 345 may utilize telephone number 320 for VoIP service for any length of time, col. 9 lines 47-51, 63-64). Mishra is in the field of telecommunication service management (title) and teaches further comprising: receiving a request for associating at least one service from the plurality of application service provider systems with a telephone number of a subscriber (a user can request products by way of product orders using an order processing system 40, the construct order operation is used to create an order, it takes an optional subscriber ID [where the telephone number of a subscriber is interpreted as a type of subscriber ID], para. 0072, 0419); associating the telephone number with the at least one service (fulfillment of an order leads to the creation of instance data based on the information stored in the product model [the service would be associated with the subscriber data [where the telephone number is interpreted as a type of subscriber data], para. 0245); and invoking the at least one service in response to a communication event with the telephone number (fulfillment of an order leads to the creation of instance data based on the information stored in the product model [the service would be invoked], the Videophone product is a natural enhancement to a VoIP serve based on delivering Videophone to the end-user's home computer [the service would be invoked in response to a communication event], para. 0245, 0473-0474). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Murphy. The motivation would have been to reduce confusion (Mishra, para. 0005).

Claim 53 lacks an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Friedes, further in view of Murphy, and further in view of Vendrow.

Regarding claim 53, Staykoff as modified lacks the teaching wherein generating the chargeable event data is based on a triggering event associated with a first telephone number of one or more of the subscribers. Vendrow is in the field of universal call management (title) and teaches wherein generating the chargeable event data is based on a triggering event associated with a first telephone number of one or more of the subscribers (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], para. 0075, 0110). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Claim 79 lacks an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Murphy, further in view of Mishra, further in view of Vendrow, and further in view of Dhawan.

Regarding claim 79, Staykoff teaches testing in the test environment (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, para. 0157); but lacks the teaching further comprising: chargeable event data routing, wherein the chargeable event data is generated in response to a performance of one or more actions. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches further comprising: chargeable event data routing, wherein the chargeable event data is generated in response to a performance of one or more actions (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the bills would be routed to the parties], para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Staykoff. The motivation would have been to improve security (Dhawan, para. 0011).

Claims 1-80 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

ADVANCE E-MAIL

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING TRANSMITTAL OF COPY OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (CHAPTER I OF THE PATENT COOPERATION TREATY)
(PCT Rule 44bis.1(c))

To:

DOCKETED
PR
4/22/16

PIPER, Michael, W.
Conley Rose, P.C.
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Plano, Texas 75024
ETATS-UNIS D'AMERIQUE

Date of mailing *(day/month/year)*
21 April 2016 (21.04.2016)

Applicant's or agent's file reference
4503-00200

IMPORTANT NOTICE

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2014/059959	09 October 2014 (09.10.2014)	09 October 2013 (09.10.2013)

Applicant
ORISHA HOLDINGS, LLC

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO
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Form PCT/IB/326 (January 2004)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference 4503-00200	**FOR FURTHER ACTION** See item 4 below	
International application No. PCT/US2014/059959	International filing date *(day/month/year)* 09 October 2014 (09.10.2014)	Priority date *(day/month/year)* 09 October 2013 (09.10.2013)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant ORISHA HOLDINGS, LLC		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 23 sheets, including this cover sheet.

   In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☒	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44*bis*.3(c) and 93*bis*.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44*bis* .2).

	Date of issuance of this report 12 April 2016 (12.04.2016)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Mineko Mohri e-mail: pt08.pct@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: MICHAEL W. PIPER
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, STE. 500
PLANO, TX 75024

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	19 MAR 2015
Applicant's or agent's file reference 4503-00200	FOR FURTHER ACTION See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2014/059959	09 October 2014	09 October 2013

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04L 12/66 (2015.01)
CPC - H04L 12/66 (2014.12)

Applicant ORISHA HOLDINGS, LLC

1. This opinion contains indications relating to the following items:

- [x] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [x] Box No. IV Lack of unity of invention
- [x] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to th IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Fom PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	12 February 2015	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2014/059959

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2014/059959

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:
   - ☒ paid additional fees.
   - ☐ paid additional fees under protest and, where applicable, the protest fee.
   - ☐ paid additional fees under protest but the applicable protest fee was not paid.
   - ☐ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
   - ☐ complied with.
   - ☒ not complied with for the following reasons:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-7, drawn to a method of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform.
Group II, claims 8-40 and 61-80, drawn to a method comprising invoking and responding to a triggering event.
Group III, claims 41-60, drawn to a method comprising associating the service with each telephone number of the plurality of telephone numbers.

The inventions listed as Groups I, II and III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: receiving a provider API interfaces for a network provider system; and integrating the provider API interface with the unified services platform API interface as claimed therein is not present in the invention of Groups II and III. The special technical feature of the Group II invention: invoking and responding to a triggering event as claimed therein is not present in the invention of Groups I or III. The special technical feature of the Group III invention: associating the service with each telephone number of the plurality of telephone numbers as claimed therein is not present in the invention of Groups I or II.

Groups I, II and III lack unity of invention because even though the inventions of these groups require the technical feature of establishing a plurality of service accounts for a corresponding plurality of application service provider systems, wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services; receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface, this technical feature is not a special technical feature as it does not make a contribution over the prior art. Specifically, US 2006/0050686 A1 (VELEZ-RIVERA et al.) teach establishing a plurality of service accounts for a corresponding plurality of application service provider systems (venders are billed for time used in the channels [the system would maintain account information for the vendor], para. 0139). Further, US 8,509,226 B1 (MURPHY et al.) teach wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services (user 345 activates telephone number 320 which originates from vendor 305, telephone number 320 may be processed by resellers 325 and 335 in order to become available to and activated by user 345, user 345 may utilize telephone number 320 for VoIP service for any length of time, col. 9 lines 47-51, 63-64); receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235, 240, col. 6 lines 8-16), integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Murphy to incorporate the above features in the invention of Velez-Rivera. The motivation would have been to increase adaptability (Velez-Rivera, para. 0008).

Since none of the special technical features of the Group I, II or III inventions are found in more than one of the inventions, unity of invention is lacking.

4. Consequently, this opinion has been established in respect of the following parts of the international application:
   - ☒ all parts.
   - ☐ the parts relating to claims Nos. _____

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Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-7, 16-36, 41-60	YES
	Claims	8-15, 37-40	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-60	NO
Industrial applicability (IA)	Claims	1-60	YES
	Claims	None	NO

2. Citations and explanations:

Claims 8-15, 37-40 lack novelty under PCT Article 33(2) as being anticipated by Vendrow et al., hereinafter referred to as Vendrow.

Regarding claim 8, Vendrow discloses a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of invoking a third party service during a communication event (users can submit their telephone number 155 to service manager 134 to access virtual PBX and other call management services including third party services to provide call features such as call handling, para. 0076-0077), the method comprising: receiving, by a policy and rules engine executing on a processor system, a first indication of an incoming communication for a telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], services manager 130 includes provisioning manager 132 that can operate to configure configuration data 144 [policies and rules] to provide a subset of virtual PBX services in association with user account 145, implemented using computing device 1000 with processor 1002, para. 0050, 0076, 0110, 0161); identifying, by the policy and rules engine, a first triggering event associated with the incoming communication for the telephone number based on the first indication (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would identify the call screening service policy in connection with incoming calls], para. 0076, 0110); invoking, by the policy and rules engine, a first service associated with the telephone number in response to the first triggering event, wherein the first service is provided by a first third party application service provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would invoke the call screening service in response to receiving the call], service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as screening rules [the service would be a third party service], para. 0076-0077, 0110); performing, in response to invoking the first service, a first action based on the first triggering event, wherein the first action is performed by the first third party application service provider system (the call screening rules can be configured to forward incoming calls with identifiable and recognizable call identification telephone numbers directly to the user [the service would be performed when a call is received], para. 0110); receiving, by the policy and rules engine, a second indication of a second incoming communication for the telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [the service manager would receive an indication for the incoming call for the user telephone number], services manager 130 includes provisioning manager 132 that can operate to configure configuration data 144 [policies and rules] to provide a subset of virtual PBX services in association with user account 145, implemented using computing device 1000 with processor 1002, para. 0050, 0076, 0093, 0161); identifying, by the policy and rules engine, a second triggering event associated with the second incoming communication for the telephone number based on the second indication (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [the service manager would identify the call forwarding service policy in connection with incoming calls], para. 0076, 0093); invoking, by the policy and rules engine, a second service associated with the telephone number in response to the second triggering event, wherein the second service is provided by a second third party application service provider system, wherein the second third party application service provider system is different than the first third party application service provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [the service manager would invoke the call forwarding service in response to receiving the call], service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as call forwarding and screening rules [the two service would be provided by different third party service providers], para. 0076-0077, 0093); pperforming, in response to invoking the second service, a second action based on the second triggering event, wherein the second action is performed by the second third party application service provider system (call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [call forwarding would be performed when an incoming call is received], para. 0093); and

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handling the communication using the telephone number (the call screening rules can be configured to forward incoming calls with identifiable and recognizable call identification telephone numbers directly to the user, call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user, mobile device 102 includes interface 101 configured to receive inbound calls [the call to the user telephone number would be facilitated], para. 0036, 0093, 0110).

Regarding claim 37, Vendrow discloses a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of using a policy store to generate multiple events (services manager 130 includes provisioning manager 132 that can operate to configure configuration data 144 [policies and rules] to provide a subset of virtual PBX services in association with user account 145, services include caller ID rules and call screening rules [multiple events], para. 0050, 0077), the method comprising: generating, by a processor system, a policy store comprising a plurality of rules for invoking a plurality of services associated with a telephone number, wherein the rules define a relationship between a triggering event and one or more actions to be performed by a service (services manager 130 includes provisioning manager 132 that can operate to configure configuration data 144 [policies and rules] to provide a subset of virtual PBX services in association with user account 145, the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual, implemented using computing device 1000 with processor 1002, para. 0050, 0078, 0161), wherein the plurality of services are provided by third party application service provider systems, wherein the triggering event is based on a communication event provided by a network provider system (users can submit telephone number 155 to service manager 134 to access a subset of virtual PBX services, service manager 134 enables integration between communication services to provide third party services such as caller ID rules and transcription [triggering event is an incoming telephone call which would be provided by a network provider system], para. 0076-0077, 0079), and where the policy store is generated by a unified services platform system in communication with the network provider system and the third party application service provider systems (service manager 134 enables integration between communication services including third party services using a universal platform, para. 0077); receiving an indication of a first triggering event based on a communication event associated with the telephone number (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID [the service manager would receive an indication for the incoming call for the user telephone number], para. 0110); matching, by the processor system, the first triggering event with one or more actions in the policy store (the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID [the processor would recognize the rule for checking a caller ID and screening calls accordingly], para. 0078, 0110); identifying, by the processor system, two or more services of the plurality of services based on the matching (the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID [the processor would identify the caller ID service and call screening service], para. 0078, 0110); generating routing information for each of the two or more services identified based on the matching (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID, service manager 134 enables integration between communication services using a universal platform including third party services, services include caller ID rules and call screening rules [based on the identification of the caller ID and call screening services the universal platform would identify routing data for the third party services that provide these features], para. 0077, 0110); and routing communication event information to each of the two or more services of the plurality of services using the routing information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID, service manager 134 enables integration between communication services using a universal platform including third party services, services include caller ID rules and call screening rules [the universal platform would route the call data to the third party services for fulfillment], para. 0077, 0110).

Regarding claim 9, Vendrow discloses wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof (the universal platform can integrate with SIP protocol to provide call features such as call handling [a service would be invoked upon receiving a SIP message associated with call handling], para. 0077).

Regarding claim 10, Vendrow discloses wherein the action comprises transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof (services include caller ID rules [obtaining customer information], para. 0077, 0122).

Regarding claim 11, Vendrow discloses wherein performing the action occurs before handling the communication (service manager 134 can be configured to store configuration parameter data 122 and responsive to such data TSP system 130 can be implemented by a user to control inbound calls before, during, or after reaching mobile device 102, para. 0040).

Regarding claim 12, Vendrow discloses wherein performing the action occurs after handling the communication (service manager 134 can be configured to store configuration parameter data 122 and responsive to such data TSP system 130 can be implemented by a user to control inbound calls before, during, or after reaching mobile device 102, para. 0040).

Regarding claim 13, Vendrow discloses wherein performing the action occurs during handling the communication (service manager 134 can be configured to store configuration parameter data 122 and responsive to such data TSP system 130 can be implemented by a user to control inbound calls before, during, or after reaching mobile device 102, para. 0040).

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Regarding claim 14, Vendrow discloses wherein handling the communication comprises routing the incoming communication to a device associated with the telephone number, wherein the communication comprises a voice call, a text message, an internet communication session, or any combination thereof (the call screening rules can be configured to forward incoming calls with identifiable and recognizable call identification telephone numbers directly to the user, call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user, mobile device 102 includes interface 101 configured to receive inbound calls [a voice call to the user telephone number would be facilitated], para. 0038, 0093, 0110).

Regarding claim 15, Vendrow discloses wherein receiving the indication comprises: receiving the first indication at a unified services platform system (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], service manager 134 can enable integration between various communication services using a universal platform, para. 0077, 0110); and wherein performing the action comprises routing incoming communication data from a network provider system to the third party application service provider system, wherein the network provider system supplies the telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would invoke the call screening service in response to receiving the call], service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as screening rules [the service would be a third party service], the universal platform can collect user information to effectuate the integration process with other service providers [would provide the telephone number to the third party service], para. 0076-0077, 0110, 0114).

Regarding claim 38, Vendrow discloses wherein routing the communication event information comprises: routing the communication event information to a first service of the two or more services using the routing information, wherein the first service generates first service data based on the communication event information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules [the incoming communication data would be sent to the third party service to determine the caller ID], para. 0077, 0110); and routing the first service data to a second service of the two or more services using the routing information, wherein the second service generates second service data based on the first service data (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110).

Regarding claim 39, Vendrow discloses further comprising: routing the communication event to the first service with the communication event information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules [the incoming communication data would be sent to the third party service to determine the caller ID], para. 0077, 0110); and routing the communication event to the second service with the first service data (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110); and routing the communication event with the second service data to a communication device associated with the telephone number (the call screening rules can be configured to forward incoming calls with identifiable and recognizable caller IDs directly to the user [the user would receive the call as well as the indication that the caller ID was recognizable], para. 0110).

Regarding claim 40, Vendrow discloses wherein routing the communication event information comprises: routing the communication event information to a first service of the two or more services using the routing information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules and transcription [the incoming communication data would be sent to the third party services to determine the caller ID], para. 0077, 0079, 0110); and routing the communication event information to a second service of the two or more services using the routing information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules and transcription [the incoming communication data would be sent to the third party services to transcribe the call content], para. 0077, 0079, 0110), wherein the communication information is routed to the first service and the second service in parallel (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules and transcription [the incoming communication data would be sent to the third party services to determine the caller ID and transcribe the call content in parallel as neither depends upon the processing results of the other], para. 0077, 0079, 0110).

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Claims 16-20 lack an inventive step under PCT Article 33(3) as being obvious over Vendrow in view of Dhawan et al., hereinafter referred to as Dhawan.

Regarding claim 16, Vendrow teaches a method (methods for enabling integration between various communication services using a universal platform, para. 0004) for a third party service performed during a communication event (users can submit their telephone number 155 to service manager 134 to access virtual PBX and other call management services including third party services to provide call features such as call handling, para. 0076-0077), the method comprising: receiving, by a unified services platform system, an indication of an incoming communication for a telephone number from a network provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number, the call would originate from a network provider system], service manager 134 can enable integration between various communication services using a universal platform, para. 0076-0077, 0110); identifying, by a processor system, a triggering event associated with the incoming communication for the telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would identify the call screening service policy in connection with incoming calls], implemented using computing device 1000 with processor 1002, para. 0076, 0110, 0161); invoking, by the processor system, a service associated with the telephone number in response to the triggering event, wherein the service is associated with a third party application service provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would invoke the call screening service in response to receiving the call], service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as screening rules [the service would be a third party service], para. 0076-0077, 0110); performing, in response to invoking the service, an action associated with the service based on the triggering event, wherein the action is performed by the third party application service provider system (the call screening rules can be configured to forward incoming calls with identifiable and recognizable call identification telephone numbers directly to the user [the service would be performed when a call is received], para. 0110); receiving a message from the third party application service provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would receive messages from the third party service providers], para. 0114); and routing the message to the network provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would provide messages to the network provider system], para. 0114); the service performed by the third party application service provider system (service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as screening rules [the service would be a third party service], para. 0077); but lacks the teaching a method of billing a customer; a billing message, wherein the billing message comprises chargeable event data; wherein the network provider system bills a subscriber associated with the telephone number for the service performed. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches a method (method to provide users with access to services, para. 0019) of billing a customer (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0118); a billing message, wherein the billing message comprises chargeable event data (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the bill would include chargeable event data], para. 0118); wherein the network provider system bills a subscriber associated with the telephone number for the service performed (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

Regarding claim 17, Vendrow teaches routing data from the network service provider system to the third party application service provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would provide messages between the network service provider and the third party service provider], para. 0114); but lacks the teaching further comprising: receiving payment from the subscriber. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches further comprising: receiving payment from the subscriber (the system is configured to receive a payment from the called parties, para. 0113). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

Regarding claim 18, Vendrow lacks the teaching wherein the billing message is generated in response to performing the action. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches wherein the billing message is generated in response to performing the action (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

Regarding claim 19, Vendrow teaches a message is received by the network provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would provide messages to the network service provider], para. 0114); but lacks the teaching wherein the billing message is received. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches wherein the billing message is received (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the called parties would receive the bill], para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

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Regarding claim 20, Vendrow teaches further comprising: invoking a second service associated with the telephone number in response to the triggering event, wherein the service is associated with a second third party application service provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [the service manager would invoke the call forwarding service in response to receiving the call], service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as call forwarding and screening rules [the two service would be provided by different third party service providers], para. 0076-0077, 0093); performing, in response to invoking the service, a second action associated with the second service based on the triggering event, wherein the action is performed by the second third party application service provider system (call forwarding field 414 allows incoming calls to be forwarded to a contact number provided by the user or to multiple numbers according to call forwarding rules set by the user [call forwarding would be performed when an incoming call is received], para. 0093); receiving a second message from the second third party application service provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would receive messages from the third party service providers], para. 0114); and routing the second message to the network provider system (the service manager can enable integration between service providers using a universal platform, the universal platform can collect user information to effectuate the integration process [the universal platform would provide messages to the network provider system], para. 0114); the service performed by the third party application service provider system and the second third party application service provider system (service manager 134 enables integration between communication services using a universal platform to provide access to third party services to provide call features such as screening rules [both services would be third party services], para. 0077); but lacks the teaching a billing message, wherein the second billing message comprises chargeable event data for performing an action; wherein the network provider system bills the subscriber associated with the telephone number for the service performed. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches a billing message, wherein the billing message comprises chargeable event data for performing an action (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the bill would include chargeable event data], para. 0118); wherein the network provider system bills the subscriber associated with the telephone number for the service performed (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

Claims 21-27, 29-35 lack an inventive step under PCT Article 33(3) as being obvious over Vendrow in view of Murphy et al., hereinafter referred to as Murphy.

Regarding claim 21, Vendrow teaches a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of creating a plurality of service actions in response to a communication event (call screening rules can be configured to forward incoming calls [second service action] with identifiable and recognizable caller IDs [first service action] directly to the user, para. 0110), the method comprising: receiving, by a processor system, an indication of an incoming communication for a telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], implemented using computing device 1000 with processor 1002, para. 0076, 0110, 0161), and wherein a plurality of services associated with a plurality of third party service systems are associated with the telephone number, wherein the plurality of services are invoked by at least one triggering event associated with the telephone number (users can submit telephone number 155 to service manager 134 to access a subset of virtual PBX services, service manager 134 enables integration between communication services to provide third party services such as caller ID rules and call screening rules, para. 0076-0077); identifying, by the processor system, a triggering event associated with the incoming communication for the telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the service manager would identify the caller ID service in connection with incoming calls], para. 0076, 0110); invoking a first service of the plurality of services in response to the triggering event (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the service manager would invoke the call screening service in response to receiving the call], para. 0076, 0110); sending incoming communication information to the first service, wherein the incoming communication information comprises at least a portion of the information associated with the incoming communication, and wherein the first service generates first service data in response to the incoming communication information (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules [the incoming communication data would be sent to the third party service to determine the caller ID], para. 0077, 0110); routing the first service data to a second service of the plurality of services (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110); and invoking the second service of the plurality of services in response to routing the first service data to the second service, wherein the second service generates second service data (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the second third party service would apply the call screening rules based on the caller ID data], para. 0077, 0110); but lacks the teaching wherein the telephone number is provided by a network provider system. Murphy is in the field of multi-tenant service management (title) and teaches wherein the telephone number is provided by a network provider system (SaaS 200 may be configured to allow telephone origination services to be aggregated, col. 6 lines 26-28). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

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Regarding claim 29, Vendrow teaches a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of creating a plurality of service actions in response to a communication event (call screening rules can be configured to forward incoming calls [second service action] with identifiable and recognizable caller IDs [first service action] directly to the user, para. 0110), the method comprising: receiving, by a processor system, an indication of an communication for a telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], implemented using computing device 1000 with processor 1002, para. 0076, 0110, 0161), and wherein a plurality of service provided by a plurality of third party service systems are associated with the telephone number, wherein one or more of the plurality of services are invoked by at least one triggering event associated with the telephone number (users can submit telephone number 155 to service manager 134 to access a subset of virtual PBX services, service manager 134 enables integration between communication services to provide third party services such as caller ID rules and transcription, para. 0076-0077, 0079); identifying, by the processor system, a triggering event associated with the communication for the telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the service manager would identify the caller ID service in connection with incoming calls], para. 0076, 0110); invoking two or more services of the plurality of services in response to the triggering event (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [first service], commercialized software provides automated transcription of voicemail messages [second service, would be triggered by the same phone call where the call goes to voicemail], para. 0076, 0110, 0129); sending communication information to each of the two or more services, wherein the communication information comprises at least a portion of the information associated with the communication (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules and transcription [the incoming communication data would be sent to the third party services to determine the caller ID and transcribe the call content], para. 0077, 0079, 0110); receiving first service data from a first service of the two or more services (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules [the incoming communication data would be sent to the third party service to determine the caller ID which would be provided to the user], para. 0077, 0110); receiving second service data from a second service of the two or more services (commercialized software provides automated transcription of voicemail messages [the transcription would be provided to the user, para. 0129); and handling the communication (calls with unrecognizable caller IDs are forwarded to the voice mailbox of the user, para. 0112); but lacks the teaching wherein the telephone number is provided by a network provider system. Murphy is in the field of multi-tenant service management (title) and teaches wherein the telephone number is provided by a network provider system (SaaS 200 may be configured to allow telephone origination services to be aggregated, col. 6 lines 26-28). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claims 22, 30, Vendrow teaches wherein the processor system forms a portion of a unified service platform system, wherein unified services platform system communicates with the plurality of third party service systems through a plurality of integrated interfaces, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein one or more of the plurality of integrated interfaces are incompatible with the provider integrated interface (service manager 134 can enable integration between communication services using a universal platform, the universal platform can integrate SIP, POP3, SMS, and third party protocols and services [the universal platform would communicate with third party services and network providers and would communicate using protocols that are not compatible with the provider], para. 0077).

Regarding claim 23, Vendrow teaches wherein the second service generates the second service data using at least a portion of the first service data (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110).

Regarding claim 24, Vendrow teaches further comprising: forwarding the first service data and the second service data to a device associated with the telephone number (services include transcription and synchronizing message communication via SMS [both services would generate data regarding an incoming call and forward it to the device], para. 0079).

Regarding claim 25, Vendrow teaches wherein the services comprise one or more actions performed by social media software, customer relationship management software, call and message translation software, file sharing software, file management software, contact management software, voicemail software, messaging software, call recording software, contact matching software, messaging storage software, call notification software, or any combination thereof (services include voice messaging, para. 0055).

Regarding claim 26, Vendrow teaches further comprising: sending the incoming communication to the first service (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules [the incoming communication data would be sent to the third party service to determine the caller ID], para. 0077, 0110); routing the incoming communication from the first service to the second service (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110); and routing the incoming communication to a device associated with the telephone number (the call screening rules can be configured to forward incoming calls with identifiable and recognizable caller IDs directly to the user, para. 0110).

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Regarding claim 27, Vendrow teaches wherein receiving the indication of the incoming communication comprises: receiving the indication at a unified services platform system from the network provider system (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call], service manager 134 enables integration between communications services using a universal platform [the universal platform would receive the call data to route the data to the third party service], para. 0076-0077, 0110).

Regarding claim 31, Vendrow teaches wherein sending the communication information to each of the two or more services occurs in parallel (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include caller ID rules and transcription [the incoming communication data would be sent to the third party services to determine the caller ID and transcribe the call content in parallel as neither depends upon the processing results of the other], para. 0077, 0079, 0110).

Regarding claim 32, Vendrow teaches wherein handling the communication comprises routing the incoming communication to a device associated with the telephone number, and wherein the communication comprises an incoming voice call, an outgoing voice all, an incoming text message, an outgoing text message, an outgoing network connection request, or any combination thereof (calls with unrecognizable caller IDs are forwarded to the voice mailbox of the user, para. 0112).

Regarding claim 33, Vendrow teaches further comprising combining the first service data and the second service data to form a combined data set; and sending the combined data set to a device associated with the telephone number (calls with unrecognizable caller IDs are forwarded to the voice mailbox of the user, commercialized software provides automated transcription of voicemail messages [when the user checks his voicemail he will be provided with a combined data set including the transcribed voicemail and an indication of the unrecognizable caller ID, the data would be combined for a single call instance and provided to the device], para. 0112, 0129).

Regarding claim 34, Vendrow teaches further comprising: routing the first service data to a third service of the plurality of services (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to a third third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110); and invoking the third service in response to routing the first service data to the third service, wherein the third service generates third service data (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the third third party service would apply the call screening rules based on the caller ID data], para. 0077, 0110).

Regarding claim 35, Vendrow teaches wherein the indication is received at a unified services platform system, and wherein the unified services platform system sends the communication information to each of the two or more services (service manager 134 enables integration between communication services including third party services using a universal platform, para. 0077).

Claims 41-42, 47 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Vendrow.

Regarding claim 41, Staykoff teaches a method (a method of grouping and orchestration of multiple services coming from various platforms, para. 0087) of provisioning a service for use with a group plan (multi-service network center 10 has the ability to determine the profile of a group of users, the user profile includes the definition of white and black lists and service profiles, para. 0140, 0174-0175), the method comprising: receiving, by a unified services platform system, a subscription request for a service for a group plan (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received], community charging service provides community pricing and billing [the request would refer to a group plan], para. 0130, 0203, 0216), wherein the group plan comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber (multi-service network center 10 has the ability to determine the profile of a community of users, the profile includes a phone number, multi-service network center 10 bills a large community of subscribers, para. 0174-0175, 0216), and wherein the service is provided by a third party application service provider system (multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services, para. 0146, 0154, 0194); sending, by the unified services platform system, an activation request for the group plan to the third party application service provider system (users subscribe to any service using multi-service network center 10, community charging service provides community pricing and billing [the request would refer to a group plan], multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [the network center would forward the request to the third party service to fulfill service], para. 0203, 0216); associating the service with each telephone number of the plurality of telephone numbers (multi-service network center 10 has the ability to determine the profile of a community of users including its usage profile related to at least one service [the service would be associated with each profile based on the subscription], para. 0174); providing access to the service for each telephone number based on the associating (multi-service network center 10 has the ability to determine the profile of a community of users including its usage profile related to at least one service [access to the subscribed service would be provided], the services requested by end-users are subject to control and billing, para. 0174, 0201); receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received, there would be a plurality of services], multi-service network center 10 as the ability to determine the profile of a user or a community of users including a phone number and its usage profile related to at least one service [a user could have both an individual and community profile], para. 0130, 0174, 0203), wherein the second service is provided by a second third party application service provider system (multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [there are a plurality of third party service platforms], para. 0146, 0154, 0194);

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sending, by the unified services platform system, a second activation request for the service to the second third party application service provider system (users subscribe to any service using multi-service network center 10, multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [the network center would forward the request to the third party service to fulfill service], para. 0203); associating the second service with the first telephone number (multi-service network center 10 has the ability to determine the profile of a user including his usage profile related to at least one service [the service would be associated with the profile based on the subscription], para. 0174); and providing access to the second service for the first telephone number based on the associating (multi-service network center 10 has the ability to determine the profile of a user including his usage profile related to at least one service [access to the subscribed service would be provided], the services requested by end-users are subject to control and billing, para. 0174, 0201); but lacks the teaching receiving an activation response from a service provider system; and receiving a second activation response from a service provider system. Vendrow is in the field of universal call management (title) and teaches receiving an activation response from a service provider system (activation manager 131 can be configured to activate user account 145 once user account 145 has been provisioned with configuration data defining a subset of virtual PBX services, test/validation manager 137 validates a telephone number provided as user ID 218a by making a call to the telephone number associated with phone 160 [receiving a validation call functions as an activation response of service], para. 0052); and receiving a second activation response from a service provider system (activation manager 131 can be configured to activate user account 145 once user account 145 has been provisioned with configuration data defining a subset of virtual PBX services, test/validation manager 137 validates an email address used as user ID 218a where an email message is sent to the email address to validate that the email address can be implemented as an extension [receiving a validation email functions as an activation response of service], para. 0052). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Regarding claim 42, Staykoff teaches further comprising: receiving billing and settlement information associated with each of the telephone numbers (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216).

Regarding claim 47, Staykoff lacks the teaching further comprising: invoking the service in response to a triggering event associated with a first telephone number of the plurality of telephone numbers. Vendrow is in the field of universal call management (title) and teaches further comprising: invoking the service in response to a triggering event associated with a first telephone number of the plurality of telephone numbers (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], para. 0076, 0110). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Claims 54, 59-60 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Murphy.

Regarding claim 54, Staykoff teaches a method (a method of grouping and orchestration of multiple services coming from various platforms, para. 0087) of using a rules engine to allocate usage of a service between personal and group accounts (multi-service network center 10 has the ability to determine the profile of a user or a community of users, the profile includes phone numbers and at least one service [the multi-service network center functions as a rules engine that allocates services among account profiles including individual and group accounts], para. 0174), the method comprising: receiving, by a unified services platform system, a subscription request for a service associated with a group (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received], community charging service provides community pricing and billing [the request would refer to a group plan], para. 0130, 0203, 0216), wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber (multi-service network center 10 has the ability to determine the profile of a community of users, the profile includes a phone number, multi-service network center 10 bills a large community of subscribers, para. 0174-0175, 0216), wherein the service is provided by a third party application service provider system (multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services, para. 0146, 0154, 0194); associating the service with each telephone number of the plurality of telephone numbers (multi-service network center 10 has the ability to determine the profile of a community of users including its usage profile related to at least one service [the service would be associated with each profile based on the subscription], para. 0174); receiving billing and settlement information from the third party application service provider system for each telephone number (billing is done by multi-service network center 10 or by specialized external platforms [the service would provide billing data], multi-service network center 10 is configured to host third party services, para. 0194, 0206); generating a billing policy store comprising a plurality of rules for charging for the service, wherein the rules define a relationship between a usage conditions of the service and payment by at least one of the subscriber or the group (a specific procedure for external billing is specified in the service logic [rules for charging] when creating the service and is triggered in real time during the user session [the service logic would be implemented as a billing policy store], para. 0202); generating billing routing information based on the billing and settlement information and the billing policy store, wherein the billing routing information forwards billing charges for the usage associated with the service to at least one of the subscriber or the group based on the usage conditions (network browser 15 communicates via a link 261 with a charging module 26 and via a link 251 with a billing module 25, in this way the services and content requested by a single end-user are generally subject to control and billing [the services would be billed according to determined billing rules enforced by the billing module], para. 0201); generating a charge for the service in response to a use of the service under usage conditions by one or more of the subscribers (a specific procedure for external billing is specified in the service logic when creating the service and is triggered in real time during the user session [a charge would be generated during the session], para. 0202); and routing the charges to at least one of the subscriber or the group using the billing routing information (network browser 15 communicates via a link 261 with a charging module 26 and via a link 251 with a billing module 25, in this way the services and content requested by a single end-user are generally subject to control and billing [the user would be billed], para. 0201); but lacks the teaching wherein the telephone numbers are provided by a network provider system.

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Murphy is in the field of multi-tenant service management (title) and teaches wherein the telephone numbers are provided by a network provider system (SaaS 200 may be configured to allow telephone origination services to be aggregated, col. 6 lines 26-28). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Staykoff. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 59, Staykoff as modified lacks the teaching wherein a first subscriber associated with a first telephone number of the plurality of telephone numbers is provided network services through the network provider system, wherein group is provided network services through a second network provider system, and wherein routing the charges to at least one of the subscriber or the group comprises routing the charges to at least one of the first subscriber through the network provider system or the group through the second network provider system. However, Staykoff teaches group network services (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216) and routing data between networks (a network gateway is a platform or a set of intermediate processes and platforms that allows communicating with elements of heterogeneous networks, para. 0137). Furthermore, providing specific network route for data was well known in the art and the specifics would have been a matter of design choice. Therefore it would have been obvious to incorporate the above features onto the invention of Staykoff. The motivation would have been to provide a routing scheme useful to the application.

Regarding claim 60, Staykoff teaches further comprising: associating a second service with each telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system (users subscribe to any service using multi-service network center 10, multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [the network center would forward the request to the third party service to fulfill service], multi-service network center 10 has the ability to determine the profile of a user including his usage profile related to at least one service [the service would be associated with the profile based on the subscription], para. 0174, 0203); receiving second billing and settlement information from the second third party application service provider for each telephone number (billing is done by multi-service network center 10 or by specialized external platforms [the service would provide billing data; there would be a plurality of services], multi-service network center 10 is configured to host third party services, para. 0194, 0206); and generating second billing routing information based on the second billing and settlement information and the billing policy store, wherein the second billing routing information forwards billing charges for the usage associated with the second service to at least one of the subscriber or the group based on a second set of usage conditions, wherein the second set of usage conditions are different than the usage conditions for the service (network browser 15 communicates via a link 261 with a charging module 26 and via a link 251 with a billing module 25, in this way the services and content requested by a single end-user are generally subject to control and billing [each service request by an end user is subject to billing, different services would be billed according to their own terms], para. 0201).

Claims 1, 7 lack an inventive step under PCT Article 33(3) as being obvious over Murphy in view of Velez-Rivera et al., hereinafter referred to as Velez-Rivera, and further in view of Gourraud.

Regarding claim 1, Murphy teaches a method (methods for managing VoIP services, col. 1 lines 57-58) of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform (the VoIP system management software application may allow reseller 155 to configure the components of the VoIP network platform [network provider] to route and treat calls for the users, reseller 205 may utilize the multi-tenant software as a service [SaaS] 200 to interface to external vendors, such as SIP trunking vendors 230, hosted PBX vendors 235, and telephone number vendors 240 [the vendors function as application developer systems]; vendor APIs may be built-in to the SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 5 lines 10-13, col. 6 lines 5-13), the method comprising: wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services (user 345 activates telephone number 320 which originates from vendor 305, telephone number 320 may be processed by resellers 325 and 335 in order to become available to and activated by user 345, user 345 may utilize telephone number 320 for VoIP service for any length of time, col. 9 lines 47-51, 63-64); receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235, 240, col. 6 lines 8-16), integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13); and integrating the API interface with the unified services platform API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the API interface (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment [the various APIs would be integrated with the SaaS unified interface], SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235 and 240 [the APIs are otherwise incompatible], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 10-18); but lacks the teaching establishing a plurality of service accounts for a corresponding plurality of application service provider systems; and receiving a provider API interfaces for a network provider system. Velez-Rivera is in the field of application development (title) and teaches establishing a plurality of service accounts for a corresponding plurality of application service provider systems (venders are billed for time used in the channels [the system would maintain account information for the vendor], para. 0139). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Velez-Rivera to incorporate the above features in the invention of Murphy. The motivation would have been to increase adaptability (Velez-Rivera, para. 0008). Gourraud is in the field of third-party service provider applications (abstract) and teaches receiving a provider API interfaces for a network provider system (network-operator-provided services can use internal-service APIs 308 to access capabilities of the network entities, each of call server 402 and call server 404 support internal-service APIs 308 [the provider API interface would be provided], para. 0054). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Gourraud to incorporate the above features in the invention of Murphy. The motivation would have been to reduce costs (Gourraud, para. 0002).

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Regarding claim 7, Murphy lacks the teaching further comprising: receiving, at the unified services platform, billing routing information from the plurality of application service provider systems; and integrating the billing routing information with the network provider system. However, Murphy teaches integrating data with the network provider system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13). Velez-Rivera is in the field of application development (title) and teaches further comprising: receiving, at the unified services platform, billing routing information from the plurality of application service provider systems (venders are billed for time used in the channels [the system would maintain billing routing data for the vendor], para. 0139). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Velez-Rivera to incorporate the above features in the invention of Murphy. The motivation would have been to increase adaptability (Velez-Rivera, para. 0008).

Claims 48-52 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Friedes, and further in view of Murphy.

Regarding claim 48, Staykoff teaches a method (a method of grouping and orchestration of multiple services coming from various platforms, para. 0087) of billing for a service provided to the members of a group (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216), the method comprising: receiving, by a unified services platform system, a subscription request for a service associated with a group (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received], community charging service provides community pricing and billing [the request would refer to a group plan], para. 0130, 0203, 0216), wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber (multi-service network center 10 has the ability to determine the profile of a community of users, the profile includes a phone number, multi-service network center 10 bills a large community of subscribers, para. 0174-0175, 0216), and wherein the service is provided by a third party application service provider system (multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services, para. 0146, 0154, 0194); associating the service with each telephone number of the plurality of telephone numbers (multi-service network center 10 has the ability to determine the profile of a community of users including its usage profile related to at least one service [the service would be associated with each profile based on the subscription], para. 0174); receiving billing and settlement information from the third party application service provider system for each telephone number (billing is done by multi-service network center 10 or by specialized external platforms [the service would provide billing data], multi-service network center 10 is configured to host third party services, para. 0194, 0206); associating billing routing information for the service with each telephone number of the plurality of telephone number (multi-service network center 10 has the ability to determine the profile of a user including a phone number and the duration of connection, a specific procedure for external billing is specified in the service logic when creating the service and is triggered in real time during the user session [the bill would be routed to the proper user], para. 0174, 0202); generating chargeable event data in response to a use of the service by one or more of the subscribers (services and content requested by a single end-user are subject to control and billing, para. 0201); associating a second service with a first telephone number of the plurality of telephone numbers, wherein the second service is not associated with the group (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received, there would be a plurality of services], multi-service network center 10 as the ability to determine the profile of a user or a community of users including a phone number and its usage profile related to at least one service [a user could have both an individual and community profile], para. 0130, 0174, 0203), wherein the second service is provided by a second third party application service provider system (multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [there are a plurality of third party service platforms], para. 0146, 0154, 0194); and routing billing charges for the second service to a first subscriber associated with the first telephone number (multi-service network center 10 has the ability to determine the profile of a user including a phone number and the duration of connection, a specific procedure for external billing is specified in the service logic when creating the service [there would be a plurality of services] and is triggered in real time during the user session [the bill would be routed to the proper user], para. 0174, 0202); but lacks the teaching wherein the telephone number is provided by a network provider system; generating billing routing information based on the billing and settlement information, wherein the routing information forwards billing charges for the services associated with the service to a group administrator; and forwarding the chargeable event data to the group administrator based on the billing routing information. Friedes is in the field of billing multiple services on a single account (title) and teaches generating billing routing information based on the billing and settlement information, wherein the routing information forwards billing charges for the services associated with the service to a group administrator (each wireless telephone station 20 has a unique telephone wireless for call routing and billing purposes, to render an aggregate bill all telephone numbers common to a single subscriber are cross referenced to a single account number associated with that subscriber, col. 2 lines 51-53, col. 4 lines 13-19); and forwarding the chargeable event data to the group administrator based on the billing routing information (a subscriber having multiple lines receives an aggregate bill, col. 4 lines 53-57). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Friedes to incorporate the above features in the invention of Staykoff. The motivation would have been to provide aggregate billing (Friedes, col. 1 lines 48-57). Murphy is in the field of multi-tenant service management (title) and teaches wherein the telephone number is provided by a network provider system (SaaS 200 may be configured to allow telephone origination services to be aggregated, col. 6 lines 26-28). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Staykoff. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

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Regarding claim 49, Staykoff teaches wherein the unified services platform system communicates with the third party service system through a first integrated interface, wherein the unified services platform system communications with the second third party service system through a second integrated interface, wherein the unified services platform system communicates with the network provider system through a provider integrated interface (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], multi-service network center 10 is configured as a hosting platform hosting applications and external or third party services [the unified platform would communicate with third party platforms and provider systems], para. 0130, 0194), and wherein the integrated interface and the second integrated interface are incompatible with the provider integrated interface (a network gateway is a platform or set of intermediate processes and platforms that allows communicating with elements of heterogeneous networks, para. 0137).

Regarding claim 50, Staykoff teaches further comprising: associating a third service with the first telephone number of the plurality of telephone numbers, wherein the third service is associated with the group (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received, there would be a plurality of services], multi-service network center 10 as the ability to determine the profile of a community of users including a phone number and its usage profile related to at least one service [the service would be a group service], para. 0130, 0174, 0203); but lacks the teaching wherein the routing information forwards billing charges for the third service to the group administrator. Friedes is in the field of billing multiple services on a single account (title) and teaches wherein the routing information forwards billing charges for the third service to the group administrator (each wireless telephone station 20 has a unique telephone wireless for call routing and billing purposes, to render an aggregate bill all telephone numbers common to a single subscriber are cross referenced to a single account number associated with that subscriber, col. 2 lines 51-53, col. 4 lines 13-19). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Friedes to incorporate the above features in the invention of Staykoff. The motivation would have been to provide aggregate billing (Friedes, col. 1 lines 48-57).

Regarding claim 51, Staykoff teaches wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data to the unified services platform system, and forwarding the chargeable event data from the unified services platform system to the network provider system (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], multi-service network center 10 is configured as a hosting platform hosting applications and external or third party services [the unified platform would communicate with third party platforms and provider systems], the community charging service allows telecom operators to manage the sessions of communities of significant size [the billing data would be routed to the network provider via the unified platform], para. 0130, 0194, 0216).

Regarding claim 52, Staykoff teaches wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data from the third party application service provider system to the network provider system (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], multi-service network center 10 is configured as a hosting platform hosting applications and external or third party services [the unified platform would communicate with third party platforms and provider systems], the community charging service allows telecom operators to manage the sessions of communities of significant size [the billing data would be routed to the network provider via the unified platform], para. 0130, 0194, 0216).

Claims 70-72 lack an inventive step under PCT Article 33(3) as being obvious over Vendrow in view of Mishra, and further in view of Staykoff.

Regarding claim 70, Vendrow teaches a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of actions within services provided by a third party application service providers (service manager 134 enables integration between communication services using a universal platform, the universal platform can integrate with third party services to provide call features including caller ID rules and call screening rules, para. 0077), the method comprising: establishing, on a unified services platform system, a plurality of service accounts for a corresponding plurality of application service providers (service manager 134 enables integration between communication services using a universal platform, the universal platform can integrate with third party services to provide call features including caller ID rules and call screening rules [would include registering the third party services with the universal platform], para. 0077); a service for each of the plurality of application service providers, wherein the service comprises one or more actions, wherein the actions comprise responses to triggering events occurring for a telephone number (service manager 134 enables integration between communication services using a universal platform, the universal platform can integrate with third party services to provide call features including caller ID rules and call screening rules, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the incoming call functions as a trigger], para. 0077, 0110); one or more actions for each service for each of the plurality of application service provider systems (service manager 134 enables integration between communication services using a universal platform, the universal platform can integrate with third party services to provide call features including caller ID rules and call screening rules [third party services perform actions], para. 0077); storing an indication of the triggering event, the corresponding action, and the response (interactions between individual users on one or more platforms can be tracked in a single conversation history as a threaded interface within the service [the triggering event is the initial communication, the subsequent interactions between the users function as the corresponding action and response], para. 0077); and individual actions associated with each of the services associated with the plurality of application service provider systems (service manager 134 enables integration between communication services using a universal platform, the universal platform can integrate with third party services to provide call features including caller ID rules and call screening rules [third party services perform actions], para. 0077); but lacks the teaching identifying actions within services; receiving a definition of a service; receiving one or more definitions of the one or more actions; testing each triggering event and corresponding action in a test environment to generate a response; and identifying individual actions associated with each of the services.

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Mishra is in the field of telecommunication service management (title) and teaches identifying actions within services (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, the product model stores entities defining the elementary services provided by the network, a product consists of several such elementary services [the elementary services function as actions and would be identified in the product catalogue], para. 0077, 0084); receiving a definition of a service (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, para. 0077); receiving one or more definitions of the one or more actions (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, the product model stores entities defining the elementary services provided by the network, a product consists of several such elementary services [the elementary services function as actions and would be identified in the product catalogue], para. 0077, 0084); and identifying individual actions associated with each of the services (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, the product model stores entities defining the elementary services provided by the network, a product consists of several such elementary services [the elementary services function as actions and would be identified in the product catalogue], para. 0077, 0084). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Vendrow. The motivation would have been to reduce confusion (Mishra, para. 0005). Staykoff is in the field of multiservice networks (title) and teaches testing each triggering event and corresponding action in a test environment to generate a response (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, para. 0157). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Staykoff to incorporate the above features in the invention of Vendrow. The motivation would have been to prevent network congestion (Staykoff, para. 0008).

Regarding claim 71, Vendrow teaches wherein the individual actions comprise one or more of transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [obtaining contact information], para. 0076, 0110).

Regarding claim 72, Vendrow teaches wherein the triggering events comprises one or more of a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof (the universal platform can integrate with SIP protocol to provide call features such as call handling [a service would be invoked upon receiving a SIP message associated with call handling], para. 0077).

Claims 28, 36 lack an inventive step under PCT Article 33(3) as being obvious over Vendrow in view of Murphy, and further in view of Dhawan.

Regarding claim 28, Vendrow teaches routing first information and second information to the network provider system (the universal platform can collect user information to effectuate the integration process, there are a plurality of call features including caller ID rules and call screening rules [information associated with each feature would be routed to the network provider system], para. 0077, 0114); but lacks the teaching further comprising: generating first billing information for the first service based on invoking the first service; generating second billing information for the second service based on invoking the second service; and wherein the network provider system bills a subscriber associated with the telephone number. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches further comprising: generating first billing information for the first service based on invoking the first service (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0118); generating second billing information for the second service based on invoking the second service (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, alternate routing service 400 might also include a routing system 406 [second service], para. 0118-0119); and wherein the network provider system bills a subscriber associated with the telephone number (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the bill would be provided to the subscriber], para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

Regarding claim 36, Vendrow teaches routing first information and second information to the network provider system (the universal platform can collect user information to effectuate the integration process, there are a plurality of call features including caller ID rules and call screening rules [information associated with each feature would be routed to the network provider system], para. 0077, 0114); but lacks the teaching further comprising: generating first billing information for the first service; generating second billing information for the second service; and wherein the network provider system bills a subscriber associated with the telephone number. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches further comprising: generating first billing information for the first service (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, para. 0118); generating second billing information for the second service (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220, alternate routing service 400 might also include a routing system 406 [second service], para. 0118-0119); and wherein the network provider system bills a subscriber associated with the telephone number (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the bill would be provided to the subscriber], para. 0118). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Vendrow. The motivation would have been to improve security (Dhawan, para. 0011).

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Claim 43 lacks an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Vendrow, and further in view of Friedes.

Regarding claim 43, Staykoff as modified lacks the teaching wherein the billing and settlement information comprises routing information for routing charges incurred through use of the service, wherein the routing information routes the charges incurred to a group administrator for the group plan. Friedes is in the field of billing multiple services on a single account (title) and teaches wherein the billing and settlement information comprises routing information for routing charges incurred through use of the service, wherein the routing information routes the charges incurred to a group administrator for the group plan (each wireless telephone station 20 has a unique telephone wireless for call routing and billing purposes, to render an aggregate bill all telephone numbers common to a single subscriber are cross referenced to a single account number associated with that subscriber, col. 2 lines 51-53, col. 4 lines 13-19). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Friedes to incorporate the above features in the invention of Staykoff. The motivation would have been to provide aggregate billing (Friedes, col. 1 lines 48-57).

Claims 44-46 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Vendrow, and further in view of Murphy.

Regarding claim 44, Staykoff as modified lacks the teaching wherein an API of the third party application service provider system is incompatible with an API of the network provider system. Murphy is in the field of multi-tenant service management (title) and teaches wherein an API of the third party application service provider system is incompatible with an API of the network provider system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment [the various APIs would be integrated with the SaaS unified interface], SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235 and 240 [the APIs are otherwise incompatible], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 10-18). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 45, Staykoff lacks the teaching wherein the API of the third party application service provider system is integrated with the unified services platform system, and wherein API of the network provider system is integrated with the unified services platform system, and wherein the third party application communicates with the network provider system through the unified services platform system. Murphy is in the field of multi-tenant service management (title) and teaches wherein the API of the third party application service provider system is integrated with the unified services platform system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13), and wherein API of the network provider system is integrated with the unified services platform system, and wherein the third party application communicates with the network provider system through the unified services platform system (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235, 240 [the third party application and the network provider function as different venders], col. 6 lines 8-16). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 46, Staykoff teaches further comprising: receiving, by the unified services platform system, a second subscription request for a second service for the group plan, wherein the second service is provided by a second third party application service provider system (multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], users subscribe to any service using multi-service network center 10 [a subscription request would be received, there would be a plurality of services], multi-service network center 10 as the ability to determine the profile of a community of users including a phone number and its usage profile related to at least one service [the service would be a group service], para. 0130, 0174, 0203); sending, by the unified services platform system, a second activation request for the group plan to the third party application service provider system (users subscribe to any service using multi-service network center 10, multi-service network center 10 is connected via link 123 to a set of networks 120 in which are contained various protocols connected to applications and services platforms including third party services [the network center would forward the request to the third party service to fulfill service], para. 0203), associating the second service with each telephone number of the plurality of telephone numbers (multi-service network center 10 has the ability to determine the profile of a community of users including their usage profile related to at least one service [the service would be associated with the profile based on the subscription], para. 0174); and providing access to the second service for each telephone number based on the associating (multi-service network center 10 has the ability to determine the profile of a community of users including their usage profile related to at least one service [access to the subscribed service would be provided], para. 0174); but lacks the teaching wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system. Vendrow is in the field of universal call management (title) and teaches receiving a second activation response from the third party application service provider system (activation manager 131 can be configured to activate user account 145 once user account 145 has been provisioned with configuration data defining a subset of virtual PBX services, test/validation manager 137 validates an email address used as user ID 218a where an email message is sent to the email address to validate that the email address can be implemented as an extension [receiving a validation email functions as an activation response of service], para. 0052). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004). Murphy is in the field of multi-tenant service management (title) and teaches wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment [the various APIs would be integrated with the SaaS unified interface], SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235 and 240 [the APIs are otherwise incompatible], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 10-18). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

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Claims 55-58 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Murphy, and further in view of Vendrow.

Regarding claim 55, Staykoff teaches wherein the plurality of rules specify payment by the group when the service is used (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216); but lacks the teaching when the service is used within a predefined usage condition, wherein the usage condition comprises a time of day, a day of the week, a month of the year, a holiday schedule, or any combination thereof. Vendrow is in the field of universal call management (title) and teaches when the service is used within a predefined usage condition, wherein the usage condition comprises a time of day, a day of the week, a month of the year, a holiday schedule, or any combination thereof (the automated responses can be customized by the user based on any number of criteria that include time of day, para. 0106). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Regarding claim 56, Staykoff teaches wherein the plurality of rules specify payment by the group when the service is used (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216); but lacks the teaching when the service is used within a predefined usage condition, wherein the usage condition comprises a geographic location or a geographic area. Vendrow is in the field of universal call management (title) and teaches when the service is used within a predefined usage condition, wherein the usage condition comprises a geographic location or a geographic area (the automated responses can be customized by the user based on any number of criteria that include GPS location, para. 0106). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Regarding claim 57, Staykoff teaches wherein the plurality of rules specify payment by the group when the service is used (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216); but lacks the teaching when the service is used within a predefined usage condition, wherein the usage condition comprises a type of network connection, a specific network interface point, or any combination thereof. Vendrow is in the field of universal call management (title) and teaches when the service is used within a predefined usage condition, wherein the usage condition comprises a type of network connection, a specific network interface point, or any combination thereof (the automated responses can be customized by the user based on any number of criteria that include originating platform). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Regarding claim 58, Staykoff teaches wherein the plurality of rules specify payment by the group when the service is used (charging and billing of a large community of subscribers is implemented using multi-service network center 10, para. 0216); but lacks the teaching when the service is used within a predefined usage condition, wherein the usage condition comprises one or more predefined triggering events. Vendrow is in the field of universal call management (title) and teaches when the service is used within a predefined usage condition, wherein the usage condition comprises one or more predefined triggering events (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations dapencing upon the identity of the callers [the incoming call functions as a trigger], para. 0076, 0110). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Claims 61-69, 73-74 lack an inventive step under PCT Article 33(3) as being obvious over Vendrow in view of Mishra et al., hereinafter referred to as Mishra, further in view of Staykoff, and further in view of Murphy.

Regarding claim 61, Vendrow teaches a method (methods for enabling integration between various communication services using a universal platform, para. 0004) of combining partial functionality across a plurality of applications to create a new service (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110), the method comprising: receiving, by a unified services platform system, data for each of a plurality of application service provider systems (service manager 134 enables integration between communication services using a universal platform [the universal platform would receive data from communication services], para. 0077); wherein actions comprise responses to triggering events occurring for a telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the incoming call functions as a trigger], para. 0076, 0110); storing an indication of the triggering event, the corresponding action, and the response (interactions between individual users on one or more platforms can be tracked in a single conversation history as a threaded interface within the service [the triggering event is the initial communication, the subsequent interactions between the users function as the corresponding action and response], para. 0077); identifying individual actions associated with each of the services associated with the plurality of application service provider systems (provisioning manager 132 can operate to configure configuration data 144 to provide a subset of virtual PBX services in association with user account 145, the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual, para. 0050, 0078);combining two or more individual actions from different services provided by different application service provider systems (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations [second action] depending upon the caller ID of the callers [first action], third party services include call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110);

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but lacks the teaching a definition of a service; receiving one or more definitions of actions for each service for each of the plurality of application service provider systems; testing each triggering event and corresponding action in a test environment to generate a response; and forming a new service based on the combining. Mishra is in the field of telecommunication service management (title) and teaches a definition of a service (the services provided by telecommunication service 10 and used by end-users 30 are defined in terms of a set of telecommunication products, para. 0071); receiving one or more definitions of actions for each service for each of the plurality of application service provider systems (the services provided by telecommunication service 10 and used by end-users 30 are defined in terms of a set of telecommunication products which are managed by a product management system 100, product management system 100 maintains a product model 102 representing available products and technologies used in their implementation, para. 0071). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Vendrow. The motivation would have been to reduce confusion (Mishra, para. 0005). Staykoff is in the field of multiservice networks (title) and teaches testing each triggering event and corresponding action in a test environment to generate a response (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, para. 0157). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Staykoff to incorporate the above features in the invention of Vendrow. The motivation would have been to prevent network congestion (Staykoff, para. 0008). Murphy is in the field of multi-tenant service management (title) and teaches forming a new service based on the combining (reseller 205 may utilize multitenant SaaS 200 residing in the cloud to add third-party services to its various service offerings and white-brand and sell those third-party services as if they were their own, col. 5 lines 54-57). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 62, Vendrow teaches wherein the individual actions comprise one or more of transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [obtaining contact information], para. 0076, 0110).

Regarding claim 63, Vendrow teaches wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof (the universal platform can integrate with SIP protocol to provide call features such as call handling [a service would be invoked upon receiving a SIP message associated with call handling], para. 0077).

Regarding claim 64, Vendrow teaches wherein combining the two or more individual actions comprises combining the two or more individual actions by the unified services platform system (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, service manager 134 enables integration between communication services using a universal platform, the universal platform integrates with third party services to provide call features including caller ID rules and call screening rules [the call data would be communicated between services using the universal platform], para. 0077, 0110).

Regarding claim 65, Vendrow teaches wherein combining the two or more individual actions further comprises: receiving, by the unified services platform system, data associated with a telephone number to combine the two or more individual actions (provisioning manager 132 can operate to configure configuration data 144 to provide a subset of virtual PBX services in association with user account 145, the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual [actions as associated with the user account], users can submit telephone number 155 to service manager 134 to access a subset of virtual PBX services, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [two individual actions], para. 0050, 0076, 0078, 0110); generating, by the unified services platform system, routing and integration data for the two or more individual actions (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, service manager 134 enables integration between communication services using a universal platform, the universal platform integrates with third party services to provide call features including caller ID rules and call screening rules [the call data would be communicated between services using the universal platform], para. 0077, 0110); and activating the service for the subscriber, wherein the new service includes the routing and integration data generated by the unified services platform (activation manager 131 can be configured to activate user account 145 once user account 145 has been provisioned with configuration data defining a subset of virtual PBX services, the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, service manager 134 enables integration between communication services using a universal platform, the universal platform integrates with third party services to provide call features including caller ID rules and call screening rules [the call data would be communicated between services using the universal platform, para. 0052, 0077, 0110); but lacks the teaching a request from a subscriber; and activating the new service for the subscriber. Mishra is in the field of telecommunication service management (title) and teaches a request from a subscriber (a user can request products by way of product orders using an order processing system 40, para. 0072); and activating the new service for the subscriber (portfolio management process 108 generates a set of products that specify product features for the end-user, para. 0179). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Vendrow. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 66, Vendrow lacks the teaching further comprising: publishing the new service in a catalog available to a plurality of subscribers. Mishra is in the field of telecommunication service management (title) and teaches further comprising: publishing the new service in a catalog available to a plurality of subscribers (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, para. 0077). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Vendrow. The motivation would have been to reduce confusion (Mishra, para. 0005).

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Regarding claim 67, Vendrow teaches wherein the new service comprises a first individual action based on a first trigger and a second individual action based on a second trigger (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the first action is the caller ID service based on the incoming call trigger, the second action is the call screening based on the caller ID data trigger], para. 0077, 0110).

Regarding claim 68, Vendrow teaches wherein the second trigger comprises a response generated by the first individual action (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers, third party services include call screening rules [the first action is the caller ID service based on the incoming call trigger, the second action is the call screening based on the caller ID data trigger], para. 0077, 0110).

Regarding claim 69, Vendrow teaches further comprising: receiving a selection of the two or more of the individual actions, wherein combining the two or more individual actions from different services occurs in response to receiving the selection of the two or more individual actions (provisioning manager 132 can operate to configure configuration data 144 to provide a subset of virtual PBX services in association with user account 145, the user can define a message handling rule for configuring service manager 134 to automatically reply to a particular message from a specific individual [actions can be selected by the user], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID of the callers [the two individual actions would be combined], para. 0050, 0078, 0110); but lacks the teaching publishing the individual actions in a catalog. Mishra is in the field of telecommunication service management (title) and teaches publishing the individual actions in a catalog (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, para. 0077). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Vendrow. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 73, Vendrow as modified lacks the teaching wherein two or more of the plurality of application service provider systems have different APIs, and wherein the different APIs are not compatible with each other. Murphy is in the field of multi-tenant service management (title) and teaches wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment [the various APIs would be integrated with the SaaS unified interface], SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235 and 240 [the APIs are otherwise incompatible], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 10-18). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Vendrow. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 74, Vendrow teaches further comprising: enabling two or more of the individual actions to work together by providing a common interface using the unified services platform system, wherein the two or more individual actions are provided by at least two different application service provider systems (the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations [second action] depending upon the caller ID of the callers [first action], the universal platform can integrate third party services to provide call features that include caller ID rules and call screening rules [the caller ID data generated by the first third party service would be sent to the second third party service to apply the call screening rules based on the caller ID data], para. 0077, 0110).

Claims 75-78, 80 lack an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Murphy, further in view of Mishra, and further in view of Vendrow.

Regarding claim 75, Staykoff teaches a method (a method of grouping and orchestration of multiple services coming from various platforms, para. 0087) of developing and testing a new application service through a unified services platform (telecommunications operators have access to this architecture to conduct functional and load testing of external systems, multi-service network center 10 is an open generic multi-application and multi-service system [unified services platform], para. 0157), the method comprising: establishing a plurality of service accounts for a corresponding plurality of application service provider systems (multi-service network center 10 is configured as a "hosting" platform hosting applications and external or third party services, third parties access securely the functionality of creating and activating applications and services [the third parties would be assigned a service account for secure access], telecommunications operators are permitted to develop network services operated by third parties, para. 0194); testing each triggering event and corresponding action for each service in a test environment to generate a response (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, para. 0157); and providing access to each service within a working environment after performing the testing (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, creation and activation of services includes testing, validation, versioning and deployment of services, para. 0157, 0211); but lacks the teaching receiving a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating each of the plurality of API interfaces with a unified services platform system API interface; receiving a definition of a service for each of the plurality of application service provider systems; receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, wherein the actions comprise responses to triggering events occurring for a telephone number. Murphy is in the field of multi-tenant service management (title) and teaches receiving a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating each of the plurality of API interfaces with a unified services platform system API interface (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of the vendors [the APIs would be received from the vendors], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 5-21). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Staykoff. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

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Mishra is in the field of telecommunication service management (title) and teaches receiving a definition of a service for each of the plurality of application service provider systems (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, para. 0077); receiving one or more definitions of actions for each service for each of the plurality of application service provider systems (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, the product model stores entities defining the elementary services provided by the network, a product consists of several such elementary services [the elementary services function as actions and would be identified in the product catalogue], para. 0077, 0084). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Staykoff. The motivation would have been to reduce confusion (Mishra, para. 0005). Vendrow is in the field of universal call management (title) and teaches wherein the actions comprise responses to triggering events occurring for a telephone number (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the caller ID [the incoming call functions as the trigger], para. 0076, 0110). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Regarding claim 76, Staykoff teaches after testing (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, creation and activation of services includes testing, validation, versioning and deployment of services, para. 0157, 0211); and the definition of the plan (a specific procedure for external billing is specified in the service logic when creating the service and is triggered in real time during the user session, para. 0202); but lacks the teaching further comprising: publishing the definition of the service and the one or more definitions of actions for each application service provider in a provisioning catalog. Mishra is in the field of telecommunication service management (title) and teaches further comprising: publishing the definition of the service and the one or more definitions of actions for each application service provider in a provisioning catalog (product model 102 is used for modelling the products available to end-users, product model 102 includes a product catalogue 104 that stores information defining the products which are available to users, the product model stores entities defining the elementary services provided by the network, a product consists of several such elementary services [the elementary services function as actions and would be identified in the product catalogue], para. 0077, 0084). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Staykoff. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 77, Staykoff lacks the teaching further comprising: receiving an API interface for a network provider system; and integrating the API interface for the network provider system with the unified services platform system API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the API interface for the network provider system. Murphy is in the field of multi-tenant service management (title) and teaches further comprising: receiving an API interface for a network provider system (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of the vendors [the APIs would be received from the vendors], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 5-21); and integrating the API interface for the network provider system with the unified services platform system API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the API interface for the network provider system (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment [the various APIs would be integrated with the SaaS unified interface], SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235 and 240 [the APIs are otherwise incompatible], SaaS 200 may include translation mechanisms to translate the various APIs to a common API, col. 6 lines 10-18). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Staykoff. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 78, Staykoff teaches testing in the test environment (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, para. 0157); but lacks the teaching further comprising: the integration of each of the plurality of API interfaces for the plurality of application service provider systems with the unified services platform system API interface; and the integration of the API interface for the network provider system with the unified services platform system API interface. Murphy is in the field of multi-tenant service management (title) and teaches further comprising: the integration of each of the plurality of API interfaces for the plurality of application service provider systems with the unified services platform system API interface; and the integration of the API interface for the network provider system with the unified services platform system API interface (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of the vendors [the APIs would be received from the vendors], SaaS 200 may include translation mechanisms to translate the various APIs to a common API [the application service providers and network providers would integrate to the common interface], col. 6 lines 5-21). It would have been obvious to one of ordinary skill in the art to use the teachings of Murphy to incorporate the above features in the invention of Staykoff. The motivation would have been to manage large datasets (Murphy, col. 1 lines 46-53).

Regarding claim 80, Staykoff lacks the teaching wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof. Vendrow is in the field of universal call management (title) and teaches wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof (the universal platform can integrate with SIP protocol to provide call features such as call handling [a service would be invoked upon receiving a SIP message associated with call handling], para. 0077). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

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Claims 2-6 lack an inventive step under PCT Article 33(3) as being obvious over Murphy in view of Velez-Rivera, further in view of Goumaud, and further in view of Mishra.

Regarding claim 2, Murphy as modified lacks the teaching further comprising: receiving e definition of a service and a plan for each of the plurality of application service provider systems. Mishra is in the field of telecommunication service management (title) and teaches further comprising: receiving a definition of a service and a plan for each of the plurality of application service provider systems (the services provided by telecommunications service 10 and used by end-users 30 are defined in terms of a set of telecommunications products which are managed by a product management system 100, product management system 100 maintains a product model 102 representing available products and technologies, a user can request products by way of product orders using an order processing system 40 [the user would receive the definitions and plans in the product model], para. 0071-0072). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Murphy. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 3, Murphy lacks the teaching further comprising: receiving one or more definitions of actions for the service, wherein the actions comprise responses to triggering events occurring with a telephone number. Mishra is in the field of telecommunication service management (title) and teaches further comprising: receiving one or more definitions of actions for the service, wherein the actions comprise responses to triggering events occurring with a telephone number (the services provided by telecommunications service 10 and used by end-users 30 are defined in terms of a set of telecommunications products which are managed by a product management system 100, product management system 100 maintains a product model 102 representing available products and technologies, a user can request products by way of product orders using an order processing system 40 [the user would receive the service definitions], the Videophone product is a natural enhancement to a VoIP serve based on delivering Videophone to the end-user's home computer [the definition of the Videophone would include the action of providing video with VoIP service when triggered by the user of the telephone], para. 0071-0072, 0473-0474). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Murphy. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 4, Murphy lacks the teaching further comprising: publishing, after integrating each of the plurality of API interfaces with the unified services platform, the definition of the service, the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog. However, Murphy teaches after integrating each of the plurality of API interfaces with the unified services platform (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13). Mishra is in the field of telecommunication service management (title) and teaches publishing the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog (the services provided by telecommunications service 10 and used by end-users 30 are defined in terms of a set of telecommunications products which are managed by a product management system 100, product management system 100 maintains a product model 102 representing available products and technologies, a user can request products by way of product orders using an order processing system 40 [the user would receive the definitions and plans in the product model], product model 102 is made up of a product catalogue 104 and a service catalogue 106, para. 0071-0072, 0077). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Murphy. The motivation would have been to reduce confusion (Mishra, para. 0005).

Regarding claim 5, Murphy lacks the teaching further comprising: receiving, from the network provider system, a selection of one or more services from the plurality of the application services provider systems; and publishing the selection of the ona or more services in a services catalog, wherein the services catalog is accessible by one or more subscribers of the network provider system. Mishra is in the field of telecommunication service management (title) and teaches further comprising: receiving, from the network provider system, a selection of one or more services from the plurality of the application services provider systems (portfolio management process 108 allows products available to the end-user to be created, the products are defined in terms of the set of capabilities represented by the service components, changes to product catalogue 104 are typically frequent [the available services would be selected; where the network provider system and application services provider systems are interpreted as types of entities], para. 0212-0213); and publishing the selection of the one or more services in a services catalog, wherein the services catalog is accessible by one or more subscribers of the network provider system (the services provided by telecommunications service 10 and used by end-users 30 are defined in terms of a set of telecommunications products which are managed by a product management system 100, product management system 100 maintains a product model 102 representing available products and technologies, a user can request products by way of product orders using an order processing system 40 [the would be published to the end-users], product model 102 is made up of a product catalogue 104 and a service catalogue 106, para. 0071-0072, 0077). It would have been obvious to one of ordinary skill in the ert at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Murphy. The motivation would have been to reduce confusion (Mishra, para. 0005).

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Regarding claim 6, Murphy lacks the teaching further comprising: receiving a request for associating at least one service from the plurality of application service provider systems with a telephone number of a subscriber; associating the telephone number with the at least one service; and invoking the at least one service in response to a communication event with the telephone number. However, Murphy teaches a telephone number of a subscriber (user 345 activates telephone number 320 which originates from vendor 305, telephone number 320 may be processed by resellers 325 and 335 in order to become available to and activated by user 345, user 345 may utilize telephone number 320 for VoIP service for any length of time, col. 9 lines 47-51, 63-64). Mishra is in the field of telecommunication service management (title) and teaches further comprising: receiving a request for associating at least one service from the plurality of application service provider systems with a telephone number of a subscriber (a user can request products by way of product orders using an order processing system 40, the construct order operation is used to create an order, it takes an optional subscriber ID [where the telephone number of a subscriber is interpreted as a type of subscriber ID], para. 0072, 0419); associating the telephone number with the at least one service (fulfillment of an order leads to the creation of instance data based on the information stored in the product model [the service would be associated with the subscriber data [where the telephone number is interpreted as a type of subscriber data], para. 0245); and invoking the at least one service in response to a communication event with the telephone number (fulfillment of an order leads to the creation of instance data based on the information stored in the product model [the service would be invoked], the Videophone product is a natural enhancement to a VoIP serve based on delivering Videophone to the end-user's home computer [the service would be invoked in response to a communication event], para. 0245, 0473-0474). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Mishra to incorporate the above features in the invention of Murphy. The motivation would have been to reduce confusion (Mishra, para. 0005).

Claim 53 lacks an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Friedes, further in view of Murphy, and further in view of Vendrow.

Regarding claim 53, Staykoff as modified lacks the teaching wherein generating the chargeable event data is based on a triggering event associated with a first telephone number of one or more of the subscribers. Vendrow is in the field of universal call management (title) and teaches wherein generating the chargeable event data is based on a triggering event associated with a first telephone number of one or more of the subscribers (users can submit their telephone number 155 to service manager 134 to access a subset of virtual PBX services [services and rules are associated with the user telephone number], the one or more call screening rules can be configured to direct incoming calls to one or more designated destinations depending upon the identity of the callers [the service manager would receive an indication for the incoming call for the user telephone number], para. 0076, 0110). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Vendrow to incorporate the above features in the invention of Staykoff. The motivation would have been to provide seamless communication between platforms (Vendrow, para. 0004).

Claim 79 lacks an inventive step under PCT Article 33(3) as being obvious over Staykoff in view of Murphy, further in view of Mishra, further in view of Vendrow, and further in view of Dhawan.

Regarding claim 79, Staykoff teaches testing in the test environment (the telecommunications operators have access to this architecture to conduct functional and load testing of external systems, para. 0157); but lacks the teaching further comprising: chargeable event data routing, wherein the chargeable event data is generated in response to a performance of one or more actions. Dhawan is in the field of performing actions based upon a dialed phone number (title) and teaches further comprising: chargeable event data routing, wherein the chargeable event data is generated in response to a performance of one or more actions (the billing system would be used to bill the called parties for telephone calls that are set to the called parties via data network 220 [the bills would be routed to the parties], para. 0116). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Dhawan to incorporate the above features in the invention of Staykoff. The motivation would have been to improve security (Dhawan, para. 0011).

Claims 1-80 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

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[Continued on next page]

(54) Title: UNIFIED SERVICES PLATFORM USING A TELEPHONE NUMBER AS A COMMON SUBSCRIBER IDENTIFIER

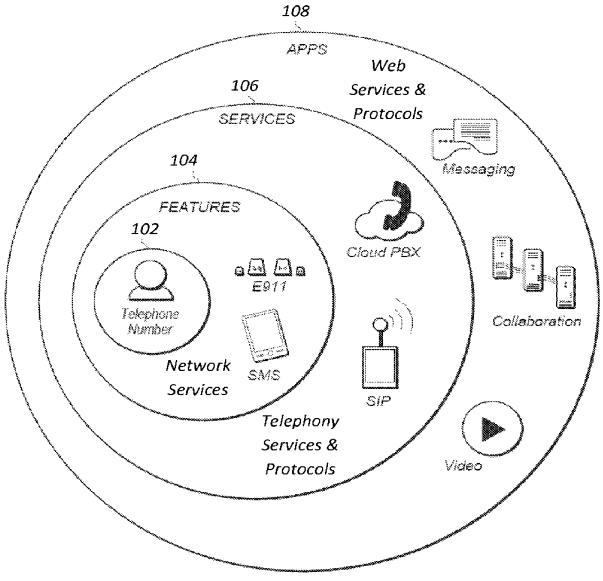


FIG. 1

(57) Abstract: A method of provisioning a plurality of applications from different application developer systems to a network provider system comprises establishing a plurality of service accounts for a corresponding plurality of application service provider systems, receiving a plurality of API interfaces from the plurality of application service provider systems, integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface, receiving a provider API interfaces for a network provider system, and integrating the provider API interface with the unified services platform API interface. The plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services. At least two of the API interfaces are different, and at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the provider API interface.

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UNIFIED SERVICES PLATFORM USING A TELEPHONE NUMBER AS A COMMON SUBSCRIBER IDENTIFIER

BACKGROUND

[0001] Even with the explosive growth in new communications technologies and service offerings, telecommunications service providers still have large numbers of customers with traditional analog telephone service. For these customers, the telephone number remains the universal identifier (ID) for communicating with the outside world. For the remaining customers, the telephone number remains a valuable identifier for providing telephone services.

[0002] As the availability of new technologies has spread, increasing numbers of customers wish to add services and applications to their existing telephone service. However, many services and applications are supplied by third-party providers in different ecosystems. These third-party ecosystems often use different types of IDs and have different rules and policies for managing and activating their services and applications.

[0003] In view of the above, new techniques for integrating advanced services and applications with legacy telephone service are desired.

SUMMARY

[0004] In an embodiment, a method of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform comprises establishing a plurality of service accounts for a corresponding plurality of application service provider systems, receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface, receiving a provider API interfaces for a network provider system, and integrating the provider API interface with the unified services platform API interface. The plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services. At least two of the API interfaces are different, and at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the provider API interface.

[0005] In an embodiment, a method of invoking a third party service during a communication event comprises receiving, by a policy and rules engine executing on a

processor system, a first indication of an incoming communication for a telephone number, identifying, by the policy and rules engine, a first triggering event associated with the incoming communication for the telephone number based on the first indication, invoking, by the policy and rules engine, a first service associated with the telephone number in response to the first triggering event, performing, in response to invoking the first service, a first action based on the first triggering event, receiving, by the policy and rules engine, a second indication of a second incoming communication for the telephone number, identifying, by the policy and rules engine, a second triggering event associated with the second incoming communication for the telephone number based on the second indication, invoking, by the policy and rules engine, a second service associated with the telephone number in response to the second triggering event, wherein the second service is provided by a second third party application service provider system, performing, in response to invoking the second service, a second action based on the second triggering event, and handling the communication using the telephone number. The first service is provided by a first third party application service provider system, and the first action is performed by the first third party application service provider system. The second third party application service provider system is different than the first third party application service provider system, and the second action is performed by the second third party application service provider system.

[0006] In an embodiment, a method of billing a customer for a third party service performed during a communication event comprises receiving, by a unified services platform system, an indication of an incoming communication for a telephone number from a network provider system, identifying, by a processor system, a triggering event associated with the incoming communication for the telephone number, invoking, by the processor system, a service associated with the telephone number in response to the triggering event, performing, in response to invoking the service, an action associated with the service based on the triggering event, receiving a billing message from the third party application service provider system, and routing the billing message to the network provider system. The service is associated with a third party application service provider system, and the action is performed by the third party application service provider system. The billing message comprises chargeable event data, and the network provider system bills a subscriber associated with the telephone

number for the service performed by the third party application service provider system.

[0007] In an embodiment, a method of creating a plurality of service actions in response to a communication event comprises receiving, by a processor system, an indication of an incoming communication for a telephone number, identifying, by the processor system, a triggering event associated with the incoming communication for the telephone number, invoking a first service of the plurality of services in response to the triggering event, sending incoming communication information to the first service, routing the first service data to a second service of the plurality of services, and invoking the second service of the plurality of services in response to routing the first service data to the second service. The telephone number is provided by a network provider system, and a plurality of services associated with a plurality of third party service systems are associated with the telephone number. The plurality of services is invoked by at least one triggering event associated with the telephone number. The incoming communication information comprises at least a portion of the information associated with the incoming communication, and the first service generates first service data in response to the incoming communication information. The second service generates second service data.

[0008] In an embodiment, a method of creating a plurality of service actions in response to a communication event comprises receiving, by a processor system, an indication of an communication for a telephone number, identifying, by the processor system, a triggering event associated with the communication for the telephone number, invoking two or more services of the plurality of services in response to the triggering event, sending communication information to each of the two or more services, receiving first service data from a first service of the two or more services, receiving second service data from a second service of the two or more services, and handling the communication. The telephone number is provided by a network provider system, and a plurality of service provided by a plurality of third party service systems are associated with the telephone number. One or more of the plurality of services are invoked by at least one triggering event associated with the telephone number, and the communication information comprises at least a portion of the information associated with the communication.

[0009] In an embodiment, a method of using a policy store to generate multiple events comprises generating, by a processor system, a policy store comprising a plurality of rules for invoking a plurality of services associated with a telephone number, receiving an indication of a first triggering event based on a communication event associated with the telephone number, matching, by the processor system, the first triggering event with one or more actions in the policy store, identifying, by the processor system, two or more services of the plurality of services based on the matching, generating routing information for each of the two or more services identified based on the matching, and routing communication event information to each of the two or more services of the plurality of services using the routing information. The rules define a relationship between a triggering event and one or more actions to be performed by a service, and the plurality of services are provided by third party application service provider systems. The triggering event is based on a communication event provided by a network provider system, and the policy store is generated by a unified services platform system in communication with the network provider system and the third party application service provider systems.

[0010] In an embodiment, a method of provisioning a service for use with a group plan comprises receiving, by a unified services platform system, a subscription request for a service for a group plan, sending, by the unified services platform system, an activation request for the group plan to the third party application service provider system, receiving an activation response from the third party application service provider system, associating the service with each telephone number of the plurality of telephone numbers, providing access to the service for each telephone number based on the associating, receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers, sending, by the unified services platform system, a second activation request for the service to the second third party application service provider system, receiving a second activation response from the second third party application service provider system, associating the second service with the first telephone number, and providing access to the second service for the first telephone number based on the associating. The group plan comprises a plurality of telephone numbers, and each telephone number of the plurality of telephone numbers is associated with a subscriber. The service is provided by a third party application

service provider system, and the second service is provided by a second third party application service provider system.

[0011] In an embodiment, a method of billing for a service provided to the members of a group comprises receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, associating the service with each telephone number of the plurality of telephone numbers, receiving billing and settlement information from the third party application service provider system for each telephone number, generating billing routing information based on the billing and settlement information, associating the billing routing information for the service with each telephone number of the plurality of telephone number, generating chargeable event data in response to a use of the service by one or more of the subscribers, forwarding the chargeable event data to the group administrator based on the billing routing information, associating a second service with a first telephone number of the plurality of telephone numbers, routing billing charges for the second service to a first subscriber associated with the first telephone number. Each telephone number of the plurality of telephone numbers is associated with a subscriber, and the telephone number is provided by a network provider system. The service is provided by a third party application service provider system, and the routing information forwards billing charges for the services associated with the service to a group administrator. The second service is not associated with the group, and the second service is provided by a second third party application service provider system.

[0012] In an embodiment, a method of using a rules engine to allocate usage of a service between personal and group accounts comprises receiving, by a unified services platform system, a subscription request for a service associated with a group, associating the service with each telephone number of the plurality of telephone numbers, receiving billing and settlement information from the third party application service provider system for each telephone number, generating a billing policy store comprising a plurality of rules for charging for the service, generating billing routing information based on the billing and settlement information and the billing policy store, generating a charge for the service in response to a use of the service under usage conditions by one or more of the subscribers, and routing the charges to at least one of the subscriber or the group using the billing routing information. The group

comprises a plurality of telephone numbers, and each telephone number of the plurality of telephone numbers is associated with a subscriber. The service is provided by a third party application service provider system, and the telephone numbers are provided by a network provider system. The billing routing information forwards billing charges for the usage associated with the service to at least one of the subscriber or the group based on the usage conditions, and the rules define a relationship between a usage conditions of the service and payment by at least one of the subscriber or the group.

[0013] In an embodiment, a method of combining partial functionality across a plurality of applications to create a new service comprises receiving, by a unified services platform system, a definition of a service for each of a plurality of application service provider systems, receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, testing each triggering event and corresponding action in a test environment to generate a response, storing an indication of the triggering event, the corresponding action, and the response, identifying individual actions associated with each of the services associated with the plurality of application service provider systems, combining two or more individual actions from different services provided by different application service provider systems, and forming a new service based on the combining. The actions comprise responses to triggering events occurring for a telephone number.

[0014] In an embodiment, a method of identifying actions within services provided by a third party application service providers comprises establishing, on a unified services platform system, a plurality of service accounts for a corresponding plurality of application service providers, receiving a definition of a service for each of the plurality of application service providers, receiving one or more definitions of the one or more actions for each service for each of the plurality of application service provider systems, testing each triggering event and corresponding action in a test environment to generate a response, storing an indication of the triggering event, the corresponding action, and the response, identifying individual actions associated with each of the services associated with the plurality of application service provider systems. The service comprises one or more actions, and the actions comprise responses to triggering events occurring for a telephone number.

[0015] In an embodiment, a method of developing and testing a new application service through a unified services platform comprises establishing a plurality of service accounts for a corresponding plurality of application service provider systems, receiving a plurality of API interfaces from the plurality of application service provider systems, integrating each of the plurality of API interfaces with a unified services platform system API interface, receiving a definition of a service for each of the plurality of application service provider systems, receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, testing each triggering event and corresponding action for each service in a test environment to generate a response, and providing access to each service within a working environment after performing the testing. At least two of the API interfaces are different, and the actions comprise responses to triggering events occurring for a telephone number

[0016] These and other features will be more clearly understood from the following detailed description taken in conjunction with the accompanying drawings and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] For a more complete understanding of the present disclosure, reference is now made to the following brief description, taken in connection with the accompanying drawings and detailed description, wherein like reference numerals represent like parts.

[0018] FIG. 1 schematically illustrates a a diagram of an embodiment of utilizing a telephone number as the common subscriber ID across a plurality of services.

[0019] FIG. 2 schematically illustrates an embodiment of a telecommunications provider cloud.

[0020] FIG. 3 schematically illustrates an embodiment of a system for providing a unified services platform.

[0021] FIG. 4 illustrates an embodiment of a method for provisioning a service from an application service provider to a unified service platform.

[0022] FIG. 5 illustrates a messaging diagram showing an embodiment of a process for selecting a service for addition to a provider's catalog.

[0023] FIG. 6 illustrates another messaging diagram showing an embodiment of a process for selecting a service for addition to a subscriber account.

[0024] FIG. 7 schematically illustrates an embodiment of a system for activating one or more selected services.

[0025] FIG. 8 illustrates a messaging diagram of another embodiment of a sequence for activating services for a subscriber.

[0026] FIG. 9 illustrates an embodiment of a method for activating services through a unified services platform with the telephone number as the common identifier.

[0027] FIG. 10 illustrates an embodiment of another method for activating a service for a first subscriber.

[0028] FIG. 11 illustrates an embodiment of still another method for activating a third-party application.

[0029] FIG. 12 illustrates an embodiment of an activation process in which an enterprise administrator is responsible for activating a service for one or more subscribers.

[0030] FIG. 13 illustrates an embodiment of another enterprise activation process in which a service can be activated for one or more subscribers.

[0031] FIG. 14 illustrates an embodiment of a method for allowing a subscriber to switch primary providers.

[0032] FIG. 15 illustrates an embodiment of a method for initiating a service for a first user.

[0033] FIG. 16 illustrates another embodiment of a method for initiating a service for subscriber based on a triggering event.

[0034] FIG. 17 illustrates a block diagram of an embodiment of chaining actions through third party provider communications.

[0035] FIG. 18 illustrates a block diagram of an embodiment of multicasting actions through third party provider communications.

[0036] FIG. 19 schematically illustrates an embodiment of a mobile device.

[0037] FIG. 20 illustrates a block diagram of an embodiment of a mobile device.

[0038] FIG. 21A illustrates an embodiment of a software environment.

[0039] FIG. 21B illustrates an alternative software environment.

[0040] FIG. 22 schematically illustrates a computer system suitable for implementing one or more embodiments disclosed herein.

DETAILED DESCRIPTION

[0041] It should be understood at the outset that although illustrative implementations of one or more embodiments are illustrated below, the disclosed systems and methods may be implemented using any number of techniques, whether currently known or not yet in existence. The disclosure should in no way be limited to the illustrative implementations, drawings, and techniques illustrated below, but may be modified within the scope of the appended claims along with their full scope of equivalents.

[0042] The telephone number is one of the most universal communication identities in use. It is the core communication, reach, and location based identity a person may currently obtain. The telephone number is thus one of most valuable assets a network provider has. The telephone number is portable, which allows subscribers to take the telephone number with them from provider to provider.

[0043] Even more than the quality and power of the provider network, the manner in which the provider's capabilities are made available to a subscriber is important in improving services for subscribers. A subscriber should be able to personalize their functional experience via the capabilities of their network service that are identifiable to them via their telephone number in the manner and way that suits their needs. This becomes possible when the capabilities of the network, anchored by the telephone number, are abstracted into a set of triggers and then connected in a one-to-many fashion into the apps and services users already have, apps and services that exist within or without that network service provider, and/or apps and services that exist globally. An ecosystem of apps and services, anchored by the telephone number as the unifying thread, weaves these together in a chain.

[0044] An application or service developer, on the other side of this global equation, once interconnected in a network agnostic way to a telephone number, may now take advantage of the network effect of becoming instantly available to an increasing number of users as more network providers come online. In the global equation of a network provider capability interconnected to a service, or indeed a discrete sliver of a service in an agnostic way, the user of the telephone number and the application or service have a plurality of choices available that exponentially increase. An application developer can connect just once, similar to a network provider, into this platform. As a result, the one-to-many aspect of integration (both provisioning and action) positively benefits each party.

[0045] A global, hosted platform transforms a network provider by enabling a single point of integration between its various systems and the global ecosystem of onboarded services. A service joining the platform in Canada can become available to a South East Asian provider's subscribers. That service's communication function may be fulfilled in a separate geography via the provider, allowing rapid time to market. Innovation across the globe becomes available to a provider's regional customers. The ability to integrate into the unified platform once and become available everywhere thus greatly increases the value to the service, the network provider, and/or the user.

[0046] From the application side, an application developer may describe multiple pieces of behavior, each defined as an action, driven by telephone number activity. As a user, an event on a telephone number can be used to trigger a plethora of actions across discrete services and applications. These actions may target the entire service, or just a piece of functionality provided within that service. These actions, made available to the user of this application or service, are agnostic to the network provider, identified only by their telephone number. These actions can now be triggered in a simultaneous and/or sequential, precedence-driven approach via a policy & rules engine that operates neutrally across network providers and application developers.

[0047] To a user, whether in control of one or more telephone numbers, or managing a group of numbers, either in a household or as part of a department in a company, the capability now exists to attach a set of actions as part of a profile. This profile allows for a single subscriber to control these actions across multiple telephone numbers. As the association of the plurality of services and apps exists with the a telephone number, not a subscriber, it is the association of the user to that telephone number that enables a subscriber to play multiple roles in how they drive use of these action sets. In these roles, the provisioning, action, and billing relationship may all drive to different places in different ways, yet anchored again by that common telephone number.

[0048] Using the systems and methods described herein, the telephone number can become free of a specific device or set of devices. When communication activity is delivered via these action sets into apps or slivers of a service, the need for a specific device to perceive this communication activity becomes federated across all

mediums and platforms where these apps and services function. It now becomes possible for a phone to be unavailable yet the telephone number continue as a viable communication identity. The integration of these applications and services into network providers thus allows the telephone number to elevate from the telephone.

[0049] In summary, a single telephone number anchoring multiple sets of actions, each action triggering either a complete service or a discrete piece of functionality within that service, whether serially, in parallel or via some other intelligent invocation manner, allows for numerous unique patterns of new service creation. Service creation thus becomes the manner in which a communication activity event triggers an application or service, thus delivering a piece of functionality that exists purely because of the linkage of the trigger to the service. The plurality of these actions, driven by a multitude of network providers and application developers on either side of a global ecosystem bridges both together, with the telephone number being the common, worldwide identifier anchoring it together.

[0050] In some current systems, the ecosystem developed around a telephone number may be limited by the number of services provided through a telecommunications provider. Services can be offered to the subscribers as either native services and applications developed by the telecommunications provider or through the integration of third party services into the telecommunication provider system. In order for a third party service to be integrated into the telecommunication provider system, the third party service must be adapted to work with the APIs of the telecommunication provider system. If the third party service wants to integrate the service with multiple telecommunication provider systems, the service must be adapted to multiple APIs as most telecommunication provider systems do not use the same APIs or communication protocols. The resulting development and maintenance responsibilities may be difficult for some third party service providers to maintain, which may limit the number of third party service provider willing to provide services to the telecommunication providers.

[0051] In order to address this difficulty, the present description provides for the use of a unified services platform. The unified services platform provides a common interface for each third party service as well as a common interface for the telecommunication provider. This may allow the unified services platform to act as a translation service for the third party services. Each third party service can then

maintain a single service product while having the service available for multiple telecommunication providers.

[0052] The use of the unified services platform may also allow the telecommunication providers to present the third party services as their own. This may increase the satisfaction of the subscribers with the telecommunication providers as well as increase revenues. The third party services may receive more customers by having their services presented to an existing subscriber base.

[0053] The ability to offer multiple services through a single telephone number and unified services platform may present the opportunity for the individual services to be combined in new and unanticipated ways. For example, the subscriber may activate multiple services and can define rules to control the routing of the information through the services. In some cases, the information can be routed serially through a plurality of services and in others the information can be routed in parallel. The use of serial routing of information may allow the results of one service to be used by the next, in essence creating a new customized service. Similarly, parallel routing of information for the services may allow the desired set of features to be obtained for a subscriber. In some cases, individualized features related to one or more services can be selected and used by the provider or subscriber to create a customized service. For example, selected features from a plurality of services can be grouped to provide a service desired by a subscriber.

[0054] Further, use of the unified services platform to mediate third party services may allow the services to be billed to the customer on a single bill. For example, the third party services can bill through the telecommunication provider directly to the subscriber rather than having to submit individual bills and deal with recovering payment from the subscriber. Thus, the systems and methods described herein may simplify the interaction of application service providers with telecommunication providers to enhance the services available for subscribers.

[0055] As described herein, the telephone number of a subscriber can be used to link any number of services. For example, a diagram of an embodiment of utilizing a telephone number as the common subscriber ID across a plurality of services is shown in FIG. 1. The telephone number 102 may be the central ID which is associated with all of the features 104, services 106, and apps 108 which are provided to the subscriber. As shown in FIG. 1, the features 104 may include enhanced 911

(E911) to link the telephone number 102 to the appropriate public resources, short message service (SMS) to provide text messaging for the telephone number 102, and network services. The services 106 may include cloud PBX services for enabling an enterprise private telephone network, session initiation protocol (SIP) for controlling sessions over IP networks, and telephony services and protocols to provider telephone service to a subscriber. The applications 108 may include messaging, collaboration, and video, web services and protocols, as well as any number of other applications not shown. These features are only exemplary and numerous other services can be provided and linked through the use of the telephone number such as telephone number bridging network based services, web based services and applications, and the like.

[0056] The diagram of FIG. 1 illustrates the aggregation of the features 104, services 106, and apps 108 around the telephone number 102. The diagram represents an ecosystem that has been built around the telephone number 102 and includes legacy services combined with IP and data related services not traditionally associated with voice service over the PSTN. The ecosystem may be associated with the telephone number 102 and the subscriber may use the telephone number 102 as the login or username to access a storefront for managing all of the supporting services and applications to which they subscribe. The services and applications may be provided by multiple providers in multiple different ecosystems, but these services and applications may be unified around the telephone number 102 and appear to the user as existing in a single ecosystem.

[0057] As an example of a system described herein, a block diagram of one embodiment of a telecommunications provider cloud is shown in FIG. 2. The telecommunications provider cloud 204 may allow a telecommunications provider to add third-party applications to its various service offerings and white-brand and sell those third-party applications as if they were their own. In an embodiment, the telecommunications provider cloud 204 may include a unified services platform, which can be provided as software as a service (SaaS), and the unified services platform SaaS may be configured to combine large numbers of applications and provide them in a single offering to end users. The block 202 represents third-party applications combined with native applications that may be sourced by the telecommunications provider represented by cloud 204.

[0058] As shown in FIG. 2, all of the applications in block 202 that are used by a given subscriber may be unified around the subscriber's telephone number. Block 206 is representative of a single subscriber with a telephone number of 555-222-2222. The applications that are unified around this telephone number in block 206 may be associated with multiple different devices for the single subscriber. The subscriber may access the applications using a computer, tablet, mobile phone, smartphone, e-reader, landline phone, and/or any other suitable electronic device.

[0059] Referring now to FIG. 3, a system 100 for providing a unified services platform is schematically illustrated. The system 100 generally comprises a device 110, a provider 120, a unified services platform 140, a policy and routing engine 145, a network 130, and a plurality of application service providers 160, 170, 180. The network 130 may communicatively couple the various components of the system including the provider, the unified services platform 140, the policy and routing engine 145, and the plurality of application service providers 160, 170, 180. The network 130 may be a public communication network, a private communication network, or a combination thereof, and the network 130 may provide wired or wireless communications through a number of protocols between the components of the system 100.

[0060] The client or device 110 comprises a device or system associated with a telephone number that can be used by a subscriber. The device 110 may comprise a telephone or mobile device assigned to the telephone number that receives telephone services based on the telephone number. However, the device 110 may include a device that is associated with the telephone number as an identifier. For example, the device 110 may receive network service based on the telephone number without also receiving telephone service. In an embodiment, the device can include a mobile phone, a tablet, a PDA, a laptop, a computer, or any other type of device capable of receiving telephone and/or network services.

[0061] The device 110 may subscribe to a standard telephone service provided by the provider 120, and the telephone service may be associated with telephone number 105. Depending on the embodiment, the telephone service may or may not be bundled with other types of services (e.g., TV, internet). The device 110 is representative of any number and type (e.g., residential, business) of customers of the provider 120. The provider may comprise a telecommunications service provider. In

some embodiments, the provider 120 may be another type of provider such as a mobile carrier, a cable services provider, a network provider, an enterprise operating a business and providing network service to subscribers (e.g., employees, customers, contractors, etc.), or the like. Also, in other embodiments, device 110 may subscribe to multiple telephone services and have multiple telephone numbers. While only a single device 110 is illustrated, any number of devices may be present in the system 100. Further, in some embodiments, the device 110 may represent a group of users or devices, each of which may have a separate identifier such as the telephone number 105.

[0062] In an embodiment, the device 110 may be connected to the provider 120 via a wired connection (e.g., copper, fiber). In some embodiment, the device 110 may be connected to the provider 120 via a wireless connection. For example, the device 110 may use a wireless communication link to the provider 120 and/or the network 130 according to one of a code division multiple access (CDMA) wireless protocol, a global system for mobile communications (GSM) wireless protocol, a long term evolution (LTE) wireless protocol, a worldwide interoperability for microwave access (WiMAX) wireless protocol, or another wireless communication protocol. In some embodiments, the device 110 may comprise a device that is coupled to the provider 120 and/or the network 130 through a wireless access point. The wireless access point or other wireless local area network (WLAN) access point may comprise any number of devices such as a router, and may use a number of wireless communication protocols including, but not limited to, WiFi, Bluetooth®, and the like. The provider 120 may also be connected to a public switched telephone network (PSTN) 125. The provider 120 may include any number of telephone systems and may also be connected to other devices and other networks.

[0063] In an embodiment, the device 110 may subscribe to services and applications in addition to the telephone service provided by the provider 120. As described in more detail herein, the services and applications can include, but are not limited to, video conferencing, text messaging, interactive texting, hosted private branch exchange (PBX) seats, voice mail systems, and other services and applications. These services may be provided by the first application service provider 160, the second application service provider 170, and/or the third application service provider 180. While three application service providers are illustrated in Figure 1, any

number of application service providers may be in communication with the unified services platform 140 and/or the provider 120. The provider 120 may also provide native services and application that can be purchased directly from the provider 120 by the device 110.

[0064] The provider 120 may operate any number of systems suitable for providing the telephone and network services to the device 110. In general, the provider 120 is a communication service provider that provides telephone numbers associated services to the device 110. In an embodiment, the provider 120 may operate a system comprising a processor and memory. The memory may comprise one or more storage devices such as databases and the like. The various components making up a suitable system for providing the telephone and network services are described in more detail below. The provider 120 may comprise a number of applications stored in the memory and capable of being executed by the processor including a subscriber management component 122, a service catalog component 124, a billing component 126, and a network services and communication component 128.

[0065] The subscriber management component 122 may be stored in the memory and executed on the processor to manage the device 110 information. The device 110 information or any portion thereof may be provided to an application service provider 160, 170, 180 through the unified services platform 140 during provisioning of the application service provider services. The subscriber management component 122 may store the customer or device 110 information as well as control the formatting and communication of the information to the other systems. In an embodiment, the subscriber management component 122 may maintain the subscriber identity (e.g., a unique identifier, etc.), subscriber authentication data, the device 110 telephone number, the subscriber contact information (e.g., name, address, email, etc.), service plan information (e.g., telephone service plan information, application service provider plan information, etc.), and the like.

[0066] The service catalog component 124 may maintain the services and applications offered by the provider 120, including those offered by the application service providers 160, 170, 180 through the unified services platform 140 as well as any internal services provided directly by the provider. The service catalog component 124 may execute on the processor and provide the service information through a portal where devices 110 can select the desired services. The service catalog

component 124 may contain filters to allow the provider 120 to select the information illustrated in the catalog displayed in the portal. As described in more detail herein, the catalog may display less than all of the information provided by an application service provider 160, 170, 180. The service catalog component 124 may also control the communications with the unified services platform 140 and/or one or more of the application service providers 160, 170, 180 during the service provisioning and/or activation process.

[0067] The billing component 126 may contain the billing information for each device 110 based on the services that the device 110 selects. When a subscriber uses the portal to activate a desired service, the billing information for the selected service may be added to the billing component 126. The billing component 126 may execute on the processor to allow chargeable services data to be sent to the unified services platform 140 and/or an application service provider 160, 170, 180 when the service is provided by the provider 120. When the service is provided directly by an application service provider 160, 170, 180, the billing component 126 may be configured to receive the chargeable service data, add the notification information to a customer billing account, and route the appropriate payment or information back to the application service provider 160, 170 180 when the payment is received from the device. The chargeable services data can include information related to the use of a service such as a use indicator, an amount of the services used, a type of the service used, event data (time, location, etc.), and the like. The chargeable services data may not contain an actual amount to be billed. Rather, the amount billed can be returned to the provider 120 from the application service providers 160, 170, 180 based on the chargeable services data.

[0068] The network services and communication component may be configured to allow the provider 120 to communication with the device 110, the unified services platform 140, and/or one or more application service providers 160, 170, 180. In an embodiment, the network services and communication component may communicate policy and rule information with the unified services platform 140, provide signaling and execution information with the unified services platform 140, provide content and data to the unified services platform 140 for use with the application service providers 160, 170, 180, and/or provide content, data, and/or signaling information directly with the application service providers 160, 170, 180.

[0069] The application service providers 160, 170, 180 can provide services to a subscriber through a device 110. The first application service provider 160 may be part of a first ecosystem with a first identifier (ID) for each user and use a first application programming interface (API) for selecting and activating apps. In addition, the second application service provider 170 may be part of a second ecosystem with a second ID for each user and use a second API for selecting and activating apps. Similarly, the third application service provider 180 may be part of a third ecosystem with a third ID for each user and use a third API for selecting and activating apps. The first ID used by first application service provider 160 may or may not be different than the second ID used by second application service provider 170 and/or the third ID used by the third application service provider 180. The first API used by first application service provider 160 may or may not be different than the second API used by the second application service provider 170 and/or the third API used by the third application service provider 180. In other words, the first, second, and third ecosystems may not be compatible, may require separate IDs (for the same customer), and may have different types of rules and APIs for accessing, provisioning, and using their various services.

[0070] The application service providers 160, 170, 180 may establish communication pathways with the unified services platform 140 and/or the provider 120. In an embodiment, all of the communications between the application service providers 160, 170, 180 and the provider 120 may pass through the unified services platform 140. In some embodiments, some or all of the communications between the application service providers 160, 170, 180 and the provider 120 may occur directly between the application service providers 160, 170, 180 and the provider 120. In this embodiment, context information may be provided back to the unified services platform 140 to provide the necessary information to allow the services to be provided to the device 110.

[0071] The provider 120 may also be coupled to the unified services platform 140 via the network 130. The unified services platform 140 may be configured to provide a common interface between the application service providers 160, 170, 180, when each may have different APIs. The unified services platform 140 may unify all of the available services and applications in a single platform and associate the services and applications with a single ID to identify the device 110. Rather than using an identifier

such as an email address or a completely separate identifier, the unified services platform 140 may associate the various services and applications provided to the device 110 with the telephone number 105. In an embodiment, the provider 120 may use a single API for generating requests that are sent to unified services platform 140, and the unified services platform 140 may aggregate a plurality of APIs for a plurality of providers (e.g., first application service provider 160, second application service provider 170, third application service provider 180, etc.) within different ecosystems. Each separate application service provider may have a different API, which may each be different than the API used by the provider 120. In order to allow the different services to be used by the device 110 through the provider 120, the unified services platform 140 may activate services using the appropriate API for the provider 120 and each application service provider 160, 170, 180 to deliver the requested service.

[0072] The unified services platform 140 may include software and/or hardware for performing the various tasks to configure and provision a variety of services and applications and associate them with the telephone number 105. In an embodiment, the unified services platform 140 may be a Software as a Service (SaaS), and the unified services platform 140 may reside in the cloud. In an embodiment, the unified services platform 140 may include the server 142 and the database 144 for hosting the SaaS 146 and storing corresponding data. The server 142 and the database 144 are representative of any number of servers and databases. In some embodiments, the computing resources of the unified services platform may be spread out in multiple locations in the cloud and be accessed via the network 130. Although the unified services platform 140 is shown as being separate from the provider 120, in some embodiments, portions of the platform 140 or the entirety of the platform 140 may be integrated within the provider 120.

[0073] The server 142 may comprise a processor and the database 144 or another memory may comprise one or more components for performing the various tasks. In an embodiment, the unified services platform 140 may comprise an application service provider account component 152, a subscriber component 154, a test environment component 156, and a billing component 158. While some components are illustrated in FIG. 3, any number of additional components may be included and executed by the unified services platform 140.

[0074] The service provider account component 152 may serve as an account for the application service providers 160, 170, 180. The service provider account component 152 may comprise information including the communication information, API definitions, service descriptions, catalog information, branding information, and the like. The service provider account component 152 may also comprise the data and/or definitions used to allow the services to be provided to the device 110. For example, the service provider account component 152 can comprise the configuration web uniform resource locator (URL) for executing the services, the configuration message format and payload, support information, and the like. When the service is selected by a provider 120, the information provided in the catalog may be provided from the service provider account component 152.

[0075] The subscriber component 154 may contain the subscriber information provided by the provider 120. In an embodiment, the subscriber component 154 of the unified services platform 140 may comprise the subscriber identity, authentication information, subscriber data, and the telephone number 105. When the different application service providers 160, 170, 180 use unique identifications, the subscriber component 154 may also comprise the mapping information to correlate the application service provider identification with the telephone number of the device 110. This information may be used during provisioning, activation, deactivation, and activation of the service(s).

[0076] In some embodiments, the subscriber component 154 may comprise policy information and rules for a subscriber. The policy information may include information related to the actions associated with the requested services. For example, the policy information may identify what actions should be taken in response to receiving a voice call. The rules may define specific actions and logic within the policy. The subscriber component 154 may execute to provide a subscriber portal for setting and/or modifying the policies and rules associated with each service. This may allow the services to be customized through the unified services platform 140.

[0077] The test environment component 156 may be provided by the unified services platform 140 to allow one or more application service providers 160, 170, 180 to develop the services and test the interaction of the services with the unified services platform 140. The test environment component 156 may respond in a manner that is the same or similar to the live implementation of the unified services platform 140

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without allow the interactions to be released. The development application is described in more detail herein.

[0078] The billing component 158 may comprise routing and event data for the billing events and chargeable services data exchanged between the application service providers 160, 170, 180 and the provider 120. The billing component 158 may be configured to interact with the billing component 126 within the provider 120 to provide the information to allow the use of the services to be billed to the device 110 account.

[0079] The system 100 may also comprise a policy and routing engine 145, which may reside within the unified services platform 140 and/or within a server associated with the provider 120. In an embodiment, the policy and routing engine 145 may be a part of the server 142. The policy and routing engine may execute the policies selected for the services provided to a subscriber. The policy and routing engine may respond to an event or trigger, apply a policy and select the appropriate information to route the appropriate service. For example, a subscriber may subscribe to a contact list lookup service that can provide contact information upon receiving a voice call. The appropriate policy may be selected by the subscriber and stored in the subscriber module within the unified services platform 140. When a voice call is received, the receipt of the voice call may serve as a trigger, and the policy engine may apply the selected policy of invoking the contact list lookup service. When the policy is executed, the appropriate routing information for the incoming call data is obtained and the call data can be forwarded, using the routing information, to the contact list lookup service. The results of the lookup can then be returned to the subscriber through the device 110.

[0080] The services offered by an application service provide may first be provisioned to the unified services platform 140. In some contexts, the process of defining and integrating the services with the unified services platform 140 may be referred to as provisioning and/or onboarding. In general, a service can be provisioned into the unified services platform 140 by defining the services, plans, and actions used with the service. The services can be tested for use with the unified services platform, and once verified, published for selection by a provider 120.

[0081] Referring to FIGS. 3 and 4, a method 400 for provisioning a service from an application service provider 160 to the unified service platform 140 can be described.

In step 402, the application service provider 160 can establish a service account with the unified service platform 140. The service account can be created and store information about the application service provider and the service. In an embodiment, the service account can store the information in the service account component 152 in the unified service platform 140. As part of the service account, the application service provider 160 can provide application service provider information such as the service name, the application service provider name, a logo, demonstration examples, and the like. The service account may then be used to maintain the information for the service and/or the application service provider while the services are offered through the unified services platform 140.

[0082] At step 404, the application service provider 160 may define the plans and services offered through the unified service provider. The services may define the availability and types of activities that the application service provider can provide with their products. The services can be defined through the use of catalog data such as a service name, associated website, description, category, availability, and the like. The service may also be defined using technical information including a configuration description, support information, and event notification information. The information may be provided as a link to URL, a message, or a messaging format for use with the service. The plans comprise information regarding pricing, features, and/or service limits associated with the service offered by the application service provider 160. The definitions and information for the services and plans can be stored in the unified services platform 140.

[0083] As step 406, the application service provider 160 can define the actions for the services and plans. Actions relate to the work performed by the service based on an input or trigger associated with the device 110. In an embodiment, the action relates to activities related to the telephone number of the device 110. The actions can be defined in terms of the trigger and the resulting activity with the trigger is performed. Various actions can be performed when the service is invoked, for example based on a trigger. Actions can include transferring messages, images, documents, postings, notifications, or the like among various software services. For example, an action can include posting an incoming message to a social media set for the subscriber or posting the message to a messaging storage log. Actions can also include obtaining information such as contact information for a caller, customer

information for a calling customer, or the like. In some embodiments, the actions can include any of those associated with various types of software, applications, or media such as social media postings, customer relationship management software, call and message translations (e.g., language translations, voice to text translations, text to voice translations, etc.), file sharing software, file management software, contact management software, voicemail, messaging applications, call recording software, contact matching software (e.g., caller ID, etc.), messaging storage software, call notification software, and any other software available for integration. While some actions are listed as examples, the actions can include any type of work performed by a service.

[0084] A trigger can include any type of action performed on the device 110, such as an event associated with the telephone number 105 of the device 110. In an embodiment, a trigger can include a request by a subscriber to use the service. In some embodiments, the triggers can be tied to activities including messaging service activities (e.g., short message service (SMS) text messaging, etc.), call events, call control events, location events, time based events, and the like. The triggers can be associated with Representational State Transfers (REST) actions associated with various services. Applicable messaging service triggers can include, but are not limited to, REST upon sending a message and/or REST upon receiving a message. Similarly, call event triggers can include, but are not limited to, REST before making a call, REST after making a call, REST before receiving a call, and/or REST after receiving a call. Activities related to call controls can include, but are not limited to, Session Initiation Protocols (SIP) actions such as SIP on receiving a call and/or SIP on making a call. Location based events can include REST upon changing a location, REST upon entering a predefined area, REST upon leaving a predefined area, or the like. Time based events can include REST before a specified time, REST after a specified time, and the like. While described in terms of messaging, calls, call control events, location events, and time based event, various other triggers can also be defined. In an embodiment, events associated with specific connections, and the like can be defined. For example, the connection based triggers can include loosing network service, restoring network service, connecting a specific network interface, connecting to a specific type of network interface (e.g., WiFi router vs. cellular communication services, etc.), and the like may also be used as triggers. The

application service provider 160 can define the triggers used to initiate the actions associated with the particular services.

[0085] In addition to the triggers that initiate the actions, the application service provider 160 can define or allow rules and policies that apply upon the triggering event. The rules can be stored in the service account. The rules may generally define what actions, routing, or services are performed upon receiving a triggering event. The rules may be customized by a subscriber and executed by the policy and routing engine 145 during use of the device 110.

[0086] At step 408, the application service provider 160 may create workflow events to provide the integration with the unified services platform 140. The workflow events define the API interfaces to allow the service offered by the application service provider 160 to integrate with the unified services platform 140. Any number of API workflow events can be defined to allow for the full integration of the service with the unified services platform 140. In an embodiment, workflow events can be defined for service events, subscriber events, and the like. For example, workflow events for service changes can be defined to provide notification(s) of a service activation, a service deactivation, or a service modification. Similarly, workflow events for subscriber changes can be defined to provide notifications of a subscriber suspension, termination, and/or resumption.

[0087] The workflow events may be sent out as standardized data notifications in a programmatic format containing the information, such as JavaScript Object Notation (JSON) or Extensible Markup Language (XML), to a web uniform resource locator (URL) specific to the application service provider 160. The application service provider 160 may then intercept the information and translate the information into appropriate systems, databases, and/or other internally relevant systems to respond to the workflow event. Likewise, the workflow even notifications from the application service provider 160 are sent in a standardized format to a web URL configured for the application service provider 160 in the unified services platform 140. The notifications may comprise information sufficient to identify the subscriber account, the service, and the type of workflow event. In an embodiment, the notification may comprise a subscriber identification (e.g., the telephone number 105), subscriber information (e.g., name, contact information, etc.), a provider identification, a service name, a plan

name, the type of event, and any additional information needed to carry out the workflow event.

[0088] In an embodiment, the billing information, model, and routing information can be defined in step 410. The billing information may be provided based on the plans defined by the application service provider 160. In general, the billing for the services provided by an application service provider may be billed to the device 110 through the provider 120. This may provide a single bill to the subscriber, which may enhance customer satisfaction with the provider and the services. The billing information may be used to define the chargeable services data format and routing. When the services are used by the device 110, the chargeable services data can be generated by the provider 120, the unified services platform 140, and/or the application service provider 160 and routed to the provider 120 for billing to the customer. The location of the generation of the chargeable services data may depend on the communication between the device 110 and the application service provider 160 when the services are used. The billing information defined during provisioning can also be used to provide payment for the service from the provider 120 to the application service provider 160 upon payment by the subscriber to the provider 120.

[0089] Once the service has been defined in the unified services platform 140, the service can be tested and built in step 412. In an embodiment, the testing component 156 within the unified services platform 140 can be used to fully test the services, functionality, and compatibility of the application service provider 160 with the unified services platform 140. Testing can include executing a number of test cases to fully establish the functionality of the service. For example, each trigger can be executed along with the use of one or more rules or policies to allow the communication with the unified services platform 140 to be verified. Billing scenarios including invoicing and returning payment can also be tested using the test system. Once the service is tested, it can be completed and published to the unified services platform 140 in step 414. The same process can be used to provision any number of services from a given application service provider 160, and/or for each service provided by different application service providers 160, 170, 180.

[0090] Once the service from the application service provider 160 is provisioned into the unified services platform 140, the service may be discoverable by the provider 120. In an embodiment, the unified services platform 140 may maintain a list or

catalog of provisioned services that can be selected by the provider 120. The catalog may allow the provider 120 to browse the available services and select one or more services to be added to the provider's 120 catalog of services that are visible and available to the device 110.

[0091] A messaging diagram illustrating an embodiment of a process for selecting a service for addition to the provider's 120 catalog is illustrated in FIG. 5. In the context of FIG. 5, it can be assumed that the provider 120 has already been integrated with the unified services platform 140 through the appropriate integration of the system APIs. Once the service from an application service provider (e.g., application service provider 160) has been provisioned into the unified services platform 140, the service may be added to a service catalog or other service store as shown as element 501 in FIG. 5. The unified services platform 140 may provide a portal for the provider 120 to view the available services in the catalog. The information provided by the application service provider 160 may be available to view such as the description, the service and plan definitions, the action definitions, screenshots, samples of the functionality, links to the application service provider's website, and the like. In this sense, the portal may act as a storefront for the provider 120 to select services provisioned to the unified services platform 140.

[0092] The provider 120 may log in and browse the provisioned services in the catalog 501 by establishing a connection with the unified services platform 140 in step 502. Once the provider 120 selects a service to make available to their subscribers, the provider 120 and the application service provider 160 may, directly or through the unified services platform 140, communicate in one or more messages to form an agreement for providing the services through the provider 120 in step 504. The agreement may establish how the services are to be provided, how the services will be routed, the billing and payment agreements and routing, and the like.

[0093] Once the agreement has been reached, the application service provider 160 may provide a message to the unified services platform 140 approving the provider 120 in step 506. Similarly, the provider 120 may provide a message to the unified services platform 140 approving the services provided by the application service provider 160 in step 508. The messages sent in steps 506, 508 may occur in any order to long as both parties approve the services being provided. The messages sent in steps 506, 508 may comprise the information relating to the routing of

information to allow the services to be provided to the device 110, billing information, and the like that can be stored in the unified services platform 140 for use when the services are invoked.

[0094] Once the service has been approved by both parties, the service may be added to the provider's 120 catalog. The provider's catalog can reside on a server at the provider 120 and/or on the unified services platform 140. When the provider's 120 catalog resides on the unified services platform 140, the provider 120 can send a message to add to the service to the provider's 120 catalog in step 510.

[0095] The provider 120 may also apply one or more filters to the services added to the provider's catalog. The ability to add a filter may allow the provider to rebrand the service as the provider's own service or present the service as being provided by the application service provider 160. In some embodiments, the provider 120 may only allow a portion of the plans or services provided by the application service provider 160, and the services that are not being presented to the device 110 can be hidden. Thus, the filters may allow the provider 120 to customize the services offered to the device 110. The filters may also limit the presentation of services that are presented to a particular device 110 to those that the device 110 can use. For example, services requiring presentation on a handset may not be presented to a device 110 having only a landline. In an embodiment, the filters can include presentation filters, service availability filters, and/or filters based on the system available at the device 110. The provider may send a message to enable the filters for use with the catalog in step 512. The provider's catalog 514 comprising the added service may then be available for viewing by a device 110.

[0096] In addition to display and use filters, the provisioning process may perform a discovery process to determine individual actions and functions that the software can perform. For example, a service offered by an application service provider service may include performing a location determination followed by a directory lookup based on the location determination. As part of the testing procedure, the location determination feature may be discovered to be separable from the remaining portions of the software. For example, an API call may return the location determination without any additional data. Alternatively, the information from the service may be routed through the unified services platform and only the location determination may be extracted from the information while the remaining portion may be discarded.

[0097] In an embodiment, the unified service platform 140 may record the information provided by the services during the testing phase of the application service provider services. The information provided by each defined action can be recorded and parsed to determine a correlation between the defined actions and the resulting data generated by the service. This information can then be used to identify separable services provided by the application service provider 160, 170, 180 services. In some embodiments, the application service provider may define specific messaging calls to perform individual functionality of the services. A catalog of individual services offered by the various application service providers can then be provided to the provider for use with various functions.

[0098] The ability to discover separable functions or services within the application service provider services may allow the unified services platform and/or the provider to identify and use individual functions for several purposes. In an embodiment, the individualized functionality may be used with the provider network to provide services to the subscribers. For example, a geolocation service that is part of one of the services may be provided to a subscriber and used as part of the functionality of a subscriber device associated with the telephone number. This may allow the provider to build in services for the subscribers without having to develop the services internally.

[0099] In an embodiment, the separable services may also be used to develop larger services by combining individual functional elements from multiple application service provider services into a single service. This is similar to the use of chaining actions, but may be more flexible in defining the type of result or functions performed. For example, a new service could be constructed from individual functionality of two or more services without using the full functionality of any of the services. The use of the unified services platform 140 may provide the interface to allow the separable functionality provided by the multiple services to work together, communicate, and route the information in a manner suitable for allowing a new service to operate.

[00100] The separable or individual services can be combined by the subscriber, the unified services platform, a provider, or and/or a third party application provider. In an embodiment, a subscriber may browse the available actions and select a plurality of actions to combine according to a provided set of rules. The rules may specify a routing (e.g., a serial routing to create a chaining flow, a parallel routing to create a

multicast flow, or any combination thereof), formatting, destination addresses, and integration details for each separable action, the output of each separable action, and any accompanying communication to allow new service to be created from the combination of the separable component. For example a subscriber may request that a geolocation action be combined with a messaging service so that the geolocation service may perform a location on the device associated with the telephone number of the subscriber. When the subscriber enters a preselected geographic area, the geographic location may be forwarded to a messaging service, which may send a text message of the location to a database associated with the subscribers employer as well as one or more mobile device (e.g., to the subscriber's boss). This may allow a new geographic notification service to be created by the subscriber. New services may be created by any of the other parties in the same manner.

[00101] When a new service is created, the new services may be added to an available service catalog such as the provisioning catalog or the services catalog offered by the provider. Once the new service is published, other subscribers, providers, and/or third party application service providers can activate or use the new services. Thus, this system may allow new services to be created and used by other parties.

[00102] In order for the service to be available to a device 110, the subscriber may select the service to add to the subscriber's account. Referring to the messaging diagram illustrated in FIG. 6, this selection and addition process 600 may be referred to as activation of the service by the device 110. The device 110 may view the services offered through the provider 120 by sending an access request message to the provider 120 in step 602, which may send an access message to the unified services platform 140 along with the device 110 information in step 604. The device information may be used with the catalog 514 filters to present the services available to the particular device 110 to the subscriber. A browsing session may then be established in step 606 with a portal to allow the device 110 to browse and select a service for use with the device 110. In an embodiment, the browsing session of the catalog may comprise access a portal for the unified services platform 140 for which a catalog of available applications and services are presented.

[00103] The device 110 may add new applications and services to their accounts using their existing telephone number 105 through the portal, as well as manage

existing applications and services to which device 110 has already subscribed. The cataloged applications and services may be from within the network of provider 120 and/or may be from third-party service providers 160, 170, 180. The portal may also be accessible via API in the case a user portal already exists with the provider 120 using the unified services platform 140. In this case, the provider 120 could integrate their portal into the API of the unified services platform 140 to source and managed applications and services.

[00104] When the device 110 decides to subscribe to a selected service, the device 110 may select the conferencing application from the catalog in the portal for platform 140 using a selection message in step 608, which may pass directly to the portal or pass through the provider 120 as a message in step 610. The selection message may occur within the session, but is shown as a separate message in FIG. 6 for clarity. In response to detecting this selection, the unified services platform 140 may collect the relevant data from device 110 which the service needs to function properly for the device 110. The relevant data may be provided by the provider, for example in the message provided in step 610. With the application service provider 160 configured in the network of the unified services platform 140, the unified services platform 140 may be aware of the location and relevant call routing information required to enable the network of provider 120 to properly send information and data to the application service provider 160. In response to receiving the selection of the service, the unified services platform 140 may update the subscriber data in a subscriber module, which may retain information for the subscriber regardless of the specific provider 120 providing services to the subscriber at the time the service is selected.

[00105] With the indication that the device 110 would like to add the service to the subscriber's account, the unified services platform 140 can send a subscription message to the application service provider 160 in step 612. This message may comprise a workflow event provided in a programmatic format (e.g., such as a JSON or XML message) containing the information that is sent to a web URL specific to the application service provider 160. The workflow event and messaging protocols can be established during the provisioning process between the unified services platform 140 and the application service provider 160. In this process, the application service provider 160 may intercept the device 110 and provider 120 data, including the telephone number 105, and the application service provider 160 may translate the

information into its internal systems to make the telephone number 105 work with the selected service as well as accept the data needed to allow the service to operate through the provider 120.

[00106] A service portal 616, which may be the same as the portal providing the catalog 514, may be provided by the unified services platform 140 to provide a session between the application service provider 160 and the portal 616 in step 614 and a session between the device 110 and the service portal 616 in step 618. The portal may allow the device 110 to select the policies and options associated with the service. The same portal 616 may also be accessed by the device 110 at various times to enable and/or disable various functions and features (e.g., actions) associated with the service. Once the device 110 has selected the desired service and available options, a notification may be provided to the provider 120 to add the service to the device 110 account in step 620. The unified services platform 140 may send out the notification as a standardized data notification in a programmatic format (e.g., such as a JSON or XML message) containing the information to a web URL specific to the provider 120. The provider 120 may then intercept the information and translate the information into appropriate systems, databases, and/or other internally relevant systems required to allow the telephone number 105 of the device 110 to function with the selected service.

[00107] Once the application service provider 160 activates the device 110 to use its service, the unified services platform 140 receives a notification in step 622, and a billing event may be generated and sent in step 624 to a web URL configured by the provider 120 in which the provider 120 intercepts and translates the billing event containing all relevant data into its internal systems. In an embodiment, as long as the device 110 remains subscribed to the service, the application service provider 160 may bill the provider 120 and the provider 120 may bill the device 110 for the service. The unified service platform 140 may remain the database of record for all active and inactive applications and services subscribed to and/or purchased through the unified services platform 140 for all of the subscribers of the provider 120.

[00108] Any number of additional services or application can be selected by the device 110 in the same manner, allowing interworking between the provider 120 and the application service providers 160, 170, 180, all working together leveraging the telephone number 105 of device 110 as the single, universal identifier.

[00109] During the activation process, the unified services platform 140 and/or the provider 120 may check to ensure that a selected service or application satisfies any pre-requisites for the use of the service. For example, a selected service may require a subscriber to have an active account with the application service provider 160 and/or an account with a second application service provider. During the activation of the service, the unified services platform 140 may perform a lookup in the subscriber component to determine if the subscriber account is associated with an active account at the application service provider 160 and/or the second application service provider. If the pre-requisite is satisfied, then the activation process may proceed as described above. However, if the pre-requisite is not satisfied, the unified services platform 140 may initiate an activation process for the pre-requisite. For example, if an active account is not located, the unified services platform 140 may attempt to activate the account for the subscriber. The subscriber may be queried to determine if the activation of the pre-requisite service is approved. If the subscriber declines the pre-requisite service, a message may be send to the subscriber indicating that the activated service may not function. In some embodiments, the activation process may abort to prevent the selected service from being activated by the subscriber.

[00110] As an example of a device 110 activation of a selected service, a first application service provider 160 may host a third party conferencing application. In this embodiment, the application service provider 160 may operate in a standalone environment by reselling telephone numbers to customers directly through its own website. This conferencing application may be provisioned within the catalog of the unified services platform 140, and this may open up the ability for the provider 120 and its subscribers (device 110 and others) to bring their existing telephone numbers into the conferencing application, thus creating a unified experience for the customers of the provider 120.

[00111] When the device 110 decides to subscribe to this conferencing application, the device 110 may select the conferencing application from the catalog in the portal for the unified services platform 140. In response to detecting this selection, the unified services platform 140 may collect the relevant data from the device 110 which the conferencing application needs to function properly for the device 110. With first application service provider 160 configured in the network of the unified services platform 140, the unified services platform 140 may be aware of the location and

relevant call routing information required to enable the network of provider 120 to properly send calls to the off-net conferencing application. The unified services platform 140 may send out the data notification to the provider 120. The provider 120 may then intercept the information and translate the information into appropriate systems, databases, and/or other internally relevant systems required to allow telephone number 105 of device 110 to function with the conferencing application. Likewise, the data collected by the unified services platform 140 from the device 110 for the conference application may be sent to a web URL configured for the provider 160 in the unified services platform 140. The application services provider 160 may intercept the device 110 and provider 120 data, including the telephone number 105, and the provider 160 may translate the information into its internal systems to make the telephone number 105 work with the conferencing application as well as accept calls from provider 120 on the behalf of device 110. Once the provider 160 activates the device 110 to use its conferencing application, the unified services platform 140 may receive a notification, and a billing event may be generated and sent to the provider 120, which the provider 120 intercepts and translates into its internal systems.

[00112] If the device 110 decides to unsubscribe from the conferencing application, then the device 110 may cancel the subscription via the same portal of the unified services platform 140 that was used to originally subscribe to the conferencing application. Similar to the way that the unified services platform 140 sent activation data to all of the relevant parties, the unified services platform 140 may send the deactivation information in the same standardized format to all of the relevant parties' configured web URLs. This includes deactivation to the web URL of the provider 120 configured for billing events.

[00113] Any number of additional services can be selected by the device 110. Various services may allow integration of activities on the device 110 with services such as social media posting, customer relationship management software, call and message translations (e.g., language translations, voice to text translations, text to voice translations, etc.), file sharing software, file management software, contact management software, voicemail, messaging applications, call recording software, contact matching software (e.g., caller ID, etc.), messaging storage software, call notification software, and any other software available for integration. Specific services and examples are provided in more detail herein.

[00114] A schematic view of a system for activating one or more selected services is illustrated in FIG. 7. As shown in FIG. 7, a block diagram of an embodiment of a unified services platform 704 is shown. The telephone number (555-111-1111) may be used as the central ID to associate services and applications that are used by the corresponding subscriber. Provider 706 may provide telephone service to the subscriber and present a storefront to the subscriber to allow the subscriber to select and add new services and applications to their existing service. The subscriber may select applications via the storefront hosted by provider 706, and then the selected applications may be activated via the unified services platform 704. As shown in unified services platform 704, the subscriber has already selected three applications (app 1, app 2, and app 3) which are associated with telephone number (555-111-1111).

[00115] When the subscriber selects a new application to add to their existing voice service, a request may be generated via sourcing and settlement API 708 to activate the new application and associate the new application with the subscriber's telephone number. The unified services platform 704 may then generate the necessary configuration data to activate the new application in accordance with the specific API 710 used by the application service provider 702 responsible for delivering the new application. In an embodiment, the unified service platform 704 may notify the corresponding application service provider 702 that the provider 706 is activating the new application in place of the subscriber. As a result, the new application may be assigned to the provider 706 and different rules may apply than if the subscriber were directly activating the new application by themselves. In an embodiment, this notification may be indicated by setting an extra configuration field bit during the activation process, and in response, the corresponding application service provider may allow the provider 706 to directly control and manage the account for the subscriber.

[00116] The unified services platform 704 may generate the appropriate workloads and manage the integration of the new application for the subscriber. The unified services platform 704 may also manage the relationships between all of the different application service providers by using the telephone number as the common identifier. After activation, the actual functionality of the new application may bypass the unified services platform 704 and instead be delivered across the actual physical connection

to the subscriber (shown as arrow 712). In an embodiment, the unified services platform 704 may be provided as a SaaS. In some embodiments, the unified services platform 704 may be extended into private clouds rather than being a standalone platform.

[00117] Referring now to FIG. 8, a diagram of another embodiment of a sequence for activating services for a subscriber is shown. For the purposes of this discussion, it will be assumed that the subscriber 802 has requested new services to be associated with their subscriber telephone number. These requests may be sent to the provider 804 in step 810, and these requests may identify the specific services being requested. In this example, the services being added can include video conferencing and interactive voice response (IVR) services. The provider 804 may receive the requests in step 810, and in turn may generate and send a request in step 820 to the unified services platform 806 to source the desired services.

[00118] In response to receiving this request, the unified services platform 806 may generate the appropriate activation data to activate these requested services and associate these services with the existing telephone number of the subscriber 802. The unified services platform 806 may generate configuration data in accordance with the APIs of the application service providers 808 who are providing the requested services. Specifically, the unified services platform 806 may generate activation data in step 830 to the application service provider 808 of the video conferencing application. In an embodiment, the unified services platform 806 may translate the telephone number into a second identifier (ID) that can be used to identify the subscriber 802 in the video conferencing provider's system. For example, this second ID may be an email address, and this email address may be a real email address of the subscriber 802. Alternatively, the unified services platform 806 may generate a dummy email address to serve as this second ID.

[00119] The unified services platform 806 may also create a mapping of the telephone number to the second ID and send this mapping to the provider 804. The provider 804 may store this mapping and use the mapping when initiating sessions of the video conferencing service for the subscriber 802. The activation response corresponding to the activation of the video conferencing application may be returned from the application service provider 808 in step 835.

[00120] The unified services platform 806 may generate activation data in step 840 to the provider of the IVR application, and the activation response corresponding to the activation of the IVR application may be returned from the corresponding application service provider 808 in step 845. In an embodiment, the unified services platform 806 may translate the telephone number into a third ID that will be used to identify the subscriber 802 in the IVR application provider's system. The unified services platform 806 may also create a mapping of the telephone number to the third ID and send this mapping to the provider 804. The provider 804 may store this mapping and use the mapping when initiating sessions of the IVR application for the subscriber 802.

[00121] In step 850, the unified services platform 806 may generate settlement data including billing information and transfer this data to the provider 804. Then, in step 860, the provider 804 may activate the new services for the subscriber 802. The actual functionality of the new services may be provided directly from the host application providers 808 to the subscriber 802 in step 870.

[00122] Once the services are activated and functioning, a subscriber 802 may optionally modify the plan, policies, and/or rules associated with the service. For example, the format and availability of the video conferencing service can be modified by the subscriber 802. In order to modify the service, the subscriber may send a request to login to the service portal for the service in step 880. If the service portal is hosted at the provider 804, the subscriber 802 may interact with the portal to modify the service. In some embodiments, the service portal may be provided at the unified services platform 806. In this embodiment, the request to login to the service portal may be forwarded from the provider 804 to the unified services platform in step 882. The service portal may be initiated to allow the subscriber 802 to make any desired changes or modifications. Once the subscriber accepts the modification, the changes may be saved in the unified services platform 806, and the data may be forwarded to the application service provider 808 in step 884. Any modifications to the application service provider systems can be made based on the data provided by the unified services platform 806. A confirmation message comprising the data can be provided from the unified services platform 806 to the provider 804 in step 886. Any modifications to the provider systems can be made based on the data provided by the unified services platform 806. A confirmation message can then be provided to the

subscriber in step 888 to verify that the changes to the service have been made. The service can be resumed using the modified plan, policies, and/or rules in step 870.

[00123] Turning now to FIG. 9, an embodiment of a method 900 for activating services through a unified services platform with the telephone number as the common identifier is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00124] In an embodiment, a first user may be provided with a first service by a first provider. The first service may be telephone service, and the first user may have a first telephone number associated with the telephone service. In this embodiment, a request to provision a second service for the first user may be received by the first provider (block 905). In some embodiments, the first telephone number may also be associated with one or more other types of services provided by the first provider. In an embodiment, the first provider may be a telecommunications service provider. In other embodiments, the first provider may be another type of provider (e.g., mobile carrier, cable services provider, network provider). The second service requested by the first user may be any of various services or applications (including IP-related applications) and the second service may be provided by a second provider. The second provider may be part of a second ecosystem (e.g., iTunes™, Google play™), and the second ecosystem may be different than a first ecosystem used by the first provider. In some embodiments, the second provider may use an API that is not recognized or accepted by the first provider.

[00125] In response to receiving the request, the first provider may use the first telephone number as a common ID for provisioning the second service (block 910). In an embodiment, a unified services platform may be used to provision the second service for the first user. The unified services platform may activate the second service for the first user and associate the second service with the first telephone number. In some embodiments, the first telephone number may be translated to a second ID that is used as a login ID or user name within the ecosystem of the second provider. In these embodiments, the unified services platform may store the first telephone number to second ID pairing and perform the necessary translation

between the two IDs when provisioning the second service. In an embodiment, the unified services platform may be integrated within the first provider's computing resources, and the first provider may perform these functions itself.

[00126] Next, a request to provision a third service for the first user may be received by the first provider (block 915). The third service may be any of various services or applications which are provided by a third provider. The third provider may be part of a third ecosystem and the third ecosystem may be different than the first and second ecosystems. In some embodiments, the third provider may use an API that is not recognized or accepted by the first provider and/or the second provider.

[00127] In response to receiving the request, the first provider may use the first telephone number as a common ID for provisioning the third service (block 920). In an embodiment, the unified services platform may be used to provision the third service for the first user. The unified services platform may activate the third service for the first user and associate the third service with the first telephone number. In some embodiments, the first telephone number may be translated to a third ID that is used as a login ID or user name within the ecosystem of the third provider. In these embodiments, the unified services platform may store the first telephone number to third ID pairing and translate between the two IDs when provisioning the third service.

[00128] Next, the first provider may create a unified storefront (e.g., as a service portal) for managing the plurality of services which are associated with the first telephone number (block 925). The unified storefront may allow the first user to monitor their account and add new services and applications to the first telephone number. The first provider may allow the first user to login to the unified storefront using the first telephone number (block 930). By enabling this login access using the first telephone number, the first provider is able to generate a simple and easy to use storefront for the first user to manage existing services and add new services.

[00129] It is noted that the method 900 may be implemented for any number of users requesting any number of services or applications from any number of providers. It is also noted that the first provider may also provide any number of native services and applications to the first user, and these native services and applications may also be associated with the first telephone number.

[00130] Turning now to FIG. 10, an embodiment of another method 1000 for activating a service for a first subscriber is shown. For purposes of discussion, the

steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00131] A request to activate a service for a subscriber and associate the service with the subscriber's telephone number may be received by a first provider (block 1005). The service may be provided by a second provider, and the second provider may be different than the first provider. In an embodiment, the subscriber may generate the request by logging into a unified storefront. The unified storefront may bring together multiple services and applications from multiple third-party providers, and the unified storefront may allow the subscriber to select these services and applications for activation. In an embodiment, the unified storefront may be maintained by the first provider. In another embodiment, the unified storefront may be independent and maintained separately from the first provider. In an embodiment, the unified storefront may be provided as a portal that is accessible by the subscriber.

[00132] Next, the first provider may forward the request to activate the service to the unified services platform (block 1010). However, in some embodiments, the unified services platform may be integrated within the computing resources of the first provider. In these embodiments, method 1000 may skip block 1010 (as indicated in FIG. 10 by the dashed arrow). Next, the unified service platform may extract the appropriate information from the request (block 1015). The extracted information may include the subscriber's telephone number and other information needed to activate the service. Next, using the extracted information, the unified service platform may send the subscriber's telephone number and other relevant data to the second provider to activate the service and associate the service with the subscriber's telephone number (block 1020). The unified service platform may provide the subscriber's telephone number to the second provider as an ID of the subscriber. In an embodiment, traditional customers who are not connected to the unified service platform may use a first API for interfacing to the second provider when activating the service. However, the unified service platform may use a second API for activating the service from the second provider, wherein the second API is different than the first API. When a traditional customer uses the first API to activate the service, the second provider may generate a new telephone number and use this new telephone number

to associate with this traditional customer. The traditional customer will then associate the service with this new telephone number, regardless of whether the traditional customer has an existing telephone number or not.

[00133] For the unified service platform using the second API, the service may be associated with the subscriber's existing telephone number. This allows the subscriber to avoid having to associate a newly created telephone number with the service. This scheme results in simplifying and enhancing the subscriber's experience and interaction with the services to which they subscribe. For example, if a subscriber activated 10 different services from 10 different providers, the existing prior art techniques would require the subscriber to use 10 different telephone numbers to activate these 10 services. Using the techniques disclosed herein, the subscriber is able to use a single telephone number to associate with these 10 different services. Additionally, the first provider may receive a plurality of bills associated with the single telephone number from a plurality of different providers, and the first provider may combine the billing information from the plurality of bills and provide a single bill to the subscriber.

[00134] After block 1020, the unified service platform may generate the necessary routing information for using the service (block 1025). Next, the unified service platform may send this routing information to the first and second providers (block 1030). The first and second providers may use this routing information for setting up and enabling sessions of the service for the subscriber (block 1035). In an embodiment, the sessions may bypass the unified service platform and work independently of the unified service platform. In another embodiment, the unified service platform may receive context data while a session is taking place, and the unified service platform may use this context data to provide enhanced services to the subscriber.

[00135] It is noted that the subscriber may activate many different services and applications from multiple different providers, and these different services may be activated and associated with the subscriber's existing telephone number using the steps of method 1000. It is also noted that in some embodiments, the subscriber's existing telephone number may not be associated with the PSTN, but rather may be independent of the PSTN.

[00136] Referring now to FIG. 11, an embodiment of still another method 1100 for activating a third-party application is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00137] A third-party application provider may provide a given application or service to end users. In the example described below, the given application is a short message service (SMS) text messaging application. It is to be understood that while this example is used for this discussion, in other embodiments, other types of applications may be provided by the third-party provider.

[00138] In order to offer the SMS text messaging application to customers of a given primary provider, the third-party application provider may configure what customer information and interworking data is needed to create a new account when a new customer subscribes to their SMS application with a telephone number on the given primary provider's network (block 1105). Next, the given primary provider may include this SMS application in their master catalog to offer to the given primary provider's customers (block 1110). As part of including the SMS application in their master catalog, interworking data is provided to the primary provider to enable them to make the SMS application work within their network in order to get SMS messages to the SMS application. Next, a customer of the primary provider may select the SMS application in the master catalog, indicating they wish to purchase this SMS application and associate the SMS application with their existing telephone number (block 1115). It is noted that in some embodiments, the customer's telephone number may be a mobile subscriber integrated services digital network number (MSISDN). The customer's existing telephone number may also be referred to as their "subscriber ID". In an embodiment, the term "subscriber ID" may be defined as the telephone number associated with a device used by the customer. In another embodiment, the term "subscriber ID" may be defined as a single telephone number that can be associated with multiple identifiers. In other embodiments, the term "subscriber ID" may be defined as the ID used to identify a given customer in a primary provider's network. In a further embodiment, a subscriber ID may be used by a primary provider

for identifying a given user, for routing information, for accounting information, and for various other purposes within the primary provider's network and other infrastructure.

[00139] After block 1115, activation data may be sent to the primary provider informing the primary provider that this SMS application will now be accepting SMS messages on behalf of the customer (block 1120). Also, interworking data which is associated with the customer's telephone number may be sent to the primary provider (block 1125). The interworking data lets the primary provider know how to route SMS messages to the third party provider when SMS messages are sent to the customer's telephone number.

[00140] Additionally, activation data may be sent to the third party provider so that an account is created for the customer by the third party provider to use the SMS messaging application (block 1130). The activation data may include the customer's telephone number, a user ID of the customer, and the necessary interworking data which is associated with the customer's telephone number. In an embodiment, the term "user ID" may be defined as an identifier which is used for authenticating a customer for the purposes of using an account or service. In another embodiment, the term "user ID" may be defined as identifier of a customer that is associated with authentication, account creation, and verification. In some embodiments, the user ID may be an email address of the customer. In other embodiments, the user ID may be any of various other types of identifiers. It is noted that blocks 1120, 1125, and 1130 may be performed simultaneously or in any order depending on the embodiment.

[00141] Next, the third party provider may consume and translate the activation data into their own proprietary API to create an account and properly accept SMS messages from the primary provider for the user's telephone number (block 1135). After block 1135, the method 1100 may end. It is noted that the method 1100 may be performed multiple times in order to associate multiple third-party services with the telephone number of the customer. As such, the telephone number is being abstracted from the primary provider's network and becomes the unifying ID across multiple eco-systems.

[00142] The techniques for utilizing a third-party service after activating an account with the third-party provider may vary depending on the embodiment. For example, in an embodiment, after activating a SMS messaging application, when a SMS message is sent to the customer's telephone number, the SMS message may be automatically

routed to the third-party provider and then to the customer's device which is associated with that telephone number. In another embodiment, a third-party conferencing application may be activated using the method 1100. After activation, the customer may use their telephone number to setup a third-party conferencing application by selecting an option for conferencing, and then entering a personal identification number (PIN) for the bridge to use the third-party conferencing application for hosting a conference. The customer may also login to a website to view details of a live conference, and the customer may use their user ID to login to this website. Therefore, in this embodiment, the telephone number of the customer may be used to access a first portion of the functionality of the conferencing application, while the user ID of the customer may be used to access a second portion of the functionality of the conferencing application. In other embodiments, other techniques may be implemented for utilizing third-party applications which are associated with the customer's telephone number.

[00143] In some embodiments, a service may be activated for an account by a business or enterprise. For example, a company may establish a service for an employee to use in the course of conducting business for the company. In this case, the enterprise administrator may be responsible for establishing a service for one or more subscribers. The service may also be activated by a group account representative. While the group account may be described in the context of an enterprise, the group may also apply to a family group (e.g., a family account), a social group, or any other group of subscribers however related. The group administrator may be a representative of the group for activation and/or billing purposes. In some embodiments, the group administrator may be a member of the group, and in other embodiments, the group administrator may not be a member of the group.

[00144] FIG. 12 illustrates an embodiment of an activation process in which an enterprise administrator is responsible for activating a service for one or more subscribers. For the purposes of this discussion, it will be assumed that the enterprise has selected a service to be added to the one or more subscriber accounts. The enterprise administrator 1210 may request the new service to be associated with the subscriber telephone numbers. In step 1202, the enterprise administrator 1210 may access the subscriber data for the subscribers to which the service is being added. The subscriber data may include an identification sent to the provider 1220, and the

provider 1220 may or may not return additional account information to the enterprise administrator 1210. In an embodiment, the subscriber data may include the telephone numbers of the subscribers for which the service will be provided.

[00145] A request for the service or services is sent from the enterprise administrator 1210 to the provider 1220 in step 1204. The request sent to the provider 1220 may identify the specific services being requested. In addition, a group plan identifier can be included with the request to identify the services as being associated with a group request. Each subscriber identifier such as the telephone number can be associated with the group plan identifier in step 1206. The provider 1220 may receive the request and in turn may generate and send a request in step 1208 to the unified services platform 1240 to source the desired services.

[00146] In response to receiving this request, the unified services platform 1240 may generate the appropriate activation data to activate the requested service and associate the service with the existing telephone numbers of the subscribers in the group plan. The unified services platform 1240 may generate configuration data in accordance with the API of the application service provider 1260 who is providing the requested service. Specifically, the unified services platform 1240 may generate activation data in step 1212 to the application service provider 1260. In an embodiment, the unified services platform 1240 may translate the telephone number into a second identifier (ID) that can be used to identify the subscriber and/or the group plan.

[00147] The unified services platform 1240 may also create a mapping of the group plan identification and/or the telephone numbers to the second ID and send this mapping to the provider 1220. The provider 1220 may store this mapping and use the mapping when initiating sessions of the service for the subscribers in the group plan. The activation response corresponding to the activation of the service may be returned from the application service provider 1260 in step 1214.

[00148] In step 1216, the unified services platform 1240 may generate settlement data including billing information and transfer this data to the provider 1220. The billing information may include the group plan identification. The group plan identification may be used establish billing for the service through the enterprise rather than through the individual subscriber accounts.

[00149] The unified services platform 1240 may then generate the necessary configuration data to activate the new service for each subscriber in the group plan. For example, the service can be activated for the first subscriber in step 1218, a second subscriber in step 1220, and a third subscriber in step 1222. The service may then perform in step 1226. In an embodiment, the unified service platform 1240 may notify the corresponding application service provider 1260 that the provider 1220 is activating the new service in place of the subscribers in the group plan. As a result, the new service may be assigned to the enterprise and different rules may apply than if the subscribers were directly activating the new application by themselves. In an embodiment, the corresponding application service provider 1260 may allow the enterprise (e.g., through an enterprise administrator) to directly control and manage the account for the subscriber. For example, the enterprise administrator may have access to a service portal for making changes to the policy, plan, and/or rules associated with the service provided to the subscribers in the group plan.

[00150] FIG. 13 illustrates an embodiment of another enterprise activation process 1300 in which a service can be activated for one or more subscribers. This process 1300 illustrated in FIG. 13 is similar to the process 1200 described with respect to FIG. 12. The processes are different in that a group plan is not identified during the request to the provider 1220 and the subscribers can access the service portal. Billing differences can also occur due to the differences in the level of control afforded the subscribers. In step 1302, the enterprise administrator 1310 may access the subscriber data for the subscribers to which the service is being added. A request for the service or services is sent from the enterprise administrator 1310 to the provider 1320 in step 1304. The request sent to the provider 1320 may identify the specific services being requested. Rather than identify a group plan identifier, a request may identify each subscriber telephone number to which the service is to be provided in step 1306. The provider 1320 may receive the request and in turn may generate and send a request in step 1308 to the unified services platform 1340 to source the desired services.

[00151] In response to receiving this request, the unified services platform 1340 may generate the appropriate activation data to activate the requested service and associate the service with the existing telephone numbers of the subscribers identified in the request. The unified services platform 1340 may generate configuration data in

accordance with the API of the application service provider 1360 who is providing the requested service. Configuration data can be generated for each subscriber identified by the Enterprise Administrator 1310. Specifically, the unified services platform 1340 may generate activation data in step 1312 to the application service provider 1360. The activation response corresponding to the activation of the service may be returned from the application service provider 1360 in step 1314.

[00152] In step 1316, the unified services platform 1340 may generate settlement data including billing information and transfer this data to the provider 1320. The billing information may include the telephone number for each subscriber being provided with the service.

[00153] The unified services platform 1340 may then generate the necessary configuration data to activate the new service for the first subscriber identified by the enterprise administrator 1310 in step 1318, for a second subscriber identified by the enterprise administrator in step 1320, for a third subscriber identified by the enterprise administrator in step 1322, and so forth for each subscriber identified by the enterprise administrator 1310.

[00154] In an embodiment, the corresponding application service provider 1360 may allow the subscriber to manage their own account alone or in addition to the enterprise administrator. For example, each subscriber and/or the enterprise administrator 1310 may have access to a service portal for making changes to the policy, plan, and/or rules associated with the service provided to the subscribers in the group plan.

[00155] The enterprise may handle the billing directly for the service as described above, or the subscriber may be responsible for their own billing of the service as described with respect to the subscriber activation. In some embodiments, the billing may be split between the enterprise and the subscriber. For example, the enterprise may be willing to pay for the service during normal work hours while requiring a subscriber to pay for the service when used for personal reasons. In this embodiment, the settlement information sent in step 1316 may contain the rules and policies outlining the conditions for which the billing should be sent to the enterprise or the subscriber.

[00156] The rules may include various time based restrictions such as time of day, day of the week, month of year, holiday schedules, and the like. The rules may also be based on location such as when a subscriber is at a work site. The rules may be

based on specific connections such as when the subscriber is using a voice call triggered service that is connected to a client or other professional connection. Any suitable rules can be implemented to allow the unified services platform 1340 to determine when the service should be billed to the enterprise or the subscriber.

[00157] The use of the policies and rules may also determine when a service is available for use. This may allow a group or subscriber to control access to the service, and therefore usage and charges associated with the service. In the same way that the billing may be determined based on usage condition rules such as various time based restrictions location restrictions, connectivity restrictions, and the like, the ability to invoke the services may be based on the application of the rules. For example, an employee may only be able to invoke a marketing service during work hours and/or when located at a work site. As another example, an employee may be provided one group based service such as a marketing software service during the day and another version of the same service at a different time or location. For example, an employee may have access and be able to invoke a premium version of a service during the work day while being limited to a lesser version when working from home at night. Thus, the usage conditions may be used to determine billing and billing routing, usage of one or more services, a version of one or more services, and/or access to one or more actions within a service.

[00158] The use of the unified services platform may allow any billing differences to be easily addressed. When the enterprise and the subscriber are associated with the same provider, the billing routing may be sent to the appropriate party. In some embodiments, the enterprise and the subscriber may be associated with different primary providers. In this instance, splitting the bill may present difficulties under the traditional billing models. However, the billing routing may be provisioned and settled at the time the service is provisioned into the subscriber account and associated with the phone number. When an enterprise is associated with a first provider and the subscriber is associated with the second provider, the billing routing information is created at the time the service is activated within the unified services platform. When the policies and rules are applied to determine if the enterprise or subscriber is to be billed for a particular service usage or instance, the appropriate billing routing is accessed and used to forward the billing information to the appropriate provider. As a

result, the use of the unified services platform may easily address the ability to split payment of a service between multiple parties such as an enterprise and a subscriber.

[00159] Referring now to FIG. 14, an embodiment of a method 1400 allowing a subscriber to switch primary providers is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00160] A unified services platform may maintain mappings of multiple active applications and services to a first telephone number of a first user (block 1405). The first user may use a first provider to provide connectivity to the network, public cloud, and/or PSTN. The multiple active applications and services associated with the first telephone number may include video conferencing, text messaging, voice mail, voice attendant, and/or various other services. These multiple active applications and services may be provided to the first user by multiple third-party providers.

[00161] At a later point in time, the first user may move these multiple active applications and services to a second provider (block 1410). In other words, the first user may cancel their contract with the first provider and start a new contract with the second provider. In response to detecting the first user moving to the second provider, the unified service platform may maintain the mappings of the multiple active applications and services to the first telephone number (block 1415). This is in contrast to traditional techniques for handling a user switching primary providers, in which all services and applications associated with the user's telephone number are de-activated.

[00162] While maintaining the mapping of the multiple active applications and services to the first telephone number, the unified service platform may generate new routing information for these active applications and services and then send this new routing information to the second provider and to the third party providers of these active applications and services (block 1420). The second provider and third party providers may then use the new routing information to provide sessions to the first user for these active applications and services (block 1425). By using the above steps of method 1400, the unified service platform is able to seamlessly transition the first user to the second provider while maintaining mappings for their applications and

services, thus allowing the first user to continue to use these applications and services and continue to associate them with the first telephone number.

[00163] As noted above, once the services are provisioned into the unified services platform and activated by a subscriber, the services provided to the subscriber may be device independent so that the services can be accessed on multiple devices of the subscriber. The services may also be network based so that a loss of connectivity may not result in an interruption of the services. As described herein, the services can be triggered by a subscriber request and/or a triggering event. Further, the ability to base the services on triggering events as well as using defined actions may allow one or more services to be invoked in a number of ways.

[00164] In an embodiment, a service can be invoked based on a subscriber request. Referring now to FIG. 15, an embodiment of a method 1500 for initiating a service for a first user is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00165] In an embodiment, a first user may be provided with a first service by a first provider. The first service may be telephone service, the first user may have a first telephone number associated with the telephone service, and the first provider may be a telephone service provider. In this embodiment, a request by the first user to use a second service may be received by the telephone service provider (block 1505). It may be assumed for the purposes of this discussion that the second service has already been activated by the telephone service provider for use by the first user. The second service may be provided by a second provider, and the second provider may be different than the telephone service provider. The second service may be any type of service or application described herein, depending on the embodiment.

[00166] In response to receiving the request from the first user to use the second service, the telephone service provider may retrieve a mapping corresponding to the first user and second service (block 1510). The mapping may provide a translation from the first telephone number to a second ID, and the second ID may be used by the second provider to identify the first user. Next, the telephone service provider may translate the first telephone number to the second ID using the retrieved mapping

(block 1515). Then, the telephone service provider may generate a request to initiate a session of the second service, and the request may include the second ID in order to identify the first user (block 1520). Next, the telephone service provider may send the request to the second provider (block 1525). In response to receiving the request, the second provider may initiate the session of the second service for the first user (block 1530). After block 1530, the method 1500 may end. It is noted that the method 1500 may be implemented in parallel for any number of users requesting any number of services or applications.

[00167] In an embodiment, a service can be invoked based on a trigger associated with the telephone number of a client. Referring now to FIG. 16, an embodiment of a method 1600 for initiating a service for subscriber based on a triggering event is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00168] In an embodiment, a subscriber may be provided with a first service by a first provider. The first service may be a telephone service and the subscriber may have a first telephone number associated with the telephone service. The first provider may be a telephone service provider. In this embodiment, communication or other incoming action may be associated with the telephone number of the subscriber (block 1605). For example, a message may be sent or received by a subscriber device, a call me be placed or received, a call may be ended, and/or a session may be initiated on the subscriber's device. Any action associated with the telephone number of the subscriber can be established as a trigger for an action. The unified services platform may be configured to receive a notification from a provider when this type of action occurs. The notification may include the relevant telephone number as well as a description of the type of action. Routing information may also be sent or requested for handling the communication or other incoming action.

[00169] When the action occurs, the action may result in activating a trigger (block 1610). The trigger may be associated with one or more services provided by application service providers through the unified service platform. It may be assumed for the purposes of this method that services have already been activated by the

telephone service provider for use by the subscriber. Further, for purposes of this method, a single service may be described for clarity. The service associated with the trigger may be provided by an application service provider that is different than the telephone service provider. The second service may comprise any type of service or application described herein.

[00170] When the trigger is activated, the unified services platform may invoke the service associated with the trigger (block 1615). In an embodiment, the service can be started and the unified services platform can route the information applicable to the service to the associated application service provide to allow the service to perform its action(s). In some embodiments, the service can be invoked based on a message from the unified services platform, and the subsequent data, routing, and information may be exchanged directly between the application service provider and the first provider to perform the service. For example, the invocation of the service may result in a session of the service being established. The service session can be established between the first provider and the application service provider directly and/or through the unified services platform.

[00171] An action associated with the service may then be performed (block 1620). The action may be defined by the application service provider to occur in response to the trigger. For example, the service may perform an action based on the trigger and/or the communication using the telephone number. The action may occur before, after, during, or in parallel with the communication. For example, the action may be performed prior to allowing the communication to occur, and the service may provide data to the subscriber as part of the communication. In an embodiment, the communication may occur using the telephone number (block 1625). In some embodiments, a billing event message containing chargeable services data may be created and sent from the application service provider to the unified services platform and/or the provider to allow for billing of the services to occur. After block 1625, the method 1600 may end. It is noted that the method 1600 may be implemented in parallel for any number of services being invoked in response to one or more triggering events. This method may allow a service to be used automatically based on a triggering event previously established by the subscriber.

[00172] As an example of the method 1600, the subscriber may have activated customer relationship management (CRM) software for use with the telephone

number. As part of the activation process, the subscriber may request that upon receiving a call, the calling number is used to lookup the name of the calling party and present the contact information for the calling party and an order history stored in the CRM software. In this embodiment, the triggering event may be defined as the receipt of a voice all on the subscriber device associated with the telephone number.

[00173] When a voice call is received on the telephone number of the subscriber, the incoming voice call may activate the trigger for the CRM software service. A message may be sent from the provider to the unified services platform indicating that the trigger event occurred. In some embodiments, a policy and rules engine may be integrated into the provider, and the message may not be sent to the unified services platform. In either event, a message may be sent to the CRM software service to activate the service for use in performing the contact information and order history lookup. The message may comprise the call details in order to identify the incoming call number (e.g., the calling party number). In response to receiving the message, the CRM software service may perform a contact information and order history lookup. The information may be provided back to the unified services platform and/or the provider for use with handling the call. The information may then be sent to a device associated with the telephone number for display to the subscriber. The voice call can be routed to the subscriber to allow the subscriber to view the relevant contact information and order history while handling the voice call from the customer. A billing record can be generated by the CRM software service and/or the unified services platform to allow the use of the CRM software service to be billed to the subscriber.

[00174] In some embodiments, more than one action may be performed by the same service or multiple services. The actions can be performed serially so that the services can build on each other and/or the services can be performed in parallel. The use of actions performed serially can be referred to as the chaining of services in some context and the use of actions performed in parallel can be referred to as multicasting in some contexts. The ability to perform many actions based on one triggering event may allow functionality to be combined amongst services in ways that were not previously considered. It can be noted that any particular triggering event may initiate a set of actions in both a chaining and multicasting manner.

[00175] Turning now to FIG. 17, a block diagram of an embodiment of chaining actions through third party provider communications is shown. The device 1705 may

be coupled to the unified services platform 1710 to choose applications and services to associate with the telephone number. The device 1705 may use the unified services platform 1710 to activate services with one or more third party providers, such as the third party providers 1715 and 1720. While only two third party providers are shown in FIG. 17, any number of additional third party providers may also be coupled to the unified services platform 1710, and the device 1705 may subscribe to any number of services from these additional third party providers. The third party providers 1715 and 1720 are different providers from the primary provider of telephone service to the device 1705. In an embodiment, the primary provider of telephone service to device 1705 may be integrated with platform 1710. Alternatively, in another embodiment, the primary provider of telephone service to the device 1705 may be a separate entity from the unified services platform 1710.

[00176] In an embodiment, the device 1705 may use the platform 1710 to activate a first service from provider 1715 and a second service from provider 1720. The services may be activated based on triggering events, and the services may perform one or more specific actions based on the type of triggering event that occurs. Both the first and second services may be associated with the telephone number of device 1705.

[00177] An inbound call to the telephone number of device 1705 may be received over network 1725. Based on the actions associated with an incoming call established at the time the services are activated, the inbound call may be routed to the third party provider 1720 for processing. The network 1725 may be the network, PSTN, or other type of network. The inbound call is represented by a dashed line in FIG. 17. The third party provider 1720 may process the call using the service associated with the third party provider 1720 and then third party provider 1720 may route the call to the second third party provider 1715. In an embodiment, this routing of the call to the second third party provider 1715 from the third party provider 1720 may happen independently of the unified services platform 1710 or the primary provider of service to device 1705.

[00178] In some embodiments, the routing of the call may proceed through the unified services platform 1710, which may control the call routing and services associated with any triggers initiated by the call. Provider 1715 may then add processing associated with the service on top of the earlier processing by provider

1720. Next, the call may be routed to the device 1705, and the call may now include the additional functionality from the first and second services. In other embodiments, more than two third-party providers may add features and services to inbound or outbound calls for the device 1705. This interworking between multiple third-party providers may allow many applications and services to be applied to calls, messages, internet sessions, and the like received or sent from the telephone number of the device 1705. Once the services have been performed, billing messages can be provided to the appropriate third party services to allow each of the services to be charged to the appropriate subscriber.

[00179] The techniques described with respect to FIG. 17 may also be used in embodiments with more than two third-party providers. These techniques allow the telephone number of the device 1705 to become the common ID which is used between multiple services and applications. The telephone number is associated with the relevant interworking data which links all of the IDs and third-party applications and services associated with the telephone number. The telephone number allows for the creation of the interworking between all of the third-party applications. In other words, the telephone number is an ID that's used by a middleware layer to allow the functionality of the third-party applications to work with each other and to work on the primary provider's network.

[00180] As an example of the use of the chaining actions, the first third party provider 1720 may provide marketing software services that include contact matching, and the second third party provider 1715 may provide message logging services. In the context of FIG. 17, an incoming text message may be sent to the telephone number of the device 1705. It can be assumed that the subscriber has activated both services and established that the services are triggered by the receipt of an incoming text message. The policy and rules for the services may also establish that an incoming text message should first be sent to the first third party provider 1720 followed by sending the message to the second third party provider, which may then forward the message to the device 1705. In response to the triggering event of receiving a text message, the message may be forwarded from the network to the first third party provider. The marketing software services may perform a contact lookup and a related marketing region for the sender of the text message. This information may be appended to the text message as a data file. Once the information is

appended to the text message, the message may be forwarded to the second third party provider 1715 where the message may be logged into a message logging and storage service. The service may categorize the text message and store the message in a segregated format for future access by the subscriber. The message logging service may access the data file to determine the identity of the sender and the marketing region. The text message can then be stored in a file associated with the appropriate marketing region, and the sender contact information and identity can be included as a text header before the message is stored. This may allow for the event log for a marketing region to be viewed by the subscriber or another person at a later time. Finally, the text message can be forwarded to the device with or without the information provided by the first third party provider 1720.

[00181] As illustrated by this example, the chaining of the services through a plurality of third party providers may not only provide incremental services, but may allow for the information from one third party provider to be used by a second third party provider to create a new functionality not offered by any one third party provider. As a result, this system may provide the subscriber the opportunity to create functionality by selectively ordering the third party provider services and establishing rules for the resulting services.

[00182] Turning now to FIG. 18, a block diagram of an embodiment of multicasting actions through third party provider communications is shown. The block diagram illustrated in FIG. 18 may comprise the same elements as shown in FIG. 17, but the routing of the call can be performed in a multicast manner. The elements previously described with respect to FIG. 17 will not be described again in the interest of brevity. The third party providers 1715 and 1720 are different providers from the primary provider of telephone service to the device 1705. In an embodiment, the device 1705 may use the platform 1710 to activate a first service from provider 1715 and a second service from provider 1720. In an embodiment, the services may be activated based on a single triggering event, and the services may perform one or more specific actions based on the type of triggering event that occurs. Both the first and second services may be associated with the telephone number of device 1705.

[00183] An inbound communication to the telephone number of device 1705 may be received over the network 1725, and the incoming communication may be routed to the device 1705. For example, an incoming voice call or text message may be routed

to the device 1705. Based on the actions associated with an incoming call established at the time the services are activated, the inbound communication may also be routed to a plurality of third party providers 1715, 1720 in parallel. In an embodiment, the unified services platform 1710 may receive a copy of the incoming communication based on the triggering event of receiving the incoming call. Any of the triggering events described herein can be used to trigger the services. While described as being handled by the unified services platform 1710, the call routing and event handling may also be provided by the primary provider of service to device 1705. In an embodiment, this routing of the communication to the third party providers 1715, 1720 may happen independently of the unified services platform 1710 or the primary provider of service to device 1705.

[00184] In an embodiment, the unified services platform 1710 can perform the actions established for each of the third party services 1715, 1720 based on the triggering event. For example, a copy of the incoming communication or any portion thereof can be routed to the first third party provider 1720. A service can be performed using the incoming communication by the first third party provider 1720. At second copy of the incoming communication or any portion thereof can be sent to the second third party provider 1715, wherein a service can be performed. In some embodiments, one or more of the third party providers may also send information to the device 1705 based on the execution of the service. For example, the second third party provider 1715 may forward information related to the service to the device 1705. The techniques described with respect to FIG. 18 may also be used in embodiments with more than two third-party providers.

[00185] As an example of the use of the multicasting actions, the first third party provider 1720 may provide CRM software services that include contact matching and communication logging, and the second third party provider 1715 may provide voicemail and voice to text translation services. In the context of FIG. 18, an incoming voice call may be sent to the telephone number of the device 1705. It can be assumed that the subscriber has activated both services and established that the services are triggered by the receipt of an incoming voice call. The policy and rules for the services may also establish that an incoming voice call should be forwarded to the device 1705 initially, and then sent to the first third party provider 1720 and the second third party provider 1715 in parallel if the voice call is not answered. In this example,

the triggering event may be the unanswered voice call by the device 1705. In response to the triggering event, the voice call may be forwarded to both the first third party provider 1720 and the second third party provider 1715. The CRM software service of the first third party provider 1720 may match the call to a contact if possible and log the call as unanswered within the software. The call log may be accessed by the subscriber or other person at a later time. The voicemail and voice to text translation services provided by the second third party service may receive the incoming call and allow the caller to leave a voicemail message. The third party provider may retain the voicemail message as well as convert the voice message into a text message. The third party provider service may be configured to forward the text version of the message along with a caller identification to the device 1705. The device 1705 may then be able to invoke the second third party services after the completion of the voice call to access the actual voicemail message and also obtain the voice to text translation on a device associated with the telephone number of the subscriber.

[00186] As illustrated by this example, the multicast routing of information and utilization of multiple services in parallel may allow more actions to occur in response to a triggering event than may be offered by a third party provider. As a result, this system may provide the subscriber the opportunity to select a desired suite of functionality in response to the available triggering events. This may present additional options over traditional single service options available for an account associated with a telephone number.

[00187] Overall, the third party services are enabled to work with a telephone company network using the common identifier, the methods and mechanisms described herein may also be used to enable external services and providers to work with one another. In this manner, multiple services may cooperate on the basis of a common identifier in ways not previously possible. Such cooperation may lead to the development of new services that may be provided to subscribers or other providers. For example, one external service may provide a first type of content while a different external service provides a second type of content. By utilizing the methods and mechanisms described herein, combinations of the first type of content and the second type of content may be created. Numerous such approaches are possible and are contemplated.

[00188] In various embodiments, one or more portions of the methods and mechanisms described herein may form part of a cloud computing environment. In such embodiments, resources may be provided over the network as services according to one or more various models. Such models may include Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). In IaaS, computer infrastructure is delivered as a service. In such a case, the computing equipment is generally owned and operated by the service provider. In the PaaS model, software tools and underlying equipment used by developers to develop software solutions may be provided as a service and hosted by the service provider. SaaS typically includes a service provider licensing software as a service on demand. The service provider may host the software, or may deploy the software to a customer for a given period of time. Numerous combinations of the above models are possible and are contemplated. It is also noted that while a telephone number is used in the examples above as a common identifier, the methods and mechanisms described herein may also be used with identifiers other than a telephone number used as a common identifier.

[00189] In an embodiment, the device may comprise a device such as a laptop, mobile device, tablet, or the like. FIG. 19 depicts a mobile device 1900, which is operable for implementing aspects of the present disclosure, but the present disclosure should not be limited to these implementations. Though illustrated as a mobile phone, the mobile device 1900 may take various forms including a wireless handset, a pager, a personal digital assistant (PDA), a gaming device, or a media player. The mobile device 1900 includes a display 1902 and a touch-sensitive surface and/or keys 1904 for input by a user. The mobile device 1900 may present options for the user to select, controls for the user to actuate, and/or cursors or other indicators for the user to direct. The mobile device 1900 may further accept data entry from the user, including numbers to dial or various parameter values for configuring the operation of the handset. The mobile device 1900 may further execute one or more software or firmware applications in response to user commands. These applications may configure the mobile device 1900 to perform various customized functions in response to user interaction. Additionally, the mobile device 1900 may be programmed and/or configured over-the-air, for example from a wireless base station, a wireless access point, or a peer mobile device 1900. The mobile device 1900 may

execute a web browser application which enables the display 1902 to show a web page. The web page may be obtained via wireless communications with a base transceiver station, a wireless network access node, a peer mobile device 1900 or any other wireless communication network or system.

[00190] FIG. 20 shows a block diagram of the mobile device 1900. While a variety of known components of handsets are depicted, in an embodiment a subset of the listed components and/or additional components not listed may be included in the mobile device 1900. The mobile device 1900 includes a digital signal processor (DSP) 2002 and a memory 2004. As shown, the mobile device 1900 may further include an antenna and front end unit 2006, a radio frequency (RF) transceiver 2008, a baseband processing unit 2010, a microphone 2012, an earpiece speaker 2014, a headset port 2016, an input/output interface 2018, a removable memory card 2020, a universal serial bus (USB) port 2022, an infrared port 2024, a vibrator 2026, a keypad 2028, a touch screen liquid crystal display (LCD) with a touch sensitive surface 2030, a touch screen/LCD controller 2032, a camera 2034, a camera controller 2036, and a global positioning system (GPS) receiver 2038. In an embodiment, the mobile device 1900 may include another kind of display that does not provide a touch sensitive screen. In an embodiment, the DSP 2002 may communicate directly with the memory 2004 without passing through the input/output interface 2018. Additionally, in an embodiment, the mobile device 1900 may comprise other peripheral devices that provide other functionality.

[00191] The DSP 2002 or some other form of controller or central processing unit operates to control the various components of the mobile device 1900 in accordance with embedded software or firmware stored in memory 2004 or stored in memory contained within the DSP 2002 itself. In addition to the embedded software or firmware, the DSP 2002 may execute other applications stored in the memory 2004 or made available via information carrier media such as portable data storage media like the removable memory card 2020 or via wired or wireless network communications. The application software may comprise a compiled set of machine-readable instructions that configure the DSP 2002 to provide the desired functionality, or the application software may be high-level software instructions to be processed by an interpreter or compiler to indirectly configure the DSP 2002.

[00192] The DSP 2002 may communicate with a wireless network via the analog baseband processing unit 2010. In some embodiments, the communication may provide Internet connectivity, enabling a user to gain access to content on the Internet and to send and receive e-mail or text messages. The input/output interface 2018 interconnects the DSP 2002 and various memories and interfaces. The memory 2004 and the removable memory card 2020 may provide software and data to configure the operation of the DSP 2002. Among the interfaces may be the USB port 2022 and the infrared port 2024. The USB port 2022 may enable the mobile device 1900 to function as a peripheral device to exchange information with a personal computer or other computer system. The infrared port 2024 and other optional ports such as a Bluetooth® interface or an IEEE 802.11 compliant wireless interface may enable the mobile device 1900 to communicate wirelessly with other nearby handsets and/or wireless base stations.

[00193] The keypad 2028 couples to the DSP 2002 via the input/output interface 2018 to provide one mechanism for the user to make selections, enter information, and otherwise provide input to the mobile device 1900. Another input mechanism may be the touch screen LCD 2030, which may also display text and/or graphics to the user. The touch screen LCD controller 2032 couples the DSP 2002 to the touch screen LCD 2030. The GPS receiver 2038 is coupled to the DSP 2002 to decode global positioning system signals, thereby enabling the mobile device 1900 to determine its position.

[00194] FIG. 21A illustrates a software environment 2102 that may be implemented by the DSP 2002. The DSP 2002 executes operating system software 2104 that provides a platform from which the rest of the software operates. The operating system software 2104 may provide a variety of drivers for the handset hardware with standardized interfaces that are accessible to application software. The operating system software 2104 may be coupled to and interact with application management services (AMS) 2106 that transfer control between applications running on the mobile device 1900. Also shown in FIG. 21A are a web browser application 2108, a media player application 2110, and JAVA applets 2112. The web browser application 2108 may be executed by the mobile device 1900 to browse content and/or the Internet, for example when the mobile device 1900 is coupled to a network via a wireless link. The web browser application 2108 may permit a user to enter information into forms and

select links to retrieve and view web pages. The media player application 2110 may be executed by the mobile device 1900 to play audio or audiovisual media. The JAVA applets 2112 may be executed by the mobile device 1900 to provide a variety of functionality including games, utilities, and other functionality.

[00195] FIG. 21B illustrates an alternative software environment 2120 that may be implemented by the DSP 2002. The DSP 2002 executes operating system kernel (OS kernel) 2128 and an execution runtime 2130. The DSP 2002 executes applications 2122 that may execute in the execution runtime 2130 and may rely upon services provided by the application framework 2124. Applications 2122 and the application framework 2124 may rely upon functionality provided via the libraries 2126.

[00196] FIG. 22 illustrates a computer system 2280 suitable for implementing one or more embodiments disclosed herein. In an embodiment, the computer system 2280 may be representative of the server or systems forming the unified services platform, the provider, and/or the third party application service providers. The computer system 2280 includes a processor 2282 (which may be referred to as a central processor unit or CPU) that is in communication with memory devices including secondary storage 2284, read only memory (ROM) 2286, random access memory (RAM) 2288, input/output (I/O) devices 2290, and network connectivity devices 2292. The processor 2282 may be implemented as one or more CPU chips.

[00197] It is understood that by programming and/or loading executable instructions onto the computer system 2280, at least one of the CPU 2282, the RAM 2288, and the ROM 2286 are changed, transforming the computer system 2280 in part into a particular machine or apparatus having the novel functionality taught by the present disclosure. It is fundamental to the electrical engineering and software engineering arts that functionality that can be implemented by loading executable software into a computer can be converted to a hardware implementation by well-known design rules. Decisions between implementing a concept in software versus hardware typically hinge on considerations of stability of the design and numbers of units to be produced rather than any issues involved in translating from the software domain to the hardware domain. Generally, a design that is still subject to frequent change may be preferred to be implemented in software, because re-spinning a hardware implementation is more expensive than re-spinning a software design. Generally, a design that is stable that will be produced in large volume may be preferred to be

implemented in hardware, for example in an application specific integrated circuit (ASIC), because for large production runs the hardware implementation may be less expensive than the software implementation. Often a design may be developed and tested in a software form and later transformed, by well-known design rules, to an equivalent hardware implementation in an application specific integrated circuit that hardwires the instructions of the software. In the same manner as a machine controlled by a new ASIC is a particular machine or apparatus, likewise a computer that has been programmed and/or loaded with executable instructions may be viewed as a particular machine or apparatus.

[00198] The secondary storage 2284 is typically comprised of one or more disk drives or tape drives and is used for non-volatile storage of data and as an over-flow data storage device if RAM 2288 is not large enough to hold all working data. Secondary storage 2284 may be used to store programs which are loaded into RAM 2288 when such programs are selected for execution. The ROM 2286 is used to store instructions and perhaps data which are read during program execution. ROM 2286 is a non-volatile memory device which typically has a small memory capacity relative to the larger memory capacity of secondary storage 2284. The RAM 2288 is used to store volatile data and perhaps to store instructions. Access to both ROM 2286 and RAM 2288 is typically faster than to secondary storage 2284. The secondary storage 2284, the RAM 2288, and/or the ROM 2286 may be referred to in some contexts as computer readable storage media and/or non-transitory computer readable media.

[00199] I/O devices 2290 may include printers, video monitors, liquid crystal displays (LCDs), touch screen displays, keyboards, keypads, switches, dials, mice, track balls, voice recognizers, card readers, paper tape readers, or other well-known input devices.

[00200] The network connectivity devices 2292 may take the form of modems, modem banks, Ethernet cards, universal serial bus (USB) interface cards, serial interfaces, token ring cards, fiber distributed data interface (FDDI) cards, wireless local area network (WLAN) cards, radio transceiver cards such as code division multiple access (CDMA), global system for mobile communications (GSM), long-term evolution (LTE), worldwide interoperability for microwave access (WiMAX), and/or other air interface protocol radio transceiver cards, and other well-known network devices. These network connectivity devices 2292 may enable the processor 2282 to

communicate with the Internet or one or more intranets. With such a network connection, it is contemplated that the processor 2282 might receive information from the network, or might output information to the network in the course of performing the above-described method steps. Such information, which is often represented as a sequence of instructions to be executed using processor 2282, may be received from and outputted to the network, for example, in the form of a computer data signal embodied in a carrier wave.

[00201] Such information, which may include data or instructions to be executed using processor 2282 for example, may be received from and outputted to the network, for example, in the form of a computer data baseband signal or signal embodied in a carrier wave. The baseband signal or signal embedded in the carrier wave, or other types of signals currently used or hereafter developed, may be generated according to several methods well known to one skilled in the art. The baseband signal and/or signal embedded in the carrier wave may be referred to in some contexts as a transitory signal.

[00202] The processor 2282 executes instructions, codes, computer programs, scripts which it accesses from hard disk, floppy disk, optical disk (these various disk based systems may all be considered secondary storage 2284), ROM 2286, RAM 2288, or the network connectivity devices 2292. While only one processor 2282 is shown, multiple processors may be present. Thus, while instructions may be discussed as executed by a processor, the instructions may be executed simultaneously, serially, or otherwise executed by one or multiple processors. Instructions, codes, computer programs, scripts, and/or data that may be accessed from the secondary storage 2284, for example, hard drives, floppy disks, optical disks, and/or other device, the ROM 2286, and/or the RAM 2288 may be referred to in some contexts as non-transitory instructions and/or non-transitory information.

[00203] In an embodiment, the computer system 2280 may comprise two or more computers in communication with each other that collaborate to perform a task. For example, but not by way of limitation, an application may be partitioned in such a way as to permit concurrent and/or parallel processing of the instructions of the application. Alternatively, the data processed by the application may be partitioned in such a way as to permit concurrent and/or parallel processing of different portions of a data set by the two or more computers. In an embodiment, virtualization software may be

employed by the computer system 2280 to provide the functionality of a number of servers that is not directly bound to the number of computers in the computer system 2280. For example, virtualization software may provide twenty virtual servers on four physical computers. In an embodiment, the functionality disclosed above may be provided by executing the application and/or applications in a cloud computing environment. Cloud computing may comprise providing computing services via a network connection using dynamically scalable computing resources. Cloud computing may be supported, at least in part, by virtualization software. A cloud computing environment may be established by an enterprise and/or may be hired on an as-needed basis from a third party provider. Some cloud computing environments may comprise cloud computing resources owned and operated by the enterprise as well as cloud computing resources hired and/or leased from a third party provider.

[00204] In an embodiment, some or all of the functionality disclosed above may be provided as a computer program product. The computer program product may comprise one or more computer readable storage medium having computer usable program code embodied therein to implement the functionality disclosed above. The computer program product may comprise data structures, executable instructions, and other computer usable program code. The computer program product may be embodied in removable computer storage media and/or non-removable computer storage media. The removable computer readable storage medium may comprise, without limitation, a paper tape, a magnetic tape, magnetic disk, an optical disk, a solid state memory chip, for example analog magnetic tape, compact disk read only memory (CD-ROM) disks, floppy disks, jump drives, digital cards, multimedia cards, and others. The computer program product may be suitable for loading, by the computer system 2280, at least portions of the contents of the computer program product to the secondary storage 2284, to the ROM 2286, to the RAM 2288, and/or to other non-volatile memory and volatile memory of the computer system 2280. The processor 2282 may process the executable instructions and/or data structures in part by directly accessing the computer program product, for example by reading from a CD-ROM disk inserted into a disk drive peripheral of the computer system 2280. Alternatively, the processor 2282 may process the executable instructions and/or data structures by remotely accessing the computer program product, for example by downloading the executable instructions and/or data structures from a remote server

through the network connectivity devices 2292. The computer program product may comprise instructions that promote the loading and/or copying of data, data structures, files, and/or executable instructions to the secondary storage 2284, to the ROM 2286, to the RAM 2288, and/or to other non-volatile memory and volatile memory of the computer system 2280.

[00205] In some contexts, the secondary storage 2284, the ROM 2286, and the RAM 2288 may be referred to as a non-transitory computer readable medium or a computer readable storage media. A dynamic RAM embodiment of the RAM 2288, likewise, may be referred to as a non-transitory computer readable medium in that while the dynamic RAM receives electrical power and is operated in accordance with its design, for example during a period of time during which the computer system 2280 is turned on and operational, the dynamic RAM stores information that is written to it. Similarly, the processor 2282 may comprise an internal RAM, an internal ROM, a cache memory, and/or other internal non-transitory storage blocks, sections, or components that may be referred to in some contexts as non-transitory computer readable media or computer readable storage media.

[00206] Having described several processes and systems herein, specific embodiments can include, but are not limited to:

[00207] In a first embodiment, a method of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform comprises establishing a plurality of service accounts for a corresponding plurality of application service provider systems, wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services; receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface; receiving a provider API interfaces for a network provider system; and integrating the provider API interface with the unified services platform API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the provider API interface.

[00208] A second embodiment may include the method of the first embodiment, further comprising: receiving a definition of a service and a plan for each of the plurality of application service provider systems.

[00209] A third embodiment may include the method of the second embodiment, further comprising: receiving one or more definitions of actions for the service, wherein the actions comprise responses to triggering events occurring with a telephone number.

[00210] A fourth embodiment may include the method of the third embodiment, further comprising: publishing, after integrating each of the plurality of API interfaces with the unified services platform, the definition of the service, the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog.

[00211] A fifth embodiment may include the method of the fourth embodiment, further comprising: receiving, from the network provider system, a selection of one or more services from the plurality of the application services provider systems; and publishing the selection of the one or more services in a services catalog, wherein the services catalog is accessible by one or more subscribers of the network provider system.

[00212] A sixth embodiment may include the method of the third embodiment, further comprising: receiving a request for associating at least one service from the plurality of application service provider systems with a telephone number of a subscriber; associating the telephone number with the at least one service; and invoking the at least one service in response to a communication event with the telephone number.

[00213] A seventh embodiment may include the method of any of the first to sixth embodiments, further comprising: receiving, at the unified services platform, billing routing information from the plurality of application service provider systems; and integrating the billing routing information with the network provider system.

[00214] In an eighth embodiment, a method of invoking a third party service during a communication event comprises: receiving, by a policy and rules engine executing on a processor system, a first indication of an incoming communication for a telephone number; identifying, by the policy and rules engine, a first triggering event associated with the incoming communication for the telephone number based on the first

indication; invoking, by the policy and rules engine, a first service associated with the telephone number in response to the first triggering event, wherein the first service is provided by a first third party application service provider system; performing, in response to invoking the first service, a first action based on the first triggering event, wherein the first action is performed by the first third party application service provider system; receiving, by the policy and rules engine, a second indication of a second incoming communication for the telephone number; identifying, by the policy and rules engine, a second triggering event associated with the second incoming communication for the telephone number based on the second indication; invoking, by the policy and rules engine, a second service associated with the telephone number in response to the second triggering event, wherein the second service is provided by a second third party application service provider system, wherein the second third party application service provider system is different than the first third party application service provider system; performing, in response to invoking the second service, a second action based on the second triggering event, wherein the second action is performed by the second third party application service provider system; and handling the communication using the telephone number.

[00215] A ninth embodiment may include the method of the eighth embodiment, wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

[00216] A tenth embodiment may include the method of the eighth or ninth embodiment, wherein the action comprises transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof.

[00217] An eleventh embodiment may include the method of any of the eighth to tenth embodiments, wherein performing the action occurs before handling the communication.

[00218] A twelfth embodiment may include the method of any of the eighth to tenth embodiments, wherein performing the action occurs after handling the communication.

[00219] A thirteenth embodiment may include the method of any of the eighth to tenth embodiments, wherein performing the action occurs during handling the communication.

[00220] A fourteenth embodiment may include the method of any of the eighth to thirteenth embodiments, wherein handling the communication comprises routing the incoming communication to a device associated with the telephone number, wherein the communication comprises a voice call, a text message, an internet communication session, or any combination thereof.

[00221] A fifteenth embodiment may include the method of any of the eighth to fourteenth embodiments, wherein receiving the indication comprises: receiving the first indication at a unified services platform system; and wherein performing the action comprises routing incoming communication data from a network provider system to the third party application service provider system, wherein the network provider system supplies the telephone number.

[00222] In a sixteenth embodiment, a method of billing a customer for a third party service performed during a communication event comprises receiving, by a unified services platform system, an indication of an incoming communication for a telephone number from a network provider system; identifying, by a processor system, a triggering event associated with the incoming communication for the telephone number; invoking, by the processor system, a service associated with the telephone number in response to the triggering event, wherein the service is associated with a third party application service provider system; performing, in response to invoking the service, an action associated with the service based on the triggering event, wherein the action is performed by the third party application service provider system; receiving a billing message from the third party application service provider system, wherein the billing message comprises chargeable event data; and routing the billing message to the network provider system, wherein the network provider system bills a subscriber associated with the telephone number for the service performed by the third party application service provider system.

[00223] A seventeenth embodiment may include the method of the sixteenth embodiment, further comprising: receiving payment from the subscriber; and routing the payment from the network service provider system to the third party application service provider system.

[00224] An eighteenth embodiment may include the method of the sixteenth or seventeenth embodiment, wherein the billing message is generated in response to performing the action.

[00225] A nineteenth embodiment may include the method of any of the sixteenth to eighteenth embodiments, wherein the billing message is received by the network provider system.

[00226] A twentieth embodiment may include the method of the any of the sixteenth to nineteenth embodiments, further comprising: invoking a second service associated with the telephone number in response to the triggering event, wherein the service is associated with a second third party application service provider system; performing, in response to invoking the service, a second action associated with the second service based on the triggering event, wherein the action is performed by the second third party application service provider system; receiving a second billing message from the second third party application service provider system, wherein the second billing message comprises chargeable event data for performing the second action; and routing the second billing message to the network provider system, wherein the network provider system bills the subscriber associated with the telephone number for the service performed by the third party application service provider system and the second third party application service provider system.

[00227] In a twenty first embodiment, a method of creating a plurality of service actions in response to a communication event comprises receiving, by a processor system, an indication of an incoming communication for a telephone number, wherein the telephone number is provided by a network provider system, and wherein a plurality of services associated with a plurality of third party service systems are associated with the telephone number, wherein the plurality of services are invoked by at least one triggering event associated with the telephone number; identifying, by the processor system, a triggering event associated with the incoming communication for the telephone number; invoking a first service of the plurality of services in response to the triggering event; sending incoming communication information to the first service, wherein the incoming communication information comprises at least a portion of the information associated with the incoming communication, and wherein the first service generates first service data in response to the incoming communication information; routing the first service data to a second service of the plurality of services; and

invoking the second service of the plurality of services in response to routing the first service data to the second service, wherein the second service generates second service data.

[00228] A twenty second embodiment may include the method of the twenty first embodiment, wherein the processor system forms a portion of a unified service platform system, wherein unified services platform system communicates with the plurality of third party service systems through a plurality of integrated interfaces, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein one or more of the plurality of integrated interfaces are incompatible with the provider integrated interface.

[00229] A twenty third embodiment may include the method of the twenty first or twenty second embodiment, wherein the second service generates the second service data using at least a portion of the first service data.

[00230] A twenty fourth embodiment may include the method of the any of the twenty first to twenty fourth embodiments, further comprising: forwarding the first service data and the second service data to a device associated with the telephone number.

[00231] A twenty fifth embodiment may include the method of any of the twenty first to twenty fourth embodiments, wherein the services comprise one or more actions performed by social media software, customer relationship management software, call and message translation software, file sharing software, file management software, contact management software, voicemail software, messaging software, call recording software, contact matching software, messaging storage software, call notification software, or any combination thereof.

[00232] A twenty sixth embodiment may include the method of any of the twenty first to twenty fifth embodiments, further comprising: sending the incoming communication to the first service; routing the incoming communication from the first service to the second service; and routing the incoming communication to a device associated with the telephone number

[00233] A twenty seventh embodiment may include the method of any of the twenty first to twenty sixth embodiments, wherein receiving the indication of the incoming communication comprises: receiving the indication at a unified services platform system from the network provider system.

[00234] A second embodiment may include the method of any fo the twenty first to twenty seventh embodiments, further comprising: generating first billing information for the first service based on invoking the first service; generating second billing information for the second service based on invoking the second service; and routing the first billing information and the second billing information to the network provider system, wherein the network provider system bills a subscriber associated with the telephone number.

[00235] In a twenty ninth embodiment, a method of creating a plurality of service actions in response to a communication event comprises receiving, by a processor system, an indication of an communication for a telephone number, wherein the telephone number is provided by a network provider system, and wherein a plurality of service provided by a plurality of third party service systems are associated with the telephone number, wherein one or more of the plurality of services are invoked by at least one triggering event associated with the telephone number; identifying, by the processor system, a triggering event associated with the communication for the telephone number; invoking two or more services of the plurality of services in response to the triggering event; sending communication information to each of the two or more services, wherein the communication information comprises at least a portion of the information associated with the communication; receiving first service data from a first service of the two or more services; receiving second service data from a second service of the two or more services; and handling the communication.

[00236] A thirtieth embodiment may include the method of the twenty ninth embodiment, wherein the processor system forms a portion of a unified service platform system, wherein unified services platform system communicates with the plurality of third party service systems through a plurality of integrated interfaces, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein one or more of the plurality of integrated interfaces are incompatible with the provider integrated interface.

[00237] A thirty first embodiment may include the method of the twenty ninth or thirtieth embodiment, wherein sending the communication information to each of the two or more services occurs in parallel.

[00238] A thirty second embodiment may include the method of any of the twenty ninth to thirty first embodiments, wherein handling the communication comprises

routing the incoming communication to a device associated with the telephone number, and wherein the communication comprises an incoming voice call, an outgoing voice all, an incoming text message, an outgoing text message, an outgoing network connection request, or any combination thereof.

[00239] A thirty third embodiment may include the method of any of the twenty ninth to thirty second embodiments, further comprising combining the first service data and the second service data to form a combined data set; and sending the combined data set to a device associated with the telephone number.

[00240] A thirty fourth embodiment may include the method of any of the twenty ninth to thirty third embodiments, further comprising: routing the first service data to a third service of the plurality of services; and invoking the third service in response to routing the first service data to the third service, wherein the third service generates third service data.

[00241] A thirty fifth embodiment may include the method of any of the twenty ninth to thirty fourth embodiments, wherein the indication is received at a unified services platform system, and wherein the unified services platform system sends the communication information to each of the two or more services.

[00242] A thirty sixth embodiment may include the method of any of the twenty ninth to thirty fifth embodiments, further comprising: generating first billing information for the first service; generating second billing information for the second service; and routing the first billing information and the second billing information to the network provider system, wherein the network provider system bills a subscriber associated with the telephone number.

[00243] In an thirty seventh embodiment, a method of using a policy store to generate multiple events comprises generating, by a processor system, a policy store comprising a plurality of rules for invoking a plurality of services associated with a telephone number, wherein the rules define a relationship between a triggering event and one or more actions to be performed by a service, wherein the plurality of services are provided by third party application service provider systems, wherein the triggering event is based on a communication event provided by a network provider system, and where the policy store is generated by a unified services platform system in communication with the network provider system and the third party application service provider systems; receiving an indication of a first triggering event based on a

communication event associated with the telephone number; matching, by the processor system, the first triggering event with one or more actions in the policy store; identifying, by the processor system, two or more services of the plurality of services based on the matching; generating routing information for each of the two or more services identified based on the matching; and routing communication event information to each of the two or more services of the plurality of services using the routing information.

[00244] A thirty eighth embodiment may include the method of the thirty seventh embodiment, wherein routing the communication event information comprises: routing the communication event information to a first service of the two or more services using the routing information, wherein the first service generates first service data based on the communication event information; and routing the first service data to a second service of the two or more services using the routing information, wherein the second service generates second service data based on the first service data.

[00245] A thirty ninth embodiment may include the method of the thirty eighth embodiment, further comprising: routing the communication event to the first service with the communication event information; routing the communication event to the second service with the first service data; and routing the communication event with the second service data to a communication device associated with the telephone number.

[00246] A fortieth embodiment may include the method of the thirty seventh embodiment, wherein routing the communication event information comprises: routing the communication event information to a first service of the two or more services using the routing information; and routing the communication event information to a second service of the two or more services using the routing information, wherein the communication information is routed to the first service and the second service in parallel.

[00247] In a forty first embodiment, a method of provisioning a service for use with a group plan comprises receiving, by a unified services platform system, a subscription request for a service for a group plan, wherein the group plan comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, and wherein the service is provided by a third party application service provider system; sending, by the unified services

platform system, an activation request for the group plan to the third party application service provider system, receiving an activation response from the third party application service provider system; associating the service with each telephone number of the plurality of telephone numbers; providing access to the service for each telephone number based on the associating; receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system; sending, by the unified services platform system, a second activation request for the service to the second third party application service provider system; receiving a second activation response from the second third party application service provider system; associating the second service with the first telephone number; and providing access to the second service for the first telephone number based on the associating.

[00248] A forty second embodiment may include the method of the forty first embodiment, further comprising: receiving billing and settlement information associated with each of the telephone numbers.

[00249] A forty third embodiment may include the method of the forty second embodiment, wherein the billing and settlement information comprises routing information for routing charges incurred through use of the service, wherein the routing information routes the charges incurred to a group administrator for the group plan.

[00250] A forty fourth embodiment may include the method of any of the forty first to forth third embodiments, wherein an API of the third party application service provider system is incompatible with an API of the network provider system.

[00251] A forty fifth embodiment may include the method of the forth fourth embodiment, wherein the API of the third party application service provider system is integrated with the unified services platform system, and wherein API of the network provider system is integrated with the unified services platform system, and wherein the third party application communicates with the network provider system through the unified services platform system.

[00252] A forty sixth embodiment may include the method of any of the forty first to forth fifth embodiments, further comprising: receiving, by the unified services platform system, a second subscription request for a second service for the group plan, wherein the second service is provided by a second third party application service

provider system, wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system; sending, by the unified services platform system, a second activation request for the group plan to the third party application service provider system, receiving a second activation response from the third party application service provider system; associating the second service with each telephone number of the plurality of telephone numbers; and providing access to the second service for each telephone number based on the associating.

[00253] A forty seventh embodiment may include the method of any of the forty first to forth sixth embodiments, further comprising: invoking the service in response to a triggering event associated with a first telephone number of the plurality of telephone numbers.

[00254] In a forty eighth embodiment, a method of billing for a service provided to the members of a group comprises receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, wherein the telephone number is provided by a network provider system, and wherein the service is provided by a third party application service provider system; associating the service with each telephone number of the plurality of telephone numbers; receiving billing and settlement information from the third party application service provider system for each telephone number; generating billing routing information based on the billing and settlement information, wherein the routing information forwards billing charges for the services associated with the service to a group administrator; associating the billing routing information for the service with each telephone number of the plurality of telephone number; generating chargeable event data in response to a use of the service by one or more of the subscribers; forwarding the chargeable event data to the group administrator based on the billing routing information; associating a second service with a first telephone number of the plurality of telephone numbers, wherein the second service is not associated with the group, wherein the second service is provided by a second third party application service provider system; and routing billing charges for the second service to a first subscriber associated with the first telephone number.

[00255] A forty ninth embodiment may include the method of the forty eight embodiment, wherein the unified services platform system communicates with the third party service system through a first integrated interface, wherein the unified services platform system communications with the second third party service system through a second integrated interface, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein the integrated interface and the second integrated interface are incompatible with the provider integrated interface.

[00256] A fiftieth embodiment may include the method of the forty eight or forty ninth embodiment, further comprising: associating a third service with the first telephone number of the plurality of telephone numbers, wherein the third service is associated with the group, and wherein the routing information forwards billing charges for the third service to the group administrator.

[00257] A fifty first embodiment may include the method of any of the forty eighth to fiftieth embodiments, wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data to the unified services platform system, and forwarding the chargeable event data from the unified services platform system to the network provider system.

[00258] A fifty second embodiment may include the method of any of the forty eighth to fiftieth embodiments, wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data from the third party application service provider system to the network provider system.

[00259] A fifty third embodiment may include the method of any of the forty eighth to fifty second embodiments, wherein generating the chargeable event data is based on a triggering event associated with a first telephone number of one or more of the subscribers.

[00260] In a fifty fourth embodiment, a method of using a rules engine to allocate usage of a service between personal and group accounts comprises receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, wherein the service is provided by a third party application service provider

system, and wherein the telephone numbers are provided by a network provider system; associating the service with each telephone number of the plurality of telephone numbers; receiving billing and settlement information from the third party application service provider system for each telephone number; generating a billing policy store comprising a plurality of rules for charging for the service, wherein the rules define a relationship between a usage conditions of the service and payment by at least one of the subscriber or the group; generating billing routing information based on the billing and settlement information and the billing policy store, wherein the billing routing information forwards billing charges for the usage associated with the service to at least one of the subscriber or the group based on the usage conditions; generating a charge for the service in response to a use of the service under usage conditions by one or more of the subscribers; and routing the charges to at least one of the subscriber or the group using the billing routing information.

[00261] A fifty fifth embodiment may include the method of the fifty fourth embodiment, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a time of day, a day of the week, a month of the year, a holiday schedule, or any combination thereof.

[00262] A fifty sixth embodiment may include the method of the fifty fourth or fifty fifth embodiments, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a geographic location or a geographic area.

[00263] A fifty seventh embodiment may include the method of any of the fifty fourth to fifty sixth embodiments, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a type of network connection, a specific network interface point, or any combination thereof.

[00264] A fifty eighth embodiment may include the method of any of the fifty fourth to fifty seventh embodiments, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises one or more predefined triggering events.

[00265] A fifty ninth embodiment may include the method of any of the fifty fourth to fifty eighth embodiments, wherein a first subscriber associated with a first telephone

number of the plurality of telephone numbers is provided network services through the network provider system, wherein group is provided network services through a second network provider system, and wherein routing the charges to at least one of the subscriber or the group comprises routing the charges to at least one of the first subscriber through the network provider system or the group through the second network provider system.

[00266] A sixtieth embodiment may include the method of any of the fifty fourth to fifty ninth embodiments, further comprising: associating a second service with each telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system; receiving second billing and settlement information from the second third party application service provider for each telephone number; and generating second billing routing information based on the second billing and settlement information and the billing policy store, wherein the second billing routing information forwards billing charges for the usage associated with the second service to at least one of the subscriber or the group based on a second set of usage conditions, wherein the second set of usage conditions are different than the usage conditions for the service.

[00267] In a sixty first embodiment, a method of combining partial functionality across a plurality of applications to create a new service comprises receiving, by a unified services platform system, a definition of a service for each of a plurality of application service provider systems; receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, wherein the actions comprise responses to triggering events occurring for a telephone number; testing each triggering event and corresponding action in a test environment to generate a response; storing an indication of the triggering event, the corresponding action, and the response; identifying individual actions associated with each of the services associated with the plurality of application service provider systems; combining two or more individual actions from different services provided by different application service provider systems; and forming a new service based on the combining.

[00268] A sixty second embodiment may include the method of the sixty first embodiment, wherein the individual actions comprise one or more of transferring a message, transferring an image, transferring a document file, transferring a posting,

generating a notification, obtaining contact information, obtaining customer information, or any combination thereof.

[00269] A sixty third embodiment may include the method of the sixty first or sixty second embodiment, wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

[00270] A sixty fourth embodiment may include the method of any of the sixty first to sixty third embodiments, wherein combining the two or more individual actions comprises combining the two or more individual actions by the unified services platform system.

[00271] A sixty fifth embodiment may include the method of the sixty fourth embodiment, wherein combining the two or more individual actions further comprises: receiving, by the unified services platform system, a request from a subscriber associated with a telephone number to combine the two or more individual actions; generating, by the unified services platform system, routing and integration data for the two or more individual actions; and activating the new service for the subscriber, wherein the new service includes the routing and integration data generated by the unified services platform.

[00272] A sixty sixth embodiment may include the method of the sixty fifth embodiment, further comprising: publishing the new service in a catalog available to a plurality of subscribers.

[00273] A sixty seventh embodiment may include the method of any of the sixty first to sixty sixth embodiments, wherein the new service comprises a first individual action based on a first trigger and a second individual action based on a second trigger.

[00274] A sixty eighth embodiment may include the method of the sixty seventh embodiment, wherein the second trigger comprises a response generated by the first individual action.

[00275] A sixty ninth embodiment may include the method of any of the sixty first to sixty eighth embodiments, further comprising: publishing the individual actions in a catalog; and receiving a selection of the two or more of the individual actions, wherein

combining the two or more individual actions from different services occurs in response to receiving the selection of the two or more individual actions.

[00276] In a seventieth embodiment, a method of identifying actions within services provided by a third party application service providers comprises establishing, on a unified services platform system, a plurality of service accounts for a corresponding plurality of application service providers; receiving a definition of a service for each of the plurality of application service providers, wherein the service comprises one or more actions, wherein the actions comprise responses to triggering events occurring for a telephone number; receiving one or more definitions of the one or more actions for each service for each of the plurality of application service provider systems; testing each triggering event and corresponding action in a test environment to generate a response; storing an indication of the triggering event, the corresponding action, and the response; identifying individual actions associated with each of the services associated with the plurality of application service provider systems.

[00277] A seventy first embodiment may include the method of the seventieth embodiment, wherein the individual actions comprise one or more of transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof.

[00278] A seventy second embodiment may include the method of the seventieth or seventy first embodiment, wherein the triggering events comprises one or more of a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

[00279] A seventy third embodiment may include the method of any of the seventieth to seventy second embodiments, wherein two or more of the plurality of application service provider systems have different APIs, and wherein the different APIs are not compatible with each other.

[00280] A seventy fourth embodiment may include the method of the seventy third embodiment, further comprising: enabling two or more of the individual actions to work together by providing a common interface using the unified services platform system,

wherein the two or more individual actions are provided by at least two different application service provider systems.

[00281] In a seventy fifth embodiment, a method of developing and testing a new application service through a unified services platform comprises establishing a plurality of service accounts for a corresponding plurality of application service provider systems; receiving a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating each of the plurality of API interfaces with a unified services platform system API interface; receiving a definition of a service for each of the plurality of application service provider systems; receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, wherein the actions comprise responses to triggering events occurring for a telephone number; testing each triggering event and corresponding action for each service in a test environment to generate a response; and providing access to each service within a working environment after performing the testing.

[00282] A seventy sixth embodiment may include the method of the seventy fifth embodiment, further comprising: publishing, after testing , the definition of the service, the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog.

[00283] A seventy seventh embodiment may include the method of the seventy fifth or seventy sixth embodiment, further comprising: receiving an API interface for a network provider system; and integrating the API interface for the network provider system with the unified services platform system API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the API interface for the network provider system.

[00284] A seventy eighth embodiment may include the method of the seventy seventh embodiment, further comprising: testing the integration of each of the plurality of API interfaces for the plurality of application service provider systems with the unified services platform system API interface in the test environment; and testing the integration of the API interface for the network provider system with the unified services platform system API interface in the test environment.

[00285] A seventy ninth embodiment may include the method of any of the seventy fifth to seventy eighth embodiments, further comprising: testing chargeable event data

routing in the test environment, wherein the chargeable event data is generated in response to a performance of one or more actions.

[00286] An eightieth embodiment may include the method of any of the seventy fifth to seventy ninth embodiments, wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

[00287] This specification includes references to “an embodiment”. The appearance of the phrase “in an embodiment” in different contexts does not necessarily refer to the same embodiment. Particular features, structures, or characteristics may be combined in any suitable manner consistent with this disclosure. Furthermore, as used throughout this application, the word "may" is used in a permissive sense (i.e., meaning having the potential to), rather than the mandatory sense (i.e., meaning must). Similarly, the words "include", "including", and "includes" mean including, but not limited to.

[00288] Terminology. The following definitions and/or context are provided for terms found in this disclosure (including the appended claims). The term “comprising” is open-ended. As used in the appended claims, this term does not foreclose additional structure or steps. Consider a claim that recites: “A system comprising a server ….” Such a claim does not foreclose the system from including additional components (e.g., network interface, memory, display). The term “configured to,” when used to describe various units, circuits, or other components may be used to connote structure by indicating that the units/circuits/components include structure (e.g., circuitry) that performs the task or tasks during operation. As such, the unit/circuit/component can be said to be configured to perform the task even when the specified unit/circuit/component is not currently operational (e.g., is not on). The units/circuits/components used with the “configured to” language include hardware-for example, circuits, memory storing program instructions executable to implement the operation, etc. Reciting that a unit/circuit/component is “configured to” perform one or more tasks is expressly intended not to invoke 35 U.S.C. § 112, sixth paragraph, for that unit/circuit/component. Additionally, “configured to” can include generic structure (e.g., generic circuitry) that is manipulated by software and/or firmware (e.g., an FPGA

or a general-purpose processor executing software) to operate in manner that is capable of performing the task(s) at issue. "Configured to" may also include adapting a manufacturing process (e.g., a semiconductor fabrication facility) to fabricate devices (e.g., integrated circuits) that are adapted to implement or perform one or more tasks. As used herein, the terms "first," "second," etc. are used as labels for nouns that they precede, and do not imply any type of ordering (e.g., spatial, temporal, logical, etc.). For example, for a customer using five services, the terms "first" and "second" resellers can be used to refer to any two of the five services. As used herein, the term "based on" is used to describe one or more factors that affect a determination. This term does not foreclose additional factors that may affect a determination. That is, a determination may be solely based on those factors or based, at least in part, on those factors. Consider the phrase "determine A based on B." While B may be a factor that affects the determination of A, such a phrase does not foreclose the determination of A from also being based on C. In other instances, A may be determined based solely on B.

[00289] While several embodiments have been provided in the present disclosure, it should be understood that the disclosed systems and methods may be embodied in many other specific forms without departing from the spirit or scope of the present disclosure. The present examples are to be considered as illustrative and not restrictive, and the intention is not to be limited to the details given herein. For example, the various elements or components may be combined or integrated in another system or certain features may be omitted or not implemented.

[00290] Also, techniques, systems, subsystems, and methods described and illustrated in the various embodiments as discrete or separate may be combined or integrated with other systems, modules, techniques, or methods without departing from the scope of the present disclosure. Other items shown or discussed as directly coupled or communicating with each other may be indirectly coupled or communicating through some interface, device, or intermediate component, whether electrically, mechanically, or otherwise. Other examples of changes, substitutions, and alterations are ascertainable by one skilled in the art and could be made without departing from the spirit and scope disclosed herein.

CLAIMS

What is claimed is:

1. A method of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform, the method comprising:

establishing a plurality of service accounts for a corresponding plurality of application service provider systems, wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services;

receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different,

integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface;

receiving a provider API interfaces for a network provider system; and

integrating the provider API interface with the unified services platform API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the provider API interface.

2. The method of claim 1, further comprising:

receiving a definition of a service and a plan for each of the plurality of application service provider systems.

3. The method of claim 2, further comprising:

receiving one or more definitions of actions for the service, wherein the actions comprise responses to triggering events occurring with a telephone number.

4. The method of claim 3, further comprising:

publishing, after integrating each of the plurality of API interfaces with the unified services platform, the definition of the service, the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog.

5. The method of claim 4, further comprising:

receiving, from the network provider system, a selection of one or more services from the plurality of the application services provider systems; and

publishing the selection of the one or more services in a services catalog, wherein the services catalog is accessible by one or more subscribers of the network provider system.

6. The method of claim 3, further comprising:

receiving a request for associating at least one service from the plurality of application service provider systems with a telephone number of a subscriber;

associating the telephone number with the at least one service; and

invoking the at least one service in response to a communication event with the telephone number.

7. The method of claim 1, further comprising:

receiving, at the unified services platform, billing routing information from the plurality of application service provider systems; and

integrating the billing routing information with the network provider system.

8. A method of invoking a third party service during a communication event, the method comprising:

receiving, by a policy and rules engine executing on a processor system, a first indication of an incoming communication for a telephone number;

identifying, by the policy and rules engine, a first triggering event associated with the incoming communication for the telephone number based on the first indication;

invoking, by the policy and rules engine, a first service associated with the telephone number in response to the first triggering event, wherein the first service is provided by a first third party application service provider system;

performing, in response to invoking the first service, a first action based on the first triggering event, wherein the first action is performed by the first third party application service provider system;

receiving, by the policy and rules engine, a second indication of a second incoming communication for the telephone number;

identifying, by the policy and rules engine, a second triggering event associated with the second incoming communication for the telephone number based on the second indication;

invoking, by the policy and rules engine, a second service associated with the telephone number in response to the second triggering event, wherein the second service is provided by a second third party application service provider system, wherein the second third party application service provider system is different than the first third party application service provider system;

performing, in response to invoking the second service, a second action based on the second triggering event, wherein the second action is performed by the second third party application service provider system; and

handling the communication using the telephone number.

9. The method of claim 8, wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

10. The method of claim 8, wherein the action comprises transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof.

11. The method of claim 8, wherein performing the action occurs before handling the communication.

12. The method of claim 8, wherein performing the action occurs after handling the communication.

13. The method of claim 8, wherein performing the action occurs during handling the communication.

14. The method of claim 8, wherein handling the communication comprises routing the incoming communication to a device associated with the telephone number, wherein the communication comprises a voice call, a text message, an internet communication session, or any combination thereof.

15. The method of claim 8, wherein receiving the indication comprises: receiving the first indication at a unified services platform system; and wherein performing the action comprises routing incoming communication data from a network provider system to the third party application service provider system, wherein the network provider system supplies the telephone number.

16. A method of billing a customer for a third party service performed during a communication event, the method comprising:

receiving, by a unified services platform system, an indication of an incoming communication for a telephone number from a network provider system;

identifying, by a processor system, a triggering event associated with the incoming communication for the telephone number;

invoking, by the processor system, a service associated with the telephone number in response to the triggering event, wherein the service is associated with a third party application service provider system;

performing, in response to invoking the service, an action associated with the service based on the triggering event, wherein the action is performed by the third party application service provider system;

receiving a billing message from the third party application service provider system, wherein the billing message comprises chargeable event data; and

routing the billing message to the network provider system, wherein the network provider system bills a subscriber associated with the telephone number for the service performed by the third party application service provider system.

17. The method of claim 16, further comprising:

receiving payment from the subscriber; and

routing the payment from the network service provider system to the third party application service provider system.

18. The method of claim 16, wherein the billing message is generated in response to performing the action.

19. The method of claim 16, wherein the billing message is received by the network provider system.

20. The method of claim 16, further comprising:

invoking a second service associated with the telephone number in response to the triggering event, wherein the service is associated with a second third party application service provider system;

performing, in response to invoking the service, a second action associated with the second service based on the triggering event, wherein the action is performed by the second third party application service provider system;

receiving a second billing message from the second third party application service provider system, wherein the second billing message comprises chargeable event data for performing the second action; and

routing the second billing message to the network provider system, wherein the network provider system bills the subscriber associated with the telephone number for the service performed by the third party application service provider system and the second third party application service provider system.

21. A method of creating a plurality of service actions in response to a communication event, the method comprising:

receiving, by a processor system, an indication of an incoming communication for a telephone number, wherein the telephone number is provided by a network provider system, and wherein a plurality of services associated with a plurality of third party service systems are associated with the telephone number, wherein the plurality of services are invoked by at least one triggering event associated with the telephone number;

identifying, by the processor system, a triggering event associated with the incoming communication for the telephone number;

invoking a first service of the plurality of services in response to the triggering event;

sending incoming communication information to the first service, wherein the incoming communication information comprises at least a portion of the information associated with the incoming communication, and wherein the first service generates first service data in response to the incoming communication information;

routing the first service data to a second service of the plurality of services; and

invoking the second service of the plurality of services in response to routing the first service data to the second service, wherein the second service generates second service data.

22. The method of claim 21, wherein the processor system forms a portion of a unified service platform system, wherein unified services platform system communicates with the plurality of third party service systems through a plurality of integrated interfaces, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein one or more of the plurality of integrated interfaces are incompatible with the provider integrated interface.

23. The method of claim 21, wherein the second service generates the second service data using at least a portion of the first service data.

24. The method of claim 21, further comprising:

forwarding the first service data and the second service data to a device associated with the telephone number.

25. The method of claim 21, wherein the services comprise one or more actions performed by social media software, customer relationship management software, call and message translation software, file sharing software, file management software, contact management software, voicemail software, messaging software, call recording software, contact matching software, messaging storage software, call notification software, or any combination thereof.

26. The method of claim 21, further comprising:

sending the incoming communication to the first service;

routing the incoming communication from the first service to the second service; and

routing the incoming communication to a device associated with the telephone number

27. The method of claim 21, wherein receiving the indication of the incoming communication comprises: receiving the indication at a unified services platform system from the network provider system.

28. The method of claim 21, further comprising:

generating first billing information for the first service based on invoking the first service;

generating second billing information for the second service based on invoking the second service; and

routing the first billing information and the second billing information to the network provider system, wherein the network provider system bills a subscriber associated with the telephone number.

29. A method of creating a plurality of service actions in response to a communication event, the method comprising:

receiving, by a processor system, an indication of an communication for a telephone number, wherein the telephone number is provided by a network provider system, and wherein a plurality of service provided by a plurality of third party service systems are associated with the telephone number, wherein one or more of the plurality of services are invoked by at least one triggering event associated with the telephone number;

identifying, by the processor system, a triggering event associated with the communication for the telephone number;

invoking two or more services of the plurality of services in response to the triggering event;

sending communication information to each of the two or more services, wherein the communication information comprises at least a portion of the information associated with the communication;

receiving first service data from a first service of the two or more services;

receiving second service data from a second service of the two or more services; and

handling the communication.

30. The method of claim 29, wherein the processor system forms a portion of a unified service platform system, wherein unified services platform system communicates with the plurality of third party service systems through a plurality of integrated interfaces, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein one or more of the plurality of integrated interfaces are incompatible with the provider integrated interface.

31. The method of claim 29, wherein sending the communication information to each of the two or more services occurs in parallel.

32. The method of claim 29, wherein handling the communication comprises routing the incoming communication to a device associated with the telephone number, and wherein the communication comprises an incoming voice call, an outgoing voice all, an incoming text message, an outgoing text message, an outgoing network connection request, or any combination thereof.

33. The method of claim 29, further comprising combining the first service data and the second service data to form a combined data set; and sending the combined data set to a device associated with the telephone number.

34. The method of claim 29, further comprising:
routing the first service data to a third service of the plurality of services; and
invoking the third service in response to routing the first service data to the third service, wherein the third service generates third service data.

35. The method of claim 29, wherein the indication is received at a unified services platform system, and wherein the unified services platform system sends the communication information to each of the two or more services.

36. The method of claim 29, further comprising:
generating first billing information for the first service;
generating second billing information for the second service; and
routing the first billing information and the second billing information to the network provider system, wherein the network provider system bills a subscriber associated with the telephone number.

37. A method of using a policy store to generate multiple events, the method comprising:

generating, by a processor system, a policy store comprising a plurality of rules for invoking a plurality of services associated with a telephone number, wherein the rules define a relationship between a triggering event and one or more actions to be performed by a service, wherein the plurality of services are provided by third party application service provider systems, wherein the triggering event is based on a communication event provided by a network provider system, and where the policy store is generated by a unified services platform system in communication with the network provider system and the third party application service provider systems;

receiving an indication of a first triggering event based on a communication event associated with the telephone number;

matching, by the processor system, the first triggering event with one or more actions in the policy store;

identifying, by the processor system, two or more services of the plurality of services based on the matching;

generating routing information for each of the two or more services identified based on the matching; and

routing communication event information to each of the two or more services of the plurality of services using the routing information.

38. The method of claim 37, wherein routing the communication event information comprises:

routing the communication event information to a first service of the two or more services using the routing information, wherein the first service generates first service data based on the communication event information; and

routing the first service data to a second service of the two or more services using the routing information, wherein the second service generates second service data based on the first service data.

39. The method of claim 38, further comprising:

routing the communication event to the first service with the communication event information; and

routing the communication event to the second service with the first service data; and

routing the communication event with the second service data to a communication device associated with the telephone number.

40. The method of claim 37, wherein routing the communication event information comprises:

routing the communication event information to a first service of the two or more services using the routing information; and

routing the communication event information to a second service of the two or more services using the routing information, wherein the communication information is routed to the first service and the second service in parallel.

41. A method of provisioning a service for use with a group plan, the method comprising:

receiving, by a unified services platform system, a subscription request for a service for a group plan, wherein the group plan comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, and wherein the service is provided by a third party application service provider system;

sending, by the unified services platform system, an activation request for the group plan to the third party application service provider system,

receiving an activation response from the third party application service provider system;

associating the service with each telephone number of the plurality of telephone numbers;

providing access to the service for each telephone number based on the associating;

receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system;

sending, by the unified services platform system, a second activation request for the service to the second third party application service provider system;

receiving a second activation response from the second third party application service provider system;

associating the second service with the first telephone number; and

providing access to the second service for the first telephone number based on the associating.

42. The method of claim 41, further comprising:

receiving billing and settlement information associated with each of the telephone numbers.

43. The method of claim 42, wherein the billing and settlement information comprises routing information for routing charges incurred through use of the service, wherein the routing information routes the charges incurred to a group administrator for the group plan.

44. The method of claim 41, wherein an API of the third party application service provider system is incompatible with an API of the network provider system.

45. The method of claim 44, wherein the API of the third party application service provider system is integrated with the unified services platform system, and wherein API of the network provider system is integrated with the unified services platform system, and wherein the third party application communicates with the network provider system through the unified services platform system.

46. The method of claim 41, further comprising:

receiving, by the unified services platform system, a second subscription request for a second service for the group plan, wherein the second service is provided by a second third party application service provider system, wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system;

sending, by the unified services platform system, a second activation request for the group plan to the third party application service provider system,

receiving a second activation response from the third party application service provider system;

associating the second service with each telephone number of the plurality of telephone numbers; and

providing access to the second service for each telephone number based on the associating.

47. The method of claim 41, further comprising:

invoking the service in response to a triggering event associated with a first telephone number of the plurality of telephone numbers.

48. A method of billing for a service provided to the members of a group, the method comprising:

receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, wherein the telephone number is provided by a network provider system, and wherein the service is provided by a third party application service provider system;

associating the service with each telephone number of the plurality of telephone numbers;

receiving billing and settlement information from the third party application service provider system for each telephone number;

generating billing routing information based on the billing and settlement information, wherein the routing information forwards billing charges for the services associated with the service to a group administrator;

associating the billing routing information for the service with each telephone number of the plurality of telephone number;

generating chargeable event data in response to a use of the service by one or more of the subscribers;

forwarding the chargeable event data to the group administrator based on the billing routing information;

associating a second service with a first telephone number of the plurality of telephone numbers, wherein the second service is not associated with

the group, wherein the second service is provided by a second third party application service provider system; and

routing billing charges for the second service to a first subscriber associated with the first telephone number.

49. The method of claim 48, wherein the unified services platform system communicates with the third party service system through a first integrated interface, wherein the unified services platform system communications with the second third party service system through a second integrated interface, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein the integrated interface and the second integrated interface are incompatible with the provider integrated interface.

50. The method of claim 48, further comprising:

associating a third service with the first telephone number of the plurality of telephone numbers, wherein the third service is associated with the group, and wherein the routing information forwards billing charges for the third service to the group administrator.

51. The method of claim 48, wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data to the unified services platform system, and forwarding the chargeable event data from the unified services platform system to the network provider system.

52. The method of claim 48, wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data from the third party application service provider system to the network provider system.

53. The method of claim 48, wherein generating the chargeable event data is based on a triggering event associated with a first telephone number of one or more of the subscribers.

54. A method of using a rules engine to allocate usage of a service between personal and group accounts, the method comprising:

receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a

plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, wherein the service is provided by a third party application service provider system, and wherein the telephone numbers are provided by a network provider system;

associating the service with each telephone number of the plurality of telephone numbers;

receiving billing and settlement information from the third party application service provider system for each telephone number;

generating a billing policy store comprising a plurality of rules for charging for the service, wherein the rules define a relationship between a usage conditions of the service and payment by at least one of the subscriber or the group;

generating billing routing information based on the billing and settlement information and the billing policy store, wherein the billing routing information forwards billing charges for the usage associated with the service to at least one of the subscriber or the group based on the usage conditions;

generating a charge for the service in response to a use of the service under usage conditions by one or more of the subscribers; and

routing the charges to at least one of the subscriber or the group using the billing routing information.

55. The method of claim 54, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a time of day, a day of the week, a month of the year, a holiday schedule, or any combination thereof.

56. The method of claim 54, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a geographic location or a geographic area.

57. The method of claim 54, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a type of network connection, a specific network interface point, or any combination thereof.

58. The method of claim 54, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises one or more predefined triggering events.

59. The method of claim 54, wherein a first subscriber associated with a first telephone number of the plurality of telephone numbers is provided network services through the network provider system, wherein group is provided network services through a second network provider system, and wherein routing the charges to at least one of the subscriber or the group comprises routing the charges to at least one of the first subscriber through the network provider system or the group through the second network provider system.

60. The method of claim 54, further comprising:

associating a second service with each telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system;

receiving second billing and settlement information from the second third party application service provider for each telephone number; and

generating second billing routing information based on the second billing and settlement information and the billing policy store, wherein the second billing routing information forwards billing charges for the usage associated with the second service to at least one of the subscriber or the group based on a second set of usage conditions, wherein the second set of usage conditions are different than the usage conditions for the service.

61. A method of combining partial functionality across a plurality of applications to create a new service, the method comprising:

receiving, by a unified services platform system, a definition of a service for each of a plurality of application service provider systems;

receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, wherein the actions comprise responses to triggering events occurring for a telephone number;

testing each triggering event and corresponding action in a test environment to generate a response;

storing an indication of the triggering event, the corresponding action, and the response;

identifying individual actions associated with each of the services associated with the plurality of application service provider systems;

combining two or more individual actions from different services provided by different application service provider systems; and

forming a new service based on the combining.

62. The method of claim 61, wherein the individual actions comprise one or more of transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof.

63. The method of claim 61, wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

64. The method of claim 61, wherein combining the two or more individual actions comprises combining the two or more individual actions by the unified services platform system.

65. The method of claim 64, wherein combining the two or more individual actions further comprises:

receiving, by the unified services platform system, a request from a subscriber associated with a telephone number to combine the two or more individual actions;

generating, by the unified services platform system, routing and integration data for the two or more individual actions; and

activating the new service for the subscriber, wherein the new service includes the routing and integration data generated by the unified services platform.

66. The method of claim 65, further comprising:

publishing the new service in a catalog available to a plurality of subscribers.

67. The method of claim 61, wherein the new service comprises a first individual action based on a first trigger and a second individual action based on a second trigger.

68. The method of claim 67, wherein the second trigger comprises a response generated by the first individual action.

69. The method of claim 61, further comprising:
publishing the individual actions in a catalog; and
receiving a selection of the two or more of the individual actions, wherein combining the two or more individual actions from different services occurs in response to receiving the selection of the two or more individual actions.

70. A method of identifying actions within services provided by a third party application service providers, the method comprising:
establishing, on a unified services platform system, a plurality of service accounts for a corresponding plurality of application service providers;
receiving a definition of a service for each of the plurality of application service providers, wherein the service comprises one or more actions, wherein the actions comprise responses to triggering events occurring for a telephone number;
receiving one or more definitions of the one or more actions for each service for each of the plurality of application service provider systems;
testing each triggering event and corresponding action in a test environment to generate a response;
storing an indication of the triggering event, the corresponding action, and the response; and
identifying individual actions associated with each of the services associated with the plurality of application service provider systems.

71. The method of claim 70, wherein the individual actions comprise one or more of transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof.

72. The method of claim 70, wherein the triggering events comprises one or more of a representational state transfer (REST) upon sending a message, a REST

upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

73. The method of claim 70, wherein two or more of the plurality of application service provider systems have different APIs, and wherein the different APIs are not compatible with each other.

74. The method of claim 73, further comprising: enabling two or more of the individual actions to work together by providing a common interface using the unified services platform system, wherein the two or more individual actions are provided by at least two different application service provider systems.

75. A method of developing and testing a new application service through a unified services platform, the method comprising:

establishing a plurality of service accounts for a corresponding plurality of application service provider systems;

receiving a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different,

integrating each of the plurality of API interfaces with a unified services platform system API interface;

receiving a definition of a service for each of the plurality of application service provider systems;

receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, wherein the actions comprise responses to triggering events occurring for a telephone number;

testing each triggering event and corresponding action for each service in a test environment to generate a response; and

providing access to each service within a working environment after performing the testing.

76. The method of claim 75, further comprising:

publishing, after testing , the definition of the service, the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog.

77. The method of claim 75, further comprising:

receiving an API interface for a network provider system; and

integrating the API interface for the network provider system with the unified services platform system API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the API interface for the network provider system.

78. The method of claim 77, further comprising:

testing the integration of each of the plurality of API interfaces for the plurality of application service provider systems with the unified services platform system API interface in the test environment; and

testing the integration of the API interface for the network provider system with the unified services platform system API interface in the test environment.

79. The method of claim 75, further comprising:

testing chargeable event data routing in the test environment, wherein the chargeable event data is generated in response to a performance of one or more actions.

80. The method of claim 75, wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

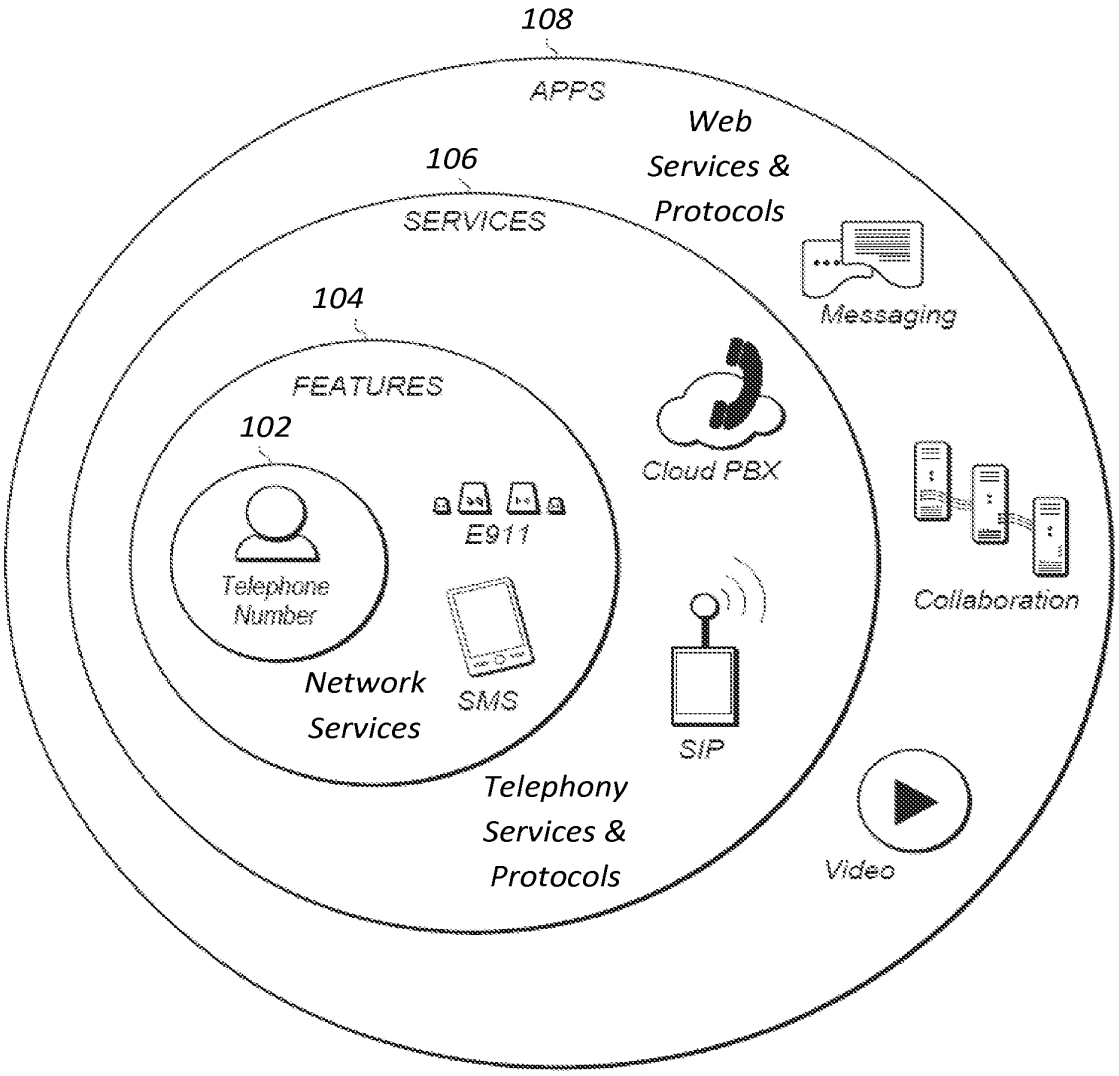

108
APPS
Web
Services &
Protocols
106
SERVICES
Messaging
104
FEATURES
102
Cloud PBX
E911
Telephone
Number
Collaboration
Network
Services
SMS
SIP
Telephony
Services &
Protocols
Video

FIG. 1

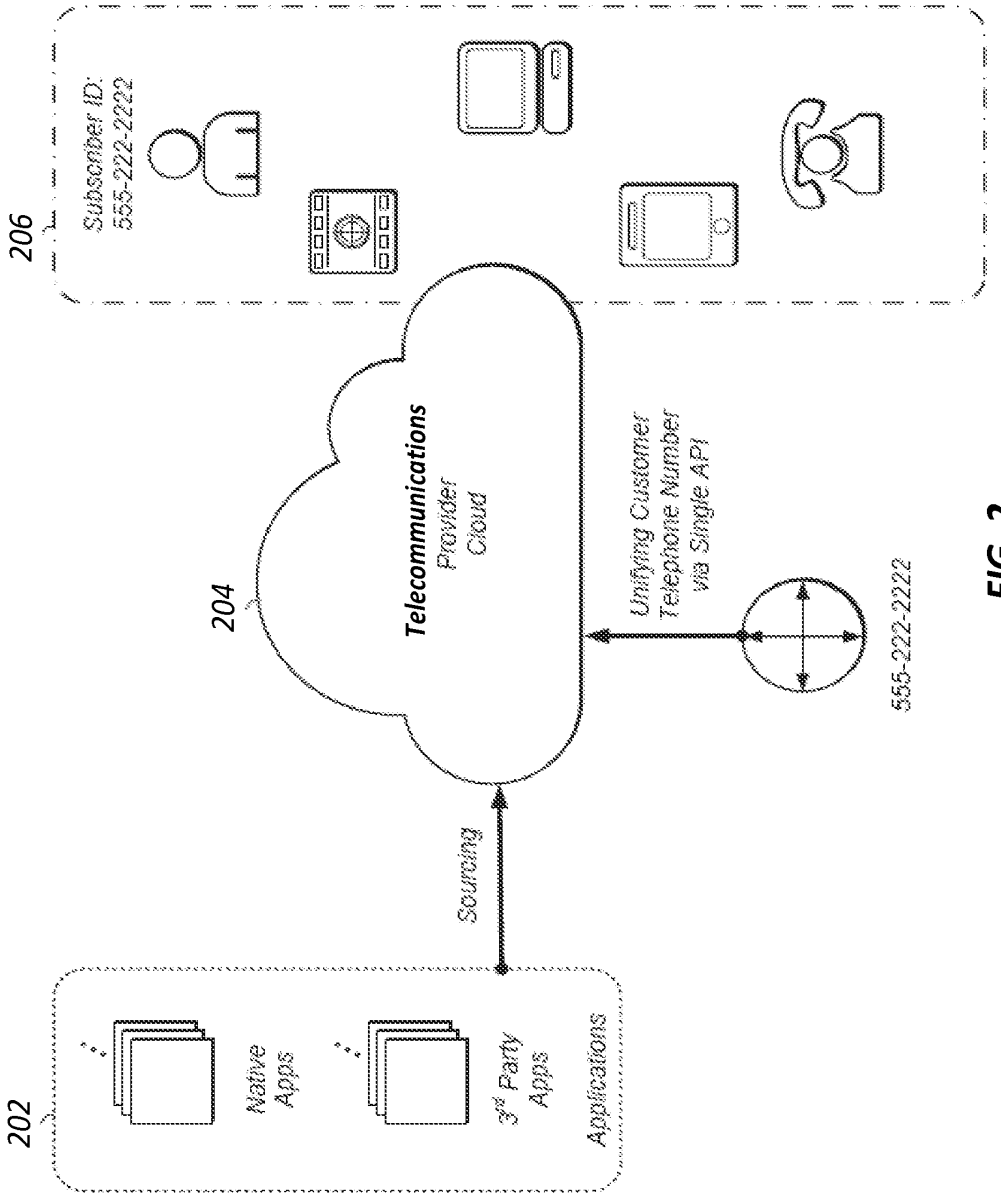
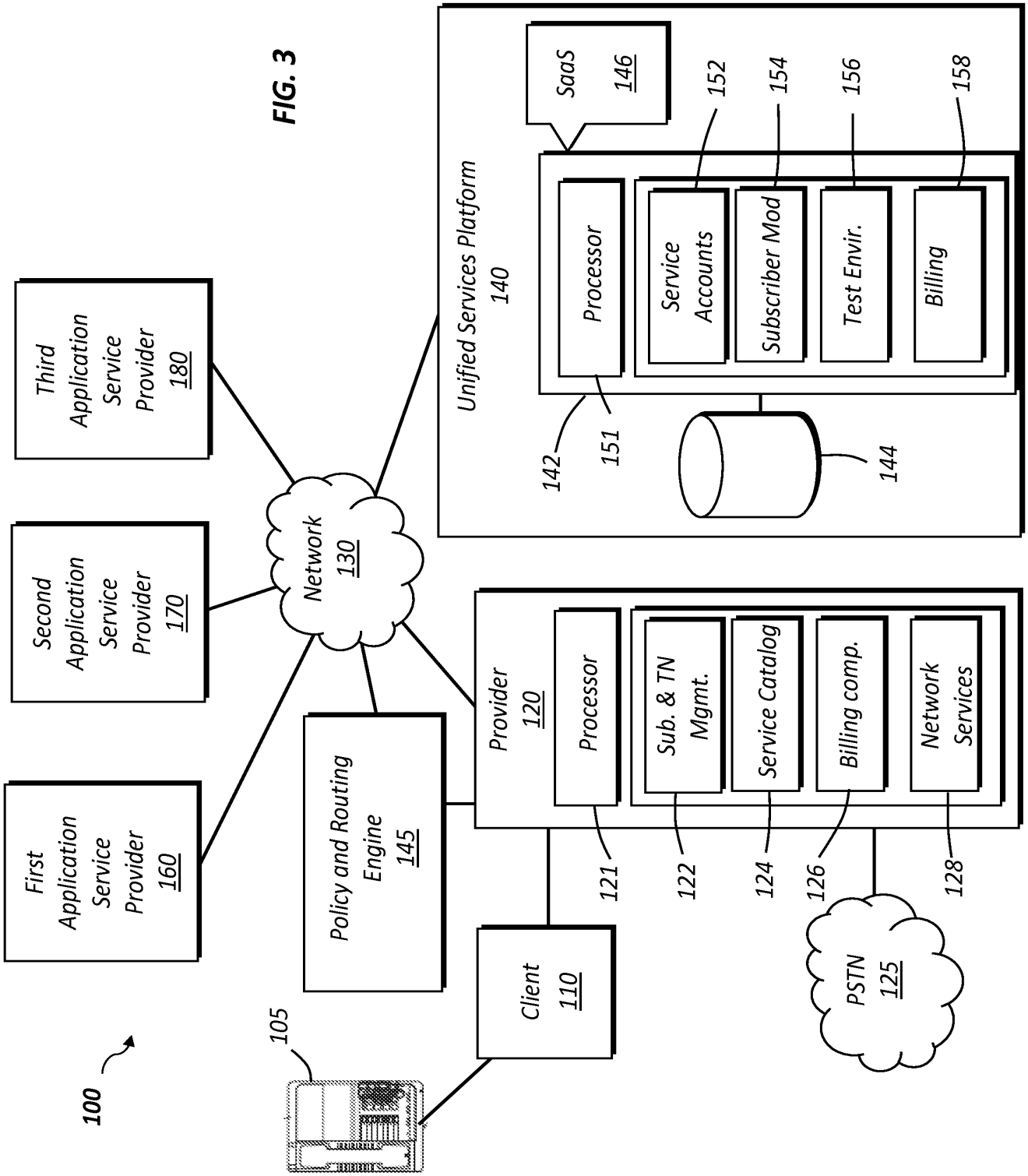

206
Subscriber ID:
555-222-2222
204
Telecommunications
Provider
Cloud
Unifying Customer
Telephone Number
via Single API
555-222-2222
Sourcing
202
Native
Apps
3rd Party
Apps
Applications

FIG. 2

FIG. 3


100
105
Client 110
First Application Service Provider 160
Second Application Service Provider 170
Third Application Service Provider 180
Network 130
Policy and Routing Engine 145
Provider 120
Processor
Sub. & TN Mgmt.
Service Catalog
Billing comp.
Network Services
121
122
124
126
128
PSTN 125
Unified Services Platform 140
SaaS 146
Processor
Service Accounts
Subscriber Mod
Test Envir.
Billing
142
151
144
152
154
156
158

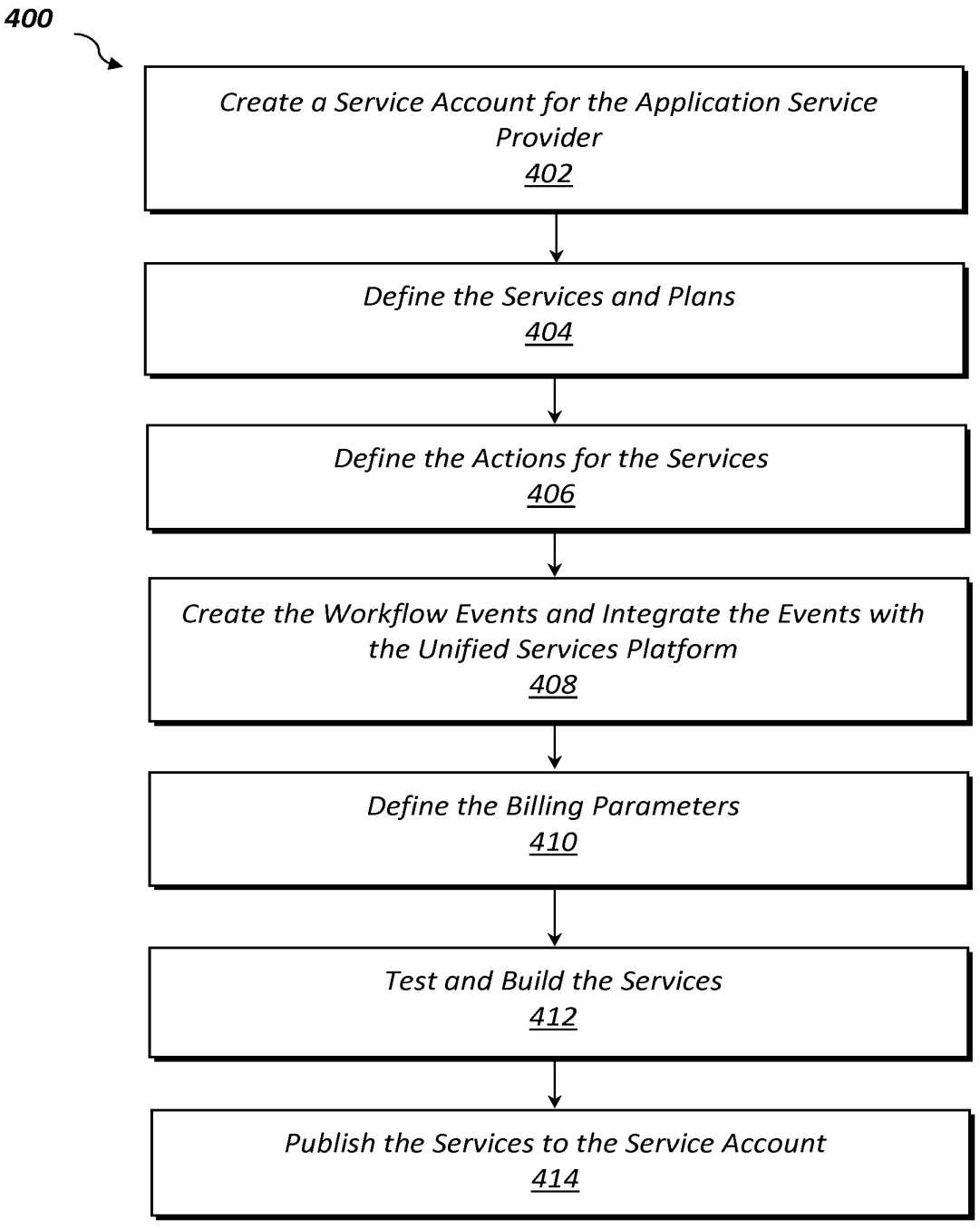

400
Create a Service Account for the Application Service Provider
402
Define the Services and Plans
404
Define the Actions for the Services
406
Create the Workflow Events and Integrate the Events with the Unified Services Platform
408
Define the Billing Parameters
410
Test and Build the Services
412
Publish the Services to the Service Account
414

FIG. 4

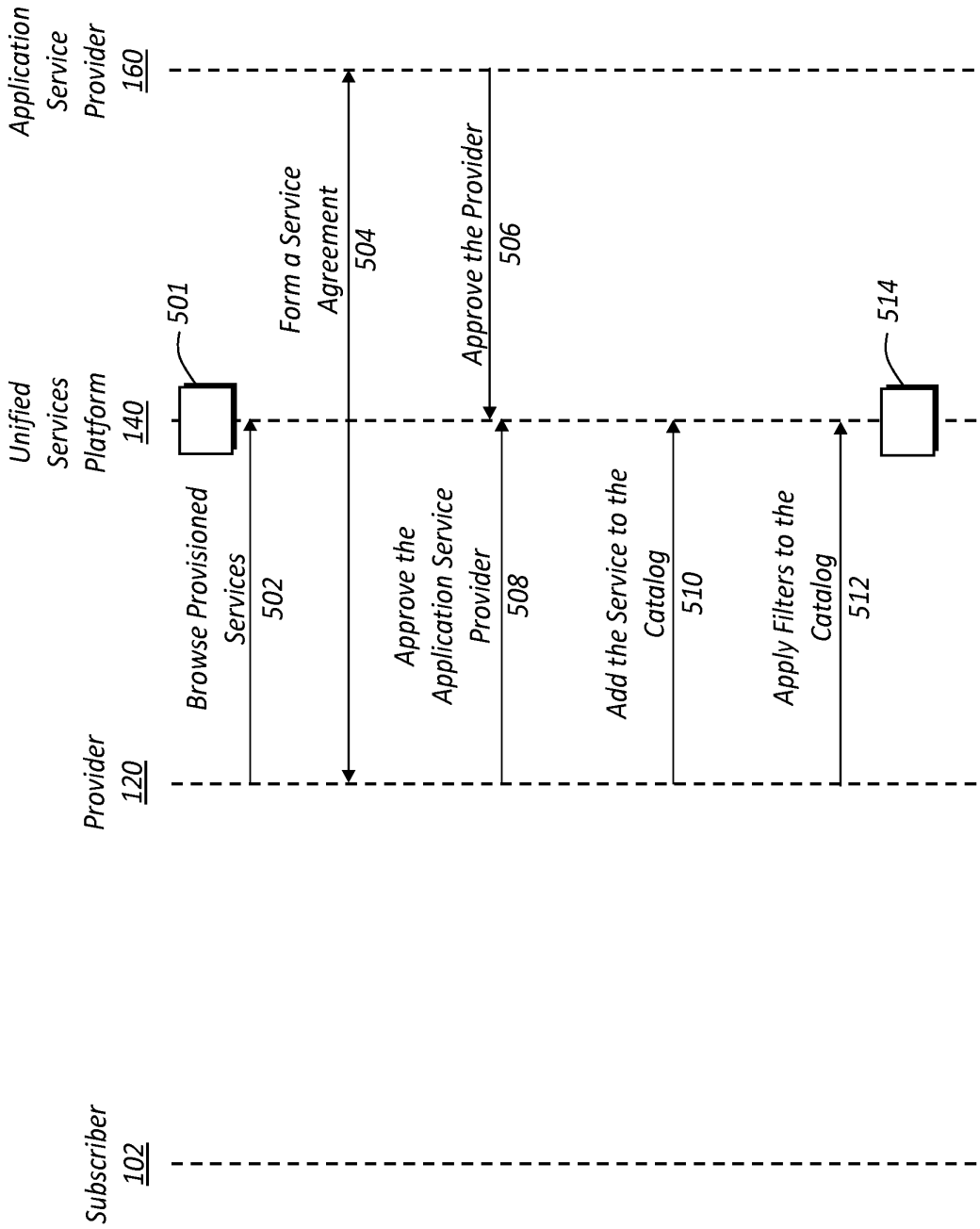

Application Service Provider 160
Unified Services Platform 140
Provider 120
Subscriber 102
501
514
Form a Service Agreement 504
Approve the Provider 506
Browse Provisioned Services 502
Approve the Application Service Provider 508
Add the Service to the Catalog 510
Apply Filters to the Catalog 512

FIG. 5

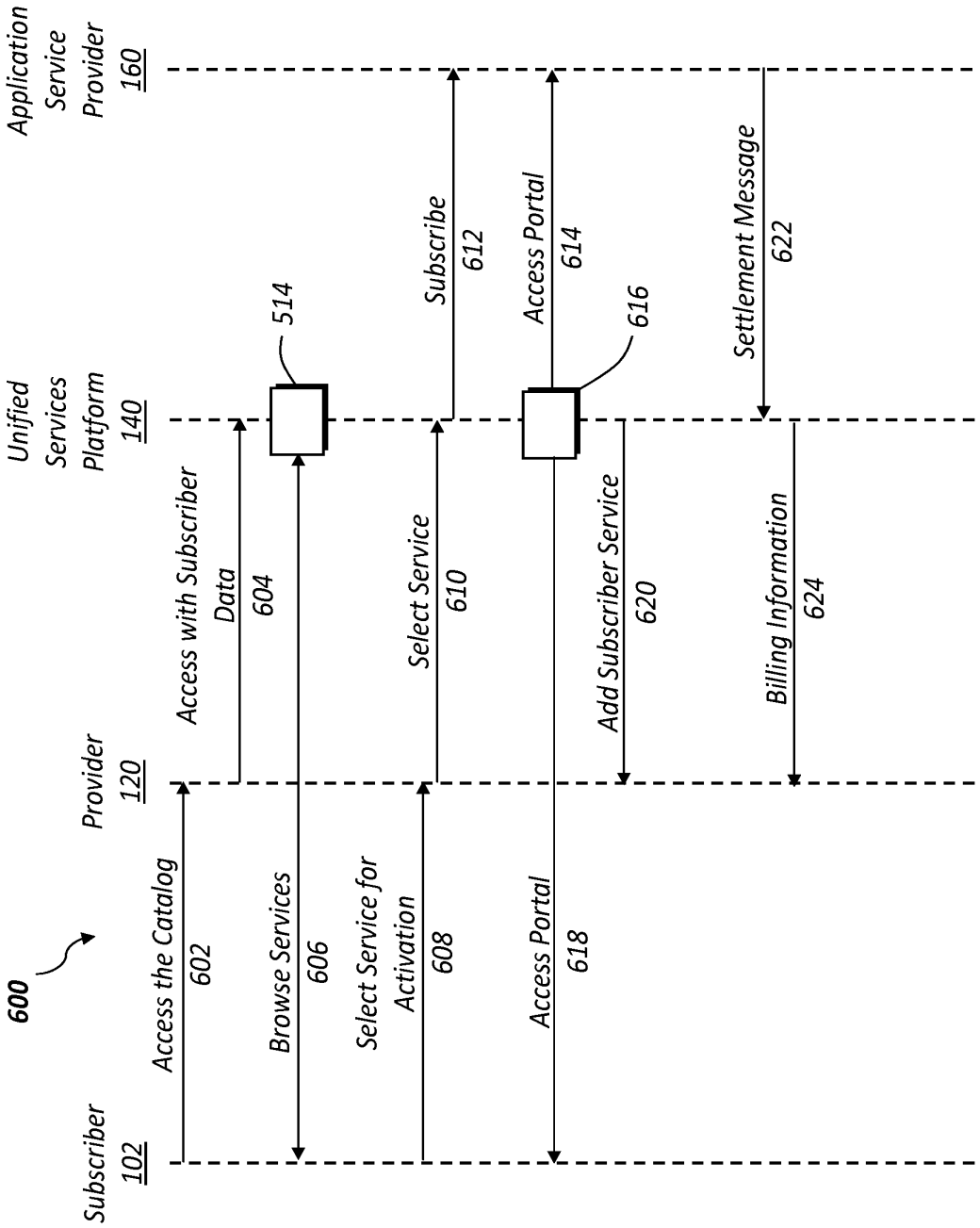

600
Subscriber 102
Provider 120
Unified Services Platform 140
Application Service Provider 160
Access the Catalog 602
Access with Subscriber Data 604
514
Browse Services 606
Select Service for Activation 608
Select Service 610
Subscribe 612
Access Portal 614
616
Access Portal 618
Add Subscriber Service 620
Settlement Message 622
Billing Information 624

FIG. 6

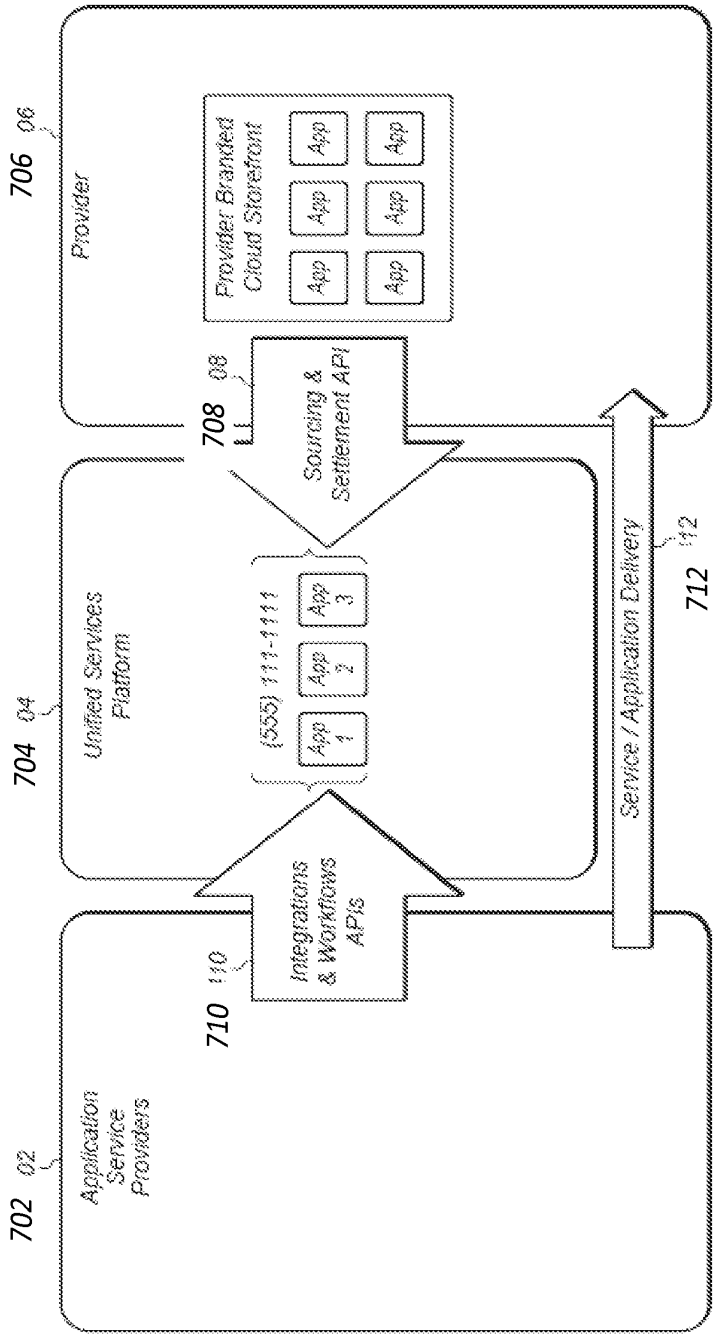

Application Service Providers
02
702
Integrations & Workflows APIs
110
710
Unified Services Platform
04
704
(555) 111-1111
App 1
App 2
App 3
Sourcing & Settlement API
08
708
Service / Application Delivery
712
Provider
06
706
Provider Branded Cloud Storefront
App
App
App
App
App
App

FIG. 7

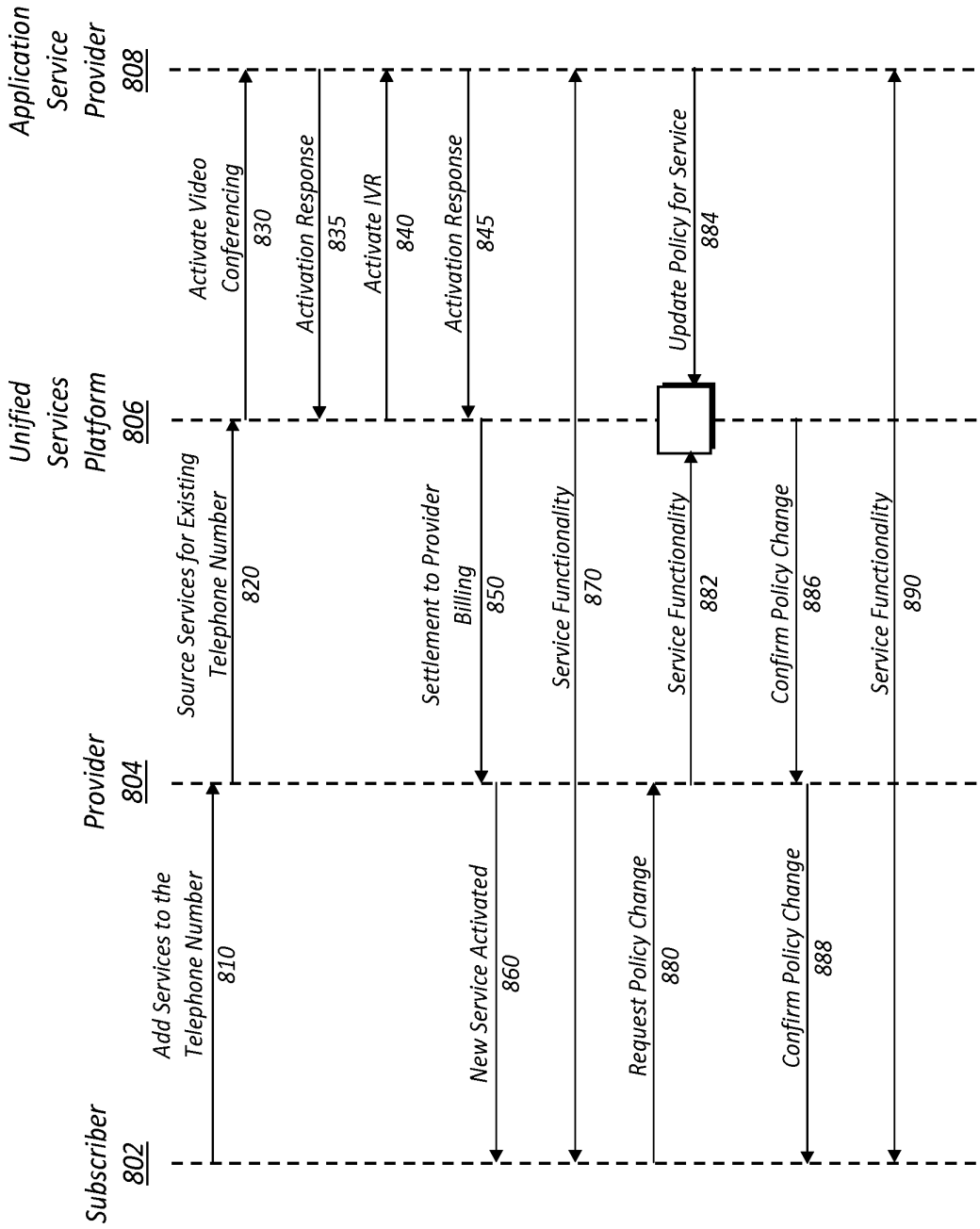

Subscriber 802
Provider 804
Unified Services Platform 806
Application Service Provider 808
Add Services to the Telephone Number 810
Source Services for Existing Telephone Number 820
Activate Video Conferencing 830
Activation Response 835
Activate IVR 840
Activation Response 845
Settlement to Provider Billing 850
New Service Activated 860
Service Functionality 870
Request Policy Change 880
Service Functionality 882
Update Policy for Service 884
Confirm Policy Change 886
Confirm Policy Change 888
Service Functionality 890

FIG. 8

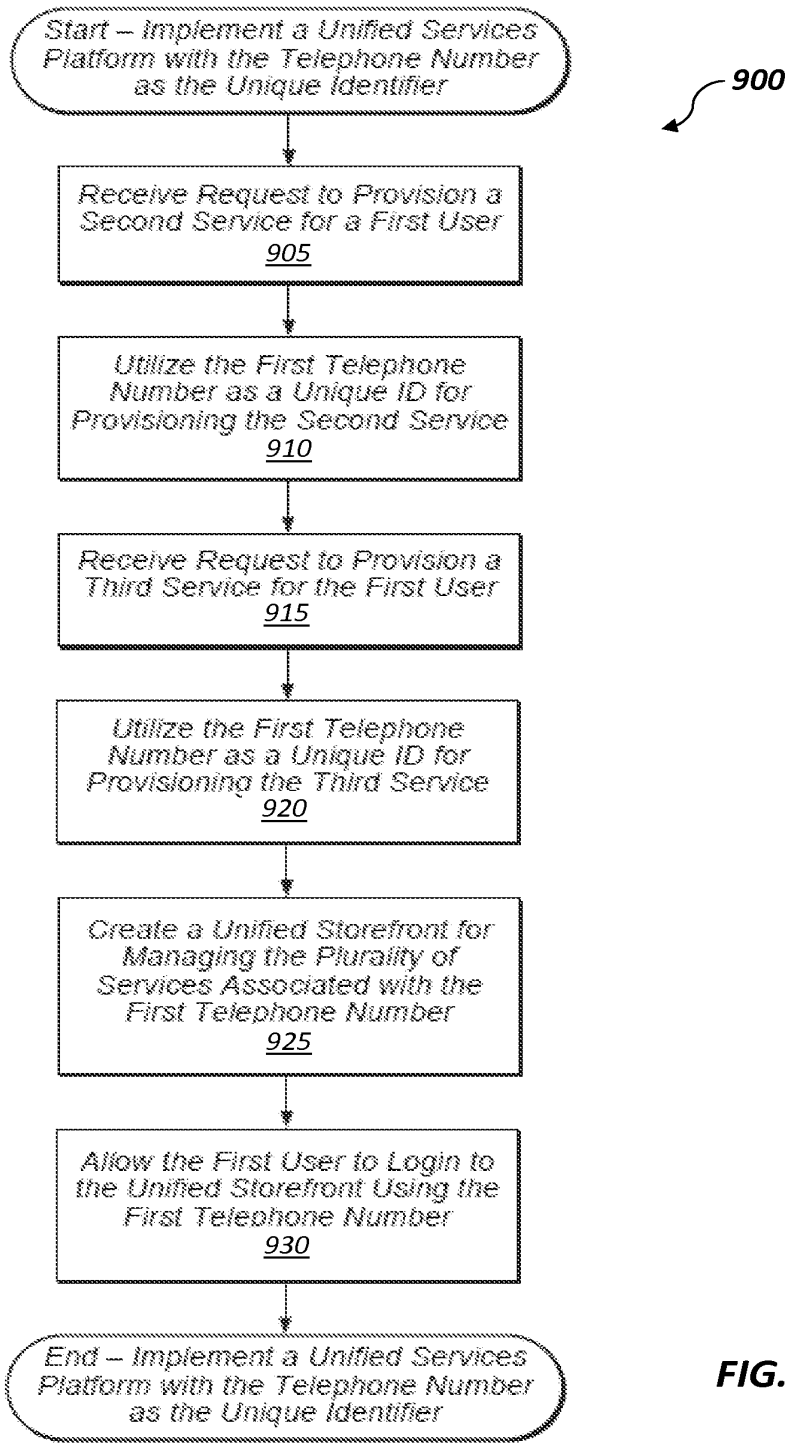

Start – Implement a Unified Services Platform with the Telephone Number as the Unique Identifier
900
Receive Request to Provision a Second Service for a First User
905
Utilize the First Telephone Number as a Unique ID for Provisioning the Second Service
910
Receive Request to Provision a Third Service for the First User
915
Utilize the First Telephone Number as a Unique ID for Provisioning the Third Service
920
Create a Unified Storefront for Managing the Plurality of Services Associated with the First Telephone Number
925
Allow the First User to Login to the Unified Storefront Using the First Telephone Number
930
End – Implement a Unified Services Platform with the Telephone Number as the Unique Identifier

FIG. 9

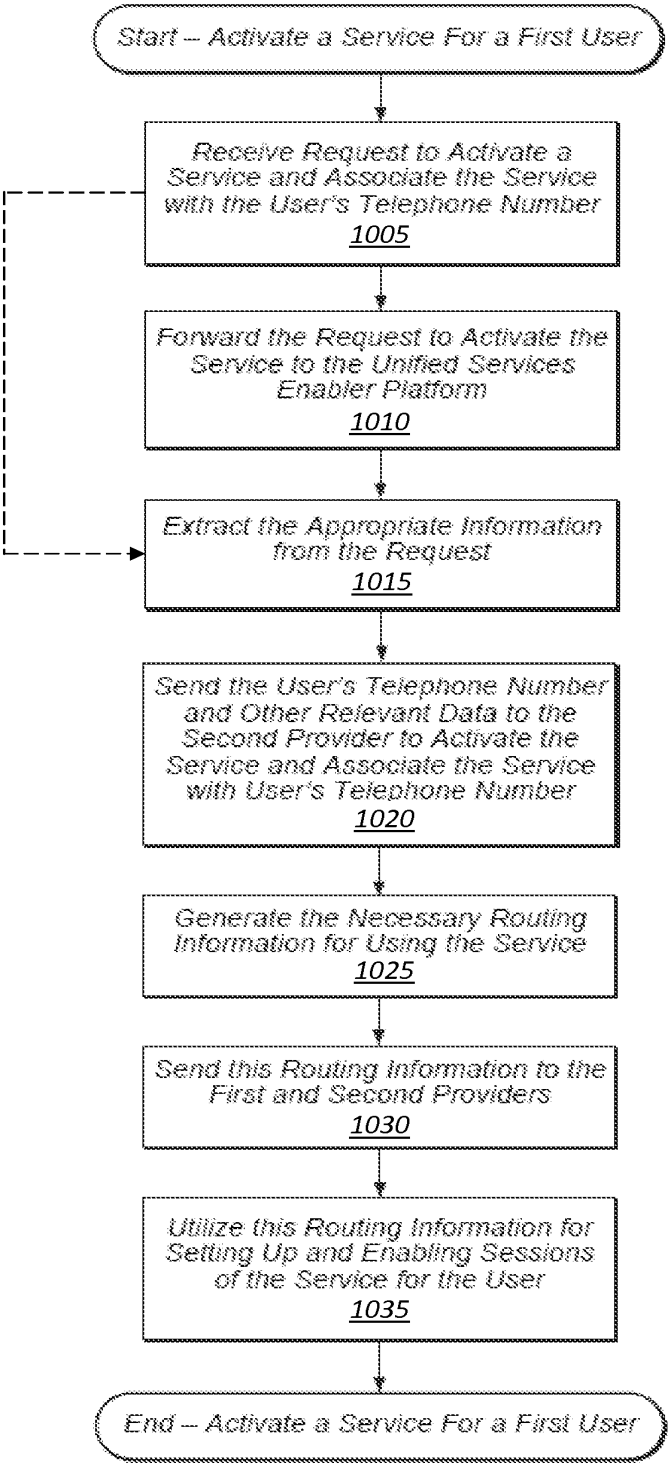

Start – Activate a Service For a First User
1000
Receive Request to Activate a Service and Associate the Service with the User's Telephone Number
1005
Forward the Request to Activate the Service to the Unified Services Enabler Platform
1010
Extract the Appropriate Information from the Request
1015
Send the User's Telephone Number and Other Relevant Data to the Second Provider to Activate the Service and Associate the Service with User's Telephone Number
1020
Generate the Necessary Routing Information for Using the Service
1025
Send this Routing Information to the First and Second Providers
1030
Utilize this Routing Information for Setting Up and Enabling Sessions of the Service for the User
1035
End – Activate a Service For a First User

FIG. 10

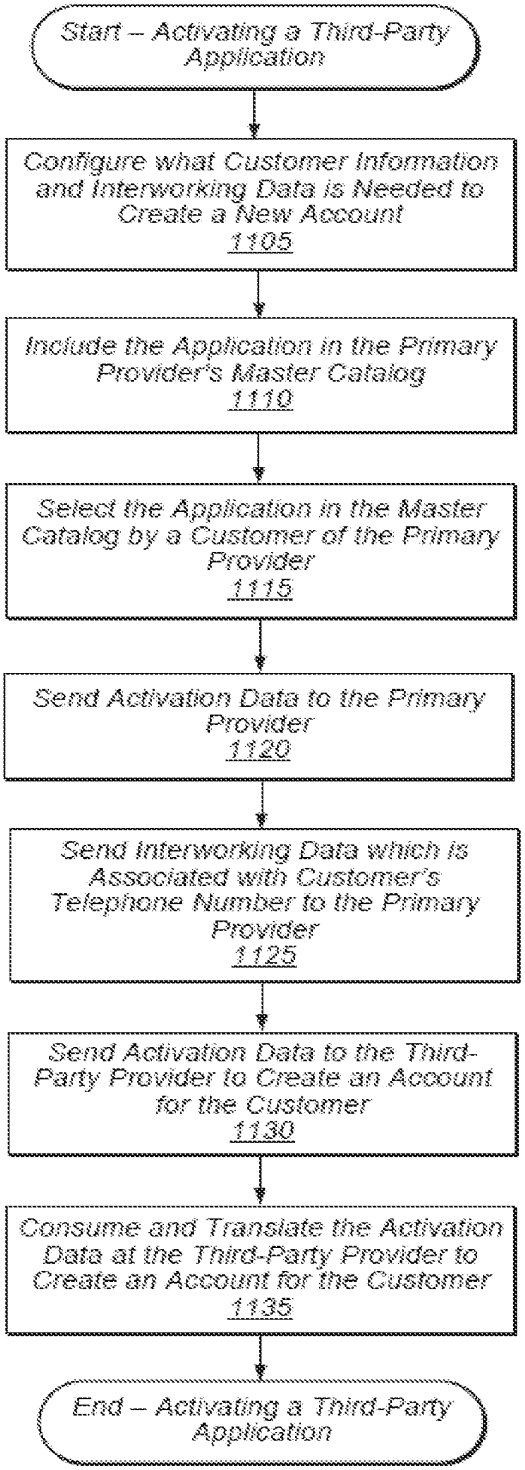

Start – Activating a Third-Party Application
Configure what Customer Information and Interworking Data is Needed to Create a New Account
1105
Include the Application in the Primary Provider's Master Catalog
1110
Select the Application in the Master Catalog by a Customer of the Primary Provider
1115
Send Activation Data to the Primary Provider
1120
Send Interworking Data which is Associated with Customer's Telephone Number to the Primary Provider
1125
Send Activation Data to the Third-Party Provider to Create an Account for the Customer
1130
Consume and Translate the Activation Data at the Third-Party Provider to Create an Account for the Customer
1135
End – Activating a Third-Party Application
1100

FIG. 11

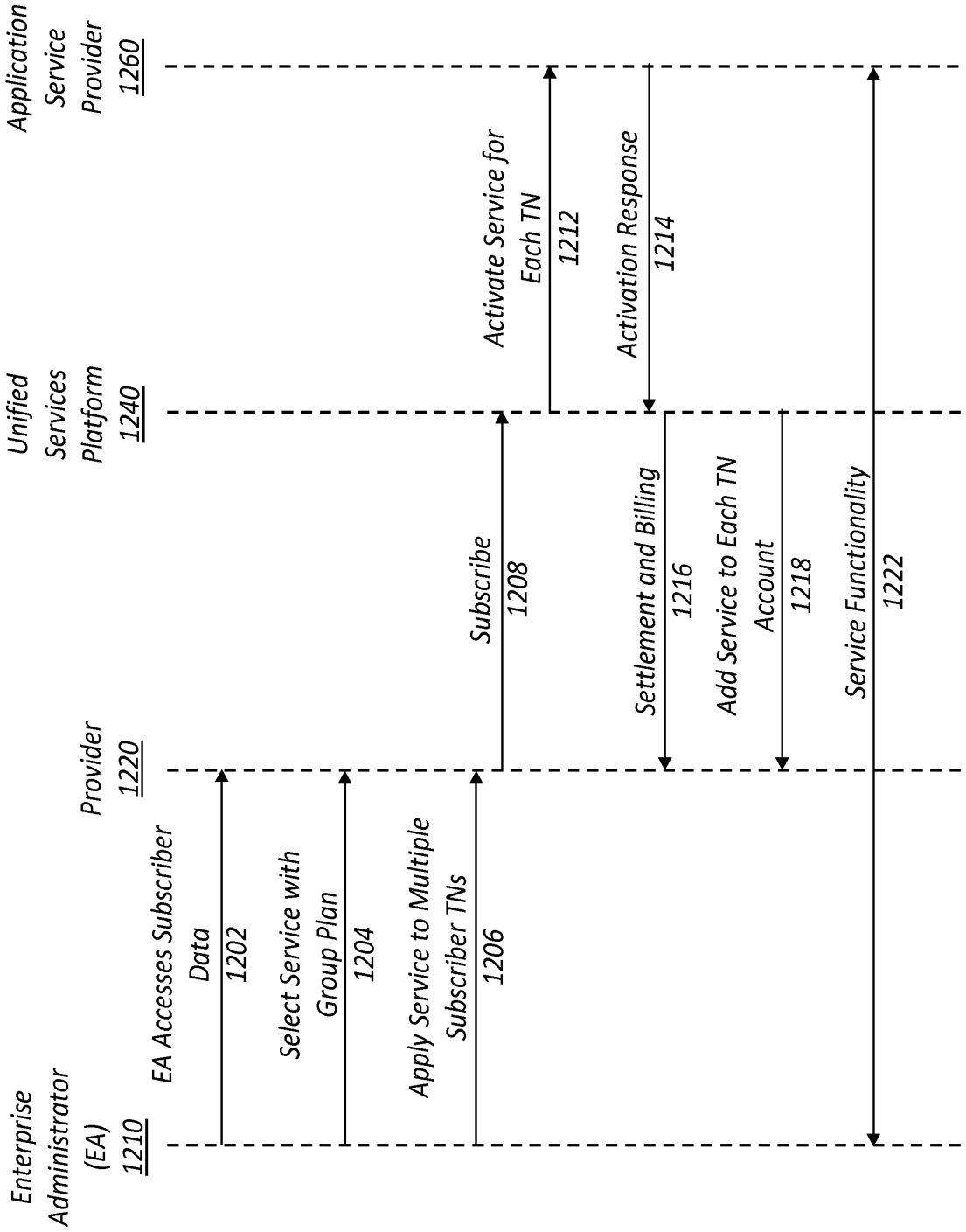

Enterprise Administrator (EA) 1210
Provider 1220
Unified Services Platform 1240
Application Service Provider 1260
EA Accesses Subscriber Data 1202
Select Service with Group Plan 1204
Apply Service to Multiple Subscriber TNs 1206
Subscribe 1208
Activate Service for Each TN 1212
Activation Response 1214
Settlement and Billing 1216
Add Service to Each TN Account 1218
Service Functionality 1222

FIG. 12

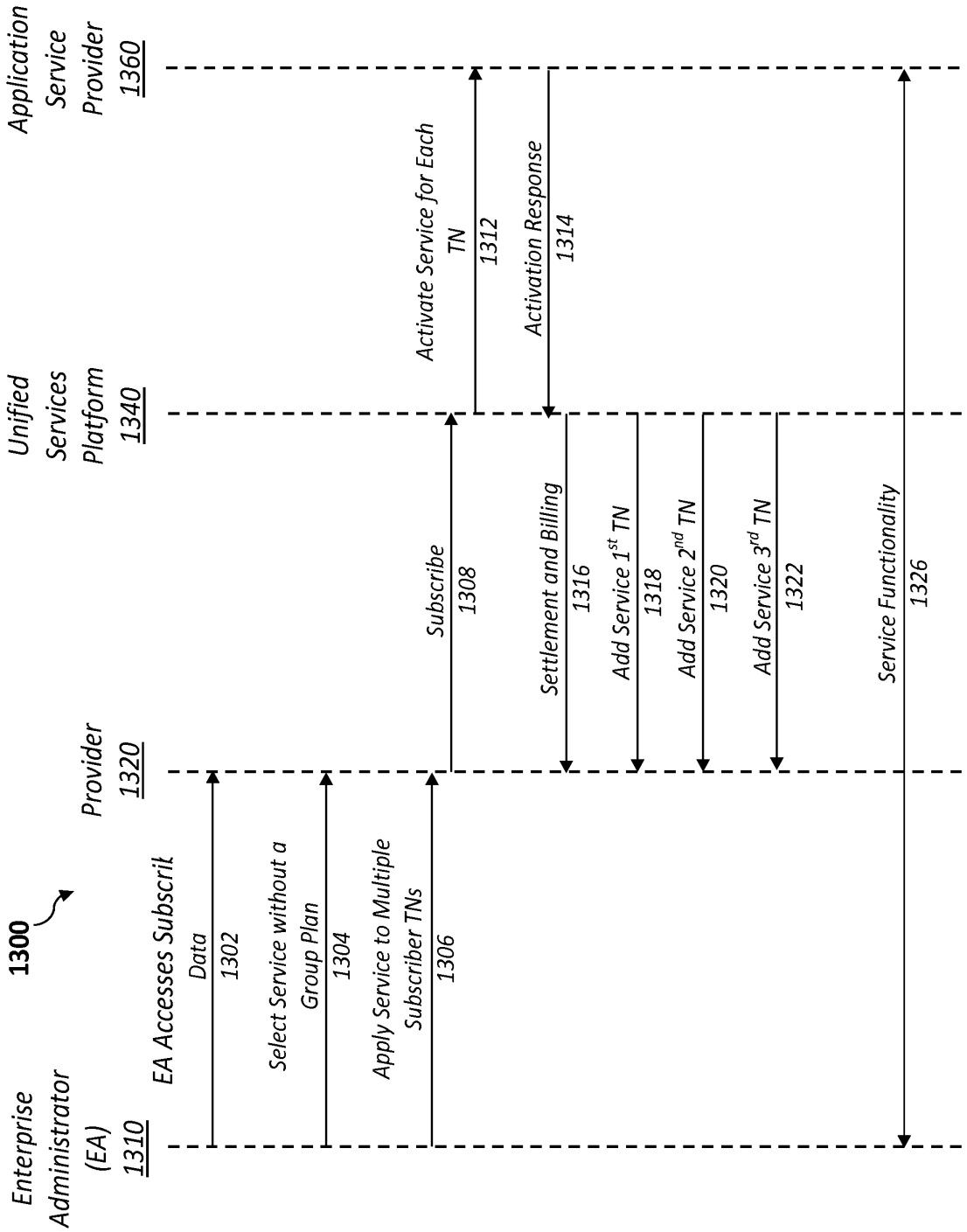

1300
Enterprise Administrator (EA) 1310
Provider 1320
Unified Services Platform 1340
Application Service Provider 1360
EA Accesses Subscril Data
1302
Select Service without a Group Plan
1304
Apply Service to Multiple Subscriber TNs
1306
Subscribe
1308
Activate Service for Each TN
1312
Activation Response
1314
Settlement and Billing
1316
Add Service 1st TN
1318
Add Service 2nd TN
1320
Add Service 3rd TN
1322
Service Functionality
1326

FIG. 13

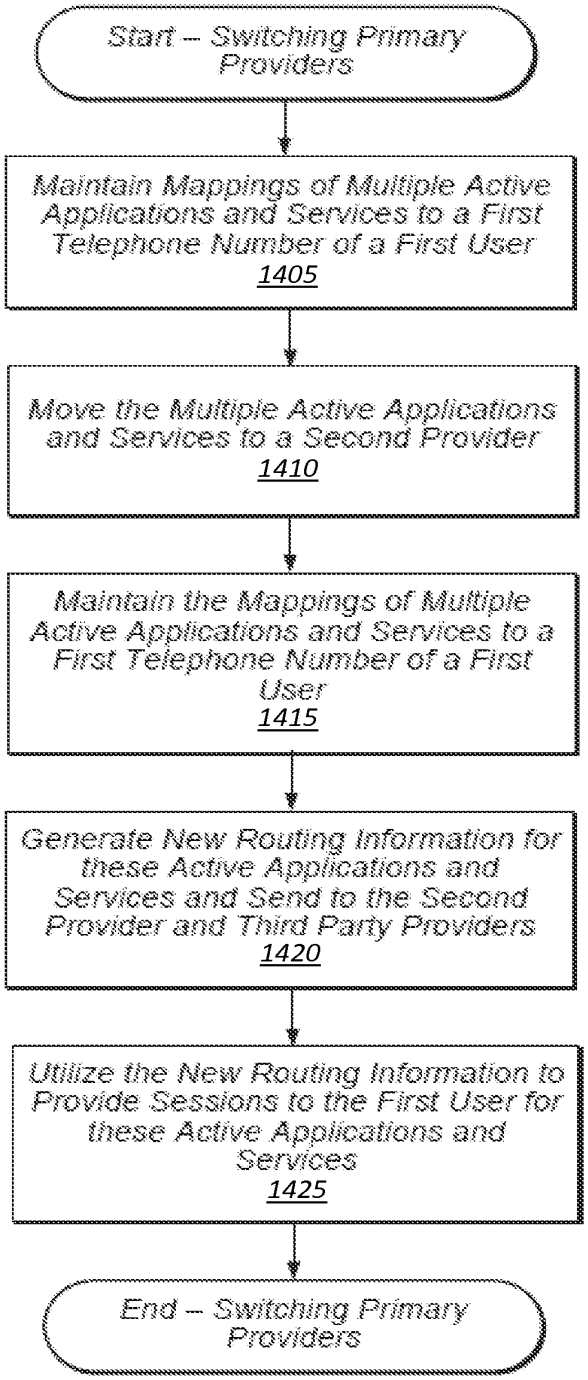

Start – Switching Primary Providers
1400
Maintain Mappings of Multiple Active Applications and Services to a First Telephone Number of a First User
1405
Move the Multiple Active Applications and Services to a Second Provider
1410
Maintain the Mappings of Multiple Active Applications and Services to a First Telephone Number of a First User
1415
Generate New Routing Information for these Active Applications and Services and Send to the Second Provider and Third Party Providers
1420
Utilize the New Routing Information to Provide Sessions to the First User for these Active Applications and Services
1425
End – Switching Primary Providers

FIG. 14

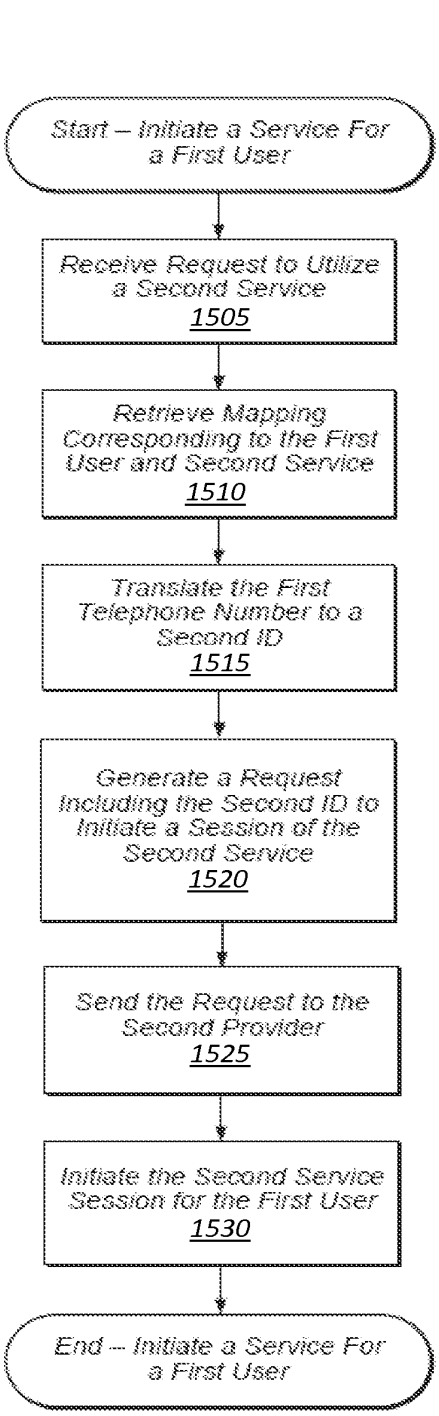

1500
Start – Initiate a Service For a First User
Receive Request to Utilize a Second Service
1505
Retrieve Mapping Corresponding to the First User and Second Service
1510
Translate the First Telephone Number to a Second ID
1515
Generate a Request Including the Second ID to Initiate a Session of the Second Service
1520
Send the Request to the Second Provider
1525
Initiate the Second Service Session for the First User
1530
End – Initiate a Service For a First User

FIG. 15

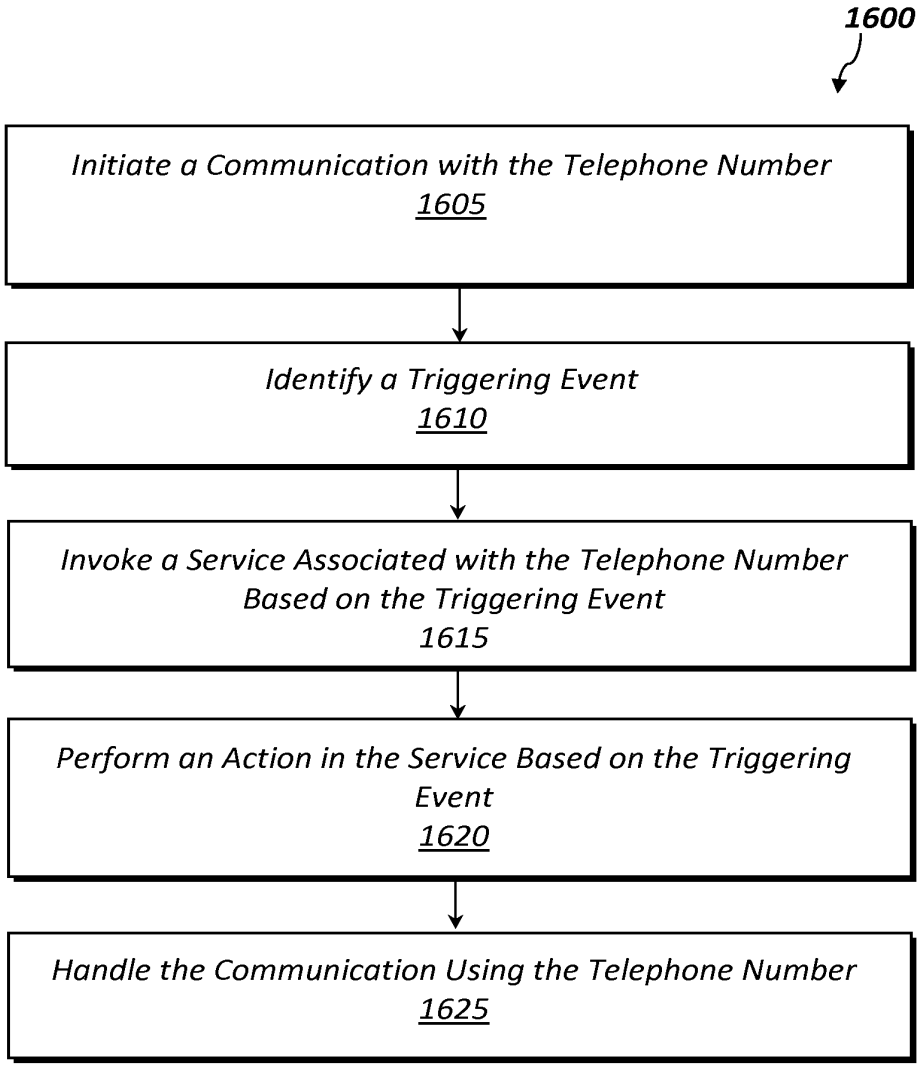

1600
Initiate a Communication with the Telephone Number
1605
Identify a Triggering Event
1610
Invoke a Service Associated with the Telephone Number Based on the Triggering Event
1615
Perform an Action in the Service Based on the Triggering Event
1620
Handle the Communication Using the Telephone Number
1625

FIG. 16

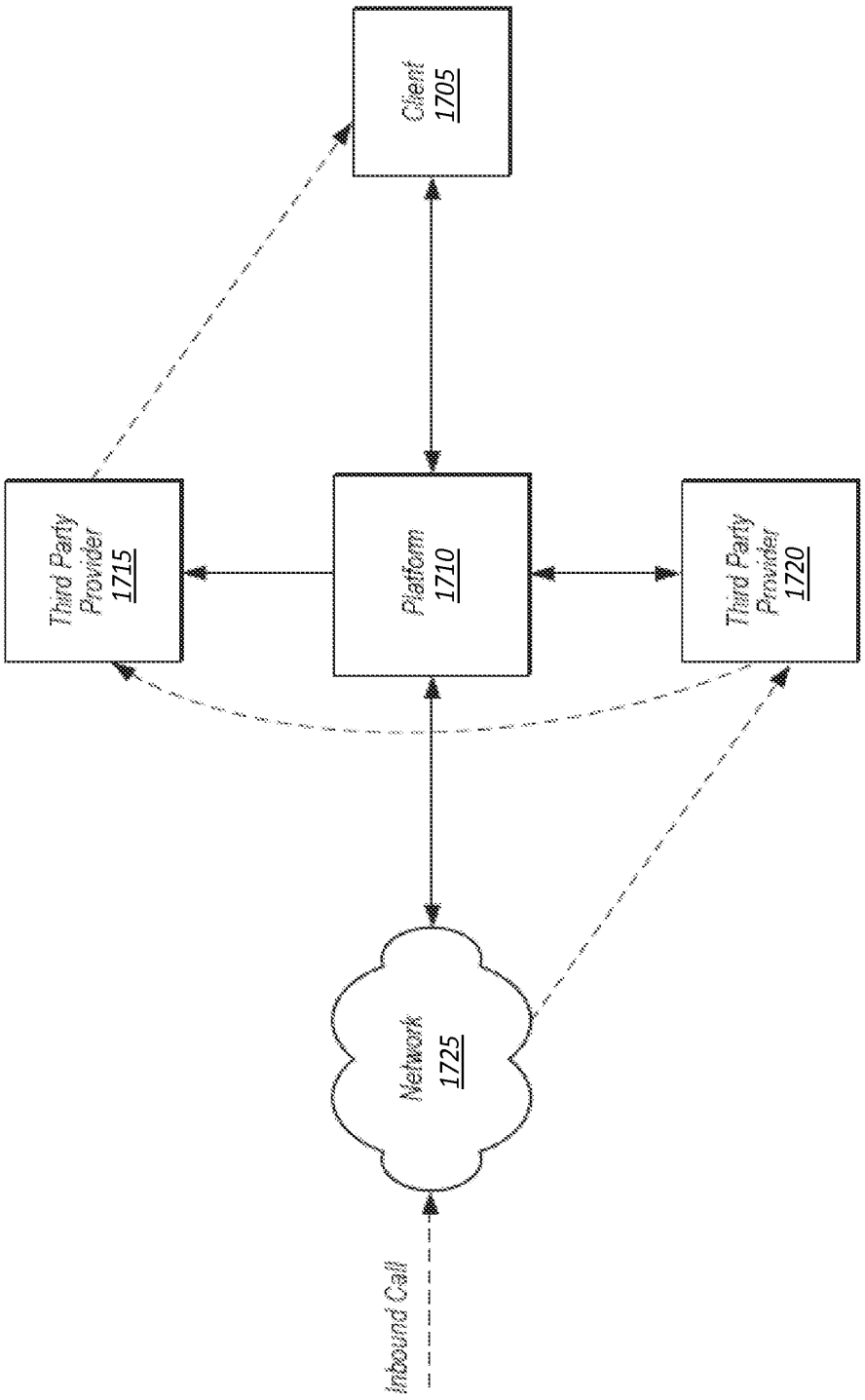

Client
1705
Third Party
Provider
1715
Platform
1710
Third Party
Provider
1720
Network
1725
Inbound Call

FIG. 17

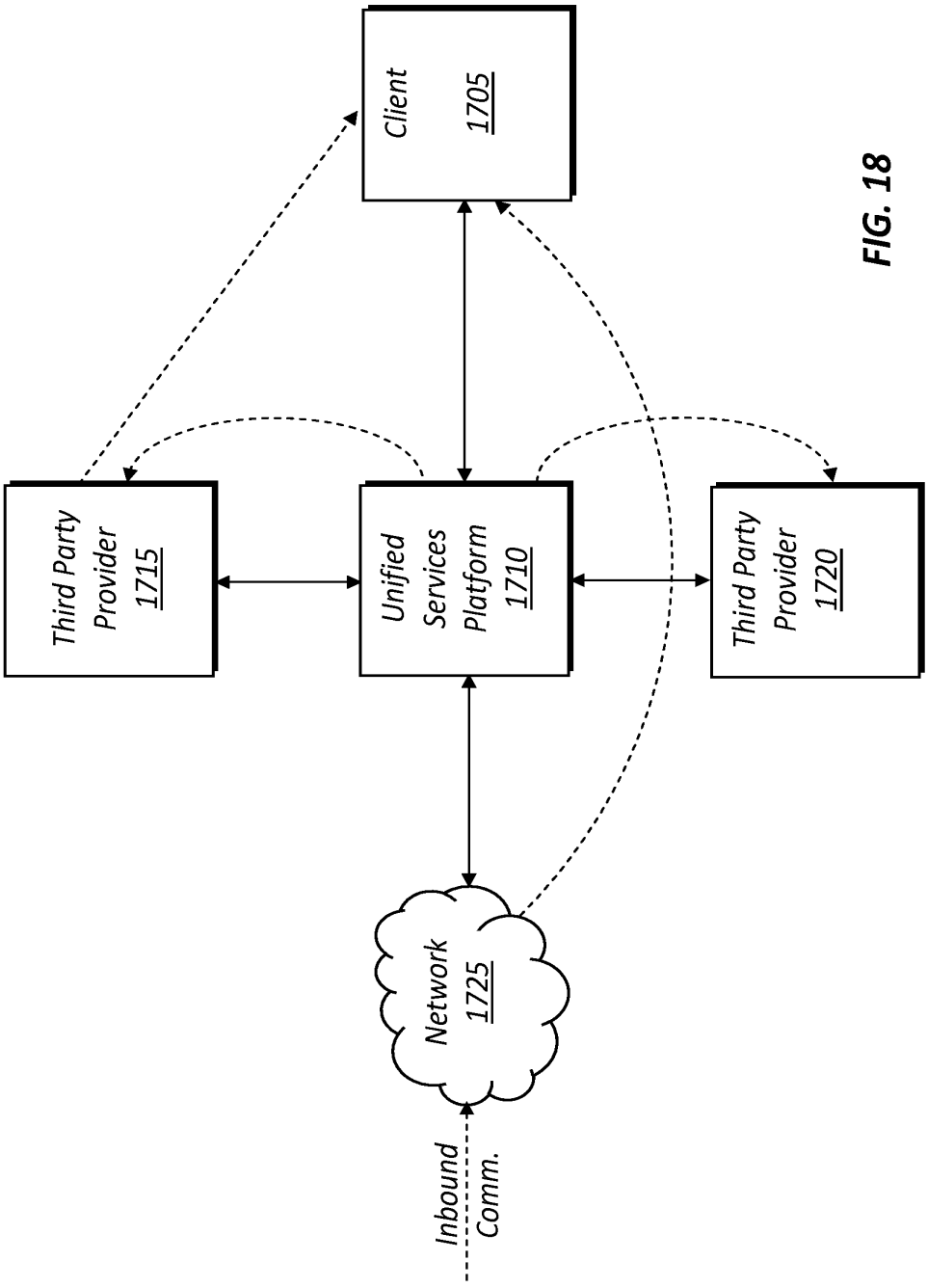

Client
1705
Third Party Provider
1715
Unified Services Platform
1710
Third Party Provider
1720
Network
1725
Inbound Comm.

FIG. 18

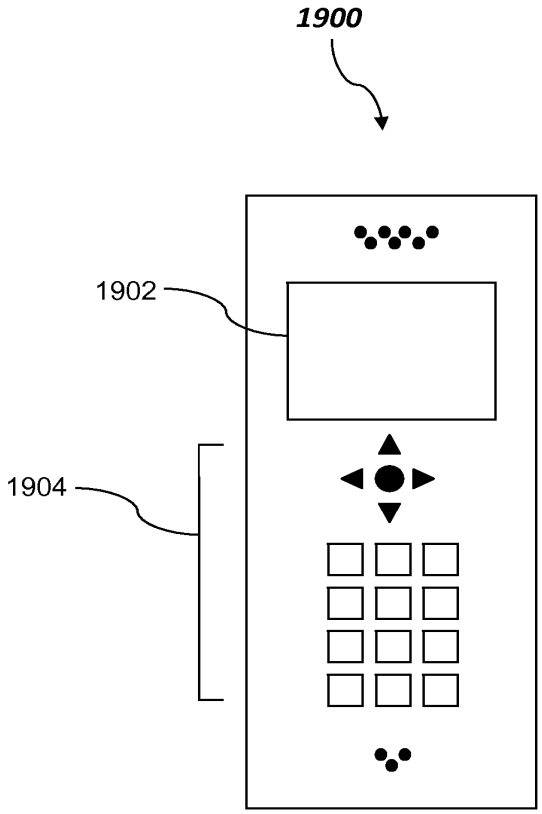


FIG. 19

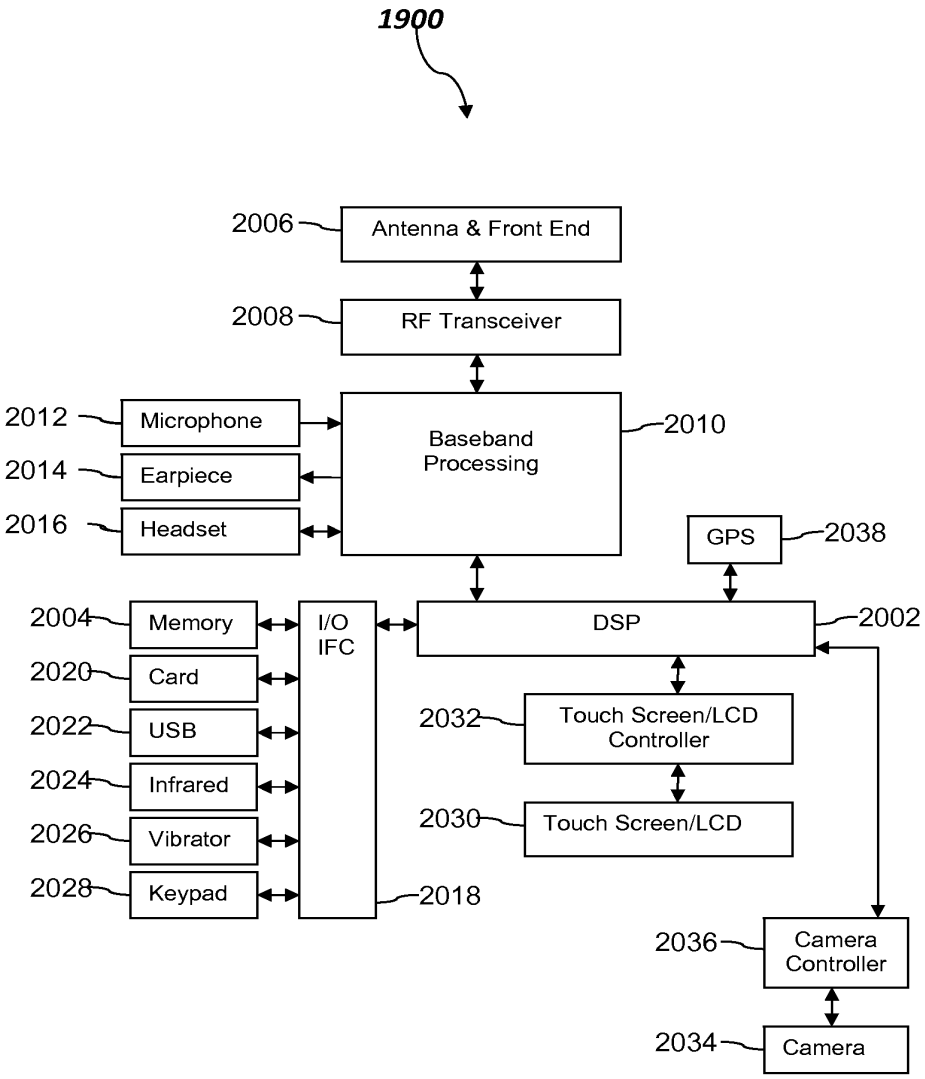

1900
2006
Antenna & Front End
2008
RF Transceiver
2012
Microphone
2014
Earpiece
2016
Headset
Baseband Processing
2010
GPS
2038
2004
Memory
2020
Card
2022
USB
2024
Infrared
2026
Vibrator
2028
Keypad
I/O IFC
2018
DSP
2002
2032
Touch Screen/LCD Controller
2030
Touch Screen/LCD
2036
Camera Controller
2034
Camera

FIG. 20

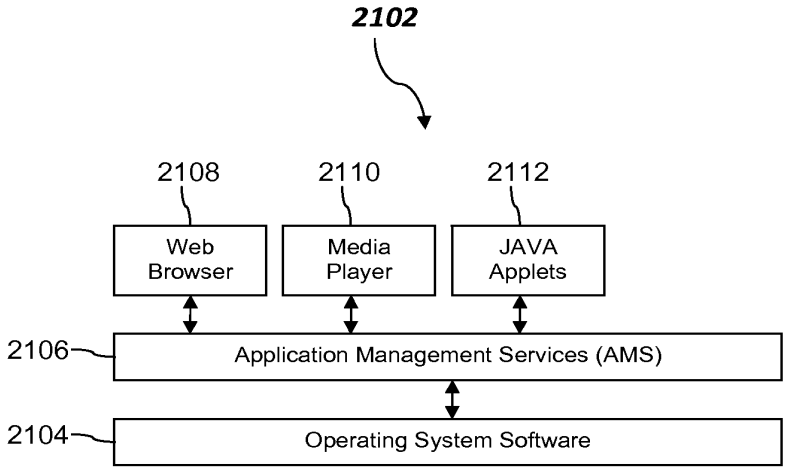


FIG. 21A

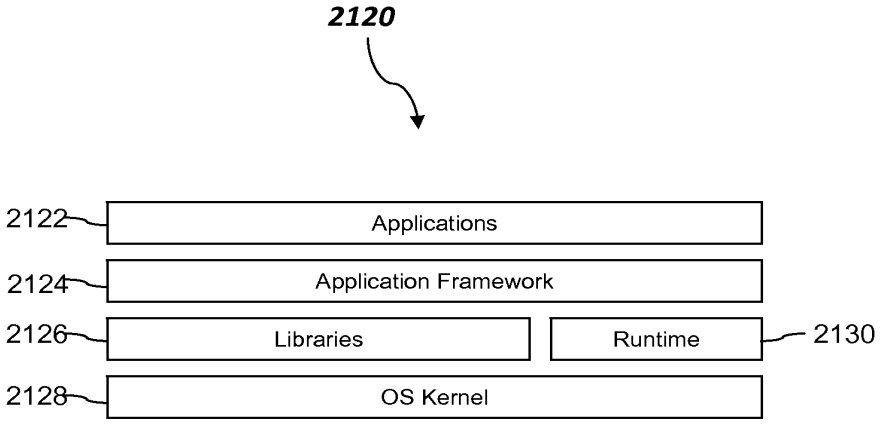


FIG. 21B

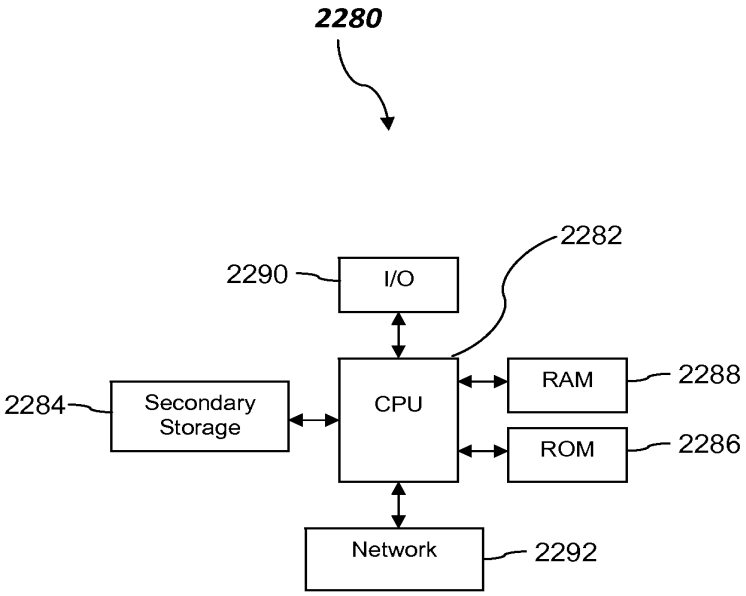

2280
2282
2290
I/O
2284
Secondary Storage
CPU
RAM
2288
ROM
2286
Network
2292

FIG. 22

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/059959

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04L 12/66 (2015.01)
CPC - H04L 12/66 (2014.12)
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04L 12/66; H04M 3/42 (2015.01)
USPC - 370/352; 379/90.01, 219, 242

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - H04L 12/66; H04M 3/42136, 3/42144, 3/42153, 3/42161 (2014.12) (keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase, Orbit, Google Patents, Google Scholar.
Search terms used: network provider, unified, API, convert, translate, telephone number

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/0130168 A1 (VENDROW et al.) 02 June 2011 (02.06.2011) entire document	8-15, 37-40
--		----
Y		16-36, 41-47, 53, 55-58, 61-80
Y	US 2010/0158230 A1 (DHAWAN et al.) 24 June 2010 (24.06.2010) entire document	16-20, 28, 36, 79
Y	US 8,509,226 B1 (MURPHY et al.) 18 August 2013 (18.08.2013) entire document	1-7,21-36, 44-46, 48-69, 73-80
Y	US 2012/0099571 A1 (STAYKOFF) 26 April 2012 (26.04.2012) entire document	41-80
Y	US 2006/0050686 A1 (VELEZ-RIVERA et al.) 09 March 2006 (09.03.2006) entire document	1-7
Y	US 2002/0154755 A1 (GOURRAUD) 24 October 2002 (24.10.2002) entire document	1-7
Y	US 5,771,282 A (FRIEDES) 23 June 1998 (23.06.1998) entire document	43, 48-53
Y	US 2008/0304644 A1 (MISHRA et al.) 11 December 2008 (11.12.2008) entire document	2-6, 61-80

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
12 February 2015	19 MAR 2015
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/059959

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See Extra Sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/059959

Continuation of Box No. III:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-7, drawn to a method of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform.
Group II, claims 8-40 and 61-80, drawn to a method comprising invoking and responding to a triggering event.
Group III, claims 41-60, drawn to a method comprising associating the service with each telephone number of the plurality of telephone numbers.

The inventions listed as Groups I, II and III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: receiving a provider API interfaces for a network provider system; and integrating the provider API interface with the unified services platform API interface as claimed therein is not present in the invention of Groups II and III. The special technical feature of the Group II invention: invoking and responding to a triggering event as claimed therein is not present in the invention of Groups I or III. The special technical feature of the Group III invention: associating the service with each telephone number of the plurality of telephone numbers as claimed therein is not present in the invention of Groups I or II.

Groups I, II and III lack unity of invention because even though the inventions of these groups require the technical feature of establishing a plurality of service accounts for a corresponding plurality of application service provider systems, wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services; receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface, this technical feature is not a special technical feature as it does not make a contribution over the prior art. Specifically, US 2006/0050686 A1 (VELEZ-RIVERA et al.) teach establishing a plurality of service accounts for a corresponding plurality of application service provider systems (venders are billed for time used in the channels [the system would maintain account information for the vendor], para. 0139). Further, US 8,509,226 B1 (MURPHY et al.) teach wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services (user 345 activates telephone number 320 which originates from vendor 305, telephone number 320 may be processed by resellers 325 and 335 in order to become available to and activated by user 345, user 345 may utilize telephone number 320 for VoIP service for any length of time, col. 9 lines 47-51, 63-64); receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different (multi-tenant SaaS 200 may include an API to each of the vendors, SaaS 200 provides a common interface for accessing and utilizing the various distinct APIs that may be needed for each of vendors 230, 235, 240, col. 6 lines 8-16), integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface (the APIs may be built-in to SaaS 200 and reseller 205 may be able to utilize these APIs for interfacing to these various external vendors of VoIP services in a unified software environment, col. 6 lines 10-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Murphy to incorporate the above features in the invention of Velez-Rivera. The motivation would have been to increase adaptability (Velez-Rivera, para. 0008).

Since none of the special technical features of the Group I, II or III inventions are found in more than one of the inventions, unity of invention is lacking.

Electronic Acknowledgement Receipt

EFS ID:	26306204
Application Number:	15094920
International Application Number:	
Confirmation Number:	8448
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Customer Number:	30652
Filer:	Andrew M. Metrailer
Filer Authorized By:	
Attorney Docket Number:	4503-00600
Receipt Date:	11-JUL-2016
Filing Date:	08-APR-2016
Time Stamp:	18:55:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	ORSH_4503_00600_071116_IDS.pdf	1036382 36491a4dca027be4edc02ffe27b81d63a2da2365	no	6

Warnings:

Information:					
2	Non Patent Literature	00101_OA_051815.pdf	317587 64e2416ef860af48ca7f3112aa86a154ae810bae	no	10
Warnings:					
Information:					
3	Non Patent Literature	00101_NOA_080415.pdf	425348 96a9feb30980be01c45a7cb6e2222b7fafda5c9a	no	8
Warnings:					
Information:					
4	Non Patent Literature	00300_NOA_061413.pdf	461337 6ec1907a202e3cf8311e9e104f4edc9ece39cb14	no	10
Warnings:					
Information:					
5	Non Patent Literature	00301_NOA_081115.pdf	612767 73dcd95d0380a14b3f5e8a4b083b4ac0b113cb5f	no	14
Warnings:					
Information:					
6	Non Patent Literature	00200_ISRWO_031915.pdf	3075541 f936dc71688f8a796a3d6f71a04944f878c4d765	no	28
Warnings:					
Information:					
7	Non Patent Literature	00200_IPRP_042116.pdf	2604506 8ea1d606880d2d2a60383f4bd46189f049966111	no	24
Warnings:					
Information:					
8	Foreign Reference	00200_WO2015054531_041615.pdf	6149145 76419b6d54f56071b597fa2a658a27f07f946e62	no	129
Warnings:					
Information:					
			Total Files Size (in bytes):	14682613	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 15/094,920

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x 40 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 210 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	730		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/094,920	04/08/2016	2652	730	4503-00600	20	3

CONFIRMATION NO. 8448

30652
CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 500
PLANO, TX 75024

FILING RECEIPT



Date Mailed: 04/26/2016

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Evin A. Hunt, Austin, TX;
Omar Paul, Austin, TX;

Applicant(s)

Zilkr Cloud Technologies, LLC, Houston, TX;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of PCT/US2014/059959 10/09/2014
which is a CON of 14/087,768 11/22/2013 PAT 9210254 *
and claims benefit of 61/888,856 10/09/2013
(*)Data provided by applicant is not consistent with PTO records.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 04/25/2016

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/094,920**

Projected Publication Date: 08/04/2016

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****
Title

MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS

Preliminary Class

379

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

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NOT GRANTED

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PTO/AIA/14 (11-15)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	4503-00600
	Application Number	
Title of Invention	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Evin	A.	Hunt	

Residence Information (Select One) ● US Residency Non US Residency Active US Military Service

City	Austin	State/Province	TX	Country of Residence	US

Mailing Address of Inventor:

Address 1	3405 Spotted Horse Trl		
Address 2			
City	Austin	State/Province	TX
Postal Code	78739	Country	US

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Omar		Paul	

Residence Information (Select One) ◉ US Residency Non US Residency Active US Military Service

City	Austin	State/Province	TX	Country of Residence	US

Mailing Address of Inventor:

Address 1	12500 Emerald Oaks Dr		
Address 2			
City	Austin	State/Province	TX
Postal Code	78739	Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

PTO/AIA/14 (11-15)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	4503-00600
	Application Number	
Title of Invention	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	30652		
Email Address	dallaspatents@dfw.conleyrose.com	Add Email	Remove Email

Application Information:

Title of the Invention	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS		
Attorney Docket Number	4503-00600	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	22	**Suggested Figure for Publication (if any)**	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	30652		

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	4503-00600
	Application Number	
Title of Invention	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	PCT/US2014/059959	2014-10-09
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
PCT/US2014/059959	Continuation of	14087768	2013-11-23
Prior Application Status			Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
PCT/US2014/059959	Claims benefit of provisional	61888856	2013-10-09

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	4503-00600
	Application Number	
Title of Invention	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	4503-00600
	Application Number	
Title of Invention	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	4503-00600
	Application Number	
Title of Invention	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	Zilkr Cloud Technologies, LLC		
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Address 2			
City	Houston	**State/Province**	TX
Country	US	Postal Code	77055
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	4503-00600
	Application Number	
Title of Invention	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

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Signature:

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NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Michael W. Piper/			Date (YYYY-MM-DD)	2016-04-08
First Name	Michael W.	Last Name	Piper	Registration Number	39,800

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	4503-00600
	Application Number	
Title of Invention	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS	

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The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

☒ Declaration Submitted With Initial Filing OR ☐ Declaration Submitted After Initial Filing (surcharge (37 CFR 1.16(f)) required)

Attorney Docket Number	4503-00600
First Named Inventor	Evin A. Hunt
COMPLETE IF KNOWN	
Application Number	
Filing Date	
Art Unit	
Examiner Name	

MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS

(Title of the Invention)

As a below named inventor, I hereby declare that:

This declaration is directed to:

☒ The attached application,

OR

☐ United States Application Number or PCT International application number _____

filed on_____.

The above-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Direct all correspondence to:	☒ The address associated with Customer Number:	30652	OR ☐	Correspondence address below
Name				
Address				
City		State		Zip
Country	Telephone		Email	

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DECLARATION — Utility or Design Patent Application

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SB/01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PAT-7, System name: *Patent Application Files* . Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE/PAT-TM-10, System name: *Deposit Accounts and Electronic Funds Transfer Profiles*.

LEGAL NAME OF SOLE OR FIRST INVENTOR:

(*E.g.,* Given Name (first and middle if any) and Family Name or Surname)

Evin A. Hunt

Inventor's Signature	Date (Optional)
	04/06/2016

Residence: City	State	Country
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Mailing Address

3405 Spotted Horse Trl

City	State	Zip	Country
Austin	TX	78739	USA

☒ Additional inventors are being named on the 1 Supplemental sheet(s) PTO/AIA/10 attached hereto

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SUPPLEMENTAL SHEET FOR DECLARATION | **ADDITIONAL INVENTOR(S)**
Supplemental Sheet (for PTO/AIA/08,09) Page 2 of 2

Legal Name of Additional Joint Inventor, if any:

(*E.g.*, Given Name (first and middle (if any)) and Family Name or Surname)

Omar Paul

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Residence: City	State	Country

Mailing Address

City	State	Zip	Country

Legal Name of Additional Joint Inventor, if any:

(*E.g.*, Given Name (first and middle (if any)) and Family Name or Surname)

Inventor's Signature	Date (Optional)

Residence: City	State	Country

Mailing Address

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MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present application is a continuation under 35 U.S.C. 120 of International Application No. PCT/US2014/059959 entitled "Unified Services Platform Using a Telephone Number as a Common Subscriber Identifier" filed in the United States Receiving Office on October 9, 2014, which claims priority to United States Non-Provisional Application No. 14/087,768 entitled "Unified Services Platform Using a Telephone Number as a Common Subscriber Identifier" filed in the United States on November 22, 2013 and Provisional Application No. 61/888,856 filed in the United States on October 9, 2013, each of which are incorporated herein in their entirety for all purposes.

BACKGROUND

[0002] Even with the explosive growth in new communications technologies and service offerings, telecommunications service providers still have large numbers of customers with traditional analog telephone service. For these customers, the telephone number remains the universal identifier (ID) for communicating with the outside world. For the remaining customers, the telephone number remains a valuable identifier for providing telephone services.

[0003] As the availability of new technologies has spread, increasing numbers of customers wish to add services and applications to their existing telephone service. However, many services and applications are supplied by third-party providers in different ecosystems. These third-party ecosystems often use different types of IDs and have different rules and policies for managing and activating their services and applications.

[0004] In view of the above, new techniques for integrating advanced services and applications with legacy telephone service are desired.

SUMMARY

[0005] In an embodiment, a method of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform comprises establishing a plurality of service accounts for a corresponding plurality of application service provider systems, receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider

systems, integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface, receiving a provider API interfaces for a network provider system, and integrating the provider API interface with the unified services platform API interface. The plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services. At least two of the API interfaces are different, and at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the provider API interface.

[0006] In an embodiment, a method of invoking a third party service during a communication event comprises receiving, by a policy and rules engine executing on a processor system, a first indication of an incoming communication for a telephone number, identifying, by the policy and rules engine, a first triggering event associated with the incoming communication for the telephone number based on the first indication, invoking, by the policy and rules engine, a first service associated with the telephone number in response to the first triggering event, performing, in response to invoking the first service, a first action based on the first triggering event, receiving, by the policy and rules engine, a second indication of a second incoming communication for the telephone number, identifying, by the policy and rules engine, a second triggering event associated with the second incoming communication for the telephone number based on the second indication, invoking, by the policy and rules engine, a second service associated with the telephone number in response to the second triggering event, wherein the second service is provided by a second third party application service provider system, performing, in response to invoking the second service, a second action based on the second triggering event, and handling the communication using the telephone number. The first service is provided by a first third party application service provider system, and the first action is performed by the first third party application service provider system. The second third party application service provider system is different than the first third party application service provider system, and the second action is performed by the second third party application service provider system.

[0007] In an embodiment, a method of billing a customer for a third party service performed during a communication event comprises receiving, by a unified services

platform system, an indication of an incoming communication for a telephone number from a network provider system, identifying, by a processor system, a triggering event associated with the incoming communication for the telephone number, invoking, by the processor system, a service associated with the telephone number in response to the triggering event, performing, in response to invoking the service, an action associated with the service based on the triggering event, receiving a billing message from the third party application service provider system, and routing the billing message to the network provider system. The service is associated with a third party application service provider system, and the action is performed by the third party application service provider system. The billing message comprises chargeable event data, and the network provider system bills a subscriber associated with the telephone number for the service performed by the third party application service provider system.

[0008] In an embodiment, a method of creating a plurality of service actions in response to a communication event comprises receiving, by a processor system, an indication of an incoming communication for a telephone number, identifying, by the processor system, a triggering event associated with the incoming communication for the telephone number, invoking a first service of the plurality of services in response to the triggering event, sending incoming communication information to the first service, routing the first service data to a second service of the plurality of services, and invoking the second service of the plurality of services in response to routing the first service data to the second service. The telephone number is provided by a network provider system, and a plurality of services associated with a plurality of third party service systems are associated with the telephone number. The plurality of services is invoked by at least one triggering event associated with the telephone number. The incoming communication information comprises at least a portion of the information associated with the incoming communication, and the first service generates first service data in response to the incoming communication information. The second service generates second service data.

[0009] In an embodiment, a method of creating a plurality of service actions in response to a communication event comprises receiving, by a processor system, an indication of an communication for a telephone number, identifying, by the processor

system, a triggering event associated with the communication for the telephone number, invoking two or more services of the plurality of services in response to the triggering event, sending communication information to each of the two or more services, receiving first service data from a first service of the two or more services, receiving second service data from a second service of the two or more services, and handling the communication. The telephone number is provided by a network provider system, and a plurality of service provided by a plurality of third party service systems are associated with the telephone number. One or more of the plurality of services are invoked by at least one triggering event associated with the telephone number, and the communication information comprises at least a portion of the information associated with the communication.

[0010] In an embodiment, a method of using a policy store to generate multiple events comprises generating, by a processor system, a policy store comprising a plurality of rules for invoking a plurality of services associated with a telephone number, receiving an indication of a first triggering event based on a communication event associated with the telephone number, matching, by the processor system, the first triggering event with one or more actions in the policy store, identifying, by the processor system, two or more services of the plurality of services based on the matching, generating routing information for each of the two or more services identified based on the matching, and routing communication event information to each of the two or more services of the plurality of services using the routing information. The rules define a relationship between a triggering event and one or more actions to be performed by a service, and the plurality of services are provided by third party application service provider systems. The triggering event is based on a communication event provided by a network provider system, and the policy store is generated by a unified services platform system in communication with the network provider system and the third party application service provider systems.

[0011] In an embodiment, a method of provisioning a service for use with a group plan comprises receiving, by a unified services platform system, a subscription request for a service for a group plan, sending, by the unified services platform system, an activation request for the group plan to the third party application service provider system, receiving an activation response from the third party application service provider system,

associating the service with each telephone number of the plurality of telephone numbers, providing access to the service for each telephone number based on the associating, receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers, sending, by the unified services platform system, a second activation request for the service to the second third party application service provider system, receiving a second activation response from the second third party application service provider system, associating the second service with the first telephone number, and providing access to the second service for the first telephone number based on the associating. The group plan comprises a plurality of telephone numbers, and each telephone number of the plurality of telephone numbers is associated with a subscriber. The service is provided by a third party application service provider system, and the second service is provided by a second third party application service provider system.

[0012] In an embodiment, a method of billing for a service provided to the members of a group comprises receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, associating the service with each telephone number of the plurality of telephone numbers, receiving billing and settlement information from the third party application service provider system for each telephone number, generating billing routing information based on the billing and settlement information, associating the billing routing information for the service with each telephone number of the plurality of telephone number, generating chargeable event data in response to a use of the service by one or more of the subscribers, forwarding the chargeable event data to the group administrator based on the billing routing information, associating a second service with a first telephone number of the plurality of telephone numbers, routing billing charges for the second service to a first subscriber associated with the first telephone number. Each telephone number of the plurality of telephone numbers is associated with a subscriber, and the telephone number is provided by a network provider system. The service is provided by a third party application service provider system, and the routing information forwards billing charges for the services associated with the service to a group

administrator. The second service is not associated with the group, and the second service is provided by a second third party application service provider system.

[0013] In an embodiment, a method of using a rules engine to allocate usage of a service between personal and group accounts comprises receiving, by a unified services platform system, a subscription request for a service associated with a group, associating the service with each telephone number of the plurality of telephone numbers, receiving billing and settlement information from the third party application service provider system for each telephone number, generating a billing policy store comprising a plurality of rules for charging for the service, generating billing routing information based on the billing and settlement information and the billing policy store, generating a charge for the service in response to a use of the service under usage conditions by one or more of the subscribers, and routing the charges to at least one of the subscriber or the group using the billing routing information. The group comprises a plurality of telephone numbers, and each telephone number of the plurality of telephone numbers is associated with a subscriber. The service is provided by a third party application service provider system, and the telephone numbers are provided by a network provider system. The billing routing information forwards billing charges for the usage associated with the service to at least one of the subscriber or the group based on the usage conditions, and the rules define a relationship between a usage conditions of the service and payment by at least one of the subscriber or the group.

[0014] In an embodiment, a method of combining partial functionality across a plurality of applications to create a new service comprises receiving, by a unified services platform system, a definition of a service for each of a plurality of application service provider systems, receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, testing each triggering event and corresponding action in a test environment to generate a response, storing an indication of the triggering event, the corresponding action, and the response, identifying individual actions associated with each of the services associated with the plurality of application service provider systems, combining two or more individual actions from different services provided by different application service provider systems, and forming a new service

based on the combining. The actions comprise responses to triggering events occurring for a telephone number.

[0015] In an embodiment, a method of identifying actions within services provided by a third party application service providers comprises establishing, on a unified services platform system, a plurality of service accounts for a corresponding plurality of application service providers, receiving a definition of a service for each of the plurality of application service providers, receiving one or more definitions of the one or more actions for each service for each of the plurality of application service provider systems, testing each triggering event and corresponding action in a test environment to generate a response, storing an indication of the triggering event, the corresponding action, and the response, identifying individual actions associated with each of the services associated with the plurality of application service provider systems. The service comprises one or more actions, and the actions comprise responses to triggering events occurring for a telephone number.

[0016] In an embodiment, a method of developing and testing a new application service through a unified services platform comprises establishing a plurality of service accounts for a corresponding plurality of application service provider systems, receiving a plurality of API interfaces from the plurality of application service provider systems, integrating each of the plurality of API interfaces with a unified services platform system API interface, receiving a definition of a service for each of the plurality of application service provider systems, receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, testing each triggering event and corresponding action for each service in a test environment to generate a response, and providing access to each service within a working environment after performing the testing. At least two of the API interfaces are different, and the actions comprise responses to triggering events occurring for a telephone number

[0017] These and other features will be more clearly understood from the following detailed description taken in conjunction with the accompanying drawings and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] For a more complete understanding of the present disclosure, reference is now made to the following brief description, taken in connection with the accompanying drawings and detailed description, wherein like reference numerals represent like parts.

[0019] FIG. 1 schematically illustrates a a diagram of an embodiment of utilizing a telephone number as the common subscriber ID across a plurality of services.

[0020] FIG. 2 schematically illustrates an embodiment of a telecommunications provider cloud.

[0021] FIG. 3 schematically illustrates an embodiment of a system for providing a unified services platform.

[0022] FIG. 4 illustrates an embodiment of a method for provisioning a service from an application service provider to a unified service platform.

[0023] FIG. 5 illustrates a messaging diagram showing an embodiment of a process for selecting a service for addition to a provider's catalog.

[0024] FIG. 6 illustrates another messaging diagram showing an embodiment of a process for selecting a service for addition to a subscriber account.

[0025] FIG. 7 schematically illustrates an embodiment of a system for activating one or more selected services.

[0026] FIG. 8 illustrates a messaging diagram of another embodiment of a sequence for activating services for a subscriber.

[0027] FIG. 9 illustrates an embodiment of a method for activating services through a unified services platform with the telephone number as the common identifier.

[0028] FIG. 10 illustrates an embodiment of another method for activating a service for a first subscriber.

[0029] FIG. 11 illustrates an embodiment of still another method for activating a third-party application.

[0030] FIG. 12 illustrates an embodiment of an activation process in which an enterprise administrator is responsible for activating a service for one or more subscribers.

[0031] FIG. 13 illustrates an embodiment of another enterprise activation process in which a service can be activated for one or more subscribers.

[0032] FIG. 14 illustrates an embodiment of a method for allowing a subscriber to switch primary providers.

[0033] FIG. 15 illustrates an embodiment of a method for initiating a service for a first user.

[0034] FIG. 16 illustrates another embodiment of a method for initiating a service for subscriber based on a triggering event.

[0035] FIG. 17 illustrates a block diagram of an embodiment of chaining actions through third party provider communications.

[0036] FIG. 18 illustrates a block diagram of an embodiment of multicasting actions through third party provider communications.

[0037] FIG. 19 schematically illustrates an embodiment of a mobile device.

[0038] FIG. 20 illustrates a block diagram of an embodiment of a mobile device.

[0039] FIG. 21A illustrates an embodiment of a software environment.

[0040] FIG. 21B illustrates an alternative software environment.

[0041] FIG. 22 schematically illustrates a computer system suitable for implementing one or more embodiments disclosed herein.

DETAILED DESCRIPTION

[0042] It should be understood at the outset that although illustrative implementations of one or more embodiments are illustrated below, the disclosed systems and methods may be implemented using any number of techniques, whether currently known or not yet in existence. The disclosure should in no way be limited to the illustrative implementations, drawings, and techniques illustrated below, but may be modified within the scope of the appended claims along with their full scope of equivalents.

[0043] The telephone number is one of the most universal communication identities in use. It is the core communication, reach, and location based identity a person may currently obtain. The telephone number is thus one of most valuable assets a network provider has. The telephone number is portable, which allows subscribers to take the telephone number with them from provider to provider.

[0044] Even more than the quality and power of the provider network, the manner in which the provider's capabilities are made available to a subscriber is important in improving services for subscribers. A subscriber should be able to personalize their

functional experience via the capabilities of their network service that are identifiable to them via their telephone number in the manner and way that suits their needs. This becomes possible when the capabilities of the network, anchored by the telephone number, are abstracted into a set of triggers and then connected in a one-to-many fashion into the apps and services users already have, apps and services that exist within or without that network service provider, and/or apps and services that exist globally. An ecosystem of apps and services, anchored by the telephone number as the unifying thread, weaves these together in a chain.

[0045] An application or service developer, on the other side of this global equation, once interconnected in a network agnostic way to a telephone number, may now take advantage of the network effect of becoming instantly available to an increasing number of users as more network providers come online. In the global equation of a network provider capability interconnected to a service, or indeed a discrete sliver of a service in an agnostic way, the user of the telephone number and the application or service have a plurality of choices available that exponentially increase. An application developer can connect just once, similar to a network provider, into this platform. As a result, the one-to-many aspect of integration (both provisioning and action) positively benefits each party.

[0046] A global, hosted platform transforms a network provider by enabling a single point of integration between its various systems and the global ecosystem of onboarded services. A service joining the platform in Canada can become available to a South East Asian provider's subscribers. That service's communication function may be fulfilled in a separate geography via the provider, allowing rapid time to market. Innovation across the globe becomes available to a provider's regional customers. The ability to integrate into the unified platform once and become available everywhere thus greatly increases the value to the service, the network provider, and/or the user.

[0047] From the application side, an application developer may describe multiple pieces of behavior, each defined as an action, driven by telephone number activity. As a user, an event on a telephone number can be used to trigger a plethora of actions across discrete services and applications. These actions may target the entire service, or just a piece of functionality provided within that service. These actions, made available to the user of this application or service, are agnostic to the network provider, identified only by

their telephone number. These actions can now be triggered in a simultaneous and/or sequential, precedence-driven approach via a policy & rules engine that operates neutrally across network providers and application developers.

[0048] To a user, whether in control of one or more telephone numbers, or managing a group of numbers, either in a household or as part of a department in a company, the capability now exists to attach a set of actions as part of a profile. This profile allows for a single subscriber to control these actions across multiple telephone numbers. As the association of the plurality of services and apps exists with the a telephone number, not a subscriber, it is the association of the user to that telephone number that enables a subscriber to play multiple roles in how they drive use of these action sets. In these roles, the provisioning, action, and billing relationship may all drive to different places in different ways, yet anchored again by that common telephone number.

[0049] Using the systems and methods described herein, the telephone number can become free of a specific device or set of devices. When communication activity is delivered via these action sets into apps or slivers of a service, the need for a specific device to perceive this communication activity becomes federated across all mediums and platforms where these apps and services function. It now becomes possible for a phone to be unavailable yet the telephone number continue as a viable communication identity. The integration of these applications and services into network providers thus allows the telephone number to elevate from the telephone.

[0050] In summary, a single telephone number anchoring multiple sets of actions, each action triggering either a complete service or a discrete piece of functionality within that service, whether serially, in parallel or via some other intelligent invocation manner, allows for numerous unique patterns of new service creation. Service creation thus becomes the manner in which a communication activity event triggers an application or service, thus delivering a piece of functionality that exists purely because of the linkage of the trigger to the service. The plurality of these actions, driven by a multitude of network providers and application developers on either side of a global ecosystem bridges both together, with the telephone number being the common, worldwide identifier anchoring it together.

[0051] In some current systems, the ecosystem developed around a telephone number may be limited by the number of services provided through a telecommunications provider. Services can be offered to the subscribers as either native services and applications developed by the telecommunications provider or through the integration of third party services into the telecommunication provider system. In order for a third party service to be integrated into the telecommunication provider system, the third party service must be adapted to work with the APIs of the telecommunication provider system. If the third party service wants to integrate the service with multiple telecommunication provider systems, the service must be adapted to multiple APIs as most telecommunication provider systems do not use the same APIs or communication protocols. The resulting development and maintenance responsibilities may be difficult for some third party service providers to maintain, which may limit the number of third party service provider willing to provide services to the telecommunication providers.

[0052] In order to address this difficulty, the present description provides for the use of a unified services platform. The unified services platform provides a common interface for each third party service as well as a common interface for the telecommunication provider. This may allow the unified services platform to act as a translation service for the third party services. Each third party service can then maintain a single service product while having the service available for multiple telecommunication providers.

[0053] The use of the unified services platform may also allow the telecommunication providers to present the third party services as their own. This may increase the satisfaction of the subscribers with the telecommunication providers as well as increase revenues. The third party services may receive more customers by having their services presented to an existing subscriber base.

[0054] The ability to offer multiple services through a single telephone number and unified services platform may present the opportunity for the individual services to be combined in new and unanticipated ways. For example, the subscriber may activate multiple services and can define rules to control the routing of the information through the services. In some cases, the information can be routed serially through a plurality of services and in others the information can be routed in parallel. The use of serial routing of information may allow the results of one service to be used by the next, in essence

creating a new customized service. Similarly, parallel routing of information for the services may allow the desired set of features to be obtained for a subscriber. In some cases, individualized features related to one or more services can be selected and used by the provider or subscriber to create a customized service. For example, selected features from a plurality of services can be grouped to provide a service desired by a subscriber.

[0055] Further, use of the unified services platform to mediate third party services may allow the services to be billed to the customer on a single bill. For example, the third party services can bill through the telecommunication provider directly to the subscriber rather than having to submit individual bills and deal with recovering payment from the subscriber. Thus, the systems and methods described herein may simplify the interaction of application service providers with telecommunication providers to enhance the services available for subscribers.

[0056] As described herein, the telephone number of a subscriber can be used to link any number of services. For example, a diagram of an embodiment of utilizing a telephone number as the common subscriber ID across a plurality of services is shown in FIG. 1. The telephone number 102 may be the central ID which is associated with all of the features 104, services 106, and apps 108 which are provided to the subscriber. As shown in FIG. 1, the features 104 may include enhanced 911 (E911) to link the telephone number 102 to the appropriate public resources, short message service (SMS) to provide text messaging for the telephone number 102, and network services. The services 106 may include cloud PBX services for enabling an enterprise private telephone network, session initiation protocol (SIP) for controlling sessions over IP networks, and telephony services and protocols to provider telephone service to a subscriber. The applications 108 may include messaging, collaboration, and video, web services and protocols, as well as any number of other applications not shown. These features are only exemplary and numerous other services can be provided and linked through the use of the telephone number such as telephone number bridging network based services, web based services and applications, and the like.

[0057] The diagram of FIG. 1 illustrates the aggregation of the features 104, services 106, and apps 108 around the telephone number 102. The diagram represents an

ecosystem that has been built around the telephone number 102 and includes legacy services combined with IP and data related services not traditionally associated with voice service over the PSTN. The ecosystem may be associated with the telephone number 102 and the subscriber may use the telephone number 102 as the login or username to access a storefront for managing all of the supporting services and applications to which they subscribe. The services and applications may be provided by multiple providers in multiple different ecosystems, but these services and applications may be unified around the telephone number 102 and appear to the user as existing in a single ecosystem.

[0058] As an example of a system described herein, a block diagram of one embodiment of a telecommunications provider cloud is shown in FIG. 2. The telecommunications provider cloud 204 may allow a telecommunications provider to add third-party applications to its various service offerings and white-brand and sell those third-party applications as if they were their own. In an embodiment, the telecommunications provider cloud 204 may include a unified services platform, which can be provided as software as a service (SaaS), and the unified services platform SaaS may be configured to combine large numbers of applications and provide them in a single offering to end users. The block 202 represents third-party applications combined with native applications that may be sourced by the telecommunications provider represented by cloud 204.

[0059] As shown in FIG. 2, all of the applications in block 202 that are used by a given subscriber may be unified around the subscriber's telephone number. Block 206 is representative of a single subscriber with a telephone number of 555-222-2222. The applications that are unified around this telephone number in block 206 may be associated with multiple different devices for the single subscriber. The subscriber may access the applications using a computer, tablet, mobile phone, smartphone, e-reader, landline phone, and/or any other suitable electronic device.

[0060] Referring now to FIG. 3, a system 100 for providing a unified services platform is schematically illustrated. The system 100 generally comprises a device 110, a provider 120, a unified services platform 140, a policy and routing engine 145, a network 130, and a plurality of application service providers 160, 170, 180. The network 130 may communicatively couple the various components of the system including the provider, the

unified services platform 140, the policy and routing engine 145, and the plurality of application service providers 160, 170, 180. The network 130 may be a public communication network, a private communication network, or a combination thereof, and the network 130 may provide wired or wireless communications through a number of protocols between the components of the system 100.

[0061] The client or device 110 comprises a device or system associated with a telephone number that can be used by a subscriber. The device 110 may comprise a telephone or mobile device assigned to the telephone number that receives telephone services based on the telephone number. However, the device 110 may include a device that is associated with the telephone number as an identifier. For example, the device 110 may receive network service based on the telephone number without also receiving telephone service. In an embodiment, the device can include a mobile phone, a tablet, a PDA, a laptop, a computer, or any other type of device capable of receiving telephone and/or network services.

[0062] The device 110 may subscribe to a standard telephone service provided by the provider 120, and the telephone service may be associated with telephone number 105. Depending on the embodiment, the telephone service may or may not be bundled with other types of services (e.g., TV, internet). The device 110 is representative of any number and type (e.g., residential, business) of customers of the provider 120. The provider may comprise a telecommunications service provider. In some embodiments, the provider 120 may be another type of provider such as a mobile carrier, a cable services provider, a network provider, an enterprise operating a business and providing network service to subscribers (e.g., employees, customers, contractors, etc.), or the like. Also, in other embodiments, device 110 may subscribe to multiple telephone services and have multiple telephone numbers. While only a single device 110 is illustrated, any number of devices may be present in the system 100. Further, in some embodiments, the device 110 may represent a group of users or devices, each of which may have a separate identifier such as the telephone number 105.

[0063] In an embodiment, the device 110 may be connected to the provider 120 via a wired connection (e.g., copper, fiber). In some embodiment, the device 110 may be connected to the provider 120 via a wireless connection. For example, the device 110

may use a wireless communication link to the provider 120 and/or the network 130 according to one of a code division multiple access (CDMA) wireless protocol, a global system for mobile communications (GSM) wireless protocol, a long term evolution (LTE) wireless protocol, a worldwide interoperability for microwave access (WiMAX) wireless protocol, or another wireless communication protocol. In some embodiments, the device 110 may comprise a device that is coupled to the provider 120 and/or the network 130 through a wireless access point. The wireless access point or other wireless local area network (WLAN) access point may comprise any number of devices such as a router, and may use a number of wireless communication protocols including, but not limited to, WiFi, Bluetooth®, and the like. The provider 120 may also be connected to a public switched telephone network (PSTN) 125. The provider 120 may include any number of telephone systems and may also be connected to other devices and other networks.

[0064] In an embodiment, the device 110 may subscribe to services and applications in addition to the telephone service provided by the provider 120. As described in more detail herein, the services and applications can include, but are not limited to, video conferencing, text messaging, interactive texting, hosted private branch exchange (PBX) seats, voice mail systems, and other services and applications. These services may be provided by the first application service provider 160, the second application service provider 170, and/or the third application service provider 180. While three application service providers are illustrated in Figure 1, any number of application service providers may be in communication with the unified services platform 140 and/or the provider 120. The provider 120 may also provide native services and application that can be purchased directly from the provider 120 by the device 110.

[0065] The provider 120 may operate any number of systems suitable for providing the telephone and network services to the device 110. In general, the provider 120 is a communication service provider that provides telephone numbers associated services to the device 110. In an embodiment, the provider 120 may operate a system comprising a processor and memory. The memory may comprise one or more storage devices such as databases and the like. The various components making up a suitable system for providing the telephone and network services are described in more detail below. The provider 120 may comprise a number of applications stored in the memory and capable

of being executed by the processor including a subscriber management component 122, a service catalog component 124, a billing component 126, and a network services and communication component 128.

[0066] The subscriber management component 122 may be stored in the memory and executed on the processor to manage the device 110 information. The device 110 information or any portion thereof may be provided to an application service provider 160, 170, 180 through the unified services platform 140 during provisioning of the application service provider services. The subscriber management component 122 may store the customer or device 110 information as well as control the formatting and communication of the information to the other systems. In an embodiment, the subscriber management component 122 may maintain the subscriber identity (e.g., a unique identifier, etc.), subscriber authentication data, the device 110 telephone number, the subscriber contact information (e.g., name, address, email, etc.), service plan information (e.g., telephone service plan information, application service provider plan information, etc.), and the like.

[0067] The service catalog component 124 may maintain the services and applications offered by the provider 120, including those offered by the application service providers 160, 170, 180 through the unified services platform 140 as well as any internal services provided directly by the provider. The service catalog component 124 may execute on the processor and provide the service information through a portal where devices 110 can select the desired services. The service catalog component 124 may contain filters to allow the provider 120 to select the information illustrated in the catalog displayed in the portal. As described in more detail herein, the catalog may display less than all of the information provided by an application service provider 160, 170, 180. The service catalog component 124 may also control the communications with the unified services platform 140 and/or one or more of the application service providers 160, 170, 180 during the service provisioning and/or activation process.

[0068] The billing component 126 may contain the billing information for each device 110 based on the services that the device 110 selects. When a subscriber uses the portal to activate a desired service, the billing information for the selected service may be added to the billing component 126. The billing component 126 may execute on the processor to allow chargeable services data to be sent to the unified services platform

140 and/or an application service provider 160, 170, 180 when the service is provided by the provider 120. When the service is provided directly by an application service provider 160, 170, 180, the billing component 126 may be configured to receive the chargeable service data, add the notification information to a customer billing account, and route the appropriate payment or information back to the application service provider 160, 170 180 when the payment is received from the device. The chargeable services data can include information related to the use of a service such as a use indicator, an amount of the services used, a type of the service used, event data (time, location, etc.), and the like. The chargeable services data may not contain an actual amount to be billed. Rather, the amount billed can be returned to the provider 120 from the application service providers 160, 170, 180 based on the chargeable services data.

[0069] The network services and communication component may be configured to allow the provider 120 to communication with the device 110, the unified services platform 140, and/or one or more application service providers 160, 170, 180. In an embodiment, the network services and communication component may communicate policy and rule information with the unified services platform 140, provide signaling and execution information with the unified services platform 140, provide content and data to the unified services platform 140 for use with the application service providers 160, 170, 180, and/or provide content, data, and/or signaling information directly with the application service providers 160, 170, 180.

[0070] The application service providers 160, 170, 180 can provide services to a subscriber through a device 110. The first application service provider 160 may be part of a first ecosystem with a first identifier (ID) for each user and use a first application programming interface (API) for selecting and activating apps. In addition, the second application service provider 170 may be part of a second ecosystem with a second ID for each user and use a second API for selecting and activating apps. Similarly, the third application service provider 180 may be part of a third ecosystem with a third ID for each user and use a third API for selecting and activating apps. The first ID used by first application service provider 160 may or may not be different than the second ID used by second application service provider 170 and/or the third ID used by the third application service provider 180. The first API used by first application service provider 160 may or

may not be different than the second API used by the second application service provider 170 and/or the third API used by the third application service provider 180. In other words, the first, second, and third ecosystems may not be compatible, may require separate IDs (for the same customer), and may have different types of rules and APIs for accessing, provisioning, and using their various services.

[0071] The application service providers 160, 170, 180 may establish communication pathways with the unified services platform 140 and/or the provider 120. In an embodiment, all of the communications between the application service providers 160, 170, 180 and the provider 120 may pass through the unified services platform 140. In some embodiments, some or all of the communications between the application service providers 160, 170, 180 and the provider 120 may occur directly between the application service providers 160, 170, 180 and the provider 120. In this embodiment, context information may be provided back to the unified services platform 140 to provide the necessary information to allow the services to be provided to the device 110.

[0072] The provider 120 may also be coupled to the unified services platform 140 via the network 130. The unified services platform 140 may be configured to provide a common interface between the application service providers 160, 170, 180, when each may have different APIs. The unified services platform 140 may unify all of the available services and applications in a single platform and associate the services and applications with a single ID to identify the device 110. Rather than using an identifier such as an email address or a completely separate identifier, the unified services platform 140 may associate the various services and applications provided to the device 110 with the telephone number 105. In an embodiment, the provider 120 may use a single API for generating requests that are sent to unified services platform 140, and the unified services platform 140 may aggregate a plurality of APIs for a plurality of providers (e.g., first application service provider 160, second application service provider 170, third application service provider 180, etc.) within different ecosystems. Each separate application service provider may have a different API, which may each be different than the API used by the provider 120. In order to allow the different services to be used by the device 110 through the provider 120, the unified services platform 140 may activate

services using the appropriate API for the provider 120 and each application service provider 160, 170, 180 to deliver the requested service.

[0073] The unified services platform 140 may include software and/or hardware for performing the various tasks to configure and provision a variety of services and applications and associate them with the telephone number 105. In an embodiment, the unified services platform 140 may be a Software as a Service (SaaS), and the unified services platform 140 may reside in the cloud. In an embodiment, the unified services platform 140 may include the server 142 and the database 144 for hosting the SaaS 146 and storing corresponding data. The server 142 and the database 144 are representative of any number of servers and databases. In some embodiments, the computing resources of the unified services platform may be spread out in multiple locations in the cloud and be accessed via the network 130. Although the unified services platform 140 is shown as being separate from the provider 120, in some embodiments, portions of the platform 140 or the entirety of the platform 140 may be integrated within the provider 120.

[0074] The server 142 may comprise a processor and the database 144 or another memory may comprise one or more components for performing the various tasks. In an embodiment, the unified services platform 140 may comprise an application service provider account component 152, a subscriber component 154, a test environment component 156, and a billing component 158. While some components are illustrated in FIG. 3, any number of additional components may be included and executed by the unified services platform 140.

[0075] The service provider account component 152 may serve as an account for the application service providers 160, 170, 180. The service provider account component 152 may comprise information including the communication information, API definitions, service descriptions, catalog information, branding information, and the like. The service provider account component 152 may also comprise the data and/or definitions used to allow the services to be provided to the device 110. For example, the service provider account component 152 can comprise the configuration web uniform resource locator (URL) for executing the services, the configuration message format and payload, support information, and the like. When the service is selected by a provider 120, the information

provided in the catalog may be provided from the service provider account component 152.

[0076] The subscriber component 154 may contain the subscriber information provided by the provider 120. In an embodiment, the subscriber component 154 of the unified services platform 140 may comprise the subscriber identity, authentication information, subscriber data, and the telephone number 105. When the different application service providers 160, 170, 180 use unique identifications, the subscriber component 154 may also comprise the mapping information to correlate the application service provider identification with the telephone number of the device 110. This information may be used during provisioning, activation, deactivation, and activation of the service(s).

[0077] In some embodiments, the subscriber component 154 may comprise policy information and rules for a subscriber. The policy information may include information related to the actions associated with the requested services. For example, the policy information may identify what actions should be taken in response to receiving a voice call. The rules may define specific actions and logic within the policy. The subscriber component 154 may execute to provide a subscriber portal for setting and/or modifying the policies and rules associated with each service. This may allow the services to be customized through the unified services platform 140.

[0078] The test environment component 156 may be provided by the unified services platform 140 to allow one or more application service providers 160, 170, 180 to develop the services and test the interaction of the services with the unified services platform 140. The test environment component 156 may respond in a manner that is the same or similar to the live implementation of the unified services platform 140 without allow the interactions to be released. The development application is described in more detail herein.

[0079] The billing component 158 may comprise routing and event data for the billing events and chargeable services data exchanged between the application service providers 160, 170, 180 and the provider 120. The billing component 158 may be configured to interact with the billing component 126 within the provider 120 to provide the information to allow the use of the services to be billed to the device 110 account.

[0080] The system 100 may also comprise a policy and routing engine 145, which may reside within the unified services platform 140 and/or within a server associated with the provider 120. In an embodiment, the policy and routing engine 145 may be a part of the server 142. The policy and routing engine may execute the policies selected for the services provided to a subscriber. The policy and routing engine may respond to an event or trigger, apply a policy and select the appropriate information to route the appropriate service. For example, a subscriber may subscribe to a contact list lookup service that can provide contact information upon receiving a voice call. The appropriate policy may be selected by the subscriber and stored in the subscriber module within the unified services platform 140. When a voice call is received, the receipt of the voice call may serve as a trigger, and the policy engine may apply the selected policy of invoking the contact list lookup service. When the policy is executed, the appropriate routing information for the incoming call data is obtained and the call data can be forwarded, using the routing information, to the contact list lookup service. The results of the lookup can then be returned to the subscriber through the device 110.

[0081] The services offered by an application service provide may first be provisioned to the unified services platform 140. In some contexts, the process of defining and integrating the services with the unified services platform 140 may be referred to as provisioning and/or onboarding. In general, a service can be provisioned into the unified services platform 140 by defining the services, plans, and actions used with the service. The services can be tested for use with the unified services platform, and once verified, published for selection by a provider 120.

[0082] Referring to FIGS. 3 and 4, a method 400 for provisioning a service from an application service provider 160 to the unified service platform 140 can be described. In step 402, the application service provider 160 can establish a service account with the unified service platform 140. The service account can be created and store information about the application service provider and the service. In an embodiment, the service account can store the information in the service account component 152 in the unified service platform 140. As part of the service account, the application service provider 160 can provide application service provider information such as the service name, the application service provider name, a logo, demonstration examples, and the like. The

service account may then be used to maintain the information for the service and/or the application service provider while the services are offered through the unified services platform 140.

[0083] At step 404, the application service provider 160 may define the plans and services offered through the unified service provider. The services may define the availability and types of activities that the application service provider can provide with their products. The services can be defined through the use of catalog data such as a service name, associated website, description, category, availability, and the like. The service may also be defined using technical information including a configuration description, support information, and event notification information. The information may be provided as a link to URL, a message, or a messaging format for use with the service. The plans comprise information regarding pricing, features, and/or service limits associated with the service offered by the application service provider 160. The definitions and information for the services and plans can be stored in the unified services platform 140.

[0084] As step 406, the application service provider 160 can define the actions for the services and plans. Actions relate to the work performed by the service based on an input or trigger associated with the device 110. In an embodiment, the action relates to activities related to the telephone number of the device 110. The actions can be defined in terms of the trigger and the resulting activity with the trigger is performed. Various actions can be performed when the service is invoked, for example based on a trigger. Actions can include transferring messages, images, documents, postings, notifications, or the like among various software services. For example, an action can include posting an incoming message to a social media set for the subscriber or posting the message to a messaging storage log. Actions can also include obtaining information such as contact information for a caller, customer information for a calling customer, or the like. In some embodiments, the actions can include any of those associated with various types of software, applications, or media such as social media postings, customer relationship management software, call and message translations (e.g., language translations, voice to text translations, text to voice translations, etc.), file sharing software, file management software, contact management software, voicemail, messaging applications, call

recording software, contact matching software (e.g., caller ID, etc.), messaging storage software, call notification software, and any other software available for integration. While some actions are listed as examples, the actions can include any type of work performed by a service.

[0085] A trigger can include any type of action performed on the device 110, such as an event associated with the telephone number 105 of the device 110. In an embodiment, a trigger can include a request by a subscriber to use the service. In some embodiments, the triggers can be tied to activities including messaging service activities (e.g., short message service (SMS) text messaging, etc.), call events, call control events, location events, time based events, and the like. The triggers can be associated with Representational State Transfers (REST) actions associated with various services. Applicable messaging service triggers can include, but are not limited to, REST upon sending a message and/or REST upon receiving a message. Similarly, call event triggers can include, but are not limited to, REST before making a call, REST after making a call, REST before receiving a call, and/or REST after receiving a call. Activities related to call controls can include, but are not limited to, Session Initiation Protocols (SIP) actions such as SIP on receiving a call and/or SIP on making a call. Location based events can include REST upon changing a location, REST upon entering a predefined area, REST upon leaving a predefined area, or the like. Time based events can include REST before a specified time, REST after a specified time, and the like. While described in terms of messaging, calls, call control events, location events, and time based event, various other triggers can also be defined. In an embodiment, events associated with specific connections, and the like can be defined. For example, the connection based triggers can include loosing network service, restoring network service, connecting a specific network interface, connecting to a specific type of network interface (e.g., WiFi router vs. cellular communication services, etc.), and the like may also be used as triggers. The application service provider 160 can define the triggers used to initiate the actions associated with the particular services.

[0086] In addition to the triggers that initiate the actions, the application service provider 160 can define or allow rules and policies that apply upon the triggering event. The rules can be stored in the service account. The rules may generally define what

actions, routing, or services are performed upon receiving a triggering event. The rules may be customized by a subscriber and executed by the policy and routing engine 145 during use of the device 110.

[0087] At step 408, the application service provider 160 may create workflow events to provide the integration with the unified services platform 140. The workflow events define the API interfaces to allow the service offered by the application service provider 160 to integrate with the unified services platform 140. Any number of API workflow events can be defined to allow for the full integration of the service with the unified services platform 140. In an embodiment, workflow events can be defined for service events, subscriber events, and the like. For example, workflow events for service changes can be defined to provide notification(s) of a service activation, a service deactivation, or a service modification. Similarly, workflow events for subscriber changes can be defined to provide notifications of a subscriber suspension, termination, and/or resumption.

[0088] The workflow events may be sent out as standardized data notifications in a programmatic format containing the information, such as JavaScript Object Notation (JSON) or Extensible Markup Language (XML), to a web uniform resource locator (URL) specific to the application service provider 160. The application service provider 160 may then intercept the information and translate the information into appropriate systems, databases, and/or other internally relevant systems to respond to the workflow event. Likewise, the workflow even notifications from the application service provider 160 are sent in a standardized format to a web URL configured for the application service provider 160 in the unified services platform 140. The notifications may comprise information sufficient to identify the subscriber account, the service, and the type of workflow event. In an embodiment, the notification may comprise a subscriber identification (e.g., the telephone number 105), subscriber information (e.g., name, contact information, etc.), a provider identification, a service name, a plan name, the type of event, and any additional information needed to carry out the workflow event.

[0089] In an embodiment, the billing information, model, and routing information can be defined in step 410. The billing information may be provided based on the plans defined by the application service provider 160. In general, the billing for the services provided by an application service provider may be billed to the device 110 through the

provider 120. This may provide a single bill to the subscriber, which may enhance customer satisfaction with the provider and the services. The billing information may be used to define the chargeable services data format and routing. When the services are used by the device 110, the chargeable services data can be generated by the provider 120, the unified services platform 140, and/or the application service provider 160 and routed to the provider 120 for billing to the customer. The location of the generation of the chargeable services data may depend on the communication between the device 110 and the application service provider 160 when the services are used. The billing information defined during provisioning can also be used to provide payment for the service from the provider 120 to the application service provider 160 upon payment by the subscriber to the provider 120.

[0090] Once the service has been defined in the unified services platform 140, the service can be tested and built in step 412. In an embodiment, the testing component 156 within the unified services platform 140 can be used to fully test the services, functionality, and compatibility of the application service provider 160 with the unified services platform 140. Testing can include executing a number of test cases to fully establish the functionality of the service. For example, each trigger can be executed along with the use of one or more rules or policies to allow the communication with the unified services platform 140 to be verified. Billing scenarios including invoicing and returning payment can also be tested using the test system. Once the service is tested, it can be completed and published to the unified services platform 140 in step 414. The same process can be used to provision any number of services from a given application service provider 160, and/or for each service provided by different application service providers 160, 170, 180.

[0091] Once the service from the application service provider 160 is provisioned into the unified services platform 140, the service may be discoverable by the provider 120. In an embodiment, the unified services platform 140 may maintain a list or catalog of provisioned services that can be selected by the provider 120. The catalog may allow the provider 120 to browse the available services and select one or more services to be added to the provider's 120 catalog of services that are visible and available to the device 110.

[0092] A messaging diagram illustrating an embodiment of a process for selecting a service for addition to the provider's 120 catalog is illustrated in FIG. 5. In the context of FIG. 5, it can be assumed that the provider 120 has already been integrated with the unified services platform 140 through the appropriate integration of the system APIs. Once the service from an application service provider (e.g., application service provider 160) has been provisioned into the unified services platform 140, the service may be added to a service catalog or other service store as shown as element 501 in FIG. 5. The unified services platform 140 may provide a portal for the provider 120 to view the available services in the catalog. The information provided by the application service provider 160 may be available to view such as the description, the service and plan definitions, the action definitions, screenshots, samples of the functionality, links to the application service provider's website, and the like. In this sense, the portal may act as a storefront for the provider 120 to select services provisioned to the unified services platform 140.

[0093] The provider 120 may log in and browse the provisioned services in the catalog 501 by establishing a connection with the unified services platform 140 in step 502. Once the provider 120 selects a service to make available to their subscribers, the provider 120 and the application service provider 160 may, directly or through the unified services platform 140, communicate in one or more messages to form an agreement for providing the services through the provider 120 in step 504. The agreement may establish how the services are to be provided, how the services will be routed, the billing and payment agreements and routing, and the like.

[0094] Once the agreement has been reached, the application service provider 160 may provide a message to the unified services platform 140 approving the provider 120 in step 506. Similarly, the provider 120 may provide a message to the unified services platform 140 approving the services provided by the application service provider 160 in step 508. The messages sent in steps 506, 508 may occur in any order to long as both parties approve the services being provided. The messages sent in steps 506, 508 may comprise the information relating to the routing of information to allow the services to be provided to the device 110, billing information, and the like that can be stored in the unified services platform 140 for use when the services are invoked.

[0095] Once the service has been approved by both parties, the service may be added to the provider's 120 catalog. The provider's catalog can reside on a server at the provider 120 and/or on the unified services platform 140. When the provider's 120 catalog resides on the unified services platform 140, the provider 120 can send a message to add to the service to the provider's 120 catalog in step 510.

[0096] The provider 120 may also apply one or more filters to the services added to the provider's catalog. The ability to add a filter may allow the provider to rebrand the service as the provider's own service or present the service as being provided by the application service provider 160. In some embodiments, the provider 120 may only allow a portion of the plans or services provided by the application service provider 160, and the services that are not being presented to the device 110 can be hidden. Thus, the filters may allow the provider 120 to customize the services offered to the device 110. The filters may also limit the presentation of services that are presented to a particular device 110 to those that the device 110 can use. For example, services requiring presentation on a handset may not be presented to a device 110 having only a landline. In an embodiment, the filters can include presentation filters, service availability filters, and/or filters based on the system available at the device 110. The provider may send a message to enable the filters for use with the catalog in step 512. The provider's catalog 514 comprising the added service may then be available for viewing by a device 110.

[0097] In addition to display and use filters, the provisioning process may perform a discovery process to determine individual actions and functions that the software can perform. For example, a service offered by an application service provider service may include performing a location determination followed by a directory lookup based on the location determination. As part of the testing procedure, the location determination feature may be discovered to be separable from the remaining portions of the software. For example, an API call may return the location determination without any additional data. Alternatively, the information from the service may be routed through the unified services platform and only the location determination may be extracted from the information while the remaining portion may be discarded.

[0098] In an embodiment, the unified service platform 140 may record the information provided by the services during the testing phase of the application service provider

services. The information provided by each defined action can be recorded and parsed to determine a correlation between the defined actions and the resulting data generated by the service. This information can then be used to identify separable services provided by the application service provider 160, 170, 180 services. In some embodiments, the application service provider may define specific messaging calls to perform individual functionality of the services. A catalog of individual services offered by the various application service providers can then be provided to the provider for use with various functions.

[0099] The ability to discover separable functions or services within the application service provider services may allow the unified services platform and/or the provider to identify and use individual functions for several purposes. In an embodiment, the individualized functionality may be used with the provider network to provide services to the subscribers. For example, a geolocation service that is part of one of the services may be provided to a subscriber and used as part of the functionality of a subscriber device associated with the telephone number. This may allow the provider to build in services for the subscribers without having to develop the services internally.

[00100] In an embodiment, the separable services may also be used to develop larger services by combining individual functional elements from multiple application service provider services into a single service. This is similar to the use of chaining actions, but may be more flexible in defining the type of result or functions performed. For example, a new service could be constructed from individual functionality of two or more services without using the full functionality of any of the services. The use of the unified services platform 140 may provide the interface to allow the separable functionality provided by the multiple services to work together, communicate, and route the information in a manner suitable for allowing a new service to operate.

[00101] The separable or individual services can be combined by the subscriber, the unified services platform, a provider, or and/or a third party application provider. In an embodiment, a subscriber may browse the available actions and select a plurality of actions to combine according to a provided set of rules. The rules may specify a routing (e.g., a serial routing to create a chaining flow, a parallel routing to create a multicast flow, or any combination thereof), formatting, destination addresses, and integration details for

each separable action, the output of each separable action, and any accompanying communication to allow new service to be created from the combination of the separable component. For example a subscriber may request that a geolocation action be combined with a messaging service so that the geolocation service may perform a location on the device associated with the telephone number of the subscriber. When the subscriber enters a preselected geographic area, the geographic location may be forwarded to a messaging service, which may send a text message of the location to a database associated with the subscribers employer as well as one or more mobile device (e.g., to the subscriber's boss). This may allow a new geographic notification service to be created by the subscriber. New services may be created by any of the other parties in the same manner.

[00102] When a new service is created, the new services may be added to an available service catalog such as the provisioning catalog or the services catalog offered by the provider. Once the new service is published, other subscribers, providers, and/or third party application service providers can activate or use the new services. Thus, this system may allow new services to be created and used by other parties.

[00103] In order for the service to be available to a device 110, the subscriber may select the service to add to the subscriber's account. Referring to the messaging diagram illustrated in FIG. 6, this selection and addition process 600 may be referred to as activation of the service by the device 110. The device 110 may view the services offered through the provider 120 by sending an access request message to the provider 120 in step 602, which may send an access message to the unified services platform 140 along with the device 110 information in step 604. The device information may be used with the catalog 514 filters to present the services available to the particular device 110 to the subscriber. A browsing session may then be established in step 606 with a portal to allow the device 110 to browse and select a service for use with the device 110. In an embodiment, the browsing session of the catalog may comprise access a portal for the unified services platform 140 for which a catalog of available applications and services are presented.

[00104] The device 110 may add new applications and services to their accounts using their existing telephone number 105 through the portal, as well as manage existing

applications and services to which device 110 has already subscribed. The cataloged applications and services may be from within the network of provider 120 and/or may be from third-party service providers 160, 170, 180. The portal may also be accessible via API in the case a user portal already exists with the provider 120 using the unified services platform 140. In this case, the provider 120 could integrate their portal into the API of the unified services platform 140 to source and managed applications and services.

[00105] When the device 110 decides to subscribe to a selected service, the device 110 may select the conferencing application from the catalog in the portal for platform 140 using a selection message in step 608, which may pass directly to the portal or pass through the provider 120 as a message in step 610. The selection message may occur within the session, but is shown as a separate message in FIG. 6 for clarity. In response to detecting this selection, the unified services platform 140 may collect the relevant data from device 110 which the service needs to function properly for the device 110. The relevant data may be provided by the provider, for example in the message provided in step 610. With the application service provider 160 configured in the network of the unified services platform 140, the unified services platform 140 may be aware of the location and relevant call routing information required to enable the network of provider 120 to properly send information and data to the application service provider 160. In response to receiving the selection of the service, the unified services platform 140 may update the subscriber data in a subscriber module, which may retain information for the subscriber regardless of the specific provider 120 providing services to the subscriber at the time the service is selected.

[00106] With the indication that the device 110 would like to add the service to the subscriber's account, the unified services platform 140 can send a subscription message to the application service provider 160 in step 612. This message may comprise a workflow event provided in a programmatic format (e.g., such as a JSON or XML message) containing the information that is sent to a web URL specific to the application service provider 160. The workflow event and messaging protocols can be established during the provisioning process between the unified services platform 140 and the application service provider 160. In this process, the application service provider 160

may intercept the device 110 and provider 120 data, including the telephone number 105, and the application service provider 160 may translate the information into its internal systems to make the telephone number 105 work with the selected service as well as accept the data needed to allow the service to operate through the provider 120.

[00107] A service portal 616, which may be the same as the portal providing the catalog 514, may be provided by the unified services platform 140 to provide a session between the application service provider 160 and the portal 616 in step 614 and a session between the device 110 and the service portal 616 in step 618. The portal may allow the device 110 to select the policies and options associated with the service. The same portal 616 may also be accessed by the device 110 at various times to enable and/or disable various functions and features (e.g., actions) associated with the service. Once the device 110 has selected the desired service and available options, a notification may be provided to the provider 120 to add the service to the device 110 account in step 620. The unified services platform 140 may send out the notification as a standardized data notification in a programmatic format (e.g., such as a JSON or XML message) containing the information to a web URL specific to the provider 120. The provider 120 may then intercept the information and translate the information into appropriate systems, databases, and/or other internally relevant systems required to allow the telephone number 105 of the device 110 to function with the selected service.

[00108] Once the application service provider 160 activates the device 110 to use its service, the unified services platform 140 receives a notification in step 622, and a billing event may be generated and sent in step 624 to a web URL configured by the provider 120 in which the provider 120 intercepts and translates the billing event containing all relevant data into its internal systems. In an embodiment, as long as the device 110 remains subscribed to the service, the application service provider 160 may bill the provider 120 and the provider 120 may bill the device 110 for the service. The unified service platform 140 may remain the database of record for all active and inactive applications and services subscribed to and/or purchased through the unified services platform 140 for all of the subscribers of the provider 120.

[00109] Any number of additional services or application can be selected by the device 110 in the same manner, allowing interworking between the provider 120 and the

application service providers 160, 170, 180, all working together leveraging the telephone number 105 of device 110 as the single, universal identifier.

[00110] During the activation process, the unified services platform 140 and/or the provider 120 may check to ensure that a selected service or application satisfies any pre-requisites for the use of the service. For example, a selected service may require a subscriber to have an active account with the application service provider 160 and/or an account with a second application service provider. During the activation of the service, the unified services platform 140 may perform a lookup in the subscriber component to determine if the subscriber account is associated with an active account at the application service provider 160 and/or the second application service provider. If the pre-requisite is satisfied, then the activation process may proceed as described above. However, if the pre-requisite is not satisfied, the unified services platform 140 may initiate an activation process for the pre-requisite. For example, if an active account is not located, the unified services platform 140 may attempt to activate the account for the subscriber. The subscriber may be queried to determine if the activation of the pre-requisite service is approved. If the subscriber declines the pre-requisite service, a message may be send to the subscriber indicating that the activated service may not function. In some embodiments, the activation process may abort to prevent the selected service from being activated by the subscriber.

[00111] As an example of a device 110 activation of a selected service, a first application service provider 160 may host a third party conferencing application. In this embodiment, the application service provider 160 may operate in a standalone environment by reselling telephone numbers to customers directly through its own website. This conferencing application may be provisioned within the catalog of the unified services platform 140, and this may open up the ability for the provider 120 and its subscribers (device 110 and others) to bring their existing telephone numbers into the conferencing application, thus creating a unified experience for the customers of the provider 120.

[00112] When the device 110 decides to subscribe to this conferencing application, the device 110 may select the conferencing application from the catalog in the portal for the unified services platform 140. In response to detecting this selection, the unified services

platform 140 may collect the relevant data from the device 110 which the conferencing application needs to function properly for the device 110. With first application service provider 160 configured in the network of the unified services platform 140, the unified services platform 140 may be aware of the location and relevant call routing information required to enable the network of provider 120 to properly send calls to the off-net conferencing application. The unified services platform 140 may send out the data notification to the provider 120. The provider 120 may then intercept the information and translate the information into appropriate systems, databases, and/or other internally relevant systems required to allow telephone number 105 of device 110 to function with the conferencing application. Likewise, the data collected by the unified services platform 140 from the device 110 for the conference application may be sent to a web URL configured for the provider 160 in the unified services platform 140. The application services provider 160 may intercept the device 110 and provider 120 data, including the telephone number 105, and the provider 160 may translate the information into its internal systems to make the telephone number 105 work with the conferencing application as well as accept calls from provider 120 on the behalf of device 110. Once the provider 160 activates the device 110 to use its conferencing application, the unified services platform 140 may receive a notification, and a billing event may be generated and sent to the provider 120, which the provider 120 intercepts and translates into its internal systems.

[00113] If the device 110 decides to unsubscribe from the conferencing application, then the device 110 may cancel the subscription via the same portal of the unified services platform 140 that was used to originally subscribe to the conferencing application. Similar to the way that the unified services platform 140 sent activation data to all of the relevant parties, the unified services platform 140 may send the deactivation information in the same standardized format to all of the relevant parties' configured web URLs. This includes deactivation to the web URL of the provider 120 configured for billing events.

[00114] Any number of additional services can be selected by the device 110. Various services may allow integration of activities on the device 110 with services such as social media posting, customer relationship management software, call and message translations (e.g., language translations, voice to text translations, text to voice

translations, etc.), file sharing software, file management software, contact management software, voicemail, messaging applications, call recording software, contact matching software (e.g., caller ID, etc.), messaging storage software, call notification software, and any other software available for integration. Specific services and examples are provided in more detail herein.

[00115] A schematic view of a system for activating one or more selected services is illustrated in FIG. 7. As shown in FIG. 7, a block diagram of an embodiment of a unified services platform 704 is shown. The telephone number (555-111-1111) may be used as the central ID to associate services and applications that are used by the corresponding subscriber. Provider 706 may provide telephone service to the subscriber and present a storefront to the subscriber to allow the subscriber to select and add new services and applications to their existing service. The subscriber may select applications via the storefront hosted by provider 706, and then the selected applications may be activated via the unified services platform 704. As shown in unified services platform 704, the subscriber has already selected three applications (app 1, app 2, and app 3) which are associated with telephone number (555-111-1111).

[00116] When the subscriber selects a new application to add to their existing voice service, a request may be generated via sourcing and settlement API 708 to activate the new application and associate the new application with the subscriber's telephone number. The unified services platform 704 may then generate the necessary configuration data to activate the new application in accordance with the specific API 710 used by the application service provider 702 responsible for delivering the new application. In an embodiment, the unified service platform 704 may notify the corresponding application service provider 702 that the provider 706 is activating the new application in place of the subscriber. As a result, the new application may be assigned to the provider 706 and different rules may apply than if the subscriber were directly activating the new application by themselves. In an embodiment, this notification may be indicated by setting an extra configuration field bit during the activation process, and in response, the corresponding application service provider may allow the provider 706 to directly control and manage the account for the subscriber.

[00117] The unified services platform 704 may generate the appropriate workloads and manage the integration of the new application for the subscriber. The unified services platform 704 may also manage the relationships between all of the different application service providers by using the telephone number as the common identifier. After activation, the actual functionality of the new application may bypass the unified services platform 704 and instead be delivered across the actual physical connection to the subscriber (shown as arrow 712). In an embodiment, the unified services platform 704 may be provided as a SaaS. In some embodiments, the unified services platform 704 may be extended into private clouds rather than being a standalone platform.

[00118] Referring now to FIG. 8, a diagram of another embodiment of a sequence for activating services for a subscriber is shown. For the purposes of this discussion, it will be assumed that the subscriber 802 has requested new services to be associated with their subscriber telephone number. These requests may be sent to the provider 804 in step 810, and these requests may identify the specific services being requested. In this example, the services being added can include video conferencing and interactive voice response (IVR) services. The provider 804 may receive the requests in step 810, and in turn may generate and send a request in step 820 to the unified services platform 806 to source the desired services.

[00119] In response to receiving this request, the unified services platform 806 may generate the appropriate activation data to activate these requested services and associate these services with the existing telephone number of the subscriber 802. The unified services platform 806 may generate configuration data in accordance with the APIs of the application service providers 808 who are providing the requested services. Specifically, the unified services platform 806 may generate activation data in step 830 to the application service provider 808 of the video conferencing application. In an embodiment, the unified services platform 806 may translate the telephone number into a second identifier (ID) that can be used to identify the subscriber 802 in the video conferencing provider's system. For example, this second ID may be an email address, and this email address may be a real email address of the subscriber 802. Alternatively, the unified services platform 806 may generate a dummy email address to serve as this second ID.

[00120] The unified services platform 806 may also create a mapping of the telephone number to the second ID and send this mapping to the provider 804. The provider 804 may store this mapping and use the mapping when initiating sessions of the video conferencing service for the subscriber 802. The activation response corresponding to the activation of the video conferencing application may be returned from the application service provider 808 in step 835.

[00121] The unified services platform 806 may generate activation data in step 840 to the provider of the IVR application, and the activation response corresponding to the activation of the IVR application may be returned from the corresponding application service provider 808 in step 845. In an embodiment, the unified services platform 806 may translate the telephone number into a third ID that will be used to identify the subscriber 802 in the IVR application provider's system. The unified services platform 806 may also create a mapping of the telephone number to the third ID and send this mapping to the provider 804. The provider 804 may store this mapping and use the mapping when initiating sessions of the IVR application for the subscriber 802.

[00122] In step 850, the unified services platform 806 may generate settlement data including billing information and transfer this data to the provider 804. Then, in step 860, the provider 804 may activate the new services for the subscriber 802. The actual functionality of the new services may be provided directly from the host application providers 808 to the subscriber 802 in step 870.

[00123] Once the services are activated and functioning, a subscriber 802 may optionally modify the plan, policies, and/or rules associated with the service. For example, the format and availability of the video conferencing service can be modified by the subscriber 802. In order to modify the service, the subscriber may send a request to login to the service portal for the service in step 880. If the service portal is hosted at the provider 804, the subscriber 802 may interact with the portal to modify the service. In some embodiments, the service portal may be provided at the unified services platform 806. In this embodiment, the request to login to the service portal may be forwarded from the provider 804 to the unified services platform in step 882. The service portal may be initiated to allow the subscriber 802 to make any desired changes or modifications. Once the subscriber accepts the modification, the changes may be saved in the unified services

platform 806, and the data may be forwarded to the application service provider 808 in step 884. Any modifications to the application service provider systems can be made based on the data provided by the unified services platform 806. A confirmation message comprising the data can be provided from the unified services platform 806 to the provider 804 in step 886. Any modifications to the provider systems can be made based on the data provided by the unified services platform 806. A confirmation message can then be provided to the subscriber in step 888 to verify that the changes to the service have been made. The service can be resumed using the modified plan, policies, and/or rules in step 870.

[00124] Turning now to FIG. 9, an embodiment of a method 900 for activating services through a unified services platform with the telephone number as the common identifier is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00125] In an embodiment, a first user may be provided with a first service by a first provider. The first service may be telephone service, and the first user may have a first telephone number associated with the telephone service. In this embodiment, a request to provision a second service for the first user may be received by the first provider (block 905). In some embodiments, the first telephone number may also be associated with one or more other types of services provided by the first provider. In an embodiment, the first provider may be a telecommunications service provider. In other embodiments, the first provider may be another type of provider (e.g., mobile carrier, cable services provider, network provider). The second service requested by the first user may be any of various services or applications (including IP-related applications) and the second service may be provided by a second provider. The second provider may be part of a second ecosystem (e.g., iTunes™, Google play™), and the second ecosystem may be different than a first ecosystem used by the first provider. In some embodiments, the second provider may use an API that is not recognized or accepted by the first provider.

[00126] In response to receiving the request, the first provider may use the first telephone number as a common ID for provisioning the second service (block 910). In an embodiment, a unified services platform may be used to provision the second service for the first user. The unified services platform may activate the second service for the first user and associate the second service with the first telephone number. In some embodiments, the first telephone number may be translated to a second ID that is used as a login ID or user name within the ecosystem of the second provider. In these embodiments, the unified services platform may store the first telephone number to second ID pairing and perform the necessary translation between the two IDs when provisioning the second service. In an embodiment, the unified services platform may be integrated within the first provider's computing resources, and the first provider may perform these functions itself.

[00127] Next, a request to provision a third service for the first user may be received by the first provider (block 915). The third service may be any of various services or applications which are provided by a third provider. The third provider may be part of a third ecosystem and the third ecosystem may be different than the first and second ecosystems. In some embodiments, the third provider may use an API that is not recognized or accepted by the first provider and/or the second provider.

[00128] In response to receiving the request, the first provider may use the first telephone number as a common ID for provisioning the third service (block 920). In an embodiment, the unified services platform may be used to provision the third service for the first user. The unified services platform may activate the third service for the first user and associate the third service with the first telephone number. In some embodiments, the first telephone number may be translated to a third ID that is used as a login ID or user name within the ecosystem of the third provider. In these embodiments, the unified services platform may store the first telephone number to third ID pairing and translate between the two IDs when provisioning the third service.

[00129] Next, the first provider may create a unified storefront (e.g., as a service portal) for managing the plurality of services which are associated with the first telephone number (block 925). The unified storefront may allow the first user to monitor their account and add new services and applications to the first telephone number. The first

provider may allow the first user to login to the unified storefront using the first telephone number (block 930). By enabling this login access using the first telephone number, the first provider is able to generate a simple and easy to use storefront for the first user to manage existing services and add new services.

[00130] It is noted that the method 900 may be implemented for any number of users requesting any number of services or applications from any number of providers. It is also noted that the first provider may also provide any number of native services and applications to the first user, and these native services and applications may also be associated with the first telephone number.

[00131] Turning now to FIG. 10, an embodiment of another method 1000 for activating a service for a first subscriber is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00132] A request to activate a service for a subscriber and associate the service with the subscriber's telephone number may be received by a first provider (block 1005). The service may be provided by a second provider, and the second provider may be different than the first provider. In an embodiment, the subscriber may generate the request by logging into a unified storefront. The unified storefront may bring together multiple services and applications from multiple third-party providers, and the unified storefront may allow the subscriber to select these services and applications for activation. In an embodiment, the unified storefront may be maintained by the first provider. In another embodiment, the unified storefront may be independent and maintained separately from the first provider. In an embodiment, the unified storefront may be provided as a portal that is accessible by the subscriber.

[00133] Next, the first provider may forward the request to activate the service to the unified services platform (block 1010). However, in some embodiments, the unified services platform may be integrated within the computing resources of the first provider. In these embodiments, method 1000 may skip block 1010 (as indicated in FIG. 10 by the dashed arrow). Next, the unified service platform may extract the appropriate information

from the request (block 1015). The extracted information may include the subscriber's telephone number and other information needed to activate the service. Next, using the extracted information, the unified service platform may send the subscriber's telephone number and other relevant data to the second provider to activate the service and associate the service with the subscriber's telephone number (block 1020). The unified service platform may provide the subscriber's telephone number to the second provider as an ID of the subscriber. In an embodiment, traditional customers who are not connected to the unified service platform may use a first API for interfacing to the second provider when activating the service. However, the unified service platform may use a second API for activating the service from the second provider, wherein the second API is different than the first API. When a traditional customer uses the first API to activate the service, the second provider may generate a new telephone number and use this new telephone number to associate with this traditional customer. The traditional customer will then associate the service with this new telephone number, regardless of whether the traditional customer has an existing telephone number or not.

[00134] For the unified service platform using the second API, the service may be associated with the subscriber's existing telephone number. This allows the subscriber to avoid having to associate a newly created telephone number with the service. This scheme results in simplifying and enhancing the subscriber's experience and interaction with the services to which they subscribe. For example, if a subscriber activated 10 different services from 10 different providers, the existing prior art techniques would require the subscriber to use 10 different telephone numbers to activate these 10 services. Using the techniques disclosed herein, the subscriber is able to use a single telephone number to associate with these 10 different services. Additionally, the first provider may receive a plurality of bills associated with the single telephone number from a plurality of different providers, and the first provider may combine the billing information from the plurality of bills and provide a single bill to the subscriber.

[00135] After block 1020, the unified service platform may generate the necessary routing information for using the service (block 1025). Next, the unified service platform may send this routing information to the first and second providers (block 1030). The first and second providers may use this routing information for setting up and enabling

sessions of the service for the subscriber (block 1035). In an embodiment, the sessions may bypass the unified service platform and work independently of the unified service platform. In another embodiment, the unified service platform may receive context data while a session is taking place, and the unified service platform may use this context data to provide enhanced services to the subscriber.

[00136] It is noted that the subscriber may activate many different services and applications from multiple different providers, and these different services may be activated and associated with the subscriber's existing telephone number using the steps of method 1000. It is also noted that in some embodiments, the subscriber's existing telephone number may not be associated with the PSTN, but rather may be independent of the PSTN.

[00137] Referring now to FIG. 11, an embodiment of still another method 1100 for activating a third-party application is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00138] A third-party application provider may provide a given application or service to end users. In the example described below, the given application is a short message service (SMS) text messaging application. It is to be understood that while this example is used for this discussion, in other embodiments, other types of applications may be provided by the third-party provider.

[00139] In order to offer the SMS text messaging application to customers of a given primary provider, the third-party application provider may configure what customer information and interworking data is needed to create a new account when a new customer subscribes to their SMS application with a telephone number on the given primary provider's network (block 1105). Next, the given primary provider may include this SMS application in their master catalog to offer to the given primary provider's customers (block 1110). As part of including the SMS application in their master catalog, interworking data is provided to the primary provider to enable them to make the SMS application work within their network in order to get SMS messages to the SMS

application. Next, a customer of the primary provider may select the SMS application in the master catalog, indicating they wish to purchase this SMS application and associate the SMS application with their existing telephone number (block 1115). It is noted that in some embodiments, the customer's telephone number may be a mobile subscriber integrated services digital network number (MSISDN). The customer's existing telephone number may also be referred to as their "subscriber ID". In an embodiment, the term "subscriber ID" may be defined as the telephone number associated with a device used by the customer. In another embodiment, the term "subscriber ID" may be defined as a single telephone number that can be associated with multiple identifiers. In other embodiments, the term "subscriber ID" may be defined as the ID used to identify a given customer in a primary provider's network. In a further embodiment, a subscriber ID may be used by a primary provider for identifying a given user, for routing information, for accounting information, and for various other purposes within the primary provider's network and other infrastructure.

[00140] After block 1115, activation data may be sent to the primary provider informing the primary provider that this SMS application will now be accepting SMS messages on behalf of the customer (block 1120). Also, interworking data which is associated with the customer's telephone number may be sent to the primary provider (block 1125). The interworking data lets the primary provider know how to route SMS messages to the third party provider when SMS messages are sent to the customer's telephone number.

[00141] Additionally, activation data may be sent to the third party provider so that an account is created for the customer by the third party provider to use the SMS messaging application (block 1130). The activation data may include the customer's telephone number, a user ID of the customer, and the necessary interworking data which is associated with the customer's telephone number. In an embodiment, the term "user ID" may be defined as an identifier which is used for authenticating a customer for the purposes of using an account or service. In another embodiment, the term "user ID" may be defined as identifier of a customer that is associated with authentication, account creation, and verification. In some embodiments, the user ID may be an email address of the customer. In other embodiments, the user ID may be any of various other types of

identifiers. It is noted that blocks 1120, 1125, and 1130 may be performed simultaneously or in any order depending on the embodiment.

[00142] Next, the third party provider may consume and translate the activation data into their own proprietary API to create an account and properly accept SMS messages from the primary provider for the user's telephone number (block 1135). After block 1135, the method 1100 may end. It is noted that the method 1100 may be performed multiple times in order to associate multiple third-party services with the telephone number of the customer. As such, the telephone number is being abstracted from the primary provider's network and becomes the unifying ID across multiple eco-systems.

[00143] The techniques for utilizing a third-party service after activating an account with the third-party provider may vary depending on the embodiment. For example, in an embodiment, after activating a SMS messaging application, when a SMS message is sent to the customer's telephone number, the SMS message may be automatically routed to the third-party provider and then to the customer's device which is associated with that telephone number. In another embodiment, a third-party conferencing application may be activated using the method 1100. After activation, the customer may use their telephone number to setup a third-party conferencing application by selecting an option for conferencing, and then entering a personal identification number (PIN) for the bridge to use the third-party conferencing application for hosting a conference. The customer may also login to a website to view details of a live conference, and the customer may use their user ID to login to this website. Therefore, in this embodiment, the telephone number of the customer may be used to access a first portion of the functionality of the conferencing application, while the user ID of the customer may be used to access a second portion of the functionality of the conferencing application. In other embodiments, other techniques may be implemented for utilizing third-party applications which are associated with the customer's telephone number.

[00144] In some embodiments, a service may be activated for an account by a business or enterprise. For example, a company may establish a service for an employee to use in the course of conducting business for the company. In this case, the enterprise administrator may be responsible for establishing a service for one or more subscribers. The service may also be activated by a group account representative.

While the group account may be described in the context of an enterprise, the group may also apply to a family group (e.g., a family account), a social group, or any other group of subscribers however related. The group administrator may be a representative of the group for activation and/or billing purposes. In some embodiments, the group administrator may be a member of the group, and in other embodiments, the group administrator may not be a member of the group.

[00145] FIG. 12 illustrates an embodiment of an activation process in which an enterprise administrator is responsible for activating a service for one or more subscribers. For the purposes of this discussion, it will be assumed that the enterprise has selected a service to be added to the one or more subscriber accounts. The enterprise administrator 1210 may request the new service to be associated with the subscriber telephone numbers. In step 1202, the enterprise administrator 1210 may access the subscriber data for the subscribers to which the service is being added. The subscriber data may include an identification sent to the provider 1220, and the provider 1220 may or may not return additional account information to the enterprise administrator 1210. In an embodiment, the subscriber data may include the telephone numbers of the subscribers for which the service will be provided.

[00146] A request for the service or services is sent from the enterprise administrator 1210 to the provider 1220 in step 1204. The request sent to the provider 1220 may identify the specific services being requested. In addition, a group plan identifier can be included with the request to identify the services as being associated with a group request. Each subscriber identifier such as the telephone number can be associated with the group plan identifier in step 1206. The provider 1220 may receive the request and in turn may generate and send a request in step 1208 to the unified services platform 1240 to source the desired services.

[00147] In response to receiving this request, the unified services platform 1240 may generate the appropriate activation data to activate the requested service and associate the service with the existing telephone numbers of the subscribers in the group plan. The unified services platform 1240 may generate configuration data in accordance with the API of the application service provider 1260 who is providing the requested service. Specifically, the unified services platform 1240 may generate activation data in step 1212

to the application service provider 1260. In an embodiment, the unified services platform 1240 may translate the telephone number into a second identifier (ID) that can be used to identify the subscriber and/or the group plan.

[00148] The unified services platform 1240 may also create a mapping of the group plan identification and/or the telephone numbers to the second ID and send this mapping to the provider 1220. The provider 1220 may store this mapping and use the mapping when initiating sessions of the service for the subscribers in the group plan. The activation response corresponding to the activation of the service may be returned from the application service provider 1260 in step 1214.

[00149] In step 1216, the unified services platform 1240 may generate settlement data including billing information and transfer this data to the provider 1220. The billing information may include the group plan identification. The group plan identification may be used establish billing for the service through the enterprise rather than through the individual subscriber accounts.

[00150] The unified services platform 1240 may then generate the necessary configuration data to activate the new service for each subscriber in the group plan. For example, the service can be activated for the first subscriber in step 1218, a second subscriber in step 1220, and a third subscriber in step 1222. The service may then perform in step 1226. In an embodiment, the unified service platform 1240 may notify the corresponding application service provider 1260 that the provider 1220 is activating the new service in place of the subscribers in the group plan. As a result, the new service may be assigned to the enterprise and different rules may apply than if the subscribers were directly activating the new application by themselves. In an embodiment, the corresponding application service provider 1260 may allow the enterprise (e.g., through an enterprise administrator) to directly control and manage the account for the subscriber. For example, the enterprise administrator may have access to a service portal for making changes to the policy, plan, and/or rules associated with the service provided to the subscribers in the group plan.

[00151] FIG. 13 illustrates an embodiment of another enterprise activation process 1300 in which a service can be activated for one or more subscribers. This process 1300 illustrated in FIG. 13 is similar to the process 1200 described with respect to FIG. 12. The

processes are different in that a group plan is not identified during the request to the provider 1220 and the subscribers can access the service portal. Billing differences can also occur due to the differences in the level of control afforded the subscribers. In step 1302, the enterprise administrator 1310 may access the subscriber data for the subscribers to which the service is being added. A request for the service or services is sent from the enterprise administrator 1310 to the provider 1320 in step 1304. The request sent to the provider 1320 may identify the specific services being requested. Rather than identify a group plan identifier, a request may identify each subscriber telephone number to which the service is to be provided in step 1306. The provider 1320 may receive the request and in turn may generate and send a request in step 1308 to the unified services platform 1340 to source the desired services.

[00152] In response to receiving this request, the unified services platform 1340 may generate the appropriate activation data to activate the requested service and associate the service with the existing telephone numbers of the subscribers identified in the request. The unified services platform 1340 may generate configuration data in accordance with the API of the application service provider 1360 who is providing the requested service. Configuration data can be generated for each subscriber identified by the Enterprise Administrator 1310. Specifically, the unified services platform 1340 may generate activation data in step 1312 to the application service provider 1360. The activation response corresponding to the activation of the service may be returned from the application service provider 1360 in step 1314.

[00153] In step 1316, the unified services platform 1340 may generate settlement data including billing information and transfer this data to the provider 1320. The billing information may include the telephone number for each subscriber being provided with the service.

[00154] The unified services platform 1340 may then generate the necessary configuration data to activate the new service for the first subscriber identified by the enterprise administrator 1310 in step 1318, for a second subscriber identified by the enterprise administrator in step 1320, for a third subscriber identified by the enterprise administrator in step 1322, and so forth for each subscriber identified by the enterprise administrator 1310.

[00155] In an embodiment, the corresponding application service provider 1360 may allow the subscriber to manage their own account alone or in addition to the enterprise administrator. For example, each subscriber and/or the enterprise administrator 1310 may have access to a service portal for making changes to the policy, plan, and/or rules associated with the service provided to the subscribers in the group plan.

[00156] The enterprise may handle the billing directly for the service as described above, or the subscriber may be responsible for their own billing of the service as described with respect to the subscriber activation. In some embodiments, the billing may be split between the enterprise and the subscriber. For example, the enterprise may be willing to pay for the service during normal work hours while requiring a subscriber to pay for the service when used for personal reasons. In this embodiment, the settlement information sent in step 1316 may contain the rules and policies outlining the conditions for which the billing should be sent to the enterprise or the subscriber.

[00157] The rules may include various time based restrictions such as time of day, day of the week, month of year, holiday schedules, and the like. The rules may also be based on location such as when a subscriber is at a work site. The rules may be based on specific connections such as when the subscriber is using a voice call triggered service that is connected to a client or other professional connection. Any suitable rules can be implemented to allow the unified services platform 1340 to determine when the service should be billed to the enterprise or the subscriber.

[00158] The use of the policies and rules may also determine when a service is available for use. This may allow a group or subscriber to control access to the service, and therefore usage and charges associated with the service. In the same way that the billing may be determined based on usage condition rules such as various time based restrictions location restrictions, connectivity restrictions, and the like, the ability to invoke the services may be based on the application of the rules. For example, an employee may only be able to invoke a marketing service during work hours and/or when located at a work site. As another example, an employee may be provided one group based service such as a marketing software service during the day and another version of the same service at a different time or location. For example, an employee may have access and be able to invoke a premium version of a service during the work day while being limited

to a lesser version when working from home at night. Thus, the usage conditions may be used to determine billing and billing routing, usage of one or more services, a version of one or more services, and/or access to one or more actions within a service.

[00159] The use of the unified services platform may allow any billing differences to be easily addressed. When the enterprise and the subscriber are associated with the same provider, the billing routing may be sent to the appropriate party. In some embodiments, the enterprise and the subscriber may be associated with different primary providers. In this instance, splitting the bill may present difficulties under the traditional billing models. However, the billing routing may be provisioned and settled at the time the service is provisioned into the subscriber account and associated with the phone number. When an enterprise is associated with a first provider and the subscriber is associated with the second provider, the billing routing information is created at the time the service is activated within the unified services platform. When the policies and rules are applied to determine if the enterprise or subscriber is to be billed for a particular service usage or instance, the appropriate billing routing is accessed and used to forward the billing information to the appropriate provider. As a result, the use of the unified services platform may easily address the ability to split payment of a service between multiple parties such as an enterprise and a subscriber.

[00160] Referring now to FIG. 14, an embodiment of a method 1400 allowing a subscriber to switch primary providers is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00161] A unified services platform may maintain mappings of multiple active applications and services to a first telephone number of a first user (block 1405). The first user may use a first provider to provide connectivity to the network, public cloud, and/or PSTN. The multiple active applications and services associated with the first telephone number may include video conferencing, text messaging, voice mail, voice attendant, and/or various other services. These multiple active applications and services may be provided to the first user by multiple third-party providers.

[00162] At a later point in time, the first user may move these multiple active applications and services to a second provider (block 1410). In other words, the first user may cancel their contract with the first provider and start a new contract with the second provider. In response to detecting the first user moving to the second provider, the unified service platform may maintain the mappings of the multiple active applications and services to the first telephone number (block 1415). This is in contrast to traditional techniques for handling a user switching primary providers, in which all services and applications associated with the user's telephone number are de-activated.

[00163] While maintaining the mapping of the multiple active applications and services to the first telephone number, the unified service platform may generate new routing information for these active applications and services and then send this new routing information to the second provider and to the third party providers of these active applications and services (block 1420). The second provider and third party providers may then use the new routing information to provide sessions to the first user for these active applications and services (block 1425). By using the above steps of method 1400, the unified service platform is able to seamlessly transition the first user to the second provider while maintaining mappings for their applications and services, thus allowing the first user to continue to use these applications and services and continue to associate them with the first telephone number.

[00164] As noted above, once the services are provisioned into the unified services platform and activated by a subscriber, the services provided to the subscriber may be device independent so that the services can be accessed on multiple devices of the subscriber. The services may also be network based so that a loss of connectivity may not result in an interruption of the services. As described herein, the services can be triggered by a subscriber request and/or a triggering event. Further, the ability to base the services on triggering events as well as using defined actions may allow one or more services to be invoked in a number of ways.

[00165] In an embodiment, a service can be invoked based on a subscriber request. Referring now to FIG. 15, an embodiment of a method 1500 for initiating a service for a first user is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method

described below, one or more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00166] In an embodiment, a first user may be provided with a first service by a first provider. The first service may be telephone service, the first user may have a first telephone number associated with the telephone service, and the first provider may be a telephone service provider. In this embodiment, a request by the first user to use a second service may be received by the telephone service provider (block 1505). It may be assumed for the purposes of this discussion that the second service has already been activated by the telephone service provider for use by the first user. The second service may be provided by a second provider, and the second provider may be different than the telephone service provider. The second service may be any type of service or application described herein, depending on the embodiment.

[00167] In response to receiving the request from the first user to use the second service, the telephone service provider may retrieve a mapping corresponding to the first user and second service (block 1510). The mapping may provide a translation from the first telephone number to a second ID, and the second ID may be used by the second provider to identify the first user. Next, the telephone service provider may translate the first telephone number to the second ID using the retrieved mapping (block 1515). Then, the telephone service provider may generate a request to initiate a session of the second service, and the request may include the second ID in order to identify the first user (block 1520). Next, the telephone service provider may send the request to the second provider (block 1525). In response to receiving the request, the second provider may initiate the session of the second service for the first user (block 1530). After block 1530, the method 1500 may end. It is noted that the method 1500 may be implemented in parallel for any number of users requesting any number of services or applications.

[00168] In an embodiment, a service can be invoked based on a trigger associated with the telephone number of a client. Referring now to FIG. 16, an embodiment of a method 1600 for initiating a service for subscriber based on a triggering event is shown. For purposes of discussion, the steps in this embodiment are shown in sequential order. It should be noted that in various embodiments of the method described below, one or

more of the elements described may be performed concurrently, in a different order than shown, or may be omitted entirely. Other additional elements may also be performed as desired.

[00169] In an embodiment, a subscriber may be provided with a first service by a first provider. The first service may be a telephone service and the subscriber may have a first telephone number associated with the telephone service. The first provider may be a telephone service provider. In this embodiment, communication or other incoming action may be associated with the telephone number of the subscriber (block 1605). For example, a message may be sent or received by a subscriber device, a call me be placed or received, a call may be ended, and/or a session may be initiated on the subscriber's device. Any action associated with the telephone number of the subscriber can be established as a trigger for an action. The unified services platform may be configured to receive a notification from a provider when this type of action occurs. The notification may include the relevant telephone number as well as a description of the type of action. Routing information may also be sent or requested for handling the communication or other incoming action.

[00170] When the action occurs, the action may result in activating a trigger (block 1610). The trigger may be associated with one or more services provided by application service providers through the unified service platform. It may be assumed for the purposes of this method that services have already been activated by the telephone service provider for use by the subscriber. Further, for purposes of this method, a single service may be described for clarity. The service associated with the trigger may be provided by an application service provider that is different than the telephone service provider. The second service may comprise any type of service or application described herein.

[00171] When the trigger is activated, the unified services platform may invoke the service associated with the trigger (block 1615). In an embodiment, the service can be started and the unified services platform can route the information applicable to the service to the associated application service provide to allow the service to perform its action(s). In some embodiments, the service can be invoked based on a message from the unified services platform, and the subsequent data, routing, and information may be

exchanged directly between the application service provider and the first provider to perform the service. For example, the invocation of the service may result in a session of the service being established. The service session can be established between the first provider and the application service provider directly and/or through the unified services platform.

[00172] An action associated with the service may then be performed (block 1620). The action may be defined by the application service provider to occur in response to the trigger. For example, the service may perform an action based on the trigger and/or the communication using the telephone number. The action may occur before, after, during, or in parallel with the communication. For example, the action may be performed prior to allowing the communication to occur, and the service may provide data to the subscriber as part of the communication. In an embodiment, the communication may occur using the telephone number (block 1625). In some embodiments, a billing event message containing chargeable services data may be created and sent from the application service provider to the unified services platform and/or the provider to allow for billing of the services to occur. After block 1625, the method 1600 may end. It is noted that the method 1600 may be implemented in parallel for any number of services being invoked in response to one or more triggering events. This method may allow a service to be used automatically based on a triggering event previously established by the subscriber.

[00173] As an example of the method 1600, the subscriber may have activated customer relationship management (CRM) software for use with the telephone number. As part of the activation process, the subscriber may request that upon receiving a call, the calling number is used to lookup the name of the calling party and present the contact information for the calling party and an order history stored in the CRM software. In this embodiment, the triggering event may be defined as the receipt of a voice all on the subscriber device associated with the telephone number.

[00174] When a voice call is received on the telephone number of the subscriber, the incoming voice call may activate the trigger for the CRM software service. A message may be sent from the provider to the unified services platform indicating that the trigger event occurred. In some embodiments, a policy and rules engine may be integrated into the provider, and the message may not be sent to the unified services platform. In either

event, a message may be sent to the CRM software service to activate the service for use in performing the contact information and order history lookup. The message may comprise the call details in order to identify the incoming call number (e.g., the calling party number). In response to receiving the message, the CRM software service may perform a contact information and order history lookup. The information may be provided back to the unified services platform and/or the provider for use with handling the call. The information may then be sent to a device associated with the telephone number for display to the subscriber. The voice call can be routed to the subscriber to allow the subscriber to view the relevant contact information and order history while handling the voice call from the customer. A billing record can be generated by the CRM software service and/or the unified services platform to allow the use of the CRM software service to be billed to the subscriber.

[00175] In some embodiments, more than one action may be performed by the same service or multiple services. The actions can be performed serially so that the services can build on each other and/or the services can be performed in parallel. The use of actions performed serially can be referred to as the chaining of services in some context and the use of actions performed in parallel can be referred to as multicasting in some contexts. The ability to perform many actions based on one triggering event may allow functionality to be combined amongst services in ways that were not previously considered. It can be noted that any particular triggering event may initiate a set of actions in both a chaining and multicasting manner.

[00176] Turning now to FIG. 17, a block diagram of an embodiment of chaining actions through third party provider communications is shown. The device 1705 may be coupled to the unified services platform 1710 to choose applications and services to associate with the telephone number. The device 1705 may use the unified services platform 1710 to activate services with one or more third party providers, such as the third party providers 1715 and 1720. While only two third party providers are shown in FIG. 17, any number of additional third party providers may also be coupled to the unified services platform 1710, and the device 1705 may subscribe to any number of services from these additional third party providers. The third party providers 1715 and 1720 are different providers from the primary provider of telephone service to the device 1705. In an

embodiment, the primary provider of telephone service to device 1705 may be integrated with platform 1710. Alternatively, in another embodiment, the primary provider of telephone service to the device 1705 may be a separate entity from the unified services platform 1710.

[00177] In an embodiment, the device 1705 may use the platform 1710 to activate a first service from provider 1715 and a second service from provider 1720. The services may be activated based on triggering events, and the services may perform one or more specific actions based on the type of triggering event that occurs. Both the first and second services may be associated with the telephone number of device 1705.

[00178] An inbound call to the telephone number of device 1705 may be received over network 1725. Based on the actions associated with an incoming call established at the time the services are activated, the inbound call may be routed to the third party provider 1720 for processing. The network 1725 may be the network, PSTN, or other type of network. The inbound call is represented by a dashed line in FIG. 17. The third party provider 1720 may process the call using the service associated with the third party provider 1720 and then third party provider 1720 may route the call to the second third party provider 1715. In an embodiment, this routing of the call to the second third party provider 1715 from the third party provider 1720 may happen independently of the unified services platform 1710 or the primary provider of service to device 1705.

[00179] In some embodiments, the routing of the call may proceed through the unified services platform 1710, which may control the call routing and services associated with any triggers initiated by the call. Provider 1715 may then add processing associated with the service on top of the earlier processing by provider 1720. Next, the call may be routed to the device 1705, and the call may now include the additional functionality from the first and second services. In other embodiments, more than two third-party providers may add features and services to inbound or outbound calls for the device 1705. This interworking between multiple third-party providers may allow many applications and services to be applied to calls, messages, internet sessions, and the like received or sent from the telephone number of the device 1705. Once the services have been performed, billing messages can be provided to the appropriate third party services to allow each of the services to be charged to the appropriate subscriber.

[00180] The techniques described with respect to FIG. 17 may also be used in embodiments with more than two third-party providers. These techniques allow the telephone number of the device 1705 to become the common ID which is used between multiple services and applications. The telephone number is associated with the relevant interworking data which links all of the IDs and third-party applications and services associated with the telephone number. The telephone number allows for the creation of the interworking between all of the third-party applications. In other words, the telephone number is an ID that's used by a middleware layer to allow the functionality of the third-party applications to work with each other and to work on the primary provider's network.

[00181] As an example of the use of the chaining actions, the first third party provider 1720 may provide marketing software services that include contact matching, and the second third party provider 1715 may provide message logging services. In the context of FIG. 17, an incoming text message may be sent to the telephone number of the device 1705. It can be assumed that the subscriber has activated both services and established that the services are triggered by the receipt of an incoming text message. The policy and rules for the services may also establish that an incoming text message should first be sent to the first third party provider 1720 followed by sending the message to the second third party provider, which may then forward the message to the device 1705. In response to the triggering event of receiving a text message, the message may be forwarded from the network to the first third party provider. The marketing software services may perform a contact lookup and a related marketing region for the sender of the text message. This information may be appended to the text message as a data file. Once the information is appended to the text message, the message may be forwarded to the second third party provider 1715 where the message may be logged into a message logging and storage service. The service may categorize the text message and store the message in a segregated format for future access by the subscriber. The message logging service may access the data file to determine the identity of the sender and the marketing region. The text message can then be stored in a file associated with the appropriate marketing region, and the sender contact information and identity can be included as a text header before the message is stored. This may allow for the event log for a marketing region to be viewed by the subscriber or another person at a later time.

Finally, the text message can be forwarded to the device with or without the information provided by the first third party provider 1720.

[00182] As illustrated by this example, the chaining of the services through a plurality of third party providers may not only provide incremental services, but may allow for the information from one third party provider to be used by a second third party provider to create a new functionality not offered by any one third party provider. As a result, this system may provide the subscriber the opportunity to create functionality by selectively ordering the third party provider services and establishing rules for the resulting services.

[00183] Turning now to FIG. 18, a block diagram of an embodiment of multicasting actions through third party provider communications is shown. The block diagram illustrated in FIG. 18 may comprise the same elements as shown in FIG. 17, but the routing of the call can be performed in a multicast manner. The elements previously described with respect to FIG. 17 will not be described again in the interest of brevity. The third party providers 1715 and 1720 are different providers from the primary provider of telephone service to the device 1705. In an embodiment, the device 1705 may use the platform 1710 to activate a first service from provider 1715 and a second service from provider 1720. In an embodiment, the services may be activated based on a single triggering event, and the services may perform one or more specific actions based on the type of triggering event that occurs. Both the first and second services may be associated with the telephone number of device 1705.

[00184] An inbound communication to the telephone number of device 1705 may be received over the network 1725, and the incoming communication may be routed to the device 1705. For example, an incoming voice call or text message may be routed to the device 1705. Based on the actions associated with an incoming call established at the time the services are activated, the inbound communication may also be routed to a plurality of third party providers 1715, 1720 in parallel. In an embodiment, the unified services platform 1710 may receive a copy of the incoming communication based on the triggering event of receiving the incoming call. Any of the triggering events described herein can be used to trigger the services. While described as being handled by the unified services platform 1710, the call routing and event handling may also be provided by the primary provider of service to device 1705. In an embodiment, this routing of the

communication to the third party providers 1715, 1720 may happen independently of the unified services platform 1710 or the primary provider of service to device 1705.

[00185] In an embodiment, the unified services platform 1710 can perform the actions established for each of the third party services 1715, 1720 based on the triggering event. For example, a copy of the incoming communication or any portion thereof can be routed to the first third party provider 1720. A service can be performed using the incoming communication by the first third party provider 1720. At second copy of the incoming communication or any portion thereof can be sent to the second third party provider 1715, wherein a service can be performed. In some embodiments, one or more of the third party providers may also send information to the device 1705 based on the execution of the service. For example, the second third party provider 1715 may forward information related to the service to the device 1705. The techniques described with respect to FIG. 18 may also be used in embodiments with more than two third-party providers.

[00186] As an example of the use of the multicasting actions, the first third party provider 1720 may provide CRM software services that include contact matching and communication logging, and the second third party provider 1715 may provide voicemail and voice to text translation services. In the context of FIG. 18, an incoming voice call may be sent to the telephone number of the device 1705. It can be assumed that the subscriber has activated both services and established that the services are triggered by the receipt of an incoming voice call. The policy and rules for the services may also establish that an incoming voice call should be forwarded to the device 1705 initially, and then sent to the first third party provider 1720 and the second third party provider 1715 in parallel if the voice call is not answered. In this example, the triggering event may be the unanswered voice call by the device 1705. In response to the triggering event, the voice call may be forwarded to both the first third party provider 1720 and the second third party provider 1715. The CRM software service of the first third party provider 1720 may match the call to a contact if possible and log the call as unanswered within the software. The call log may be accessed by the subscriber or other person at a later time. The voicemail and voice to text translation services provided by the second third party service may receive the incoming call and allow the caller to leave a voicemail message. The third party provider may retain the voicemail message as well as convert the voice message

into a text message. The third party provider service may be configured to forward the text version of the message along with a caller identification to the device 1705. The device 1705 may then be able to invoke the second third party services after the completion of the voice call to access the actual voicemail message and also obtain the voice to text translation on a device associated with the telephone number of the subscriber.

[00187] As illustrated by this example, the multicast routing of information and utilization of multiple services in parallel may allow more actions to occur in response to a triggering event than may be offered by a third party provider. As a result, this system may provide the subscriber the opportunity to select a desired suite of functionality in response to the available triggering events. This may present additional options over traditional single service options available for an account associated with a telephone number.

[00188] Overall, the third party services are enabled to work with a telephone company network using the common identifier, the methods and mechanisms described herein may also be used to enable external services and providers to work with one another. In this manner, multiple services may cooperate on the basis of a common identifier in ways not previously possible. Such cooperation may lead to the development of new services that may be provided to subscribers or other providers. For example, one external service may provide a first type of content while a different external service provides a second type of content. By utilizing the methods and mechanisms described herein, combinations of the first type of content and the second type of content may be created. Numerous such approaches are possible and are contemplated.

[00189] In various embodiments, one or more portions of the methods and mechanisms described herein may form part of a cloud computing environment. In such embodiments, resources may be provided over the network as services according to one or more various models. Such models may include Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). In IaaS, computer infrastructure is delivered as a service. In such a case, the computing equipment is generally owned and operated by the service provider. In the PaaS model, software tools and underlying equipment used by developers to develop software solutions may be provided as a service and hosted by the service provider. SaaS typically includes a

service provider licensing software as a service on demand. The service provider may host the software, or may deploy the software to a customer for a given period of time. Numerous combinations of the above models are possible and are contemplated. It is also noted that while a telephone number is used in the examples above as a common identifier, the methods and mechanisms described herein may also be used with identifiers other than a telephone number used as a common identifier.

[00190] In an embodiment, the device may comprise a device such as a laptop, mobile device, tablet, or the like. FIG. 19 depicts a mobile device 1900, which is operable for implementing aspects of the present disclosure, but the present disclosure should not be limited to these implementations. Though illustrated as a mobile phone, the mobile device 1900 may take various forms including a wireless handset, a pager, a personal digital assistant (PDA), a gaming device, or a media player. The mobile device 1900 includes a display 1902 and a touch-sensitive surface and/or keys 1904 for input by a user. The mobile device 1900 may present options for the user to select, controls for the user to actuate, and/or cursors or other indicators for the user to direct. The mobile device 1900 may further accept data entry from the user, including numbers to dial or various parameter values for configuring the operation of the handset. The mobile device 1900 may further execute one or more software or firmware applications in response to user commands. These applications may configure the mobile device 1900 to perform various customized functions in response to user interaction. Additionally, the mobile device 1900 may be programmed and/or configured over-the-air, for example from a wireless base station, a wireless access point, or a peer mobile device 1900. The mobile device 1900 may execute a web browser application which enables the display 1902 to show a web page. The web page may be obtained via wireless communications with a base transceiver station, a wireless network access node, a peer mobile device 1900 or any other wireless communication network or system.

[00191] FIG. 20 shows a block diagram of the mobile device 1900. While a variety of known components of handsets are depicted, in an embodiment a subset of the listed components and/or additional components not listed may be included in the mobile device 1900. The mobile device 1900 includes a digital signal processor (DSP) 2002 and a memory 2004. As shown, the mobile device 1900 may further include an antenna and

front end unit 2006, a radio frequency (RF) transceiver 2008, a baseband processing unit 2010, a microphone 2012, an earpiece speaker 2014, a headset port 2016, an input/output interface 2018, a removable memory card 2020, a universal serial bus (USB) port 2022, an infrared port 2024, a vibrator 2026, a keypad 2028, a touch screen liquid crystal display (LCD) with a touch sensitive surface 2030, a touch screen/LCD controller 2032, a camera 2034, a camera controller 2036, and a global positioning system (GPS) receiver 2038. In an embodiment, the mobile device 1900 may include another kind of display that does not provide a touch sensitive screen. In an embodiment, the DSP 2002 may communicate directly with the memory 2004 without passing through the input/output interface 2018. Additionally, in an embodiment, the mobile device 1900 may comprise other peripheral devices that provide other functionality.

[00192] The DSP 2002 or some other form of controller or central processing unit operates to control the various components of the mobile device 1900 in accordance with embedded software or firmware stored in memory 2004 or stored in memory contained within the DSP 2002 itself. In addition to the embedded software or firmware, the DSP 2002 may execute other applications stored in the memory 2004 or made available via information carrier media such as portable data storage media like the removable memory card 2020 or via wired or wireless network communications. The application software may comprise a compiled set of machine-readable instructions that configure the DSP 2002 to provide the desired functionality, or the application software may be high-level software instructions to be processed by an interpreter or compiler to indirectly configure the DSP 2002.

[00193] The DSP 2002 may communicate with a wireless network via the analog baseband processing unit 2010. In some embodiments, the communication may provide Internet connectivity, enabling a user to gain access to content on the Internet and to send and receive e-mail or text messages. The input/output interface 2018 interconnects the DSP 2002 and various memories and interfaces. The memory 2004 and the removable memory card 2020 may provide software and data to configure the operation of the DSP 2002. Among the interfaces may be the USB port 2022 and the infrared port 2024. The USB port 2022 may enable the mobile device 1900 to function as a peripheral device to exchange information with a personal computer or other computer system. The

infrared port 2024 and other optional ports such as a Bluetooth® interface or an IEEE 802.11 compliant wireless interface may enable the mobile device 1900 to communicate wirelessly with other nearby handsets and/or wireless base stations.

[00194] The keypad 2028 couples to the DSP 2002 via the input/output interface 2018 to provide one mechanism for the user to make selections, enter information, and otherwise provide input to the mobile device 1900. Another input mechanism may be the touch screen LCD 2030, which may also display text and/or graphics to the user. The touch screen LCD controller 2032 couples the DSP 2002 to the touch screen LCD 2030. The GPS receiver 2038 is coupled to the DSP 2002 to decode global positioning system signals, thereby enabling the mobile device 1900 to determine its position.

[00195] FIG. 21A illustrates a software environment 2102 that may be implemented by the DSP 2002. The DSP 2002 executes operating system software 2104 that provides a platform from which the rest of the software operates. The operating system software 2104 may provide a variety of drivers for the handset hardware with standardized interfaces that are accessible to application software. The operating system software 2104 may be coupled to and interact with application management services (AMS) 2106 that transfer control between applications running on the mobile device 1900. Also shown in FIG. 21A are a web browser application 2108, a media player application 2110, and JAVA applets 2112. The web browser application 2108 may be executed by the mobile device 1900 to browse content and/or the Internet, for example when the mobile device 1900 is coupled to a network via a wireless link. The web browser application 2108 may permit a user to enter information into forms and select links to retrieve and view web pages. The media player application 2110 may be executed by the mobile device 1900 to play audio or audiovisual media. The JAVA applets 2112 may be executed by the mobile device 1900 to provide a variety of functionality including games, utilities, and other functionality.

[00196] FIG. 21B illustrates an alternative software environment 2120 that may be implemented by the DSP 2002. The DSP 2002 executes operating system kernel (OS kernel) 2128 and an execution runtime 2130. The DSP 2002 executes applications 2122 that may execute in the execution runtime 2130 and may rely upon services provided by

the application framework 2124. Applications 2122 and the application framework 2124 may rely upon functionality provided via the libraries 2126.

[00197] FIG. 22 illustrates a computer system 2280 suitable for implementing one or more embodiments disclosed herein. In an embodiment, the computer system 2280 may be representative of the server or systems forming the unified services platform, the provider, and/or the third party application service providers. The computer system 2280 includes a processor 2282 (which may be referred to as a central processor unit or CPU) that is in communication with memory devices including secondary storage 2284, read only memory (ROM) 2286, random access memory (RAM) 2288, input/output (I/O) devices 2290, and network connectivity devices 2292. The processor 2282 may be implemented as one or more CPU chips.

[00198] It is understood that by programming and/or loading executable instructions onto the computer system 2280, at least one of the CPU 2282, the RAM 2288, and the ROM 2286 are changed, transforming the computer system 2280 in part into a particular machine or apparatus having the novel functionality taught by the present disclosure. It is fundamental to the electrical engineering and software engineering arts that functionality that can be implemented by loading executable software into a computer can be converted to a hardware implementation by well-known design rules. Decisions between implementing a concept in software versus hardware typically hinge on considerations of stability of the design and numbers of units to be produced rather than any issues involved in translating from the software domain to the hardware domain. Generally, a design that is still subject to frequent change may be preferred to be implemented in software, because re-spinning a hardware implementation is more expensive than re-spinning a software design. Generally, a design that is stable that will be produced in large volume may be preferred to be implemented in hardware, for example in an application specific integrated circuit (ASIC), because for large production runs the hardware implementation may be less expensive than the software implementation. Often a design may be developed and tested in a software form and later transformed, by well-known design rules, to an equivalent hardware implementation in an application specific integrated circuit that hardwires the instructions of the software. In the same manner as a machine controlled by a new ASIC is a particular machine or apparatus,

likewise a computer that has been programmed and/or loaded with executable instructions may be viewed as a particular machine or apparatus.

[00199] The secondary storage 2284 is typically comprised of one or more disk drives or tape drives and is used for non-volatile storage of data and as an over-flow data storage device if RAM 2288 is not large enough to hold all working data. Secondary storage 2284 may be used to store programs which are loaded into RAM 2288 when such programs are selected for execution. The ROM 2286 is used to store instructions and perhaps data which are read during program execution. ROM 2286 is a non-volatile memory device which typically has a small memory capacity relative to the larger memory capacity of secondary storage 2284. The RAM 2288 is used to store volatile data and perhaps to store instructions. Access to both ROM 2286 and RAM 2288 is typically faster than to secondary storage 2284. The secondary storage 2284, the RAM 2288, and/or the ROM 2286 may be referred to in some contexts as computer readable storage media and/or non-transitory computer readable media.

[00200] I/O devices 2290 may include printers, video monitors, liquid crystal displays (LCDs), touch screen displays, keyboards, keypads, switches, dials, mice, track balls, voice recognizers, card readers, paper tape readers, or other well-known input devices.

[00201] The network connectivity devices 2292 may take the form of modems, modem banks, Ethernet cards, universal serial bus (USB) interface cards, serial interfaces, token ring cards, fiber distributed data interface (FDDI) cards, wireless local area network (WLAN) cards, radio transceiver cards such as code division multiple access (CDMA), global system for mobile communications (GSM), long-term evolution (LTE), worldwide interoperability for microwave access (WiMAX), and/or other air interface protocol radio transceiver cards, and other well-known network devices. These network connectivity devices 2292 may enable the processor 2282 to communicate with the Internet or one or more intranets. With such a network connection, it is contemplated that the processor 2282 might receive information from the network, or might output information to the network in the course of performing the above-described method steps. Such information, which is often represented as a sequence of instructions to be executed using processor 2282, may be received from and outputted to the network, for example, in the form of a computer data signal embodied in a carrier wave.

[00202] Such information, which may include data or instructions to be executed using processor 2282 for example, may be received from and outputted to the network, for example, in the form of a computer data baseband signal or signal embodied in a carrier wave. The baseband signal or signal embedded in the carrier wave, or other types of signals currently used or hereafter developed, may be generated according to several methods well known to one skilled in the art. The baseband signal and/or signal embedded in the carrier wave may be referred to in some contexts as a transitory signal.

[00203] The processor 2282 executes instructions, codes, computer programs, scripts which it accesses from hard disk, floppy disk, optical disk (these various disk based systems may all be considered secondary storage 2284), ROM 2286, RAM 2288, or the network connectivity devices 2292. While only one processor 2282 is shown, multiple processors may be present. Thus, while instructions may be discussed as executed by a processor, the instructions may be executed simultaneously, serially, or otherwise executed by one or multiple processors. Instructions, codes, computer programs, scripts, and/or data that may be accessed from the secondary storage 2284, for example, hard drives, floppy disks, optical disks, and/or other device, the ROM 2286, and/or the RAM 2288 may be referred to in some contexts as non-transitory instructions and/or non-transitory information.

[00204] In an embodiment, the computer system 2280 may comprise two or more computers in communication with each other that collaborate to perform a task. For example, but not by way of limitation, an application may be partitioned in such a way as to permit concurrent and/or parallel processing of the instructions of the application. Alternatively, the data processed by the application may be partitioned in such a way as to permit concurrent and/or parallel processing of different portions of a data set by the two or more computers. In an embodiment, virtualization software may be employed by the computer system 2280 to provide the functionality of a number of servers that is not directly bound to the number of computers in the computer system 2280. For example, virtualization software may provide twenty virtual servers on four physical computers. In an embodiment, the functionality disclosed above may be provided by executing the application and/or applications in a cloud computing environment. Cloud computing may comprise providing computing services via a network connection using dynamically

scalable computing resources. Cloud computing may be supported, at least in part, by virtualization software. A cloud computing environment may be established by an enterprise and/or may be hired on an as-needed basis from a third party provider. Some cloud computing environments may comprise cloud computing resources owned and operated by the enterprise as well as cloud computing resources hired and/or leased from a third party provider.

[00205] In an embodiment, some or all of the functionality disclosed above may be provided as a computer program product. The computer program product may comprise one or more computer readable storage medium having computer usable program code embodied therein to implement the functionality disclosed above. The computer program product may comprise data structures, executable instructions, and other computer usable program code. The computer program product may be embodied in removable computer storage media and/or non-removable computer storage media. The removable computer readable storage medium may comprise, without limitation, a paper tape, a magnetic tape, magnetic disk, an optical disk, a solid state memory chip, for example analog magnetic tape, compact disk read only memory (CD-ROM) disks, floppy disks, jump drives, digital cards, multimedia cards, and others. The computer program product may be suitable for loading, by the computer system 2280, at least portions of the contents of the computer program product to the secondary storage 2284, to the ROM 2286, to the RAM 2288, and/or to other non-volatile memory and volatile memory of the computer system 2280. The processor 2282 may process the executable instructions and/or data structures in part by directly accessing the computer program product, for example by reading from a CD-ROM disk inserted into a disk drive peripheral of the computer system 2280. Alternatively, the processor 2282 may process the executable instructions and/or data structures by remotely accessing the computer program product, for example by downloading the executable instructions and/or data structures from a remote server through the network connectivity devices 2292. The computer program product may comprise instructions that promote the loading and/or copying of data, data structures, files, and/or executable instructions to the secondary storage 2284, to the ROM 2286, to the RAM 2288, and/or to other non-volatile memory and volatile memory of the computer system 2280.

[00206] In some contexts, the secondary storage 2284, the ROM 2286, and the RAM 2288 may be referred to as a non-transitory computer readable medium or a computer readable storage media. A dynamic RAM embodiment of the RAM 2288, likewise, may be referred to as a non-transitory computer readable medium in that while the dynamic RAM receives electrical power and is operated in accordance with its design, for example during a period of time during which the computer system 2280 is turned on and operational, the dynamic RAM stores information that is written to it. Similarly, the processor 2282 may comprise an internal RAM, an internal ROM, a cache memory, and/or other internal non-transitory storage blocks, sections, or components that may be referred to in some contexts as non-transitory computer readable media or computer readable storage media.

[00207] Having described several processes and systems herein, specific embodiments can include, but are not limited to:

[00208] In a first embodiment, a method of provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform comprises establishing a plurality of service accounts for a corresponding plurality of application service provider systems, wherein the plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services; receiving, by a processor system, a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface; receiving a provider API interfaces for a network provider system; and integrating the provider API interface with the unified services platform API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the provider API interface.

[00209] A second embodiment may include the method of the first embodiment, further comprising: receiving a definition of a service and a plan for each of the plurality of application service provider systems.

[00210] A third embodiment may include the method of the second embodiment, further comprising: receiving one or more definitions of actions for the service, wherein the actions comprise responses to triggering events occurring with a telephone number.

[00211] A fourth embodiment may include the method of the third embodiment, further comprising: publishing, after integrating each of the plurality of API interfaces with the unified services platform, the definition of the service, the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog.

[00212] A fifth embodiment may include the method of the fourth embodiment, further comprising: receiving, from the network provider system, a selection of one or more services from the plurality of the application services provider systems; and publishing the selection of the one or more services in a services catalog, wherein the services catalog is accessible by one or more subscribers of the network provider system.

[00213] A sixth embodiment may include the method of the third embodiment, further comprising: receiving a request for associating at least one service from the plurality of application service provider systems with a telephone number of a subscriber; associating the telephone number with the at least one service; and invoking the at least one service in response to a communication event with the telephone number.

[00214] A seventh embodiment may include the method of any of the first to sixth embodiments, further comprising: receiving, at the unified services platform, billing routing information from the plurality of application service provider systems; and integrating the billing routing information with the network provider system.

[00215] In an eighth embodiment, a method of invoking a third party service during a communication event comprises: receiving, by a policy and rules engine executing on a processor system, a first indication of an incoming communication for a telephone number; identifying, by the policy and rules engine, a first triggering event associated with the incoming communication for the telephone number based on the first indication; invoking, by the policy and rules engine, a first service associated with the telephone number in response to the first triggering event, wherein the first service is provided by a first third party application service provider system; performing, in response to invoking the first service, a first action based on the first triggering event, wherein the first action is

performed by the first third party application service provider system; receiving, by the policy and rules engine, a second indication of a second incoming communication for the telephone number; identifying, by the policy and rules engine, a second triggering event associated with the second incoming communication for the telephone number based on the second indication; invoking, by the policy and rules engine, a second service associated with the telephone number in response to the second triggering event, wherein the second service is provided by a second third party application service provider system, wherein the second third party application service provider system is different than the first third party application service provider system; performing, in response to invoking the second service, a second action based on the second triggering event, wherein the second action is performed by the second third party application service provider system; and handling the communication using the telephone number.

[00216] A ninth embodiment may include the method of the eighth embodiment, wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

[00217] A tenth embodiment may include the method of the eighth or ninth embodiment, wherein the action comprises transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof.

[00218] An eleventh embodiment may include the method of any of the eighth to tenth embodiments, wherein performing the action occurs before handling the communication.

[00219] A twelfth embodiment may include the method of any of the eighth to tenth embodiments, wherein performing the action occurs after handling the communication.

[00220] A thirteenth embodiment may include the method of any of the eighth to tenth embodiments, wherein performing the action occurs during handling the communication.

[00221] A fourteenth embodiment may include the method of any of the eighth to thirteenth embodiments, wherein handling the communication comprises routing the incoming communication to a device associated with the telephone number, wherein the

communication comprises a voice call, a text message, an internet communication session, or any combination thereof.

[00222] A fifteenth embodiment may include the method of any of the eighth to fourteenth embodiments, wherein receiving the indication comprises: receiving the first indication at a unified services platform system; and wherein performing the action comprises routing incoming communication data from a network provider system to the third party application service provider system, wherein the network provider system supplies the telephone number.

[00223] In a sixteenth embodiment, a method of billing a customer for a third party service performed during a communication event comprises receiving, by a unified services platform system, an indication of an incoming communication for a telephone number from a network provider system; identifying, by a processor system, a triggering event associated with the incoming communication for the telephone number; invoking, by the processor system, a service associated with the telephone number in response to the triggering event, wherein the service is associated with a third party application service provider system; performing, in response to invoking the service, an action associated with the service based on the triggering event, wherein the action is performed by the third party application service provider system; receiving a billing message from the third party application service provider system, wherein the billing message comprises chargeable event data; and routing the billing message to the network provider system, wherein the network provider system bills a subscriber associated with the telephone number for the service performed by the third party application service provider system.

[00224] A seventeenth embodiment may include the method of the sixteenth embodiment, further comprising: receiving payment from the subscriber; and routing the payment from the network service provider system to the third party application service provider system.

[00225] An eighteenth embodiment may include the method of the sixteenth or seventeenth embodiment, wherein the billing message is generated in response to performing the action.

[00226] A nineteenth embodiment may include the method of any of the sixteenth to eighteenth embodiments, wherein the billing message is received by the network provider system.

[00227] A twentieth embodiment may include the method of the any of the sixteenth to nineteenth embodiments, further comprising: invoking a second service associated with the telephone number in response to the triggering event, wherein the service is associated with a second third party application service provider system; performing, in response to invoking the service, a second action associated with the second service based on the triggering event, wherein the action is performed by the second third party application service provider system; receiving a second billing message from the second third party application service provider system, wherein the second billing message comprises chargeable event data for performing the second action; and routing the second billing message to the network provider system, wherein the network provider system bills the subscriber associated with the telephone number for the service performed by the third party application service provider system and the second third party application service provider system.

[00228] In a twenty first embodiment, a method of creating a plurality of service actions in response to a communication event comprises receiving, by a processor system, an indication of an incoming communication for a telephone number, wherein the telephone number is provided by a network provider system, and wherein a plurality of services associated with a plurality of third party service systems are associated with the telephone number, wherein the plurality of services are invoked by at least one triggering event associated with the telephone number; identifying, by the processor system, a triggering event associated with the incoming communication for the telephone number; invoking a first service of the plurality of services in response to the triggering event; sending incoming communication information to the first service, wherein the incoming communication information comprises at least a portion of the information associated with the incoming communication, and wherein the first service generates first service data in response to the incoming communication information; routing the first service data to a second service of the plurality of services; and invoking the second service of the plurality

of services in response to routing the first service data to the second service, wherein the second service generates second service data.

[00229] A twenty second embodiment may include the method of the twenty first embodiment, wherein the processor system forms a portion of a unified service platform system, wherein unified services platform system communicates with the plurality of third party service systems through a plurality of integrated interfaces, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein one or more of the plurality of integrated interfaces are incompatible with the provider integrated interface.

[00230] A twenty third embodiment may include the method of the twenty first or twenty second embodiment, wherein the second service generates the second service data using at least a portion of the first service data.

[00231] A twenty fourth embodiment may include the method of the any of the twenty first to twenty fourth embodiments, further comprising: forwarding the first service data and the second service data to a device associated with the telephone number.

[00232] A twenty fifth embodiment may include the method of any of the twenty first to twenty fourth embodiments, wherein the services comprise one or more actions performed by social media software, customer relationship management software, call and message translation software, file sharing software, file management software, contact management software, voicemail software, messaging software, call recording software, contact matching software, messaging storage software, call notification software, or any combination thereof.

[00233] A twenty sixth embodiment may include the method of any of the twenty first to twenty fifth embodiments, further comprising: sending the incoming communication to the first service; routing the incoming communication from the first service to the second service; and routing the incoming communication to a device associated with the telephone number

[00234] A twenty seventh embodiment may include the method of any of the twenty first to twenty sixth embodiments, wherein receiving the indication of the incoming communication comprises: receiving the indication at a unified services platform system from the network provider system.

[00235] A second embodiment may include the method of any fo the twenty first to twenty seventh embodiments, further comprising: generating first billing information for the first service based on invoking the first service; generating second billing information for the second service based on invoking the second service; and routing the first billing information and the second billing information to the network provider system, wherein the network provider system bills a subscriber associated with the telephone number.

[00236] In a twenty ninth embodiment, a method of creating a plurality of service actions in response to a communication event comprises receiving, by a processor system, an indication of an communication for a telephone number, wherein the telephone number is provided by a network provider system, and wherein a plurality of service provided by a plurality of third party service systems are associated with the telephone number, wherein one or more of the plurality of services are invoked by at least one triggering event associated with the telephone number; identifying, by the processor system, a triggering event associated with the communication for the telephone number; invoking two or more services of the plurality of services in response to the triggering event; sending communication information to each of the two or more services, wherein the communication information comprises at least a portion of the information associated with the communication; receiving first service data from a first service of the two or more services; receiving second service data from a second service of the two or more services; and handling the communication.

[00237] A thirtieth embodiment may include the method of the twenty ninth embodiment, wherein the processor system forms a portion of a unified service platform system, wherein unified services platform system communicates with the plurality of third party service systems through a plurality of integrated interfaces, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein one or more of the plurality of integrated interfaces are incompatible with the provider integrated interface.

[00238] A thirty first embodiment may include the method of the twenty ninth or thirtieth embodiment, wherein sending the communication information to each of the two or more services occurs in parallel.

[00239] A thirty second embodiment may include the method of any of the twenty ninth to thirty first embodiments, wherein handling the communication comprises routing the incoming communication to a device associated with the telephone number, and wherein the communication comprises an incoming voice call, an outgoing voice all, an incoming text message, an outgoing text message, an outgoing network connection request, or any combination thereof.

[00240] A thirty third embodiment may include the method of any of the twenty ninth to thirty second embodiments, further comprising combining the first service data and the second service data to form a combined data set; and sending the combined data set to a device associated with the telephone number.

[00241] A thirty fourth embodiment may include the method of any of the twenty ninth to thirty third embodiments, further comprising: routing the first service data to a third service of the plurality of services; and invoking the third service in response to routing the first service data to the third service, wherein the third service generates third service data.

[00242] A thirty fifth embodiment may include the method of any of the twenty ninth to thirty fourth embodiments, wherein the indication is received at a unified services platform system, and wherein the unified services platform system sends the communication information to each of the two or more services.

[00243] A thirty sixth embodiment may include the method of any of the twenty ninth to thirty fifth embodiments, further comprising: generating first billing information for the first service; generating second billing information for the second service; and routing the first billing information and the second billing information to the network provider system, wherein the network provider system bills a subscriber associated with the telephone number.

[00244] In an thirty seventh embodiment, a method of using a policy store to generate multiple events comprises generating, by a processor system, a policy store comprising a plurality of rules for invoking a plurality of services associated with a telephone number, wherein the rules define a relationship between a triggering event and one or more actions to be performed by a service, wherein the plurality of services are provided by third party application service provider systems, wherein the triggering event is based on a communication event provided by a network provider system, and where the policy

store is generated by a unified services platform system in communication with the network provider system and the third party application service provider systems; receiving an indication of a first triggering event based on a communication event associated with the telephone number; matching, by the processor system, the first triggering event with one or more actions in the policy store; identifying, by the processor system, two or more services of the plurality of services based on the matching; generating routing information for each of the two or more services identified based on the matching; and routing communication event information to each of the two or more services of the plurality of services using the routing information.

[00245] A thirty eighth embodiment may include the method of the thirty seventh embodiment, wherein routing the communication event information comprises: routing the communication event information to a first service of the two or more services using the routing information, wherein the first service generates first service data based on the communication event information; and routing the first service data to a second service of the two or more services using the routing information, wherein the second service generates second service data based on the first service data.

[00246] A thirty ninth embodiment may include the method of the thirty eighth embodiment, further comprising: routing the communication event to the first service with the communication event information; routing the communication event to the second service with the first service data; and routing the communication event with the second service data to a communication device associated with the telephone number.

[00247] A fortieth embodiment may include the method of the thirty seventh embodiment, wherein routing the communication event information comprises: routing the communication event information to a first service of the two or more services using the routing information; and routing the communication event information to a second service of the two or more services using the routing information, wherein the communication information is routed to the first service and the second service in parallel.

[00248] In a forty first embodiment, a method of provisioning a service for use with a group plan comprises receiving, by a unified services platform system, a subscription request for a service for a group plan, wherein the group plan comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone

numbers is associated with a subscriber, and wherein the service is provided by a third party application service provider system; sending, by the unified services platform system, an activation request for the group plan to the third party application service provider system, receiving an activation response from the third party application service provider system; associating the service with each telephone number of the plurality of telephone numbers; providing access to the service for each telephone number based on the associating; receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system; sending, by the unified services platform system, a second activation request for the service to the second third party application service provider system; receiving a second activation response from the second third party application service provider system; associating the second service with the first telephone number; and providing access to the second service for the first telephone number based on the associating.

[00249] A forty second embodiment may include the method of the forty first embodiment, further comprising: receiving billing and settlement information associated with each of the telephone numbers.

[00250] A forty third embodiment may include the method of the forty second embodiment, wherein the billing and settlement information comprises routing information for routing charges incurred through use of the service, wherein the routing information routes the charges incurred to a group administrator for the group plan.

[00251] A forty fourth embodiment may include the method of any of the forty first to forth third embodiments, wherein an API of the third party application service provider system is incompatible with an API of the network provider system.

[00252] A forty fifth embodiment may include the method of the forth fourth embodiment, wherein the API of the third party application service provider system is integrated with the unified services platform system, and wherein API of the network provider system is integrated with the unified services platform system, and wherein the third party application communicates with the network provider system through the unified services platform system.

[00253] A forty sixth embodiment may include the method of any of the forty first to forth fifth embodiments, further comprising: receiving, by the unified services platform system, a second subscription request for a second service for the group plan, wherein the second service is provided by a second third party application service provider system, wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system; sending, by the unified services platform system, a second activation request for the group plan to the third party application service provider system, receiving a second activation response from the third party application service provider system; associating the second service with each telephone number of the plurality of telephone numbers; and providing access to the second service for each telephone number based on the associating.

[00254] A forty seventh embodiment may include the method of any of the forty first to forth sixth embodiments, further comprising: invoking the service in response to a triggering event associated with a first telephone number of the plurality of telephone numbers.

[00255] In a forty eighth embodiment, a method of billing for a service provided to the members of a group comprises receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, wherein the telephone number is provided by a network provider system, and wherein the service is provided by a third party application service provider system; associating the service with each telephone number of the plurality of telephone numbers; receiving billing and settlement information from the third party application service provider system for each telephone number; generating billing routing information based on the billing and settlement information, wherein the routing information forwards billing charges for the services associated with the service to a group administrator; associating the billing routing information for the service with each telephone number of the plurality of telephone number; generating chargeable event data in response to a use of the service by one or more of the subscribers; forwarding the chargeable event data to the group administrator based on the billing routing information; associating a second service with a first telephone number

of the plurality of telephone numbers, wherein the second service is not associated with the group, wherein the second service is provided by a second third party application service provider system; and routing billing charges for the second service to a first subscriber associated with the first telephone number.

[00256] A forty ninth embodiment may include the method of the forty eight embodiment, wherein the unified services platform system communicates with the third party service system through a first integrated interface, wherein the unified services platform system communications with the second third party service system through a second integrated interface, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein the integrated interface and the second integrated interface are incompatible with the provider integrated interface.

[00257] A fiftieth embodiment may include the method of the forty eight or forty ninth embodiment, further comprising: associating a third service with the first telephone number of the plurality of telephone numbers, wherein the third service is associated with the group, and wherein the routing information forwards billing charges for the third service to the group administrator.

[00258] A fifty first embodiment may include the method of any of the forty eighth to fiftieth embodiments, wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data to the unified services platform system, and forwarding the chargeable event data from the unified services platform system to the network provider system.

[00259] A fifty second embodiment may include the method of any of the forty eighth to fiftieth embodiments, wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data from the third party application service provider system to the network provider system.

[00260] A fifty third embodiment may include the method of any of the forty eighth to fifty second embodiments, wherein generating the chargeable event data is based on a triggering event associated with a first telephone number of one or more of the subscribers.

[00261] In a fifty fourth embodiment, a method of using a rules engine to allocate usage of a service between personal and group accounts comprises receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, wherein the service is provided by a third party application service provider system, and wherein the telephone numbers are provided by a network provider system; associating the service with each telephone number of the plurality of telephone numbers; receiving billing and settlement information from the third party application service provider system for each telephone number; generating a billing policy store comprising a plurality of rules for charging for the service, wherein the rules define a relationship between a usage conditions of the service and payment by at least one of the subscriber or the group; generating billing routing information based on the billing and settlement information and the billing policy store, wherein the billing routing information forwards billing charges for the usage associated with the service to at least one of the subscriber or the group based on the usage conditions; generating a charge for the service in response to a use of the service under usage conditions by one or more of the subscribers; and routing the charges to at least one of the subscriber or the group using the billing routing information.

[00262] A fifty fifth embodiment may include the method of the fifty fourth embodiment, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a time of day, a day of the week, a month of the year, a holiday schedule, or any combination thereof.

[00263] A fifty sixth embodiment may include the method of the fifty fourth or fifty fifth embodiments, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a geographic location or a geographic area.

[00264] A fifty seventh embodiment may include the method of any of the fifty fourth to fifty sixth embodiments, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition

comprises a type of network connection, a specific network interface point, or any combination thereof.

[00265] A fifty eighth embodiment may include the method of any of the fifty fourth to fifty seventh embodiments, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises one or more predefined triggering events.

[00266] A fifty ninth embodiment may include the method of any of the fifty fourth to fifty eighth embodiments, wherein a first subscriber associated with a first telephone number of the plurality of telephone numbers is provided network services through the network provider system, wherein group is provided network services through a second network provider system, and wherein routing the charges to at least one of the subscriber or the group comprises routing the charges to at least one of the first subscriber through the network provider system or the group through the second network provider system.

[00267] A sixtieth embodiment may include the method of any of the fifty fourth to fifty ninth embodiments, further comprising: associating a second service with each telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system; receiving second billing and settlement information from the second third party application service provider for each telephone number; and generating second billing routing information based on the second billing and settlement information and the billing policy store, wherein the second billing routing information forwards billing charges for the usage associated with the second service to at least one of the subscriber or the group based on a second set of usage conditions, wherein the second set of usage conditions are different than the usage conditions for the service.

[00268] In a sixty first embodiment, a method of combining partial functionality across a plurality of applications to create a new service comprises receiving, by a unified services platform system, a definition of a service for each of a plurality of application service provider systems; receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, wherein the actions comprise responses to triggering events occurring for a telephone number; testing each triggering event and corresponding action in a test environment to generate a response; storing an

indication of the triggering event, the corresponding action, and the response; identifying individual actions associated with each of the services associated with the plurality of application service provider systems; combining two or more individual actions from different services provided by different application service provider systems; and forming a new service based on the combining.

[00269] A sixty second embodiment may include the method of the sixty first embodiment, wherein the individual actions comprise one or more of transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof.

[00270] A sixty third embodiment may include the method of the sixty first or sixty second embodiment, wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

[00271] A sixty fourth embodiment may include the method of any of the sixty first to sixty third embodiments, wherein combining the two or more individual actions comprises combining the two or more individual actions by the unified services platform system.

[00272] A sixty fifth embodiment may include the method of the sixty fourth embodiment, wherein combining the two or more individual actions further comprises: receiving, by the unified services platform system, a request from a subscriber associated with a telephone number to combine the two or more individual actions; generating, by the unified services platform system, routing and integration data for the two or more individual actions; and activating the new service for the subscriber, wherein the new service includes the routing and integration data generated by the unified services platform.

[00273] A sixty sixth embodiment may include the method of the sixty fifth embodiment, further comprising: publishing the new service in a catalog available to a plurality of subscribers.

[00274] A sixty seventh embodiment may include the method of any of the sixty first to sixty sixth embodiments, wherein the new service comprises a first individual action based on a first trigger and a second individual action based on a second trigger.

[00275] A sixty eighth embodiment may include the method of the sixty seventh embodiment, wherein the second trigger comprises a response generated by the first individual action.

[00276] A sixty ninth embodiment may include the method of any of the sixty first to sixty eighth embodiments, further comprising: publishing the individual actions in a catalog; and receiving a selection of the two or more of the individual actions, wherein combining the two or more individual actions from different services occurs in response to receiving the selection of the two or more individual actions.

[00277] In a seventieth embodiment, a method of identifying actions within services provided by a third party application service providers comprises establishing, on a unified services platform system, a plurality of service accounts for a corresponding plurality of application service providers; receiving a definition of a service for each of the plurality of application service providers, wherein the service comprises one or more actions, wherein the actions comprise responses to triggering events occurring for a telephone number; receiving one or more definitions of the one or more actions for each service for each of the plurality of application service provider systems; testing each triggering event and corresponding action in a test environment to generate a response; storing an indication of the triggering event, the corresponding action, and the response; identifying individual actions associated with each of the services associated with the plurality of application service provider systems.

[00278] A seventy first embodiment may include the method of the seventieth embodiment, wherein the individual actions comprise one or more of transferring a message, transferring an image, transferring a document file, transferring a posting, generating a notification, obtaining contact information, obtaining customer information, or any combination thereof.

[00279] A seventy second embodiment may include the method of the seventieth or seventy first embodiment, wherein the triggering events comprises one or more of a representational state transfer (REST) upon sending a message, a REST upon receiving

a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

[00280] A seventy third embodiment may include the method of any of the seventieth to seventy second embodiments, wherein two or more of the plurality of application service provider systems have different APIs, and wherein the different APIs are not compatible with each other.

[00281] A seventy fourth embodiment may include the method of the seventy third embodiment, further comprising: enabling two or more of the individual actions to work together by providing a common interface using the unified services platform system, wherein the two or more individual actions are provided by at least two different application service provider systems.

[00282] In a seventy fifth embodiment, a method of developing and testing a new application service through a unified services platform comprises establishing a plurality of service accounts for a corresponding plurality of application service provider systems; receiving a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different, integrating each of the plurality of API interfaces with a unified services platform system API interface; receiving a definition of a service for each of the plurality of application service provider systems; receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, wherein the actions comprise responses to triggering events occurring for a telephone number; testing each triggering event and corresponding action for each service in a test environment to generate a response; and providing access to each service within a working environment after performing the testing.

[00283] A seventy sixth embodiment may include the method of the seventy fifth embodiment, further comprising: publishing, after testing , the definition of the service, the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog.

[00284] A seventy seventh embodiment may include the method of the seventy fifth or seventy sixth embodiment, further comprising: receiving an API interface for a network

provider system; and integrating the API interface for the network provider system with the unified services platform system API interface, wherein at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the API interface for the network provider system.

[00285] A seventy eighth embodiment may include the method of the seventy seventh embodiment, further comprising: testing the integration of each of the plurality of API interfaces for the plurality of application service provider systems with the unified services platform system API interface in the test environment; and testing the integration of the API interface for the network provider system with the unified services platform system API interface in the test environment.

[00286] A seventy ninth embodiment may include the method of any of the seventy fifth to seventy eighth embodiments, further comprising: testing chargeable event data routing in the test environment, wherein the chargeable event data is generated in response to a performance of one or more actions.

[00287] An eightieth embodiment may include the method of any of the seventy fifth to seventy ninth embodiments, wherein the triggering event comprises a representational state transfer (REST) upon sending a message, a REST upon receiving a message, a REST before making a call, a REST after making a call, a REST before receiving a call, a REST after receiving a call, a Session Initiation Protocols (SIP) on receiving a call, a SIP on making a call, or any combination thereof.

[00288] This specification includes references to “an embodiment”. The appearance of the phrase “in an embodiment” in different contexts does not necessarily refer to the same embodiment. Particular features, structures, or characteristics may be combined in any suitable manner consistent with this disclosure. Furthermore, as used throughout this application, the word "may" is used in a permissive sense (i.e., meaning having the potential to), rather than the mandatory sense (i.e., meaning must). Similarly, the words "include", "including", and "includes" mean including, but not limited to.

[00289] Terminology. The following definitions and/or context are provided for terms found in this disclosure (including the appended claims). The term “comprising” is open-ended. As used in the appended claims, this term does not foreclose additional structure or steps. Consider a claim that recites: “A system comprising a server ….” Such a claim

does not foreclose the system from including additional components (e.g., network interface, memory, display). The term "configured to," when used to describe various units, circuits, or other components may be used to connote structure by indicating that the units/circuits/components include structure (e.g., circuitry) that performs the task or tasks during operation. As such, the unit/circuit/component can be said to be configured to perform the task even when the specified unit/circuit/component is not currently operational (e.g., is not on). The units/circuits/components used with the "configured to" language include hardware-for example, circuits, memory storing program instructions executable to implement the operation, etc. Reciting that a unit/circuit/component is "configured to" perform one or more tasks is expressly intended not to invoke 35 U.S.C. § 112, sixth paragraph, for that unit/circuit/component. Additionally, "configured to" can include generic structure (e.g., generic circuitry) that is manipulated by software and/or firmware (e.g., an FPGA or a general-purpose processor executing software) to operate in manner that is capable of performing the task(s) at issue. "Configured to" may also include adapting a manufacturing process (e.g., a semiconductor fabrication facility) to fabricate devices (e.g., integrated circuits) that are adapted to implement or perform one or more tasks. As used herein, the terms "first," "second," etc. are used as labels for nouns that they precede, and do not imply any type of ordering (e.g., spatial, temporal, logical, etc.). For example, for a customer using five services, the terms "first" and "second" resellers can be used to refer to any two of the five services. As used herein, the term "based on" is used to describe one or more factors that affect a determination. This term does not foreclose additional factors that may affect a determination. That is, a determination may be solely based on those factors or based, at least in part, on those factors. Consider the phrase "determine A based on B." While B may be a factor that affects the determination of A, such a phrase does not foreclose the determination of A from also being based on C. In other instances, A may be determined based solely on B.

[00290] While several embodiments have been provided in the present disclosure, it should be understood that the disclosed systems and methods may be embodied in many other specific forms without departing from the spirit or scope of the present disclosure. The present examples are to be considered as illustrative and not restrictive, and the intention is not to be limited to the details given herein. For example, the various

elements or components may be combined or integrated in another system or certain features may be omitted or not implemented.

[00291] Also, techniques, systems, subsystems, and methods described and illustrated in the various embodiments as discrete or separate may be combined or integrated with other systems, modules, techniques, or methods without departing from the scope of the present disclosure. Other items shown or discussed as directly coupled or communicating with each other may be indirectly coupled or communicating through some interface, device, or intermediate component, whether electrically, mechanically, or otherwise. Other examples of changes, substitutions, and alterations are ascertainable by one skilled in the art and could be made without departing from the spirit and scope disclosed herein.

CLAIMS

What is claimed is:

1. A method of provisioning a service for use with a group plan, the method comprising:

receiving, by a unified services platform system, a subscription request for a service for a group plan, wherein the group plan comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, and wherein the service is provided by a third party application service provider system;

sending, by the unified services platform system, an activation request for the group plan to the third party application service provider system,

receiving an activation response from the third party application service provider system;

associating the service with each telephone number of the plurality of telephone numbers;

providing access to the service for each telephone number based on the associating;

receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system;

sending, by the unified services platform system, a second activation request for the service to the second third party application service provider system;

receiving a second activation response from the second third party application service provider system;

associating the second service with the first telephone number; and

providing access to the second service for the first telephone number based on the associating.

2. The method of claim 1, further comprising:
receiving billing and settlement information associated with each of the telephone numbers.

3. The method of claim 2, wherein the billing and settlement information comprises routing information for routing charges incurred through use of the service, wherein the routing information routes the charges incurred to a group administrator for the group plan.

4. The method of claim 1, wherein an API of the third party application service provider system is incompatible with an API of the network provider system.

5. The method of claim 4, wherein the API of the third party application service provider system is integrated with the unified services platform system, and wherein API of the network provider system is integrated with the unified services platform system, and wherein the third party application communicates with the network provider system through the unified services platform system.

6. The method of claim 1, further comprising:
receiving, by the unified services platform system, a second subscription request for a second service for the group plan, wherein the second service is provided by a second third party application service provider system, wherein an API of the third party application service provider system is incompatible with an API of the second third party application service provider system;
sending, by the unified services platform system, a second activation request for the group plan to the third party application service provider system,
receiving a second activation response from the third party application service provider system;
associating the second service with each telephone number of the plurality of telephone numbers; and

providing access to the second service for each telephone number based on the associating.

7. The method of claim 1, further comprising:

invoking the service in response to a triggering event associated with a first telephone number of the plurality of telephone numbers.

8. A method of billing for a service provided to the members of a group, the method comprising:

receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, wherein the telephone number is provided by a network provider system, and wherein the service is provided by a third party application service provider system;

associating the service with each telephone number of the plurality of telephone numbers;

receiving billing and settlement information from the third party application service provider system for each telephone number;

generating billing routing information based on the billing and settlement information, wherein the routing information forwards billing charges for the services associated with the service to a group administrator;

associating the billing routing information for the service with each telephone number of the plurality of telephone number;

generating chargeable event data in response to a use of the service by one or more of the subscribers;

forwarding the chargeable event data to the group administrator based on the billing routing information;

associating a second service with a first telephone number of the plurality of telephone numbers, wherein the second service is not associated with the group, wherein the second service is provided by a second third party application service provider system; and

routing billing charges for the second service to a first subscriber associated with the first telephone number.

9. The method of claim 8, wherein the unified services platform system communicates with the third party service system through a first integrated interface, wherein the unified services platform system communications with the

second third party service system through a second integrated interface, wherein the unified services platform system communicates with the network provider system through a provider integrated interface, and wherein the integrated interface and the second integrated interface are incompatible with the provider integrated interface.

10. The method of claim 8, further comprising:
associating a third service with the first telephone number of the plurality of telephone numbers, wherein the third service is associated with the group, and wherein the routing information forwards billing charges for the third service to the group administrator.

11. The method of claim 8, wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data to the unified services platform system, and forwarding the chargeable event data from the unified services platform system to the network provider system.

12. The method of claim 8, wherein forwarding the chargeable event data to the group administrator based on the billing routing information comprises routing the chargeable event data from the third party application service provider system to the network provider system.

13. The method of claim 8, wherein generating the chargeable event data is based on a triggering event associated with a first telephone number of one or more of the subscribers.

14. A method of using a rules engine to allocate usage of a service between personal and group accounts, the method comprising:

receiving, by a unified services platform system, a subscription request for a service associated with a group, wherein the group comprises a plurality of telephone numbers, wherein each telephone number of the plurality of telephone numbers is associated with a subscriber, wherein the service is provided by a third party application service provider system, and wherein the telephone numbers are provided by a network provider system;

associating the service with each telephone number of the plurality of telephone numbers;

receiving billing and settlement information from the third party application service provider system for each telephone number;

generating a billing policy store comprising a plurality of rules for charging for the service, wherein the rules define a relationship between a usage conditions of the service and payment by at least one of the subscriber or the group;

generating billing routing information based on the billing and settlement information and the billing policy store, wherein the billing routing information forwards billing charges for the usage associated with the service to at least one of the subscriber or the group based on the usage conditions;

generating a charge for the service in response to a use of the service under usage conditions by one or more of the subscribers; and

routing the charges to at least one of the subscriber or the group using the billing routing information.

15. The method of claim 14, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a time of day, a day of the week, a month of the year, a holiday schedule, or any combination thereof.

16. The method of claim 14, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a geographic location or a geographic area.

17. The method of claim 14, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises a type of network connection, a specific network interface point, or any combination thereof.

18. The method of claim 14, wherein the plurality of rules specify payment by the group when the service is used within a predefined usage condition, wherein the usage condition comprises one or more predefined triggering events.

19. The method of claim 14, wherein a first subscriber associated with a first telephone number of the plurality of telephone numbers is provided network services through the network provider system, wherein group is provided network services through a second network provider system, and wherein routing the charges to at least one of the subscriber or the group comprises routing the charges to at least one of the first subscriber through the network provider system or the group through the second network provider system.

20. The method of claim 14, further comprising:

associating a second service with each telephone number of the plurality of telephone numbers, wherein the second service is provided by a second third party application service provider system;

receiving second billing and settlement information from the second third party application service provider for each telephone number; and

generating second billing routing information based on the second billing and settlement information and the billing policy store, wherein the second billing routing information forwards billing charges for the usage associated with the second service to at least one of the subscriber or the

group based on a second set of usage conditions, wherein the second set of usage conditions are different than the usage conditions for the service.

ABSTRACT

A method of provisioning a plurality of applications from different application developer systems to a network provider system comprises establishing a plurality of service accounts for a corresponding plurality of application service provider systems, receiving a plurality of API interfaces from the plurality of application service provider systems, integrating, by the processor system, each of the plurality of API interfaces with a unified services platform API interface, receiving a provider API interfaces for a network provider system, and integrating the provider API interface with the unified services platform API interface. The plurality of application service provider systems provide services for use in association with a telephone number of a subscriber of telecommunication services. At least two of the API interfaces are different, and at least one of the plurality of API interfaces from the plurality of application service provider systems is not compatible with the provider API interface.

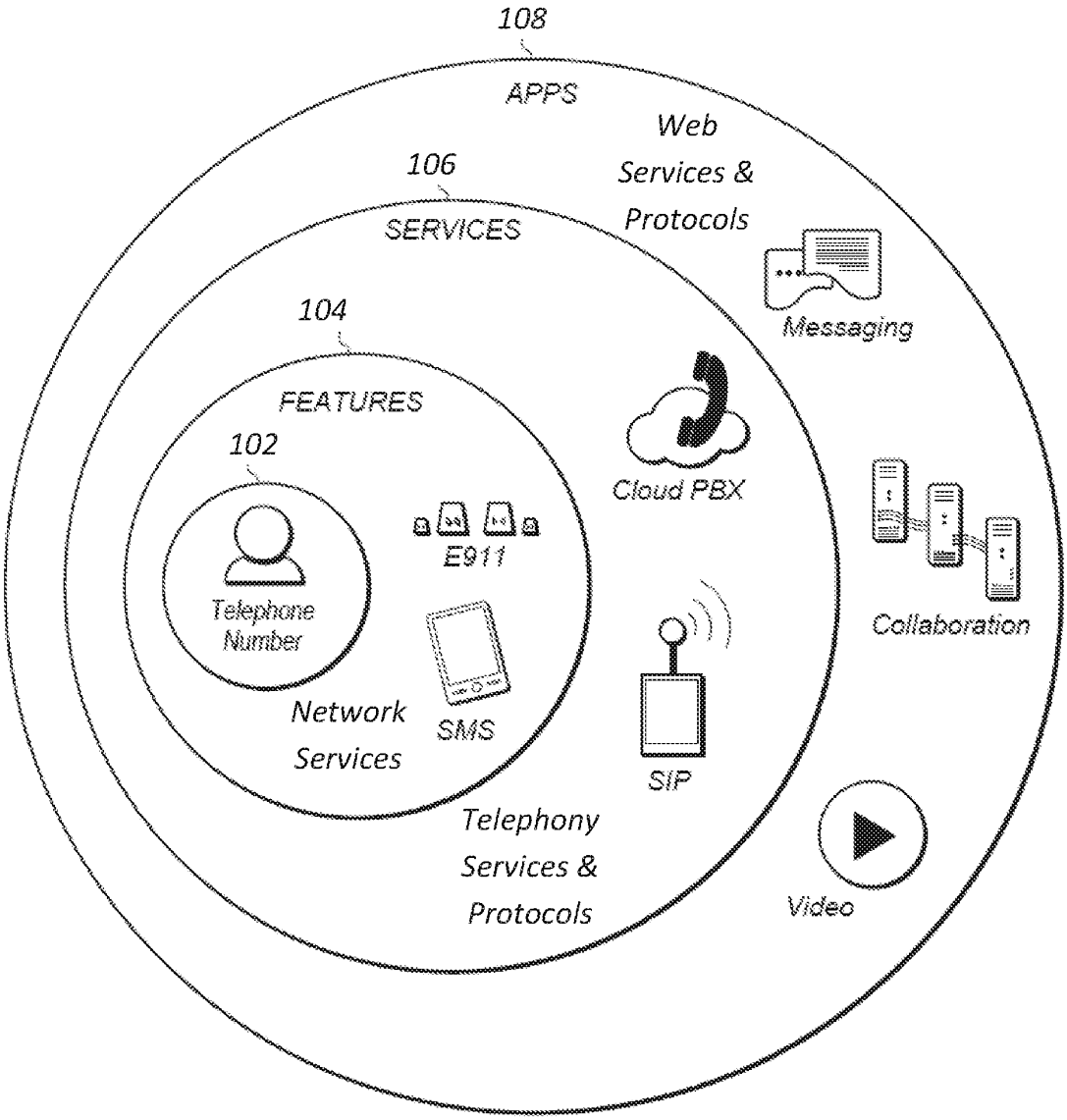

108
APPS
Web
Services &
Protocols
106
SERVICES
Messaging
104
FEATURES
102
Cloud PBX
E911
Telephone
Number
Collaboration
Network
Services
SMS
SIP
Telephony
Services &
Protocols
Video

FIG. 1

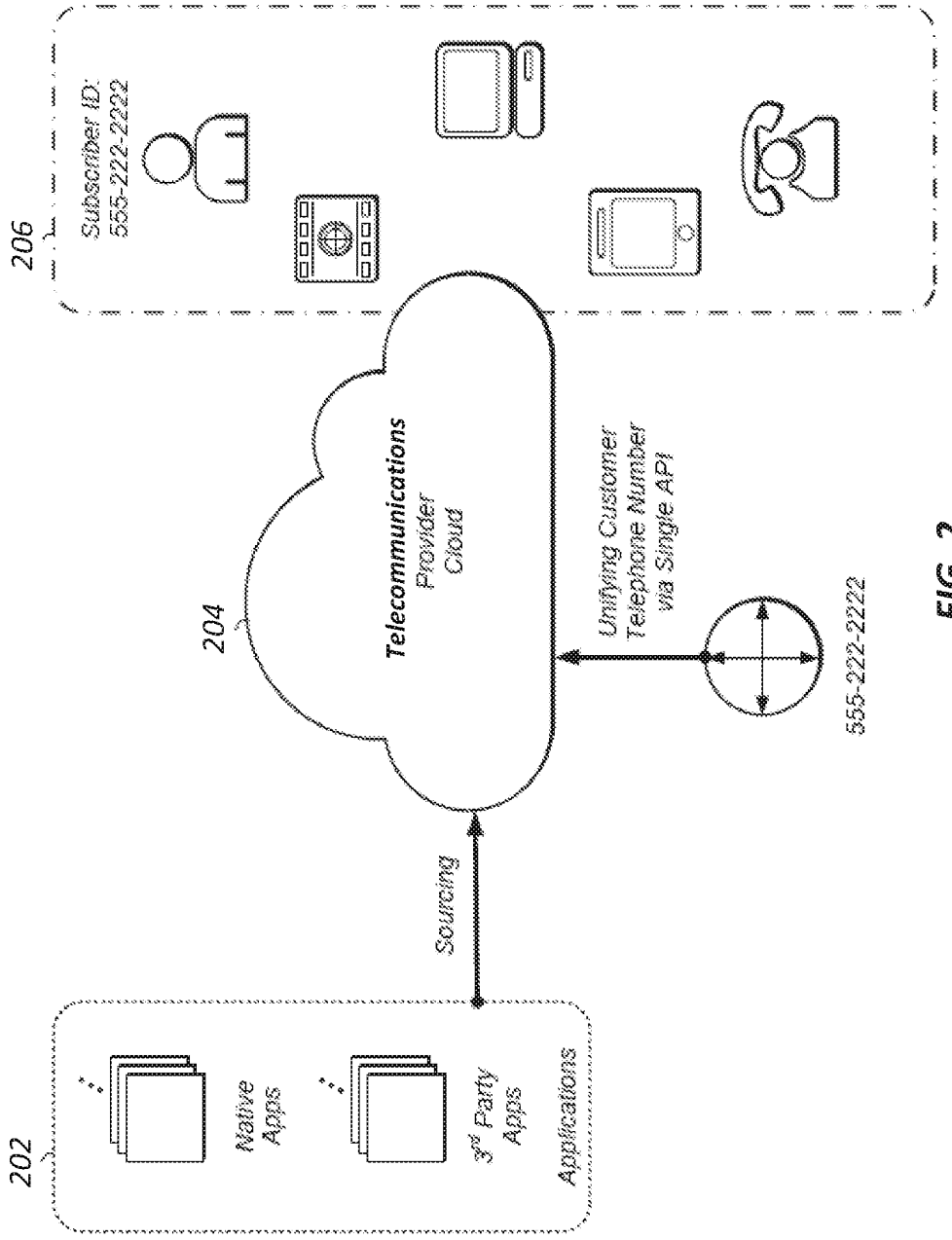
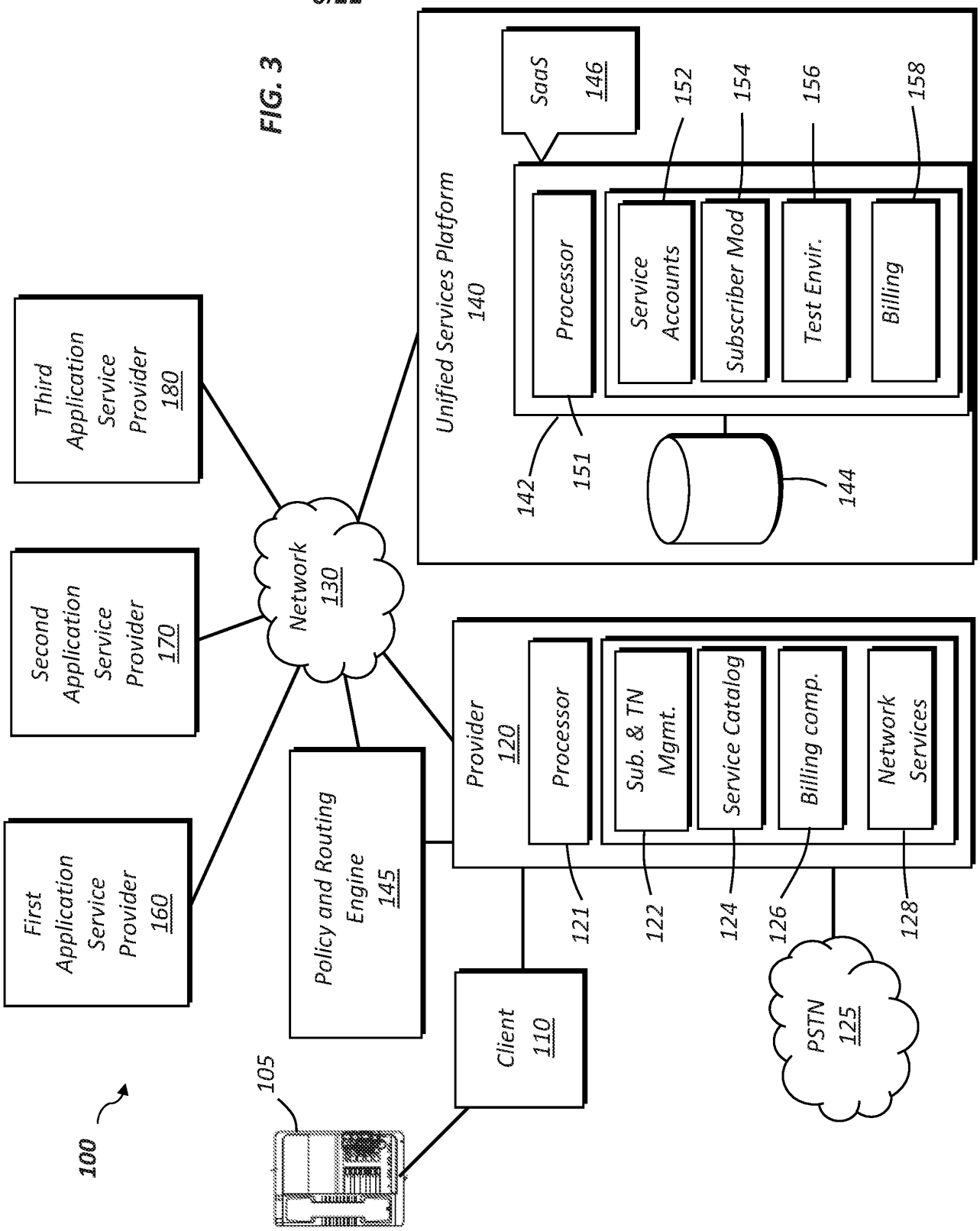

206
Subscriber ID:
555-222-2222
204
Telecommunications
Provider
Cloud
Unifying Customer
Telephone Number
via Single API
555-222-2222
Sourcing
202
Native
Apps
3rd Party
Apps
Applications

FIG. 2

FIG. 3


100
105
Client 110
First Application Service Provider 160
Second Application Service Provider 170
Third Application Service Provider 180
Network 130
Policy and Routing Engine 145
Unified Services Platform 140
SaaS 146
Processor
Service Accounts
Subscriber Mod
Test Envir.
Billing
142
151
144
152
154
156
158
Provider 120
Processor
Sub. & TN Mgmt.
Service Catalog
Billing comp.
Network Services
121
122
124
126
128
PSTN 125

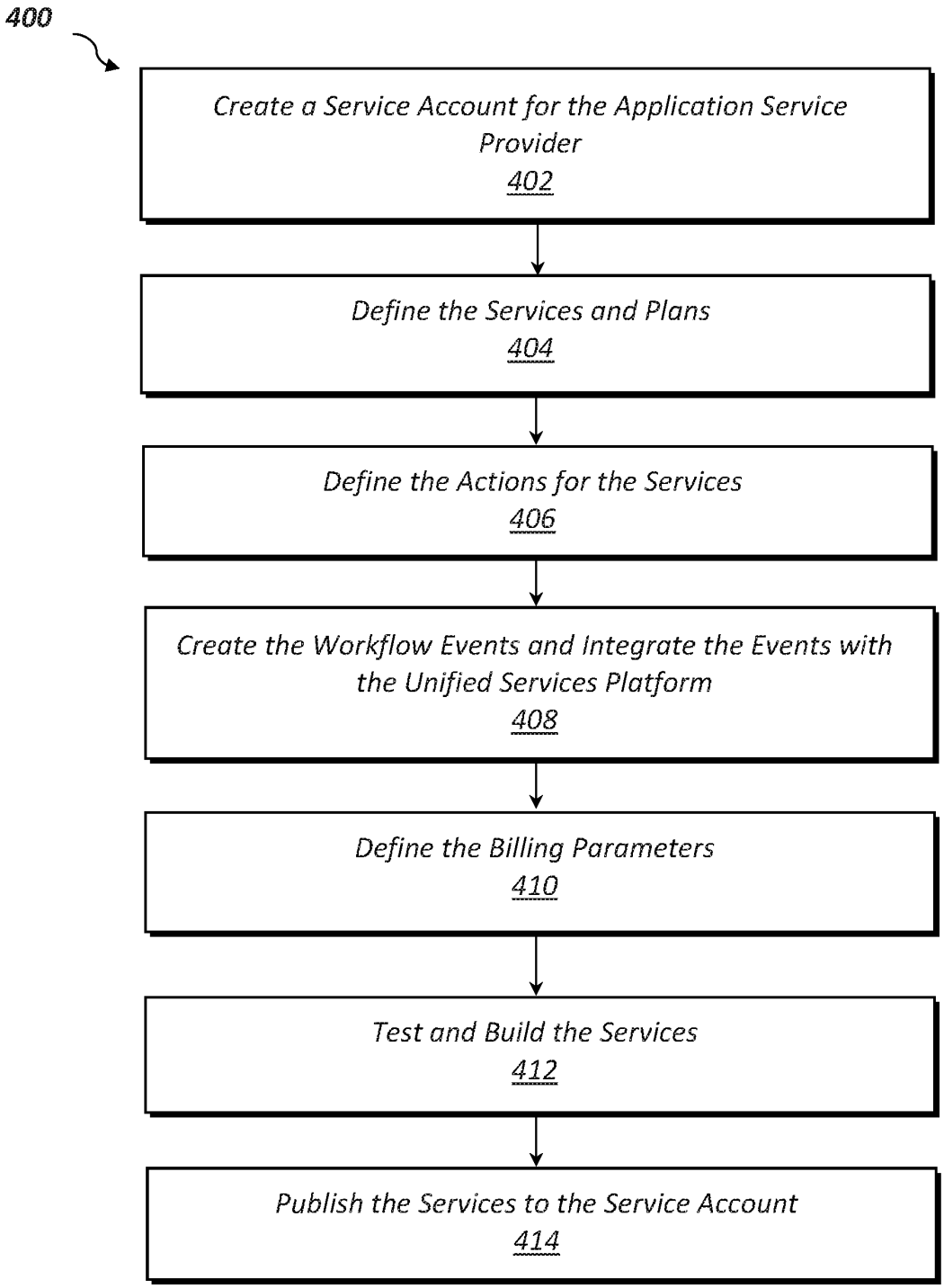

400
Create a Service Account for the Application Service Provider
402
Define the Services and Plans
404
Define the Actions for the Services
406
Create the Workflow Events and Integrate the Events with the Unified Services Platform
408
Define the Billing Parameters
410
Test and Build the Services
412
Publish the Services to the Service Account
414

FIG. 4

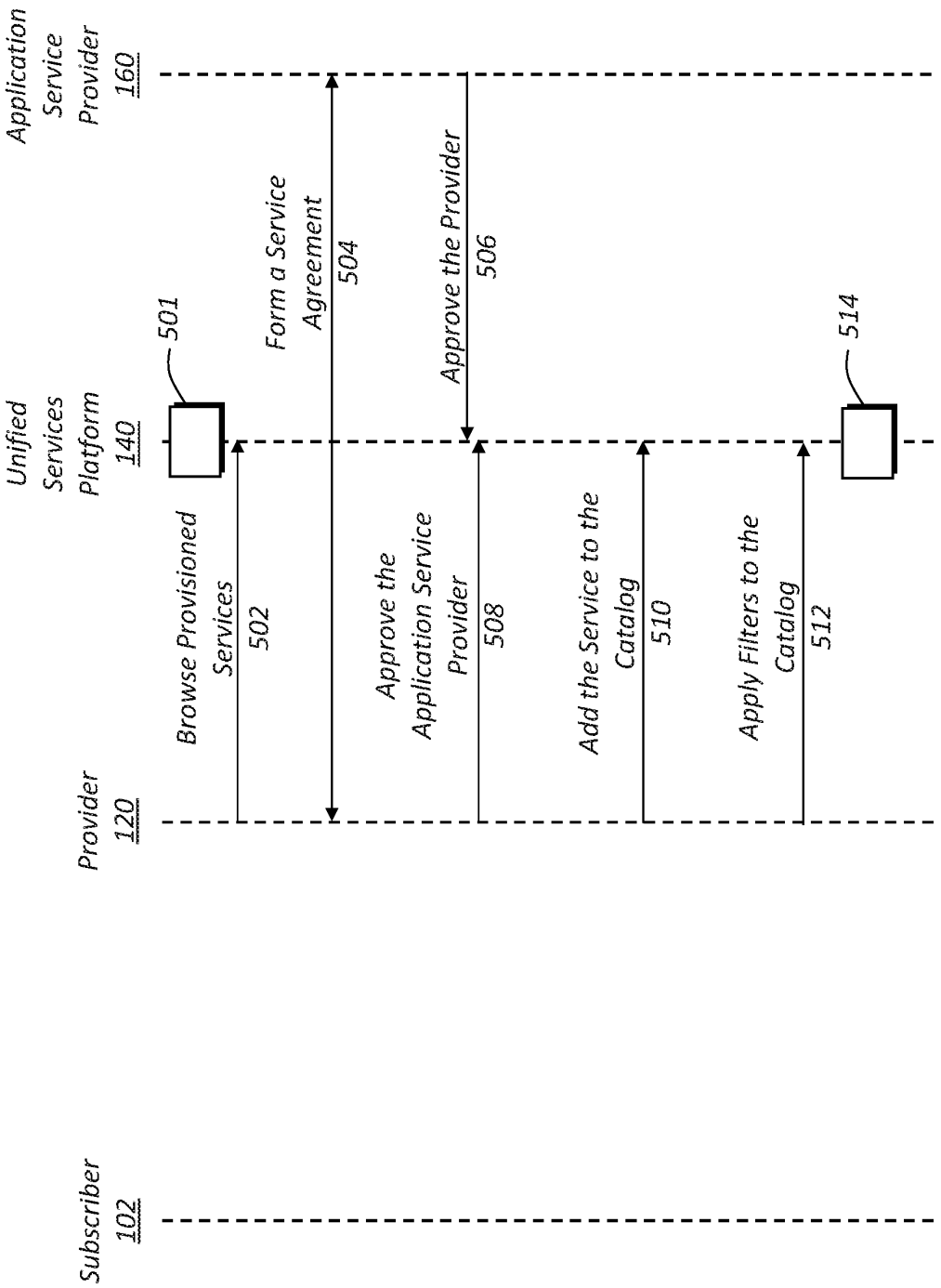

Application Service Provider 160
Unified Services Platform 140
Provider 120
Subscriber 102
501
514
Form a Service Agreement 504
Approve the Provider 506
Browse Provisioned Services 502
Approve the Application Service Provider 508
Add the Service to the Catalog 510
Apply Filters to the Catalog 512

FIG. 5

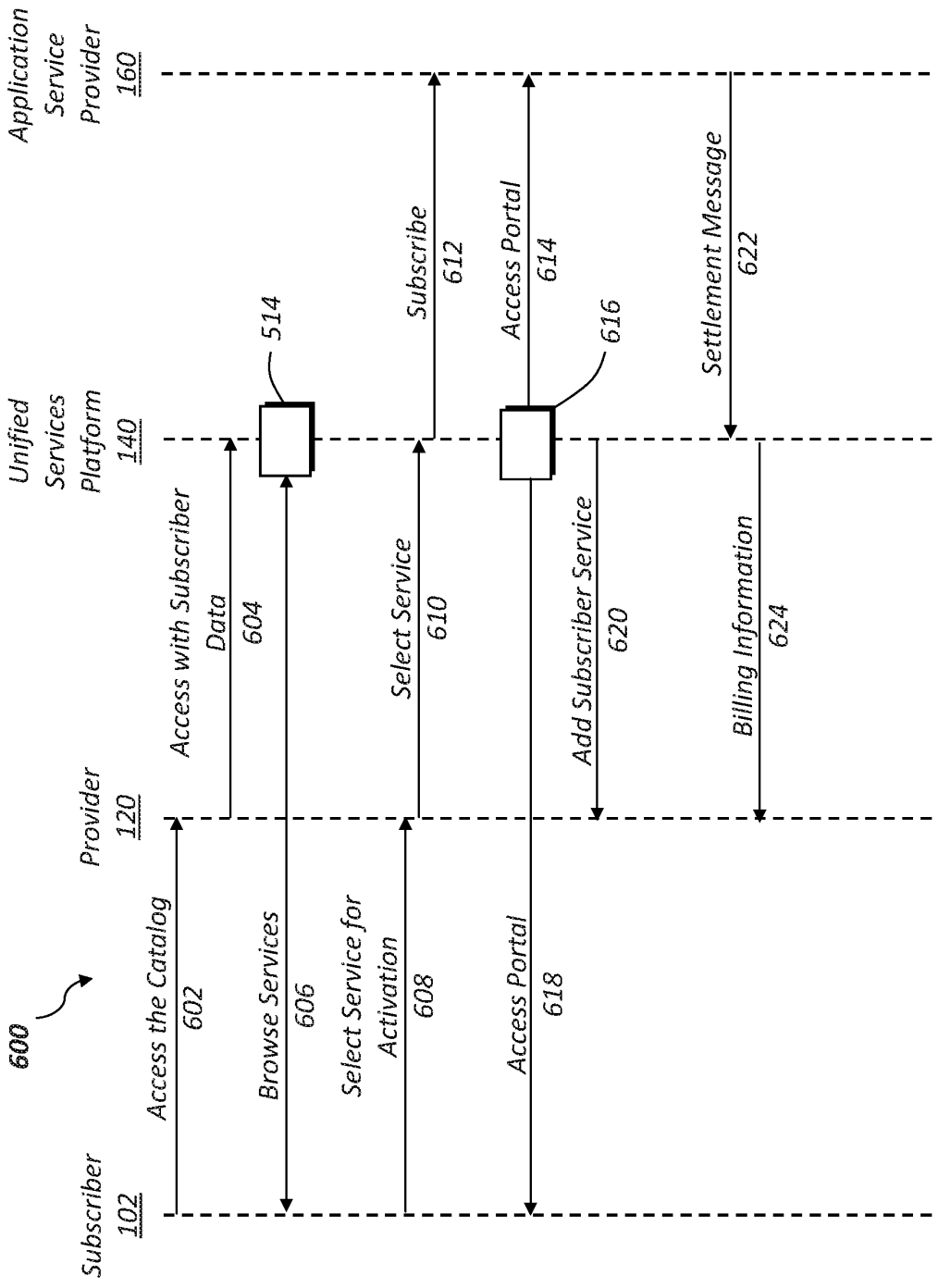

600
Subscriber 102
Provider 120
Unified Services Platform 140
Application Service Provider 160
Access the Catalog 602
Access with Subscriber Data 604
514
Browse Services 606
Select Service for Activation 608
Select Service 610
Subscribe 612
Access Portal 614
616
Access Portal 618
Add Subscriber Service 620
Settlement Message 622
Billing Information 624

FIG. 6

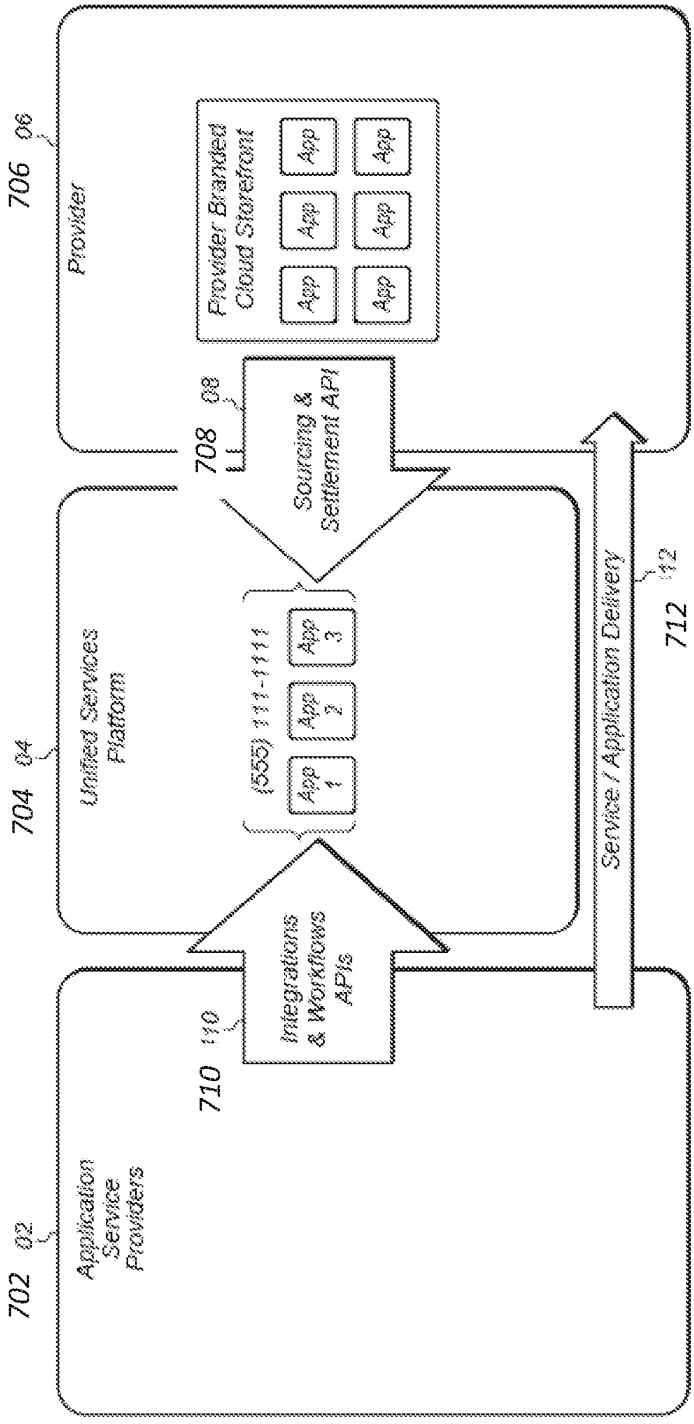

706
06
Provider
Provider Branded Cloud Storefront
App
App
App
App
App
App
708
08
Sourcing & Settlement API
704
04
Unified Services Platform
(555) 111-1111
App 1
App 2
App 3
710
10
Integrations & Workflows APIs
712
12
Service / Application Delivery
702
02
Application Service Providers

FIG. 7

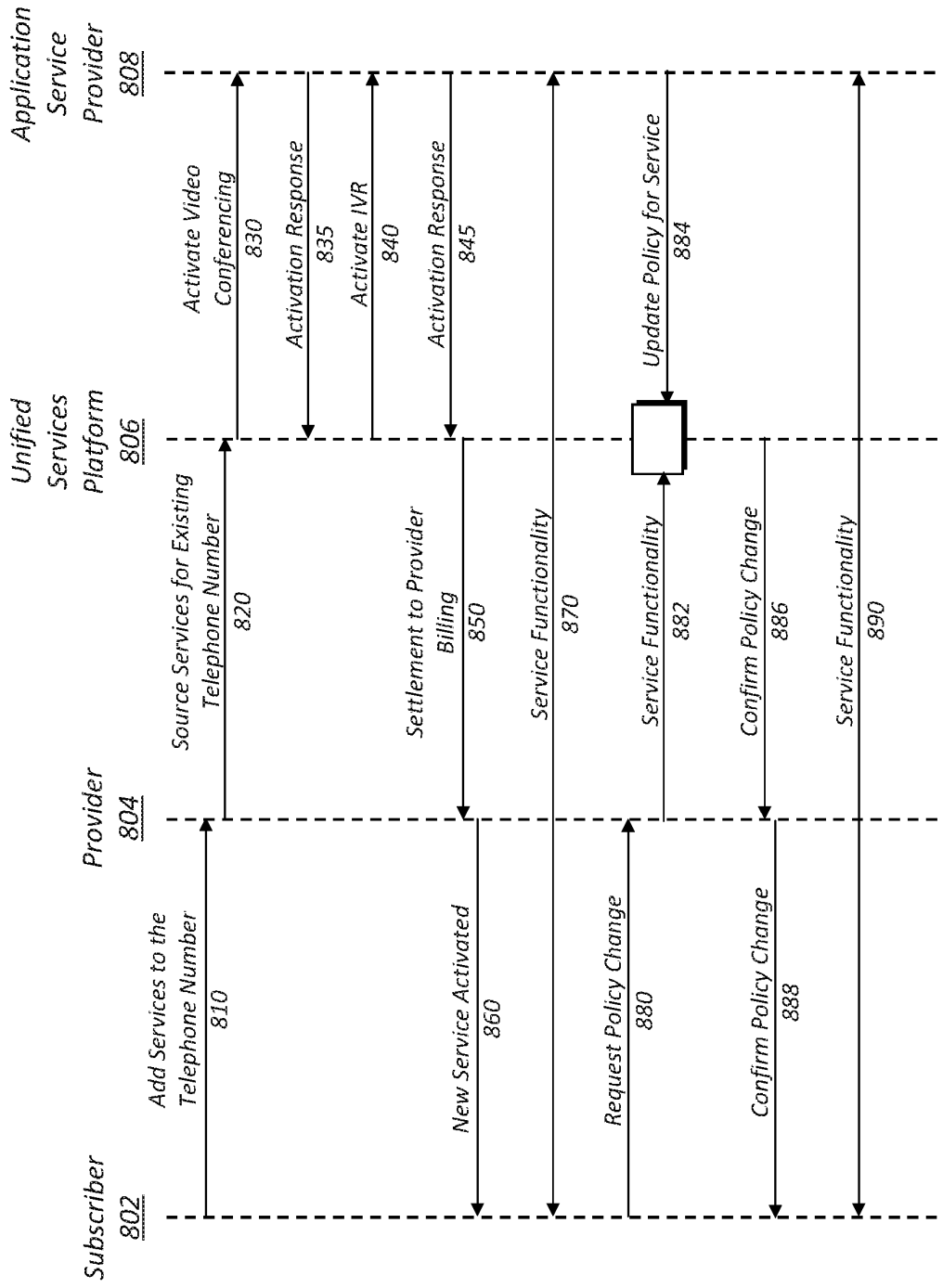

Subscriber 802
Provider 804
Unified Services Platform 806
Application Service Provider 808
Add Services to the Telephone Number 810
Source Services for Existing Telephone Number 820
Activate Video Conferencing 830
Activation Response 835
Activate IVR 840
Activation Response 845
Settlement to Provider Billing 850
New Service Activated 860
Service Functionality 870
Request Policy Change 880
Service Functionality 882
Update Policy for Service 884
Confirm Policy Change 886
Confirm Policy Change 888
Service Functionality 890

FIG. 8

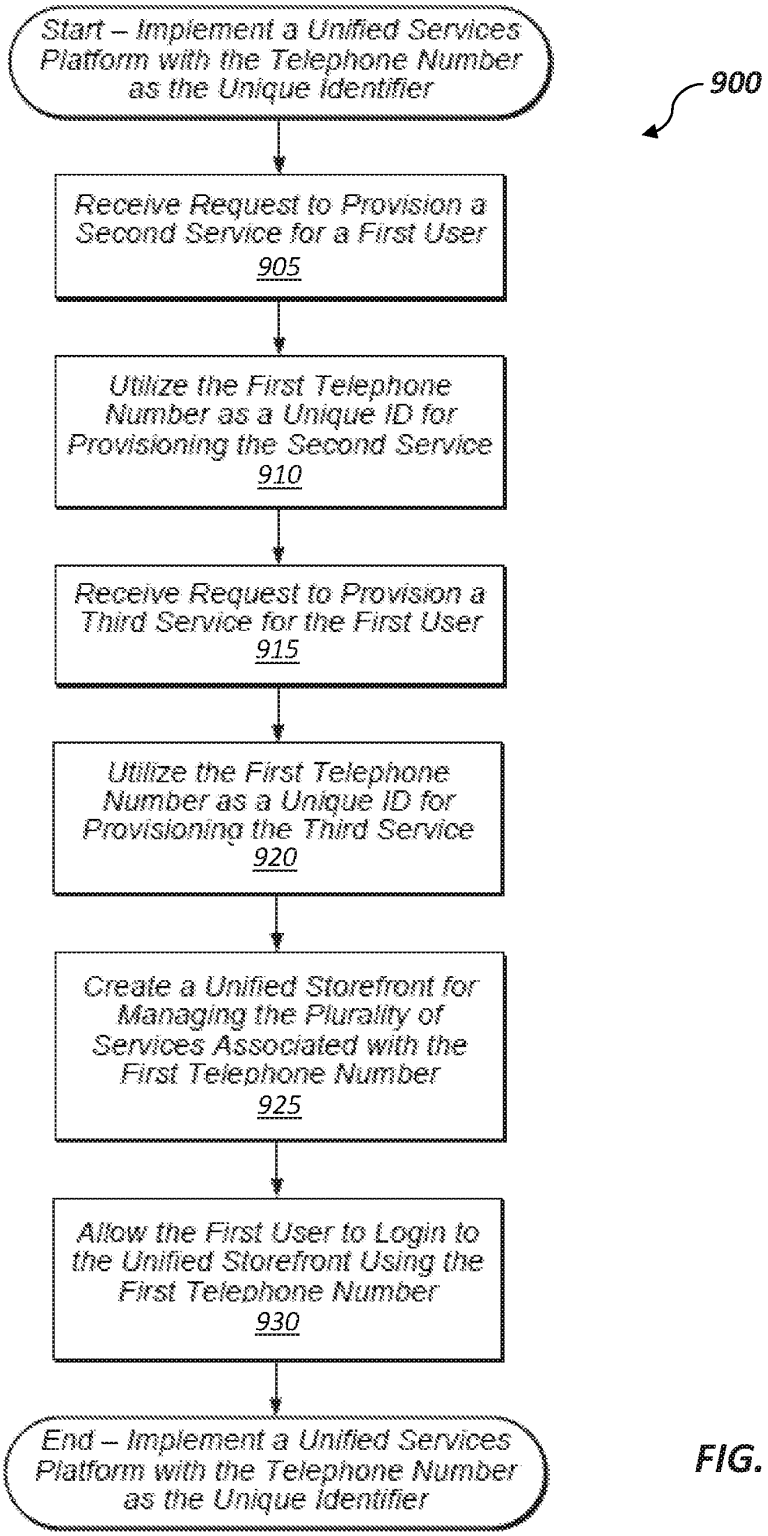

Start – Implement a Unified Services Platform with the Telephone Number as the Unique Identifier
900
Receive Request to Provision a Second Service for a First User
905
Utilize the First Telephone Number as a Unique ID for Provisioning the Second Service
910
Receive Request to Provision a Third Service for the First User
915
Utilize the First Telephone Number as a Unique ID for Provisioning the Third Service
920
Create a Unified Storefront for Managing the Plurality of Services Associated with the First Telephone Number
925
Allow the First User to Login to the Unified Storefront Using the First Telephone Number
930
End – Implement a Unified Services Platform with the Telephone Number as the Unique Identifier

FIG. 9

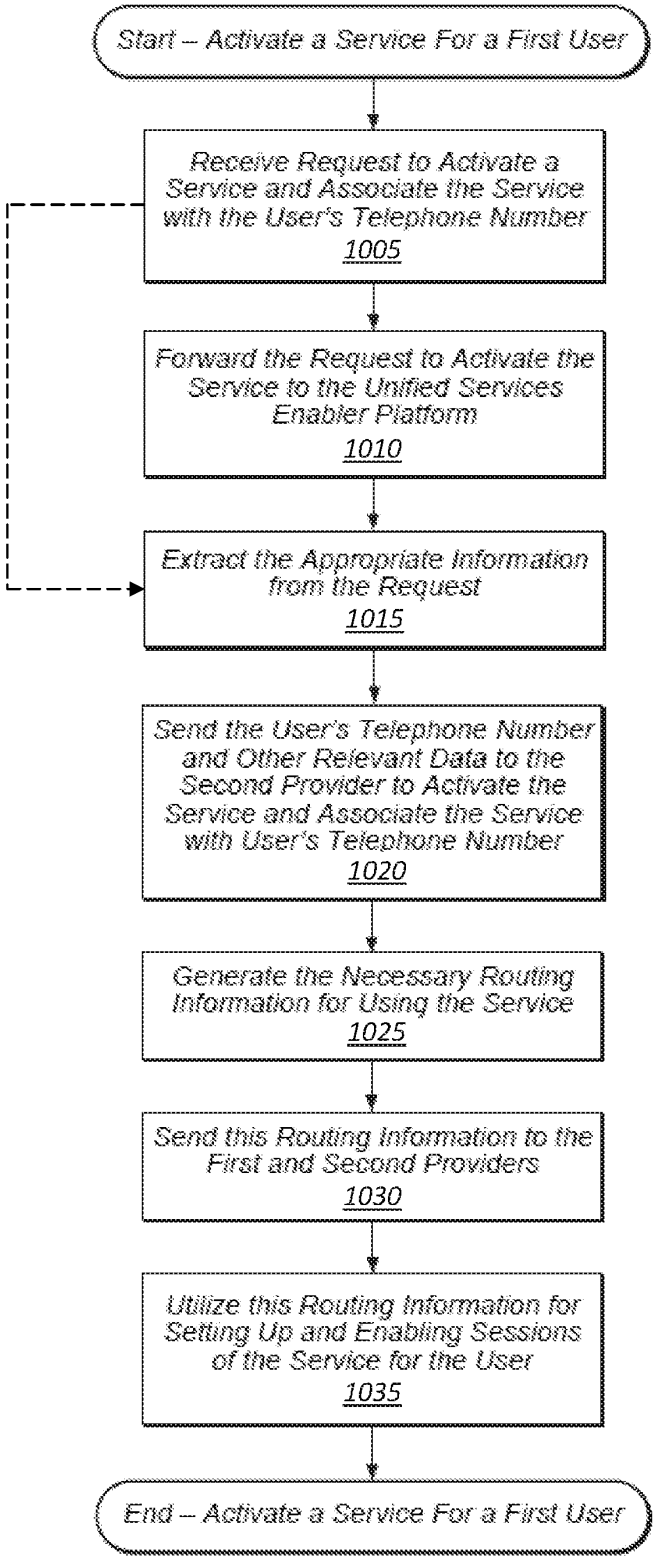

Start – Activate a Service For a First User
1000
Receive Request to Activate a Service and Associate the Service with the User's Telephone Number
1005
Forward the Request to Activate the Service to the Unified Services Enabler Platform
1010
Extract the Appropriate Information from the Request
1015
Send the User's Telephone Number and Other Relevant Data to the Second Provider to Activate the Service and Associate the Service with User's Telephone Number
1020
Generate the Necessary Routing Information for Using the Service
1025
Send this Routing Information to the First and Second Providers
1030
Utilize this Routing Information for Setting Up and Enabling Sessions of the Service for the User
1035
End – Activate a Service For a First User

FIG. 10

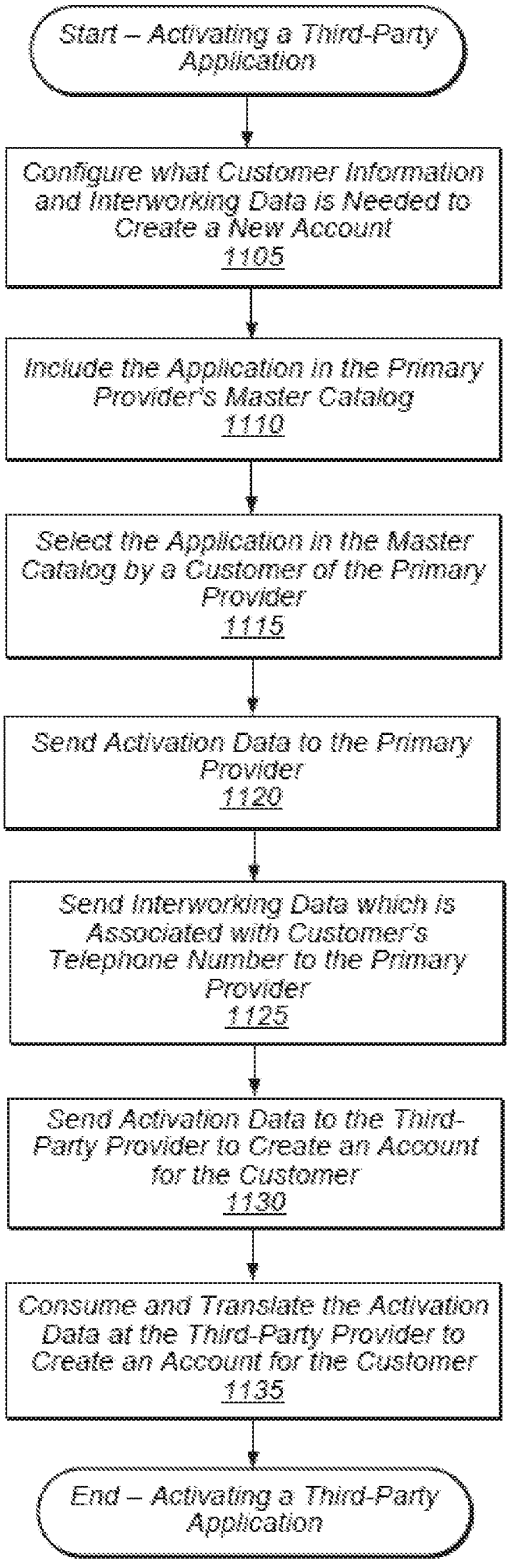

Start – Activating a Third-Party Application
Configure what Customer Information and Interworking Data is Needed to Create a New Account
1105
Include the Application in the Primary Provider's Master Catalog
1110
Select the Application in the Master Catalog by a Customer of the Primary Provider
1115
Send Activation Data to the Primary Provider
1120
Send Interworking Data which is Associated with Customer's Telephone Number to the Primary Provider
1125
Send Activation Data to the Third-Party Provider to Create an Account for the Customer
1130
Consume and Translate the Activation Data at the Third-Party Provider to Create an Account for the Customer
1135
End – Activating a Third-Party Application
1100

FIG. 11

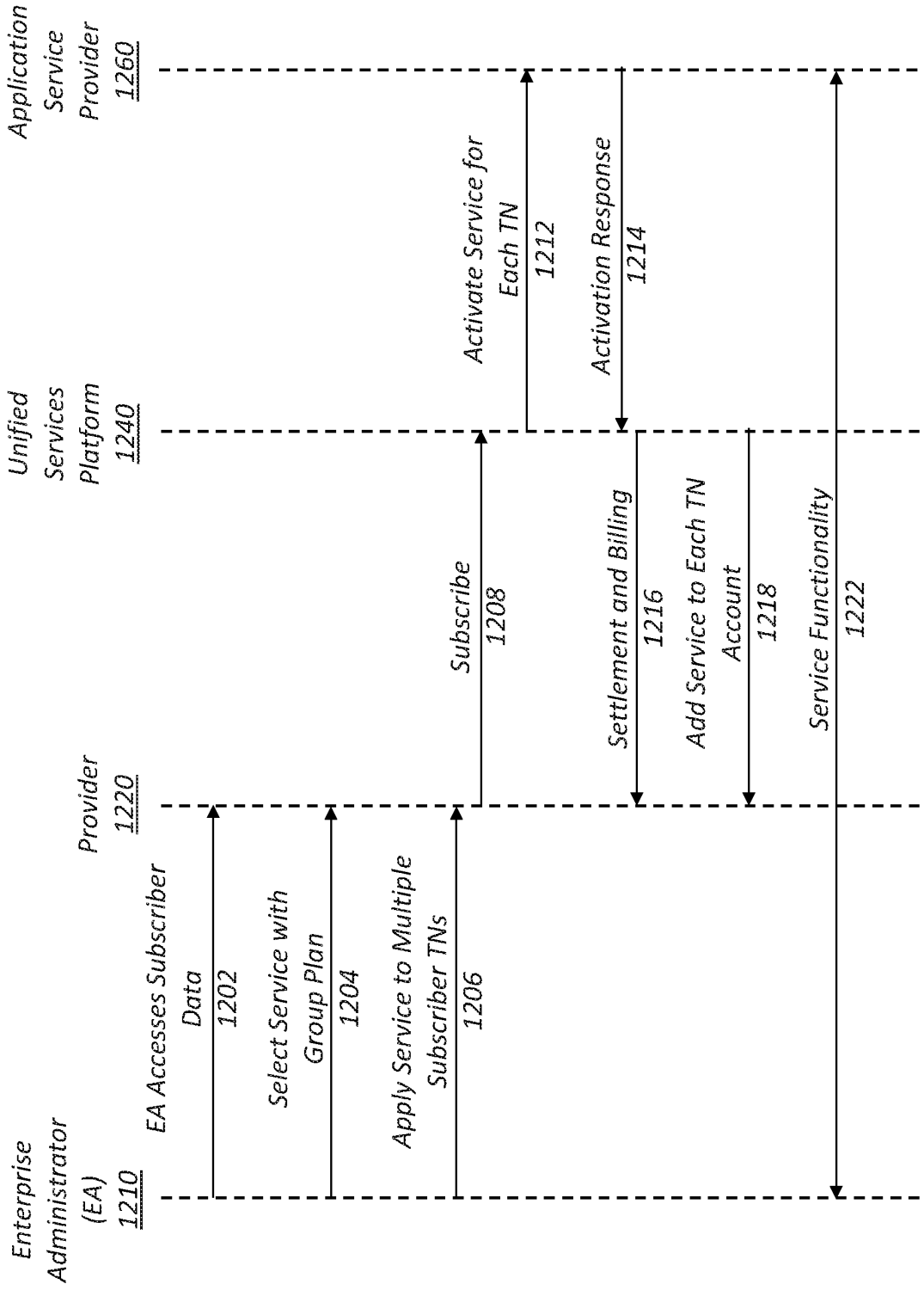

Enterprise Administrator (EA) 1210
Provider 1220
Unified Services Platform 1240
Application Service Provider 1260
EA Accesses Subscriber Data 1202
Select Service with Group Plan 1204
Apply Service to Multiple Subscriber TNs 1206
Subscribe 1208
Activate Service for Each TN 1212
Activation Response 1214
Settlement and Billing 1216
Add Service to Each TN Account 1218
Service Functionality 1222

FIG. 12

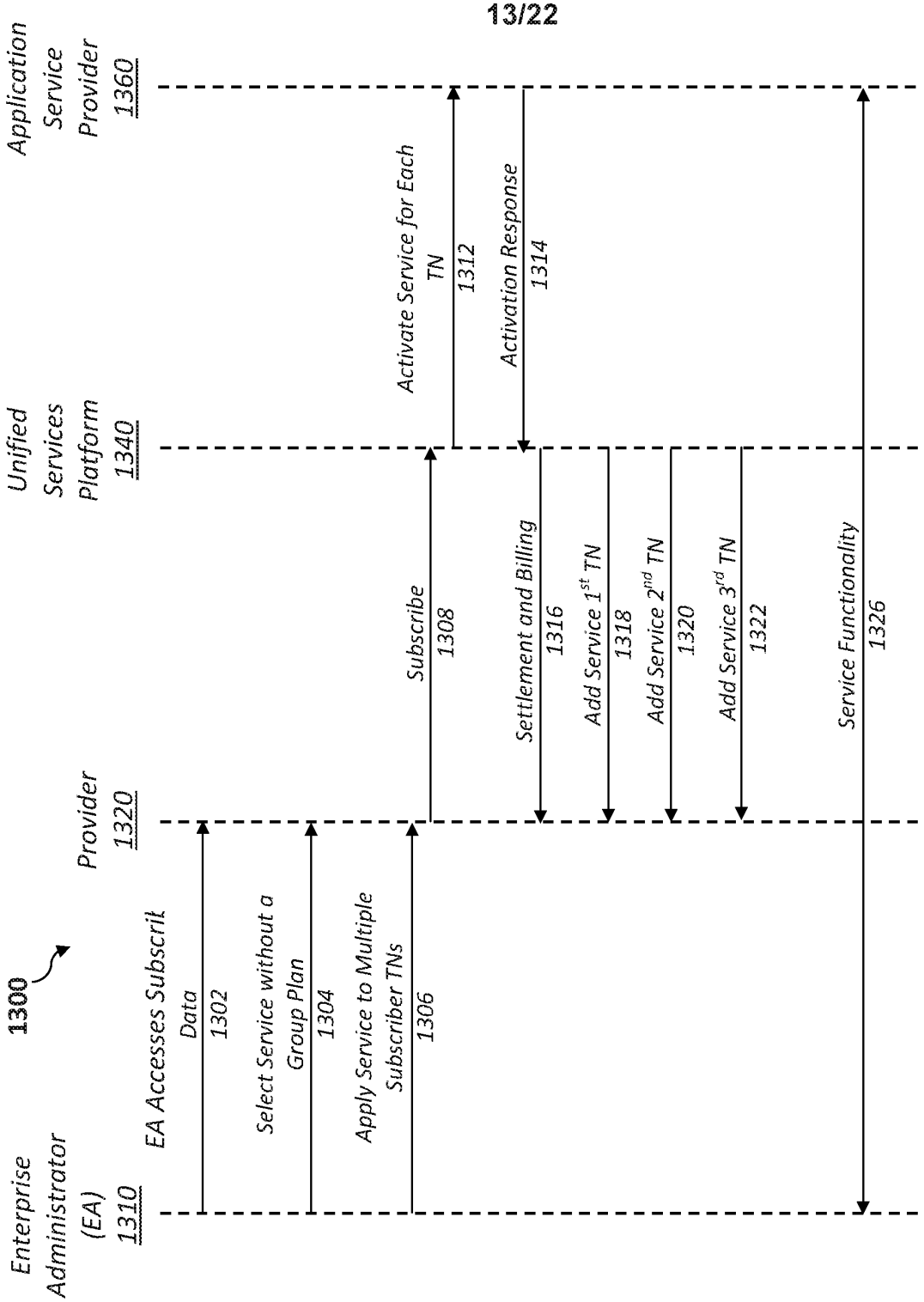

1300
Enterprise Administrator (EA) 1310
Provider 1320
Unified Services Platform 1340
Application Service Provider 1360
EA Accesses Subscrit Data 1302
Select Service without a Group Plan 1304
Apply Service to Multiple Subscriber TNs 1306
Subscribe 1308
Activate Service for Each TN 1312
Activation Response 1314
Settlement and Billing 1316
Add Service 1st TN 1318
Add Service 2nd TN 1320
Add Service 3rd TN 1322
Service Functionality 1326

FIG. 13

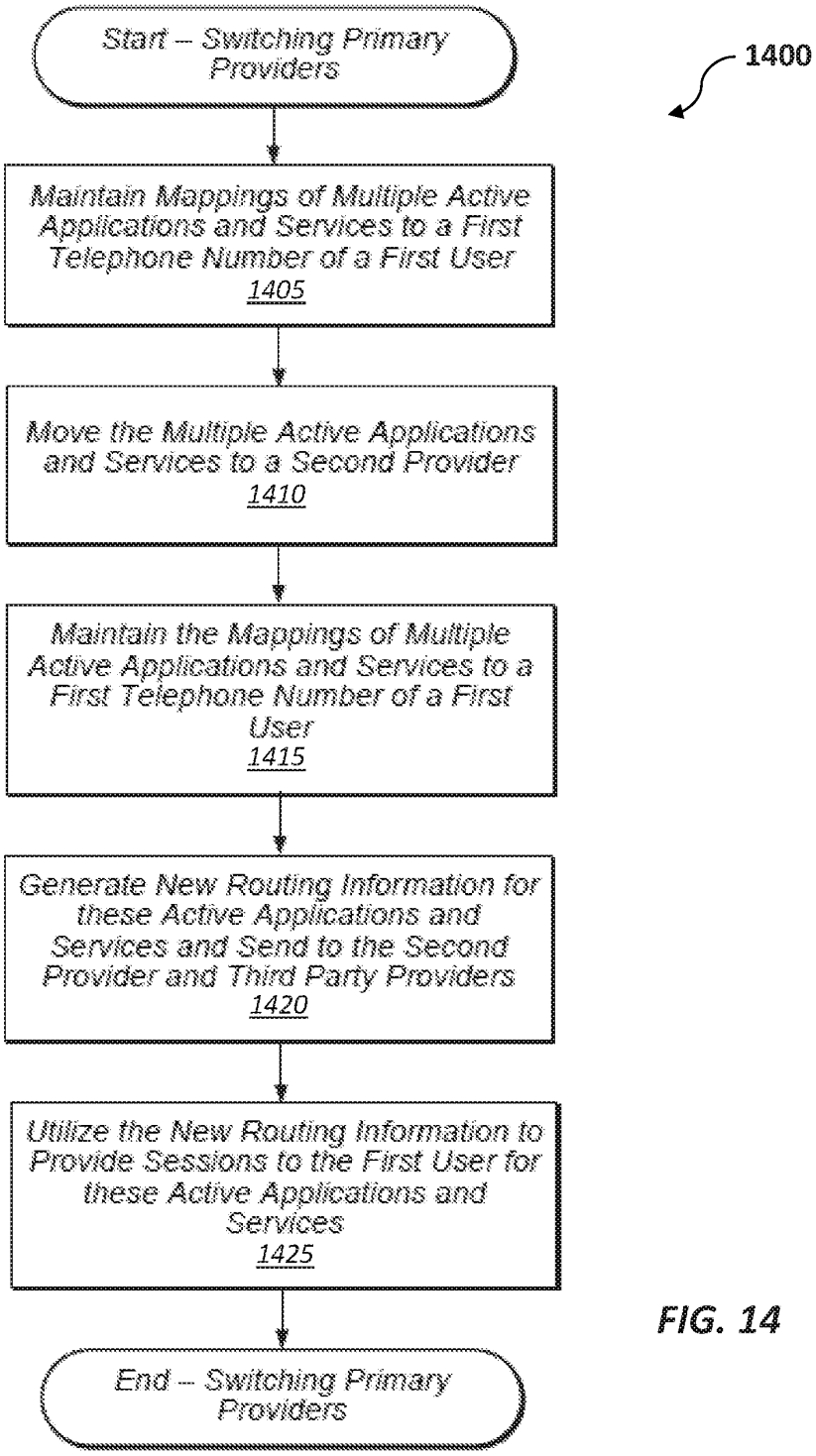

Start – Switching Primary Providers
1400
Maintain Mappings of Multiple Active Applications and Services to a First Telephone Number of a First User
1405
Move the Multiple Active Applications and Services to a Second Provider
1410
Maintain the Mappings of Multiple Active Applications and Services to a First Telephone Number of a First User
1415
Generate New Routing Information for these Active Applications and Services and Send to the Second Provider and Third Party Providers
1420
Utilize the New Routing Information to Provide Sessions to the First User for these Active Applications and Services
1425
End – Switching Primary Providers

FIG. 14

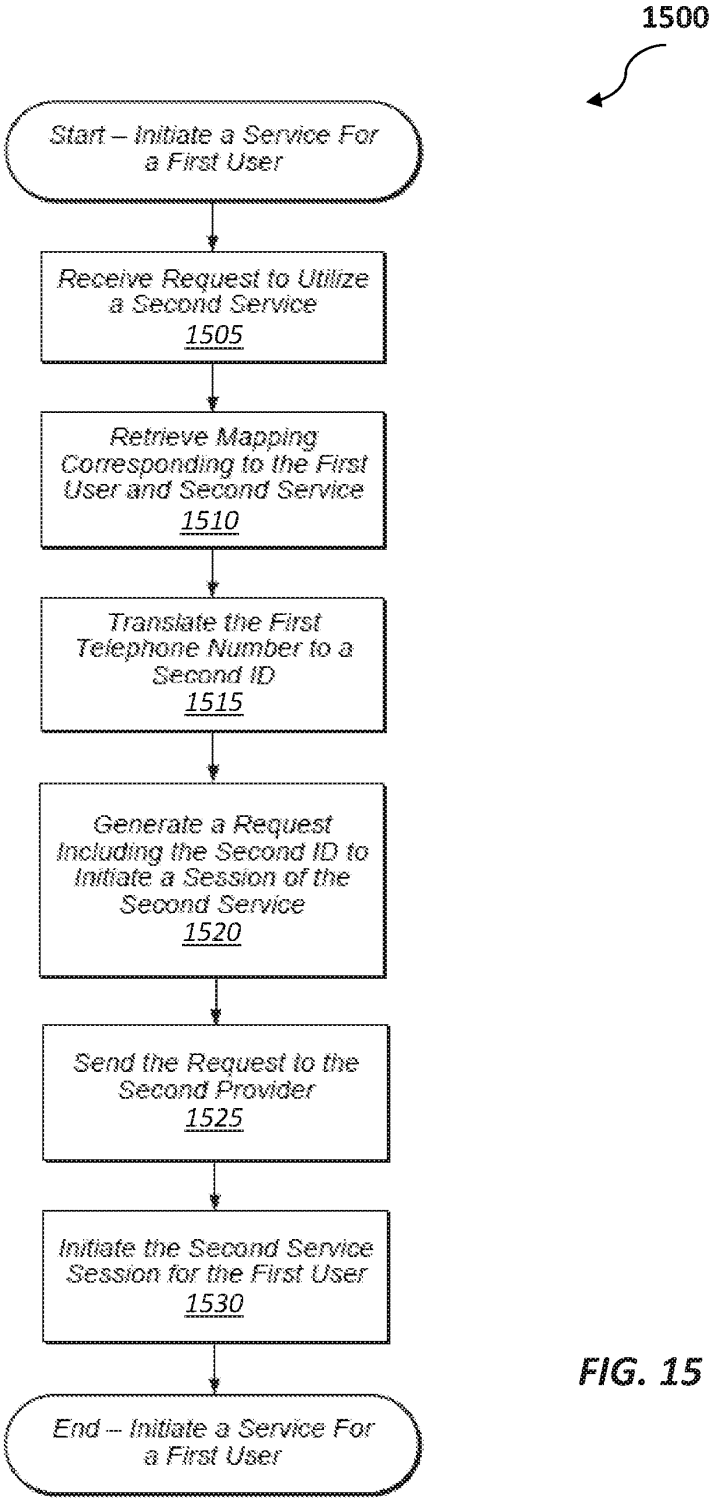

1500
Start – Initiate a Service For a First User
Receive Request to Utilize a Second Service
1505
Retrieve Mapping Corresponding to the First User and Second Service
1510
Translate the First Telephone Number to a Second ID
1515
Generate a Request Including the Second ID to Initiate a Session of the Second Service
1520
Send the Request to the Second Provider
1525
Initiate the Second Service Session for the First User
1530
End – Initiate a Service For a First User

FIG. 15

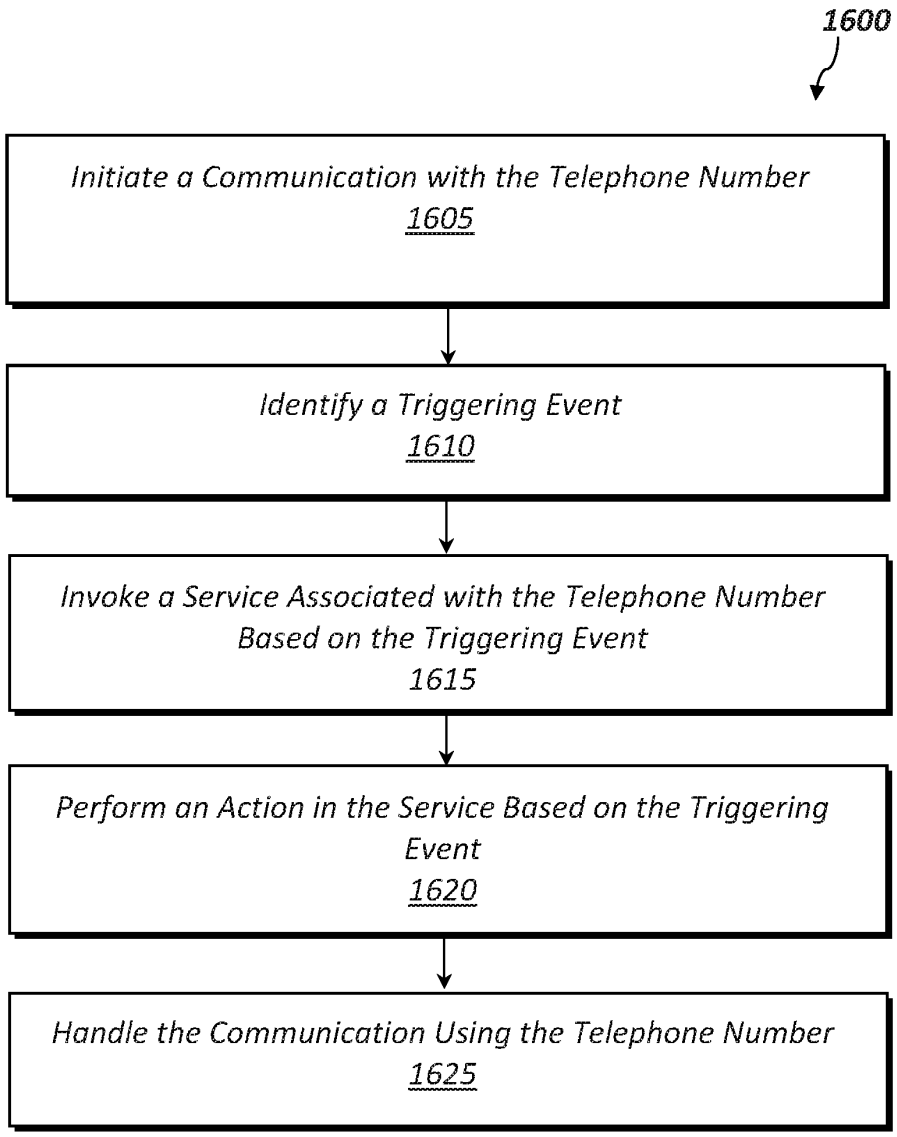

1600
Initiate a Communication with the Telephone Number
1605
Identify a Triggering Event
1610
Invoke a Service Associated with the Telephone Number Based on the Triggering Event
1615
Perform an Action in the Service Based on the Triggering Event
1620
Handle the Communication Using the Telephone Number
1625

FIG. 16

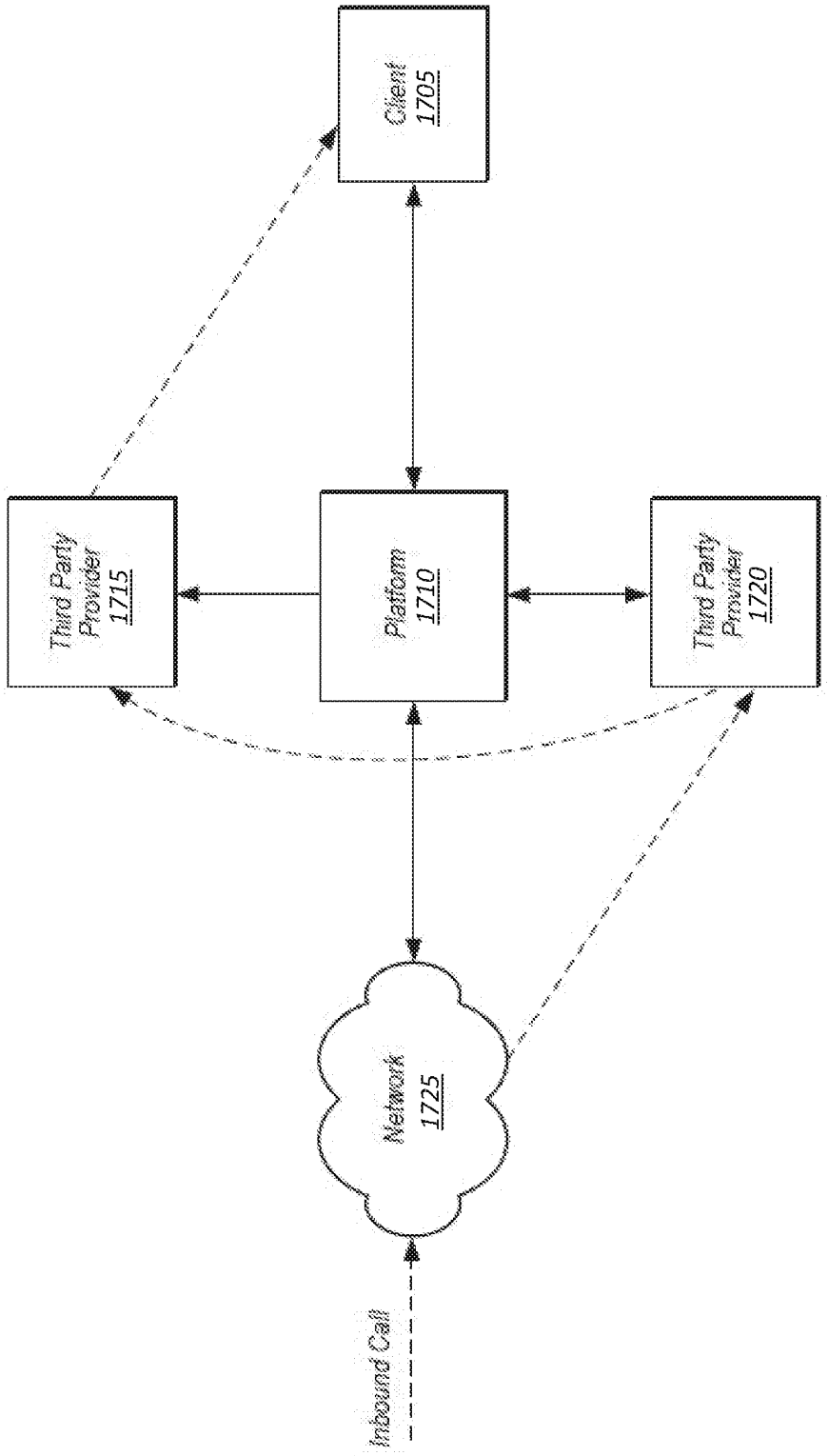

Client
1705
Third Party
Provider
1715
Platform
1710
Third Party
Provider
1720
Network
1725
Inbound Call

FIG. 17

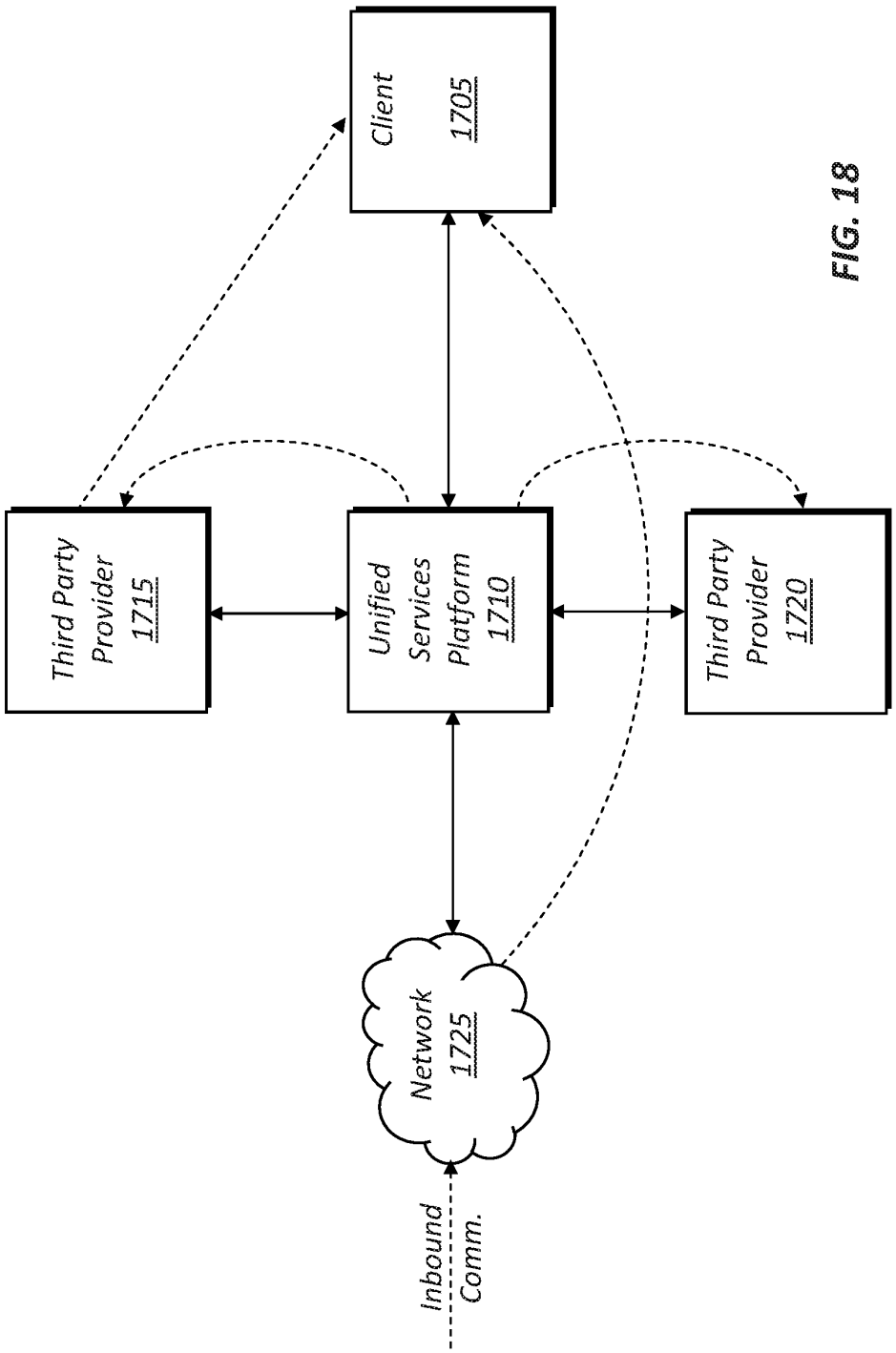

Client
1705
Third Party Provider
1715
Unified Services Platform
1710
Third Party Provider
1720
Network
1725
Inbound Comm.

FIG. 18

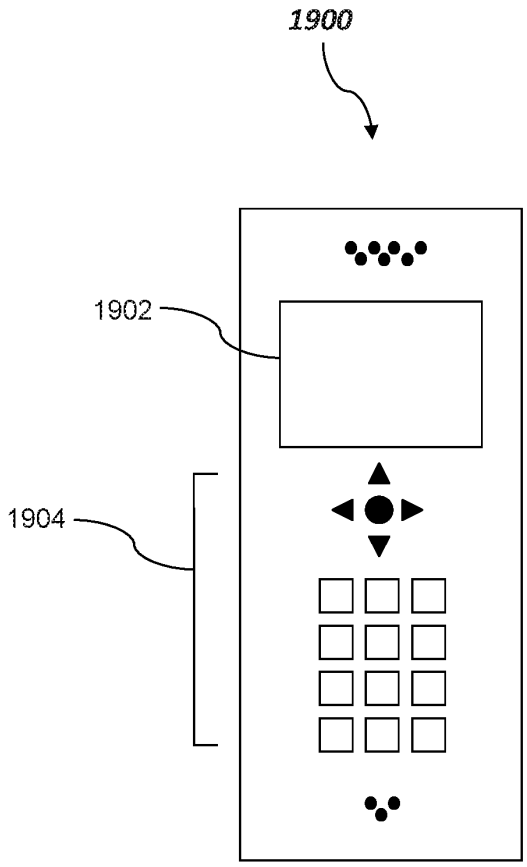


FIG. 19

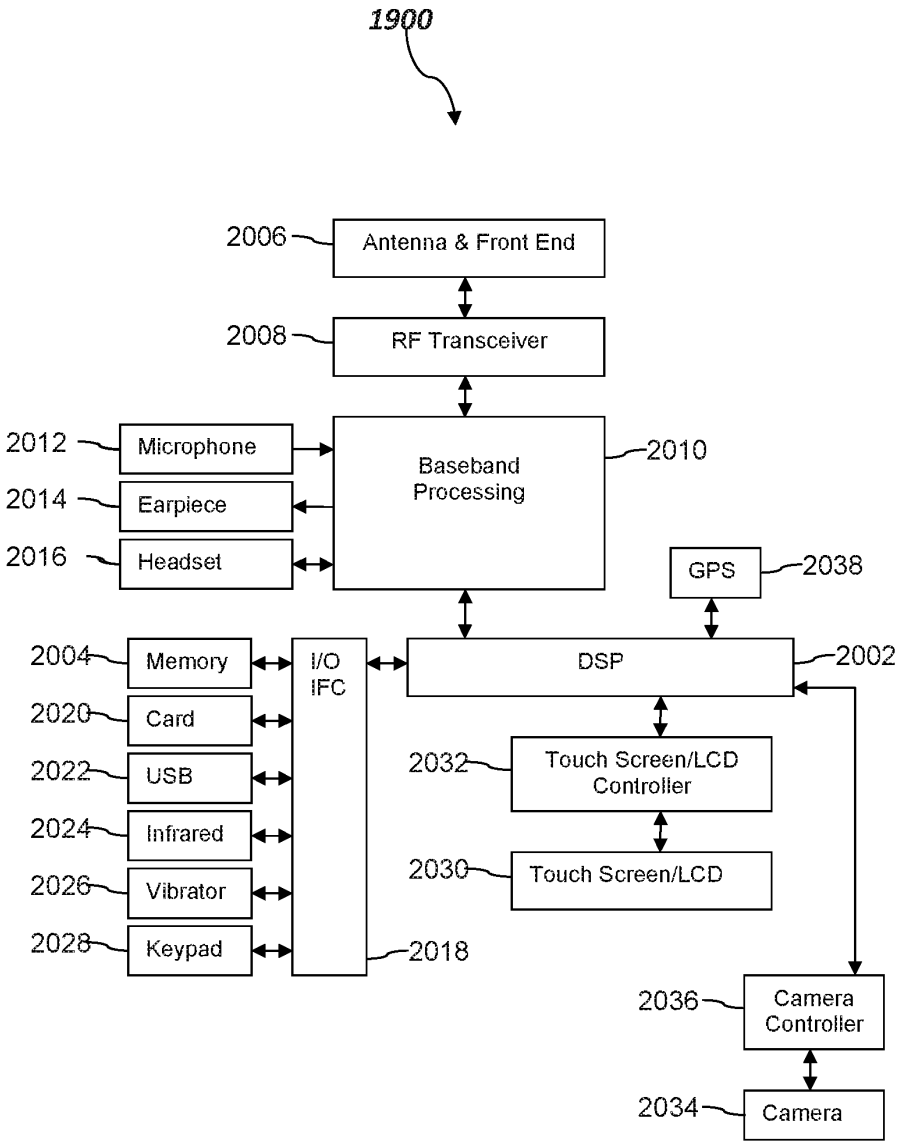

1900
2006
Antenna & Front End
2008
RF Transceiver
2012
Microphone
2014
Earpiece
2016
Headset
Baseband Processing
2010
GPS
2038
2004
Memory
2020
Card
2022
USB
2024
Infrared
2026
Vibrator
2028
Keypad
I/O IFC
2018
DSP
2002
2032
Touch Screen/LCD Controller
2030
Touch Screen/LCD
2036
Camera Controller
2034
Camera

FIG. 20

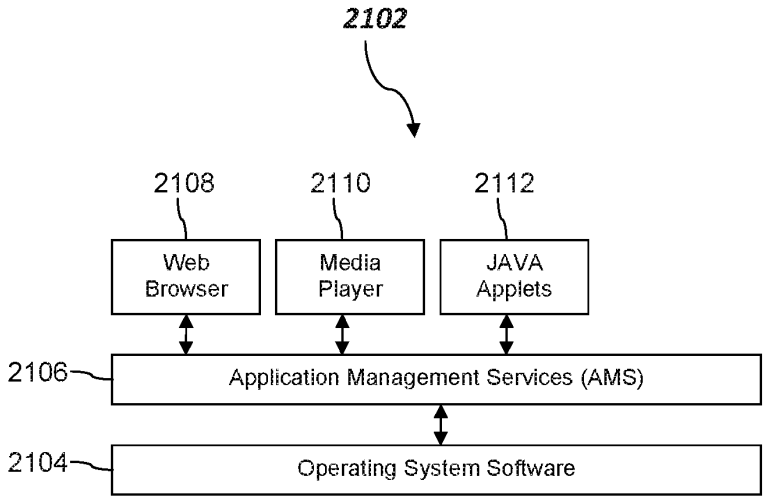


FIG. 21A

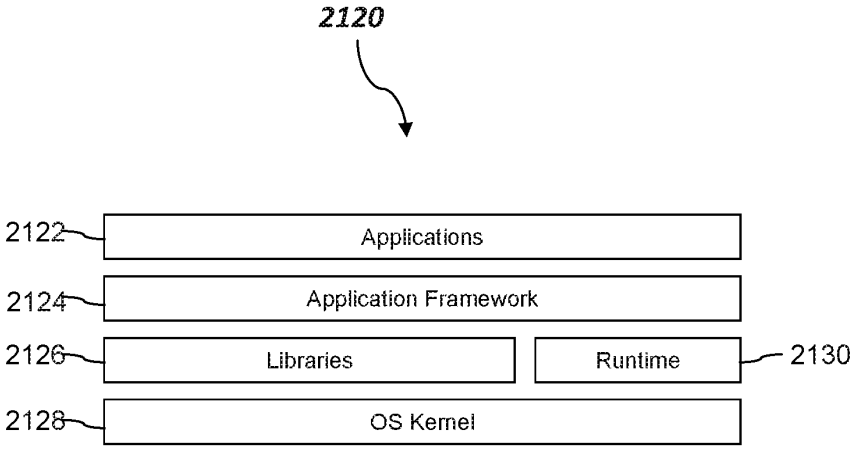


FIG. 21B

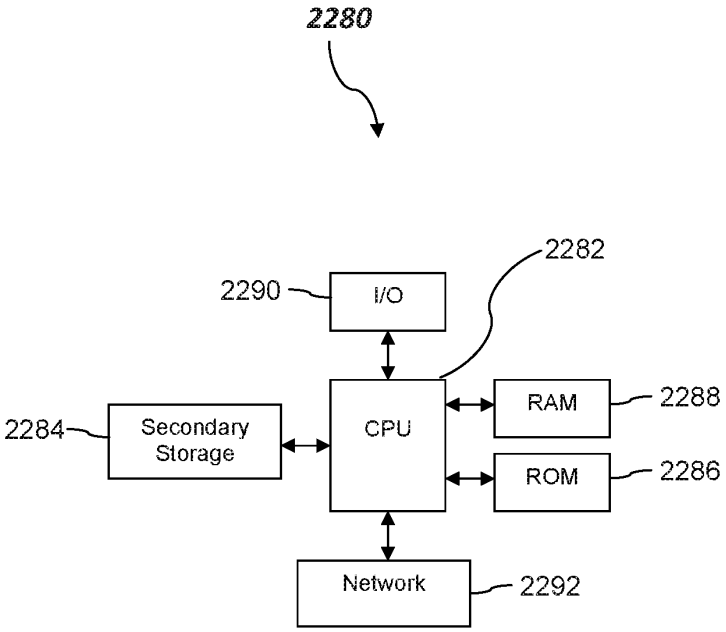

2280
2282
2290
I/O
2284
Secondary Storage
CPU
RAM
2288
ROM
2286
Network
2292

FIG. 22

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Filer:	Michael W. Piper/Jennifer Wiebusch
Attorney Docket Number:	4503-00600

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**730**

Electronic Acknowledgement Receipt	
EFS ID:	25439365
Application Number:	15094920
International Application Number:	
Confirmation Number:	8448
Title of Invention:	MULTIPLE SERVICE GROUP INTERACTIONS AND AUTHORIZATIONS
First Named Inventor/Applicant Name:	Evin A. Hunt
Customer Number:	30652
Filer:	Michael W. Piper
Filer Authorized By:	
Attorney Docket Number:	4503-00600
Receipt Date:	08-APR-2016
Filing Date:	
Time Stamp:	20:01:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$730
RAM confirmation Number	5587
Deposit Account	501515
Authorized User	PIPER, MICHAEL W.
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 CFR 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 CFR 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 CFR 1.19 (Document supply fees)

Charge any Additional Fees required under 37 CFR 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	ORSH_4503-00600_ADS.pdf	1823352 2182749f17e6f0c4d18951611b0c836dae8362e9	no	9
Warnings:					
Information:					
2	Oath or Declaration filed	ORSH_4503-00600_Signed_Declaration.pdf	230052 961b2102d65e66571bb2faf953dcf1b6078574b1	no	3
Warnings:					
Information:					
3		ORSH_4503-00600_Specification.pdf	406077 83986a7515c81078ff3fffad12ce9deffdb206fd	yes	95

Multipart Description/PDF files in .zip description

Document Description	Start	End
Specification	1	86
Claims	87	94
Abstract	95	95

Warnings:					
Information:					
4	Drawings-only black and white line drawings	ORSH_4503-00600_Drawings.pdf	609097 24c26fad577389d4fb518ad209e80594c1c38224	no	22
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	35321 67505cee666347d3dedc2f3d0ab60eb923d25cb6	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	3103899		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.