

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,
Petitioner

IPR2023-00822
U.S. Patent No. 9,883,047

**PETITION FOR *INTER PARTES* REVIEW
UNDER 35 U.S.C. § 312 AND 37 C.F.R. § 42.104**

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PETITIONER’S EXHIBIT LIST

Ex.1001	U.S. Pat. No. 9,883,047 to Hunt <i>et al.</i>
Ex.1002	Prosecution History of U.S. Pat. No. 9,883,047
Ex.1003	Declaration of Henry Houh, Ph.D., under 37 C.F.R. § 1.68
Ex.1004	<i>Curriculum Vitae</i> of Henry Houh, Ph.D.
Ex.1005	U.S. Pat. App. Pub. No. 2013/0132854 to Raleigh <i>et al.</i>
Ex.1006	U.S. Pat. No. 7,593,980 to Marascio <i>et al.</i>
Ex.1007	U.S. Pat. No. 7,496,054 to Taylor
Ex.1008	Microsoft Press Computer Dictionary (3d ed. 1997)
Ex.1009	Newton’s Telecom Dictionary (18th ed. 2002)
Ex.1010	U.S. Pat. App. Pub. No. 2011/0126266 to Weatherston
Ex.1011	U.S. Pat. App. Pub. No. 20060048212 to Tsuruoka <i>et al.</i>
Ex.1012	U.S. District Courts –Combined Civil and Criminal Federal Court Management Statistics (Dec. 31, 2022), available at: https://www.uscourts.gov/statistics/table/na/federal-court-management-statistics/2022/12/31-1
Ex.1013	Docket Control Order, <i>Zilkr Cloud Technologies, LLC v. Cisco Systems, Inc.</i> , No. 2-22-cv-00166-JRG-RSP, Dkt. No. 31 (E.D. Tex., Oct. 13, 2022)
Ex.1014	Plaintiff’s Notice of Disclosures, <i>Zilkr Cloud Technologies, LLC v. Cisco Systems, Inc.</i> , No. 2-22-cv-00166-JRG-RSP, Dkt. No. 26 (E.D. Tex., Sep. 22, 2022)
Ex.1015	Original Complaint for Patent Infringement, <i>Zilkr Cloud Technologies, LLC v. Cisco Systems, Inc.</i> , No. 2-22-cv-00166-JRG-RSP, Dkt. No. 1 (E.D. Tex., May 20, 2022)
Ex.1016	Director Katherine K. Vidal, “Interim Procedure for Discretionary

	Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation,” June 21, 2022
Ex.1017	PACER Calendar Events Report for Judge Rodney Gilstrap, January 22, 2024.
Ex.1018	U.S. Pat. App. Pub. No. 2007/0240202 to Sullivan <i>et al.</i>

I. INTRODUCTION

Pursuant to 35 U.S.C. §§ 311, 314(a), and 37 C.F.R. § 42.100, Cisco Systems, Inc. (“Petitioner”) requests that the Board review and cancel as unpatentable under 35 U.S.C. §103 (AIA) claims 1 and 4-7 (the “Challenged Claims”) of U.S. 9,883,047 (the “’047 patent,” Ex.1001).

The ’047 patent describes methods for “provisioning a service for use with a group plan.” Ex.1001, 3:47-67. A group plan may be administered by a “group account representative” on behalf of the employees of a company, or for members of a family, for example. Ex.1001, 30:31-32. The group plan service provisioning methods described by the ’047 patent are facilitated by a “unified services platform” that receives subscription requests from the group account administrator and manages service activation with third-party application service providers. Ex.1001, 3:47-67.

As shown below and confirmed in Dr. Henry Houh’s Declaration (Ex.1003), these concepts were well known before the ’047 patent’s earliest priority date. The challenge presented in this Petition renders obvious the Challenged Claims.

II. GROUNDS FOR STANDING

The ’047 patent is eligible for IPR and Petitioner is not barred or estopped from requesting IPR of the Challenged Claims. 37 C.F.R. § 42.104(a).

III. NOTE

Petitioner cites to exhibits' original page numbers. **Emphasis** in quoted material has been added. Claim terms are presented in *italics*.

IV. TECHNOLOGY BACKGROUND

Dr. Henry Houh's Declaration (Ex.1003) provides a background of the relevant technology. Ex.1003, ¶¶27-31.

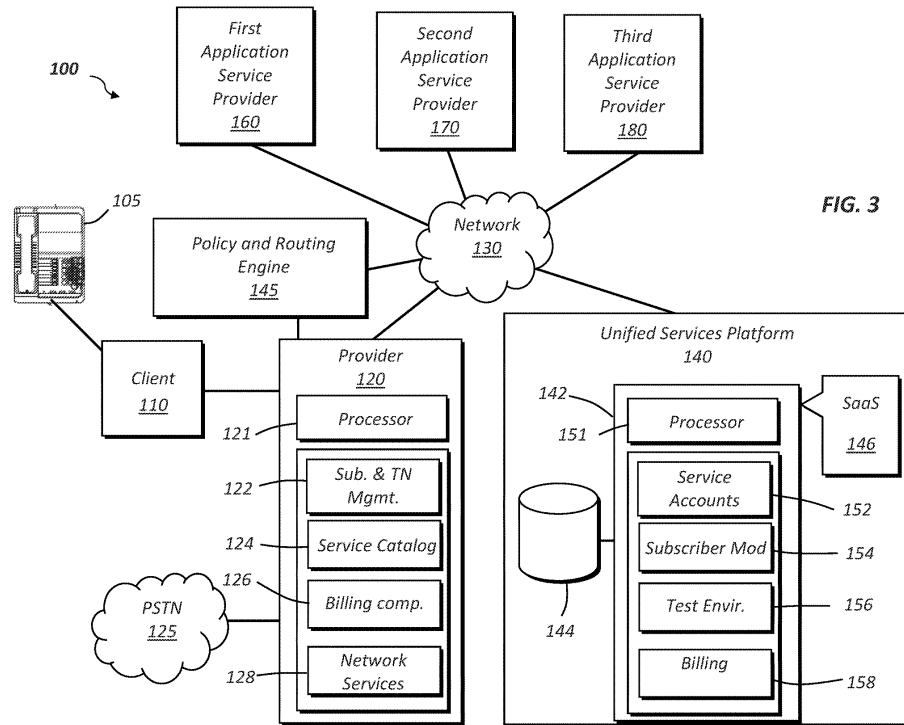
V. SUMMARY OF THE '047 PATENT

The '047 patent relates to methods for “provisioning a service for use with a group plan.” Ex.1001, 3:47-67. The '047 patent explains that a group plan may be administered by a “group account representative” on behalf of the employees of a company, or for members of a family, for example. Ex.1001, 30:31-32. In the case of company employees, the '047 patent explains that the group account representative may be an “enterprise administrator” who is “responsible for establishing a service for one or more subscribers.” Ex.1001, 30:29-31. The services that the group account representative may subscribe to include “video conferencing, text messaging, interactive texting, hosted private branch exchange (PBX) seats, voice mail systems, and other services and applications.” Ex.1001, 11:25-29. Ex.1003, ¶32.

The group plan service provisioning methods described by the '047 patent are facilitated by a “unified services platform” that receives subscription requests

from the group account administrator and manages service activation with third-party application service providers. Ex.1001, 3:47-67. The unified services platform “integrat[es]” API interfaces from the application service providers and a telecommunications provider (network provider) “with a unified services platform system API interface.” Ex.1001, 5:29-43, 51:60-63. In this way, the unified service platform aims to provide “a common interface for each third party service as well as a common interface for the telecommunication provider.” Ex.1001, 8:47-50. Ex.1003, ¶33.

Fig.3 below illustrates the unified services enabler platform 140 connected through the network 130 to client 110, telephone service provider 120, and application service providers 160, 170, and 180. Ex.1001, Fig.3, 3:24-37, 4:7-29.



Ex.1001, Fig.3.

As demonstrated below, it was well-known in the prior art to use a unified platform system to request and provision third party services for a group plan.

Ex.1003, ¶35. It was also well-known in the prior art to integrate APIs of third-party service providers and network providers with a unified platform API.

Ex.1003, ¶¶35.

VI. PROSECUTION HISTORY

The '047 patent claims priority to PCT application PCT/US2014/059959, filed October 9, 2014, which claims priority to U.S. Provisional Patent Application

No. 61/888,856, filed October 9, 2013. Ex.1002, p.305. The application that issued as the '047 patent was filed on April 8, 2016. Ex.1002, p.300. The Patent Office issued a first notice of allowance on October 2, 2017 (Ex.1002, pp.31-38), and a second notice of allowance on November 7, 2017 after receiving an invention disclosure statement (IDS) from the Applicant identifying additional references for consideration. Ex.1002, pp.16-20. The '047 patent issued on January 30, 2018. Ex.1002, p.9.

VII. EFFECTIVE PRIORITY DATE OF THE '047 PATENT

The '047 patent claims priority to a PCT application filed October 9, 2014. The PCT application claims priority to U.S. Non-Provisional Patent Application No. 14/087,768, filed November 23, 2013, and to U.S. Provisional Patent Application No. 61/888,856, filed October 9, 2013.

The Challenged Claims are not entitled to the earliest priority date of the provisional application filed October 9, 2013, because they recite subject matter that is not present in the provisional application. Nevertheless, a determination that the '047 patent is not entitled to an earlier priority date is unnecessary in this proceeding, as the '047 patent is an AIA patent, all of the asserted prior art predates the October 9, 2013 provisional filing date, and none of the exceptions of 35 U.S.C. § 102(b) apply. Petitioner does not waive any right or opportunity it may

have to dispute the priority date of the '047 patent in this or another forum where the issue becomes more relevant.

VIII. LEVEL OF ORDINARY SKILL IN THE ART

A Person of Ordinary Skill in The Art (“POSITA”) at the time that the U.S. Provisional Patent Application was filed in October 2013 would have had experience in and knowledge of telecommunications and networking technologies. Ex.1003, ¶21. A POSITA would have had a bachelor’s degree in electrical engineering, computer science, computer engineering, or an equivalent. A POSITA would have also had two years of experience in telecommunications and networking. Ex.1003, ¶21. Lack of education can be remedied by additional professional experience, and lack of professional experience can be remedied by additional education. Ex.1003, ¶21.

IX. CLAIM CONSTRUCTION

Claim terms in IPR are construed according to their “ordinary and customary meaning” to those of skill in the art. 37 C.F.R. § 42.100(b). Petitioner submits that, for the purposes of this proceeding, the terms of the Challenged Claims should be given their ordinary and customary meaning, and no terms require specific construction. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017). Ex.1003, ¶36.

X. RELIEF REQUESTED AND THE REASONS FOR THE

REQUESTED RELIEF

Petitioner asks that the Board institute an IPR trial and cancel the Challenged Claims as obvious.

XI. IDENTIFICATION OF HOW THE CLAIMS ARE UNPATENTABLE

A. Challenged claims

The Challenged Claims are asserted in *Zilkr Cloud Technologies, LLC v. Cisco Systems, Inc.* No. 2-22-cv-00166 (E.D. Tex. filed May 20, 2022). A finding that the Challenged Claims are unpatentable in this proceeding will resolve the parties' dispute and obviate the need for a trial regarding the '047 patent in the co-pending litigation, substantially reducing the time and expense of that litigation for all parties.

B. Statutory Grounds for challenges

Grounds	Claims	Basis
#1	1, 4-7	35 U.S.C. § 103 over Raleigh

U.S. Pat. App. Pub. No. 2013/0132854 (Ex.1005, "Raleigh"), based on U.S. Appl. No. 13/748,152 filed on January 23, 2013, published on May 23, 2013. Raleigh is prior art under 35 U.S.C. § 102(a)(1).

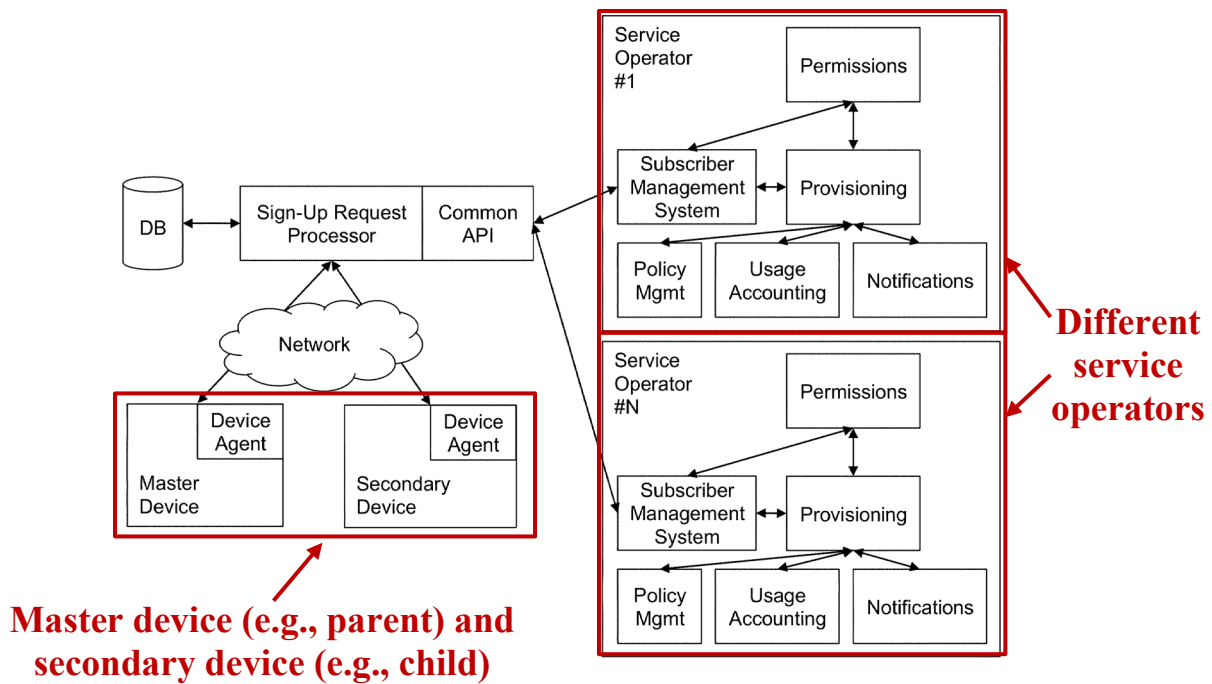
C. Ground 1: Claims 1 and 4-7 are obvious under 35 U.S.C. § 103 over Raleigh

1. Raleigh

Raleigh describes "methods, systems, and apparatuses that allow subscribers

to create and manage a group of two or more devices ... and to share or assign service plans with differen[t] devices in the device group using one or more APIs.” Ex.1005, [0057]. Raleigh explains that “[a]fter a subscriber has established a master service account, the subscriber can create a device group by associating additional mobile wireless communication devices with the established master service account.” Ex.1005, [0053]. The subscriber establishing the master service account may be “a parent” or “an employer,” for example. Ex.1005, [0382]-[0383]. Ex.1003, ¶¶40-42.

Raleigh’s methods allow a master service account administrator, such as a parent, “to purchase a single service plan that is shared among all members of the family.” Ex.1005, [0383]. FIG.15I of Raleigh, reproduced in annotated form below, shows a system configuration allowing a master device or a secondary device of a device group to sign up for services from different service operators through a common API. Ex.1005, [0927]. Ex.1003, ¶¶43-45.



Ex.1005, FIG.15I (annotated); Ex.1003, ¶45

Some of the available service plans described in Raleigh include “voice services (e.g., phone calls, etc.), messaging services (e.g., text messages, multimedia messages, etc.), data services (e.g., Internet access, etc.), and hybrid services (e.g., voice over IP (VOIP), video chat, etc.).” Ex.1005, [0381]. To facilitate service plan selection among a variety of service plans and service providers, Raleigh’s architecture includes a “third-party service partner [that] provides a communication service marketplace directly to users of mobile devices 105, e.g., akin to or integrated with **an application store.**” Ex.1005, [1711]. The third-party service partner provides “a uniform and consistent communication service plan purchase and communication service management experience to users

of mobile devices 105 for different service providers.” Ex.1005, [1711]. Raleigh also describes various APIs that “assist in providing a uniform and consistent service selection and purchase process for the user of the mobile device 105.” Ex.1005, [1455]. Ex.1003, ¶¶44-48.

Raleigh is a thorough and lengthy disclosure. The Abstract summarizes all of these disclosures:

Disclosed herein are methods, systems, and apparatuses to[:]

enable subscribers of mobile wireless communication devices to view, research, select and customize service plans;

to create and manage device groups, share and set permission controls for service plans among devices in device groups;

to manage communication services through graphical user interfaces;

to sponsor and promote service plans; and

to design, manage, and control communication services through application programming interfaces.

Ex.1005, Abstract.

Raleigh is divided into several sections describing each of these aspects. Some of these sections are organized as follows:

- FIGS.1H-1P are functional diagrams that show an architecture for service access control and monitoring.
- FIGS.2A-8J are mobile device user interfaces (UIs) for users to view, research, select, and customize service plans.
- FIGS.9A-14D are mobile device UIs used for creating and managing device groups, and sharing and setting permission controls within the device group.
- FIGS.15A-15I include schematic diagrams and signaling diagrams illustrating methods and architectures for allowing one or more devices of a device group to sign-up for service plans provided by one or more service providers.
- FIGS.17B-24G include various UIs (e.g., desktop computer UIs) of a network manager environment that enable a network manager to design and administer service plan offerings, advertisements, and notifications for subscribers.
- FIGS.25A-28J are schematic diagrams and signaling diagrams illustrating how subscribers, service providers, and third-party service partner systems communicate with one another using APIs to provision services.

- FIGS.34A-36B illustrate processes whereby a user selects a service provider and a service.

Ex.1003, ¶49.

2. Reasons to Combine Raleigh's Teachings

This Petition relies primarily on three aspects of Raleigh to demonstrate that the features of the Challenged Claims were known or obvious to a POSITA:

1. Service selection and activation procedures (FIGS.35A-36B);
2. Group account management (FIGS.9G, and 12A-12B); and
3. Service provider and network provider API integration (FIGS.1AH-1AM, 15I, and 25H-26A). Ex.1003, ¶51.

Although Raleigh is organized into different sections, a POSITA would have understood that these aspects are part of an overall cohesive system and framework, rather than alternative embodiments or configurations. *See* Ex.1005, Abstract; *see also* Ex.1005, [0057]; Ex.1003, ¶51. Thus, Raleigh's disclosure of these aspects as connected parts of the same framework would itself suggest to a POSITA to combine them. Ex.1003, ¶51. In the resulting combination, the service selection and activation procedures of FIGS.35A-36B would be performed for a "master service account," using integrated APIs to "assist in providing a uniform and consistent service selection and purchase process." Ex.1005, [1455]; Ex.1003, ¶51.

Nothing in Raleigh would suggest to a POSITA that these aspects are incompatible or inconsistent with one another. Ex.1003, ¶52. To the contrary—Raleigh explains that its service selection and activation procedures illustrated in FIGS.36A-36B may be “conducted in conjunction with selection of a service provider as described [in FIGS.35A-35B].” Ex.1005, [1846]; Ex.1003, ¶52. Further, Raleigh’s description of FIGS.35A-36B refers to the disclosure of at least FIGS.4F, 4N-4V, 4AD, 4AL-4AN, 4AQ, 5A-5H, 6A-6J, 7C-7G, 8C-8J, 9A-9F, 25F-25I, 25K-25M, 26A, 26D, 27A, 27D, 28A, 28G, 29A-29H, and states that the descriptions of those figures “can apply equally” to the aspects of the service plan activation and service provider selection processes of 35A-36B. Ex.1005, [1841], [1847], [1851], [1853], [1855], [1856]; Ex.1003, ¶52. Many of those figures, including FIGS.8C-8E and 8G-9F, describe managing services for a “master service account.” *See, e.g.*, Ex.1005, [0739], [0741], [0743], [1841]; Ex.1003, ¶52. Raleigh also explains that “[a]spects of APIs are described elsewhere herein this patent application ... and can apply equally to aspects of service provider selection, service provider account activation, and/or service selection processes for FIGS. 34A, 34B, **35A, 35B, 36A, 36B....**” Ex.1005, [1833]; Ex.1003, ¶53. Thus, a POSITA would have been motivated to combine Raleigh’s teachings and would have had a reasonable expectation of success in the combination. Ex.1003, ¶54.

3. Claim 1

[1.0] *A method of provisioning a service for use with a group plan, the method comprising:*

Raleigh describes “**methods** ... that provide for ... service plan selection and customization, **service plan provisioning**... using one or more APIs” (“*[a] method of provisioning a service....*”). Ex.1005, [0057]. Raleigh contemplates various types of services offered by a service provider, including “voice services (e.g., phone calls, etc.), messaging services (e.g., text messages, multimedia messages, etc.), data services (e.g., Internet access, etc.), and hybrid services (e.g., voice over IP (VOIP), video chat, etc.).” Ex.1005, [0381]. Ex.1003, ¶¶55-56.

Further, Raleigh teaches “**methods** ... to enable subscribers of mobile wireless communication devices ... to create and manage **device groups**, share and set permission controls for service plans among devices in device groups.” Ex.1005, Abstract. Raleigh describes managing services for “a **single service account** for the several mobile phones used by family members” (“*for use with a group plan*”). Ex.1005, [0382]. Raleigh refers to the “single service account” for a device group as a “master service account” (“*group plan*”) and explains that a subscriber can “associat[e] additional mobile wireless communication devices with the established master service account.” Ex.1005, [0053]. Ex.1003, ¶¶57-58.

Raleigh’s “master service account” is consistent with the ’047 patent’s

description of the claimed “*group plan*.” Ex.1005, [0382]. Ex.1003, ¶59. For instance, the ’047 patent explains that a “group account may be described in the context of an **enterprise**, ... a **family group** (e.g., a family account), a social group, or any other group of subscribers however related.” Ex.1001, 30:32-36; Ex.1003, ¶59.

Therefore, to the extent Raleigh does not anticipate the preamble, a POSITA would have understood that Raleigh’s disclosures of provisioning service plans and managing service plans for a “master service account” render obvious “[a] *method of provisioning a service for use with a group plan*.” Ex.1003, ¶60.

Elements [1.1]-[1.7] recite a sequence of events for “*providing access to [a service for a group plan] for each telephone number*” associated with the group plan. Elements [1.8]-[1.13] are nearly identical to elements [1.1]-[1.7], but with a subscription request being “from a **subscriber**” and “*for a **second** service ... provided by a **second** third party application service provider system*.” See *infra*, Section XI.C.3.1.[1.8]; Ex.1003, ¶62. The service-provisioning sequence claimed in [1.1]-[1.7] and repeated in [1.8]-[1.13] is taught by Raleigh’s service plan selection and activation procedures shown in FIGS.35A-36B. Ex.1003, ¶¶61-62.

Raleigh explains that the service plan selection and activation procedures of FIGS.35A-36B are for a “service account,” but does not explicitly equate it to its

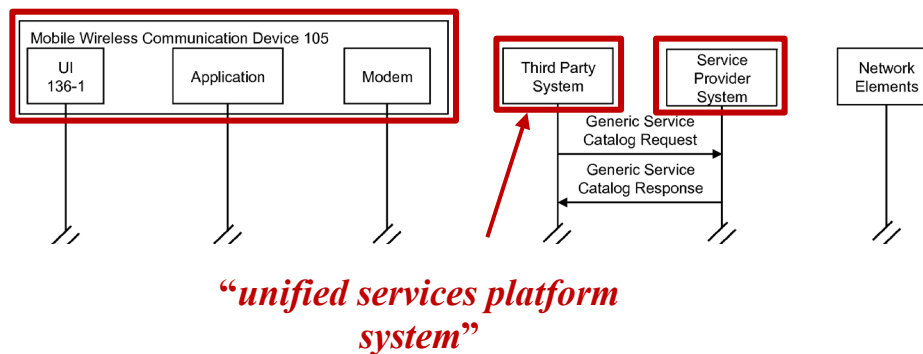
“master service account” (“*group plan*”). Ex.1005, [1840]. However, Raleigh clearly contemplates in numerous parts of its disclosure that a “service account” may be a “master service account” associated with a plurality of users and telephone numbers. *See, e.g.*, Ex.1005, FIG.9G, [0789], [0382]; Ex.1003, ¶62. As explained in more detail below, and to the extent Raleigh does not explicitly disclose that the “service account” in FIGS.35A-36B is a “master service account,” it would have been obvious to a POSITA to apply Raleigh’s service selection and activation procedures for the “service account” to its master service account (“*for a group plan*”). Ex.1003, ¶¶62-63.

[1.1] *receiving, by a unified services platform system, a subscription request for a service for a group plan,*

Raleigh describes “a representative process for selecting a service for a mobile wireless communication device” in FIGS.36A-36B. Ex.1005, [1846]. Raleigh explains that the process for selecting the service may be “conducted in conjunction with selection of a service provider as described [in FIGS.35A and 35B].” Ex.1005, [1846]. Accordingly, the service selection process of FIGS.36A-36B and the service provider selection process illustrated in FIGS.35A-35B will be discussed together for the limitations of [1.1]-[1.13]. Ex.1003, ¶64.

The service selection process of FIGS.36A-36B involves a mobile wireless communication device, a third party service partner system and a service provider

system:



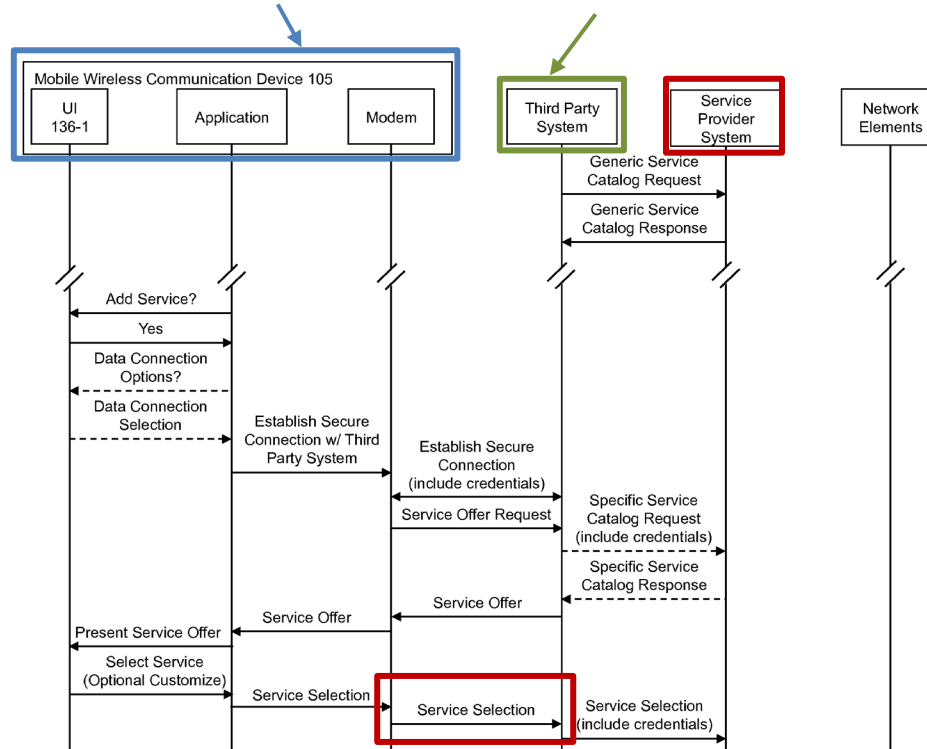
Ex.1005, FIG.36A (partial, annotated); Ex.1003, ¶65.

First, the “third party service partner system” is a “*unified services platform system*.” Ex.1005, [1848]; Ex.1003, ¶66. Raleigh teaches that the third party service partner may maintain an “application store” or “marketplace” similar to Apple’s App Store. Ex.1005, [1832], [1605], [1610], [1711]. The third-party service partner system “provides a uniform and consistent communication service plan purchase and communication service management experience to users of mobile devices 105 for different service providers.” Ex.1005, [1711]. Thus, a POSITA would have understood that the third party service partner system is a “*unified services platform system*.” Ex.1003, ¶¶66-67.

Second, returning to FIG.36A, Raleigh teaches that “the user selects a service plan” and the user’s wireless communication device “communicates the **service plan selection** to the third-party service partner system.” Ex.1005, [1850].

Mobile wireless communication
device of a user

Third party service partner system



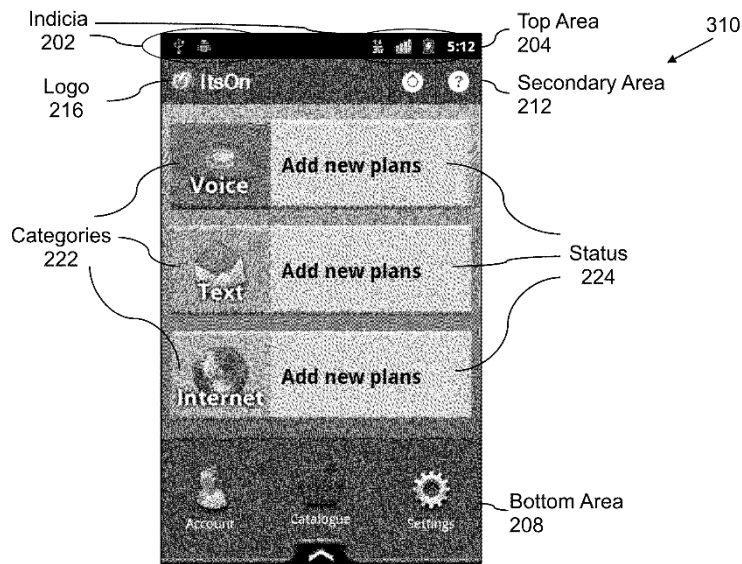
Ex.1005, FIG.36A (partial, annotated); Ex.1003, ¶68.

The “service plan selection” is a “*subscription request for a service.*”

Ex.1003, ¶69. Because Raleigh discloses that the user’s wireless communication device “communicates” the service plan selection *to* the third party service partner system (“*unified services platform system*”), a POSITA would have understood that the third-party service partner system therefore “*receiv[es]*” the service plan selection (“*subscription request for a service*”). Ex.1003, ¶69.

Raleigh provides several examples of service plans (“*service[s]*”) that may be selected or requested by subscribers for a service account, including “voice

services, messaging services (e.g., text messages, multimedia messages, etc.), data services (e.g., Internet access, etc.), and hybrid services (e.g., voice over IP (VOIP), video chat, etc.).” Ex.1005, [0381]. For instance, FIG.3B (reproduced below) shows an example mobile UI for selecting service plans from the categories of “Voice,” “Text,” and “Internet.” Ex.1003, ¶70.

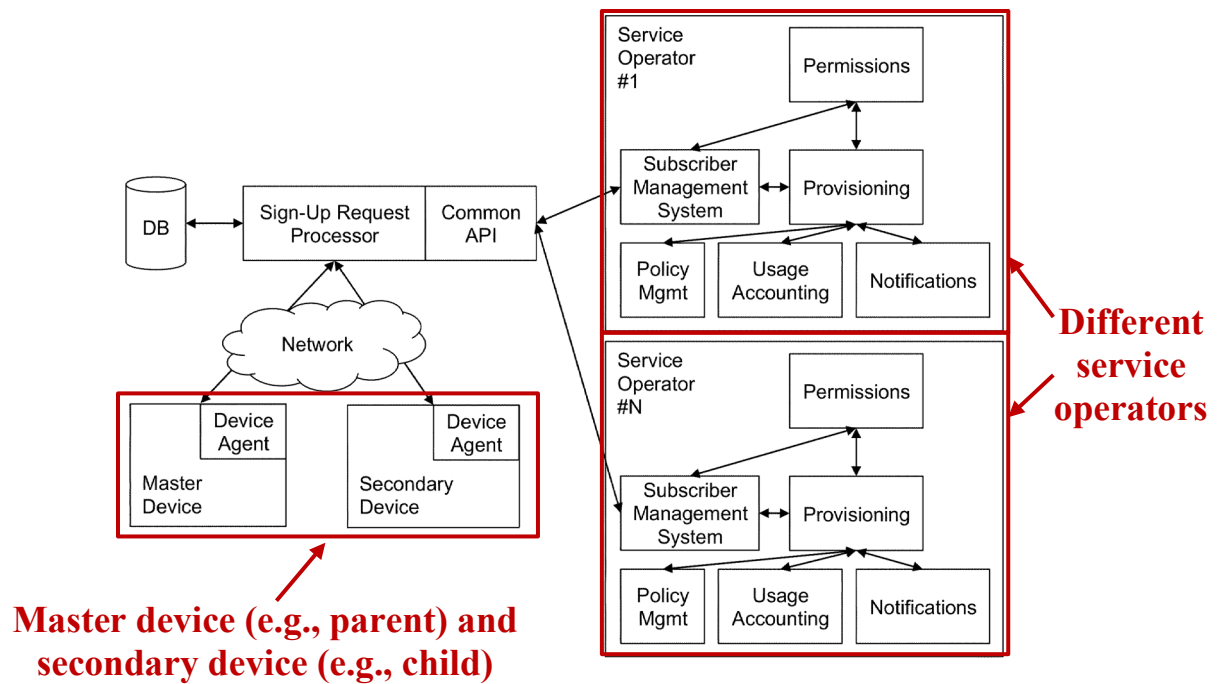


Ex.1005, FIG.3B (annotated); Ex.1003, ¶70

Another example is data access to a story-reading service which Raleigh refers to as “iStoryBooks,” illustrated in FIGS.12A-12B. Ex.1005, [0841]-[0842]. A POSITA would have understood that each of these service plans is an example of “*a service*.”

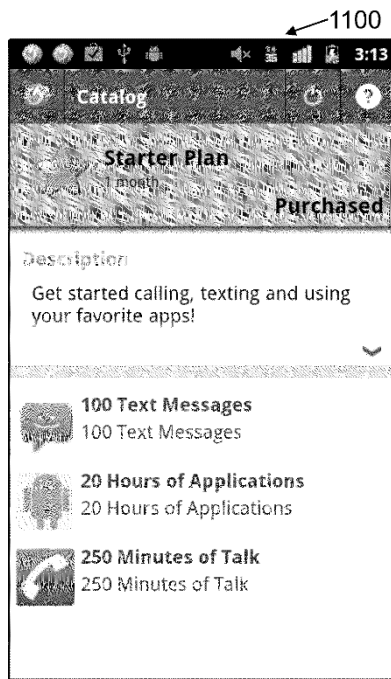
Third, it would have been obvious to a POSITA for the service plan selection to be “*for a group plan*.” Ex.1003, ¶72. As mentioned above, Raleigh

explains that the service plan selection method of FIGS.36A-36B is for a “service account,” which may be a master service account (“*group plan*”). Ex.1005, [1840], [1846]. For example, Raleigh contemplates “establish[ing] a **master service account**” and “associating additional mobile wireless communication devices **with the established master service account**.” Ex.1005, [0053]. Raleigh also describes that “service plans can be **shared among multiple devices** in a device group.” Ex.1005, [0818]. “For example, a parent might want to purchase a single service plan that is shared among all members of the family.” Ex.1005, [0383]. FIG.15I illustrates a configuration for signing up a new service or service operator using a “master device” or a “secondary device” associated with a master service account. Ex.1005, [0927]-[0929]. Ex.1003, ¶¶72-75.

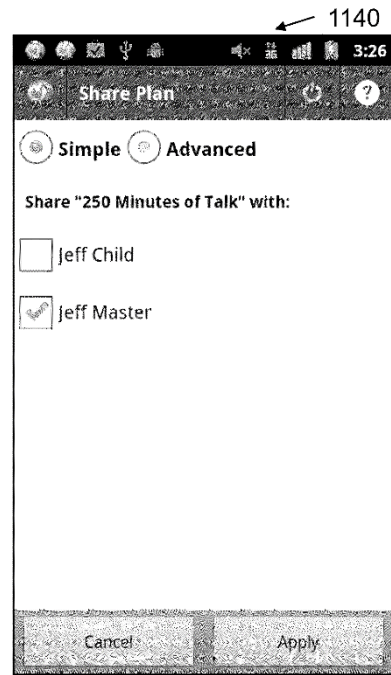


Ex.1005, FIG.15I (annotated); Ex.1003, ¶75

It would have been obvious to a POSITA for the service plan selected by the master device or secondary device on the master service account to include data service, voice service, messaging service, or access to iStoryBooks for example. Ex.1003, ¶76. FIGS.11A and 11D of Raleigh (reproduced below) show example UIs for a master user to manage text, voice, and app access for the master service account (“for the group plan”). Ex.1005, [0803]-[0805].

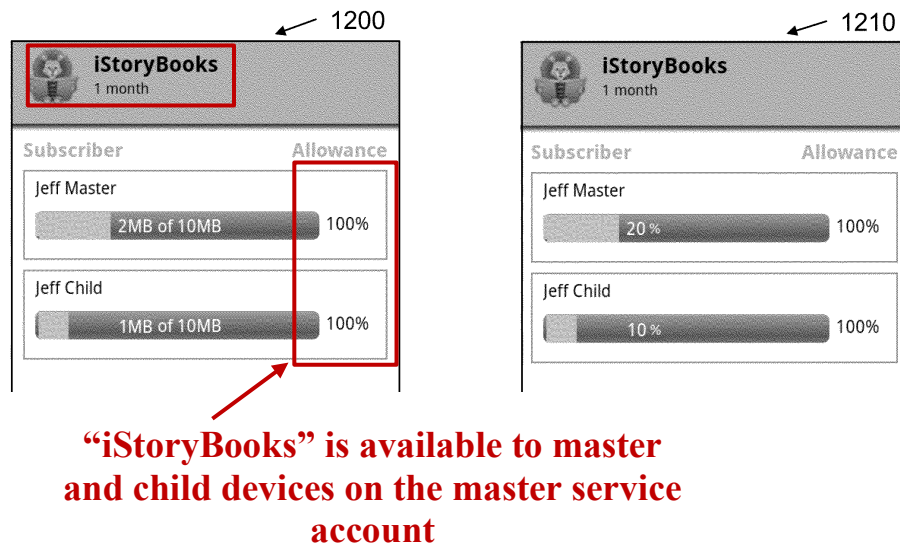


Ex.1005, FIG.11A;
Ex.1003, ¶77



Ex.1005, FIG.11D;
Ex.1003, ¶77

In another example shown in FIGS.12A-12B below, a master user can manage “a service plan (‘iStoryBooks’) that is **available to both the master device and the child device.**” Ex.1005, [0841]-[0842]. Ex.1003, ¶78.



Ex.1005, FIGS.12A-12B (partial, annotated); Ex.1003, ¶78.

It would have been obvious to a POSITA for the service plan selection to be a service plan that is shared by and available to the devices on the master service account, as illustrated in the examples of FIGS.11A and 11D, as well as FIGS.12A-12B. Ex.1003, ¶79. Thus, voice service, text service, data service, and iStoryBooks are all examples of the “*service for a group plan.*” Ex.1003, ¶77. It would also have been obvious for any of these services to be shared by and available to the members of a master service account (“*for a group plan*”). Thus, it would have been obvious to a POSITA for the service plan selected by the user in FIG.36A to be for a master service account (“*for a group plan*”). Ex.1003, ¶¶77-79.

[1.2] 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

First, as explained above at [1.1], Raleigh describes using a single service account (e.g., master service account) (“*group plan*”) for a device group. Ex.1003, ¶80. Raleigh describes “associat[ing] more than one mobile wireless communication device with a particular service account.” Ex.1005, [0382]. In one example, “a parent may want to establish a single service account for **the several mobile phones** used by family members.” Ex.1005, [0382]. Raleigh teaches that each device in the master service account for the family (“*group plan*”) is associated with credentials, including a “phone number” (“*wherein the group plan comprises a plurality of telephone numbers*”) Ex.1005, [0558]-[0559], [0737]; Ex.1003, ¶¶80-81.

FIG.9G of Raleigh is a representative mobile user interface where “the subscriber can view **all devices** associated with the master service account.” Ex.1005, [0789].

Phone numbers for each line in the device group. Ex.1005, [0789].



Ex.1005, FIG.9G (partial, annotated); Ex.1003, ¶81.

FIG.9G of Raleigh shows that each device is associated with its own phone number. Further, Raleigh explains that the “**Lines & Devices**” associated with a master service account have phone numbers. Ex.1005, FIG.8A, [0737].

Furthermore, it was common at the time for each mobile phone to be associated with its own telephone number.

Accordingly, Raleigh would have taught or suggested to a POSITA that each line or device (e.g., each mobile phone) on the master service account is associated with its own telephone number. Thus, Raleigh teaches “*wherein the group plan comprises a plurality of telephone numbers.*” Ex.1003, ¶82.

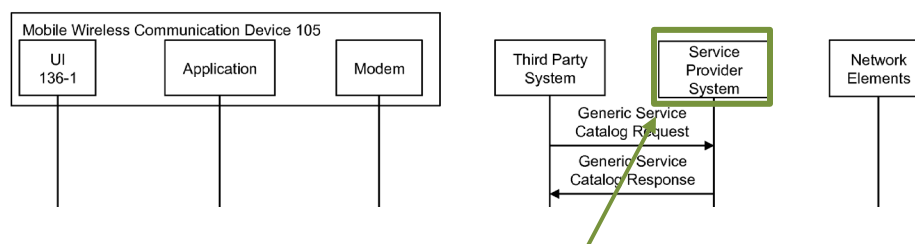
Second, Raleigh explains that “a subscriber” establishes the master service account and “associat[es] additional mobile wireless communication device with the established master service account.” Ex.1005, [0053]. Since each mobile wireless communication device (e.g., mobile phone) is associated with its own telephone number, and since the multiple devices are associated with the subscriber’s master service account, it would have been obvious to a POSITA that each telephone number is “*associated with*” the “*subscriber*” (e.g., the parent, company administrator) who established the master service account. Ex.1005, FIG.8A, [0737], [0382], [0558]; Ex.1003, ¶83.

Alternatively, if “*a subscriber*” is interpreted as each individual have a mobile phone (e.g., parent, child, etc.) associated with the master service account,

Raleigh renders obvious the association of a *telephone number* to a *subscriber* through its description of “secondary **subscriber**[s].” Ex.1005, [0886], [0895], [0909]; Ex.1003, ¶84. Each secondary subscriber on the master service account is also “a *subscriber*” with an associated mobile phone and corresponding telephone number. Therefore each of the secondary users’ telephone numbers is also “associated with” a corresponding “subscriber.” Ex.1003, ¶84.

[1.3] wherein the service is provided by a third party application service provider system;

Returning to the service selection process in FIGS.36A-36B, Raleigh describes that the service plan (“*the service*”) being selected is provided by a “service provider system.” Ex.1005, FIG.36A, [1848]-[1850]. Raleigh contemplates that a “service provider” may be a “third-party service provider.” Ex.1005, [0477]. Ex.1003, ¶85.



*“third party application
service provider system”*

Ex.1005, FIG.36A (partial, annotated); Ex.1003, ¶85.

Further, Raleigh explains that “the third party service partner provides a communication service marketplace directly to users of mobile devices 105, e.g.,

akin to or integrated with an application store (Apple App Store, Google Play Store, Amazon App Marketplace).” Ex.1005, [1711]; *see also* [1505]. Ex.1003, ¶86. Thus, to the extent Raleigh does not explicitly teach that the service provider in FIG.36A is “a ***third party application service provider system***,” it would have been obvious to a POSITA to use the service selection and service provider activation techniques of FIGS.35A-36B to select service plans from one or more “*third party application service provider system[s]*.” Ex.1003, ¶87. Selecting service plans from third party application service providers systems would increase the variety of services available to customers. Ex.1003, ¶87.

It would have been obvious to a POSITA that the service providers, including the selected service provider, would include “a *third party application service provider system*” to improve or enhance the quality and diversity of the service plans available to the users. Ex.1003, ¶¶87-88.

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

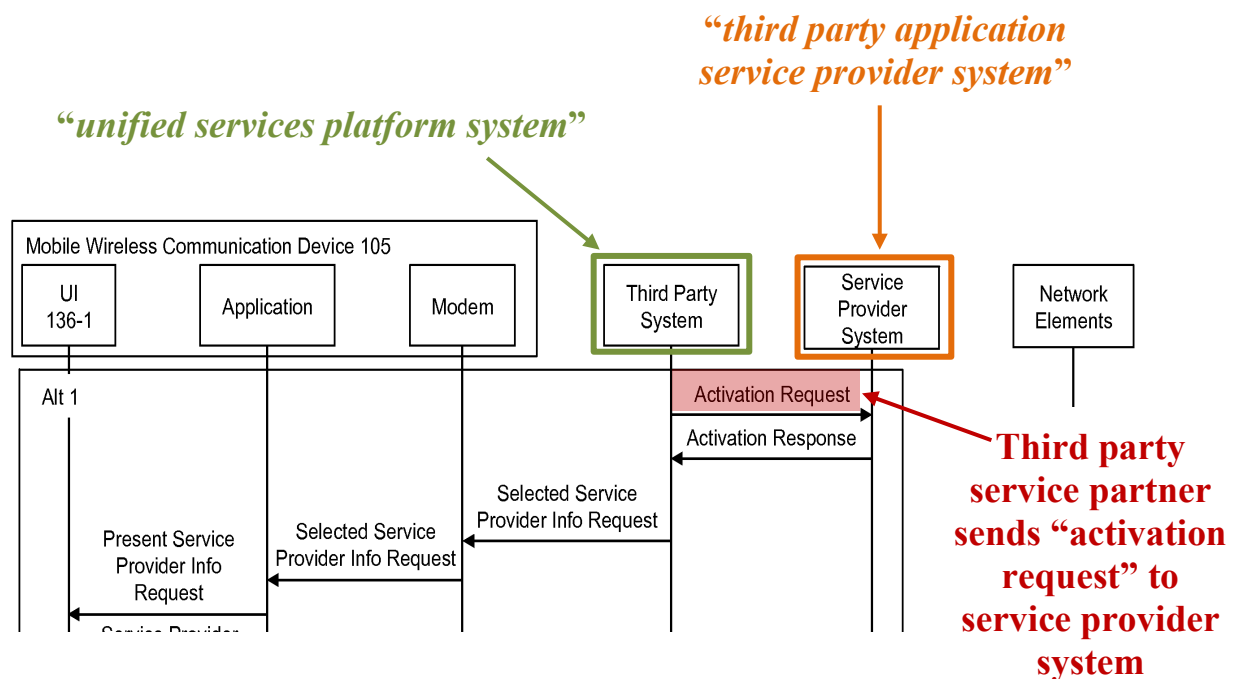
As mentioned above, Raleigh teaches that the service selection process shown in FIGS.36A-36B discussed at [1.1] above for “*receiving ... a subscription request for a service*” may be “conducted in conjunction with selection of a service provider” as described in FIGS.35A-35B. Ex.1005, [1846]; Ex.1003, ¶¶89-90.

As discussed at [1.3], Raleigh’s service provider system corresponds to “*the*

third party application service provider system.” Ex.1003, ¶89.

First, FIG.35A of Raleigh illustrates a process “to activate an association between a service provider and [a] mobile wireless communication device.”

Ex.1005, [1840]. In the process of FIG.35A, reproduced below, Raleigh’s third party service partner system (corresponding to the claimed *unified services platform system*, see [1.1]) “provides **an activation request** to the service provider system of the selected service provider.” Ex.1005, [1840]; Ex.1003, ¶91.



Ex.1005, FIG.35A (partial, annotated); Ex.1003, ¶91.

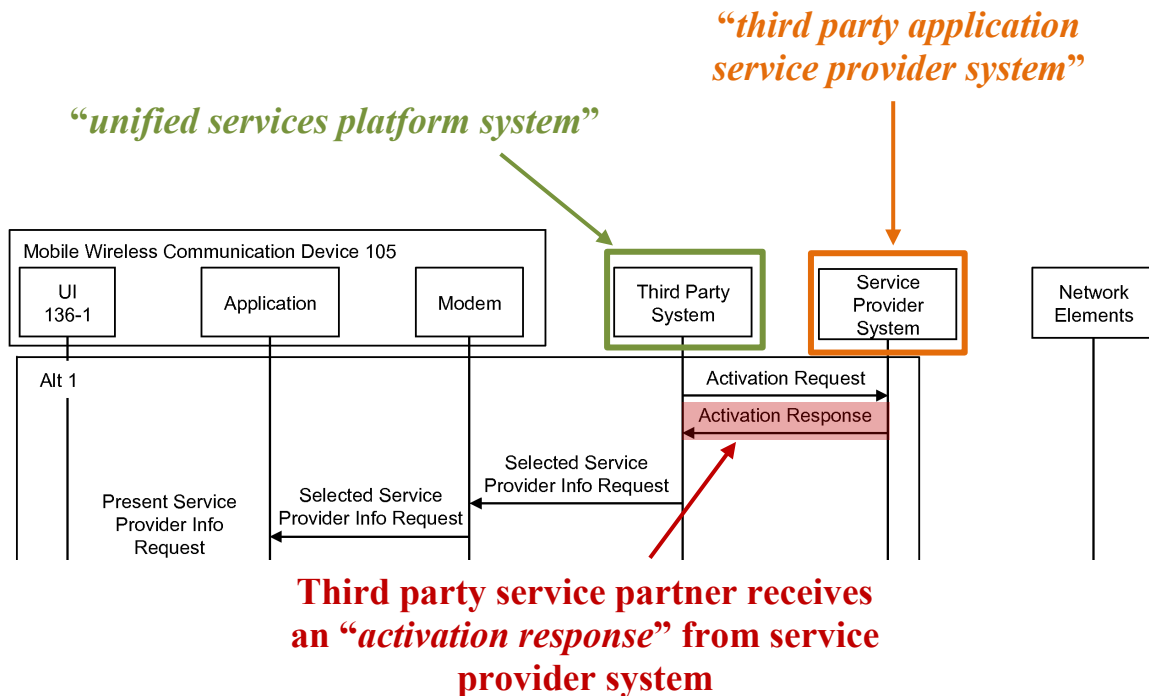
Thus, Raleigh teaches that the third party service partner system (“*unified services platform system*”) sends “an activation request to the service provider system” (“*an activation request ... to the third party application service provider*

system”). Ex.1003, ¶92.

Second, as explained above at [1.1], it would have been obvious to a POSITA that the service provider activation and service selection procedures of FIGS.35A-36B would be “for a group plan.” Ex.1003, ¶93.

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

Referring again to the service provider selection process illustrated in FIG.35A, “the service provider system provides **an activation response** message to the **third-party service partner system** in response to the activation request message.” Ex.1005, [1840]. Ex.1003, ¶94.

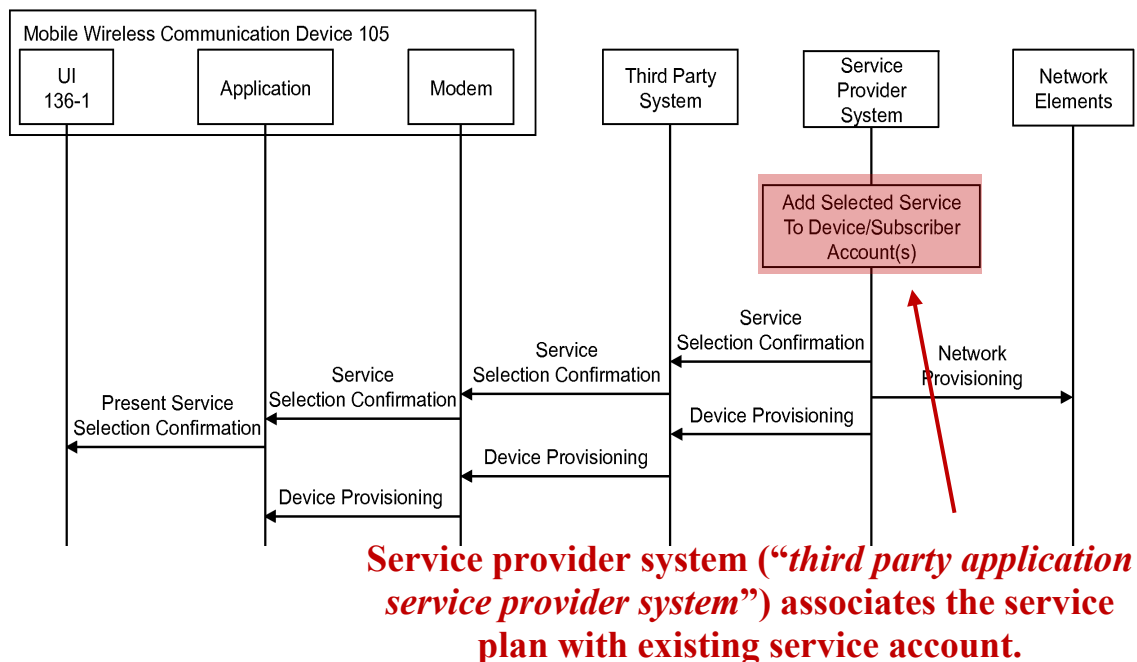


Ex.1005, FIG.35A (partial, annotated); Ex.1003, ¶94.

Thus, the third-party service partner system (“*unified services platform system*”) “*receiv[es]*” the activation response message from the service provider system (“*from the third party application service provider system*”). Ex.1003, ¶95.

[1.6] associating the service with each telephone number of the plurality of telephone numbers;

FIG.36B of Raleigh is a continuation of the service selection process in FIG.36A, discussed above at [1.1]-[1.5]. The service selection process illustrated in FIG.36B of Raleigh also discloses that service provider system adds a selected service plan (“*the service*”) to the service account of the user after receiving the service plan selection. Ex.1005, [1852]; Ex.1003, ¶96.



Ex.1005, FIG.36B (partial, annotated); Ex.1003, ¶96.

Referring to FIG.36B, Raleigh explains that “the service provider system

adds (and/or customizes) one or more **selected service plans** to a **service account** associated with the mobile wireless communication device 105 and/or the user thereof.” Ex.1005, [1852]. A POSITA would have understood that the service provider system adding the selected service plan to the service account teaches “*associating the service*” with the service account. Ex.1003, ¶¶97-98.

As explained above at [1.1], it would have been obvious to a POSITA for the “service account” in the service selection process of FIGS.36A-36B to be a master service account (“*group plan*”). *See supra*, [1.1]; Ex.1003, ¶99. As explained above at [1.2], Raleigh teaches that the master service account comprises “*the plurality of telephone numbers.*” *See supra*, [1.2]; Ex.1003, ¶99. For the same reasons explained at [1.1], it would have been obvious to a POSITA to add the service plan (“*associat[e] the service*”) with each of the plurality of lines on the service account (“*with each telephone number of the plurality of telephone numbers*”). Ex.1003, ¶99.

For example, Raleigh teaches sharing service plans and making available service plans for all devices on the master service account, or some of the devices. Ex.1005, [0383]; *supra*, [1.1]; Ex.1003, ¶100. Each of the devices on the master service account is associated with a telephone number, as also explained above at [1.2]. Ex.1005, FIGS.8A, 9G, [0382], [0737], [0789]; Ex.1003, ¶100.

Accordingly, a POSITA would have found it obvious to associate the

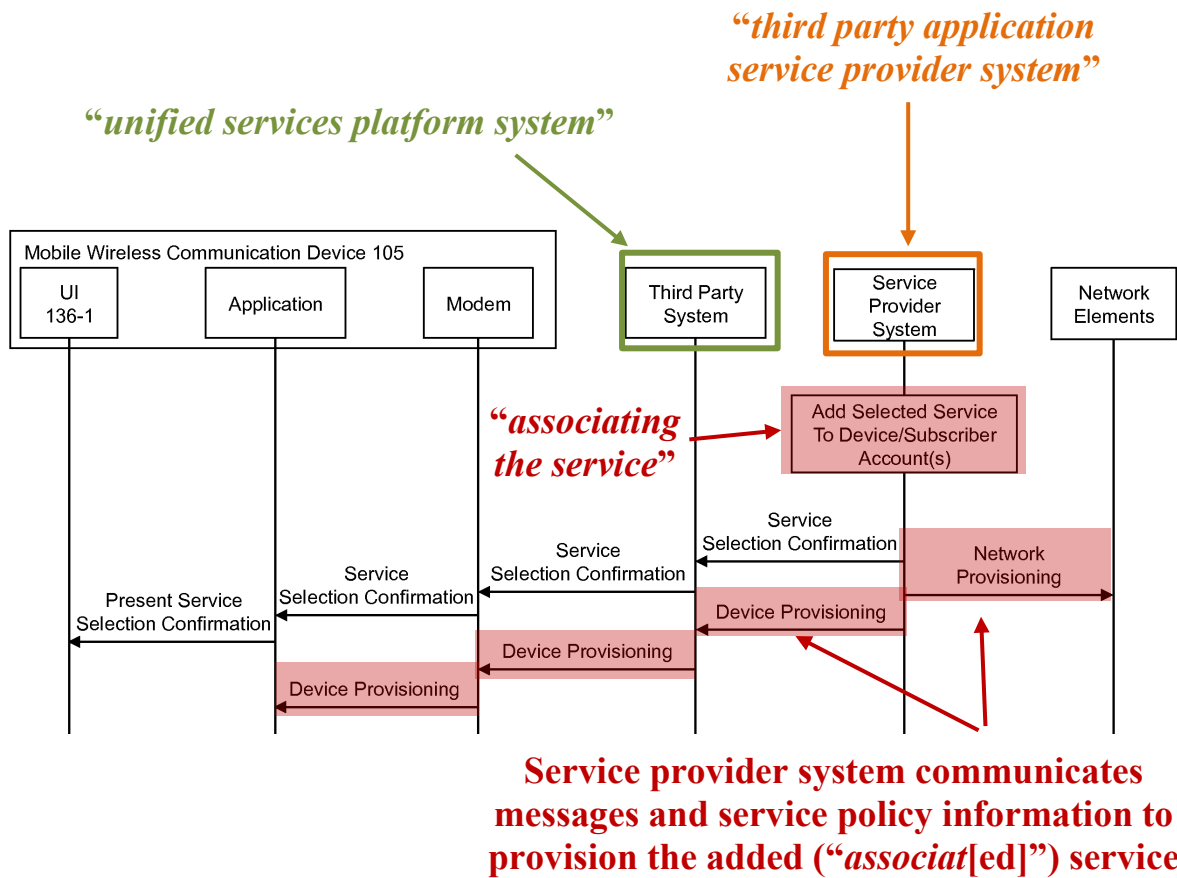
selected service plan with each telephone number on the master service account (“*group plan*”) as part of the process of adding the service plan (“*associating the service...*”) to the master service account. Ex.1003, ¶101. In this way, the service plan would be accessible to, and shared by, all users on the master service account, as contemplated by Raleigh. *See, e.g.*, Ex.1005, FIGS.12A-12B; *supra*, [1.1]; Ex.1003, ¶101. Because each of the users is associated with a telephone number, the added service plan for the master service account would be associated “*with each telephone number*” on the master service account (“*group plan*”). Ex.1003, ¶101; Ex.1005, [0819]; Ex.1011, [0045], [0048]; Ex.1018, [0035], [0041]; Ex.1010, Abstract, [0022].

Thus, to the extent Raleigh does not explicitly disclose “*associating the service with each telephone number of the plurality of telephone numbers,*” Raleigh renders this limitation obvious. Ex.1003, ¶102.

[1.7] *providing access to the service for each telephone number based on the associating;*

First, Raleigh’s service selection process illustrated in FIGS.36A-36B teaches that the service provider “communicates messages to one or more network elements that provide for **provisioning of the selected service plans.**” Ex.1005, FIG.36B, [1852]. The service provider also communicates “service policy information ... through the third-party service partner system to the mobile wireless

communication device 105 to provision the mobile wireless communication device 105 for the selected service plans.” Ex.1005, FIG.36B, [1852]; Ex.1003, ¶¶103-104.



Ex.1005, FIG.36B (partial, annotated); Ex.1003, ¶103.

Second, a POSITA would have understood that provisioning the service plan for the device 105 teaches “*providing access to the service.*” Ex.1003, ¶105. Because the service plan provisioning is performed after, and as a result of, adding the selected service plan to the service account, a POSITA would have understood

that the provisioning is “*based on the associating.*” Ex.1003, ¶105.

Third, as similarly explained above at [1.5], it would have been obvious to a POSITA to provide access to the service plan with each of a plurality of lines (“*each telephone number of the plurality of telephone numbers*”) on the service account. Ex.1003, ¶106. As explained above at [1.2], a service account may be a master service account (“*group plan*”) associated with multiple users, such as family members associated with a single plan. Ex.1003, ¶106. Raleigh also teaches sharing and making available service plans for all devices on the master service account, as explained above at [1.3]. Ex.1003, ¶106. Further, each of the devices on the service plan is associated with a telephone number (“*each telephone number...*”), as also explained above at [1.2]. Ex.1003, ¶106.

Thus, a POSITA would have found it obvious for the service provider system to provision the selected service plan (“*provid[e] access to the service*”) for each line or device on the master service account (“*for each telephone number*”) as part of the process of provisioning the service. Ex.1003, ¶107. In this way, the service plan would be accessible to all users on the master service account, as contemplated by Raleigh. *See, e.g.*, Ex.1005, FIGS.12A-12B; *supra*, [1.3]; Ex.1003, ¶107.

Thus, to the extent Raleigh does not explicitly disclose “*providing access to the service for each telephone number based on the associating,*” Raleigh renders

this limitation obvious. Ex.1003, ¶108.

[1.8] *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,*

Claim limitations [1.8]-[1.13] are identical to the respective claim limitations of [1.1]-[1.7], except for the following differences:

- The subscription request is “*for a **second** service*”;
- The subscription request is “*from a **subscriber** associated with a first telephone number*” ([1.1] does not specify who the request is from); and
- The second service is “*provided by a **second** third party application service provider system.*”

As will be explained in more detail below, the limitations of [1.8]-[1.13] are obvious in light of Raleigh’s teachings discussed above with respect to [1.1]-[1.7]. Ex.1003, ¶¶109-110.

First, regarding the “*second service*,” Raleigh contemplates multiple types of services, including “voice services,” “messaging services,” “data services (e.g., Internet access), and hybrid services (e.g., voice over IP (VOIP), video chat, etc.).” Ex.1005, [0381]. It would have been obvious that the third-party services partner system (“*unified services platform system*”) would receive subscription requests for both a “[first] service” and “*a second service.*” Ex.1003, ¶¶111-112. For instance,

the “*service*” introduced at [1.1] may be a “messaging service” or a “data service,” and the “*second service*” introduced here at [1.7] may be a VOIP service. Ex.1005, [0381]; Ex.1003, ¶¶111-112.

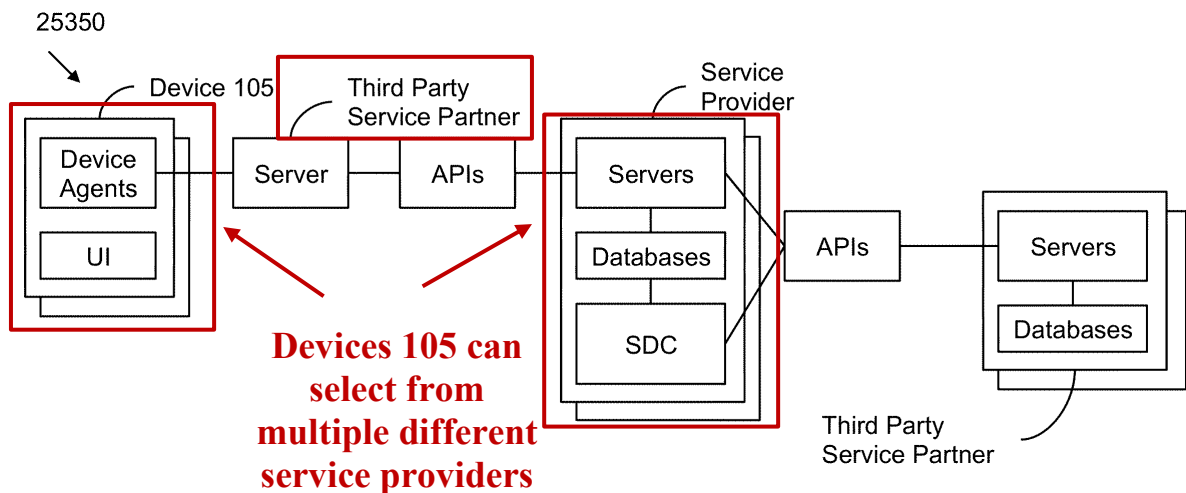
Second, regarding the “*subscriber*,” [1.1]-[1.3] neither require nor preclude that the subscription request for the service for the group plan is “*from a subscriber*,” as recited in [1.7]. Ex.1003, ¶113. As explained above at [1.1], Raleigh describes that a user sends, via a mobile wireless communication device, “the service plan selection to the third party service partner system.” Ex.1005, [1850]/ Ex.1003, ¶113.

A POSITA would have understood that Raleigh’s “user” is “*a subscriber*.” Ex.1003, ¶114. For instance, Raleigh refers to the user who manages the master service account as a “subscriber.” Ex.1005, [0053]; Ex.1003, ¶114. It would have been obvious to a POSITA for the third party service partner system to receive the service plan selection for the messaging service or the data service (“*the service*”) as well as the service plan selection for the VOIP service (“*second service*”) from the user (“*from a subscriber*”) who is responsible for managing the master service account. Ex.1003, ¶114.

Third, regarding the “*second third party application service provider system*,” it would have been obvious to a POSITA for the VOIP service (“*second service*”) to be provided by “*a second third-party application service provider*

system.” Ex.1003, ¶115. Raleigh describes systems and methods for “communication service management (e.g., service plan selection, purchase, modification, and control) with **multiple service providers**, network operators, and/or third party service partners.” Ex.1005, [1438]. Raleigh also contemplates that a “service provider” may be a “**third party service provider**,” as explained above at [1.3]. Ex.1005, [0477]. Ex.1003, ¶115.

Moreover, FIG.25H of Raleigh illustrates a service provisioning system in which devices 105 (e.g., mobile phones) can select services from multiple service providers through a third party service partner. Ex.1003, ¶116.



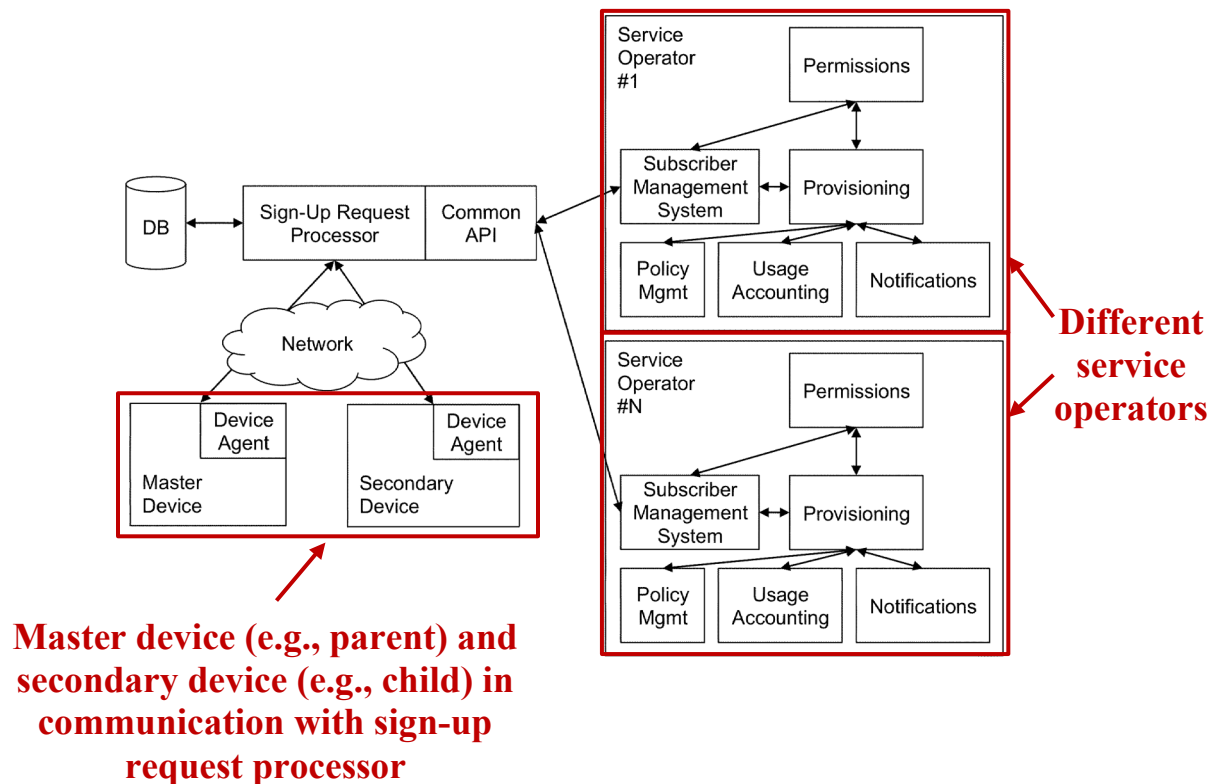
Ex.1005, FIG.25H (annotated); Ex.1003, ¶116.

Referring to the architecture of FIG.25H, Raleigh explains that the third party service partner is “akin to or integrated with an application store (Apple App Store, Google Play Store, Amazon App Marketplace).” Ex.1005, [1711]. Further,

“the third party service partner’s server provides a uniform and consistent communication service plan purchase and communication service management experience to users of mobile devices 105 for **different service providers.**”

Ex.1005, [1711]; Ex.1003, ¶117.

Raleigh also describes a system configuration in FIG.15I (below) in which multiple devices (e.g., master device and secondary device) on the same service account (“*group plan*”) can sign-up with multiple different service providers through a “sign-up request processor.” Ex.1005, [0927]-[0929]. Ex.1003, ¶118.



Ex.1005, FIG.15I (annotated); Ex.1003, ¶118.

In the configuration of FIG.15I, the Sign-Up Request Processor may be “located in

a third-party provider network (e.g., device OEM, VSP, MVNO, device OS provider, VoIP provider, etc.)” Ex.1005, [0928]. Ex.1003, ¶119.

Thus, Raleigh describes members of a master service account (“*group plan*”) signing up to access different services from different service operators (“*third party application service provider system[s]*”). Ex.1003, ¶119. In light of these teachings, it would have been obvious to use the service provider activation and service selection processes of FIGS.35A-36B to select a messaging service or data service (“*the service*”) from a first service provider system (“*third party application service provider system*”), and a VOIP service (“*second service*”) from a second service provider system (“*second third party application service provider system*”). Ex.1003, ¶119.

In this regard, a POSITA would have known that messaging services, data services and VOIP services (“*second service*”) were commonly provided by different third party service providers (“*third party application service provider system[s]*”), which Raleigh acknowledges. Ex.1005, [0477] (“... a service provider (e.g., a wireless network operator or a third party service provider)...), [1610] (“3rd party provider scenarios (i.e. party that provides service and is not the party that owns the access network assets)...); FIG.15I; Ex.1003, ¶120. Further, a POSITA would have found it obvious for the service plan selections (“*subscription request[s]*”) of the different service plans to be received from a user (“*from a*

subscriber”) on the service account. Ex.1003, ¶120. Thus, because Raleigh also renders obvious the minor distinctions in [1.8]-[1.13] relative to [1.1]-[1.7], the limitations of [1.8]-[1.13] are obvious in light of Raleigh’s teachings discussed above with respect to [1.1]-[1.7]. Ex.1003, ¶¶120-121.

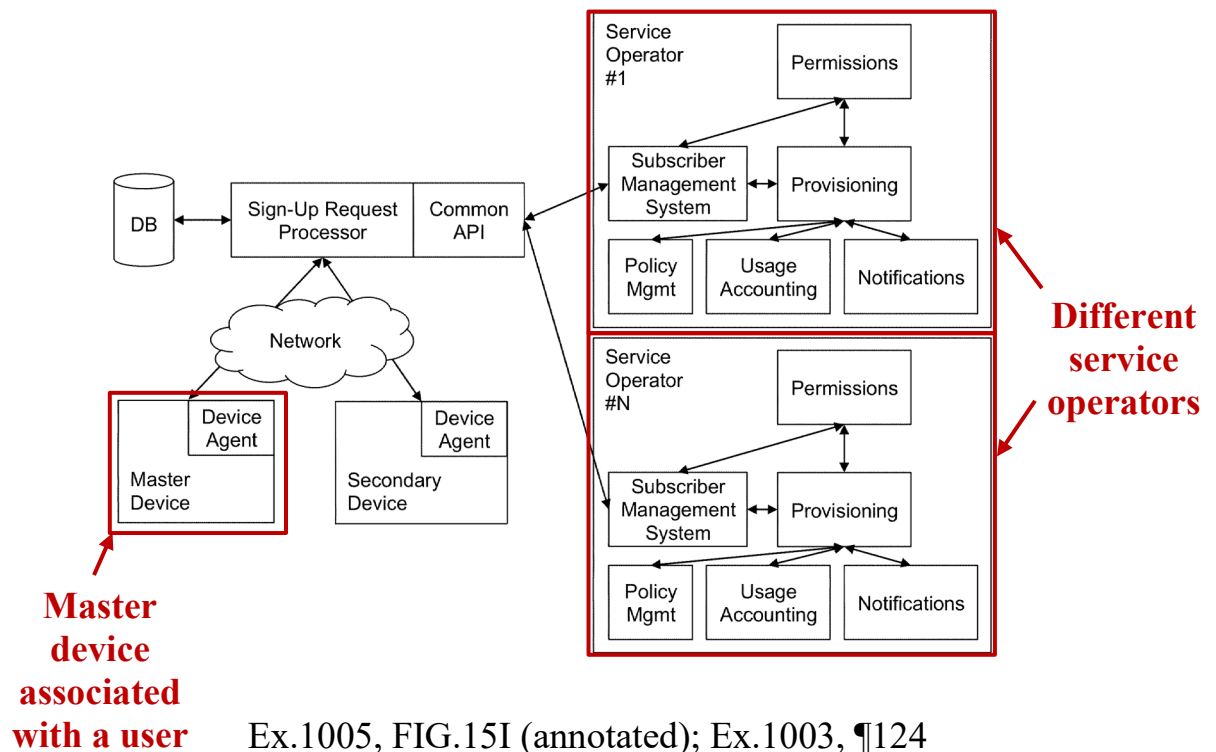
Referring specifically to the present limitation, [1.8] is analogous to [1.1]. Ex.1003, ¶122. For the reasons described above, Raleigh renders obvious “*receiving, by the unified services platform system, a subscription request for a second service from a subscriber associated with a first telephone number of the plurality of telephone numbers.*” Ex.1003, ¶122.

[1.9] wherein the second service is provided by a second third party application service provider system;

As explained above at [1.8], it would have been obvious to use the service provider activation and service selection processes of FIGS.35A-36B to select a data service or messaging service (“*the service*”) from a first service provider system (“*third party application service provider system*”) and a VOIP service (“*second service*”) from a second service provider system (“*a **second** third party application service provider system*”). Ex.1003, ¶123. For instance, Raleigh explains that “the third party service partner’s server provides a uniform and consistent communication service plan purchase and communication service management experience to users of mobile devices 105 for **different service**

providers.” Ex.1005, [1711]; Ex.1003, ¶123.

Further, FIG.15I of Raleigh shows that a user may sign-up for services from different service operators (“*third party application service provider system[s]*”):



In view of Raleigh’s disclosure of selecting service plans and providers as explained above with respect to [1.1] and [1.2], it would have been obvious that a VOIP service plan (“*second service*”) would be provided by a VOIP service provider (“*second third party application service provider system*”) different from the messaging service provider or data service provider. Ex.1003, ¶125.

For these reasons, and the reasons provided above in [1.4] and [1.8], Raleigh renders obvious “*wherein the second service is provided by a second third party*

application service provider system.” Ex.1003, ¶126.

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

This limitation is analogous to [1.4]. For the reasons provided above in [1.4], as well as [1.8] and [1.9], Raleigh renders obvious “*sending, by the unified services platform system, a **second** activation request for the service to the **second** third party application service provider system.” Ex.1003, ¶127.*

[1.11] *receiving a second activation response from the second third party application service provider system;*

This limitation is analogous to [1.5]. For the reasons provided above in [1.5], as well as [1.8] and [1.9], Raleigh renders obvious “*receiving a **second** activation response from the **second** third party application service provider system.” Ex.1003, ¶128.*

[1.12] *associating the second service with the first telephone number; and*

This limitation is analogous to [1.6]. For the reasons provided above in [1.6], as well as [1.8] and [1.9], Raleigh renders obvious “*associating the **second** service with the first telephone number.” Ex.1003, ¶129.*

[1.13] *providing access to the second service for the first telephone number based on the associating.*

This limitation is analogous to [1.7]. For the reasons provided above in [1.7], as well as [1.8] and [1.9], Raleigh renders obvious “*providing access to the **second***

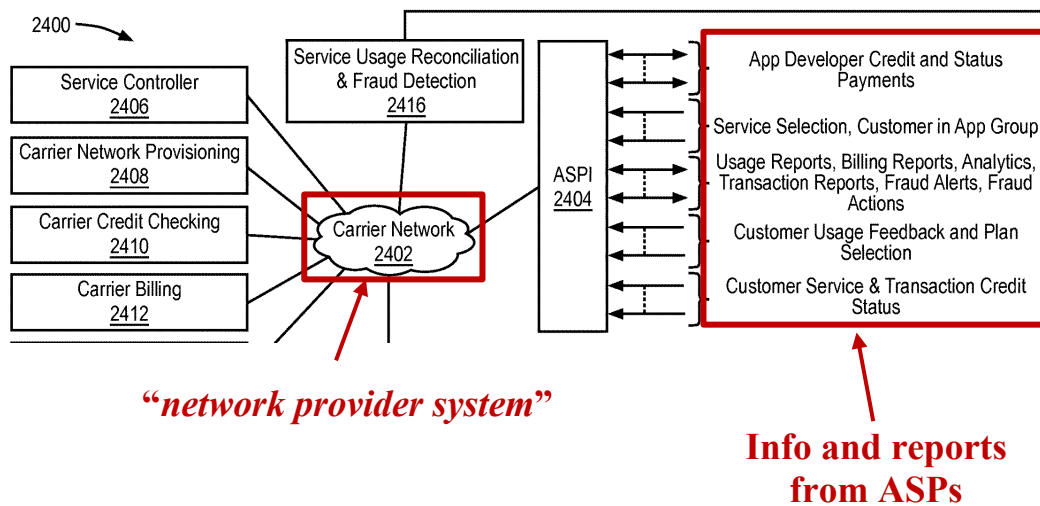
service for the first telephone number based on the associating.” Ex.1003, ¶130.

4. Claim 4

[4.0] *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.*

First, Raleigh explains that the service providers (also called service operators) have APIs. *See* Ex.1005, [0929], [1693]. For instance, Raleigh teaches that the service operators (“*third party service provider system[s]*”) in FIG.15I have “**service operator API[s]**.” Ex.1005, [0929]. A POSITA would have understood that Raleigh’s “service operator API” is “*an API of the third party application service provider system.*” Ex.1003, ¶131; *see also*, Ex.1005, [1366], [1709] (“...set of APIs are specified by the service provider.”); Ex.1006, 5:37-58; Ex.1007, 2:64-3:6; Ex.1009, pp.723-727, 195; Ex.1008, p.461.

Second, Raleigh teaches that that “[a] service provider may be an operator of a wireless communication network.” Ex.1005, [1381]. Similarly, Raleigh contemplates that a service provider may be a “carrier.” *See* Ex.1005, [0428], [0826], [1238]. For instance, a carrier may be “**a network access carrier** (for example, a wireless network carrier such as Vodafone, Verizon, or AT&T, or a cable network carrier such as Comcast, etc.).” Ex.1005, [1001]. FIG.1AH of Raleigh shows a carrier network 2402 in communication with application service providers (ASPs) via an ASP interface. Ex.1003, ¶132.



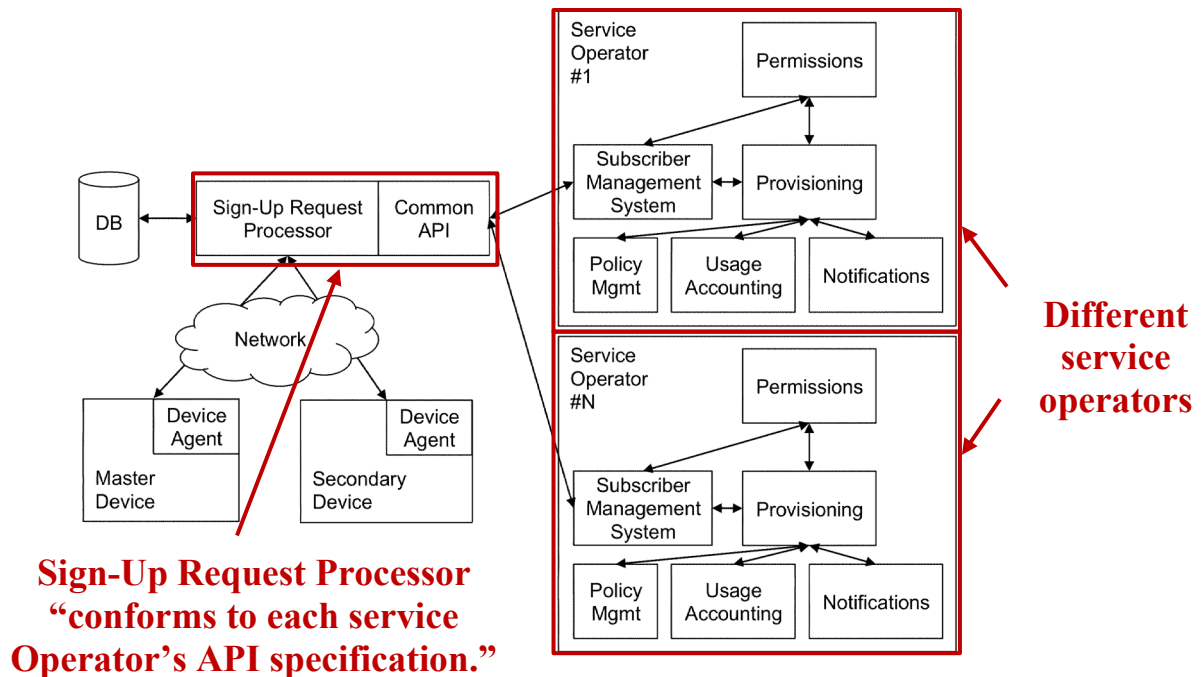
Ex.1005, FIG.1AH (partial annotated); Ex.1003, ¶132.

A POSITA would have understood that a carrier, such as the carrier network 2402, is a “network provider system.” Ex.1003, ¶132.

Third, it would have been obvious to a POSITA that the carrier network would use APIs to facilitate access to carrier resources by other third party service providers. Ex.1003, ¶133. In this regard, Raleigh teaches that “a **network API** can provide an interface for an application to communicate with a service cloud (e.g., network server).” Ex.1005, [1393]. Further, “a **network API** can facilitate an application provider, **central network/service provider**, and/or a third party with access to communicate with the application to provide and/or request information.” Ex.1005, [1393]. It would have been obvious to a POSITA for the carrier network to use the “network API” to “facilitate” service providers or other third parties “with access to communicate with the application.” Ex.1005, [1393]. Thus, to the

Raleigh renders obvious “*an API of the network provider system.*” Ex.1003, ¶133.

Fourth, Raleigh also describes provisioning services from different service providers to the same device or service account. Ex.1005, [0926], [1690]. For example, FIG.15I illustrates a system configuration in which different service operators provision their services to master and secondary devices through a sign-up request processor. Ex.1005, [1690]. Ex.1003, ¶¶134-135.



Ex.1005, FIG.15I (annotated); Ex.1003, ¶135.

Raleigh explains that “the device manufacturer provides the Sign-Up Request Processor and the common API and work[s] with the service operators to have them implement the required functionality **to support the On-Device Service**

Sign-Up and Multi-Device sharing functions.” Ex.1005, [0926]. Raleigh further explains that each service operator has an “API specification” and customized workflows:

the Sign-Up Request Processor conforms to **each service Operator's API specification**. In some embodiments, the service operator API exposes the “high level” requests ... to the Sign-Up Request Processor and then converts the “high level” commands into the appropriate “low level” commands and workflow **specific to that service operator**.

Ex.1005, [0929]; *see also* [0930]; Ex.1003, ¶136.

Thus, Raleigh explains that service operators must implement additional “required functionality” to integrate with the common API, and service operators have their own “API specification[s]” and workflows. Ex.1005, [0926], [0929]. In light of these teachings, it would have been obvious to a POSITA that at least some of the service operators’ APIs are not originally or natively compatible with the common API, with the network provider’s API, and with the APIs of other service providers. Ex.1003, ¶136.

Accordingly, Raleigh contemplates that different service providers, including carriers or network service providers, operate according to different protocols and APIs. Ex.1003, ¶137. A POSITA would have understood that service

providers of voice services, for example, would use different APIs than the network provider system's APIs. Ex.1005, [0381]; Ex.1003, ¶137. For instance, a POSITA would have understood that the protocols, procedures, and signaling/messaging needs of the carrier network are substantially different from the needs of a messaging service provider, a data service provider, or a VOIP service provider. Ex.1003, ¶137. In this regard, Raleigh contemplates scenarios in which the "party that provides service [] is not the party that owns access to network assets," such as "app store providers (e.g., Google, Apple)...." Ex.1005, [1610]; Ex.1003, ¶137.

Thus, it would have been obvious to a POSITA that at least one of the APIs of the messaging service provider or data service provider ("*third party application service provider system*") would be incompatible with at least one API of the of the "*network provider system.*" Ex.1003, ¶138. Similarly, a POSITA would have found it obvious that the carrier network provider providing access to network resources would have at least one "network API" that is incompatible with at least one API of the service provider system ("*third party application service provider system*"). Ex.1003, ¶138.

5. Claim 5

[5.0] *The method of claim 4, wherein the API of the third party application service provider system is integrated with the unified services platform system,*

As explained above at [4.0], Raleigh teaches “*the API of the third party application service provider system.*” Ex.1003, ¶139.

Raleigh describes that the third party service partner (“*unified services platform system*”) may implement an app store and use APIs for “a uniform and consistent communication service plan purchase and communication service management experience to users of mobile devices for different service providers.” Ex.1005, [1711]. Raleigh further explains that “the [service providers’] APIs provide an indirect communication path between a server [of a service provider] and the mobile device.” Ex.1005, [1366]. Ex.1003, ¶140.

It would have been obvious to a POSITA to “*integrate[]*” the API of the service provider (“*third party application service provider*”) with the third party service partner (“*unified services platform system*”). Ex.1003, ¶141. This integration would facilitate communications between the service provider and the third party service partner so as to provide “a uniform and consistent user experience in communication service management.” Ex.1005, [1438]; Ex.1003, ¶¶141-142; Ex.1006, 5:37-58; Ex.1007, 2:64-3:6; Ex.1009, pp.723-727, 195; Ex.1008, p.461.

[5.1] and wherein [sic] API of the network provider system is integrated with the unified services platform system,

Raleigh also teaches that “a **network API** can provide an interface for an

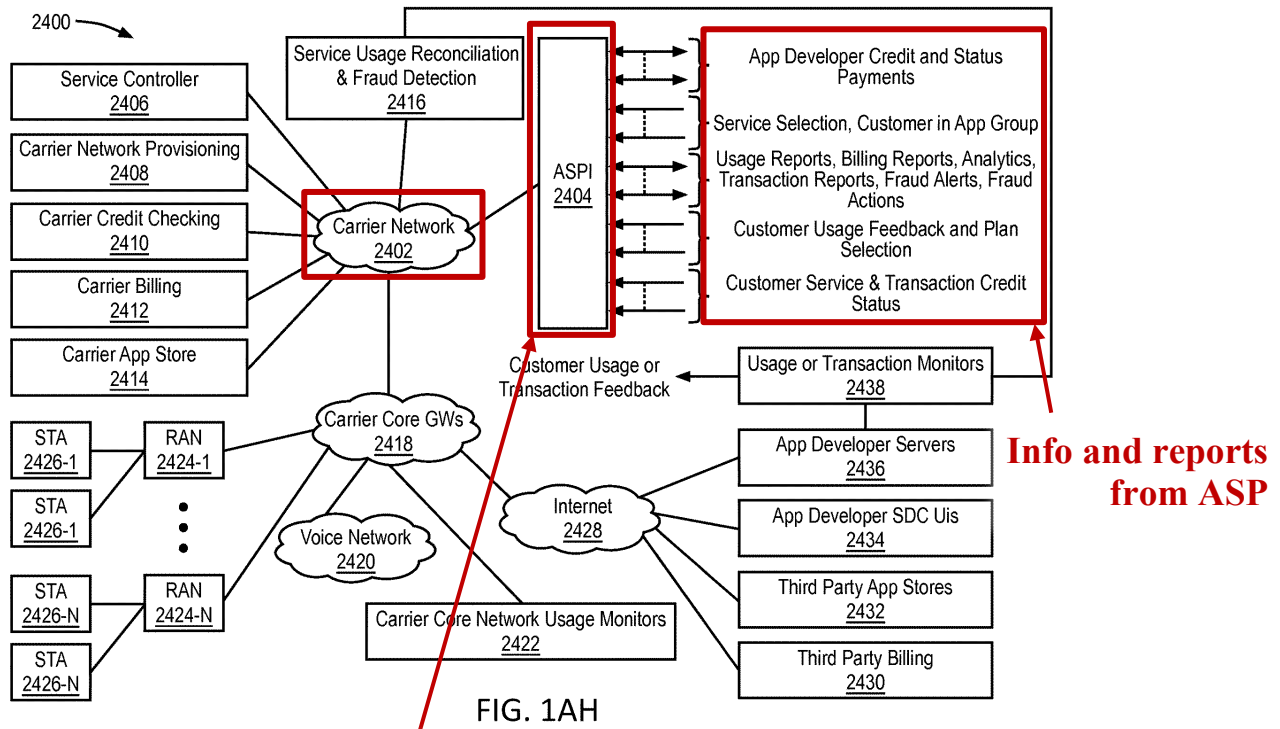
application to communicate with a service cloud (e.g., network server).” Ex.1005, [1393]. Further, “a network API can facilitate an application provider, central network/service provider, and/or a third party with access to communicate with the application to provide and/or request information.” Ex.1005, [1393]. Thus, to the extent Raleigh does not explicitly teach “*an API of the network provider system*,” Raleigh renders obvious an “*API of the network provider system*.” Ex.1003, ¶143.

As explained above at [4.0] and [5.0], Raleigh contemplates using additional APIs from the service providers and the network operators to standardize communications between subscribers, third-party service partners, and the service providers. Ex.1003, ¶144. It would have been obvious to a POSITA for these inter-entity communications to “*integrate[]*” the network operator (“*network provider system*”) with the third-party service partner (“*unified services platform system*”). Ex.1003, ¶145. This integration would provide “a uniform and consistent user experience in communication service management.” Ex.1005, [1438]; Ex.1003, ¶145.

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

“[T]he third party application” appears for the first time in this limitation. In a first interpretation, [5.1] may be interpreted as “*wherein the third party application [service provider system] communicates*” Ex.1003, ¶146.

FIG.1AH of Raleigh, reproduced below, illustrates an application service provider interface (ASPI) engine “provid[ing] an interface for the [application service provider] ASP into the carrier network.” Ex.1005, [1511]. Ex.1003, ¶147.



ASPI (“unified services platform system”) as an intermediary between ASPs and carrier network (“network provider system”)

Ex.1005, FIG.1AH (annotated); Ex.1003, ¶147.

A POSITA would understand the ASPI engine 2904 to be a “unified services platform system.” Ex.1003, ¶148. For instance, referring to FIG.1AM, Raleigh explains that “a third party (e.g., **an app store provider** and/or an OS system provider) provides an **intermediary ASPI function** to re-distribute carrier access

services provided by one or more carrier networks to application service providers.” Ex.1005, [1605]. Further, Raleigh explains that the implementation shown in FIG.1AM is “ASPI System with **3rd Party Service Distribution and Control of ASPI.**” Ex.1005, [1493]. Ex.1003, ¶¶148.

Additionally, Raleigh explains that the ASPI facilitates communication between the application developer or service provider and the carrier network:

a service provider and/or network operator provides an application service provider interface (ASPI) through which applications (and application developers) interwork with communication services provided by the service provider in association with the applications. In some embodiments, the interfaces of the ASPI illustrated in FIGS. 1AH and 1AI (and also provided for in FIG. 1AM) use one or more APIs for communication of information between the network elements of the carrier network 2402 and systems managed by the application developer.

Ex.1005, [1646].

Thus, a POSITA would have understood that the ASPI may be a third party intermediary system that “provides an interface for the ASP into the carrier network,” and “distributes “carrier access services ... to application service providers.” Ex.1005, [1605]; Ex.1003, ¶¶149-152. For instance, it would have been obvious that the APSs would communicate with the carrier network (“*network*

provider system”) through the ASPI (“*unified services platform system*”) to provide “Credit and Status” information, “Usage Reports, Billing Reports, Analytics, Transaction Reports, Fraud Alerts,” etc., as shown in FIG.1AH. Ex.1003, ¶151. Accordingly, a POSITA would have understood that the ASPI may be implemented by a third party service partner system (“*unified services platform system*”). Ex.1003, ¶149-151.

Therefore, Raleigh describes systems and architectures where an ASPI is implemented by a third party service partner system that links an application service provider (“*third party application service provider system*”) with carrier services and resources. Ex.1005, [1493], [1511], [1605]. As explained above at [1.1], the third party service partner system (“*unified services platform system*”) “provides a communication service marketplace directly to users of mobile devices, e.g., akin to or integrated with **an application store.**” Ex.1005, [1711]; Ex.1003, ¶151. It would have been obvious to a POSITA to implement the ASPI engine 2904 with the third-party service partner (“*unified services platform system*”) to operate as the intermediary between the application service providers and the carrier (“*network provider system*”). Ex.1003, ¶151. In this way, the service provider systems (“*third party application service provider system[s]*”) communicate with the carrier or network operator (“*network provider system*”) through the intermediary third-party service partner system (“*unified services*

platform system”). Ex.1003, ¶¶151-152.

In a second interpretation, “*the third party application*” may be interpreted as “[a] *third party application*,” such as the “*service*” provided by the “*third party application service provider system*.” Raleigh also renders this limitation obvious under the second interpretation. Ex.1003, ¶153.

As explained above, Raleigh’s ASPI is implemented in the “*unified services platform system*” and “provides an interface for the ASP into the carrier network.” Ex.1005, [1511], FIG.1AH; Ex.1003, ¶154. ASPs provide “Credit and Status” information, “Usage Reports, Billing Reports, Analytics, Transaction Reports, Fraud Alerts,” etc., to the network provider system through the ASPI. Ex.1005, FIG.1AH. Further, Raleigh explains:

a service provider and/or network operator provides an application service provider interface (ASPI) through which applications (and application developers) interwork with communication services provided by the service provider in association with the applications. In some embodiments, the interfaces of the ASPI illustrated in FIGS. 1AH and 1AI (and also provided for in FIG. 1AM) use one or more APIs for communication of information between the network elements of the carrier network 2402 and systems managed by the application developer.

Ex.1005, [1646]; Ex.1003, ¶155.

Further, Raleigh explains that “[t]he ASPI enables ASPs to tie access [sic] network service policy enforcement to applications.” Ex.1005, [1487]. Thus, Raleigh teaches that the ASPI links an ASP (“*third party application service provider system*”) with carrier services and resources, and also that the ASP’s applications interwork with communications services through the ASPI. Ex.1003, ¶155. Accordingly, it would have been obvious to a POSITA for the ASPI to also link the ASP’s application (“*the third party application*”) with the carrier services and resources. Ex.1005, [1493], [1511], [1605]; Ex.1003, ¶¶155-156.

6. Claim 6

Claim limitations [6.0] and [6.2]-[6.5] are nearly identical to the respective features of [1.8]-[1.13], except that the subscription request in [6.1] is referred to as a “*second subscription request*,” and does not require that the second subscription request is “*from a subscriber associated with a first telephone number*.” Thus, the features of [6.0] and [6.2]-[6.5] may be interpreted as having antecedent basis in the corresponding features of [1.8]-[1.13] (e.g., the “*second service*” of claim 6 is the same “*second service*” of claim 1). Alternatively, the features of [6.0] and [6.2]-[6.5] may be interpreted as being distinct from the features of [1.8]-[1.13] (e.g., the “*second service*” of claim 6 is different from “*the second service*” of claim 1). Ex.1003, ¶157.

However, in either case, the limitations of [6.0] and [6.2]-[6.5] are obvious in light of Raleigh's teachings discussed above with respect to [1.1] and [1.3]-[1.7], and additionally for the reasons articulated in [1.8] and [1.9]. Ex.1003, ¶158.

First, if the “*second subscription request*,” “*second service*,” and “*second third party application service provider system*” of claim 6 are interpreted as the same features as those recited in [1.8]-[1.13], then the features of claim 6 are rendered obvious by Raleigh for the reasons described above with respect to [1.8]-[1.13]. Ex.1003, ¶159.

Second, if the “*second subscription request*,” “*second service*,” and “*second third party application service provider system*” of claim 6 are intended to be distinct from the corresponding features of [1.8]-[1.13], Raleigh describes a variety of services (e.g., “messaging services,” “data services,” “VOIP,” and “video chat”) and contemplates “communication service plan purchase ... for **different service providers**.” Ex.1005, [0381], [1711]; *see also* Ex.1005, [1438] (APIs facilitate “communication service management ... with **multiple service providers**...”); Ex.1003, ¶161. As similarly explained above at [1.8], it would have been obvious to use the service selection procedures of FIGS.36A-36B to select the data service or messaging service (“*the service*”) from the first third party application

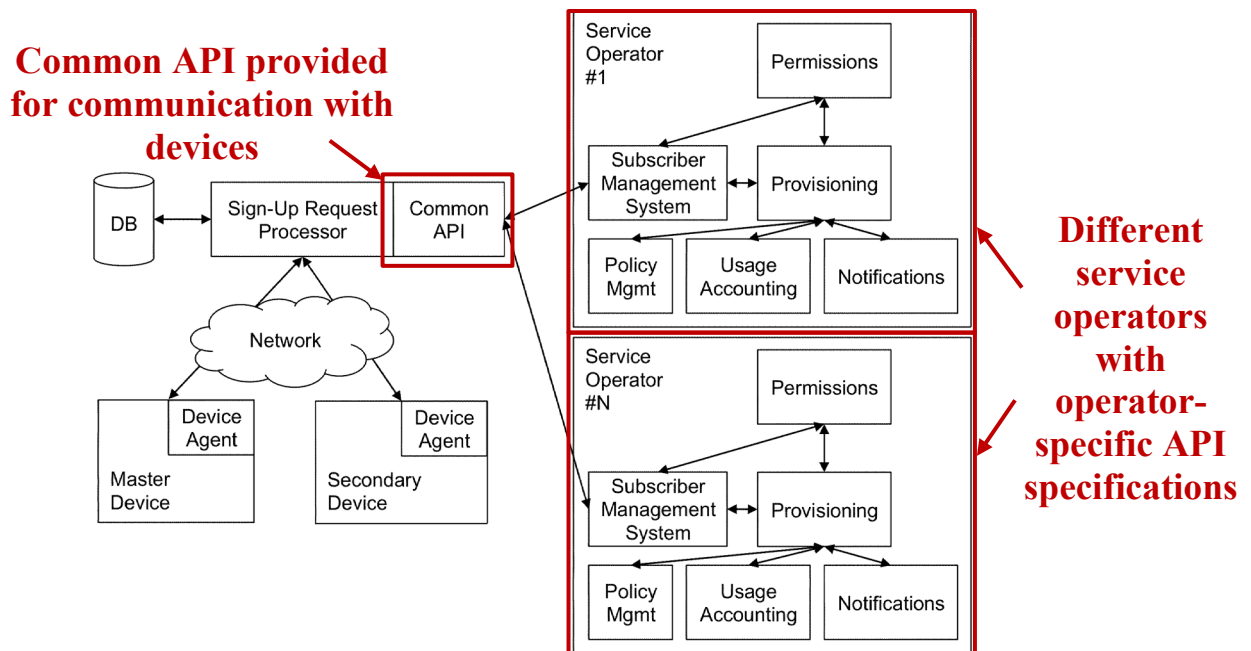
service provider system, and a video chat service (“*a second service*”) from
“*a second third party application service provider system.*” Ex.1003, ¶¶161-
162.

[6.0] *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,*

This limitation is analogous to [1.8] and [1.9], except that the subscription request is claimed as a “*second subscription request*” and is “*for the group plan.*” Ex.1003, ¶163. As explained above in [1.8] and [1.9], Raleigh renders obvious “*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.*” Ex.1003, ¶¶109-126. Thus, Raleigh renders obvious this limitation. Ex.1003, ¶163.

[6.1] *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;*

Raleigh contemplates systems and methods “to design, manage, and control communication services through **application programming interfaces.**” Ex.1005, Abstract. Raleigh also describes a system configuration in which different service operators provision their services to devices through a sign-up request processor using a common API. Ex.1005, [1690]. Ex.1003, ¶164.



Ex.1005, FIG.15I (annotated)

Referring to FIG.15I, Raleigh explains that that each operator has its own API specification, and that the service operators conform to a same “high level” workflow, while keeping their own “low level” workflows:

the Sign-Up Request Processor conforms to **each service Operator's API specification**. In some embodiments, the service operator API exposes the “high level” requests (e.g., add subscriber to a master service account, device group, or multi-device service plan, remove subscriber from a master service account, device group, or multi-device service plan, allocate quotas, add curfew, remove curfew, add notification, delete notification, etc.) to the Sign-Up Request Processor and then converts the “high level” commands into **the appropriate “low level”**

commands and workflow specific to that service operator.

Ex.1005, [1693]; Ex.1003, ¶165.

Thus, Raleigh contemplates that different service providers may operate according to different protocols and workflows, and proposes using APIs “to manage communication services for mobile wireless communication devices in a uniform consistent manner across different devices and/or different service providers.” Ex.1005, [0057], [1693]; Ex.1003, ¶166. It would have been obvious that one of the service operators would have at least one API that is “*incompatible*” with at least one API of the other service operator. Ex.1003, ¶166.

Accordingly, Raleigh renders obvious “*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.*” Ex.1003, ¶167.

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

This limitation is analogous to [1.10]. As explained above in [1.8] and [1.9], Raleigh renders obvious “*sending, by the unified services platform system, a second activation request for the group plan to the third party application service provider system.*” Ex.1003, ¶168.

[6.3] *receiving a second activation response from the third party application service provider system;*

This limitation is analogous to [1.11]. As explained above in [1.8] and [1.9], Raleigh renders obvious “*receiving a second activation response from the third party application service provider system.*” Ex.1003, ¶169.

[6.4] *associating the second service with each telephone number of the plurality of telephone numbers; and*

This limitation is analogous to [1.12]. As explained above in [1.8] and [1.9], Raleigh renders obvious “*associating the second service with each telephone number of the plurality of telephone numbers.*” Ex.1003, ¶170.

[6.5] *providing access to the second service for each telephone number based on the associating.*

This limitation is analogous to [1.13]. As explained above in [1.8] and [1.9], Raleigh renders obvious “*providing access to the second service for each telephone number based on the associating.*” Ex.1003, ¶171.

7. Claim 7

[7.0] *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.*

Raleigh teaches that the services may include a variety of communication types, including “voice services (e.g., phone calls, etc.), **messaging services** (e.g., text messages, multimedia messages, etc.), **data services** (e.g., Internet access, etc.), and hybrid services (e.g., voice over IP (**VOIP**), video chat, etc.).” Ex.1005, [0381]. Ex.1003, ¶172.

In a messaging services example, Raleigh explains that, in response to an “incoming text message or multi-media message” (“*in response to a trigger event*”), a service provider can provide a “notification message [presenting] options to purchase a service plan and accept an incoming text message or multi-media message” (“*invoking the service*”):

the notification message can present options to purchase a service plan and **accept an incoming text message or multi-media message** (or equivalent)... In some embodiments, purchase of a service plan can be completed before or after accepting and viewing an incoming text message or multi-media message.

Ex.1005, [0781]; Ex.1003, ¶173.

A POSITA would have understood that an incoming text message is “*associated with*” the user’s telephone number (“*the first telephone number*”).

Ex.1003, ¶174. For instance, an incoming text message, such as an Short Message Service (SMS) message, would have been addressed to the user’s telephone number. Further, it would have been obvious in light of Raleigh’s disclosure of group service accounts that the user’s telephone number would be associated with a plurality of telephone numbers in the group (“*...of the plurality of telephone numbers*”). *See, e.g.*, Ex.1005, FIG.9G; *supra*, [1.2], [1.8]; Ex.1003, ¶174.

XII. DISCRETIONARY DENIAL IS INAPPROPRIATE

A. No basis for 35 U.S.C. § 325(d) denial

Raleigh was not cited or considered by the Examiner during prosecution of the '047 patent.

Accordingly, discretionary denial under 35 U.S.C. § 325(d) is not appropriate because the first part of the *Advanced Bionics* framework is not met. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential).

B. Discretionary denial under the *Fintiv* factors is not appropriate

The six factors for considering denial under § 314 strongly favor institution. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (Mar. 20, 2020) (precedential). The district court case is in its early stages. Patent Owner filed its complaint on May 20, 2022 (Ex.1015) and served Cisco on May 27, 2022. Patent Owner provided its preliminary infringement contentions on September 22, 2022. Ex.1014. Petitioner has since worked diligently to prepare this Petition, which is being filed within the one-year timeframe allowed by Congress under 35 U.S.C. § 315(b).

1. Whether evidence exists that a stay may be granted if a proceeding is instituted

A motion to stay has not yet been filed and the Board should not infer or

attempt to predict the outcome if such a motion is later filed. *Sand Revolution II LLC v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 7 (June 16, 2020) (informative); *see also Dish Network L.L.C. v. Broadband iTV, Inc.*, IPR2020-01359, Paper 15 at 11-12 (Feb. 12, 2021) (“It would be improper to speculate, at this stage, what the Texas court might do regarding a motion to stay...”). Thus, this factor is neutral.

2. Proximity of the court’s trial date to the board’s projected statutory deadline for a final written decision

The operative Docket Control Order sets July 13, 2023, for the *Markman* hearing and January 22, 2024, for Jury Selection. Ex.1013, p. 1, 3. The Final Written Decision is expected in this case in October 2024. This factor nevertheless is neutral, because the Petitioner has worked expeditiously to prepare and file this petition approximately seven months after receiving Patent Owner’s infringement contentions on September 22, 2022. Ex.1014; *Fintiv*, Paper 11 at 11-12.

The current average time-to-trial for the district court hearing the co-pending case is 19 months. Ex.1012, p. 35; *In re Apple Inc.*, 979 F.3d 1332, 1350 (Fed. Cir. 2020). Thus, a trial in the co-pending case would be expected in December 2023. However, “scheduled trial dates are often subject to change.” *In re Apple Inc.*, 979 F.3d 1332, 1344, n.5 (Fed. Cir. 2020). Petitioner notes that four other cases are scheduled for Jury Selection on January 22, 2024—the same Jury Selection date as

the co-pending litigation—and have not settled. Ex.1017 (listing all cases having Jury Selection scheduled for January 22, 2024).

As such, this factor is neutral. *See Sand Revolution II, LLC v. Continental Intermodal Grp.—Trucking LLC*, IPR2020-01393, Paper 24 (June 16, 2020) (panel granting institution on rehearing based on finding that uncertainty over district court’s trial date weighed against discretionary denial).

3. Investment in the parallel proceeding

The co-pending litigation is in its early stages, and the investment in it has been minimal. Fact discovery is not set to close until September 5, 2023, and expert discovery is not set to close until October 10, 2023. Ex.1013. The Docket Control Order sets July 13, 2023 as the date for the *Markman* Hearing. Ex.1013, p.3. Thus, this factor weights against discretionary denial. *See PEAG LLC v. Varta Microbattery GMBH*, IPR2020-01214, Paper 8 at 17 (Jan. 6, 2021) (finding that since no claim construction hearing had yet been held and discovery was not completed, the little investment in the parallel proceeding weighed against discretionary denial).

4. Overlap between issues raised in the petition and in the parallel proceeding

There will be no overlap of prior art issues. Petitioner stipulates that, if the Board institutes trial, Petitioner will cease asserting in the co-pending litigation the

reference on which trial is instituted for the claims, to the extent Petitioner even asserts the same combination in the district court. This factor weighs against discretionary denial. *See Verizon Bus. Network Servs. v. Huawei Techs. Co., Ltd.*, IPR2020-01079, Paper 10 at 38 (Jan. 14, 2021) (finding a similar stipulation “mitigates the concern about overlapping issues” and weighs “against discretionary denial of the Petition.”).

5. Whether the petitioner is a defendant

Petitioner is a defendant in the litigation. Ex.1015. This is true of most Petitioners in IPR proceedings. While the *Fintiv* case indicates that a difference between the district court defendant and the petitioner may weigh against discretionary denial, nothing within the *Fintiv* case suggests that the same party between the proceedings weighs in favor of discretionary denial. *See HP Inc. v. Slingshot Printing LLC*, IPR2020-01084, Paper 13 at 9 (Jan. 14, 2021) (having the “same parties as parallel proceeding” makes factor 5 “neutral”). Accordingly, this factor is neutral and should not be a basis for denying institution.

6. Other circumstances that impact the Board’s exercise of discretion, including the merits

As discussed above, the prior art presented in this Petition renders the Challenged Claims unpatentable as obvious. In view of the striking similarities between the ’047 patent claims and the Raleigh primary prior art reference, this

petition “presents compelling evidence of unpatentability.” Director Vidal’s Guidance Memorandum, Ex.1016, 2. This factor weighs against discretionary denial.

As such, the *Fintiv* factors are either neutral or weigh against discretionary denial. Because this Petition was filed more than three months before the statutory bar date, institution should not be denied on discretionary factors.

C. Discretionary denial under *General Plastic* is not appropriate

The ’047 patent has not been challenged in any prior IPR petition, so no *General Plastic* discretionary institution factors apply here. *See General Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16 (Sept. 6, 2016) (Section II.B.4.i. precedential).

XIII. CONCLUSION

Petitioner has established a reasonable likelihood that the Challenged Claims are unpatentable.

Respectfully submitted,

Dated: April 20, 2023
HAYNES AND BOONE, LLP
2323 Victory Avenue, Suite 700
Dallas, Texas 75219
Customer No. 27683

/Theodore M. Foster/
Theodore M. Foster
Lead Counsel for Petitioner
Registration No. 57,456

XIV. MANDATORY NOTICES

A. Real party-in-interest

Pursuant to 37 C.F.R. §42.8(b)(1), Petitioner certifies the real party-in-interest is Cisco Systems, Inc.

B. Related matters

Pursuant to 37 C.F.R. §42.8(b)(2), to Petitioner's best knowledge, the '047 patent is or was involved in the following cases:

Case Heading	Number	Court	Filed
<i>Zilkr Cloud Technologies, LLC v. Cisco Systems, Inc.</i>	2-22-cv-00166	E.D. Tex.	May 20, 2022
<i>Zilkr Cloud Technologies, LLC v. RingCentral, Inc.</i>	3-21-cv-02807	N.D. Tex.	Nov. 11, 2021

Additionally, the '047 patent is related to U.S. Patent No. 9,210,254, which is involved in the *Inter Partes* Review proceeding IPR2023-00552. The '047 patent is also related to U.S. Patent No. 9,998,607, which is involved in the *Inter Partes* Review proceeding IPR2023-00663. The '047 patent is also related to U.S. Patent No. 9,883,048, which is involved in the *Inter Partes* Review proceeding IPR2023-00809.

C. Lead and back-up counsel and service information

Lead Counsel

Theodore M. Foster
HAYNES AND BOONE, LLP
2323 Victory Ave. Suite 700
Dallas, TX 75219

Phone: (303) 382-6205
Fax: (214) 200-0853
ipr.theo.foster@haynesboone.com
USPTO Reg. No. 57,456

Back-up Counsel

David L. McCombs
HAYNES AND BOONE, LLP
2323 Victory Ave. Suite 700
Dallas, TX 75219

Phone: (214) 651-5533
Fax: (214) 200-0853
david.mccombs.ipr@haynesboone.com
USPTO Reg. No. 32,271

Eugene Goryunov
HAYNES AND BOONE, LLP
2323 Victory Ave. Suite 700
Dallas, TX 75219

Phone: (312) 216-1630
Fax: (214) 200-0853
eugene.goryunov.ipr@haynesboone.com
USPTO Reg. No. 61,579

Samuel M. Drezdzon
HAYNES AND BOONE, LLP
2323 Victory Ave. Suite 700
Dallas, TX 75219

Phone: 972-739-6918
Fax: 214-200-0853
samuel.drezdzon.ipr@haynesboone.com
USPTO Reg. No. 67,085

Brett Bostrom
HAYNES AND BOONE, LLP
2323 Victory Ave. Suite 700
Dallas, TX 75219

Phone: (972) 739-6973
Fax: (202) 654-4501
brett.bostrom.ipr@haynesboone.com
USPTO Reg. No. 73,009

Please address all correspondence in this proceeding to lead and back-up counsel. Petitioner consents to service in this proceeding by email at the addresses above.

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Petitioner hereby certifies, in accordance with and reliance on the word count provided by the word-processing system used to prepare this Petition, that the number of words in this paper is 11,224. Pursuant to 37 C.F.R. § 42.24(d), this word count excludes the table of contents, table of authorities, mandatory notices under § 42.8, certificate of service, certificate of word count, appendix of exhibits, and any claim listing.

Dated: April 20, 2023

/Theodore M. Foster/

Theodore M. Foster
Lead Counsel for Petitioner
Registration No. 57,456

CERTIFICATE OF SERVICE

The undersigned certifies that, in accordance with 37 C.F.R. § 42.6(e) and 37 C.F.R. § 42.105, service was made on Patent Owner as detailed below.

Date of service April 20, 2023

Manner of service FEDERAL EXPRESS

Documents served Petition for *Inter Partes* Review Under 35 U.S.C. § 312 and 37 C.F.R. § 42.104 of U.S. 9,883,047;
Petitioner's Exhibit List;
Exhibits 1001-1018.

Persons served Conley Rose, P.C.
4965 Preston Park Blvd., Suite 195E
Plano, TX 75093

/Theodore M. Foster/

Theodore M. Foster
Lead Counsel for Petitioner
Registration No. 57,456