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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/694,455	03/19/2013	8402111	RALEP027 [26WV-160504]	6047

107265 7590 02/27/2013

Headwater Partners I LLC - Outside Firm 1
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Redwood Shores, CA 94065

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 92 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):

Gregory G. Raleigh, Woodside, CA;

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PTO/SB/08 (08-03)

Substitute for form 1449/PTO				Complete if Known	
Information Disclosure Statement By Applicant *(Use as many sheets as necessary)*				Application No.:	12/694,455
				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	1	of	1	Atty Docket No.	RALEP027

U.S. Patent Documents

Examiner Initials	Cite No.	Document Number Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A.	US 2003/0088671	05-08-2003	KLINKER et al.	
	B.	US 2007/0248100	10-25-2007	ZUBERI et al.	
	C.	US 2008/0130534	06-05-2008	Tazuko Tomioka	
	D.	US 2006/0236095	10-19-2006	SMITH et al.	
	E.	US 2009/0054030	02-26-2009	Golds	
	F.	US 6,952,428	10-04-2005	NECKA et al.	
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Change(s) applied to document, /R.K.V./ 11/7/2012

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	Z.	WO 2007/018363	~~08-02-2006~~	Upresto, Inc.	2/2007

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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, page(s), volume-issue number(s), publisher, city and/or country where published	T^2
	AA.		
	BB.		

Examiner	/Andrew Joseph Rudy/	Date Considered	02/10/2012

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/T.C.T./
11/8/2012

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				First Named Inventor	Gregory G. Raleigh
				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	2	of	4	Atty Docket No.	RALEP027

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/694,455	01/27/2010	Gregory G. Raleigh	RALEP027 [26WV-160504]	6047

107265 7590 02/06/2013

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EXAMINER	
RUDY, ANDREW J	

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
12/694,455	27 January, 2010	RALEIGH, GREGORY G.	RALEP027 [26WV-160504]

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ANDREW JOSEPH RUDY	
ART UNIT	**PAPER**
3687	20130130

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The Information Disclosure Statements (IDS's) submitted January 15, 2013; January 22, 2013; January 24, 2013 and January 29, 2013 have been reviewed and entered into the prosecution history. Note the attached IDS's.

/ANDREW JOSEPH RUDY/
Primary Examiner
Art Unit: 3687

PTO-90C (Rev.04-03)

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

PTO/SB/08a (01-10)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

U.S.PATENTS						
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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	2	8350700		2013-01-08	Fast, Raymond D. et al.	
	3	7236780		2007-06-26	Benco, David S. et al.	
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	6	8204190		2012-06-19	Bang, Jung-Hee et al.	
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	First Named Inventor	Raleigh, Gregory G.
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	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

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U.S.PATENT APPLICATION PUBLICATIONS

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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Doc description: Information Disclosure Statement (IDS) Filed

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EFS Web 2.1.17 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.R./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3587
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

	20	7844728		2010-11-30	Anderson, Thomas W. et al.	
	21	7873344		2011-01-18	Bowser, Robert et al.	
	22	7856226		2010-12-21	Wong, Ellis L. et al.	
	23	7948952		2011-05-24	Hurtta, Tuija et al.	
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	26	7167078		2007-01-23	Pourchot, Shawn C.	

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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	20100103820		2010-04-29	Fuller, Randy et al.	
	2	20080005285		2008-01-03	Robinson, James David et al.	

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	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

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	8	20080262798		2008-10-23	KIM, Eun Ah et al.	
	9	20100153781		2010-06-17	HANNA, Stephen R.	
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	11	20050009499		2005-01-13	Koster, Karl	
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Examiner Signature	/Andrew Joseph Rudy/	Date Considered	01/30/2013

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

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U.S.PATENTS

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	8102814		2012-01-24	Rahman, Shahriar I. et al.	
	2	7970350		2011-06-28	Sheynman, Arnold et al.	
	3	8094551		2012-01-10	Huber, Kurt Donald et al.	

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U.S.PATENT APPLICATION PUBLICATIONS

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	20100041364		2010-02-18	Lott, Robert Wayne et al.	
	2	20100027469		2010-02-04	Gurajala, Ravindra Babu et al.	

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	Examiner Name	Rudy, Andrew J.
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U.S.PATENTS						
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	8353001		2013-01-08	Herrod, Allan	
	2	8350700		2013-01-08	Fast, Raymond D. et al.	
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	5	7865182		2011-01-04	Macaluso, Anthony G.	
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	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

	9	7962622		2011-06-14	Friend, John et al.	
	10	7583964		2009-09-01	Wong, Gregory A.	
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	Art Unit	3687
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

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	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

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

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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		Date (YYYY-MM-DD)	2013-01-29
Name/Print	Krista S. Jacobsen	Registration Number	59374

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Electronic Patent Application Fee Transmittal					
Application Number:	12694455				
Filing Date:	27-Jan-2010				
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL				
First Named Inventor/Applicant Name:	Gregory G. Raleigh				
Filer:	Krista Susan Jacobsen/Ann Taylor				
Attorney Docket Number:	RALEP027 [26WV-160504]				
Filed as Large Entity					
Utility under 35 USC 111(a) Filing Fees					
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:					

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Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt	
EFS ID:	14823265
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	29-JAN-2013
Filing Date:	27-JAN-2010
Time Stamp:	17:14:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
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	Examiner Name	Rudy, Andrew J.
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U.S.PATENTS						
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	1	8335161		2012-12-18	Foottit, Tom et al.	
	2	8315594		2012-11-20	Mauser, Edward Ronald et al.	
	3	8135388		2012-03-13	Gailloux, Michael A. et al.	
	4	6947723		2005-09-20	Gurnani, Roger et al.	
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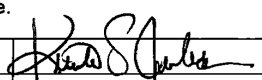
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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature		Date (YYYY-MM-DD)	2013-01-24
Name/Print	Krista S. Jacobsen	Registration Number	59374

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Filer:	Krista Susan Jacobsen/Ann Taylor
Attorney Docket Number:	RALEP027 [26WV-160504]
Filed as Large Entity	

Utility under 35 USC 111(a) Filing Fees

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($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt	
EFS ID:	14786769
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	24-JAN-2013
Filing Date:	27-JAN-2010
Time Stamp:	18:31:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	6024
Deposit Account	505876
Authorized User	
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 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)	
Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)	
Charge any Additional Fees required under 37 C.F.R. Section 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	Information Disclosure Statement (IDS) Form (SB08)	P027IDS.pdf	704496 c0f495396bcba18d231fd5ba8bbb963a78da1da4	no	3
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
2	Fee Worksheet (SB06)	fee-info.pdf	30229 921e18d1359e4ba74ba6bf6400fee1c336d8d29f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	734725		

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.

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

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. 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	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

U.S.PATENTS						
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	8102814		2012-01-24	Rahman, Shahriar I. et al.	
	2	7970350		2011-06-28	Sheynman, Arnold et al.	
	3	8094551		2012-01-10	Huber, Kurt Donald et al.	
If you wish to add additional U.S. Patent citation information please click the Add button.						

U.S.PATENT APPLICATION PUBLICATIONS						
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	20100041364		2010-02-18	Lott, Robert Wayne et al.	
	2	20100027469		2010-02-04	Gurajala, Ravindra Babu et al.	
If you wish to add additional U.S. Published Application citation information please click the Add button.						

FOREIGN PATENT DOCUMENTS								
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]

EFS Web 2.1.17

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

	1							☐

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

NON-PATENT LITERATURE DOCUMENTS

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		☐

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

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.

EFS Web 2.1.17

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

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.

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

☐ None

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		Date (YYYY-MM-DD)	2013-01-22
Name/Print	Krista S. Jacobsen	Registration Number	59374

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.**

EFS Web 2.1.17

Electronic Patent Application Fee Transmittal	
Application Number:	12694455
Filing Date:	27-Jan-2010
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Filer:	Krista Susan Jacobsen/Ann Taylor
Attorney Docket Number:	RALEP027 [26WV-160504]
Filed as Large Entity	

Utility under 35 USC 111(a) Filing Fees

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($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt	
EFS ID:	14764106
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	22-JAN-2013
Filing Date:	27-JAN-2010
Time Stamp:	21:24:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	8067
Deposit Account	505876
Authorized User	
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 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)	
Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)	
Charge any Additional Fees required under 37 C.F.R. Section 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	Information Disclosure Statement (IDS) Form (SB08)	P027IDS.pdf	709137 819a72822ce717e343ad7392d5502897d50cff8e	no	3
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
2	Fee Worksheet (SB06)	fee-info.pdf	30218 d86233f51e6d30eda498efd5078b64d08b0f7451	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	739355		

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
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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.

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. 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.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	12694455	Filing Date	2010-01-27	Docket Number (if applicable)	RALEP027	Art Unit	3687
First Named Inventor	Gregory G. Raleigh			Examiner Name	Andrew J. Rudy		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☐ Amendment/Reply
- ☒ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☒ Other 1. Certification & Request for Consideration of an IDS Filed After Payment of the Issue Fee Under the QPIDS Program; 2. Petition to Withdraw an Application from Issue After Payment of Issue Fee Under 37 CFR 1.313(c)

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 505876

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature
☐ Applicant Signature

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. 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.

Signature of Registered U.S. Patent Practitioner			
Signature	/Krista S. Jacobsen/	Date (YYYY-MM-DD)	2013-01-15
Name	Krista S. Jacobsen	Registration Number	59374

This collection of information is required by 37 CFR 1.114. 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.

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 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).

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 Patent Application Fee Transmittal	
Application Number:	12694455
Filing Date:	27-Jan-2010
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Filer:	Krista Susan Jacobsen/Ann Taylor
Attorney Docket Number:	RALEP027 [26WV-160504]
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Petition fee- 37 CFR 1.17(h) (Group III)	1464	1	130	130
Request for continued examination	2801	1	465	465
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**595**

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

Decision Date : January 15, 2013

In re Application of :

Gregory Raleigh

DECISION ON PETITION
UNDER CFR 1.313(c)(2)

Application No : 12694455

Filed : 27-Jan-2010

Attorney Docket No : RALEP027 [26WV-160504]

This is an electronic decision on the petition under 37 CFR 1.313(c)(2), filed January 15, 2013 , to withdraw the above-identified application from issue after payment of the issue fee.

The petition is **GRANTED.**

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

Telephone inquiries concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

This application file is being referred to Technology Center AU 3687 for processing of the request for continuing examination under 37 CFR 1.114 .

Office of Petitions

Electronic Acknowledgement Receipt	
EFS ID:	14709419
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	15-JAN-2013
Filing Date:	27-JAN-2010
Time Stamp:	22:47:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$595
RAM confirmation Number	7455
Deposit Account	505876
Authorized User	
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 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 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	Petition automatically granted by EFS	petition-request.pdf	31946 476fbae101e12622ec68007772124b908cdb031a	no	2
Warnings:					
Information:					
2	Transmittal Letter	P027Trans.pdf	311922 b8c6879ad767a8ec6d2bfaaea6b388e581280023	no	1
Warnings:					
Information:					
3	Request for Continued Examination (RCE)	P027CondRCE.pdf	697927 e6669b418ba04dba3fb0a8d58709d48979244092	no	3
Warnings:					
Information:					
4	Information Disclosure Statement (IDS) Form (SB08)	P027IDS.pdf	613244 3c6023397a000fa421e0456a99cfb6c268d4e021	no	7
Warnings:					
Information:					
5	Quick Path Information Disclosure Statement	P027QPIDSCert.pdf	357304 d8e434e2b6dadbaf96ba7c66428e91539c3fafde	no	1
Warnings:					
Information:					
6	Fee Worksheet (SB06)	fee-info.pdf	32094 82d1ef5ce06b0255aa17e5359a5fb6d4edab1124	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	2044437		

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.

Doc Code: PET.AUTO Document Description: Petition automatically granted by EFS-Web	PTO/SB/140 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**PETITION TO WITHDRAW AN APPLICATION FROM ISSUE AFTER PAYMENT OF THE ISSUE FEE UNDER 37 CFR 1.313(c)**
Application Number	12694455
Filing Date	27-Jan-2010
First Named Inventor	Gregory Raleigh
Art Unit	3687
Examiner Name	ANDREW RUDY
Attorney Docket Number	RALEP027 [26WV-160504]
Title	DEVICE ASSISTED SERVICES INSTALL

An application may be withdrawn from issue for further action upon petition by the applicant. To request that the Office withdraw an application from issue, applicant must file a petition under this section including the fee set forth in § 1.17(h) and a showing of good and sufficient reasons why withdrawal of the application from issue is necessary.

APPLICANT HEREBY PETITIONS TO WITHDRAW THIS APPLICATION FROM ISSUE UNDER 37 CFR 1.313(c).

A grantable petition requires the following items:
(1) Petition fee; and
(2) One of the following reasons:
(a) Unpatentability of one or more claims, which must be accompanied by an unequivocal statement that one or more claims are unpatentable, an amendment to such claim or claims, and an explanation as to how the amendment causes such claim or claims to be patentable;
(b) Consideration of a request for continued examination in compliance with § 1.114 (for a utility or plant application only); or
(c) Express abandonment of the application. Such express abandonment may be in favor of a continuing application, but not a CPA under 37 CFR 1.53(d).

Petition Fee

☐ Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

☒ Applicant(s) status remains as SMALL ENTITY.

☐ Applicant(s) status remains as other than SMALL ENTITY

Reason for withdrawal from issue

◯ One or more claims are unpatentable ◉ Consideration of a request for continued examination (RCE) (List of Required Documents and Fees) ◯ Applicant hereby expressly abandons the instant application (any attorney/agent signing for this reason must have power of attorney pursuant to 37 CFR 1.32(b)).
RCE request,submission, and fee. ☐ I certify, in accordance with 37 CFR 1.4(d)(4) that : The RCE request ,submission, and fee have already been filed in the above-identified application on ☒ Are attached.
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES 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, acting in a representative capacity. ◯ A sole inventor ◯ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors ◯ A joint inventor; all of whom are signing this e-petition ◯ The assignee of record of the entire interest that has properly made itself of record pursuant to 37 CFR 3.71

Signature	/Krista S. Jacobsen/
Name	Krista S. Jacobsen
Registration Number	59374

Doc Code: TRAN.LET

Document Description: Transmittal Letter

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Total Number of Pages in This Submission

Application Number	12/694455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687
Examiner Name	Andrew J. Rudy
Attorney Docket Number	RALEP027

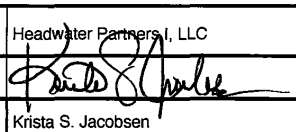
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- [ ] Amendment/Reply
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- [x] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
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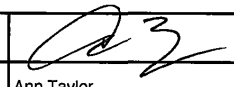
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Firm Name	Headwater Partners I, LLC		
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Date	January 15, 2013	Reg. No.	59374

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	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3587
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

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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	8255689		2012-08-28	Kim, Eun Ah et al.	
	2	7746854		2010-06-29	Ambe, Shekhar et al.	
	3	7068600		2006-06-27	Cain, Joseph Bibb	
	4	6876653		2005-04-05	Ambe, Shekhar et al.	
	5	6631122		2003-10-07	Arunachalam, Vaidhyanathan et al.	
	6	7599288		2009-10-06	Cole, Raymond E. et al.	
	7	7546629		2009-06-09	Albert, Anthony et al.	
	8	7747730		2010-06-29	Harlow, James D.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3587
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

	9	7609650		2009-10-27	Roskowski, Steve et al.	
	10	6581092		2003-06-17	Motoyama, Tetsuro et al.	
	11	7283963		2007-10-16	Fitzpatrick, John E. et al.	
	12	8271049		2012-09-18	Silver, Andrew et al.	
	13	7644151		2010-01-05	Jerrim, John et al.	
	14	8291238		2012-10-16	Ginter, Karl L. et al.	
	15	8068824		2011-11-29	Shan, Xueshan et al.	
	16	7228354		2007-06-05	Chambliss, David Darden et al.	
	17	5283904		1994-02-01	Carson, David G. et al.	
	18	8208919		2012-06-26	Kotecha, Lalit Ratilal	
	19	8185152		2012-05-22	Goldner, Alla	

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	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3587
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

	20	7844728		2010-11-30	Anderson, Thomas W. et al.	
	21	7873344		2011-01-18	Bowser, Robert et al.	
	22	7856226		2010-12-21	Wong, Ellis L. et al.	
	23	7948952		2011-05-24	Hurtta, Tuija et al.	
	24	7957020		2011-06-07	Mine, Ryuta et al.	
	25	7346410		2008-03-18	Uchiyama, Kenji	
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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	20100103820		2010-04-29	Fuller, Randy et al.	
	2	20080005285		2008-01-03	Robinson, James David et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3587
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

	3	20090046723		2009-02-19	Rahman, Reshad A. et al.	
	4	20080219268		2008-09-11	Dennison, Larry R.	
	5	20090315735		2009-12-24	Bhavani, Neeraj S. et al.	
	6	20090219170		2009-09-03	Clark, Ryan C. et al.	
	7	20090067372		2009-03-12	Shah, Keyur C. et al.	
	8	20080262798		2008-10-23	KIM, Eun Ah et al.	
	9	20100153781		2010-06-17	HANNA, Stephen R.	
	10	20090307746		2009-12-10	DI, Jinwen et al.	
	11	20050009499		2005-01-13	Koster, Karl	
	12	20010053694		2001-12-20	Igarashi, Yoichiro et al.	

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	Application Number	12694455
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	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3587
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

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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	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3587
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

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).

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☐ See attached certification statement.

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

☐ None

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	/Krista S. Jacobsen/	Date (YYYY-MM-DD)	2013-01-15
Name/Print	Krista S. Jacobsen	Registration Number	59374

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Electronic Patent Application Fee Transmittal	
Application Number:	12694455
Filing Date:	27-Jan-2010
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Filer:	Krista Susan Jacobsen/Ann Taylor
Attorney Docket Number:	RALEP027 [26WV-160504]
Filed as Large Entity	

Utility under 35 USC 111(a) Filing Fees

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($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt	
EFS ID:	14709424
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	15-JAN-2013
Filing Date:	27-JAN-2010
Time Stamp:	22:48:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	7459
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/694,455	01/27/2010	Gregory G. Raleigh	RALEP027 [26WV-160504]	6047

107265 7590 11/14/2012

Headwater Partners I LLC - Outside Firm 1
350 Marine Parkway, Suite 300
Redwood Shores, CA 94065

EXAMINER	
RUDY, ANDREW J	

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
12/694,455	27 January, 2010	RALEIGH, GREGORY G.	RALEP027 [26WV-160504]

Headwater Partners I LLC - Outside Firm 1
350 Marine Parkway, Suite 300
Redwood Shores, CA 94065

EXAMINER	
ANDREW JOSEPH RUDY	
ART UNIT	PAPER
3687	20121108

DATE MAILED:

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Commissioner for Patents

Applicant's November 2, 2012 Amendment after Allowance and Information Disclosure Statement (IDS) have been received. Pursuant to Applicant's associated REMARKS, the 11/2/12 Amendment has been entered. Also, the IDS has been reviewed. Note the attached IDS.

/ANDREW JOSEPH RUDY/
Primary Examiner
Art Unit: 3687

PTO-90C (Rev.04-03)

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

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	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

U.S.PATENTS						
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	7609700		2009-10-27	Ying, Wen-Ping et al.	
	2	8255515		2012-08-28	Melman, David et al.	
	3	7945240		2011-05-17	Klock, Jacqueline et al.	
	4	7912056		2011-03-22	Brassem, Wayne	
	5	7920529		2011-04-05	Mahler, Roger et al.	
	6	8184530		2012-05-22	Swan, Tim L. et al.	
	7	8213363		2012-07-03	Ying, Wen-Ping et al.	
	8	8214536		2012-07-03	Zhao, Wen	

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	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

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	1	20080085707		2008-04-10	FADELL, Tony	

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BIB DATA SHEET

CONFIRMATION NO. 6047

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/694,455	01/27/2010	705	3687	RALEP027 [26WV-160504]

APPLICANTS

Gregory G. Raleigh, Woodside, CA;

**** CONTINUING DATA ***************************

This application is a CIP of 12/380,780 03/02/2009
and claims benefit of 61/206,354 01/28/2009
and claims benefit of 61/206,944 02/04/2009
and claims benefit of 61/207,393 02/10/2009
and claims benefit of 61/207,739 02/13/2009
and claims benefit of 61/264,120 11/24/2009

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

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

02/05/2010

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /ANDREW JOSEPH RUDY/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		CA	5	32	3

ADDRESS

Headwater Partners I LLC - Outside Firm 1
350 Marine Parkway, Suite 300
Redwood Shores, CA 94065
UNITED STATES

TITLE

DEVICE ASSISTED SERVICES INSTALL

FILING FEE RECEIVED		
1844	FEES: Authority has been given in Paper 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).

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107265 7590 10/30/2012
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Ann Taylor	(Depositor's name)
	(Signature)
November 5, 2012	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/694,455	01/27/2010	Gregory G. Raleigh	RALEP027 [26WV-160504]	6047

TITLE OF INVENTION: DEVICE ASSISTED SERVICES INSTALL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1770	$300	$0	$2070	01/30/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
RUDY, ANDREW J	3687	705-030000

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.
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2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
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1 Krista S. Jacobsen
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: Headwater Partners I, LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Redwood Shores, CA

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:
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☒ Publication Fee (No small entity discount permitted)
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5. **Change in Entity Status** (from status indicated above)
☒ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

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Authorized Signature _____ Date November 5, 2012

Typed or printed name Krista S. Jacobsen Registration No. 59374

This collection of information 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.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Examiner:
Gregory G. Raleigh	Andrew J. Rudy
Serial No. 12/694,455	Art Unit: 3687
Filed: January 27, 2010	Conf. No.: 6047
Title: Device Assisted Services Install	

Commissioner for Patents
P.O. Box 1450
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NOTICE OF CHANGE OF ENTITY STATUS FROM LARGE TO SMALL

Dear Sir:

The Applicant is entitled to claim small entity status for the above-referenced patent application, and shall henceforth pay fees due at the small entity rate.

Please change your records to reflect this change in entity status.

No fee should be required for this change of entity status, but if such fee is determined to be owned, please charge Deposit Account No. **50-5876** for the same.

Respectfully submitted,

Date: November 5, 2012

By: _____

Krista S. Jacobsen, Reg. No. 59,374
Headwater Partners I, LLC
350 Marine Parkway, Suite 300
Redwood Shores, CA 94065
Telephone: (650) 517-2798

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Date: November 5, 2012 By: _____
Ann Taylor

Electronic Patent Application Fee Transmittal	
Application Number:	12694455
Filing Date:	27-Jan-2010
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Filer:	Krista Susan Jacobsen/Ann Taylor
Attorney Docket Number:	RALEP027 [26WV-160504]
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

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:				
Utility Appl issue fee	2501	1	885	885
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1185**

Electronic Acknowledgement Receipt	
EFS ID:	14155213
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	05-NOV-2012
Filing Date:	27-JAN-2010
Time Stamp:	20:54:33
Application Type:	Utility under 35 USC 111(a)

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1	Issue Fee Payment (PTO-85B)	P027IFT.pdf	436370 9e9504a27a5d5ac0a723313f3b75833161046c25	no	1
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Information:					
2	Transmittal Letter	P027Ltr.pdf	205556 78ce4e0372d9a606f02fb0149a863be8af443820	no	1
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	31959 98127e61b95ce0fb5de39533b649dbce68958aa7	no	2
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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
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Raleigh	Examiner:	Rudy, Andrew J.
Serial No.:	12/694,455	Art Unit:	3687
Filed:	January 27, 2010	Conf. No.:	6047
Title:	Device Assisted Services Install		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AFTER NOTICE OF ALLOWANCE

Sir:

Applicant received a Notice of Allowance including an Examiner's Amendment in the above-identified application on October 30, 2012. Pursuant to 37 C.F.R. § 1.312, please amend the above-identified application as follows:

Listing of Claims begins on page 2.

Remarks begin on page 8.

LISTING OF CLAIMS

Without prejudice and without surrender of any subject matter, please amend the claims as follows:

1. (Previously presented) A system, comprising:

a processor of a network device configured to:

determine whether a communications device in communication with the system over a wireless network includes a first version service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the first version service processor includes a service profile that includes at least one service policy setting, and wherein the service profile provides for access to the service; and

when the communications device includes the first version service processor,

determine a device group associated with the communications device, and

download a second version service processor to the communications device based on the device group; and

memory of the network device coupled to the processor and configured to provide the processor with instructions.

2. (Previously presented) The system recited in claim 1, wherein the first version service processor is uniquely associated with the communications device.

3. (Previously presented) The system recited in claim 1, wherein the communications device is activated prior to a point of sale of the communications device, and the service profile is associated with the communications device during activation.

4. (Previously presented) The system recited in claim 1, wherein the service profile is associated with the communications device during a manufacture of the communications device, during a distribution of the communications device, or at a point of sale of the communications device.

5. (Previously presented) The system recited in claim 1, wherein the service profile is associated with an ambient service plan that provides a low cost or free trial service plan that is bundled or provided as an option for purchase at a point of sale of the communications device.

6. (Previously presented) The system recited in claim 1, wherein the communications device includes a plurality of service processors for supporting a plurality of operating systems or a plurality of service plans.

7. (Previously presented) The system recited in claim 1, wherein the communications device is a mobile communications device or an intermediate networking device, and the service includes one or more Internet based services.

8. (Previously presented) The system recited in claim 1, wherein the communications device is a mobile communications device, and the service includes one or more Internet based services, and wherein the mobile communications device includes one or more of the following: a mobile phone, a personal digital assistant (PDA), an eBook reader, a music device, an entertainment device, a gaming device, a computer, a laptop, a netbook, a tablet, and a home networking system.

9. (Previously presented) The system recited in claim 1, wherein the communications device includes a modem, and at least one of the first version service processor and the second version service processor is located in the modem.

10. (Previously presented) The system recited in claim 1, wherein the at least one service policy setting includes one or more of the following: an access control setting, a traffic control setting, a billing system setting, a user notification with acknowledgement setting, a user notification with synchronized service usage information setting, a user privacy setting, a user preference setting, an authentication setting, an admission control setting, an application access setting, a content access setting, a transaction setting, a network communication setting, and a device management communication setting.

11. (Previously presented) The system recited in claim 1, wherein the processor is further configured to verify an implementation of the service profile based on one or more of the following: device generated service usage information and network generated service usage information.

12. (Previously presented) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device does not include the first version service processor, download the first version service processor or the second version service processor to the communications device.

13. (Previously presented) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device does not include the first version service processor, download the first version service processor or the second version service processor to the communications device using a bootstrapper.

14. (Previously presented) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device includes the first version service processor, update the first version service processor.

15. (Previously presented) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device includes the first version service processor, download a replacement service processor to the communications device.

16. (Canceled)

17. (Previously presented) The system recited in claim 1, wherein the second version service processor is uniquely associated with the communications device.

18. (Canceled)

19. (Previously presented) The system recited in claim 1, wherein the second version service processor is uniquely associated with the communications device based on one or more device credentials of the communications device.

20. (Previously presented) The system recited in claim 1, wherein the second version service processor is uniquely associated with the communications device based on one or more device credentials of the communications device and based on user information associated with a temporary user account.

21. (Previously presented) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device includes the first version service processor, download a service processor update to the communications device, wherein the service processor update includes one or more updates to the first version service processor.

22. (Currently amended) The system recited in claim 1, **[[and]]** wherein the processor of the network device is further configured to:

when the communications device includes the first version service processor, download a service processor update to the communications device, wherein the service processor update includes one or more settings changes to the first version service processor.

23. (Currently amended) The system recited in claim 1, **wherein the second version service processor** is uniquely associated with the communications device, a communications device user, a device group, or a service plan.

24. (Previously presented) The system recited in claim 1, wherein the second version service processor is uniquely associated with the communications device, and wherein the second version service processor includes one or more restricted Internet protocol (IP) addresses

providing for access to a service controller reserved for verified and non-probation mode service processors.

25. (Previously presented) The system recited in claim 1, wherein the first version service processor allows for limited access to the wireless network for purposes of service control and for permitting selection of a service plan, and wherein the second version service processor is based on a service plan selection for the communications device.

26. (Previously presented) The system recited in claim 1, wherein the second version service processor facilitates a dual boot configuration that provides support for at least two operating systems executed on the communications device.

27. (Currently amended) The system recited in claim 1, wherein the service profile **[[plan]]** includes an option to purchase a service plan for the communications device, wherein the service plan includes additional service capabilities, and wherein the second version service processor is associated with the service plan.

28. (Currently amended) The system recited in claim 1, wherein the processor of the network device is configured to **download the second version** service processor to the communications device based on one or more of the following: a service plan selection, an indication of tampering with the service processor, an update availability, and a periodic service processor verification request.

29. (Previously presented) The system recited in claim 1, wherein the processor of the network device is further configured to:

allow the communications device access to the service in a probation mode that allows for access to the service with increased service monitoring or limited service capabilities that are limited based on one or more of the following: a period of time, a network address, a service type, a content type, an application type, a bandwidth, and a data usage.

30. (Previously presented) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device includes the first version service processor, download an updated service processor to the communications device.

31. (Previously presented) A method performed by a network system, comprising:

determining whether a communications device in communication with the network system over a wireless network includes a first version service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the first version service processor includes a service profile that includes at least one service policy setting, and wherein the service profile provides for access to the service; and

when the communications device includes the first version service processor,

determining a device group associated with the communications device, and

downloading a second version service processor to the communications device based on the device group.

32. (Previously presented) A computer program product, the computer program product being embodied in a non-transitory computer readable storage medium and comprising computer instructions for causing a network system to perform the steps of:

determining whether a communications device in communication with the network system over a wireless network includes a first version service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the first version service processor includes a service profile that includes at least one service policy setting, and wherein the service profile provides for access to the service; and

when the communications device includes the first version service processor,

determining a device group associated with the communications device, and

downloading a second version service processor to the communications device based on the device group.

REMARKS

Claims 1-32 were allowed with an Examiner's Amendment in the Notice of Allowance mailed on October 30, 2012.

Applicant thanks the Examiner for the Examiner's Amendment and for allowing the claims as modified by the Examiner's Amendment.

Claims 22, 23, 27, and 28 are being amended herein. No new matter is being added. Applicant respectfully requests entry of these amendments.

Applicant respectfully notes that a few words added in the Examiner's Amendment to claims 1 ("first version" in line 9), 5 ("is associated with" in line 2), 12 ("or the second version service processor" in lines 4-5), 13 ("first version" in lines 3 and 4), and 14 ("first version" in lines 3 and 4) were not underlined in Applicant's copy of the Examiner's Amendment, but that all of these additions are satisfactory to Applicant.

CONCLUSION

If the Examiner has any questions or needs any additional information, the Examiner is invited to contact the undersigned.

The Commissioner is authorized to charge any fee deficiency or credit any overpayment to Deposit Account 50-5876.

Respectfully submitted,

Date: Nov. 2, 2012 By: _____

Krista S. Jacobsen
Reg. No. 59,374
Head Counsel
Headwater Partners I LLC
350 Marine Parkway, Suite 300
Redwood Shores, CA 94065
(650) 517-2798

CERTIFICATE OF ELECTRONIC TRANSMISSION

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Date: Nov. 2, 2012 By: _____
Ann Taylor

Electronic Patent Application Fee Transmittal	
Application Number:	12694455
Filing Date:	27-Jan-2010
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Filer:	Krista Susan Jacobsen/Ann Taylor
Attorney Docket Number:	RALEP027 [26WV-160504]
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

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($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt	
EFS ID:	14140945
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	02-NOV-2012
Filing Date:	27-JAN-2010
Time Stamp:	17:51:16
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	5008
Deposit Account	505876
Authorized User	
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Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees) Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees) Charge any Additional Fees required under 37 C.F.R. Section 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	Transmittal Letter	P027Trans.pdf	301553 387ee6952069fa3941ce79bbf9073a9ab5f084e0	no	1
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	P027IDS.pdf	743200 e01b3460a7e9359ce308c6a932c2724b0b9402d9	no	3
Warnings:					
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3		P027Amend.pdf	1897445 0a9a4239affce5570a222bad52b4055803cd446d	yes	9
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Amendment after Notice of Allowance (Rule 312)		1	1	
	Claims		2	7	
	Applicant Arguments/Remarks Made in an Amendment		8	9	
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30229 df71eaee2402c8a0ae1086fd5388fceaf9a3a2b0	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	2972427		

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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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Application Number	12/694455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687 Conf. 6047
Examiner Name	Andrew J. Rudy
Attorney Docket Number	RALEP027

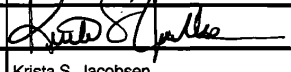
ENCLOSURES *(Check all that apply)*

- ☑ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☑ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☐ Other Enclosure(s) (please Identify below):

Remarks

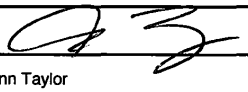
You are hereby authorized to charge any additional fee required or credit any overpayment to Deposit Account No. 50-5876.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Headwater Partners I, LLC		
Signature			
Printed name	Krista S. Jacobsen		
Date	November 2, 2012	Reg. No.	59374

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Ann Taylor	Date	November 2, 2012

This collection of information is required by 37 CFR 1.5. 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 and1.14. This collection is estimated to 2 hours 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.

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

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. 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	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

U.S.PATENTS						
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	7609700		2009-10-27	Ying, Wen-Ping et al.	
	2	8255515		2012-08-28	Melman, David et al.	
	3	7945240		2011-05-17	Klock, Jacqueline et al.	
	4	7912056		2011-03-22	Brassem, Wayne	
	5	7920529		2011-04-05	Mahler, Roger et al.	
	6	8184530		2012-05-22	Swan, Tim L. et al.	
	7	8213363		2012-07-03	Ying, Wen-Ping et al.	
	8	8214536		2012-07-03	Zhao, Wen	

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

EFS Web 2.1.17

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

U.S.PATENT APPLICATION PUBLICATIONS

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	20080085707		2008-04-10	FADELL, Tony	

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

FOREIGN PATENT DOCUMENTS

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							☐

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

NON-PATENT LITERATURE DOCUMENTS

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		☐

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

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.

EFS Web 2.1.17

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

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).

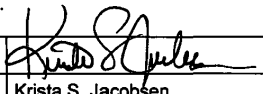
☐ See attached certification statement.

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

☐ None

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		Date (YYYY-MM-DD)	2012-11-02
Name/Print	Krista S. Jacobsen	Registration Number	59374

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.**

EFS Web 2.1.17

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

107265 7590 10/30/2012
Headwater Partners I LLC - Outside Firm 1
350 Marine Parkway, Suite 300
Redwood Shores, CA 94065

EXAMINER	
RUDY, ANDREW J	
ART UNIT	PAPER NUMBER
3687	

DATE MAILED: 10/30/2012

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/694,455	01/27/2010	Gregory G. Raleigh	RALEP027 [26WV-160504]	6047

TITLE OF INVENTION: DEVICE ASSISTED SERVICES INSTALL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1770	$300	$0	$2070	01/30/2013

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 SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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)

107265 7590 10/30/2012
Headwater Partners I LLC - Outside Firm 1
350 Marine Parkway, Suite 300
Redwood Shores, CA 94065

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.
12/694,455	01/27/2010	Gregory G. Raleigh	RALEP027 [26WV-160504]	6047

TITLE OF INVENTION: DEVICE ASSISTED SERVICES INSTALL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1770	$300	$0	$2070	01/30/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
RUDY, ANDREW J	3687	705-030000

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 credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information 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.

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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.
12/694,455	01/27/2010	Gregory G. Raleigh	RALEP027 [26WV-160504]	6047

107265 7590 10/30/2012

Headwater Partners I LLC - Outside Firm 1
350 Marine Parkway, Suite 300
Redwood Shores, CA 94065

EXAMINER	
RUDY, ANDREW J	

ART UNIT	PAPER NUMBER
3687	

DATE MAILED: 10/30/2012

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

The Patent Term Adjustment to date is 179 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 179 day(s).

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 Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

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.

Notice of Allowability	Application No.	Applicant(s)	
	12/694,455	RALEIGH, GREGORY G.	
	Examiner	Art Unit	
	ANDREW JOSEPH RUDY	3687	

-- 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 *16 August 2012 Amendment*.
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 *1-15, 17 and 19-34*.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   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. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ 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).
7. ☐ 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. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. The previous rejection is withdrawn pursuant to Applicant's August 16, 2012 REMARKS.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Krista Jacobsen on October 15, 2012.

The application has been amended as follows:

Claims 16 and 18 have been cancelled.

1. (Currently amended) A system, comprising:

a processor of a network device configured to:

determine whether a communications device in communication with the system over a wireless network includes a first version service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the first version service processor includes a service profile that includes at

least one service policy setting, and wherein the service profile ~~is associated with a service plan that~~ provides for access to the service; and

when the communications device includes the first version service processor,

determine a device group associated with the communications device, and

download a second version service processor to the communications device based on the device group ~~verify at least an aspect of the service processor~~; and

memory of the network device coupled to the processor and configured to provide the processor with instructions.

2. (Currently amended) The system recited in claim 1, wherein the first version service processor is uniquely associated with the communications device.

3. (Currently amended) The system recited in claim 1, wherein the communications device is activated prior to a point of sale of the communications device, and the service profile ~~plan~~ is associated with the communications device during activation.

4. (Currently amended) The system recited in claim 1, wherein the service profile ~~plan~~ is associated with the communications device during a manufacture of the

communications device, during a distribution of the communications device, or at a point of sale of the communications device.

5. (Currently amended) The system recited in claim 1, wherein the service profile ~~plan~~ is associated with an ambient service plan that provides a low cost or free trial service plan that is bundled or provided as an option for purchase at a point of sale of the communications device.

9. (Currently amended) The system recited in claim 1, wherein the communications device includes a modem, and at least one of the first version service processor and the second version service processor is located in the modem.

12. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device does not include the first version service processor, download the first version service processor or the second version service processor to the communications device.

13. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device does not include the first version service processor, download the first version service processor or the second version service processor to the communications device using a bootstrapper.

14. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device includes the first version service processor, update the first version service processor.

15. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device includes the first version service processor, download a replacement service processor to the communications device.

16. (Canceled)

17. (Currently amended) The system recited in claim 1, ~~wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:~~

~~when the communications device includes the first version service processor, download a second version service processor to the communications device,~~ wherein

the second version service processor is uniquely associated with the communications device.

18. (Canceled)

19. (Currently amended) The system recited in claim 1, ~~wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:~~

~~when the communications device includes the first version service processor:~~

~~determine a device group associated with the communications device; and~~

~~download a second version service processor to the communications device based on the device group,~~ wherein the second version service processor is uniquely associated with the communications device based on one or more device credentials of the communications device.

20. (Currently amended) The system recited in claim 1, ~~wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:~~

~~when the communications device includes the first version service processor, download a second version service processor to the communications device,~~ wherein the second version service processor is uniquely associated with the communications

device based on one or more device credentials of the communications device and based on user information associated with a temporary user account.

21. (Currently amended) The system recited in claim 1, ~~wherein the service processor is a first version service processor, and~~ wherein the processor of the network device is further configured to:

when the communications device includes the first version service processor, download a service processor update to the communications device, wherein the service processor update includes one or more updates to the first version service processor.

22. (Currently amended) The system recited in claim 1, ~~wherein the service processor is a first version service processor,~~ and wherein the processor of the network device is further configured to:

when the communications device includes the first version service processor, download a service processor update to the communications device, wherein the service processor update includes one or more settings changes to the first version service processor.

23. (Currently amended) The system recited in claim 1, ~~wherein the service processor is a first version service processor, and wherein the second version service processor of the network device is further configured to:~~

~~when the communications device includes the first version service processor, download a service processor update to the communications device, wherein the service processor update includes one or more encryption or obfuscation computations to perform on the first version service processor to provide a second version of the service processor that~~ is uniquely associated with the communications device, a communications device user, a device group, or a [[the]] service plan.

24. (Currently amended) The system recited in claim 1, ~~wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:~~

~~when the communications device includes the first version service processor, download a second version service processor to the communications device,~~ wherein the second version service processor is uniquely associated with the communications device, and wherein the second version service processor includes one or more restricted Internet protocol (IP) addresses providing for access to a service controller reserved for verified and non-probation mode service processors.

25. (Currently amended) The system recited in claim 1, wherein the ~~service processor is~~ [[a]] first version service processor [[that]] allows for limited access to the wireless network for purposes of service control and for permitting selection of a [[new]] service plan, and wherein the ~~processor of the network device is further configured to:~~

~~when the communications device includes the first version service processor, download a~~ second version service processor is ~~to the communications device~~ based on a [[new]] service plan selection for the communications device~~, wherein the second version service processor is uniquely associated with the communications device~~.

26. (Currently amended) The system recited in claim 1, ~~wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:~~

~~when the communications device includes the first version service processor, download a second version service processor to the communications device,~~ wherein the second version service processor facilitates a dual boot configuration that provides support for at least two operating systems executed on the communications device.

27. (Currently amended) The system recited in claim 1, wherein the service profile plan includes an option to purchase a [[new]] service plan for the communications device, wherein the [[new]] service plan includes additional service capabilities, and ~~wherein the processor of the network device is further configured to:~~

~~when the communications device includes the service processor, download a new service processor to the communications device,~~ wherein the second version ~~new~~ service processor is associated with the [[new]] service plan.

28. (Currently amended) The system recited in claim 1, wherein the processor of the network device is ~~further~~ configured to~~:~~

~~when the communications device includes the service processor, download the second version~~ [[a new]] service processor to the communications device based on one or more of the following: a [[new]] service plan selection, an indication of tampering with the service processor, an update availability ~~for the service processor~~, and a periodic service processor verification request.

30. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device includes the first version service processor, download an updated ~~or replacement~~ service processor to the communications device.

31. (Currently amended) A method performed by a network system, comprising:

determining whether a communications device in communication with the network system over a wireless network includes a first version service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the first version service processor includes a service profile that includes at least one service policy setting, and wherein the service profile ~~is associated with a service plan that~~ provides for access to the service; and

when the communications device includes the first version service processor,

determining a device group associated with the communications device, and

downloading a second version service processor to the communications device based on the device group ~~verifying the service processor~~.

32. (Currently amended) A computer program product, the computer program product being embodied in a non-transitory computer readable storage medium and comprising computer instructions for causing a network system to perform the steps of:

determining whether a communications device in communication with the network system over a wireless network includes a first version service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the first version service processor includes a service profile that includes at least one service policy setting, and wherein the service profile ~~is associated with a service plan that~~ provides for access to the service; and

when the communications device includes the first version service processor,

determining a device group associated with the communications device, and

downloading a second version service processor to the communications device based on the device group ~~verifying the service processor~~.

3. Further pertinent references of interest are noted on the attached PTO-892.

4. Applicant's Information Disclosure Statements (IDS's) received August 13, 2012 and October 10, 2012 have been reviewed. Note the attached IDS's.

Allowable Subject Matter

5. Claims 1-15, 17 and 19-32 are allowed.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW JOSEPH RUDY whose telephone number is (571)272-6789. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Gart can be reached on 571-272-3955. 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

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/ANDREW JOSEPH RUDY/

Primary Examiner, Art Unit 3687

Notice of References Cited	Application/Control No. 12/694,455	Applicant(s)/Patent Under Reexamination RALEIGH, GREGORY G.	
	Examiner ANDREW JOSEPH RUDY	Art Unit 3687	Page 1 of 1

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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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

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

Application Number	12694455
Filing Date	2010-01-27
First Named Inventor	Raleigh, Gregory G.
Art Unit	3687
Examiner Name	Rudy, Andrew J
Attorney Docket Number	RALEP027

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Doc code: IDS
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Examiner Signature	/Andrew Joseph Rudy/	Date Considered	10/19/2012

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Search Notes	Application/Control No.	Applicant(s)/Patent under Reexamination
	12/694,455	RALEIGH, GREGORY G.
	Examiner	Art Unit
	ANDREW JOSEPH RUDY	3687

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SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
Continuity data reviewed.	10/17/2012	AJR
Inventor name search conducted.	10/17/2012	AJR
Bibliographic data sheet updated.	10/17/2012	AJR

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

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	16	6839340		2005-01-04	Voit, Eric A. et al.	
	17	6922562		2005-07-26	Ward, Stephen L. et al.	
	18	7620041		2009-11-17	Dunn, Jeffrey H. et al.	
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	Filing Date	2010-01-27
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	Art Unit	3687
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

	20	7792538		2010-09-07	Kozisek, Steven E.	
	21	7801523		2010-09-21	Kenderov, Stoyan	
	22	7877090		2011-01-25	Maes, Stephane H.	
	23	7912025		2011-03-22	Pattenden, Christopher E. S. et al.	
	24	7948968		2011-05-24	Voit, Eric A. et al.	
	25	7970426		2011-06-28	Poe, Brian R. et al.	
	26	8185158		2012-05-22	Tamura, Motoshi et al.	
	27	8254915		2012-08-28	Kozisek, Steven E.	
	28	7418257		2008-08-26	Kim, Myong-Ju	
	29	8126123		2012-02-28	Cai, Yigang et al.	
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	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

	31	8155620		2012-04-10	Wang, Jun et al.	
	32	8238287		2012-08-07	Gopi, Paramesh et al.	
	33	7113997		2006-09-26	Jayapalan, Jay et al.	
	34	5594777		1997-01-14	Makkonen, Matti et al.	
	35	8244241		2012-08-14	Montemurro, Michael	
	36	7756534		2010-07-13	Anupam, Vinod et al.	
	37	7636574		2009-12-22	Poosala, Viswanath	
	38	6678516		2004-01-13	Nordman, Ian et al.	
	39	6477670		2002-11-05	Ahmadvand, Nima	
	40	6038452		2000-03-14	Strawczynski, Leo et al.	
	41	8160015		2012-04-17	Rashid, Mohammed H. et al.	

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	42	8108520		2012-01-31	Ruutu, Jussi et al.	
	43	7778643		2010-08-17	Laroia, Rajiv et al.	
	44	7668176		2010-02-23	Chuah, Mooi Choo	
	45	7515608		2009-04-07	Yuan, Yuan et al.	
	46	7251218		2007-07-31	Jorgensen, Jacob W.	
	47	7002920		2006-02-21	Ayyagari, Deepak et al.	
	48	7685131		2010-03-23	Batra, Vishal Singh et al.	
	49	7283561		2007-10-16	Picher-Dempsey, Heidi	
	50	7212491		2007-05-01	Koga, Takahiro	
	51	6683853		2004-01-27	Kannas, Chris et al.	
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	Attorney Docket Number	RALEP027

	53	7953808		2011-05-31	Sharp, Christopher Brooke et al.	
	54	8064896		2011-11-22	Bell, Kris M. et al.	

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U.S.PATENT APPLICATION PUBLICATIONS

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	20100144310		2010-06-10	Bedingfield Sr., James Carlton, et al.	
	2	20080132201		2008-06-05	Karlberg, Johan	
	3	20080081606		2008-04-03	Cole, Terry L.	
	4	20090248883		2009-10-01	Suryanarayana, Lalitha et al.	

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FOREIGN PATENT DOCUMENTS

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	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

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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Issue Classification	Application/Control No.	Applicant(s)/Patent under Reexamination	
	12/694,455	RALEIGH, GREGORY G.	
	Examiner	Art Unit	
	ANDREW JOSEPH RUDY	3687	

ISSUE CLASSIFICATION

ORIGINAL		CROSS REFERENCE(S)							
CLASS	SUBCLASS	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)						
709	217	709	224						
INTERNATIONAL CLASSIFICATION		455	414.1						
G 0 6 F	15/173	235	383						
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XXXXXXXXXXXXXXXXX (Assistant Examiner) (Date)		Total Claims Allowed: 30
(Legal Instruments Examiner) (Date)	/Andrew Joseph Rudy/ 10/19/2012 (Primary Examiner) (Date)	O.G. Print Claim(s): 1 / O.G. Print Fig.: 2

☐ 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
1	1	29	31		61		91		121		151		181
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18	30		60		90		120		150		180		210

PTO/SB/08a (01-10)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

U.S.PATENTS						
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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	2	6505114		2003-01-07	Luciani, Sergio	
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	7	7881199		2011-02-01	Krstulich, Zlatko	
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	9	7911975		2011-03-22	Droz, Patrick et al.	
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	15	6226277		2001-05-01	Chuah, Mooi Choo	
	16	6839340		2005-01-04	Voit, Eric A. et al.	
	17	6922562		2005-07-26	Ward, Stephen L. et al.	
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	26	8185158		2012-05-22	Tamura, Motoshi et al.	
	27	8254915		2012-08-28	Kozisek, Steven E.	
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	33	7113997		2006-09-26	Jayapalan, Jay et al.	
	34	5594777		1997-01-14	Makkonen, Matti et al.	
	35	8244241		2012-08-14	Montemurro, Michael	
	36	7756534		2010-07-13	Anupam, Vinod et al.	
	37	7636574		2009-12-22	Poosala, Viswanath	
	38	6678516		2004-01-13	Nordman, Ian et al.	
	39	6477670		2002-11-05	Ahmadvand, Nima	
	40	6038452		2000-03-14	Strawczynski, Leo et al.	
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	45	7515608		2009-04-07	Yuan, Yuan et al.	
	46	7251218		2007-07-31	Jorgensen, Jacob W.	
	47	7002920		2006-02-21	Ayyagari, Deepak et al.	
	48	7685131		2010-03-23	Batra, Vishal Singh et al.	
	49	7283561		2007-10-16	Picher-Dempsey, Heidi	
	50	7212491		2007-05-01	Koga, Takahiro	
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	53	7953808		2011-05-31	Sharp, Christopher Brooke et al.	
	54	8064896		2011-11-22	Bell, Kris M. et al.	

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	4	20090248883		2009-10-01	Suryanarayana, Lalitha et al.	

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	Attorney Docket Number	RALEP027

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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	Art Unit	3687
	Examiner Name	Rudy, Andrew J.
	Attorney Docket Number	RALEP027

CERTIFICATION STATEMENT

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

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☐ See attached certification statement.

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

☐ None

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		Date (YYYY-MM-DD)	2012-10-09
Name/Print	Krista S. Jacobsen	Registration Number	59374

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Electronic Patent Application Fee Transmittal	
Application Number:	12694455
Filing Date:	27-Jan-2010
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Filer:	Krista Susan Jacobsen/Ann Taylor
Attorney Docket Number:	RALEP027 [26WV-160504]
Filed as Large Entity	

Utility under 35 USC 111(a) Filing Fees

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($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt	
EFS ID:	13946758
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	10-OCT-2012
Filing Date:	27-JAN-2010
Time Stamp:	00:57:50
Application Type:	Utility under 35 USC 111(a)

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First Named Inventor	Gregory G. Raleigh
Art Unit	3687 Conf. 6047
Examiner Name	Andrew J. Rudy
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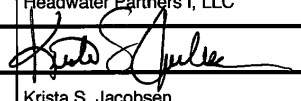
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- [x] Fee Transmittal Form
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  - [ ] Affidavits/declaration(s)
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- [ ] Petition to Convert to a Provisional Application
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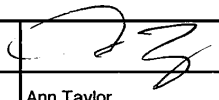
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Date	October 9, 2012	Reg. No.	59374

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Raleigh	Examiner:	Rudy, Andrew J.
Serial No.:	12/694,455	Art Unit:	3687
Filed:	January 27, 2010	Conf. No.:	6047
Title:	Device Assisted Services Install		

Mail Stop Amendment
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AMENDMENT AND RESPONSE

Sir:

In response to the Office Action dated February 16, 2012, the deadline for response ending on August 16, 2012, with the enclosed request for a three-month extension of time, please amend the above-identified application as follows:

Listing of Claims begins on page 2.

Remarks begin on page 10.

LISTING OF CLAIMS

Without prejudice and without surrender of any subject matter, please amend the claims as follows:

1. (Currently amended) A system, comprising:

a processor of a network device configured to:

determine [[if]]whether a communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device [[use]]of a service on the wireless network, wherein the service processor includes a service profile that includes at ~~plurality of~~least one service policy setting[[s]], and wherein the service profile is associated with a service plan that provides for access to the service; and

when the communications device includes the service processor, verify at least an aspect of the service processor; and

[[a]]memory of the network device coupled to the processor and configured to provide the processor with instructions.

2. (Previously presented) The system recited in claim 1, wherein the service processor is uniquely associated with the communications device.

3. (Previously presented) The system recited in claim 1, wherein the communications device is activated prior to a point of sale of the communications device, and the service plan is associated with the communications device during activation.

4. (Currently amended) The system recited in claim 1, wherein the service plan is associated with the communications device during ~~one or more of the following: a~~ manufacture of the communications device, during a distribution of the communications device, or at a point of sale of the communications device.

5. (Previously presented) The system recited in claim 1, wherein the service plan is an ambient service plan that provides a low cost or free trial service plan that is bundled or provided as an option for purchase at a point of sale of the communications device.

6. (Currently amended) The system recited in claim 1, wherein the communications device includes a plurality of service processors for supporting a plurality of operating systems [[and/]]or a plurality of service plans.

7. (Previously presented) The system recited in claim 1, wherein the communications device is a mobile communications device or an intermediate networking device, and the service includes one or more Internet based services.

8. (Currently amended) The system recited in claim 1, wherein the communications device is a mobile communications device, and the service includes one or more Internet based services, and wherein the mobile communications device includes one or more of the following: a mobile phone, a personal digital assistant (PDA), an eBook reader, a music device, an entertainment device,[[/]] a gaming device, a computer, a laptop, a netbook, a tablet, and a home networking system.

9. (Currently amended) The system recited in claim 1, wherein the communications device includes a modem, and the service processor is located in the modem.

10. (Currently amended) The system recited in claim 1, wherein the at least one service policy setting[[s]] includes one or more of the following: an access control setting[[s]], a traffic control setting[[s]], a billing system setting[[s]], a user notification with acknowledgement setting[[s]], a user notification with synchronized service usage information setting, a user privacy setting[[s]], a user preference setting[[s]], an authentication setting[[s]], an admission control setting[[s]], an application access setting[[s]], a content access setting[[s]], a transaction setting[[s]], [[and]]a network communication setting, [[or]]and a device management communication setting[[s]].

11. (Currently amended) The system recited in claim 1, wherein the processor is further configured to verify an implementation of the ~~first~~ service profile ~~is verified~~ based on one or more of the following: device generated service usage information and network generated service usage information.

12. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device does not include the service processor, ~~and the processor of the network device is further configured to:~~download the service processor to the communications device.

13. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device does not include the service processor, ~~and the processor of the network device is further configured to:~~download [[a]]the service processor to the communications device using a bootstrapper.

14. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device includes the service processor, ~~and the processor of the network device is further configured to:~~update the service processor.

15. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device includes the service processor, ~~and the processor of the network device is further configured to:~~download a replacement service processor to the communications device.

16. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor, ~~and the processor of the network device is further configured to:~~download a second version service processor to the communications device.

17. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor, ~~and the processor of the network device is further configured to:~~download a second version service processor to the communications device, wherein the second version service processor is uniquely associated with the communications device.

18. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor~~, and the processor of the network device is further configured to~~:

determine a device group associated with the communications device; and

download a second version service processor to the communications device based on the device group.

19. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor~~, and the processor of the network device is further configured to~~:

determine a device group associated with the communications device; and

download a second version service processor to the communications device based on the device group, wherein the second version service processor is uniquely associated with the communications device based on one or more device credentials of the communications device.

20. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor, ~~and the processor of the network device is further configured to:~~download a second version service processor to the communications device, wherein the second version service processor is uniquely associated with the communications device based on one or more device credentials of the communications device and based on user information associated with a temporary user account.

21. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor, ~~and the processor of the network device is further configured to:~~download a service processor update to the communications device, wherein the service processor update includes one or more updates to the first version service processor.

22. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor, ~~and the processor of the network device is further configured to:~~download a service processor update to the communications device, wherein the service processor update includes one or more settings changes to the first version service processor.

23. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor, ~~and the processor of the network device is further configured to:~~download a service processor update to the communications device, wherein the service processor update includes one or more encryption or obfuscation computations to perform on the first version service processor to provide a second version of the service processor that is uniquely associated with the communications device, a communications device user, a device group ~~associated with the communications device~~, [[and/]]or the service plan ~~associated with the communications device~~.

24. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor, ~~and the processor of the network device is further configured to:~~download a second version service processor to the communications device, wherein the second version service processor is uniquely associated with the communications device, and wherein the second version service processor includes one or more restricted Internet protocol (IP) addresses providing for access to a service controller reserved for verified and non-probation mode service processors.

25. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor that allows for limited access to the wireless network for purposes of service control and for permitting selection of a new service plan, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor, ~~that allows for limited access to the wireless network for purposes of service control and for permitting selection of a new service plan, and the processor of the network device is further configured to:~~download a second version service processor to the communications device based on a new service plan selection for the communications device, wherein the second version service processor is uniquely associated with the communications device.

26. (Currently amended) The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:

when the communications device includes [[a]]the first version service processor, ~~and the processor of the network device is further configured to:~~download a second version service processor to the communications device, wherein the second version service processor facilitates a dual boot configuration that provides support for ~~a plurality of~~at least two operating systems executed on the communications device.

27. (Currently amended) The system recited in claim 1, wherein the service plan includes an option to purchase a new service plan for the communications device, wherein the new service plan includes additional service capabilities, and wherein the processor of the network device is further configured to:

when the communications device includes the service processor, download a new service processor to the communications device, wherein the new service processor is associated with the new service plan.

28. (Currently amended) The system recited in claim 1, wherein the ~~communications device includes the service processor, and the~~ processor of the network device is further configured to:

when the communications device includes the service processor, download a new service processor to the communications device based on one or more of the following: a new service plan selection, an indication of tampering with the service processor, an update availability for the service processor, and a periodic service processor verification request.

29. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

allow the communications device access to the service in a probation mode~~, wherein the communications device is initially in a probation mode~~ that allows for access to the service with increased service monitoring [[and/]]or limited service capabilities that are limited based on one or more of the following: a period of time, a network address, a service type, a content type, an application type, a bandwidth, and a data usage.

30. (Currently amended) The system recited in claim 1, wherein the processor of the network device is further configured to:

when the communications device includes the service processor,~~periodically~~ download an updated or replacement service processor to the communications device.

31. (Currently amended) A method performed by a network system, comprising:

determining [[if]]whether a communications device in communication with the network system over a wireless network includes a service processor for assisting control of a use by the communications device [[use]]of a service on the wireless network, wherein the service processor includes a service profile that includes at ~~plurality of~~least one service policy setting[[s]], and wherein the service profile is associated with a service plan that provides for access to the service; and

when the communications device includes the service processor, verifying the service processor.

32. (Currently amended) A computer program product, the computer program product being embodied in a non-transitory computer readable storage medium and comprising computer instructions for causing a network system to perform the steps of:

determining [[if]]whether a communications device in communication with the network system over a wireless network includes a service processor for assisting control of a use by the communications device [[use]]of a service on the wireless network, wherein the service processor includes a service profile that includes at ~~plurality of~~least one service policy setting[[s]], and wherein the service profile is associated with a service plan that provides for access to the service; and

when the communications device includes the service processor, verifying the service processor.

REMARKS

Claims 1-32 are pending and were rejected in the Office Action mailed on February 16, 2012. Claims 1, 4, 6, and 8-32 are being amended. No new matter is being added. Reconsideration is respectfully requested.

Claim Rejections – 35 U.S.C. § 102

In section 3, the Office Action rejects claims 1, 2, 6-12, 14-19, 21-24, 28, and 30-32 under 35 U.S.C. § 102(b) as being anticipated by Forbes et al. (U.S. 6,996,076) (hereinafter, "Forbes"). Applicant respectfully submits that Forbes does not anticipate any of claims 1, 2, 6-12, 14-19, 21-24, 28, or 30-32 because Forbes does not disclose all of the limitations of each of these claims.

Forbes discloses wireless call processing in a network system. (Abstract). Forbes seeks to solve certain problems created by the development of different cellular phone services (e.g., AMPS, CDMA, TDMA, and GSM) that have protocols and air interfaces that are different from, and incompatible with, each other. (Col. 1, ll. 14-29). Forbes proposes a system and method "to internetwork wireless telecommunication networks" to allow operators of wireless systems to provide switching control in a single platform that removes dependencies on systems' different protocols or air interfaces. (Col. 1, ll. 60-62; col. 2, ll. 20-24).

Forbes purports to have invented a "softswitch" that resides within a network system. *See, e.g.*, col. 1, ll. 14-36 ("FIG. 1 is a block diagram of a network topology 5 based on the softswitch of the present invention. . . . Network topology 5 also includes one or more softswitches 11 which couple to one or more wireless base stations or radio gateways 17. . . ."). The softswitch includes a logic engine that is a protocol-independent, data-configurable, multi-threaded state machine processor. (Col. 10, ll. 17-19, 41-43). Because the logic engine has no built-in algorithms for performing any specific process, applications are downloaded to the logic engine to perform particular functions. (Col. 12, ll. 19-22). For example, the applications may establish and maintain a TCP/IP socket connection with the logic engine, generate appropriate logic control programs and download them to the logic engine, or monitor event and statistical data. (Col. 12, ll. 22-26). Forbes asserts that "the softswitch of the present invention provides an

integrated hardware and software solution set that provides the capability to receive signaling messages from any type of network and transmit the messages across a different network, while keeping the existing customer feature set," which "bridges the gap between packet-based networks, traditional [public switched telephone network] communications, and wireless networks to advance lower cost, and higher revenue value-added services." (Col. 4, ll. 59-67).

The softswitch can be incorporated into a network that includes various agents that provide various aspects of call and/or session control for the network. (Col. 14, ll. 49-53, 64-66). A control agent manages information flow from networks such as the public switched telephone network to a wireless network, and a mobility management agent provides hand-over functionality to provide base station controls for wireless networks, such as managing configuration or authentication information including data from home location registers between the radio-frequency interface and radio gateways and the control agent. (Col. 14, l. 66 – col. 15, l. 7). The mobility management agent and the control agent provide functions such as authentication, control, and monitoring of calls and/or session traffic between network elements such as base stations, controllers, distributed switches, application software, and signaling systems. (Col. 15, ll. 7-13). Forbes discloses that mobile devices such as cellular phones or personal digital assistants may include at least portions of the mobility management agent and the control agent. (Col. 19, ll. 29-30).

Forbes also discloses an Internet telephony network architecture in which the softswitch is coupled to a residential service gateway over a wired network, and user devices are coupled to the residential service gateway. (Col. 6, ll. 8-15 (softswitch functions as "Internet central office" that provides traditional central office functions and capabilities to Internet users); Fig. 3 (showing softswitch 52 located within Internet and separated from telephone and computer by cable or DSL connection and residential gateway)). The residential service gateway, which may be a stand-alone hardware/software combination or a software application that can be downloaded and run locally on a user's computer, converts analog telephony services from the user into TCP/IP for transport through the Internet. (Col. 6, ll. 24-26, 44-49). The "Internet central office," which includes the softswitch, controls and communicates with the residential service gateway for "call state control." (Col. 6, ll. 26-28). A user's service profiles may be uploaded or downloaded to a database in the residential service gateway through a local area

network, a serial port, a smart card, or an infra-red interface into a third party application and device, which allows a user to connect to any residential service gateway, download the user's profile into the residential service gateway, and personalize it. (Col. 6, ll. 36-43).

In rejecting claims 1, 2, 6-12, 14-19, 21-24, 28, and 30-32, the Office Action states that Forbes discloses, e.g., in Figures 1, 2, 4, 14, and 15, abstract, columns 2, 3, 4, 6, 7, 8, 9, 10, 12, and 15, a network device (e.g., logic controls), a wireless network (e.g., columns 2, 4, lines 14-36), a service plan (e.g., column 7), service policy settings (e.g., column 8, lines 41-42), a processor (e.g., column 10, lines 41-51), verification, a mobile communications (e.g., column 2, lines 14-41), and service usage and settings.

Applicant is amending independent claims 1, 31, and 32 to clarify that the communications device is in wireless communication with the system *over the wireless network*. Applicant respectfully submits that Forbes fails to disclose each and every limitation of claims 1, 2, 6-12, 14-19, 21-24, 28, and 30-32 as amended.

Claim 1

As amended, claim 1 reads:

> A system, comprising:
>
> a processor of a network device configured to:
>
> determine whether a communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service; and
>
> when the communications device includes the service processor, verify at least an aspect of the service processor; and
>
> memory of the network device coupled to the processor and configured to provide the processor with instructions.

The amendments to claim 1 are supported at least by paragraphs [0022], [0023], and [0063], and by Figures 1-3 of the application as originally filed.

Applicant respectfully submits that Forbes does not anticipate claim 1, as amended, at least because Forbes fails to disclose "a processor of a network device configured to determine whether a communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service," and "a processor of a network device configured to, when the communications device includes the service processor, verify at least an aspect of the service processor."

Applicant respectfully submits that Forbes does not disclose a processor of a network device configured to determine whether a communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service. First, although Forbes discloses that "wireless devices may include at least a portion of mobility management agent 641 and control agent 642," (col. 19, ll. 28-30), Forbes does not disclose that a processor of a network device (e.g., the softswitch) is configured to determine whether the wireless devices do, in fact, include portions of the mobility management agent or the control agent. Therefore, even if the mobility management agent or the control agent is a service processor for assisting control of a use by the wireless device of a service on the wireless network, Forbes does not disclose a processor of a network device configured to determine whether the wireless device in communication with the system over the wireless network includes portions of either the mobility management agent or the control agent.

Second, although Forbes discloses that, in the Internet telephony configuration, "the Internet central office is operable to control and communicate with residential service gateway client software 56 for call state control," (col. 6, ll. 26-28), Forbes does not disclose that the

Internet central office determines whether the residential service gateway client software is present on the residential service gateway. Indeed, Forbes' Internet telephony system presumes the presence of the client software to enable the user to solicit or initiate service from the Internet central office, (col. 6, ll. 24-26), and therefore the Internet central office has no reason to determine whether the client software is present. Moreover, as shown in Figure 3 of Forbes, the residential service gateway is coupled to the network system (i.e., the softswitch, labeled "52") by a cable or DSL network, and not by a wireless network, and therefore the residential service gateway is not a "communications device in communication with the system over a wireless network." Furthermore, even if the residential service gateway client software performs some type of control of the use of the telephony service, Forbes does not disclose that the client software includes a service profile that includes at least one service policy setting, wherein the service profile is associated with a service plan that provides access to the service.

Forbes does disclose that a "user's service profiles may be uploaded or downloaded to a database in the residential service gateway through a local area network (LAN), serial port, smart card, or infra-red interface into a third party application and device." (Col. 6, ll. 36-40). But Forbes does not disclose either that the user's service profiles assist in controlling a use of a service on the wireless network, or that any of the user's service profiles includes at least one service policy setting, wherein the service profile is associated with a service plan that provides access to the service. Additionally, even if the user's service profiles assist in controlling a use of a service on the wireless network and include at least one service policy setting, Forbes does not disclose that a processor of a network device is configured to determine whether the residential service gateway includes the user's service profiles.

Forbes discloses that a call session engine in the network interacts with a policy/directory server, (col. 8, ll. 40-44), but Forbes does not disclose that the policy/directory server includes a service profile that includes at least one service policy setting, wherein the service profile is associated with a service plan that provides access to the service, or that such service profile is somehow provided to the residential service gateway or to a user device. Forbes also does not disclose that a processor of a network device determines whether the residential service gateway or a user device includes such a service profile. Thus, Applicant respectfully submits that Forbes fails to disclose "a processor of a network device configured to determine whether a

communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service."

Because Forbes fails to disclose a processor of a network device configured to determine whether a communications device in communication with the system over a wireless network includes a service processor, Forbes also fails to disclose a processor of a network device configured to, when the communications device includes the service processor, verify at least an aspect of the service processor. Although Forbes discloses that agents in the network provide authentication and verification for origination and termination parties (col. 14, ll. 49-51; col. 15, ll. 19-22); access to a database to verify a user's legitimacy (col. 15, ll. 35-37); and authentication, verification, and routing information to a state processor in the network (col. 16, ll. 50-53), Forbes does not disclose that these network agents verify an aspect of a service processor included in either the residential service gateway or a user device.

Consequently, Applicant respectfully submits that Forbes does not disclose "a processor of a network device configured to determine whether a communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service," or "a processor of a network device configured to, when the communications device includes the service processor, verify at least an aspect of the service processor." Thus, for at least the reasons provided herein, Applicant respectfully submits that claim 1, as amended, is patentable over Forbes, and Applicant respectfully requests that the 35 U.S.C. § 102(b) rejection be withdrawn.

Claims 2, 6-12, 14-19, 21-24, 28, and 30

Claims 2, 6-12, 14-19, 21-24, 28, and 30 depend directly from claim 1. Applicant respectfully submits that, for at least the same reasons that claim 1 is patentable over Forbes, claims 2, 6-12, 14-19, 21-24, 28, and 30 are also patentable over Forbes.

Furthermore, Applicant respectfully submits that Forbes fails to disclose additional limitations of claims 2, 6-12, 14-19, 21-24, 28, and 30. For example, Forbes fails to disclose the claim 2 limitation of a service processor that is uniquely associated with a device. As another example, Forbes fails to disclose the claim 6 limitation that the communications device includes a plurality of service processors for supporting a plurality of operating systems or a plurality of service plans. Moreover, Forbes fails to disclose the downloading/updating limitations of claims 12, 14-19, 21-24, 28, and 30. Although Forbes discloses downloading applications to the softswitch logic engine to perform various functions, (col. 12, ll. 19-22), the softswitch logic engine is a network component, and therefore the download occurs entirely within the network system. Likewise, although Forbes discloses that a user's service profiles may be downloaded to the residential service gateway, Forbes discloses doing so only through a local area network, a serial port, a smart card, or an infra-red interface. (Col. 6, ll. 36-43). Forbes does not disclose that a processor of a network device downloads or updates a service processor in a communications device in communication with the system over a wireless network.

For at least the reasons provided herein, Applicant respectfully submits that claims 2, 6-12, 14-19, 21-24, 28, and 30 are patentable over Forbes, and Applicant respectfully requests that the 35 U.S.C. § 102(b) rejections be withdrawn.

Claim 31

As amended, claim 31 recites:

> A method performed by a network system, comprising:
>
> determining whether a communications device in communication with the network system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that

includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service; and

when the communications device includes the service processor, verifying the service processor.

Applicant respectfully submits that Forbes fails to disclose the limitations of claim 31, as amended, because Forbes does not disclose "determining whether a communications device in communication with the network system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service" or "when the communications device includes the service processor, verifying the service processor."

As explained above, Forbes discloses that wireless devices may include portions of a mobility management agent and a control agent, but Forbes does not disclose a network system determining whether a wireless device in communication with the network system over a wireless network actually includes the portions of these agents, or, if it does, verifying at least an aspect of the portions of the agents. Furthermore, Forbes discloses that the Internet central office is operable to control and communicate with residential gateway client software, but Forbes does not disclose the Internet central office or any other network element determining whether the residential gateway client software is present, or, if it is, verifying at least an aspect of the residential gateway client software. In addition, the residential gateway is coupled to the network system by a wired network, and therefore the residential gateway is not a "communications device in communication with the network system over a wireless network." Finally, Forbes does not disclose that the residential gateway client software includes a service profile that includes at least one service policy setting, wherein the service profile is associated with a service plan that provides for access to the service. Thus, Forbes does not disclose a network system determining whether a communications device in communication with the network system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service

processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service. Forbes also does not disclose verifying the service processor when the communications device includes the service processor.

Thus, for at least the reasons provided herein, Applicant respectfully submits that claim 31, as amended, is patentable over Forbes, and Applicant respectfully requests that the 35 U.S.C. § 102(b) rejection be withdrawn.

Claim 32

As amended, claim 32 recites:

> A computer program product, the computer program product being embodied in a non-transitory computer readable storage medium and comprising computer instructions for causing a network system to perform the steps of:
>
> determining whether a communications device in communication with the network system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service; and
>
> when the communications device includes the service processor, verifying the service processor.

Applicant respectfully submits that claim 32, as amended, is patentable over Forbes for at least the same reasons that claim 31 is patentable over Forbes. Therefore, Applicant respectfully requests that the 35 U.S.C. § 102(b) rejection be withdrawn.

Claim Rejections – 35 U.S.C. § 103

In Section 5, the Office Action rejects claims 3-5 under 35 U.S.C. § 103(a) as being unpatentable over Forbes. In rejecting claims 3-5, the Office Action states that Forbes does not disclose that the communications device, e.g., the wireless device, is activated prior to a point of

sale, a service plan associated with a manufacture of the communications device or a low cost or free trial service plan. The Office Action states that Official Notice is taken that each of these features has been common knowledge in the art, and that to have provided such along with the teachings of Forbes would have been obvious to one of ordinary skill in the art.

Claim 3

Claim 3 recites:

> The system recited in claim 1, wherein the communications device is activated prior to a point of sale of the communications device, and the service plan is associated with the communications device during activation.

Applicant respectfully submits that claim 3 is nonobvious over Forbes at least because, as explained above, Forbes does not disclose, contemplate, or suggest the claim 1 limitations of "a processor of a network device configured to determine whether a communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service," or "a processor of a network device configured to, when the communications device includes the service processor, verify at least an aspect of the service processor."

Furthermore, Applicant respectfully disagrees that the additional features of claim 3 were common knowledge in the art as of the filing date of the application. Even today, service plans for wireless devices such as smart phones, cellular phones, tablets, etc., are not selected or activated until *after* the device has been purchased, i.e., after the point of sale of the device. *See, e.g.*, http://prepaid-phones.t-mobile.com/prepaid-support-activate (T-Mobile web page indicating subscribers first purchase, then activate, even so-called "pre-paid" phones); http://www.verizonwireless.com/plans/global/prepaid.shtml (Verizon web page indicating service plans are associated with devices *after* devices have been purchased); http://www.target.com/p/boost-samsung-prevail-locked-cell-phone-black/-/A-13859326 (Target web page indicating even no-contract phones are sold without service plans);

http://www.virginmobileusa.com/shop/cell-phones/android-phones/ (Virgin Mobile website indicating customers first purchase, then activate, phones).

Moreover, even if the activation of a communications device prior to a point of sale or the association of a service plan with a communications device prior to a point of sale were common knowledge as of the filing date of the application—which, Applicant respectfully submits, they were not—Forbes' focus is on providing a *network system* that overcomes protocol and air interface compatibility issues between different wireless systems, and not on the devices that are on the other side of the communication medium, or the service plans that allow those devices to access a service, or the activation of such service plans. Thus, Applicant respectfully submits that it would not have been obvious to a person having ordinary skill in the art as of the filing date of the application to have provided "the communications device is activated prior to a point of sale of the communications device, and the service plan is associated with the communications device during activation" along with the teachings of Forbes because Forbes is addressing a problem that is unrelated to a communications device being activated prior to a point of sale or a service plan being associated with a communications device during activation.

Therefore, for at least the reasons provided herein, Applicant respectfully submits that claim 3 is nonobvious over Forbes, and Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection be withdrawn.

Claim 4

As amended, claim 4 recites:

> The system recited in claim 1, wherein the service plan is associated with the communications device during a manufacture of the communications device, during a distribution of the communications device, or at a point of sale of the communications device.

Applicant respectfully submits that claim 4, as amended, is nonobvious over Forbes at least because, as explained above, Forbes does not disclose, contemplate, or suggest the claim 1 limitations of "a processor of a network device configured to determine whether a communications device in communication with the system over a wireless network includes a

service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service," or "a processor of a network device configured to, when the communications device includes the service processor, verify at least an aspect of the service processor."

Moreover, Applicant respectfully disagrees that the additional features of claim 4 were common knowledge in the art as of the filing date of the application. In particular, Applicant respectfully submits that it was not common knowledge as of the filing date of the application to associate a service plan with a communications device during a manufacture of the communications device, during a distribution of the communications device, or at a point of sale of the communications device. Even today, service plans for many wireless devices, such as smart phones, cellular phones, tablets, etc., are not associated with a device until *after* the device has been purchased by a subscriber, i.e., after the device has been manufactured, distributed, and purchased. *See, e.g.*, http://prepaid-phones.t-mobile.com/prepaid-support-activate (T-Mobile web page indicating subscribers first purchase, then activate, even so-called "pre-paid" phones); http://www.verizonwireless.com/plans/global/prepaid.shtml (Verizon web page indicating service plans are associated with devices *after* devices have been purchased); http://www.target.com/p/boost-samsung-prevail-locked-cell-phone-black/-/A-13859326 (Target web page indicating even no-contract phones are sold without service plans); http://www.virginmobileusa.com/shop/cell-phones/android-phones/ (Virgin Mobile website indicating customers first purchase, then activate, phones).

Furthermore, even if the association of a service plan with a communications device during a manufacture of the communications device, during a distribution of the communications device, or at a point of sale of the communications device were common knowledge as of the filing date of the application—which, Applicant respectfully submits, it was not—Forbes' focus is on providing a *network system* that overcomes protocol and air interface compatibility issues between different wireless network systems, and not on the devices that are on the other side of the communication medium, or the need for a service plan to enable a device to access a service, or the timing of associating that service plan with the device. Thus, Applicant respectfully

submits that it would not have been obvious to a person having ordinary skill in the art as of the filing date of the application to have provided "the service plan is associated with the communications device during a manufacture of the communications device, a distribution of the communications device, or a point of sale of the communications device" along with the teachings of Forbes because Forbes is addressing a different problem that is unrelated to a service plan being associated with a communications device during a manufacture of the communications device, during a distribution of the communications device, or at a point of sale of the communications device.

Therefore, for at least the reasons provided herein, Applicant respectfully submits that claim 4 is nonobvious over Forbes, and Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection be withdrawn.

Claim 5

Claim 5 recites:

> The system recited in claim 1, wherein the service plan is an ambient service plan that provides a low cost or free trial service plan that is bundled or provided as an option for purchase at a point of sale of the communications device.

Applicant respectfully submits that claim 5 is nonobvious over Forbes at least because, as explained above, Forbes does not disclose, contemplate, or suggest the claim 1 limitations of "a processor of a network device configured to determine whether a communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service," or "a processor of a network device configured to, when the communications device includes the service processor, verify at least an aspect of the service processor."

In addition, Applicant respectfully disagrees that the additional features of claim 5 were common knowledge in the art as of the filing date of the application. In particular, Applicant

respectfully submits that it was not common knowledge in the art as of the filing date of the application to provide an ambient service plan that provides a low cost or free trial service plan that is bundled or provided as an option for purchase at a point of sale of the communications device. Even today, subscribers pay significant amounts for wireless service plans for their wireless devices, such as smart phones, cellular phones, tablets, etc. *See, e.g.*, http://www.virginmobileusa.com/shop/cell-phones/android-phones/ (Virgin Mobile web page indicating that service plans start at $35 per month); http://www.verizonwireless.com/plans/global/prepaid.shtml (Verizon web page indicating that all service plans are subscriber-paid); http://www.t-mobile.com/shop/Packages/ValuePackages.aspx (T-Mobile web page indicating that even "value plans" result in a significant charge to subscribers).

Moreover, even if providing an ambient service plan that provides a low cost or free trial service plan that is bundled or provided as an option for purchase at a point of sale of the communications device were common knowledge as of the filing date of the application—which, Applicant respectfully submits, it was not—Forbes' focus is on providing a *network system* that overcomes protocol and air interface compatibility issues between different wireless network systems, and not on the devices that are on the other side of the communication medium, or the service plans that allow those devices to access a service, or whether, or how much, subscribers pay for such service plans. Thus, Applicant respectfully submits that it would not have been obvious to a person having ordinary skill in the art as of the filing date of the application to have provided "the service plan is an ambient service plan that provides a low cost or free trial service plan that is bundled or provided as an option for purchase at a point of sale of the communications device" along with the teachings of Forbes because Forbes is addressing a different problem that is unrelated to a service plan being an ambient service plan that provides a low cost or free trial service plan that is bundled or provided as an option for purchase at a point of sale of the communications device.

Therefore, for at least the reasons provided herein, Applicant respectfully submits that claim 5 is nonobvious over Forbes, and Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection be withdrawn.

Claims 13 and 26

In Section 6, the Office Action rejects claims 13 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Forbes in view of Paul et al. (U.S. 2008/0183812 A1) (hereinafter, "Paul").

Paul discloses a system and method for a fault-tolerant remote boot solution for a server-managed client architecture in which files are stored on servers and copied through a network by client devices. (¶¶ [0009], [0015], [0016]). A client broadcasts a boot message to one or more boot servers on the network, and each boot server that is able to service the client sends a boot response message to the client, where the boot response message identifies the responding boot server. (¶ [0017]). A client then requests and downloads an executable image from a selected boot server of those boot servers that responded to the boot message. (¶ [0032]). This executable image may include a network bootstrap program. (¶ [0032]).

In rejecting claims 13 and 26, the Office Action states that Paul discloses a communication device that does not include a service processor (¶ [0027]), a bootstrapper (e.g., claim 42), plural boot servers (¶ [0017]), a plurality of operating systems (¶ [0042]), and a fault remote boot (¶ [0016]). The Office Action states that to have provided Forbes a bootstrapper and a fault tolerant remote boot would have been obvious to one of ordinary skill in the art in view of Paul, and that the motivation for having done so would have been to incorporate common knowledge technology.

As amended, claim 13 recites:

> The system recited in claim 1, wherein the processor of the network device is further configured to:
>
> when the communications device does not include the service processor, download the service processor to the communications device using a bootstrapper.

Applicant respectfully submits that claim 13, as amended, is nonobvious over Forbes in view of Paul at least because neither Forbes nor Paul discloses, contemplates, or suggests the claim 1 limitations of "a processor of a network device configured to determine whether a

communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service," or "a processor of a network device configured to, when the communications device includes the service processor, verify at least an aspect of the service processor." As discussed above, Forbes does not disclose either of these limitations, and Applicant respectfully submits that Paul does not, either.

Paul discloses an improved boot process for server-managed clients. The boot process is initiated by the client devices after the client devices themselves determine that they need an executable file from a server. The server does not determine whether a particular client device includes a service processor; rather, it responds to a client request. Therefore, Paul does not disclose a processor of a network device configured to determine whether a communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network. Paul also does not disclose that the downloaded executable file includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service. Finally, Paul does not disclose, contemplate, or suggest that a processor of the server verifies the executable file.

Therefore, for at least the reasons provided herein, Applicant respectfully submits that claim 18, as amended, is nonobvious over Forbes in view of Paul, and Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection be withdrawn.

As amended, claim 26 recites:

> The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:
>
> when the communications device includes the first version service processor, download a second version service processor to the communications device, wherein the second version service processor facilitates a dual boot configuration that provides support

for at least two operating systems executed on the communications device.

Applicant respectfully submits that claim 26, as amended, is nonobvious over Forbes in view of Paul at least because, as explained above, neither Forbes nor Paul discloses, contemplates, or suggests the claim 1 limitations of "a processor of a network device configured to determine whether a communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service," or "a processor of a network device configured to, when the communications device includes the service processor, verify at least an aspect of the service processor."

Moreover, Paul fails to disclose the additional limitation of claim 26, "the processor of the network device is further configured to, when the communications device includes the first version service processor, download a second version service processor to the communications device, wherein the second version service processor facilitates a dual boot configuration that provides support for at least two operating systems executed on the communications device." Paul does not disclose, contemplate, or suggest that when the client device includes a first version service processor, the server downloads a second version service processor to the client device, wherein the second version service processor facilitates a dual boot configuration that provides support for at least two operating systems executed on the client device. Paul discloses a single download of client software that is initiated by a client device, not by a boot server, and not after a determination of whether the client includes a first version service processor.

Therefore, for at least the reasons provided herein, Applicant respectfully submits that claim 26, as amended, is nonobvious over Forbes in view of Paul, and Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection be withdrawn.

Claim 20

In section 7, the Office Action rejects claim 20 under 35 U.S.C. § 103(a) as being unpatentable over Forbes in view of Yiu et al. (U.S. 2007/0226225 A1) (hereinafter, "Yiu").

Yiu discloses a mobile collaboration and communication system that includes a processor for controlling the operation of the system. (Abstract; ¶ [0031]). The collaboration and communication system is capable of user account management, bandwidth control, and other gateway functions. (¶ [0034]). Authorized users have accounts with varying levels of authorization. (¶ [0039]). A host may create a temporary account for guests or visitors. (¶¶ [0040], [0053]). Guest access is automatically removed upon completion of a specified task or after a specific period of time. (¶ [0055]).

In rejecting claim 20, the Office Action states that Yiu discloses a communication device and user information are associated with a temporary user account (¶¶ [0040], [0053], [0055]). The Office Action asserts that to have provided such for Forbes would have been obvious to one of ordinary skill in the art in view of Yiu, and that the motivation for having done so would have been to incorporate common knowledge technology.

As amended, claim 20 recites:

> The system recited in claim 1, wherein the service processor is a first version service processor, and wherein the processor of the network device is further configured to:
>
> when the communications device includes the first version service processor, download a second version service processor to the communications device, wherein the second version service processor is uniquely associated with the communications device based on one or more device credentials of the communications device and based on information associated with a temporary user account.

Applicant respectfully submits that claim 20, as amended, is nonobvious over Forbes in view of Yiu at least because neither Forbes nor Yiu discloses, contemplates, or suggests the claim 1 limitations of "a processor of a network device configured to determine whether a

communications device in communication with the system over a wireless network includes a service processor for assisting control of a use by the communications device of a service on the wireless network, wherein the service processor includes a service profile that includes at least one service policy setting, and wherein the service profile is associated with a service plan that provides for access to the service," or "a processor of a network device configured to, when the communications device includes the service processor, verify at least an aspect of the service processor." As discussed above, Forbes does not disclose either of these limitations, and Applicant respectfully submits that Yiu also fails to do so.

Yiu does disclose that when a mobile device first connects to the collaboration and communication system, the management module detects if the client program exists, and, if it does not, the client program is automatically delivered to the mobile device. (¶ [0043]). But Yiu does not disclose that the client program includes a service profile that includes at least one service policy setting, or that the service profile is associated with a service plan that provides for access to the service.

Even if Yiu's client program did include a service profile that includes at least one service policy setting, wherein the service profile is associated with a service plan that provides for access to the service—which, Applicant respectfully submits, it does not—Yiu does not disclose, contemplate, or suggest that the management module verifies any aspect of the client program. Yiu merely discloses downloading the client program to a device.

But even if Yiu did disclose that the management module verifies an aspect of the client program—which, Applicant respectfully submits, it does not—Yiu does not disclose, contemplate, or suggest the additional claim 20 limitation of "the processor of the network device is further configured to, if the communications device includes the first version service processor, download a second version service processor to the communications device, wherein the second version service processor is uniquely associated with the communications device based on one or more device credentials of the communications device and based on user information associated with a temporary user account." Yiu discloses providing a temporary user account that allows a guest who does not already have a user account stored in the user account database to participate in a created group. (¶ [0053]). Yiu does not disclose that the

management module makes any determination of whether a client device includes a first version of the client program before downloading a second version of the client program. Yiu discloses a single client program, and that single client program is downloaded only once, and only after the management module determines that the client program is not present on the client device. Yiu does not disclose, suggest, or contemplate that the management module downloads a second version of the client program after determining a first version of the client program is present. Because Yiu does not disclose a second version service processor, it follows that Yiu also does not disclose that the second version service processor is uniquely associated with the communications device based on one or more device credentials of the communications device and based on user information associated with a temporary user account.

Therefore, for at least the reasons provided herein, Applicant respectfully submits that claim 20, as amended, is nonobvious over Forbes in view of Yiu, and Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection be withdrawn.

CONCLUSION

Applicant respectfully requests entry of these amendments as provided herein. The application is believed to be in condition for allowance, and a Notice of Allowance is hereby respectfully requested. If the Examiner has any questions or needs any additional information, the Examiner is invited to contact the undersigned.

The Commissioner is authorized to charge any fee deficiency or credit any overpayment to Deposit Account 50-5876.

Respectfully submitted,

Date: Aug. 16, 2012 By: 

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CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being filed electronically via EFS-Web addressed to the Commissioner for Patents on:

Date: Aug 16, 2012 By:
Ann Taylor

PTO/SB/22 (09-11)
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)	Docket Number (Optional) RALEP027 [26WV-160504]
Application Number 12/694,455	Filed January 27, 2010
For Device Assisted Services Install	
Art Unit 3687 Conf. No. 6047	Examiner Andrew J. Rudy

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	
☐ One month (37 CFR 1.17(a)(1))	$150	$75	$
☐ Two months (37 CFR 1.17(a)(2))	$560	$280	$
☑ Three months (37 CFR 1.17(a)(3))	$1270	$635	$ 635.00
☐ Four months (37 CFR 1.17(a)(4))	$1980	$990	$
☐ Five months (37 CFR 1.17(a)(5))	$2690	$1345	$

☑ Applicant claims small entity status. See 37 CFR 1.27.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 50-5876.

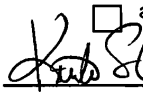
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the ☐ applicant/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96).

☑ attorney or agent of record. Registration Number 59374

☐ attorney or agent under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____



Signature — August 16, 2012 (Date)

Krista S. Jacobsen (Typed or printed name) — 650-517-2798 (Telephone Number)

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☐ Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). 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 6 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.

Electronic Patent Application Fee Transmittal				
Application Number:	12694455			
Filing Date:	27-Jan-2010			
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL			
First Named Inventor/Applicant Name:	Gregory G. Raleigh			
Filer:	Krista Susan Jacobsen/Ann Taylor			
Attorney Docket Number:	RALEP027 [26WV-160504]			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
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:				
Extension - 3 months with $0 paid	2253	1	635	635

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**635**

Electronic Acknowledgement Receipt	
EFS ID:	13518789
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	16-AUG-2012
Filing Date:	27-JAN-2010
Time Stamp:	20:26:26
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$635
RAM confirmation Number	5910
Deposit Account	505876
Authorized User	
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 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

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Charge any Additional Fees required under 37 C.F.R. Section 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	Transmittal Letter	Trans.pdf	297612 0a28202eacdc6f63aee9552e0d806cf7b8cb9b75	no	1
Warnings:					
Information:					
2		Amend.pdf	350251 589b8cf31a303793223d68597b3f1a527a30b7e0	yes	30

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	9
	Applicant Arguments/Remarks Made in an Amendment	10	30

Warnings:					
Information:					
3	Extension of Time	Exten.pdf	298300 040c92c89b74916e35302bd112ecc8f4e94eee98	no	1
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30432 0b71a09128fe32e667c3f728712aeae35f3a998f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	976595		

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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.

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Electronic Acknowledgement Receipt	
EFS ID:	13518789
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	16-AUG-2012
Filing Date:	27-JAN-2010
Time Stamp:	20:26:26
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$635
RAM confirmation Number	5910
Deposit Account	505876
Authorized User	
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Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees) Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees) Charge any Additional Fees required under 37 C.F.R. Section 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	Transmittal Letter	Trans.pdf	297612 0a28202eacdc6f63aee9552e0d806cf7b8cb9b75	no	1
Warnings:					
Information:					
2		Amend.pdf	350251 589b8cf31a303793223d68597b3f1a527a30b7e0	yes	30
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	9	
	Applicant Arguments/Remarks Made in an Amendment		10	30	
Warnings:					
Information:					
3	Extension of Time	Exten.pdf	298300 040c92c89b74916e35302bd112ecc8f4e94eee98	no	1
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30432 0b71a09128fe32e667c3f728712aeae35f3a998f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	976595		

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New International Application Filed with the USPTO as a Receiving Office
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Doc Code: TRAN.LET
Document Description: Transmittal Letter

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	31

Application Number	12/694,455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687 Conf. No.: 6047
Examiner Name	Rudy, Andrew J.
Attorney Docket Number	RALEP027 [26WV-160504]

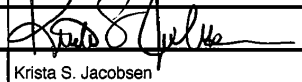
ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
- ☐ Fee Attached
- ☑ Amendment/Reply
- ☐ After Final
- ☐ Affidavits/declaration(s)
- ☑ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
- ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
- ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☐ Other Enclosure(s) (please Identify below):

Remarks

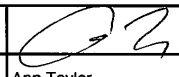
You are hereby authorized to charge any additional fee required or credit any overpayment to Deposit Account No. 50-5876.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Headwater Partners I LLC		
Signature			
Printed name	Krista S. Jacobsen		
Date	August 16, 2012	Reg. No.	59374

CERTIFICATE OF TRANSMISSION/MAILING

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Signature			
Typed or printed name	Ann Taylor	Date	August 16, 2012

This collection of information is required by 37 CFR 1.5. 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 and1.14. This collection is estimated to 2 hours 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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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/694,455	Filing Date 01/27/2010	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☐		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 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).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	08/16/2012	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 32	Minus	** 32	= 0	X $ =		OR	X $60=	0
	Independent (37 CFR 1.16(h))	* 2	Minus	***3	= 0	X $ =		OR	X $250=	0
	☐ 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	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	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 number found in the appropriate box in column 1.

Legal Instrument Examiner:
/CHRISTINE V.13390459 MOORE/

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

PTO/SB/08a (01-10)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

U.S.PATENTS						
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	5794142		1998-08-11	Vanttila, Jaakko et al.	
	2	5903845		1999-05-11	Buhrmann, Michael et al.	
	3	5933778		1999-08-03	Buhrmann, Michael et al.	
	4	6078953		2000-06-20	Vaid, Aseem et al.	
	5	6317584		2001-11-13	Abu-Amara, Hosame et al.	
	6	6418147		2002-07-09	Wiedeman, Robert A	
	7	6765864		2004-07-20	Natarajan, Shankar et al.	
	8	6829596		2004-12-07	Frazee, Steve	

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	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

	9	7024200		2006-04-04	McKenna, Daniel B. et al.	
	10	7366497		2008-04-29	Nagata, Hideaki	
	11	7388950		2008-06-17	Elsey, Nicholas J. et al.	
	12	7450927		2008-11-11	Creswell, Carroll W. et al.	
	13	7499537		2009-03-03	Elsey, Nicholas J. et al.	
	14	7610328		2009-10-27	Haase, Oliver et al.	
	15	7620162		2009-11-17	Aaron, Jeffrey A. et al.	
	16	7650137		2010-01-19	Jobs, Steven P. et al.	
	17	7693720		2010-04-06	Kennewick, Robert A. et al.	
	18	7734784		2010-06-08	Araujo, Wladimir et al.	
	19	7747699		2010-06-29	Prueitt, James K. et al.	

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	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

	20	7792708		2010-09-07	Alva, Jessi	
	21	7797401		2010-09-14	Stewart, Hugh Donal et al.	
	22	7822837		2010-10-26	Urban, Mark et al.	
	23	7949529		2011-05-24	Weider, Chris et al.	
	24	8023425		2011-09-20	Raleigh, Gregory G.	
	25	8095666		2012-01-10	Schmidt, Jonathan E. et al.	
	26	8099077		2012-01-17	Chowdhury, Amor et al.	
	27	8099517		2012-01-17	Jia, Lujun R. et al.	
	28	8170553		2012-05-01	Bennett, James D.	
	29	7984130		2011-07-19	Bogineni, Kalyani et al.	
	30	8019687		2011-09-13	Wang, Feng Chi et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

	31	8144591		2012-03-27	Ghai, Rajat et al.	
	32	7336960		2008-02-26	Zavalkovsky, Arthur et al.	
	33	8194549		2012-06-05	Huber, Kurt Donald et al.	
	34	6606744		2003-08-12	Mikurak, Michael G.	
	35	8190675		2012-05-29	Tribbett, David	
	36	8200775		2012-06-12	Moore, James F.	
	37	7069248		2006-06-27	Huber, Adriano	
	38	6574465		2003-06-03	Marsh, William et al.	

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U.S.PATENT APPLICATION PUBLICATIONS

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					

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

PTO/SB/08a (01-10)
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U.S.PATENTS						
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					
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U.S.PATENT APPLICATION PUBLICATIONS						
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	20030013434		2003-01-16	Rosenberg, Dave H. et al.	
	2	20030018524		2003-01-23	Fishman, Dan et al.	
	3	20030046396		2003-03-06	Richter, Roger K.	
	4	20030220984		2003-11-27	Jones, Paul David et al.	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

	6	20040107360		2004-06-03	Herrmann, Conrad K. et al.	
	7	20040249918		2004-12-09	Sunshine, Roger N.	
	8	20050048950		2005-03-03	Morper, Hans-Jochen	
	9	20060112016		2006-05-25	Ishibashi, Yoshihito	
	10	20060258341		2006-11-16	Miller, Quentin S.C. et al.	
	11	20070061243		2007-03-15	Ramer, Jorey et al.	
	12	20070282896		2007-12-06	Wydroug, Zoe M. et al.	
	13	20080010452		2008-01-10	Holtzman, Michael et al.	
	14	20080060066		2008-03-06	Wynn, Simon et al.	
	15	20080062900		2008-03-13	Rao, Bindu Rama	
	16	20080164304		2008-07-10	Narasimhan, Subram et al.	

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	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

	17	20080184127		2008-07-31	Rafey, Richter A. et al.	
	18	20080207167		2008-08-28	Bugenhagen, Michael K.	
	19	20080221951		2008-09-11	Stanforth, Peter	
	20	20080311885		2008-12-18	Dawson, Christopher James et al.	
	21	20080319879		2008-12-25	Carroll, Jim et al.	
	22	20090005005		2009-01-01	Forstall, Scott et al.	
	23	20090013157		2009-01-08	Beaule, Stephane	
	24	20090068984		2009-03-12	Burnett, R. Alan	
	25	20090079699		2009-03-26	SUN, JIAN	
	26	20090286507		2009-11-19	O'Neil, Douglas R. et al.	
	27	20100017506		2010-01-21	Fadell, Anthony	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

	28	20100191576		2010-07-29	Raleigh, Gregory G.	
	29	20100191612		2010-07-29	Raleigh, Gregory G.	
	30	20100192212		2010-07-29	Raleigh, Gregory G.	
	31	20100195503		2010-08-05	Raleigh, Gregory G.	
	32	20110126141		2011-05-26	King, Bennett M. et al.	
	33	20100325420		2010-12-23	Kanekar, Tushar	
	34	20100103820		2010-04-29	Fuller, Randy et al.	
	35	20070254675		2007-11-01	Zorlu Ozer, Sebnem et al.	
	36	20080005285		2008-01-03	Robinson, James David et al.	
	37	20080256593		2008-10-16	Vinberg, Anders B. et al.	
	38	20090077622		2009-03-19	Baum, Marc et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

	39	20090113514		2009-04-30	Hu, Q. James	
	40	20090288140		2009-11-19	Huber, Kurt Donald et al.	
	41	20100042675		2010-02-18	FUJII, Hiroshi	

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

FOREIGN PATENT DOCUMENTS

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	2010088413	WO		2010-08-05	Headwater Partners I LLC		☐

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NON-PATENT LITERATURE DOCUMENTS

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		☐

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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.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

[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.

EFS Web 2.1.17

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	Raleigh, Gregory G.
	Art Unit	3687
	Examiner Name	Rudy, Andrew J
	Attorney Docket Number	RALEP027

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).

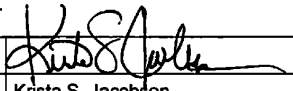
☐ See attached certification statement.

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

☐ None

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		Date (YYYY-MM-DD)	2012-08-13
Name/Print	Krista S. Jacobsen	Registration Number	59,374

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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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.

Electronic Patent Application Fee Transmittal					
Application Number:	12694455				
Filing Date:	27-Jan-2010				
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL				
First Named Inventor/Applicant Name:	Gregory G. Raleigh				
Filer:	Krista Susan Jacobsen/Ann Taylor				
Attorney Docket Number:	RALEP027 [26WV-160504]				
Filed as Small Entity					
Utility under 35 USC 111(a) Filing Fees					
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($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt	
EFS ID:	13487899
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	107265
Filer:	Krista Susan Jacobsen/Ann Taylor
Filer Authorized By:	Krista Susan Jacobsen
Attorney Docket Number:	RALEP027 [26WV-160504]
Receipt Date:	13-AUG-2012
Filing Date:	27-JAN-2010
Time Stamp:	23:37:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	8235
Deposit Account	505876
Authorized User	
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 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)	
Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)	
Charge any Additional Fees required under 37 C.F.R. Section 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	Transmittal Letter	Trans.pdf	362869 848a9570a98afc0c626b9ab5c9ec39e54dc71a39	no	1
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	1460847 317c179c400a7ac924f16373421ff6841db7e2c8	no	12
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	WO2010.pdf	8109078 0558072122361033892 6e7c7d074f9ec8d64dd4a	no	97
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30229 d75222fce32db8265f60e6f52e9dbdcb1920091f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	9963023		

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.

Doc Code: TRAN.LET
Document Description: Transmittal Letter

PTO/SB/21 (07-09)
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	12/694,455
Filing Date	2010-01-27
First Named Inventor	Gregory G. Raleigh
Art Unit	3687 Conf.: 6047
Examiner Name	Rudy, Andrew J
Attorney Docket Number	RALEP027

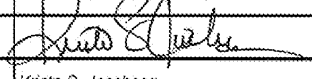
ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☑ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☐ Other Enclosure(s) (please identify below):

Remarks

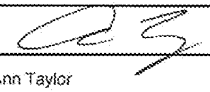
You are hereby authorized to charge any additional fee required or credit any overpayment to Deposit Account No. 50-5876.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Headwater Partners I LLC		
Signature			
Printed name	Krista S. Jacobsen		
Date	August 13, 2012	Reg. No.	59,374

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Ann Taylor	Date	August 13, 2012

This collection of information is required by 37 CFR 1.5. 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 and1.14. This collection is estimated to 2 hours 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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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/694,455	01/27/2010	Gregory G. Raleigh	26WV-160504 [RALEP027]

CONFIRMATION NO. 6047

107265
Headwater Partners I LLC - Outside Firm 1
350 Marine Parkway, Suite 300
Redwood Shores, CA 94065

POA ACCEPTANCE LETTER

OC000000055641167

Date Mailed: 07/31/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/16/2012.

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.

/agizaw/

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

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/694,455	01/27/2010	Gregory G. Raleigh	26WV-160504 [RALEP027]

CONFIRMATION NO. 6047

69849
SHEPPARD, MULLIN, RICHTER & HAMPTON LLP
379 Lytton Avenue
Palo Alto, CA 94301

POWER OF ATTORNEY NOTICE

OC000000055641108

Date Mailed: 07/31/2012

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/16/2012.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/agizaw/

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

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JUL 16 2012

PTO/SB/80 (11-08)
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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(b).

I hereby appoint:

☑ Practitioners associated with the Customer Number: 107265

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 assignment documents attached to this form in accordance with 37 CFR 3.73(b).

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

☑ The address associated with Customer Number: 107265

OR

☐ Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address:

Headwater Partners I LLC
350 Marine Parkway, Suite 300
Redwood City, CA 94065 U.S.A.

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, 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	July 5, 2012
Name	Gregory G. Raleigh	Telephone	650-517-2781
Title	Manager		

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.**

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STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Gregory G. Raleigh

Application No./Patent No.: 12/694,455 Filed/Issue Date: January 27, 2010

Entitled: Device Assisted Services Install

Headwater Partners I LLC (Name of Assignee), a limited liability company (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☑ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest (The extent (by percentage) of its ownership interest is _____ %)

in the patent application/patent identified above by virtue of either:

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 024248, Frame 0209, or for which a copy therefore is attached.

OR

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

1. 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.
2. 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.
3. 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.

☑ As required by 37 CFR 3.73(b)(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 — July 16, 2012 (Date)

Krista S. Jacobsen, Reg. No. 59,374 (Printed or Typed Name) — 650-517-2798 (Telephone Number)

Attorney of Record (Title)

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.

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JUL 16 2012

Date:	July 16, 2012
Send To:	Commissioner for Patents
Fax No.:	571-273-8300
From:	Krista S. Jacobsen, Head Counsel, Headwater Partners I LLC
Phone Number:	650-517-2798

Total Pages Including Cover: 3

Fax

Sir:

Following this cover sheet, please find form SB/80, granting power of attorney to prosecute applications before the USPTO to practitioners associated with the Customer Number 107265, and form SB/96, a statement under 37 C.F.R. § 3.73(b) establishing the right of assignee Headwater Partners I LLC to take action in application number 12/694,455.

Please let me know if you need any additional information to complete the Customer Number change in the application.

Sincerely,

Krista S. Jacobsen
Head Counsel, Headwater Partners I LLC
Reg. No. 59,374

PAGE 1/3 * RCVD AT 7/16/2012 3:40:03 PM [Eastern Daylight Time] * SVR:W-PTOFAX-002/38 * DNIS:2738300 * CSID:16506108051 * DURATION (mm-ss):01-06

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.
12/694,455	01/27/2010	Gregory G. Raleigh	26WV-160504 [RALEP027]	6047

69849 7590 02/16/2012

SHEPPARD, MULLIN, RICHTER & HAMPTON LLP
379 Lytton Avenue
Palo Alto, CA 94301

EXAMINER	
RUDY, ANDREW J	

ART UNIT	PAPER NUMBER
3687	

MAIL DATE	DELIVERY MODE
02/16/2012	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.

PTOL-90A (Rev. 04/07)

Office Action Summary	Application No.	Applicant(s)	
	12/694,455	RALEIGH, GREGORY G.	
	Examiner	Art Unit	
	ANDREW J. RUDY	3687	

-- 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 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, 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 _____.

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) 1-32 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) 1-32 is/are rejected.

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

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

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).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

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

a)☐ All b)☐ Some * c)☐ None of:

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) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-32 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 6-12, 14-19, 21,-24, 38 and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Forbes et al., US 6,996,076.

Forbes discloses, e.g. Figs. 1, 2, 4, 14, 15, abstract, columns, 2, 3, 4, 6, 7, 8, 9, 10, 12, 15, a network device, e.g. logic controls, a wireless network, e.g. cols. 2, 4, lines 14-36, a service plan, e.g. col. 7, service policy settings, e.g. col. 8, lines 41-42, a processor, col. 10, lines 41-51, verification, a mobile communications, e.g. col. 2, lines 14-41, service usage and settings.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

> the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forbes et al., US 6,996,076.

Forbes does not disclose that the communications device, e.g. wireless device, is activated prior to a point of sale, a service plan associated with a manufacture of the communications device or a low cost or free trial service plan. Official Notice is taken that each of these features has been common knowledge in the art. To have provided such along with the teachings of Forbes would have been obvious to one of ordinary skill in the art.

6. Claims 13 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forbes et al., US 6,996,076 in view of Paul et al., US 2008/0183812 A1.
Per claims 13 and 16 Paul discloses a communication device that does not include a service processor [para 0027], a bootstrapper, e.g. claim 42, plural boot servers [para 0017], a plurality of operating systems [0042] and fault remote boot [0016]. To have provided Forbes a bootstrapper and a fault tolerant remote boot would have been obvious to one of ordinary skill in the art in view of Paul. The motivation for having done such would have been to incorporate common knowledge technology.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Forbes et al., US 6,996,076 in view of Yiu et al., US 2007/0226225 A1.

Yiu discloses a communication device and user information are associated with a temporary user account [0040, 0053, 0055]. To have provided such for Forbes would have been obvious to one of ordinary skill in the art in view of Yiu. The motivation for having done such would have been to incorporate common knowledge technology.

8. Further pertinent references of interest are noted on the attached PTO-892.

9. Applicant's Information Disclosure Statements (IDS's) have been reviewed. Note the attached IDS's.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW J. RUDY whose telephone number is (571)272-6789. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Gart can be reached on 571-272-3955. 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.

/ANDREW J RUDY/

Primary Examiner, Art Unit 3687

Notice of References Cited	Application/Control No. 12/694,455	Applicant(s)/Patent Under Reexamination RALEIGH, GREGORY G.	
	Examiner ANDREW J. RUDY	Art Unit 3687	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-7,174,174	02-2007	Boris et al.	455/461
*	B	US-7,797,204	09-2010	Balent, Bruce F.	705/28
*	C	US-7,957,511	06-2011	Drudis et al.	379/201.01
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	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 (01-10)
Approved for use through 07/31/2012. 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	12694455
	Filing Date	2010-01-27
	First Named Inventor	RALEIGH, Gregory G.
	Art Unit	2447
	Examiner Name	HWANG, Joon H.
	Attorney Docket Number	26WV-160504 [RALEP027]

U.S.PATENTS						
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	6651101		2003-11-18	GAI et al	
	2	7290283		2007-10-30	COPELAND III, John A.	
	3	7401338		2008-07-15	BOWEN et al	
	4	7197321		2007-03-27	ERSKINE et al	
	5	7516219		2009-04-07	MOGHADDAM et al	
	6	7647047		2010-01-12	MOGHADDAM et al	
	7	7929960		2011-04-19	MARTIN et al	
	8	7937069		2011-05-03	RASSAM, Frederic	

EFS Web 2.1.17

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.R./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	RALEIGH, Gregory G.
	Art Unit	2447
	Examiner Name	HWANG, Joon H.
	Attorney Docket Number	26WV-160504 [RALEP027]

	9	6563806		2003-05-13	YANO et al	
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	11	7280816		2007-10-09	FRATTI et al	

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

U.S.PATENT APPLICATION PUBLICATIONS

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	20090125619		2009-05-14	ANTANI, Snehal S.	
	2	20080212470		2008-09-04	CASTANEDA et al	
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.R./

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	Filing Date	2010-01-27
	First Named Inventor	RALEIGH, Gregory G.
	Art Unit	2447
	Examiner Name	HWANG, Joon H.
	Attorney Docket Number	26WV-160504 [RALEP027]

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

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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	WO1999/065185	WO		1999-12-16	British Telecommunications Public Limited Company		☐

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

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	Art Unit	2447
	Examiner Name	HWANG, Joon H.
	Attorney Docket Number	26WV-160504 [RALEP027]

NON-PATENT LITERATURE DOCUMENTS			
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	Author Unknown, "Data Roaming Tariffs - Transparency Measures." EUROPA - Europe's Information Society Thematic Portal website, date unknown.	☐
If you wish to add additional non-patent literature document citation information please click the Add button			

EXAMINER SIGNATURE			
Examiner Signature	/Andrew Joseph Rudy/	Date Considered	02/10/2012

*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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PTO/SB/08 (08-03)

Substitute for form 1449/PTO				Complete if Known	
				Application No.:	12/694,455
Information Disclosure Statement By Applicant				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
(Use as many sheets as necessary)				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	1	of	4	Atty Docket No.	RALEP027

U.S. Patent Documents					
Examiner Initials	CiteNo.	Document Number Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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	B.	US 6,965,667	11-15-2005	TRABANDT et al.	
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.R./

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(Use as many sheets as necessary)				First Named Inventor	Gregory G. Raleigh
				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	2	of	4	Atty Docket No.	RALEP027

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.R./

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Substitute for form 1449/PTO				Complete if Known	
				Application No.:	12/694,455
Information Disclosure Statement By Applicant				Filing Date	January 27, 2010
(Use as many sheets as necessary)				First Named Inventor	Gregory G. Raleigh
				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	3	of	4	Atty Docket No.	RALEP027

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.R./

PTO/SB/08 (08-03)

Substitute for form 1449/PTO				Complete if Known	
Information Disclosure Statement By Applicant *(Use as many sheets as necessary)*				Application No.:	12/694,455
				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	4	of	4	Atty Docket No.	RALEP027

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	1A	WO 2006/130960	12-14-2006	Mobidia, Inc.	
	1B	EP 1772988A1	04-11-2007	Huawei Technologies, Co., LTD.	
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	1E	WO 2006/073837	07-13-2006	Symbol Technologies, Inc.	
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Examiner	/Andrew Joseph Rudy/	Date Considered	02/10/2012

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 4

Complete if Known	
Application Number	12/694,455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687
Examiner Name	Andrew J. Rudy
Attorney Docket Number	26WV-160504 [RALEP027]

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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Examiner Signature	/Andrew Joseph Rudy/	Date Considered	02/10/2012

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Sheet 2 of 4

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Application Number	12/694,455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687
Examiner Name	Andrew J. Rudy
Attorney Docket Number	26WV-160504 [RALEP027]

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 3 of 4

Complete if Known	
Application Number	12/694,455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687
Examiner Name	Andrew J. Rudy
Attorney Docket Number	26WV-160504 [RALEP027]

U. S. PATENT DOCUMENTS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 4 of 4

Complete if Known	
Application Number	12/694,455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687
Examiner Name	Andrew J. Rudy
Attorney Docket Number	26WV-160504 [RALEP027]

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
		International Search Report and Written Opinion mailed March 9, 2010 from International Serial Number PCT/US2010/022240 filed January 27, 2010.	

Examiner Signature	/Andrew Joseph Rudy/	Date Considered	02/10/2012

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PTO/SB/08 (08-03)

Substitute for form 1449/PTO				Complete if Known	
Information Disclosure Statement By Applicant *(Use as many sheets as necessary)*				Application No.:	12/694,455
				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	1	of	2	Atty Docket No.	RALEP027

U.S. Patent Documents					
Examiner Initials	CiteNo.	Document Number Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS					
Examiner Initials	Cite No.	Foreign Patent Document Country Code–Number–Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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	2B	WO 2008/051379	05-02-2008	Verizon Services	
	2C	WO 2008/080139	07-03-2008	Integrated Mobile	
	2D	WO 2004/077797	09-10-2004	Boston Communications	
	2E	WO 2003/058880	04-17-2003	Telia AB	

NON PATENT LITERATURE DOCUMENTS

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, page(s), volume-issue number(s), publisher, city and/or country where published	T^2
	2F	HARTMANN et al., Agent-Based Banking Transactions & Information Retrieval-What about Performance Issues? 1999	
	2G	VAN EIJK, et al., GigaMobile, Agent Technology for Designing Personalized Mobile Service Brokerage, July 1, 2002	
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	2M	Author Unknown, 3GPP TS 23.203, V8.4.0, 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Policy and Charging Control Architecture (Release 8), December 2008	
	2N	Author Unknown, 3GPP TS 23.401, V8.4.0, 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; General Packer Radio Service (GPRS) Enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Access (Release 8), December 2008	
	2O	STEPHAN STEGLICH, I-Centric User Interaction, November 21, 2003	
	2P	HAN et al., Information Collection Services for Qos-Aware Mobile Applications, 2005	
	2Q	ALONISTIOTI et al., Intelligent Architectures Enabling Flexible Service Provision and Adaptability, 2002	
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PTO/SB/08 (08-03)

Substitute for form 1449/PTO				Complete if Known	
Information Disclosure Statement By Applicant *(Use as many sheets as necessary)*				Application No.:	12/694,455
				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	2	of	2	Atty Docket No.	RALEP027

Examiner	/Andrew Joseph Rudy/	Date Considered	02/10/2012

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				Art Unit	2447
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	3AA	US 7,747,240	06-29-2010	BRISCOE et al.	
	3BB	US 2003/0088671	05-08-2003	KINKER et al.	
	3CC	US 2007/0248100	10-25-2007	ZUBERI et al.	
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	3A	WO 2007/014630	02-08-2007	Telefonaktiebolaget LM Ericsson	
	3B	WO 2006/004467	01-12-2006	Telefonaktiebolaget LM Ericsson	
	3M	WO 1999/065185	12-16-1999	British Telecommunications	

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	3G	CHAOUCHI et al., Policy Based Networking in the Integration Effort Of 4G Networks and Services, 2004 IEEE	
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	3I	KYRIAKAKOS et al., Ubiquitous Service Provision in Next Generation Mobile Networks, Proceedings of the 13th IST Mobile and Wireless Communications Summit, Lyon, France, June 2004	
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	3K	Author Unknown, HP, IP Multimedia Services Charging, A White Paper from HP, January 2006	
	3L	Author Unknown, Kindle™ User's Guide 3rd Edition, Copyright 2004-2009	

Examiner	/Andrew Joseph Rudy/	Date Considered	02/10/2012

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(Use as many sheets as necessary)				First Named Inventor	Gregory G. Raleigh
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	A.	US 2003/0088671	05-08-2003	KLINKER et al.	
	B.	US 2007/0248100	10-25-2007	ZUBERI et al.	
	C.	US 2008/0130534	06-05-2008	Tazuko Tomioka	
	D.	US 2006/0236095	10-19-2006	SMITH et al.	
	E.	US 2009/0054030	02-26-2009	Golds	
	F.	US 6,952,428	10-04-2005	NECKA et al.	
	G.	US 2010/0043068	02-18-2010	VARADHAN et al.	
	H.	US 2010/0071053	03-18-2010	ANSARI et al.	
	I.	US 2003/0005112	01-03-2003	Krautkremer	
	J.	US 2006/0045245	03-02-2006	AARON et al.	
	K.	US 2007/0076616	04-05-2007	NGO et al.	
	L.	US 2006/0190314	08-24-2006	Hernandez	
	M.	US 2009/0271514	10-29-2009	THOMAS et al.	
	N.	US 6,684,244	01-27-2004	GOLDMAN et al.	
	O.	US 2005/0055291	03-10-2005	BEVENTE et al.	
	P.	US 2006/0019632	01-26-2006	CUNNINGHAM et al.	
	Q.	US 2005/0238046	10-27-2005	HASSAN et al.	
	R.	US 5,577,100	11-19-1996	McGREGOR et al.	
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	T.	US 6,650,887	11-18-2003	McGREGOR et al.	
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	V.	US 7,373,136	05-13-2008	WATLER et al.	
	W.	US 6,725,031	04-20-2004	WATLER et al.	
	X.	US 2002/0022472	02-21-2002	WATLER et al.	
	Y.	US 6,532,579	03-11-2003	SATO et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document Country Code–Number–Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	Z.	WO 2007/018363	08-02-2006	Upresto, Inc.	

NON PATENT LITERATURE DOCUMENTS

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, page(s), volume-issue number(s), publisher, city and/or country where published	T^2
	AA.		
	BB.		

Examiner	/Andrew Joseph Rudy/	Date Considered	02/10/2012

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

T^2 = Applicant is to place a check mark here if English language Translation is attached

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.R./

Search Notes	Application/Control No.	Applicant(s)/Patent under Reexamination
	12/694,455	RALEIGH, GREGORY G.
	Examiner	Art Unit
	ANDREW J. RUDY	3687

SEARCHED			
Class	Subclass	Date	Examiner
705	28,30,34	2/10/2012	AJR
709	203,217	2/10/2012	AJR
709	223,224	2/10/2012	AJR
455	461	2/10/2012	AJR
379	201.01	2/10/2012	AJR

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
Continuity data reviewed.	2/6/2012	AJR

PTO/SB/08a (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 4

Complete if Known	
Application Number	12/694,455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687
Examiner Name	Andrew J. Rudy
Attorney Docket Number	26WV-160504 [RALEP027]

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		6,449,479	09-10-2002	SANCHEZ, Eduardo	
		6,603,969	08-05-2003	VUORISTO, et al.	
		6,658,254	12-02-2003	PURDY, et al.	
		6,785,889	08-31-2004	WILLIAMS	
		6,829,696	12-07-2004	BALMER et al	
		6,920,455	07-19-2005	WESCHLER, Paul	
		6,998,985	02-14-2006	REISMAN et al	
		7,027,408	04-11-2006	NABKEL, et al.	
		7,092,696	08-15-2006	HOSAIN et al	
		7,158,792	01-02-2007	COOK et al	
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		7,280,818	10-09-2007	CLAYTON, Steve	
		7,324,447	01-29-2008	MORFORD	
		7,421,004	09/02/2008	FEHER, Kamilo	
		7,450,591	11-11-2008	KORLING, et al.	
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		7,580,857	08-25-2009	VanFLEET, et al.	
		7,617,516	11-10-2009	HUSLAK, et al.	
		7,620,065	11-17-2009	FALARDEAU, Eric	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] "Number[4] "Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1]Applicant's unique citation designation number (optional). [2]See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

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 2 hours 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, 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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www.FormsWorkFlow.com

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 4

Complete if Known	
Application Number	12/694,455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687
Examiner Name	Andrew J. Rudy
Attorney Docket Number	26WV-160504 [RALEP027]

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number: Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		7,668,903	02-23-2010	EDWARDS, et al.	
		7,720,505	05-18-2010	GOPI, et al.	
		7,848,768	12-07-2010	OMORI, et al.	
		7,868,778	01-11-2011	KENWRIGHT, David Norris	
		7,873,705	01-18-2011	KALISH, Dan	
		7,882,029	02/01/2011	WHITE, Craig R.	
		7,941,184	05-10-2011	PRENDERGAST et al	
		7,975,184	07-05-2011	GOFF et al	
		7,986,935	07-26-2011	D'SOUZA et al	
		8,005,459	08-23-2011	BALSILLIE, Jim	
		8,010,080	08-30-2011	THENTHIRUPERAI, et al.	
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		8,015,133	09-06-2011	WU, et al	
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		2002/0120540	08-29-2002	KENDE et al	
		2002/0131404	09-19-2002	MEHTA et al	
		2004/0132427	07-08-2004	LEE et al	
		2005/0254435	11-17-2005	MOAKLEY et al	
		2006/0014519	01-19-2006	MARSH et al	
		2006/0199608	09-07-2006	DUNN et al	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document: Country Code[3] "Number[4] "Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1]Applicant's unique citation designation number (optional). [2]See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 3 of 4

Complete if Known	
Application Number	12/694,455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687
Examiner Name	Andrew J. Rudy
Attorney Docket Number	26WV-160504 [RALEP027]

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		2007/0093243	04-26-2007	KAPADEKAR et al	
		2007/0259673	11-08-2007	WILLARS et al	
		2007/0263558	11-15-2007	SALOMONE	
		2008/0049630	02-28-2008	KOZISEK et al	
		2008/0147454	06-19-2008	WALKER, et al.	
		2008/0162637	07-03-2008	ADAMCZYK et al	
		2008/0167027	07-10-2008	GAUTIER et al	
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		2009/0180391	07-16-2009	PETERSEN et al	
		2009/0197585	08-06-2009	AARON, Jeffrey A.	
		2009/0257379	10-15-2009	ROBINSON et al	
		2010/0082431	04-01-2010	RAMER et al	
		2010/0188975	07-29-2010	RALEIGH, Gregory G.	
		2010/0188990	07-29-2010	RALEIGH, Gregory G.	
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		2010/0188994	07-29-2010	RALEIGH, Gregory G.	
		2010/0191846	07-29-2010	RALEIGH, Gregory G.	
		2010/0192170	07-29-2010	RALEIGH, Gregory G.	
		2010/0197268	08-05-2010	RALEIGH, Gregory G., et al	
		2010/0198698	08-05-2010	RALEIGH, Gregory G., et al	
		2010/0198939	08-05-2010	RALEIGH, Gregory G., et al	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] "Number[4] "Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

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

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 4 of 4

Complete if Known	
Application Number	12/694,455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687
Examiner Name	Andrew J. Rudy
Attorney Docket Number	26WV-160504 [RALEP027]

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
		International Search Report and Written Opinion mailed March 9, 2010 from International Serial Number PCT/US2010/022240 filed January 27, 2010.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.
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If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

W02-WEST:1LKB1\404598092.1

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
MICHAEL J. SCHALLOP
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD.
SUITE 200
CUPERTINO, CA 95014

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)* 09 MAR 2010
Applicant's or agent's file reference RALEP027PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US 10/22240	International filing date *(day/month/year)* 27 January 2010 (27.01.2010)
Applicant HEADWATER PARTNERS I 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.

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 8270

   For more detailed instructions, see the notes on the accompanying sheet.

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 the 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 the applicant's 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**

   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 as provided in Rules 90*bis*.1 and 90*bis*.3, respectively, before the completion of the technical preparations for international publication.

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. 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. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

   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.

   See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

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: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/220 (January 2004) *(See notes on accompanying sheet)*

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference RALEP027PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US 10/22240	International filing date *(day/month/year)* 27 January 2010 (27.01.2010)	(Earliest) Priority Date *(day/month/year)* 28 January 2009 (28.01.2009)
Applicant HEADWATER PARTNERS I 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 3 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.

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 10/22240

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 15/173 (2010.01)
USPC - 709/224
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) - G06F 15/173 (2010.01)
USPC - 709/224

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
IPC(8) - G06F 15/173 (2010.01) (keyword limited - see terms below)
USPC - 709/224-230 (keyword limited - see terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Electronic Databases Searched: PubWEST(PGPB,USPT,USOC,EPAB,JPAB); Google Scholar
Search Terms Used: processor, wireless, network, services, communication, phone, PDA, wireless device, mobile, service plan, service profile

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 6,996,076 B1 (Forbes et al.) 07 February 2006 (07.02.2006), entire document, especially;col. 2, ln. 14-17; col. 6, ln. 35-38; col. 9, ln. 55-67; col. 10, ln. 41-51; col. 12, ln. 35-36, FIG. 1, 4, 14, 15;	1-12, 14-19, 21-24, 28, 30-32 --- 13, 20, 25-27, 29
Y	US 2008/0183812 A1 (Paul et al.) 31 July 2008 (31.07.2008), para. [0016], [0027], [0042], Claim 42	13, 26
Y	US 2007/0226225 A1 (Yiu et al.) 27 September 2007 (27.09.2007), para. [0040], [0053], [0055]	20
Y	US 2007/0130315 A1 (Friend et al.) 07 June 2007 (07.06.2007), para. [0037]-[0044]	25, 27
Y	US 2008/0059743 A1 (Bychkov et al.) 06 March 2008 (06.03.2008), para. [0011], [0012]	29

☐ 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
26 February 2010 (26.02.2010)	09 MAR 2010
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: Lee W. Young 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/US 10/22240

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

Device assisted services (DAS) install techniques are provided. DAS install techniques are proivided for providing service processors for mobile devices are provided; for downloading/installing new and/or updated service processors for mobile devices; providing verified service processors for mobile devices; providing secured service processors for mobile devices. In some embodiments, DAS install techniques include determining if a communications device in communication with a wireless network includes a service processor for assisting control of the communications device use of a service on the wireless network, in which the service processor includes a service profile that includes a plurality of service policy settings, and in which the service profile is associated with a service plan that provides for access to the service; and verifying the service processor. In further embodiments, DAS install techniques include providing a generic first version service processor for downloading and installing a second version service processor.

Form PCT/ISA/210 (continuation of first sheet (3)) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: MICHAEL J. SCHALLOP
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD.
SUITE 200
CUPERTINO, CA 95014

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	09 MAR 2010
Applicant's or agent's file reference RALEP027PCT	FOR FURTHER ACTION See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US 10/22240	27 January 2010 (27.01.2010)	28 January 2009 (28.01.2009)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 15/173 (2010.01)
USPC - 709/224

Applicant HEADWATER PARTNERS I LLC

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

- ☒ 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
- ☐ Box No. IV Lack of unity of invention
- ☒ 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 the 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.

3. For further details, see notes to 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	01 March 2010 (01.03.2010)	Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2009)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US 10/22240

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:

Form PCT/ISA/237 (Box No. I) (July 2009)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 10/22240

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	3-5, 13, 20, 25-27, 29	YES
	Claims	1, 2, 6-12, 14-19, 21-24, 28, 30-32	NO
Inventive step (IS)	Claims	None.	YES
	Claims	1 - 32	NO
Industrial applicability (IA)	Claims	1 - 32	YES
	Claims	None.	NO

2. Citations and explanations:

Claims 1, 2, 6-12, 14-19, 21-24, 28 and 30-32 lack novelty under PCT Article 33(2) as being anticipated by US 6,996,076 B1 to Forbes et al. (hereinafter 'Forbes').

As per claim 1, Forbes discloses a system, comprising: a processor of a network device (logic controls of FIG. 14 & 15, col. 12, ln. 35-36) configured to: determine if a communications device (e.i. wireless device) in communication with a wireless network (see network diagram in FIG. 1) includes a service processor (processor detailed in FIG. 4, 14, 15, see col. 12, ln. 35-36 for processor example) for assisting control of the communications device use of a service on the wireless network (col. 4, ln. 14-36), wherein the service processor includes a service profile (col. 6, ln. 35-38) that includes a plurality of service policy settings (col. 8, ln. 41-42), and wherein the service profile is associated with a service plan that provides for access to the service (col. 7, ln. 40-44); and verify the service processor (verification, col. 2, ln. 14-17); and a memory of the network device coupled to the processor (col. 10, ln. 41-51) and configured to provide the processor with instructions (instructions from network gateway, col. 9, ln. 55-67).

As per claim 2, Forbes discloses the system recited in claim 1, and further discloses that the service processor is uniquely associated with the communications device (abstract, function-specific processor is downloaded).

As per claim 6, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a plurality of service processors for supporting a plurality of operating systems and/or service plans (processor 315-321, col. 12, ln. 35-48).

As per claim 7, Forbes discloses the system recited in claim 1, and further discloses that the communications device is a mobile communications device or an intermediate networking device (mobile communication device, such as a mobile phone, col. 2, ln. 40-41), and the service includes one or more Internet based services (see col. 5, ln. 21-25 for Internet based services).

As per claim 8, Forbes discloses the system recited in claim 1, and further discloses that the communications device is a mobile communications device (mobile communication device, such as a mobile phone, col. 2, ln. 40-41), and the service includes one or more Internet based services (see col. 5, ln. 21-25 for Internet based services), and wherein the mobile communications device includes one or more of the following: a mobile phone, a PDA, an eBook reader, a music device, an entertainment/gaming device, a computer, laptop, a netbook, a tablet, and a home networking system (mobile communication device, such as a mobile phone, col. 2, ln. 40-41 and PDA col. 18, ln. 26-28).

As per claim 9, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a modem, and the processor is located in the modem (modem 44, col. 5, ln. 53-58).

As per claim 10, Forbes discloses the system recited in claim 1, and further discloses that the service policy settings include one or more of the following: access control settings, traffic control settings, billing system settings, user notification with acknowledgment settings, user notification with synchronized service usage information, user privacy settings, user preference settings, authentication settings, admission control settings, application access settings, content access settings, transaction settings, and network or device management communication settings (traffic control, col. 3, ln. 11-15; billing system, col. 2, ln. 32-33; authentication settings col. 3, ln. 12).

As per claim 11, Forbes discloses the system recited in claim 1, and further discloses that the implementation of the first service profile is verified based on one or more of the following: device generated service usage information and network generated service usage information (user and network usage, col. 15, ln. 34-38).

As per claim 12, Forbes discloses the system recited in claim 1, and further discloses that the communications device does not include the service processor (the network device does), and the processor of the network device is further configured to: download the service processor to the communications device (abstract and col. 1, ln. 67 to col. 2, ln. 5).

---please see continuation in supplemental boxes---

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

V.2. Citations and explanations:

As per claim 14, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes the service processor, and the processor of the network device is further configured to: update the service processor (update to processor, col. 11, ln. 22-25).

As per claim 15, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes the service processor, and the processor of the network device is further configured to: download a replacement service processor (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor).

As per claim 16, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor, and the processor of the network device is further configured to: download a second version service processor (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor).

As per claim 17, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor (the generic processor, claim 1), and the processor of the network device is further configured to: download a second version service processor, wherein the second version service processor is uniquely associated with the communications device (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor).

As per claim 18, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor (the generic processor, claim 1), and the processor of the network device is further configured to: determine a device group associated with the communications device (groups selection, claim 2); and download a second version service processor based on the device group (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor).

As per claim 19, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor (the generic processor, claim 1), and the processor of the network device is further configured to: determine a device group associated with the communications device (groups selection, claim 2); and download a second version service processor based on the device group, wherein the second version service processor is uniquely associated with the communications device based on one or more device credentials (layer based) of the communications device (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor).

As per claim 21, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor (the generic processor, claim 1), and the processor of the network device is further configured to: download a service processor update (col. 11, ln. 22-25), wherein the service processor update includes one or more updates to the first version service processor (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor).

As per claim 22, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor (the generic processor, claim 1), and the processor of the network device is further configured to: download a service processor update (col. 11, ln. 22-25), wherein the service processor update includes one or more settings changes to the first version service processor (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor).

As per claim 23, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor (the generic processor, claim 1), and the processor of the network device is further configured to: download a service processor update (col. 11, ln. 22-25), wherein the service processor update includes one or more encryption (col. 6, ln. 32-34) or obfuscation computations to perform on the first version service processor to provide a second version of the service processor that is uniquely associated with the communications device (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor), a communications device user (users 40, FIG. 2), a device group associated with the communications device (groups selection, claim 2), and/or the service plan associated with the communications device (col. 7, ln. 40-44).

As per claim 24, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor (the generic processor, claim 1), and the processor of the network device is further configured to: download a second version service processor (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor), wherein the second version service processor is uniquely associated with the communications device (specific associates, abstract), and wherein the second version service processor includes one or more restricted IP addresses (col. 5, ln. 48-58, FIG. 2 diagram) providing for access to a service controller reserved for verified and non-probation mode service processors (col. 19, ln. 29-30).

As per claim 28, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes the service processor (the generic processor, claim 1), and the processor of the network device is further configured to: download a new service processor (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor) based on one or more of the following: a new service plan selection, an indication of tampering with the service processor, an update availability for the service processor, and a periodic service processor verification request (availability, col. 10, ln. 1-15).

As per claim 30, Forbes discloses the system recited in claim 1, and further discloses that the processor of the network device is further configured to: periodically download an updated or replacement service processor to the communications device (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. download of the function specific processor).

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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 10/22240

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

V.2. Citations and explanations:

As per claims 31 and 32, Forbes discloses a computer program product, the computer program product being embodied in a computer readable storage medium and comprising computer instructions for carrying out the method comprising: determining if a communications device (I.e. wireless device) in communication with a wireless network (see network diagram in FIG. 1) includes a service processor (processor detailed in FIG. 4, 14, 15, see col. 12, ln. 35-36 for processor example) for assisting control of the communications device use of a service on the wireless network (col. 4, ln. 14-36), wherein the service processor includes a service profile (col. 6, ln. 35-38) that includes a plurality of service policy settings (col. 8, ln. 41-42), and wherein the service profile is associated with a service plan that provides for access to the service (col. 7, ln. 40-44); and verifying the service processor (verification, col. 2, ln. 14-17).

Claims 3-5 lack an Inventive step under PCT Article 33(3) as being obvious over Forbes.

As per claim 3, Forbes discloses the system recited in claim 1. Although Forbes does not specify that the communications device is activated prior to a point of sale of the communications device, and the service plan is associated with the communications device during activation, this configuration was well known in the art at the time of the invention (e.g. mobile communication device activation (such as PDAs or mobile phones) to activate mobile communications devices for immediate consumer use). Thus, it would have been obvious to a person having ordinary skill in the art to activate the device prior to the point of same and associate a service plan with the device during activation for immediate consumer use.

As per claim 4, Forbes discloses the system recited in claim 1. Although Forbes does not specify that the service plan is associated with the communications device during one or more of the following: a manufacture of the communications device, a distribution of the communications device, or a point of sale of the communications device, this configuration was well known in the art at the time of the invention (e.g. PDAs or mobile phones) to associate a service plan either during manufacture, distribution, or point of sale for immediate consumer use. Thus, it would have been obvious to a person having ordinary skill in the art to associate a service plan either during manufacture, distribution, or point of sale for immediate consumer use.

As per claim 5, Forbes discloses the system recited in claim 1. Although Forbes does not specify that the service plan is an ambient service plan that provides a low cost or free trial service plan that is bundled or provided as an option for purchase at a point of sale of the communications device, such free trials or bundling were known in the art at the time of the invention (e.g. PDAs or mobile phones) to insensitivize users to purchase a service plan if it meets their communication needs. Thus, it would have been obvious to a person having ordinary skill in the art to provide free trial plans to insensilivize users to purchase a service plan if it meets their communication needs.

Claims 13 and 26 lack an inventive step under PCT Article 33(3) as being obvious over Forbes, in view of US 2008/0183812 A1 to Paul et al. (hereinafter 'Paul').

As per claim 13, Forbes discloses the system recited in claim 1, but does not specify that the communications device does not include the service processor, and the processor of the network device is further configured to: download a service processor to the communications device using a bootstrapper. However, Paul discloses a communication system wherein the communications device does not include the service processor (the system has a service processor not the communication device, para. [0027]), and the processor of the network device is further configured to: download a service processor to the communications device using a bootstrapper (claim 42). Thus, it would have been obvious to a person having ordinary skill in the art to use a bootstrapper as taught by Paul in the system of Forbes to request a message from the client for downloading.

As per claim 26, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor (the generic processor, claim 1), and the processor of the network device is further configured to: download a second version service processor (abstract and col. 1, in. 67 to col. 2, ln. 5, i.e. the function specific processor), but does not specify that the second version service processor facilitates a dual boot configuration that provides support for a plurality of operating systems executed on the communications device. However, Paul discloses a communication system wherein a service processes facilitates a dual boot configuration (from plural boot servers, para. [0017]) that provides support for a plurality of operating systems (para. [0042]) executed on the communications device (para. [0042]).Thus, it would have been obvious to a person having ordinary skill in the art to use a dual boot as taught by Paul in the system of Forbes to provide a fault tolerant remote boot (Paul: para. [0016]).

Claim 20 lacks an inventive step under PCT Article 33(3) as being obvious over Forbes, in view of US 2007/0226225 A1 to Yiu et al. (hereinafter 'Yiu').

As per claim 20, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor (the generic processor, claim 1), and the processor of the network device is further configured to: download a second version service processor (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor), wherein the second version service processor is uniquely associated with the communications device (abstract, i.e. specific) based on one or more device credentials (layer based), but does not specify that of the communications device and user information are associated with a temporary user account. However, Yiu discloses a communication system wherein the communications device and user information are associated with a temporary user account (para. [0040], [0053], [0055]). Thus, it would have been obvious to a person having ordinary skill in the art to associate information with a temporary user account as taught by Yiu in the system of Forbes to allow for temporary task-specific access to a user, as a guest for example (Yiu: para. [0055]).

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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 10/22240

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

V.2. Citations and explanations:

Claims 25 and 27 lack an inventive step under PCT Article 33(3) as being obvious over Forbes, in view of US 2007/0130315 A1 to Friend et al. (hereinafter 'Friend').

As per claim 25, Forbes discloses the system recited in claim 1, and further discloses that the communications device includes a first version service processor (the generic processor, claim 1) that allows for limited access to the wireless network for purposes of service control (col. 2, ln. 32-34), and the processor of the network device is further configured to: download a second version service processor (abstract and col. 1, ln. 67 to col. 2, ln. 5, i.e. the function specific processor), wherein the second version service processor is uniquely associated with the communications device (specific association, abstract), but does not disclose permitting selection of a new service plan and downloading a service process based on a new service plan selection for the communications device. However, Friend discloses a communication system including permitting selection of a new service plan and downloading a service process based on a new service plan selection for the communications device (Service Adjustment process para. [0037]-[0044]). Thus, it would have been obvious to a person having ordinary skill in the art to allow for the download of a service process based on a new service plan selection for the communications device as taught by Friend in the system of Forbes to allow a user to adjust their service agreement (Friend: para. [0037]-[0044]).

As per claim 27, Forbes discloses the system recited in claim 1, but does not further disclose that the service plan includes an option to purchase a new service plan for the communications device, wherein the new service plan includes additional service capabilities, and wherein the processor of the network device is further configured to: download a new service processor to the communications device, wherein the new service processor is associated with the new service plan. However, Friend discloses a communication system where the service plan includes an option to purchase a new service plan for the communications device, wherein the new service plan includes additional service capabilities, and wherein the processor of the network device is further configured to: download a new service processor to the communications device, wherein the new service processor is associated with the new service plan (Service Adjustment process para. [0037]-[0044]).Thus, it would have been obvious to a person having ordinary skill in the art to allow for the download of a service process based on a new service plan selection for the communications device as taught by Friend in the system of Forbes to allow a user to adjust their service agreement (Friend: para. [0037]-[0044]).

Claim 29 lacks an inventive step under PCT Article 33(3) as being obvious over Forbes, in view of US 2008/0059743 A1 to Bychkov et al. (hereinafter 'Bychkov').

As per claim 29, Forbes discloses the system recited in claim 1, but disclose not further disclose that the processor of the network device is further configured to: allow the communications device access to the service in a probation mode, wherein the communications device is initially in a probation mode that allows for access to the service with increased service monitoring and/or limited service capabilities that are limited based on one or more of the following: period of time, network address, service type, content type, application type, bandwidth, and data usage. However, Bychkov discloses a communication system where a processor of the network device is further configured to: allow the communications device access to the service in a probation mode (i.e. limited use, para. [0011], [0012]), wherein the communications device is initially in a probation mode that allows for access to the service with increased service monitoring and/or limited service capabilities (para. [0011], [0012]) that are limited based on one or more of the following: period of time, network address, service type, content type, application type, bandwidth, and data usage (data usage, para. [0011], [0012]). Thus, it would have been obvious to a person having ordinary skill in the art to place the communication device in "probation" mode as taught by Bychkov in the system of Forbes by limiting usage which will result in limited access by specified users.

Claims 1 - 32 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

Electronic Acknowledgement Receipt	
EFS ID:	11997258
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	69849
Filer:	Marc A. Sockol/Linda Brost
Filer Authorized By:	Marc A. Sockol
Attorney Docket Number:	26WV-160504 [RALEP027]
Receipt Date:	03-FEB-2012
Filing Date:	27-JAN-2010
Time Stamp:	19:49:03
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		160504-RALEP027-IDS-020312.pdf	576148 063db760c19188dcc3059149ac649534edd997b3	yes	17

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
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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.

PTO/SB/21 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	17

Application Number	12/694,455
Filing Date	January 27, 2010
First Named Inventor	Gregory G. Raleigh
Art Unit	3687 Conf. No. 6047
Examiner Name	Andrew J. Rudy
Attorney Docket Number	26WV-160504 [RALEP027]

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
- ☐ Fee Attached
- ☐ Amendment/Reply
- ☐ After Final
- ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☒ Information Disclosure Statement with PTO/SB/08a/b (6 pgs.)
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
- ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation, Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
- ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) (please Identify below):

  Copy of International Search Report and Written Opinion for PCT/US2010/022240 (10 pgs.)

Remarks

You are hereby authorized to charge any additional fee required or credit any overpayment to Deposit Account No. 50-4561.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Sheppard, Mullin, Richter & Hampton LLP		Customer No. 69849
Signature			
Printed name	Marc A. Sockol		
Date	February 3, 2012	Reg. No.	40,823

CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this correspondence is being filed electronically via EFS-Web addressed to the Commissioner for Patents on the date shown below:

Signature			
Typed or printed name	Linda K. Brost	Date	February 3, 2012

This collection of information is required by 37 CFR 1.5. 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 2 hours 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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Examiner:
Gregory G. Raleigh	Andrew J. Rudy
Serial No.: 12/694,455	Art Unit: 3687
Filed: January 27, 2010	Conf. No.: 6047
Title: Device Assisted Services Install	

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT PURSUANT TO 37 C.F.R. §§1.97(b)

Sir:

In accordance with the duty of disclosure under 37 CFR §1.56 and pursuant to 37 CFR §§1.97-1.98, Applicant hereby notifies the U.S. Patent and Trademark Office of the references listed on the enclosed Form PTO-SB/08A. Pursuant to the USPTO's waiver of the requirements under 37 CFR 1.98(a)(2)(i) for submitting a copy of each cited U.S. patent, we are not submitting copies of U.S. patents and/or patent publications cited.

The present Information Disclosure Statement is being filed more than three months after the filing date but before receiving the first Office Action. Accordingly, no fee or certification is needed.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant reserves the right to dispute any of the listed documents as prior art during examination. Furthermore, Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the

present application. The submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made or that no other material information may exist.

The Examiner is requested to initial the enclosed Form PTO/SB/08A and return a copy thereof to the undersigned.

No fee is believed to be due relative to this submission, but if for any reason an insufficient fee has been paid, please charge the insufficiency to Deposit Account No. **50-4561**.

Respectfully submitted,

Date: February 3, 2012 By: _____

Marc A. Sockol, Reg. No. 40,823
Attorney for Applicants
Customer Number 69849
Sheppard, Mullin, Richter & Hampton LLP
379 Lytton Avenue
Palo Alto, CA 94301-1432
Telephone: (650) 815-2600

CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being filed electronically via EFS-Web addressed to the Commissioner for Patents on:

Date: February 3, 2012 By: _____
Linda K. Brost

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. 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	12694455
	Filing Date	2010-01-27
	First Named Inventor	RALEIGH, Gregory G.
	Art Unit	2447
	Examiner Name	HWANG, Joon H.
	Attorney Docket Number	26WV-160504 [RALEP027]

U.S.PATENTS						
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	6651101		2003-11-18	GAI et al	
	2	7290283		2007-10-30	COPELAND III, John A.	
	3	7401338		2008-07-15	BOWEN et al	
	4	7197321		2007-03-27	ERSKINE et al	
	5	7516219		2009-04-07	MOGHADDAM et al	
	6	7647047		2010-01-12	MOGHADDAM et al	
	7	7929960		2011-04-19	MARTIN et al	
	8	7937069		2011-05-03	RASSAM, Frederic	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	RALEIGH, Gregory G.
	Art Unit	2447
	Examiner Name	HWANG, Joon H.
	Attorney Docket Number	26WV-160504 [RALEP027]

	9	6563806		2003-05-13	YANO et al	
	10	6532235		2003-03-11	BENSON et al	
	11	7280816		2007-10-09	FRATTI et al	

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

U.S.PATENT APPLICATION PUBLICATIONS

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	20090125619		2009-05-14	ANTANI, Snehal S.	
	2	20080212470		2008-09-04	CASTANEDA et al	
	3	20080183812		2008-07-31	PAUL et al	
	4	20060178918		2006-08-10	MIKURAK	
	5	20040103193		2004-05-27	PANDYA et al	
	6	20050183143		2005-08-18	ANDERHOLM et al	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	RALEIGH, Gregory G.
	Art Unit	2447
	Examiner Name	HWANG, Joon H.
	Attorney Docket Number	26WV-160504 [RALEP027]

	7	20070294395		2007-12-20	STRUB et al	
	8	20090287921		2009-11-19	ZHU et al	
	9	20060085543		2006-04-01	HRASTAR et al	
	10	20080059474		2008-03-01	LIM, Keng	
	11	20080066149		2008-03-01	LIM, Keng	
	12	20080066150		2008-03-01	LIM, Keng	
	13	20080167033		2008-07-10	BECKERS, Michel	
	14	20070298764		2007-12-27	CLAYTON	

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

FOREIGN PATENT DOCUMENTS

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	WO1999/065185	WO		1999-12-16	British Telecommunications Public Limited Company		☐

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

EFS Web 2.1.17

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12694455
	Filing Date	2010-01-27
	First Named Inventor	RALEIGH, Gregory G.
	Art Unit	2447
	Examiner Name	HWANG, Joon H.
	Attorney Docket Number	26WV-160504 [RALEP027]

NON-PATENT LITERATURE DOCUMENTS			
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	Author Unknown, "Data Roaming Tariffs - Transparency Measures." EUROPA - Europe's Information Society Thematic Portal website, date unknown.	☐
If you wish to add additional non-patent literature document citation information please click the Add button			

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	12694455
	Filing Date	2010-01-27
	First Named Inventor	RALEIGH, Gregory G.
	Art Unit	2447
	Examiner Name	HWANG, Joon H.
	Attorney Docket Number	26WV-160504 [RALEP027]

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		Date (YYYY-MM-DD)	2011-07-20
Name/Print	Marc A. Sockol	Registration Number	40,823

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.**

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.

Electronic Acknowledgement Receipt	
EFS ID:	10564870
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	69849
Filer:	Marc A. Sockol/Linda Brost
Filer Authorized By:	Marc A. Sockol
Attorney Docket Number:	RALEP027
Receipt Date:	20-JUL-2011
Filing Date:	27-JAN-2010
Time Stamp:	20:26:47
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		160504-RALEP027-IDS072011.pdf	459658 1545851d9438e6a22a51eed563460e75f94bf7b7	yes	14

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Information Disclosure Statement (IDS) Form (SB08)	1	6
	Non Patent Literature	7	14
Warnings:			
Information:			

2	Foreign Reference	WO1999-065185A2andA3.pdf	1952852 b4b22a6a3b435dba71663391f5ac019eb0e4ba7f	no	56
Warnings:					
Information:					
		Total Files Size (in bytes):	2412510		

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/694,455	01/27/2010	Gregory G. Raleigh	RALEP027

CONFIRMATION NO. 6047

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

POWER OF ATTORNEY NOTICE

OC000000047368638

Date Mailed: 04/28/2011

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/20/2011.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/fstephanos/

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

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/694,455	01/27/2010	Gregory G. Raleigh	RALEP027

CONFIRMATION NO. 6047

69849
SHEPPARD, MULLIN, RICHTER & HAMPTON LLP
390 Lytton Avenue
Palo Alto, CA 94301

POA ACCEPTANCE LETTER

OC000000047368654

Date Mailed: 04/28/2011

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/20/2011.

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.

/fstephanos/

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

PTO/SB/80 (11-08)
Approved for use through 11/30/2011. 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(b).

I hereby appoint:

☒ Practitioners associated with the Customer Number: 69849

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 assignment documents attached to this form in accordance with 37 CFR 3.73(b).

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

☒ The address associated with Customer Number: 69849

OR

☐ Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address:
Headwater Partners I, LLC
350 Marine Parkway, Suite 300
Redwood City, California 94065
U.S.A.

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, 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: 18 MARCH, 2011
Name	David R. Johnson	Telephone: 650-517-2782
Title	Chief Financial Officer	

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.

Electronic Acknowledgement Receipt	
EFS ID:	9924433
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	21912
Filer:	Marc A. Sockol/Linda Brost
Filer Authorized By:	Marc A. Sockol
Attorney Docket Number:	RALEP027
Receipt Date:	20-APR-2011
Filing Date:	27-JAN-2010
Time Stamp:	20:46:14
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		160504POAand3-73bStmt042011.pdf	156148 fddd16c7582a9091adc24613ebf0615b8bfe5a88	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Assignee showing of ownership per 37 CFR 3.73(b).	1	2
	Power of Attorney	3	4
Warnings:			
Information:			
	Total Files Size (in bytes):	156148	

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.

PTO/SB/96 (07-09)
Approved for use through 07/31/2012. 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(b)

Applicant/Patent Owner: Gregory G. Raleigh

Application No./Patent No.: 12/694,455 Filed/Issue Date: January 27, 2010

Titled: Device Assisted Services Install

Headwater Partners I, LLC , a limited liability company

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

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;

2. ☐ an assignee of less than the entire right, title, and interest in (The extent (by percentage) of its ownership interest is _____ %); or

3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

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 024248, Frame 0209, or for which a copy therefore is attached.

OR

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

1. From: _____ To: _____

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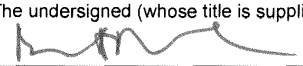
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☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(b)(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 — April 20, 2011 (Date)

Marc A. Sockol, Reg. No. 40,823 (Printed or Typed Name) — Attorney of Record (Title)

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.**

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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/SB/08 (08-03)

Substitute for form 1449/PTO				Complete if Known	
				Application No.:	12/694,455
Information Disclosure Statement By Applicant				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
(Use as many sheets as necessary)				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	1	of	1	Atty Docket No.	RALEP027

U.S. Patent Documents

Examiner Initials	Cite No.	Document Number Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A.	US 2003/0088671	05-08-2003	KLINKER et al.	
	B.	US 2007/0248100	10-25-2007	ZUBERI et al.	
	C.	US 2008/0130534	06-05-2008	Tazuko Tomioka	
	D.	US 2006/0236095	10-19-2006	SMITH et al.	
	E.	US 2009/0054030	02-26-2009	Golds	
	F.	US 6,952,428	10-04-2005	NECKA et al.	
	G.	US 2010/0043068	02-18-2010	VARADHAN et al.	
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	I.	US 2003/0005112	01-03-2003	Krautkremer	
	J.	US 2006/0045245	03-02-2006	AARON et al.	
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	N.	US 6,684,244	01-27-2004	GOLDMAN et al.	
	O.	US 2005/0055291	03-10-2005	BEVENTE et al.	
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	R.	US 5,577,100	11-19-1996	McGREGOR et al.	
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	W.	US 6,725,031	04-20-2004	WATLER et al.	
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Examiner Initials	Cite No.	Foreign Patent Document Country Code–Number–Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	Z.	WO 2007/018363	08-02-2006	Upresto, Inc.	

NON PATENT LITERATURE DOCUMENTS

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, page(s), volume-issue number(s), publisher, city and/or country where published	T^2
	AA.		
	BB.		

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

T^2 = Applicant is to place a check mark here if English language Translation is attached

Electronic Acknowledgement Receipt	
EFS ID:	8592127
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	21912
Filer:	Michael J. Schallop/Veronica Pula
Filer Authorized By:	Michael J. Schallop
Attorney Docket Number:	RALEP027
Receipt Date:	08-OCT-2010
Filing Date:	27-JAN-2010
Time Stamp:	19:29:09
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	Transmittal Letter	RALEP027_IDS_Before_1st_OA.pdf	55801 3605a37a8ee71f0018503458eddc073d71d5af75	no	2
Warnings:					
Information:					

2	Information Disclosure Statement (IDS) Filed (SB/08)	RALEP027_IDS_SB08_before_1st_OA_2_.pdf	100999 51f3115a7cf68fe34bdbba73f5549e2e0e6c5d4b	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	RALE_Foreign_Ref_WO2007018363.pdf	1322623 37b720bd7d61efc44073aef18cbf624bab5e7d3b	no	37
Warnings:					
Information:					
		Total Files Size (in bytes):	1479423		

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor:	Gregory G. Raleigh	Examiner:	Not Assigned
Application No.:	12/694,455	Art Unit:	2447
Filed:	January 27, 2010	Docket No.:	RALEP027
Title:	DEVICE ASSISTED SERVICES INSTALL		

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§1.56 AND 1.97(b) BEFORE MAILING OF A FIRST OFFICE ACTION

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The references listed in the attached PTO SB/08, may be material to examination of the above-identified patent application. Applicants disclose these references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application. Copies of the cited references are provided to the extent required by 37 CFR §1.98 and any applicable waivers.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

This Information Disclosure Statement is being filed (1) with the above-referenced application or (2) within three months of the filing date of the above-referenced application or (3) before the mailing date of a first Office Action on the merits or (4) before the mailing date of a first Office Action after filing of a Request for Continued Examination. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-0685 (Order No. RALEP027).

Respectfully submitted,
VAN PELT, YI & JAMES LLP

/Michael J. Schallop/

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Substitute for form 1449/PTO				Complete if Known	
				Application No.:	12/694,455
Information Disclosure Statement By Applicant				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
(Use as many sheets as necessary)				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	1	of	4	Atty Docket No.	RALEP027

U.S. Patent Documents					
Examiner Initials	CiteNo.	Document Number Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A.	US 2006/0048223	03-02-2006	LEE et al.	
	B.	US 6,965,667	11-15-2005	TRABANDT et al.	
	C.	US 2008/0268813	10-13-2008	Stephane H. Maes	
	D.	US 2007/0255848	11-01-2007	SEWALL et al.	
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	H.	US 7,403,763	07-22-2008	Stephane H. Maes	
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	L.	US 7,058,968	06-06-2006	ROWLAND et al.	
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	S.	US 6,141,686	10-31-2000	JACKOWSKI et al.	
	T.	US 2004/0044623	03-04-2004	WAKE et al.	
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Substitute for form 1449/PTO				Complete if Known	
Information Disclosure Statement By Applicant *(Use as many sheets as necessary)*				Application No.:	12/694,455
				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	2	of	4	Atty Docket No.	RALEP027

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	AAAA.	US 2008/0134330	06-05-2008	KAPOOR et al.	
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	DDDD.	US 2003/0161265	08-28-2003	CAO et al.	

Substitute for form 1449/PTO				Complete if Known	
				Application No.:	12/694,455
Information Disclosure Statement By Applicant				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
(Use as many sheets as necessary)				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	3	of	4	Atty Docket No.	RALEP027

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	FFFFF.	US 2007/0036312	02-15-2007	CAI et al.	
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	RRRRR.	US 2008/0130656	06-05-2008	KIM et al.	
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Substitute for form 1449/PTO				Complete if Known	
				Application No.:	12/694,455
Information Disclosure Statement By Applicant				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
(Use as many sheets as necessary)				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	4	of	4	Atty Docket No.	RALEP027

	UUUUU.	US 2008/0229385	09-18-2008	FEDER et al.	
	VVVVV.	US 2008/0098062	04-24-2008	Balia	

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document Country Code–Number–Kind Code (known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1A	WO 2006/130960	12-14-2006	Mobidia, Inc.	
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2	Information Disclosure Statement (IDS) Filed (SB/08)	RALEP027_IDS_SB08_1.pdf	124527 33ea5640e95970a369f2d50801cab63b6cf1de43	no	4
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3	Foreign Reference	RALE_Foreign_Ref_1A.pdf	6139391 ed22a6dbc67f09d4e7a5cb6045be867df9248ed8	no	49
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PATENT

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Title:	DEVICE ASSISTED SERVICES INSTALL		

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§1.56 AND 1.97(b) BEFORE MAILING OF A FIRST OFFICE ACTION

Commissioner for Patents
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Dear Sir:

The references listed in the attached PTO SB/08, may be material to examination of the above-identified patent application. Applicants disclose these references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application. Copies of the cited references are provided to the extent required by 37 CFR §1.98 and any applicable waivers.

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Respectfully submitted,
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				Art Unit	2447
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Examiner Initials	CiteNo.	Document Number Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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	3BB	US 2003/0088671	05-08-2003	KINKER et al.	
	3CC	US 2007/0248100	10-25-2007	ZUBERI et al.	
	3DD	US 2008/0130534	06-05-2008	Tazuko Tomioka	

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Examiner Initials	Cite No.	Foreign Patent Document Country Code–Number–Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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	3B	WO 2006/004467	01-12-2006	Telefonaktiebolaget LM Ericsson	
	3M	WO 1999/065185	12-16-1999	British Telecommunications	

NON PATENT LITERATURE DOCUMENTS

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	3D	KOUTSOPOULOU et al., Middleware Platform for the Support of Charging Reconfiguration Actions, 2005	
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(57) Abstract

In a communications network, loading of network resources is detected locally at a customer terminal, and a tariff for network usage is varied automatically depending on the usage.

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Communications Network

BACKGROUND TO THE INVENTION

The present invention relates to a communications network, and in particular to charging mechanisms in such a network. It includes aspects of the inventions disclosed and claimed in the present applicant's co-pending British patent application no. 9812161.9 filed 5 June 1998 (applicant's ref: A25547) and the contents of that earlier application are incorporated herein by reference.

In conventional communications networks, such as national PSTNs (public switched telephone networks), a significant proportion of the network resources are devoted to metering and billing network usage. Studies have estimated these resources as consuming as much as 6% of the revenue of a telecommunications company. The Internet, by contrast, does not in general incorporate metering and billing mechanisms for individual customers. The absence of the network infrastructure required to support metering and billing reduces the operational costs of the Internet compared to conventional telephony networks, and has facilitated the rapid expansion of the Internet. However, the absence of appropriate billing mechanisms has significant disadvantages in terms of the characteristics of the traffic carried by the Internet: it encourages profligate use of network resources, and diminishes the incentive for investment in network infrastructure to support new applications requiring, e.g., guaranteed quality of service (QoS).

SUMMARY OF THE INVENTION

According to a first aspect of the present invention, there is provided a method of operating a communications network, including automatically varying, depending on network loading as detected at a customer terminal, a tariff for network usage by the customer terminal.

In this document references to varying a tariff encompass changing a price, e.g. as a function of a congestion parameter. The structure of the tariff may be unchanged.

The present invention provides an approach to charging for network usage which involves little or no network overheads, and which moreover is able to reflect local variations in network loading. This is achieved by detecting a measure of

network loading at the customer terminal. This measure will reflect those resources being used by the customer terminal at a particular time. For example, in a federated data network comprising a number of sub-domains, such as the Internet, a customer terminal in one subdomain may attempt to access a server in another subdomain at a time when there is overloading of a router somewhere in the path from the customer terminal to the server. Then, even if average loading of the network as a whole is low, the loading as perceived by the customer terminal is high, and a tariff for use of the network by the customer terminal is increased to reflect the scarcity of the relevant network resources. Similarly other terminals attempting to access data via the same router will also perceive the network loading as being high, and will also have their tariffs increased accordingly. With an appropriately steep rise in tariff, at least some customer terminals will then choose to abandon or defer their attempts to use the network resource in question, thereby relieving the loading of the router.

This aspect of the invention may be used in systems in which the end user is merely informed of the price and accounting and billing is carried out by the network provider, also in systems where the end user measures their usage and supplies this information to the network provider, and also in systems where the end user both measures their usage and calculates the payment due to the network provider.

The method may include detecting at the customer terminal a network performance parameter which depends on network loading, and varying the tariff depending on the network performance parameter. When the network is a packet network, then the network performance parameter may be the number of packets lost in transmission between a data source and the customer terminal. This approach has the advantage that it is suitable for implementation using existing congestion control mechanisms in packet networks. For example, in the Internet, routers respond to congestion by dropping packets, and a customer terminal using TCP (Transport Control Protocol) detects packet loss and controls a congestion window at the terminal accordingly. The present invention may use the detected packet loss to trigger an increase in the tariff applicable to the terminal. This may be accompanied by the signalling of congestion by the receiving terminal to the data source.

In an alternative and preferred approach, when congestion is detected within the network an explicit congestion signal may be generated and transmitted to the customer terminal, and the receipt of the explicit congestion signal at the customer

terminal may then trigger the increase in the tariff. This approach has the advantage that an appropriate congestion signal may be generated in advance of significant degradation in network performance occurring, making it easier to maintain a required quality of service. Preferably the explicit congestion signal is carried with a data packet on the communications network. Preferably a router in the network writes an explicit congestion signal in a packet when congestion is detected at the router.

As a further alternative, the congestion notification signal may be a source quench signal generated at the router and transmitted back to the data source.

Preferably there is a non-linear relationship between the increase in tariff and the detected network loading. Preferably the method includes making a first relatively smaller increase in the tariff when congestion is first detected, and making at least one further, relatively larger increase, if the congestion persists. This behaviour may be pre-programmed into the tariff algorithm. In this way oscillatory behaviour of the network can be avoided, while ensuring that a sufficient increase is made to have a desired impact on the demand for network resources.

Preferably the method includes programming a decision agent at the customer terminal with user-determined price criteria, and comparing a price calculated using the tariff with the said price criteria. For example, the decision agent might be programmed to proceed with data communications as long as a per-packet charge is zero or is less than a predetermined threshold. Then if congestion causes the charge to rise above that threshold, the data communication is interrupted and the decision agent modifies the operation of the customer terminal. For example the decision agent may slow down communications once the cost threshold is exceeded. The user may then choose to continue with the communication, or may elect to abandon the attempt to access data from a particular source. The decision agent may be programmed with rules which relate to an overall price for multiple simultaneous transmissions and which accord different weights to different respective applications.

Preferably the method includes distributing a tariff algorithm via the communications network to a plurality of terminals and calculating at each terminal using the tariff a charge for network usage by the terminal. In this case preferably the method includes steps, carried out by a network operator, of intermittently

sampling traffic between a customer terminal and the network, and as part of the sampling recording network loading affecting the customer terminal;

for the sampled traffic comparing a charge calculated by the customer terminal and an expected charge and detecting thereby any discrepancy.

The step of recording network loading may involve, for example, recording packet drops, or explicit congestion notification (ECN) bits or source quench messages.

The invention also encompasses a network operating by a method in accordance with the first aspect of the invention, and customer terminals, network routers and other network nodes for use in such a network.

DESCRIPTION OF DRAWINGS

Systems embodying the present invention will now be described in further detail, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a schematic showing a network embodying the invention;

Figures 2a and 2b are graphs showing tariff functions;

Figure 3 shows the format of a differential service byte;

Figure 4 is a schematic showing the component objects of a charging architecture for use with the network of Figure 1;

Figure 5 shows data passed between the accounting objects of Figure 4;

Figure 6 is a schematic showing protocol stacks on a customer terminal and in the network domain;

Figure 7 is a graph showing the variation of tariff with time;

Figures 8a to 8e are class diagrams for software implementing accounting and measurement objects;

Figure 9 is a diagram showing a graphic user interface (GUI) for use with the objects of figures 8a to 8e;

Figure 10 is a class diagram for software implementing tariff objects; and

Figure 11 is a diagram showing an alternative embodiment.

DESCRIPTION OF EXAMPLES

As shown in Figure 1, a communications network 1 includes a number of network sub-domains 2A-C. The network sub-domains may be under the control of different operators who may not trust each other. The network subdomains are interconnected by gateway routers 3, 4. In the present example the communications network is the Internet and supports both unicast and multicast Internet Protocol (IP) and associated protocols. A customer terminal 5 is connected via a public switched telephony network (PSTN) 6 and an access router 7 to a subdomain 2A. A single blocking test is applied to traffic at this point of access. The gateway routers 3,4, and access router 7 may be commercially available devices such as CISCO series 7500 routers and CISCO series AS5800 universal access server respectively. Other customer terminals are connected to the network, including a Java-enabled mobile terminal 8 and a data server 9. The customer terminal 5 may be connected via a LAN to an accounting server. The accounting server may include an accounting object as described below that receives measurement data from the customer terminal.

In addition to the local tariff variation mechanism that is described below, the network also uses network-based control of a number of tariff bands. A network management platform 10 is connected to each subdomain. Each network management platform may comprise, for example, a computing system comprising a SPARC workstation running UNIX (Solaris) together with network management applications. The network management platform 10 hosts management entities and tariff entities. The network management platform communicates with agents 100 in managed devices connected to the respective subdomain, for example using SNMP (simple network management protocol). The management platforms monitors the overall loading of network resources in the respective subdomains, and, as will be further described below, adjust the tariffs for network use accordingly. The Net management platform (NMP) instructs the agent to monitor the device and report aggregated results at regular intervals back to the NMP, so the NMP can monitor the combination of all reports.

Tariff data is communicated to peer tariff entities in other subdomains and also to the customer terminals. The tariff data is multicast using, for example Distance Vector Multicast Routing Protocol (DVMRP) or Protocol Independent Multicast (PIM) dense mode. The tariff data channels are announced and monitored

using protocols based on SDP (Session Description Protocol), SAP (Session Announcement Protocol) Charging is carried out on a "pay and display" model. Each customer terminal monitors its own network usage, for example by counting the number of packets it sends or receives across the network interface and the quantity of data (in bytes) in those packets. It calculates, using a tariff received via the network, the payment due to the network operator, and makes a corresponding payment into an account at the network operator. The network operator polices the use made by customers of the terminal by intermittently sampling traffic to or from a particular customer and comparing the use made and the use paid for.

The tariffs supplied to the customer terminals are divided into bands of different volatilities. The tariffs are varied under the control of the network operators to reflect the overall loading of the network. That is to say, if network loading becomes high, then the tariffs may be increased to reflect the scarcity of network resources.

A service provider may offer different products defined by different service level agreements, and/or by different price volatilities. For example product A might offer best-effort service at a fixed price while another product B might offer best-effort service at a variable price. A service provider may adjust product prices on the basis of the following parameters: the price the service provider pays to its wholesale provider: competitors' prices; current resource utilisation; relevant demand for different products. In response to changes in these parameters, tariff adjustments may be effected in one of three ways. Firstly, a tariff may adjust prices on the basis of local observations of network loading, without necessitating explicit communication from the provider. This approach, which is described in further detail below, needs to be built into the tariff at the outset, and is limited to those price variations which are dependent exclusively on local observations. Secondly, the provider may tune a tariff by adjusting some of its parameters. This kind of adjustment is required when the decision is dependent on parameters which cannot be observed directly by the customer, e.g., variation in the wholesale price of network resources. Thirdly, the provider may completely replace a tariff. This is required when the existing tariff cannot accommodate the changes that are required.

The first of the tariff changes described above is necessarily carried out automatically. The second type of change may be performed manually, or by an

agent that issues adjustments automatically in response to observations made by the service provider system. The third type of change is likely to be performed manually, as replacement of a new tariff will in general require an element of design requiring human input. However, it is possible that an agent might be employed to automatically switch tariffs for a product on the basis of a set of specified rules.

This section describes a prototype that we implemented to demonstrate the tariff subsystem outlined above. Features of the design include:

* using mobile code to represent tariffs and associated user interface components;
* use of a repeated multicast announcement protocol to communicate tariffs and tariff adjustments efficiently;
* using dynamic class loading and reflection in order to receive and tune tariffs.

The prototype consists of a library of general-purpose Java classes and two specific applications, namely:

* a provider system which allows the provider to introduce, replace, and tune tariffs for a number of products;
* a customer system that enables customer to keep track of the charges being applied for the products they are using.

The provider system services multiple instances of the customer system running on different hosts in a multicast-enabled network. A multicast announcement protocol is used to communicate tariff changes from the provider system to customer systems.

In order to maximise flexibility with respect to the definition of tariffs, we chose to represent tariffs using Java classes. This technique is also used to supply user interface components to customers to support visualisation of the behaviour of a tariff.

The `Tariff` interface acts as the base class for all tariffs. This defines a single operation `getGUI()` which returns as a Java SWING component that can be incorporated into the customer's GUI (graphical user interface). This GUI component enables the customer to visualise the behaviour of the tariff using techniques appropriate to the tariff.

Subclasses of the `Tarrif` interface establish a set of tariff types, each of which is associated with a different set of measurement and input parameters. These parameters are identified by listing them in the signature of the `getCharge()` method. For example, the interface `RSVPTariff` defines `getCharge()` as

receiving n RSVP TSPEC, allowing for the definition of tariffs that compute price on the basis of the characteristics of an RSVP reservation. On the other hand, the interface PacketCountTariff defines getCharge () as receiving measurements of packets in, packets out, and current congestion (typically measured as a function of packet drop), allowing for the definition of tariffs that are dependent on packet counts and sensitive to congestion. Other tariffs may be added as new forms of usage-measurement emerge.

Tariffs are defined by providing implementations of the various tariff interfaces described above. For example, the tariff PacketCountLinear implements PacketCountTariff to compute charges in proportion to packet counts. Another tariff CongestionSensitiveLinear works on a similar basis, but adds a penalty charge if the customer does not stay within a specified traffic limit in the presence of congestion.

In addition to the tariff interface implementation, a tariff may make use of other 'helper' classes to assist in its operation, as well as one or more user interface component classes for customer visualisation purposes. A provider-side user interface may also be required in order to enable the provider to make tariff adjustments.

A complete tariff description consists of a set of Java classes, some of which are destined for the customer system and others which are intended for use by the provider system. The customer-side classes are bundled into a Java archive (JAR) file to facilitate processing by the provider system.

In order to deploy a new tariff, the provider system first loads the tariff classes which it requires into its execution environment. It then loads the customer-side bundle, serialises it, signs it with a private key, and uses an announcement protocol to distribute it to customer systems. The use of a signature makes it possible for customers to verify that received tariffs are authentic.

Upon receiving the bundle, each customer system verifies the signature (using the public key matching the provider's private key), and at the activation time specified in the announcement protocol headers which may be significantly later, e.g. hours or days, unpacks the bundle, and loads the classes into its execution environment using a purpose-built dynamic class loader. An instance of the received tariff class is created and installed in place of the previous tariff. If the tariff has a

user interface component (obtained by calling the tariff object's `getGUI ()` method), then it replaces the user interface of the previous tariff. The change in user interface serves to notify the user that the tariff has changed.

Tariff adjustment involves the remote invocation of an operation which is specific to the tariff currently in force. This means that a customer system cannot know the signature of this operation in advance of receiving the tariff i.e. the operation will not be listed in any of the tariff interfaces known to the customer system.

In order to get around this problem, use is made of the "reflection" feature supported by Java. In order to disseminate a tariff adjustment, the provider creates an instance of an `Invocation` object, which stores the name of the operation to be called, together with the parameters that are to be supplied to it. This object is then serialised, signed, and announced using the announcement protocol. When an adjustment is receive and verified by a customer system, the `Invocation` object is de-serialised and applied to the current tariff by using reflection to invoke the described operation.

In order to simplify the announcement protocol, adjustments are required to be idempotent and complete. Idempotency guarantees that a tariff will not be adversely affected if an adjustment is applied more than once. Completeness implies that an adjustment determines the entire parameter set of a tariff object, so that an adjustment completely removed the effects of any previously applied adjustments.

The customer system may apply a tariff by repeatedly invoking the `getCharge()` operation supported by that tariff every second, and adding the returned value to the cumulative charge. The parameters supplied to `getCharge ()` depend on the kind of tariff currently in force. For example, if the tariff is an implementation of `PacketCountTariff`, then measurements of inbound packets, outbound packets and congestion over the past second are required. However, if the tariff is an implementation of `RsvpTariff`, then only a `TSPEC` describing the current reservation is required. This implies that a customer system can only subscribe to a product if it can supply the parameters require by the tariff associated with hat product.

Each invocation of the `getCharge ()` method also results in an update to the tariff-specific user interface. For example, in the `CongestionSensitiveLinear` tariff, the usage parameters supplied to `getCharge ()` are used to update the graphical displays of traffic and congestion.

The announcement protocol is used to communicate serialised tariffs and adjustments from a provider system to multiple customer systems. The number of customer systems is assumed to be large, and a repeated multicast solution is adopted.

Each product supported by a provider is assigned a multicast channel for announcement purposes. Customer systems listen to the channels corresponding to the products that they are using. In the current implementation, it is assumed that each customer system has knowledge of well-known multicast addresses for the products it is interested in.

For each product channel, the provider repeatedly announces the current tariff and the most recent adjustment made to it (if any). Each announcement carries a version number, which is incremented each time the announcement is changed. Customer systems only process announcements when a version number change is detected. If a new customer joins a channel, it waits until it receives a tariff before processing any adjustment announcements. Furthermore, an adjustment is only applied if its announcement version is greater than that of the current tariff, thereby ensuring that a missed tariff announcement does not result in the application of a subsequent adjustment to an old tariff.

While centralised monitoring and control of tariffs by the network management platform is effective to respond to global changes in the loading of the network, it is difficult to handle localised congestion in this way. It is difficult to cause a price rise signal to be multicast in such a way that the signal is only received by those attempting to communicate packets through the point of congestion. This would require a separate multicast transmission for each element in the Internet , e.g. a multicast for every different queue on every interface of every router. Alternatively some aggregation of price rises triggered by local resource loading might be used. This however would mean that price rise signals were sent to users who were not making use of the congested resource. This in turn would make it necessary for the

price rise signal to be damped, reducing the ability of the price rise to reduce the demand on the congested resource.

To overcome these difficulties, the tariff algorithms installed on the customer terminals are arranged to respond automatically to congestion in a network resource being used by the terminal. Each algorithm includes a function which varies the price for network usage in dependence upon the detected congestion level. This function may be integrated in the main tariff algorithm, or, as in the example described here may be a separate algorithm used to calculate a premium to be added to a price calculated in accordance with the main tariff algorithm.

The main tariff algorithm calculates a price P as a function of a number of quality parameters, Q_1, Q_2, Q_3 where, for example, Q_1 is a specified latency for packets communicated across the interface between the customer terminal and the network, Q_2 is the reserved bandwidth for the transmission, Q_3 is a specified level of reliability corresponding to a maximum permissible level of packet loss.

The price P is then given by:

$$P = f(Q_1, Q_2, Q_3, \ldots\ldots)$$

An example of the pricing function in terms of one of the quality parameters Q is shown schematically in Figure 2a.

The congestion tariff algorithm calculates a premium ΔP which is a function of one or more congestion parameters C:

$$\Delta P = f(C_1, C_2 \ldots)$$

The congestion parameters provide a measure of the loading of the resources which a customer terminal is making use of at any given time. In the present example the ratio of packets lost to packets received is used as the congestion parameter. This parameter is readily calculated, for example in the case of packets using TCP (transport control protocol), or RTP (real time protocol) over UDP (user datagram protocol), since such packets include a sequence number. Figure 2b shows one example of the function for generating the premium. In this case, the premium increases as an approximately exponential function of the congestion, so that at low congestion levels a small premium is charged, while if congestion increases still further, then at higher levels of congestion the premium increases sharply.

In an alternative implementation, an explicit congestion signal is added by any congested router within the network to packets transmitted to the customer

terminal. Whether congestion is signalled explicitly or implicitly by packet drop, the price algorithm might not directly charge for congestion indication. Instead, it may charge if the customer terminal does not halve the congestion window in response to a congestion indication. Halving the congestion window halves the rate of transmission which is the standard response to congestion indication used in TCP and other compatible congestion control protocols. The change in transmission rate can be measured by the network provider as well as at the customer terminal, although this places a heavy load on router processing resources. If the provider is merely sampling certain customers to audit their own measurements, this results in an acceptable load.

Although only a single main tariff and premium are described here, in practice different subdomains, and different service providers associated with each subdomain, may each have a different pricing structure, with different main and premium tariffs. However, there is across all the subdomains a common relationship between network loading levels and congestion signalling.

The operation of this second implementation will now be described in the context of a network operating using a differentiated service as described in the Internet Engineering Task Force draft "Differentiated Services Operational Model and Definitions" and in the paper by David D Clark (MIT), "A Model for Cost Allocation and Pricing in the Internet", presented at MIT Workshop on Internet Economics, Mar 1995, URL:http://www.press.umich.edu/jep/works/ClarkModel.html. In a network implementing differentiated services, nodes are arranged to discriminate between packets to provide different levels of service. This capability might be used, for example, to accord delay-sensitive data, such as data generated by an IP telephony client, a higher priority compared to other data, such as email data. At the network edge, for example at a client terminal running the IP telephony client, bits in a TOS (type of service) octet contained within each packet header are set to indicate the appropriate service level. Those bits are used by routers within the network to determine how the relevant packets should be handled.

The TOS octet when used in this way is termed the DS (differential service) byte. The format of the differential service byte is shown in Figure 3. Bit zero, labelled "IN" indicates whether the packet is inside or outside a defined profile. Bits 1 to 5 labelled "PHB" define a "per-hop-behaviour" that is they indicate how, for

example, a router should handle the packet, e.g. by according it lower or higher priority. Bits 6 to 7, in this particular form of the DS byte, are used for explicit congestion notification (ECN). One of these bits is set to indicate whether the routers in the path of the packet are capable of setting the ECN field, and the other bit is used as a flag which is set (by ECN capable routers) when congestion, or loading which would potentially lead to congestion, occurs. Random Early Detection (RED) algorithms are currently implemented in routers. These algorithms measure average queue length within the packet buffers of a router. An exponential moving average is calculated. When that average queue length exceeds a predetermined threshold, then the router signals that congestion is occurring. Conventionally this signalling has been done simply by dropping a packet. However, in the context of an ECN scheme, the router, instead of dropping a packet, sets an ECN bit in a packet header to indicate that congestion is occurring. This is done probabilistically: that is, some only of the packets passing through the router are marked. The probability of a packet being marked increases with the average queue size. In the rare case that the queue increases to a length where the router buffers are full, then packets are dropped, rather than an ECN bit being set. In this case ECN bits are set for all the remaining packets.

In operation, if the client terminal 5 is accessing a data source on the server 9, congestion may occur, for example, at router 4 which links network sub-domains 2B and 2C. RED-like algorithms in the router 4 detect that the queue lengths in the router buffers, as calculated using the exponential moving average, exceed a predetermined threshold. Accordingly some of the packets from the server 9 en route to the client terminal have the ECN bit of the DS byte set by the router 9 to mark the fact that congestion is occurring. At the client terminal, the DS byte in the headers of incoming packets is read. A moving average of the number of packets containing an ECN bit which is marked is calculated. This average then provides the congestion parameter C_i which is used to calculate the premium:

$$\Delta P = f(C_i).$$

The total price to the user P_{TOT} is then calculated by adding together the prices determined by main tariff algorithm and by the premium algorithm:

$$P_{TOT} = P + \Delta P.$$

This total price is passed to a cost decision agent running on the client terminal. This cost decision agent is programmed with user defined rules. These might state, for example, that the cost decision agent should authorise the system to proceed with a connection as long as the total cost averaged over a certain time period falls below a predetermined threshold, e.g. of £0.01 per minute, and that the cost decision agent should suspend a connection and alert the user if the cost rises above that threshold. Alternatively, as previously noted, the cost decision agent may handle several applications simultaneously, and may be programmed to slow down one of the applications as the premium for using a data source accessed by that application increases.

For some customers in some circumstances, the variability of the tariff for network usage may pose problems. For example, a customer might wish to schedule a multicast audio-video conference with, say, twenty participants and with the customer intending to pay the network usage costs for all of the participants. The conference will be scheduled a day or more in advance, but since the tariff is variable over time, at the point when the conference is scheduled, the customer will not know the cost which will be incurred. The preferred implementation of the present invention overcomes this problem for the customer, and also provides an additional revenue source for the network operator. This is achieved by applying a further tariff which defines a premium for price stability for a given customer terminal, the value of the premium increasing as the required duration of the period of stability increases. In the example referred to above, the customer scheduling a conference one day in advance refers to the current tariff to determine the present cost of the network resources required, including any congestion premium currently applicable, and then refers to the further tariff to determine the premium for maintaining the cost at its present value for a period of one day. Then if the user decides to make use of the fixed tariff a message is sent from the user to the network operator. The message identifies the data flows in question, for example by specifying the IP addresses and the service levels for the audio and video data flows between the participants, together with the current time at which the user is contracting for a fixed period, and the required duration of the fixed period and also an identifying code for the message. Alternatively, the message with these details may be tracked with an appropriate cryptographic function (e.g. MD5), and the hash value only communicated initially to

the provider, and subsequently used to verify account data. Subsequently, for the duration of the specified period, in this case one day, the user applies the fixed tariff. In systems where the users themselves are responsible for generating accounting data and calculating the applicable charge for network usage, then the user calculates the charge using the fixed tariff and returns the accounting data to the network operator together with the identifying code for the fixed tariff contract.

This aspect of the invention is not only applicable to systems where tariff variation is carried out locally in response to the detection of congestion, but may also be used in systems where, for example, the only variation is imposed by the network operator.

The tariff for the stability premium may be distributed by multicasting from tariff entities in network operator platforms to the customer terminals in the same manner as described previously for the other tariffs discussed above. As with those other tariffs, different tariffs and optionally different periods of stability might apply to different service levels. In a scenario such as that discussed in the preceding paragraph, then different service levels might be used for different elements of the audio and video data streams required for the multicast conference.

Figure 2c shows a possible for the stability premium tariff. This tariff may be embodied in a Java function multicast to the users. Curve C is communicated to the customer terminal as another subsidiary algorithm that contributes to the main tariff algorithm. The customer may choose a period of price stability and calculate the premium above the spot price that his will require using curve C. Curve B is an example of the stable price chosen in a particular case. Once the period of stability expires a new one can be bought at the premium over the spot price at that time. To buy a period of price stability, the customer must announce the period required and the range of addresses for which it applies to her provider. It may be required for one address (e.g. for the duration of an Internet phone call to a single person) or for a range of addresses (e.g. for a video conference). Certain risk-averse customers might request stable pricing for all addresses all the time.

For ease of description, the preceding sections have treated in isolation the local variations in tariff in response to congestion. In practice, this mechanism will in general be combined with other responses to congestion, and with other sources of variation in the tariff. Also, a decision to proceed with a transmission despite

congestion will in general require the consent of parties at both ends of the transmission. Considering the entire system of the data source, network and routers and the data receiver, the implementation of an increase in tariff (also termed here a "fine") in response to locally detected congestion occurs as a last resort. Other responses are implemented first, in the following numerical order:

1.the network re-routes around congestion

2.the network borrows capacity from lower levels of service (lower in the context of the relevant dimension(s) of QoS) including the best effort service

3.the network introduces extra capacity (possibly automatically)

4.the end-system establishes that the congestion is on the shared network and not just on the access links or end systems

5.the end-system sets QoS requirements to a "higher" level (if cheaper than the fine for ignoring congestion at the current level)

6.the end-system decides it is essential to ignore the congestion, given the fine for doing

so might be quite high

7.both (all) end-systems agree to ignore the congestion.

Typically, it is at step 4 that an ECN signal is generated. Steps 1 to 3 precede the generation of this signal and steps 5 to 7 follow the generation of the ECN signal.

The last step prior to proceeding with a connection and paying the premium for doing so is establishing agreement by both parties. Accordingly, when the customer terminal detects congestion, either through receiving explicit congestion notification, or through detection of a relevant parameter such as packet loss, the customer terminal signals this fact back to the or each other end system. In the present example therefore, the client terminal 5 signals to the data server 9 that congestion is occurring. The data server is programmed with rules, which as at the customer may be implemented as an agent, which determine the response to such a signal. For example, the server may refuse service in these conditions. As described previously with respect to Figure 1, in the present example tariffs are multicast through the network from network operators to the customer terminals, and charging is carried out using a "pay and display" process. Figures 4a and 4b shows the objects used to implement the charging architecture in this case. Figure 4a

shows the higher level objects and 4b shows the component objects used in a software implementation of the architecture of Figure 4b. In Figure 4a, objects on the client terminal are shown in the half of the Figure labelled "customer" and objects on the access router 7 and the corresponding network sub-domain are shown in the half of the Figure labelled "edge network". The objects on the customer terminal include a session control object S, a customer business rules object B_c, a customer pricing object Pr_c, a QoS manager Q, a customer accounting object Act_c and a customer measurement object M_c. The business rules object B_c receives information on those aspects of the session which involve liability for payment and receives current pricing data from the pricing object Pr_c. The customer business object makes decisions, under the customer's policy control on which chargeable services are utilised, and how much of the chargeable services are utilised. These decisions are fed to the QoS manager Q, which decides which mechanisms are used to achieve the requirements. The QoS manager then controls the customer measurement object M_c to determine which aspects of traffic and service to measure and which aspects to ignore. The measurement object then records the selected aspects of the traffic, for example counting the number of packets received by the customer terminal and the QoS levels for those packets. These data together with the current tariffs, including any premium for congestion, are then used by the customer terminal to determine the charge payable to the network operator. The measurement object M_c is also programmed with instructions which determine the frequency with which it passes data to the customer accounting object Act_c. The customer accounting object Act_c passes payments to an accounting object Act_p in the network provider's domain.

The accounting objects on the customer terminal may be implemented using a small encrypted flat-file database. On the network provider's side, the equivalent objects may be implemented using a larger database that is scaleable to handle e.g., tens of thousands of customer accounts. An object request broker (ORB) is used for communication between the customer-side objects and the network-side objects, implemented using commercially available tools such as ORBIX (TradeMark) from Iona Technologies plc.

On the network provider's side, that is to say within the subdomain to which the customer terminal is connected, the customer's traffic is measured by a version of M_c denoted M_p, but only on a sampling basis determined by the policing function,

Po. That is to say, the network operator samples the customer's traffic only intermittently. Po controls where in the network measurements are made in order to capture all of any particular customer's traffic. A bulk measurement function, M_b, is responsible for reporting aggregate traffic levels, as reflected in the moving average of the router queue lengths, to the pricing object, Pr_p. Bulk measurements would typically be collected from across the provider's domain to a centralised pricing function (which would be replicated for reliability). Pr_p sets prices taking into account the business rules from the network provider's business object, B_p, as well as the current traffic levels reported by Mb and pricing from neighbouring providers (see below). The policing function, Po, compares sample measurements from M_b with accounting messages received at Act_p as a result of the customers own measurements . If it establishes that the accounts are insufficient it might restrict service at the access control gateway, Acs, or initiate some other punishment. Encapsulated within the accounting object another policing object checks the accounts match the payments within the contracted time for payment. Finally, the identity mapping function, I, provides a mapping between a customer's identity (account, digital signature, etc.) and their current network address (typically allocated by the ISP, whether unicast or multicast).

Figure 5 shows the data which are passed between the accounting objects. In this example the account data comprises: account identity; bill record identity; service type identifier; source address; destination address; tariff identity; time; period (i.e. the period covered by the bill record); units; cost; and currency. In addition, the payment data comprises the amount of money and the currency of payment.

Figure 6 shows the measurement region within protocol stacks on the customer terminal and in the network domain. Ideally there would be two measurement points within this region, one trusted by the customer and one trusted by the network, for example at the two points referenced (a) in the Figure. For ease of implementation, a single measurement point (b) trusted by both parties may be used. This might be implemented, for example within a secure module such as a cryptographic card on the client terminal. As an alternative, measurements may be made at different points with some possibility of discrepancies between measurements. On the network the practical measurement point is at the first

access device(s) that, for each customer, inspects network layer headers (c)(IP in this case). ISPs should not measure any deeper into their network (d) because their access network and systems will introduce delays and losses.

For an individual customer (e.g. on dial-up access), a practical point at which to measure would also be alongside the network layer but in their end-system's stack (e). Ideally these measurement points would be lower in each stack to be closer to the interface between the two parties and less likely to be affected by contention in the stack. However, measuring at the link layer (f-f) would be inappropriate because only some chargeable parameters set at the network layer will ever be reflected in link layer frames; network level multicast, end-end latency requirements etc. may never be visible at the link layer. Also, link layer headers would need to be ignored when measuring packet sizes for bandwidth calculations to avoid apparent discrepancies where different link technologies are chained together.

In the reception direction (up the stack) this choice of measurement points implies that the lower layers must be dimensioned (buffer sizes, interrupt and thread scheduling priorities) to cope with the most stringent QoS requirements of higher layers. As frames are taken off the physical media, the machine must be able to pass data up the stack without any chance that usage-charged data gets discarded (e.g. due to buffer overflow caused by interrupt contention) before it gets to the network layer. It is at the network layer where the ISP's service is to be measured and where it is most convenient for QoS requirements to control correct differential treatment of the various flows as they are passed further up the stack (on end-systems) or forwarded (on routers).

The measurement objects described above may be implemented using, with appropriate modifications, publicly available network metering software such as Nevil Brownlee's NeTraMet system. This is a software meter which conforms to the IETF internet accounting architecture described in RFC 2063 and RFC 2064. The meter builds up, using "packet sniffing", packet and byte counts for traffic flows, which are defined by their end-point addresses. Although generally, Addresses can be ethernet addresses, protocol addresses (IP, DECnet, EtherTalk, IPX or CLNS) or 'transport' addresses (IP port numbers, etc), or any combination of these, in the present implementation IP addresses only are used. The traffic flows to be observed are specified by a set of rules, which are downloaded to NeTraMet by a 'manager'

program. Traffic flow data is collected via SNMP (Simple Network Management Protocol) from a 'collector' program.

Figure 7 shows how the main tariff determined by the network operator varies in time. In the Figure, curve A is the spot price calculated to reflect the loading of the network at any instant. Curve B is one of a number of different tariff bands. Different tariff bands have different volatilities, and the customer pays a premium for bands offering greater stability. Tariffs are communicated to the customer terminals using a hierarchy of channels carried by the network. An initial contract between a customer and a service provider a single channel address that might typically hold new announcements distributed some months apart (e.g. for contract variations or for new services specifying which second level channel to listen to for tariffs or for downloading new code to handle new tariff structures). The second level channels might deliver updates hours apart which simply announce the addresses of third level channels for the most volatile information. These third level channels may carry updates at intervals of less than a second. Prices for many services may be carried on one channel. For greatest efficiency, this one channel may be split into several channels at times of highest volatility, and re-aggregated into a single channel in more stable periods.

Tables 1 to 7 below list Java source code used to implement two different tariffs. The code of table 1 establishes the operations used for communication between a customer system and a tariff algorithm downloaded by the customer system. Table 2 shows a linear tariff algorithm, in which the tariff depends on the total of the packets sent and packets received by the customer together with a congestion parameter. Table 3 shows the code for generating the customer display in this case. Table 4 shows the code used to display the tariff at the network operator's server. Table 5 shows an exponential tariff algorithm. Table 6 generates the customer display and Table 7 the operator display for the exponential tariff algorithm. By downloading Java code to generate the user interface, that interface can be tailored to the requirements of the particular tariff, and can be adapted as the tariff changes.

Although the examples so far described have been in the context of federated packet data networks, such as the Internet, many aspects of the invention can also be used with advantage in other types of network, such as in a circuit-

switched PSTN (public switched telephony network). Figure 11 shows an example of the invention applied in this context. In this network, customer terminals 81, which are in this example so-called intelligent phones, that is telephones incorporating a microprocessor and a data interface, are connected via local exchanges 82 and trunk exchanges 3 to the telephony networks. The trunk exchanges 83 are connected via a common channel SS7 (signalling system number 7) signalling network to a service control point 85 that is responsible for the execution of advanced call control functions. The service control point 85 is also connected to an operational support server 86 that is responsible for billing operations, and that, in this example, controls the setting of tariffs for the network. The OSS server and customer terminals include tariff entities (TE). The fixed PSTN network is also interconnected via a gateway 87 to a cellular GSM network 88. Base Stations BS in the cellular network communicate signals to intelligent mobile phones 89. In operation, network tariffs are distributed to customer terminals via the PSTN network and via the GSM network. Conveniently, the tariff may again take the form of Java functions which are executed on processors in the customer terminals. The Java functions may be streamed as Internet packets. In one implementation, these Internet packets may be distributed via the PSTN networks and GSM networks themselves. For example, the packets may be encapsulated and transported to the trunk exchanges using the MTP (message transport part) transport layer and may be communicated onwards to the customer terminals using out-of-band signalling. Alternatively, a separate data connection may be established between the OSS server and the customer terminals via the public internet. As in the examples above, the network operator monitors the loading of resources within the network and may transmit signals to the tariff entities in the customer terminals to change the tariff to reflect the scarceness or otherwise of relevant resources. Customer terminals may themselves monitor network loading and automatically generate variations in the tariffs. Usage of network resources may be measured locally by the customer terminals instead of conventional billing carried out within the network. The network operator may police the measurement of usage data by carrying out sampling, as described previously.

Table 1

```
// Generated by Together
package com.bt.jungle.lsma.charging.pricing;

import com.sun.java.swing.JComponent;

/**This establishes the operations used for
communication between the customer system
and the downloaded algorithm.
@author Mike Rizzo*/
public interface Tariff {
Jcomponenet getGUI( );
Float getPrice (int pkin, int pkout, int cng);
```

Table 2

```
package algorithms.linear;

import com.sun.java.swing.JComponent;
import com.sun.java.swing.JTextField;

import com.bt.jungle.isma.charging.pricing.Tariff ;

public class LinearAlgorithm implements Tariff {
        private float rate;
        private LinearAlgorithmDisplay display;
        public LinearAlgorithm ( ) {
                display = new LinearAlgorithmDisplay ( );
                setRate (new Float(1));
        }
        public float getPrice (int pkin, int pkout, int cng) {
                return (pkin + pkout + cng) * rate;
        }
        public JComponent getGUI( ) { return display; }
        public void setRate (Float f) {
                rate = f.floatValue( ) ;
                display.setRate (rate) ;
        }
}
```

Table 3

```
// Generated by Together

package algorithms.linear;

import com.sun.java.swing.JPanel;
import com.sun.java.swing.JTextField;
import com.sun.java.swing.Box;
import com.sun.java.swing.JLabel;

public class LinearAlgorithmDisplay extends Jpanel {
        private JTextField tfRate = new JTextField (4);
        public LinearAlgorithmDisplay ( ) {

                Box vbox = Box.createVerticalBox ( ) ;

                Box hbox = Box.createHorizontalBox ( ) ;
                hbox.add (Box.createHorizontalGlue ( )) ;
                hbox.add (new Jlabel ("Rate:"));
                hbox.add (Box.createHorizontalGlue( ));
                hbox.add (tfRate);
                tfRate.setEditable (false);
                hbox.add (Box.createHorizontalGlue( ))
                vbox.add (hbox);

                add (vbox());
        }
        public void setRate (float f) {
                tfRate.setText (String.valueOf (f));
        }
        }
```

Table 4

```
// Generated by Together
package algorithms.linear;

import com.sun.java.swing.*;
import java.awt.event.*;

import com.bt.jungle.isma.charging.pricing.provider.*;
import com.bt.jungle.util.*;

public class LinearAlgorithmGUI extends Jpanel {
        private JTextField tfRate - new JTextField ( );
        private TuningMessageListener tuningMessageListener;
        private final static String DEFAULT_RATE = "1.0";
        public LinearAlgorithmGUI (TuningMessageListener tml) {
                tuningMessageListener = tml;
                tfRate.setText (DEFAULT_RATE);

        Box vbox = Box.createVerticalBox( );

        Box hbox = Box.createHorizontalBox ( );
        hbox.add (new Jlabel ("Rate:"));
        hbox.add (Box.createHorizontalGlue( ));
        hbox.add (tfRate);
        hbox.add (Box.createHorizontalGlue( ));
        hbox.add (hbox);

        JButton bTransmit = new JButton ("Transmit");
        bTransmit.addActionListener (
                new ActionListener ( ) {
                        public void actionPerformed (ActionEvent e) {
                                transmit ( ) ;
                        }
                }
        );
        hbox = Box.createHorizontalBox( );
        hbox.add. (Box.createHorizontalGlue( ));
        hbox.add (bTransmit);
        hbox.add (Box.createHorizontalGlue( ));
        vbox.add (hbox);

        add (vbox);
}
void transmit ( ) {
        try {
                Float f = new Float (tfRate.getText( ));
                Object  args [ ] = new Object [1];
                Args [0] = f;
                TuningMessageListener.notify(
```

```
                    new Invocation ("SetRate", args)
                );
            }
            catch (Exception e) {
                e.printStackTrace ( );
            }
        }
    }
```

Table 5

```
package algorithms.exp;

import com.sun.java.swing.JComponent;
import com.sun.java.swing.JTextField;

import com.sun.java.lsma.charging.pricing.Tariff;

public class ExpAlgorithm implements tariff {
        private float min;
        private float base;
        private float divisor;
        private ExpAlgorithmDisplay display( );
        public ExpAlgorithm( ) {
                display = new ExpAlgorithmDisplay ( );
                setMin (new Float (1));
                setBase (new Float (2));
                setDivisor (new Float (10));
        }
        public float getPrice (int pkin, int pkout, int cng) {
                return min + (float)math.pow (base,(pkin+pkout+cng)/divisor);
        }
        public JComponent getGUI( ) {return display; }
        public void setMin (Float f) {
                min = f.floatValue( );
                display.setMin(min);
        }
        public void setBase (Float f) {
                base = f.floatValue( );
                display.setBase(base);
        }
        public void set Divisor (Float f) {
                base = f.floatValue( );
                display.setBase (divisor);
        }
}
```

Table 6

```
// Generated by Together

package algorithms.exp;

import java.awt.GridLayout;
import com.sun.java.swing JPanel;
import com.sun.java.swing.JTextField;
import com.sun.java.swing.Box;
import com.sun.java.swing.JLabel;

public class ExpAlgorithmDisplay extends Jpanel {
        private JLabel tfDisplay = new JLabel ( );
        private float min, base, div;

        public ExpAlgorithmDisplay ( ) {

                add (tfDisplay);
        //              tfDisplay.setEditable (false);
                updateDisplay ( );
        }
        private void updateDisplay ( ) {
                tfDisplay.setText ("price = " + min + " + " + base +
"^((pkin+pkout+cng)/" + div +")");
        }
        public void setMin (float f) {
                min = f;
                updateDisplay ( );
        }
        public void setBase (float f) {
                base = f;
                updateDisplay ( );

        public void setDivisor (float f) {
                div = f;
                updateDisplay ( );
        }
}
```

Table 7

```
// Generated by Together

package algorithms.exp;

import java.awt.GridLayout;
import com.sun.java.swing.*;
import java.awt.event.*;

import com.bt.jungle.isma.charging.pricing.provider.*;
import com.bt.jungle.util.*;

public class ExpAlgorithmGUI extends Jpanel {
        private JTextField tfMin = new JTextField ( );
        private JTextField tfBase = new JtextFfield ( );
        private JTextField tfDivisor = new JTextField ( );

        private TuningMessageListener tuningMessageListener;
        private final static String DEFAULT_MIN = "1.0";
        private final static String DEFAULT_BASE = "2.0";
        private final static String DEFAULT_DIV = "10.0";

        public ExpAlgorithmGUI (TuningMessageListener tml) {
                tuningMessageListener = tml;
                tfMin.setText (DEFAULT_MIN);
                tfBase.setText (DEFAULT_BASE);
                tfDivisor.setText (DEFAULT_DIV);

                Box vbox = Box.createVerticalBox ( );

                vbox.add (new JLabel ("price = min + pow (base,
(pkin + pkout + cng)/divisor)"));

                vbox.add (Box.createVerticalGlue ( ));

                Jpanel panel = new JPanel (new GridLayout (3,2));
                panel.add (new JLabel ("Minimum"));
                panel.add (tfMin);
                tfMin.addActionListener (
                        new ActionListener ( ) {
                                public void actionPerformed (ActionEvent e) {
                                        transmit ("setMin", tfMin);
                                }
                        }
                );
                panel.add (new JLabel ("Base"));
                panel.add (tfBase)
                tfBase.addActionListener (
                        new ActionListener ( ) {
```

```
                        public void actionPerformed (ActionEvent e) {
                        transmit ("setBase", tfBase);
                    }
                }
            };
            panel.add (new JLabel ("Divisor"));
            panel.add (tfDivisor);
            tfDivisor.addActionListener (
                new ActionListner ( ) {
                    public void actionPerformed (ActionEvent e) {
                        transmit ("setDivisor", tfDivisor);
                    }
                }
            );
            vbox.add (panel);

            add (vbox)
        }
        void transmit (String m, JTextField tf) {
            try {
                Float f = new Float (tf.getText ( ));
                Object args [ ] = new Object [1];
                args [0] = f;
                tuningMessageListener.notify(
                    new Invocation (m, args)
                );
            }
            catch (Exception e) {
            e.printStackTrace ( );
            }
        }
    }
```

CLAIMS

1. A method of operating a communications network, including automatically varying, depending on network loading as detected at a customer terminal, a tariff for network usage by the customer terminal.

2. A method according to claim 1, including detecting at the customer terminal a network performance parameter which depends on network loading, and varying the tariff depending on the network performance parameter.

3 A method according to claim 2, in which the network is a packet network and the network performance parameter is the number of packets lost in transmission between a data source and the customer terminal.

4. A method according to claim 1, including detecting a congestion signal at the customer terminal and varying the tariff in response to the congestion signal.

5. A method according to claim 4, including reading a congestion signal at the customer terminal from a data packet received at the customer terminal.

6. A method according to claim 4 or 5, including generating a congestion signal at a router in the network in response to the detection of congestion at the router.

7. A method according to any one of the preceding claims, including making a first relatively smaller increase in the tariff when congestion is first detected, and making at least one further, relatively larger increase, if the congestion persists.

8. A method according to any one of the preceding claims, including programming a decision agent at the customer terminal with user-determined price criteria, and comparing a price calculated using the tariff with the said price criteria.

9. A method according to any one of the preceding claims, including distributing a tariff algorithm via the communications network to a plurality of terminals and

calculating at each terminal, using the tariff, a charge for network usage by the terminal.

10. A method according to claim 9, further comprising steps, carried out by the network operator, of:

intermittently sampling traffic between a customer terminal and the network, and as part of the sampling recording network loading affecting the customer terminal; and

for the sampled traffic comparing a charge calculated by the customer terminal and an expected charge and detecting thereby any discrepancy.

11. A method according to any one of the preceding claims, in which when the customer terminal detects congestion in data transmitted to the customer terminal from a data source via the network, the customer terminal returns a congestion notification signal to the data source.

12. A method according to any one of the preceding claims, including at a customer terminal, selecting a period of time for which the tariff is to be fixed and paying a premium depending on the duration of the said period.

13. A method of operating a communications network including applying to customer terminals a tariff for network usage, varying the tariff with time; at a customer terminal, selecting a period of time for which the tariff is to be fixed; and paying a premium depending on the duration of the said period.

14. A communications network including :

means for detecting network loading locally at a customer terminal; and

means responsive to the said means for detecting arranged automatically to vary a tariff for network usage by the customer terminal.

15. A customer terminal for use in a communications network, the customer terminal including:

means for detecting loading of a network to which, in use, the customer terminal is connected;

means responsive to the said means for detecting and arranged automatically to vary a tariff for network usage by the customer terminal.

14. A customer terminal for use in a communications network, the customer terminal including one or more processors arranged to carry out the following steps in sequence:

detecting loading of resources in a network to which the customer terminal is connected; and

automatically varying in dependence on the detected loading a tariff for network usage by the customer terminal.

15. A method according to any one of claims 1 to 13, in which the tariff is varied only if the terminal fails to reduce its output in response to detected congestion.

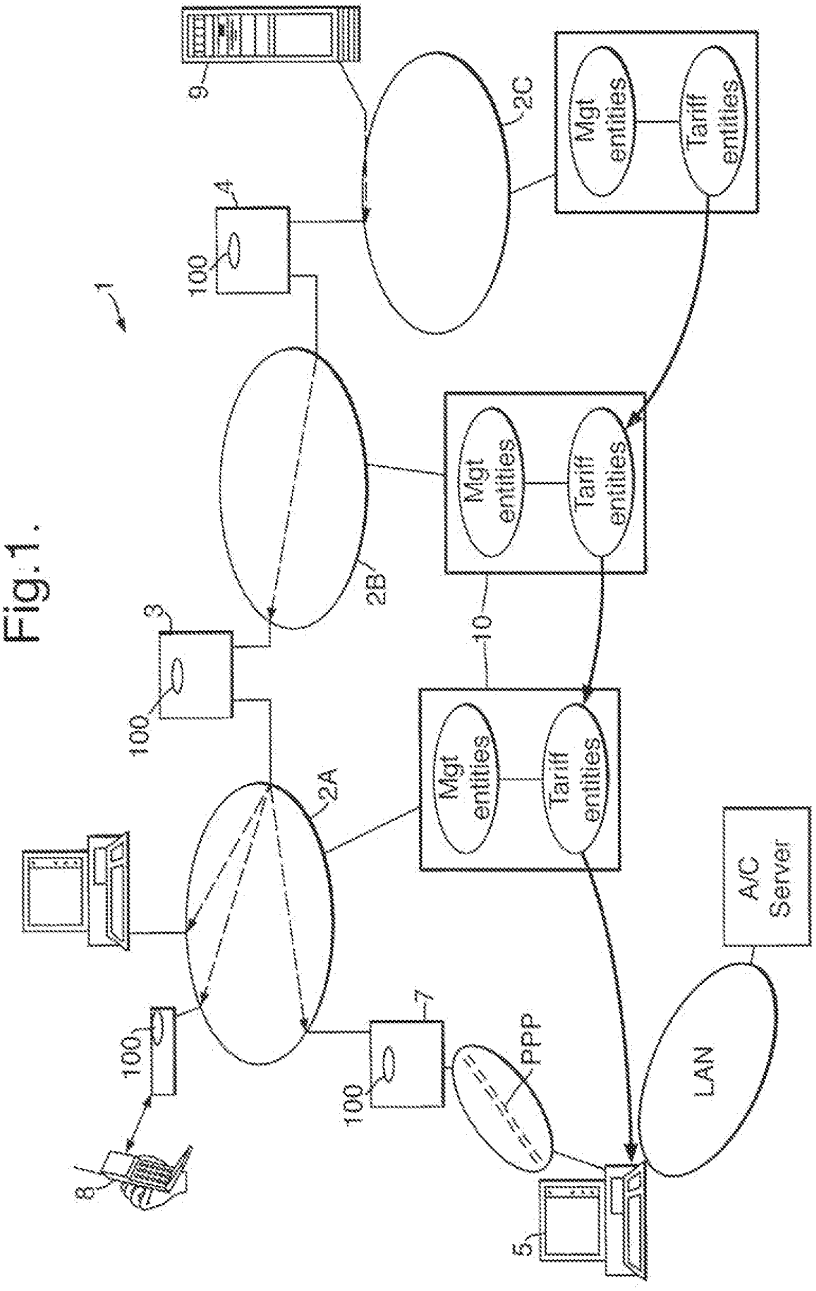

1
2A
2B
2C
3
4
5
6
7
8
9
10
100
Mgt entities
Tariff entities
A/C Server
LAN
PPP

Fig.1.

Fig.2a.

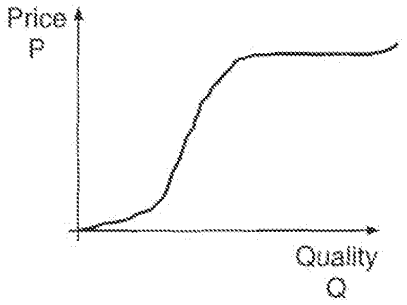


Fig.2b.

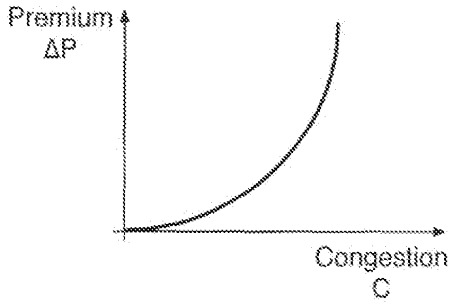


Fig.3.

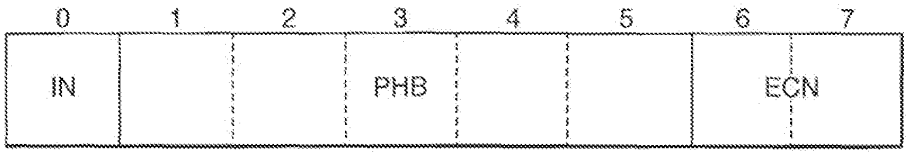


Fig.2c.

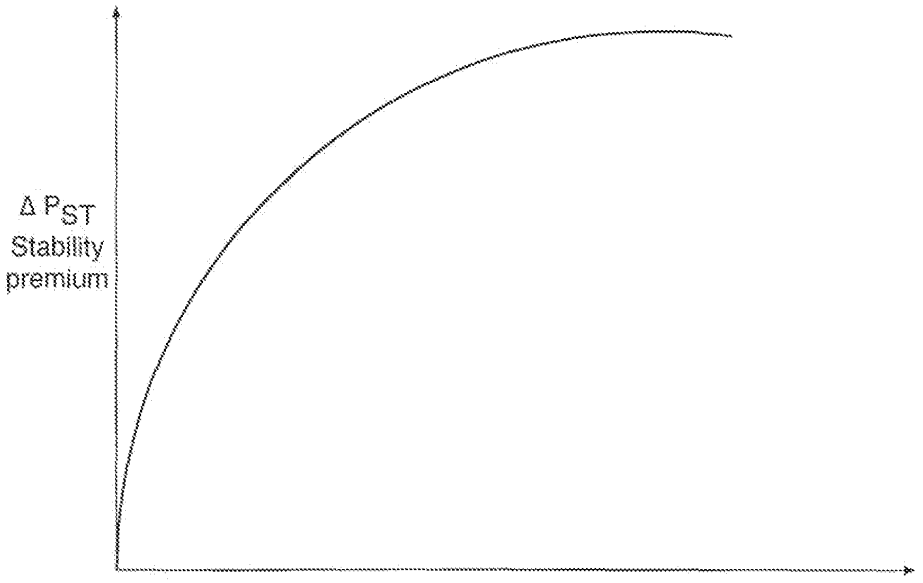


Fig.4a.

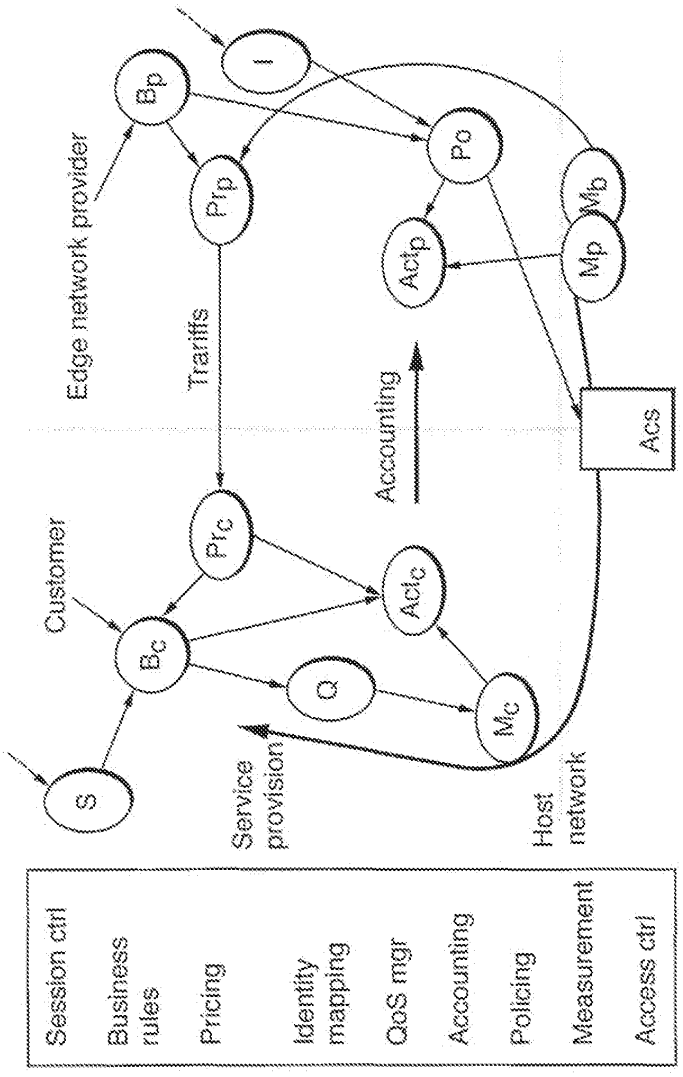

Session ctrl
Business rules
Pricing
Identity mapping
QoS mgr
Accounting
Policing
Measurement
Access ctrl
Customer
Edge network provider
Host network
Service provision
Tariffs
Accounting
S
Bc
Q
Mc
Prc
Achc
Bp
Prp
I
Po
Achp
Mp
Mb
Acs

Fig.4b.

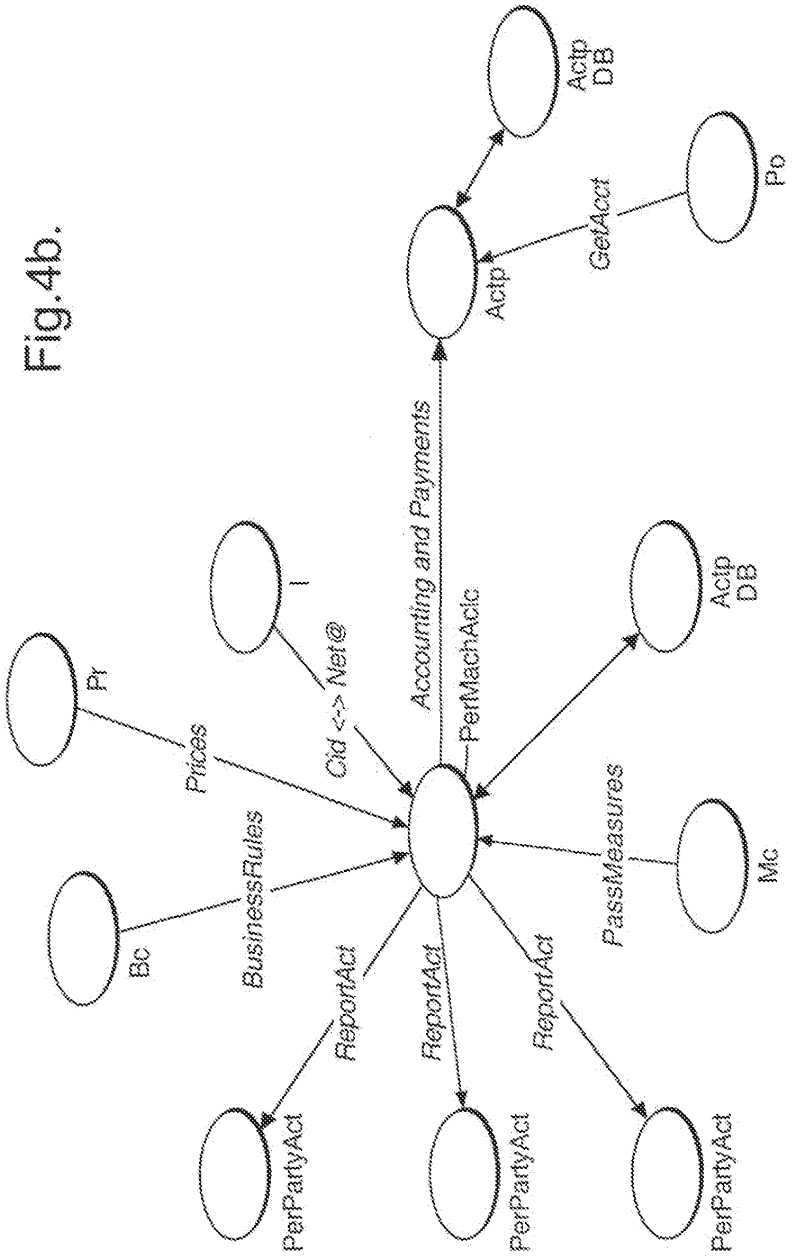

Actp DB
Po
GetAcct
Actp
Accounting and Payments
I
Pr
Prices
Old <-> Net@
PerMachAcIc
Actp DB
Bc
BusinessRules
PassMeasures
Mc
ReportAct
ReportAct
ReportAct
PerPartyAct
PerPartyAct
PerPartyAct

Fig.5a.

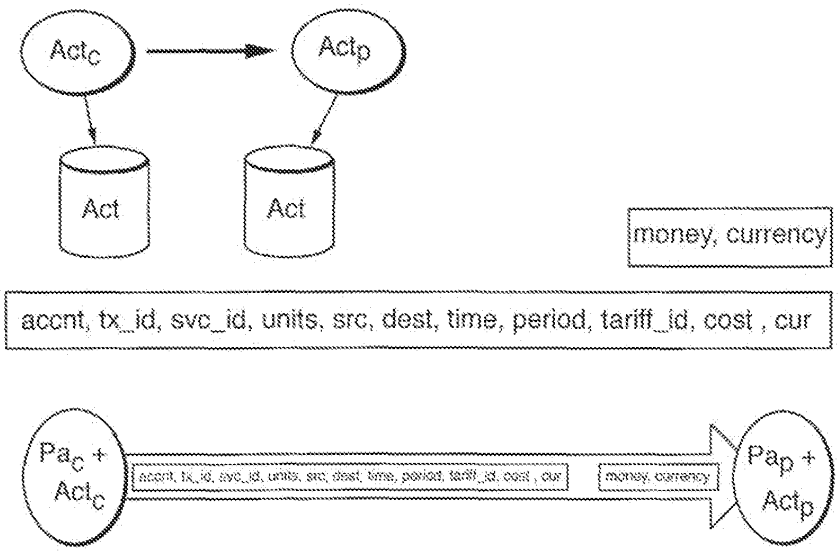

Act$_C$
Act$_P$
Act
Act
money, currency
accnt, tx_id, svc_id, units, src, dest, time, period, tariff_id, cost , cur
Pa$_C$ + Act$_C$
accnt, tx_id, svc_id, units, src, dest, time, period, tariff_id, cost , cur
money, currency
Pa$_P$ + Act$_P$

Fig.5b.

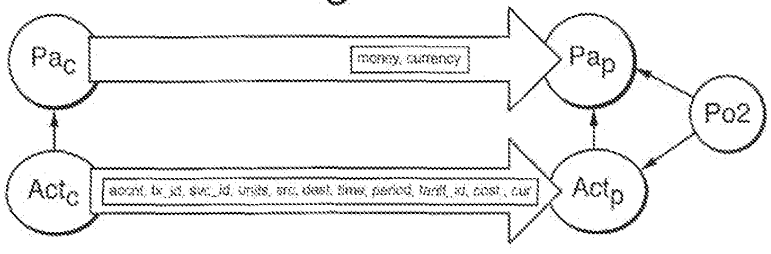

Pa$_C$
money, currency
Pa$_P$
Po2
Act$_C$
accnt, tx_id, svc_id, units, src, dest, time, period, tariff_id, cost , cur
Act$_P$

Fig.6.

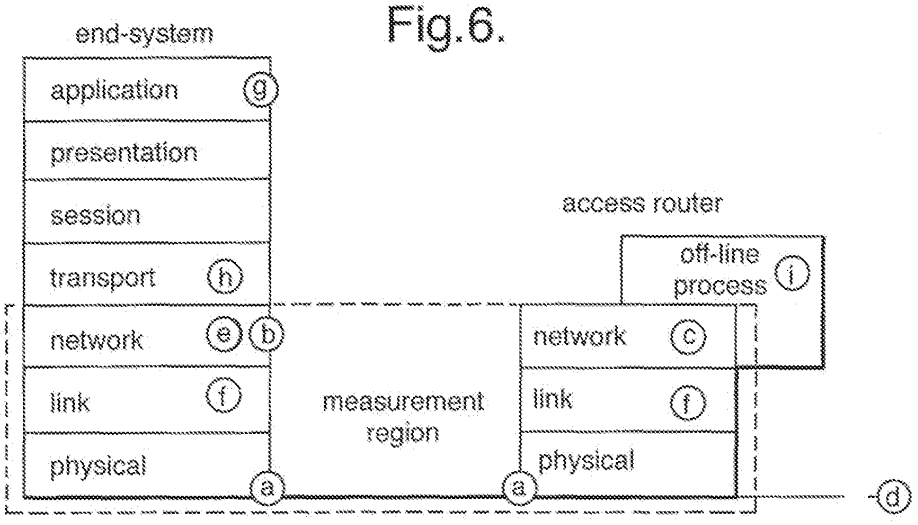

end-system
application
g
presentation
session
transport
h
network
e
b
link
f
physical
a
measurement region
access router
off-line process
i
network
c
link
f
physical
a
d

Fig.7.

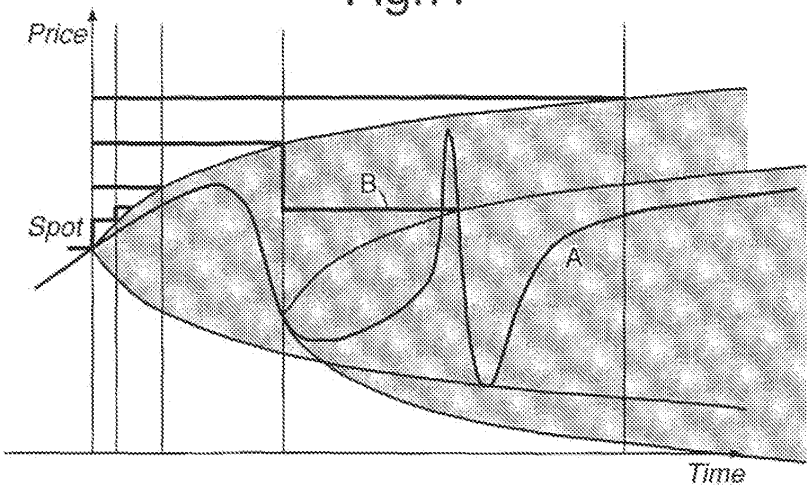

Price
Spot
B
A
Time

Fig.8a.

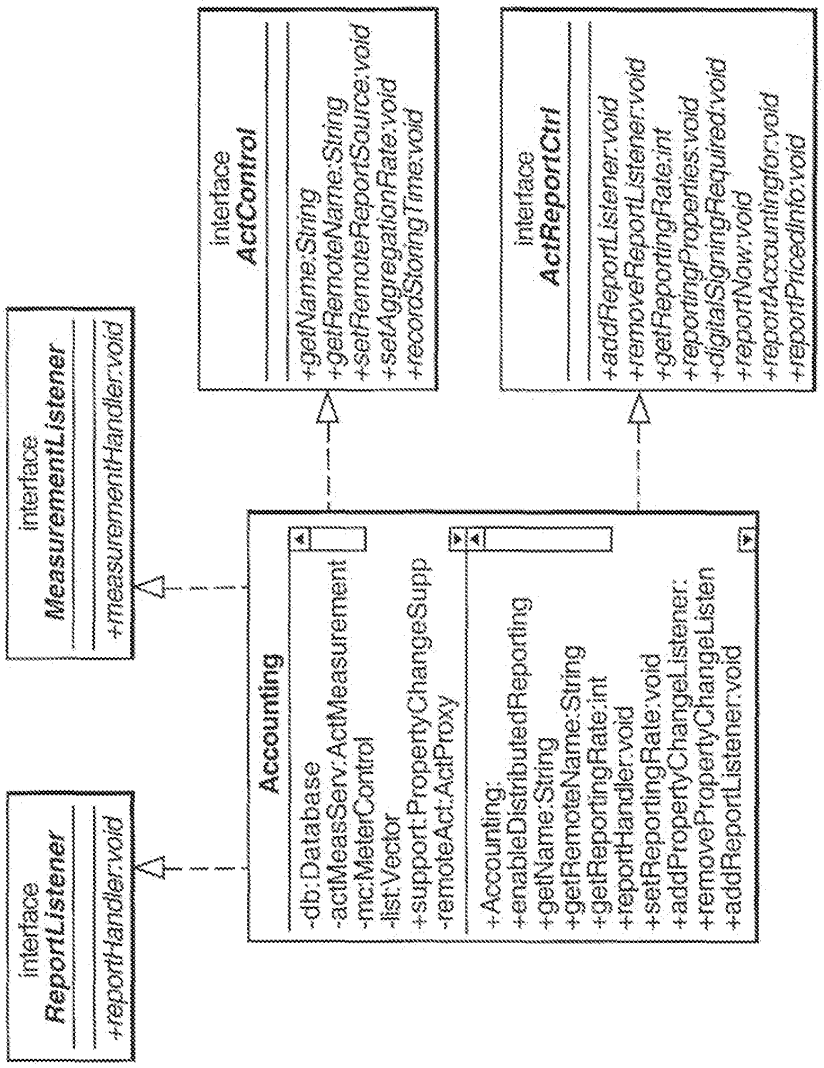

interface
ReportListener
+reportHandler:void
interface
MeasurementListener
+measurementHandler:void
interface
ActControl
+getName:String
+getRemoteName:String
+setRemoteReportSource:void
+setAggregationRate:void
+recordStoringTime:void
interface
ActReportCtrl
+addReportListener:void
+removeReportListener:void
+getReportingRate:int
+reportingProperties:void
+digitalSigningRequired:void
+reportNow:void
+reportAccountingFor:void
+reportPricedInfo:void
Accounting
-db:Database
-actMeasServ:ActMeasurement
-mc:MeterControl
-list:Vector
+support:PropertyChangeSupp
-remoteAct:ActProxy
+Accounting:
+enableDistributedReporting
+getName:String
+getRemoteName:String
+getReportingRate:int
+reportHandler:void
+setReportingRate:void
+addPropertyChangeListener:
+removePropertyChangeListen
+addReportListener:void

Fig.8b.

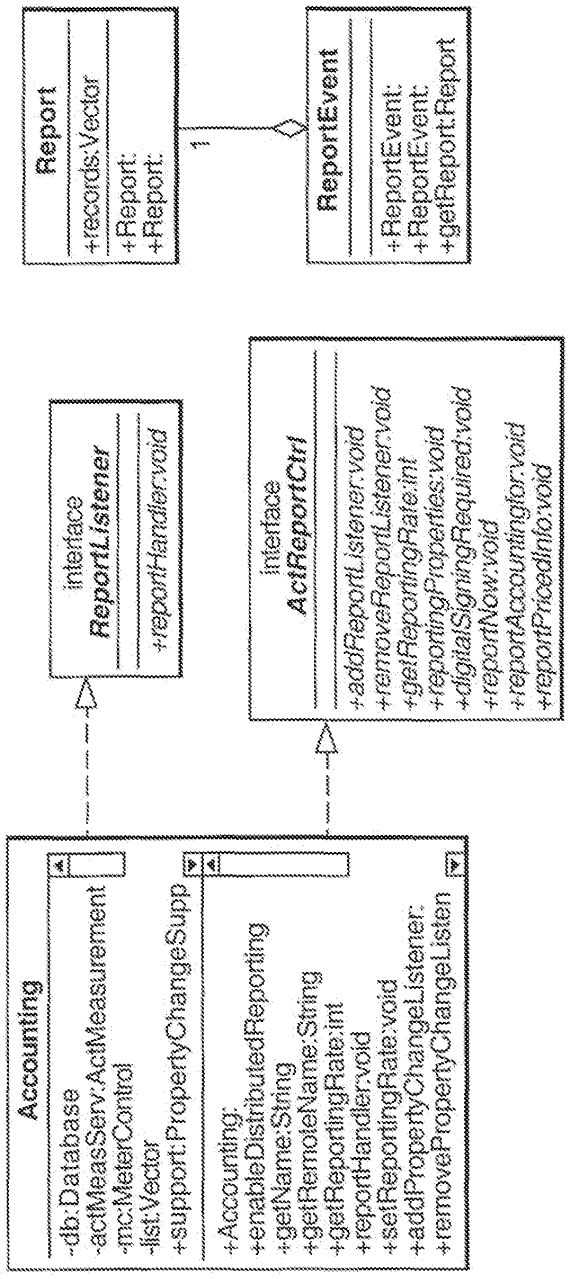

Report
+records:Vector
+Report:
+Report:
1
ReportEvent
+ReportEvent:
+ReportEvent:
+getReport:Report
interface
ReportListener
+reportHandler:void
interface
ActReportCtrl
+addReportListener:void
+removeReportListener:void
+getReportingRate:int
+reportingProperties:void
+digitalSigningRequired:void
+reportNow:void
+reportAccountingFor:void
+reportProceedInfo:void
Accounting
-db:Database
-actMeasServ:ActMeasurement
-mc:MeterControl
-list:Vector
+support:PropertyChangeSupp
+Accounting:
+enableDistributedReporting
+getName:String
+getRemoteName:String
+getReportingRate:int
+reportHandler:void
+setReportingRate:void
+addPropertyChangeListener:
+removePropertyChangeListen

Fig.8c.

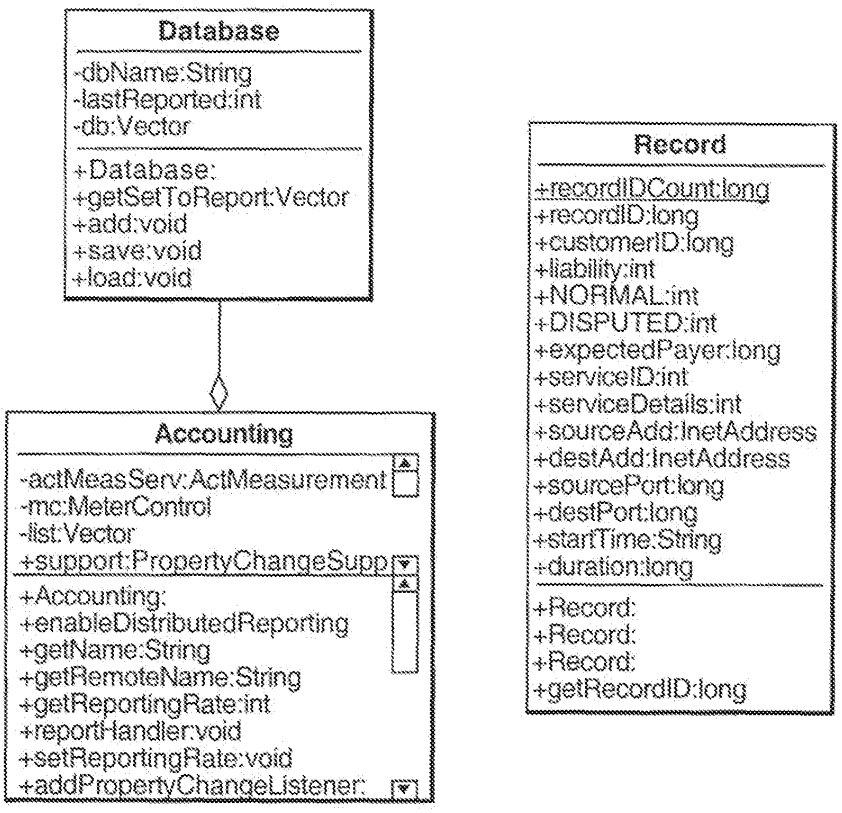

Database
-dbName:String
-lastReported:int
-db:Vector
+Database:
+getSetToReport:Vector
+add:void
+save:void
+load:void
Record
+recordIDCount:long
+recordID:long
+customerID:long
+liability:int
+NORMAL:int
+DISPUTED:int
+expectedPayer:long
+serviceID:int
+serviceDetails:int
+sourceAdd:InetAddress
+destAdd:InetAddress
+sourcePort:long
+destPort:long
+startTime:String
+duration:long
+Record:
+Record:
+Record:
+getRecordID:long
Accounting
-actMeasServ:ActMeasurement
-mc:MeterControl
-list:Vector
+support:PropertyChangeSupp
+Accounting:
+enableDistributedReporting
+getName:String
+getRemoteName:String
+getReportingRate:int
+reportHandler:void
+setReportingRate:void
+addPropertyChangeListener:

Fig.8d.

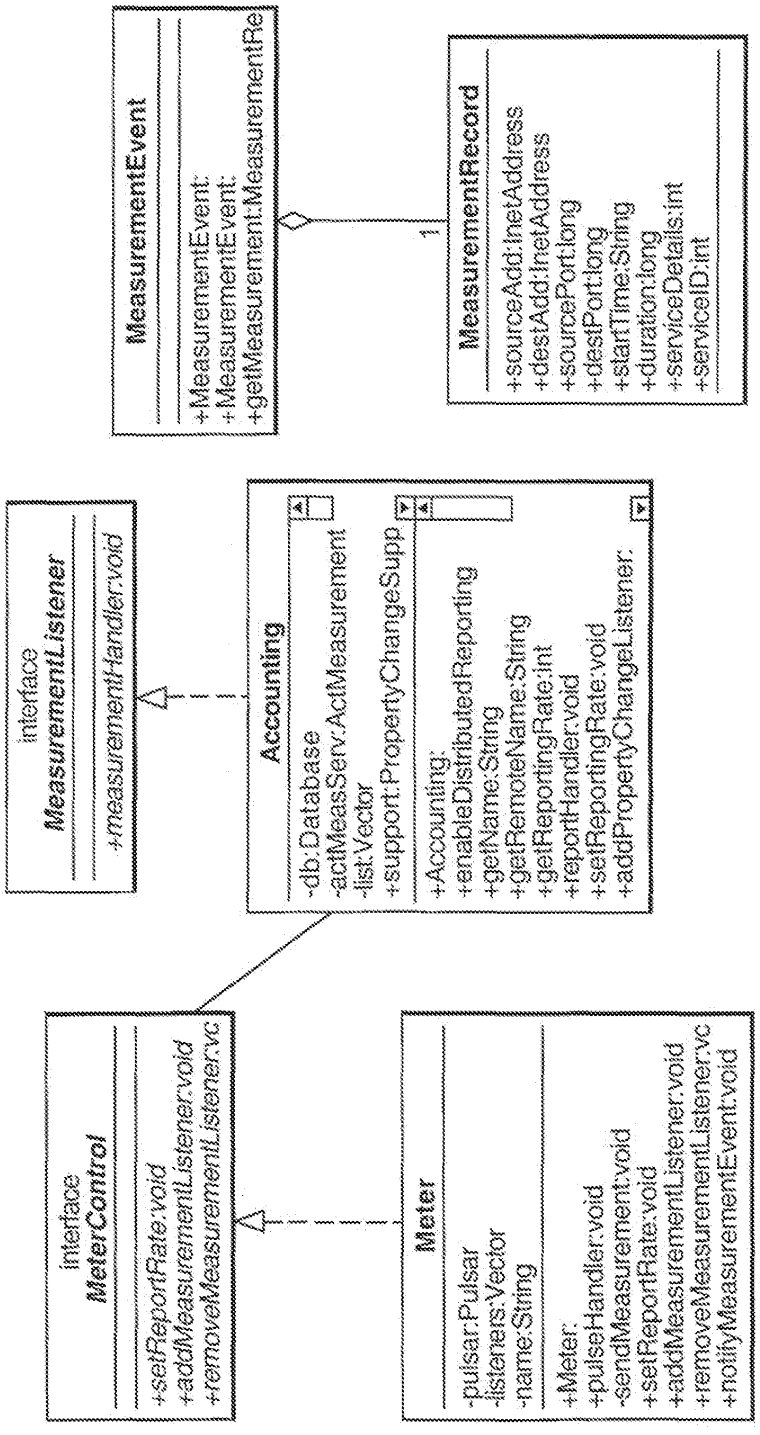

interface
MeterControl
+setReportRate:void
+addMeasurementListener:void
+removeMeasurementListener:vc
Meter
-pulsar:Pulsar
-listeners:Vector
-name:String
+Meter:
+pulseHandler:void
-sendMeasurement:void
+setReportRate:void
+addMeasurementListener:void
+removeMeasurementListener:vc
+notifyMeasurementEvent:void
interface
MeasurementListener
+measurementHandler:void
Accounting
-db:Database
-actMeasServ:ActMeasurement
-list:Vector
+support:PropertyChangeSupp
+Accounting:
+enableDistributedReporting
+getName:String
+getRemoteName:String
+getReportingRate:int
+reportHandler:void
+setReportingRate:void
+addPropertyChangeListener:
MeasurementEvent
+MeasurementEvent:
+MeasurementEvent:
+getMeasurement:MeasurementRe
1
MeasurementRecord
+sourceAdd:InetAddress
+destAdd:InetAddress
+sourcePort:long
+destPort:long
+startTime:String
+duration:long
+serviceDetails:int
+serviceID:int

Fig.8e.

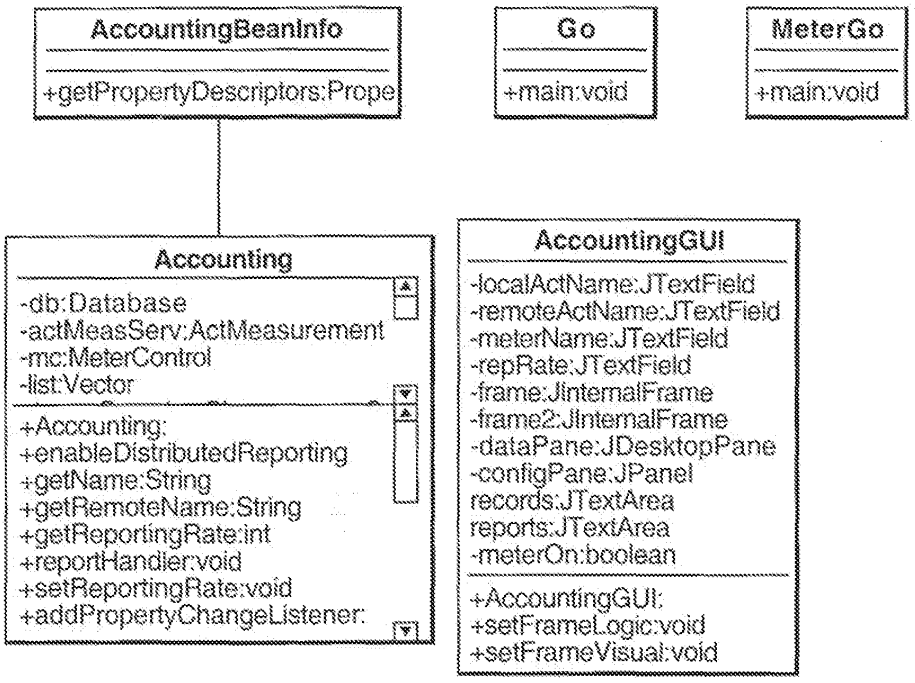

AccountingBeanInfo
+getPropertyDescriptors:Prope
Go
+main:void
MeterGo
+main:void
Accounting
-db:Database
-actMeasServ:ActMeasurement
-mc:MeterControl
-list:Vector
+Accounting:
+enableDistributedReporting
+getName:String
+getRemoteName:String
+getReportingRate:int
+reportHandler:void
+setReportingRate:void
+addPropertyChangeListener:
AccountingGUI
-localActName:JTextField
-remoteActName:JTextField
-meterName:JTextField
-repRate:JTextField
-frame:JInternalFrame
-frame2:JInternalFrame
-dataPane:JDesktopPane
-configPane:JPanel
records:JTextArea
reports:JTextArea
-meterOn:boolean
+AccountingGUI:
+setFrameLogic:void
+setFrameVisual:void

Fig.9.

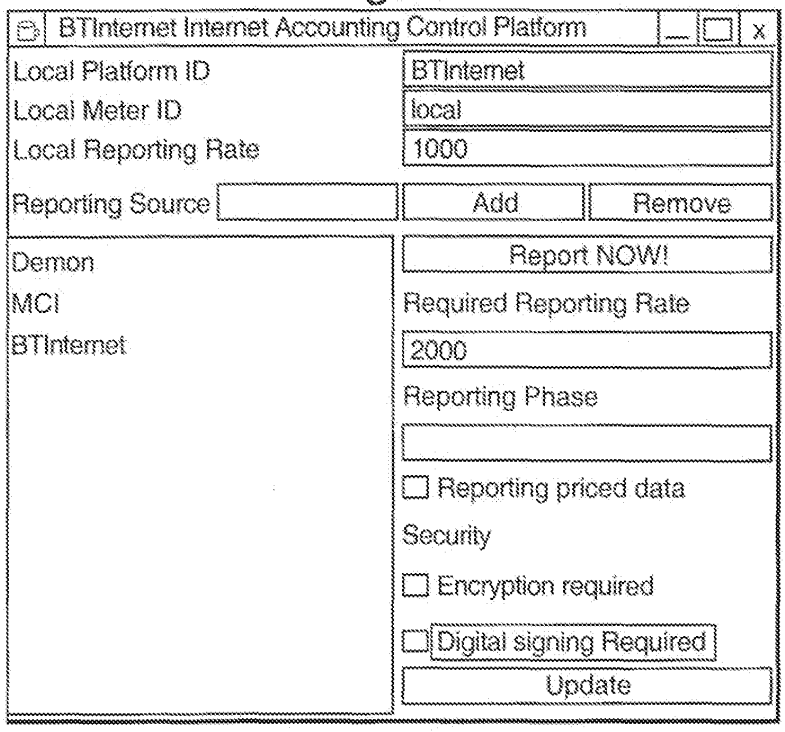

BTInternet Internet Accounting Control Platform
Local Platform ID
BTInternet
Local Meter ID
local
Local Reporting Rate
1000
Reporting Source
Add
Remove
Demon
MCI
BTInternet
Report NOW!
Required Reporting Rate
2000
Reporting Phase
Reporting priced data
Security
Encryption required
Digital signing Required
Update

Fig.10.

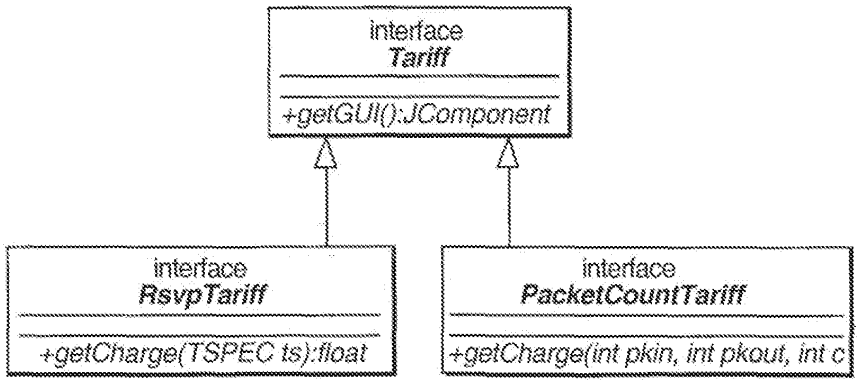
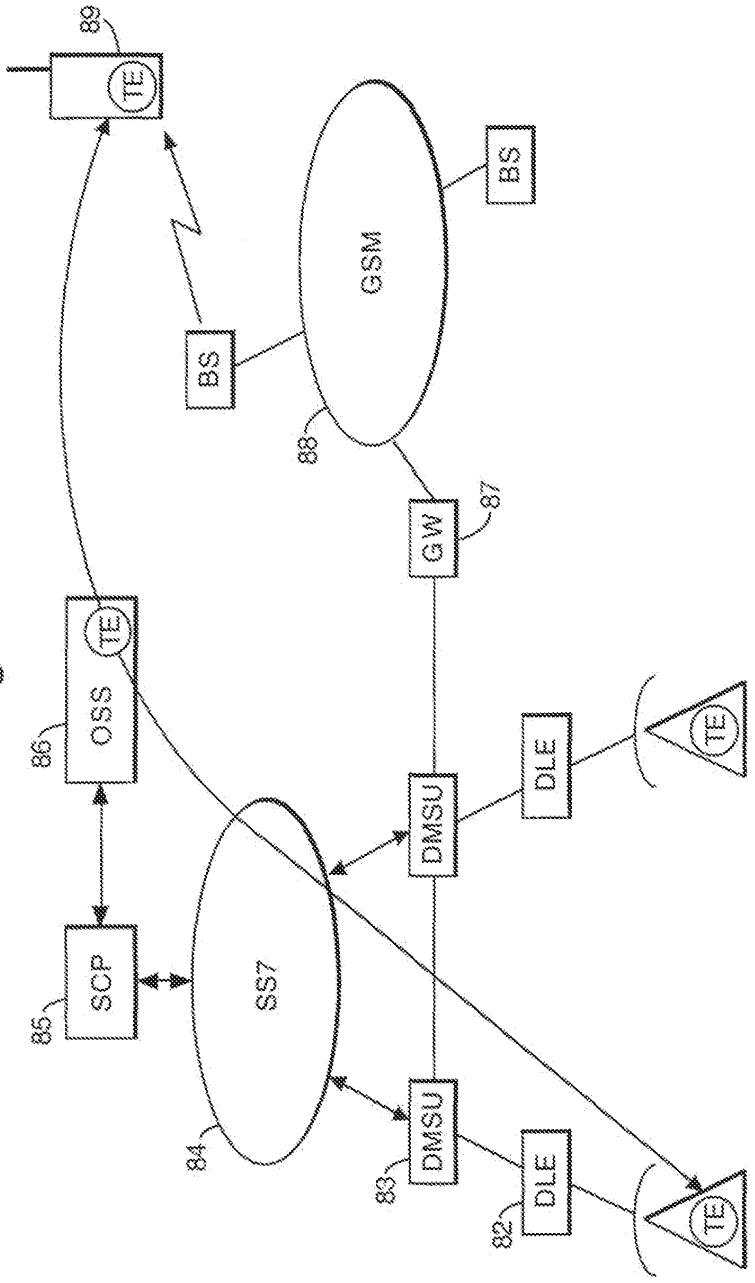

interface
Tariff
+getGUI():JComponent
interface
RsvpTariff
+getCharge(TSPEC ts):float
interface
PacketCountTariff
+getCharge(int pkin, int pkout, int c

Fig.11.


89
TE
BS
GSM
BS
88
GW
87
86
OSS
TE
DLE
TE
DMSU
SCP
85
SS7
84
DMSU
83
DLE
82
TE

Electronic Acknowledgement Receipt	
EFS ID:	8302920
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	21912
Filer:	Michael J. Schallop/Veronica Pula
Filer Authorized By:	Michael J. Schallop
Attorney Docket Number:	RALEP027
Receipt Date:	27-AUG-2010
Filing Date:	27-JAN-2010
Time Stamp:	16:29:50
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.)
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Warnings:					
Information:					

2	Information Disclosure Statement (IDS) Filed (SB/08)	RALEP027_IDS_SB08_3.pdf	87667 01415e705e117dace57f493f6da90ff24a9999f1	no	1
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Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	RALE_Foreign_Ref_3A.pdf	7292666 bda2da57ab175aa54d24e9cd7699784789063e0a	no	55
Warnings:					
Information:					
4	Foreign Reference	RALE_Foreign_Ref_3B.pdf	4238695 2b1ac857c7db7ca12f5a92190a59fb4eac5e537a	no	29
Warnings:					
Information:					
5	NPL Documents	RALE_NPL_Ref_3C.pdf	117093 adaccc6f7b2b7c7891095a31e01c2a5c2182ad86	no	8
Warnings:					
Information:					
6	NPL Documents	RALE_NPL_Ref_3D.pdf	1817585 1b0cb7a0b41b1340ba9e48fa0ea77e27f1632f33	no	10
Warnings:					
Information:					
7	NPL Documents	RALE_NPL_Ref_3E.pdf	184255 2e2daf80298dda3e93323c4a7f91f1ec3e478c42	no	9
Warnings:					
Information:					
8	NPL Documents	RALE_NPL_Ref_3F.pdf	5141787 6ecd30cfa00263c87082d7274ae16e8caa198bf1	no	35
Warnings:					
Information:					
9	NPL Documents	RALE_NPL_Ref_3G.pdf	1451509 e95282786ba86e4a05ee8c793a9ec634aa5a654c	no	6
Warnings:					
Information:					
10	NPL Documents	RALE_NPL_Ref_3H.pdf	128010 8d35d15d27cc8636c1526980a75aa6a4a97a745d	no	9

Warnings:					
Information:					
11	NPL Documents	RALE_NPL_Ref_3I.pdf	112089 24c595d8153db4b6ba795d5be64c6f98b0573749	no	5
Warnings:					
Information:					
12	NPL Documents	RALE_NPL_Ref_3J.pdf	338617 746715911bbc19ab5364956f70d29b176cce30b1f	no	11
Warnings:					
Information:					
13	NPL Documents	RALE_NPL_Ref_3K.pdf	2587996 104930755650d3cb8fbbb63837dc7338fbc2bd3c	no	16
Warnings:					
Information:					
14	NPL Documents	RALE_NPL_Ref_3L.pdf	1050612 c5435588dd68fcddc7835e4dce1e6489894a398b	no	124
Warnings:					
Information:					
15	Foreign Reference	RALE_Foreign_Ref_3M.pdf	6080065 c95895297c2769217788ac8dce979a79e9d20d33	no	49
Warnings:					
Information:					
		Total Files Size (in bytes):	30684447		

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.

<u>New Applications Under 35 U.S.C. 111</u>
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.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
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.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor:	Gregory G. Raleigh	Examiner:	Not Assigned
Application No.:	12/694,455	Art Unit:	2447
Filed:	January 27, 2010	Docket No.:	RALEP027
Title:	DEVICE ASSISTED SERVICES INSTALL		

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§1.56 AND 1.97(b) BEFORE MAILING OF A FIRST OFFICE ACTION

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The references listed in the attached PTO SB/08, may be material to examination of the above-identified patent application. Applicants disclose these references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application. Copies of the cited references are provided to the extent required by 37 CFR §1.98 and any applicable waivers.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

This Information Disclosure Statement is being filed (1) with the above-referenced application or (2) within three months of the filing date of the above-referenced application or (3) before the mailing date of a first Office Action on the merits or (4) before the mailing date of a first Office Action after filing of a Request for Continued Examination. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-0685 (Order No. RALEP027).

Respectfully submitted,
VAN PELT, YI & JAMES LLP

/Michael J. Schallop/

Michael J. Schallop
Registration No. 44,319
V (408) 207-4762
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10050 N. Foothill Blvd, Ste 200
Cupertino, CA 95014

Substitute for form 1449/PTO				Complete if Known	
Information Disclosure Statement By Applicant *(Use as many sheets as necessary)*				Application No.:	12/694,455
				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	1	of	2	Atty Docket No.	RALEP027

U.S. Patent Documents					
Examiner Initials	CiteNo.	Document Number Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS					
Examiner Initials	Cite No.	Foreign Patent Document Country Code–Number–Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	2A	WO 2006/077481	07-27-2006	True Context Corporation	
	2B	WO 2008/051379	05-02-2008	Verizon Services	
	2C	WO 2008/080139	07-03-2008	Integrated Mobile	
	2D	WO 2004/077797	09-10-2004	Boston Communications	
	2E	WO 2003/058880	04-17-2003	Telia AB	

NON PATENT LITERATURE DOCUMENTS

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, page(s), volume-issue number(s), publisher, city and/or country where published	T^2
	2F	HARTMANN et al., Agent-Based Banking Transactions & Information Retrieval-What about Performance Issues? 1999	
	2G	VAN EIJK, et al., GigaMobile, Agent Technology for Designing Personalized Mobile Service Brokerage, July 1, 2002	
	2H	YU LI, Dedicated E-Reading Devices: The State of the Art and Challenges, Scroll, Vol. 1, No. 1, 2008	
	2I	DIKAIAKOS et al., A Distributed Middleware Infrastructure for Personalized Services, November 24, 2003	
	2J	RAO et al., Evolution of Mobile Location-Based Services, Communication of the ACM, December 2003	
	2K	CHANDRASEKHAR et al., Femtocell Networks: A Survey, June 28, 2008	
	2L	HOSSAIN et al., Gain-Based Selection of Ambient Media Services in Pervasive Environments, 2008	
	2M	Author Unknown, 3GPP TS 23.203, V8.4.0, 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Policy and Charging Control Architecture (Release 8), December 2008	
	2N	Author Unknown, 3GPP TS 23.401, V8.4.0, 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; General Packer Radio Service (GPRS) Enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Access (Release 8), December 2008	
	2O	STEPHAN STEGLICH, I-Centric User Interaction, November 21, 2003	
	2P	HAN et al., Information Collection Services for Qos-Aware Mobile Applications, 2005	
	2Q	ALONISTIOTI et al., Intelligent Architectures Enabling Flexible Service Provision and Adaptability, 2002	
	2R	ROLF OPPLIGER, Internet Security: Firewalls and Bey, Communications of the ACM, May 1997, Vol. 40. No.5	

Substitute for form 1449/PTO				*Complete if Known*	
Information Disclosure Statement By Applicant *(Use as many sheets as necessary)*				Application No.:	12/694,455
				Filing Date	January 27, 2010
				First Named Inventor	Gregory G. Raleigh
				Art Unit	2447
				Examiner Name	Not Assigned
Sheet	2	of	2	Atty Docket No.	RALEP027

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

T[2] = Applicant is to place a check mark here if English language Translation is attached

Electronic Acknowledgement Receipt	
EFS ID:	8302791
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	21912
Filer:	Michael J. Schallop/Veronica Pula
Filer Authorized By:	Michael J. Schallop
Attorney Docket Number:	RALEP027
Receipt Date:	27-AUG-2010
Filing Date:	27-JAN-2010
Time Stamp:	16:28:21
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	Transmittal Letter	RALEP027_IDS_Before_1st_OA.pdf	55801 3605a37a8ee71f0018503458eddc073d71d5af75	no	2
Warnings:					
Information:					

2	Information Disclosure Statement (IDS) Filed (SB/08)	RALEP027_IDS_SB08_2.pdf	89826 69485128a03f2c4c7bde31e506e38db7029f4421	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	RALE_Foreign_Ref_2A.pdf	5821505 81bd528285eeb7055e34118b1c6f3ad0b406f580	no	34
Warnings:					
Information:					
4	Foreign Reference	RALE_Foreign_Ref_2B.pdf	4014433 6c150dbecf6e07e6e926c4953d9f7fa596419ee3	no	26
Warnings:					
Information:					
5	Foreign Reference	RALE_Foreign_Ref_2C.pdf	8969766 8a08a661fedb57f7c563ba498f498bb2309c2fc6	no	61
Warnings:					
Information:					
6	Foreign Reference	RALE_Foreign_Ref_2D.pdf	12405145 775980dffc4fd87b178f106d99003d7a52ddaca2	no	79
Warnings:					
Information:					
7	Foreign Reference	RALE_Foreign_Ref_2E.pdf	2436174 c0f643662921a19d681c882cd985d04b7837a8bd	no	21
Warnings:					
Information:					
8	NPL Documents	RALE_NPL_Ref_2F.pdf	219474 ebce1f8721f1fe656f69a3905f36d944f0f575a4	no	6
Warnings:					
Information:					
9	NPL Documents	RALE_NPL_Ref_2G.pdf	682711 8ee373cfd5a9d752aae23b4ea2fc1e12b949497c	no	77
Warnings:					
Information:					
10	NPL Documents	RALE_NPL_Ref_2H.pdf	137925 312ccdc04271430ed42b709573c0105d48599e5d	no	8

Warnings:					
Information:					
11	NPL Documents	RALE_NPL_Ref_2I.pdf	1378815 1d1b86ccc61e4d602380d993e4561849720eab8b	no	17
Warnings:					
Information:					
12	NPL Documents	RALE_NPL_Ref_2J.pdf	1319237 50d69a59a8af2531967879de03d70ef081c646f2	no	5
Warnings:					
Information:					
13	NPL Documents	RALE_NPL_Ref_2K.pdf	384366 ca4acdc0719ea1636b3d667e2aafd3397dfca7ef	no	23
Warnings:					
Information:					
14	NPL Documents	RALE_NPL_Ref_2L.pdf	3636374 8440928107fdb5d75ce06783a2192520dc545702	no	15
Warnings:					
Information:					
15	NPL Documents	RALE_NPL_Ref_2M.pdf	887279 5a30977e77dc57a16d92c2240fea93e245299f94	no	111
Warnings:					
Information:					
16	NPL Documents	RALE_NPL_Ref_2N.pdf	2190991 8ba9616337a9da73d1158dfaec561ac7bc23b576	no	219
Warnings:					
Information:					
17	NPL Documents	RALE_NPL_Ref_2O.pdf	22848329 5dfb6b37b9bdba2974aea1f1643a2cc9b9129f17	no	262
Warnings:					
Information:					
18	NPL Documents	RALE_NPL_Ref_2P.pdf	496028 a267ff12b9b336818993ff8b85da8e35a5708cc5	no	35
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Information:					
19	NPL Documents	RALE_NPL_Ref_2Q.pdf	1970806 2398c7ca475eec3e037b4ad60021644397a754ed	no	10

Warnings:					
Information:					
20	NPL Documents	RALE_NPL_Ref_2R.pdf	347340 e87bfc75fa6949a4c1ea09d431b076cdc1b55249	no	11
Warnings:					
Information:					
			Total Files Size (in bytes):	70292325	

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
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New International Application Filed with the USPTO as a Receiving Office
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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor:	Gregory G. Raleigh	Examiner:	Not Assigned
Application No.:	12/694,455	Art Unit:	2447
Filed:	January 27, 2010	Docket No.:	RALEP027
Title:	DEVICE ASSISTED SERVICES INSTALL		

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§1.56 AND 1.97(b) BEFORE MAILING OF A FIRST OFFICE ACTION

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The references listed in the attached PTO SB/08, may be material to examination of the above-identified patent application. Applicants disclose these references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application. Copies of the cited references are provided to the extent required by 37 CFR §1.98 and any applicable waivers.

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Respectfully submitted,
VAN PELT, YI & JAMES LLP

/Michael J. Schallop/

Michael J. Schallop
Registration No. 44,319
V (408) 207-4762
F (408) 973-2595

10050 N. Foothill Blvd, Ste 200
Cupertino, CA 95014

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/694,455	01/27/2010	Gregory G. Raleigh	RALEP027

CONFIRMATION NO. 6047

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

PUBLICATION NOTICE



Title:DEVICE ASSISTED SERVICES INSTALL

Publication No.US-2010-0198939-A1
Publication Date:08/05/2010

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

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 NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
12/694,455	01/27/2010	2447	1844	RALEP027	32	3

CONFIRMATION NO. 6047

UPDATED FILING RECEIPT

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

OC000000041269223

Date Mailed: 04/26/2010

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**

Applicant(s)

Gregory G. Raleigh, Woodside, CA;

Assignment For Published Patent Application

HEADWATER PARTNERS I LLC, Woodside, CA

Power of Attorney: The patent practitioners associated with Customer Number 21912

Domestic Priority data as claimed by applicant

This application is a CIP of 12/380,780 03/02/2009
and claims benefit of 61/206,354 01/28/2009
and claims benefit of 61/206,944 02/04/2009
and claims benefit of 61/207,393 02/10/2009
and claims benefit of 61/207,739 02/13/2009
and claims benefit of 61/264,120 11/24/2009

Foreign Applications

If Required, Foreign Filing License Granted: 02/05/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/694,455**

Projected Publication Date: 08/05/2010

Non-Publication Request: No

Early Publication Request: No

Title

DEVICE ASSISTED SERVICES INSTALL

Preliminary Class

709

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 (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor:	Gregory G. Raleigh	Examiner:	Not Assigned
Application No.:	12/694,455	Art Unit:	2447
Filed:	January 27, 2010	Docket No.:	RALEP027
Title:	DEVICE ASSISTED SERVICES INSTALL		

RESPONSE TO NOTICE TO FILE MISSING PARTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a Response to Notice to File Missing Parts mailed **February 16, 2010.**

Application Elements:

☒ Declaration

☒ Newly executed (original or copy)

☐ Copy from a prior application (37 CFR 1.63(d) for a continuation or divisional). The entire disclosure of the prior application from which a copy of the declaration is herein supplied is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

☐ Deletion of inventors Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).

Accompanying Application Parts:

☐ Information Disclosure Statement with Form PTO/SB/08 ☐ Copies of IDS Citations

☐ Preliminary Amendment (*New claims numbered after highest original claim in prior application.*)

☐ Return Receipt Postcard

☐ Copy of Notice to File Missing Parts of NonProvisional Application

☐ Other:

Amendments

☐ Cancel in this application original claims _____ of the prior application before calculating the filing fee. (*At least one original independent claim must be retained.*)

Fee Calculation (37 CFR § 1.16)

					Small Entity			Large Entity	
					Rate	Fee		Rate	Fee
Filing Fees					x $165 = $		OR	x $330 = $	330
Search Fees					x $270 = $		OR	x $540 = $	540
Examination Fees					x $110 = $		OR	x $220 = $	220
CLAIMS	Filed.		Extra						
Total	32	Less 20	12		x $26 = $		OR	x $52 = $	624
Independent	3	Less 3	-0-		x $110 = $		OR	x $220 = $	
Multiple Dependent Claims			-0-		x $195 = $		OR	x $390 = $	
Declaration and Surcharge Fee					X $65 = $		OR	X $130 = $	130
					TOTAL FILING FEE $			TOTAL FILING FEE $	**1844.00**

☐ Applicants petition for an extension of time to respond under 37 CFR § 1.136(a) as follows:

	SMALL ENTITY			LARGE ENTITY	
	Rate	Add'l Fee		Rate	Add'l Fee
☐ Extension for Response within FIRST month	x $65 = $		OR	x $130 = $	
☐ Extension for Response within SECOND month	x $245 = $		OR	x $490 = $	
☐ Extension for Response within THIRD month	x $555 = $		OR	x $1110 = $	
☐ Extension for Response within FOURTH month	x $865 = $		OR	x $1730= $	
☐ Extension for Response within FIFTH month	x $1175 = $		OR	x $2350 = $	

☐ Check No. _____for $_____ is enclosed.

General Authorizations

☒ Applicants hereby make and generally authorize any Petitions for Extensions of Time as needed for this or any subsequent filings. The Commissioner is also authorized to charge any extension fees under 37 CFR §1.17 as needed to Deposit Account No. 50-0685 (Order No. RALEP027).

☒ The Commissioner is given general authorization to charge any fees or to credit any overpayment during the pendency of this application to Deposit Account No. 50-0685 (Order No. RALEP027).

☒ Please send correspondence to the following address:

Customer No. 21912
VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd.
Suite 200
Cupertino, CA 95014

Date: April 15, 2010

/Michael J. Schallop/
Michael J. Schallop
Registration No. 44,319

DECLARATION AND POWER OF ATTORNEY FOR ORIGINAL U.S. PATENT APPLICATION

Attorney's Docket No. RALEP027

As a below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **DEVICE ASSISTED SERVICES INSTALL**, the specification of which,

(check one)

1. ☐ is attached hereto.

2. ☒ was filed on January 27, 2010 as U.S. Application No. 12/694,455 and was amended on _____.

3. ☐ was filed on _____ as International PCT Application No. _____ and was amended on _____.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

For Assigned Inventions: I understand that the purpose of making this appointment is to permit prosecution of patent applications for the above-identified invention for the benefit of my assignee, and that this appointment does not create an attorney-client relationship between me and these appointees.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under Title 35, United States code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Benefits Claimed?
_____	_____	_____	☐Yes ☐No
(Appl. No.)	(Country)	(Filing Date)	

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below:

Prior Provisional Application(s)

61/206,354	1/28/2009
(Application No.)	(Filing Date)
61/206,944	2/4/2009
(Application No.)	(Filing Date)

61/207,393 (Application No.)	2/10/2009 (Filing Date)
61/207,739 (Application No.)	2/13/2009 (Filing Date)
61/264,120 (Application No.)	11/24/2009 (Filing Date)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Prior U.S. Application(s)

12/380,780 (Application No.)	3/2/2009 (Filing Date)	PENDING (Status - patented, pending, abandoned)

And I hereby appoint the attorneys and/or agents associated with Customer No. **21912** as my principal attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Please Direct all Correspondence To: **Customer No. 21912**
VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014

Direct Telephone Calls To: **Michael J. Schallop at telephone number (408) 207-4762**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full name of sole or first inventor	Gregory G. Raleigh				
Signature of sole or first inventor				Date:	4/8, 2010
Residence: City	Woodside	State:	CA	Citizenship:	US
Mailing Address	2995 Woodside Road, Suite 400, Woodside, CA 94062				

Electronic Patent Application Fee Transmittal	
Application Number:	12694455
Filing Date:	27-Jan-2010
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Filer:	Michael J. Schallop/Veronica Pula
Attorney Docket Number:	RALEP027
Filed as Large Entity	

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility application filing	1011	1	330	330
Utility Search Fee	1111	1	540	540
Utility Examination Fee	1311	1	220	220
Pages:				
Claims:				
Claims in excess of 20	1202	12	52	624
Miscellaneous-Filing:				
Late filing fee for oath or declaration	1051	1	130	130

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1844**

Electronic Acknowledgement Receipt	
EFS ID:	7429655
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	21912
Filer:	Michael J. Schallop/Veronica Pula
Filer Authorized By:	Michael J. Schallop
Attorney Docket Number:	RALEP027
Receipt Date:	16-APR-2010
Filing Date:	27-JAN-2010
Time Stamp:	17:03:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1844
RAM confirmation Number	3584
Deposit Account	500685
Authorized User	
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 C.F.R. Section 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	RALEP027_Response_to_Missing_Parts.pdf	83572 0782477cb06fd2d77e4ce862209764f26c705e5b	no	2
Warnings:					
Information:					
2	Oath or Declaration filed	RALEP027_Declaration_POA.pdf	452757 7cbe442968226061 18e091a46f8de1ebe9803c75	no	2
Warnings:					
Information:					
3	Fee Worksheet (PTO-875)	fee-info.pdf	38019 c4d741c78504983de69d423f0cbef631fd3a6257	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	574348		

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.

<u>New Applications Under 35 U.S.C. 111</u>
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.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
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.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
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 Patent and Trademark Office
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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
12/694,455	01/27/2010	2447	0.00	RALEP027	32	3

CONFIRMATION NO. 6047

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

FILING RECEIPT

OC000000040059843

Date Mailed: 02/16/2010

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**

Applicant(s)

Gregory G. Raleigh, Woodside, CA;

Assignment For Published Patent Application

HEADWATER PARTNERS I LLC, Woodside, CA

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CIP of 12/380,780 03/02/2009
and claims benefit of 61/206,354 01/28/2009
and claims benefit of 61/206,944 02/04/2009
and claims benefit of 61/207,393 02/10/2009
and claims benefit of 61/207,739 02/13/2009
and claims benefit of 61/264,120 11/24/2009

Foreign Applications

If Required, Foreign Filing License Granted: 02/05/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/694,455**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

DEVICE ASSISTED SERVICES INSTALL

Preliminary Class

709

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.

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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 (1-866-999-4158).

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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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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/694,455	01/27/2010	Gregory G. Raleigh	RALEP027

CONFIRMATION NO. 6047

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

FORMALITIES LETTER

OC000000040059844

Date Mailed: 02/16/2010

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
  *Applicant must submit $**330** to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).*
- The oath or declaration is missing.
  A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
  Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Additional claim fees of $**624** as a non-small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.
- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of $**130** for a non-small entity, must be submitted with the missing items identified in this notice.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is $**1844** for a non-small entity
- $**330** Statutory basic filing fee.
- $**130** Surcharge.
- The application search fee has not been paid. Applicant must submit $**540** to complete the search fee.

- The application examination fee has not been paid. Applicant must submit $**220** to complete the examination fee for a non-small entity.
- Total additional claim fee(s) for this application is $**624**
  - $**624** for **12** total claims over 20.

Replies should be mailed to:

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Commissioner for Patents
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/mkoroma/

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

Attorney Docket No. RALEP027

APPLICATION FOR UNITED STATES PATENT

DEVICE ASSISTED SERVICES INSTALL

By Inventor(s):

Gregory G. Raleigh
Woodside, CA
A Citizen of the United States

Assignee: Headwater Partners I LLC, a Delaware limited liability company

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DEVICE ASSISTED SERVICES INSTALL

CROSS REFERENCE TO OTHER APPLICATIONS

[0001] This application claims priority to U.S. Provisional Patent Application No. 61/206,354 (Attorney Docket No. RALEP001+) entitled SERVICES POLICY COMMUNICATION SYSTEM AND METHOD filed January 28, 2009, U.S. Provisional Patent Application No. 61/206,944 (Attorney Docket No. RALEP002+) entitled SERVICES POLICY COMMUNICATION SYSTEM AND METHOD filed February 4, 2009, U.S. Provisional Application No. 61/207,393 (Attorney Docket No. RALEP003+) entitled SERVICES POLICY COMMUNICATION SYSTEM AND METHOD filed February 10, 2009, U.S. Provisional Patent Application No. 61/207,739 (Attorney Docket No. RALEP004+) entitled SERVICES POLICY COMMUNICATION SYSTEM AND METHOD filed on February 13, 2009, and U.S. Provisional Patent Application No. 61/264,120 (Attorney Docket No. RALEP027+) entitled DEVICE ASSISTED SERVICES INSTALL filed on November 24, 2009, which are incorporated herein by reference for all purposes.

[0002] This application is a continuation in part of co-pending U.S. Patent Application No. 12/380,780 (Attorney Docket No. RALEP007), entitled AUTOMATED DEVICE PROVISIONING AND ACTIVATION, filed on March 2, 2009, which is incorporated herein by reference for all purposes, and which claims priority to U.S. Provisional Patent Application No. 61/206,354 (Attorney Docket No. RALEP001+) entitled SERVICES POLICY COMMUNICATION SYSTEM AND METHOD filed January 28, 2009, U.S. Provisional Patent Application No. 61/206,944 (Attorney Docket No. RALEP002+) entitled SERVICES POLICY COMMUNICATION SYSTEM AND METHOD filed February 4, 2009, U.S. Provisional Application No. 61/207,393 (Attorney Docket No. RALEP003+) entitled SERVICES POLICY COMMUNICATION SYSTEM AND METHOD filed February 10, 2009, and U.S. Provisional Patent Application No. 61/207,739 (Attorney Docket No. RALEP004+) entitled SERVICES POLICY COMMUNICATION SYSTEM AND METHOD filed on February 13, 2009, which are incorporated herein by reference for all purposes.

BACKGROUND OF THE INVENTION

[0003] With the advent of mass market digital communications, applications and content distribution, many access networks such as wireless networks, cable networks and DSL (Digital Subscriber Line) networks are pressed for user capacity, with, for example, EVDO (Evolution-Data Optimized), HSPA (High Speed Packet Access), LTE (Long Term Evolution), WiMax (Worldwide Interoperability for Microwave Access), DOCSIS, DSL, and Wi-Fi (Wireless Fidelity) becoming user capacity constrained. In the wireless case, although network capacity will increase with new higher capacity wireless radio access technologies, such as MIMO (Multiple-Input Multiple-Output), and with more frequency spectrum and cell splitting being deployed in the future, these capacity gains are likely to be less than what is required to meet growing digital networking demand.

[0004] Similarly, although wire line access networks, such as cable and DSL, can have higher average capacity per user compared to wireless, wire line user service consumption habits are trending toward very high bandwidth applications and content that can quickly consume the available capacity and degrade overall network service experience. Because some components of service provider costs go up with increasing bandwidth, this trend will also negatively impact service provider profits.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] Various embodiments of the invention are disclosed in the following detailed description and the accompanying drawings.

[0006] **Figure 1** illustrates a wireless network architecture for providing device assisted services (DAS) install techniques in accordance with some embodiments.

[0007] **Figure 2** illustrates another wireless network architecture for providing DAS install techniques in accordance with some embodiments.

[0008] **Figure 3** illustrates a flow diagram for DAS install techniques in accordance with some embodiments.

[0009] **Figure 4** illustrates another flow diagram for DAS install techniques in accordance with some embodiments.

[0010] **Figure 5** illustrates another flow diagram for DAS install techniques in accordance with some embodiments.

DETAILED DESCRIPTION

[0011] The invention can be implemented in numerous ways, including as a process; an apparatus; a system; a composition of matter; a computer program product embodied on a computer readable storage medium; and/or a processor, such as a processor configured to execute instructions stored on and/or provided by a memory coupled to the processor. In this specification, these implementations, or any other form that the invention may take, may be referred to as techniques. In general, the order of the steps of disclosed processes may be altered within the scope of the invention. Unless stated otherwise, a component such as a processor or a memory described as being configured to perform a task may be implemented as a general component that is temporarily configured to perform the task at a given time or a specific component that is manufactured to perform the task. As used herein, the term 'processor' refers to one or more devices, circuits, and/or processing cores configured to process data, such as computer program instructions.

[0012] A detailed description of one or more embodiments of the invention is provided below along with accompanying figures that illustrate the principles of the invention. The invention is described in connection with such embodiments, but the invention is not limited to any embodiment. The scope of the invention is limited only by the claims and the invention encompasses numerous alternatives, modifications and equivalents. Numerous specific details are set forth in the following description in order to provide a thorough understanding of the invention. These details are provided for the purpose of example and the invention may be practiced according to the claims without some or all of these specific details. For the purpose of clarity, technical material that is known in the technical fields related to the invention has not been described in detail so that the invention is not unnecessarily obscured.

[0013] Device assisted services (DAS) install techniques are provided in accordance with some embodiments. In some embodiments, DAS install techniques for providing service processors for mobile devices are provided. In some embodiments, DAS install techniques for downloading/installing new and/or updated service processors for mobile devices are provided. In some embodiments, DAS install techniques for providing verified service processors for mobile devices are provided. In some embodiments, DAS install techniques for providing

secured service processors for mobile devices are provided. In some embodiments, DAS install techniques include providing a generic first version service processor for downloading and installing a second version service processor. These and other DAS install techniques are described herein with respect to various embodiments.

[0014] **Figure 1** illustrates a wireless network architecture for providing device assisted services (DAS) install techniques in accordance with some embodiments. As shown, Figure 1 includes various wireless communications devices 100 (e.g., a mobile wireless device or an intermediate networking device) in wireless communication with central provider access and core networks 210. As shown, some of the devices 100 include service processors 115. For example, devices 100 can include various types of mobile phones, PDAs, computing devices, laptops, netbooks, tablets, cameras, music/media players, GPS devices, networked appliances, and any other networked device. In some embodiments, intermediate networking devices, as described herein, include a service processor or assist in the downloading of a service processor for one or more devices 100 to facilitate network access as described herein with respect to various embodiments. In some embodiments, a device 100 does not initially include a service processor (as shown in Figure 1). In some embodiments, a service processor 115 is previously installed (e.g., during manufacture or distribution), or is downloaded and installed on a device 100 (as also shown in Figure 1).

[0015] In some embodiments, the wireless communications device is a mobile communications device, and the service includes one or more Internet based services, and the mobile communications device includes one or more of the following: a mobile phone, a PDA, an eBook reader, a music device, an entertainment/gaming device, a computer, laptop, a netbook, a tablet, and a home networking system. In some embodiments, the wireless communications device includes a modem, and the processor is located in the modem. In some embodiments, an intermediate networking device includes any type of networking device capable of communicating with a device and a network, including a wireless network, example intermediate networking devices include a femto cell, or any network communication device that translates the wireless data received from the device to a network, such as an access network. In some embodiments, intermediate networking devices include 3G/4G WWAN to WLAN

bridges/routers/gateways, femto cells, DOCSIS modems, DSL modems, remote access/backup routers, and other intermediate network devices.

[0016] In some embodiments, there are at least two versions of a service processor. For example, a first version service processor can be a generic version of a service processor version that can be pre-installed during manufacture or distribution and used for downloading a second version service processor. For example, the first version service processor can be a generic version that is not specific to a device group while the second version is specific to a device group. As another example, the first version service processor installed during time of manufacture or during device distribution may not contain all of the functions that are available for a permanent second version service processor that is installed when the device first connects to a network. As another example, service processors can be regularly updated to change the security parameters of the software, such as software signatures, encryption, obfuscation, secure query response sequence information, and/or other parameters, so that it becomes more difficult to hack or otherwise modify the software. As another example, the second version service processor can be uniquely associated with the device 100 (e.g., wireless communications device or an intermediate networking device) and the associated service plan and/or service provider. In some embodiments, a first version service processor is installed on a device 100 (e.g., service processor 115 installed on the device 100 can be a first version service processor that was previously installed during manufacture or distribution, or downloaded and installed during initial network access, as shown in Figure 1). In some embodiments, a second version service processor is installed on a mobile device (e.g., service processor 115 can be a second version service processor that was previously installed during manufacture or distribution, or downloaded and installed during initial network access, as shown in Figure 1).

[0017] In some embodiments, a new and/or updated version service processor 115 can be downloaded from, for example, a service processor download 170, as described herein. In some embodiments, the service processor download 170 provides a function or service that is located elsewhere in the network or partially located in elsewhere or integrated with/as part of other network elements (e.g., the service processor download 170 can be a function/service of service control 150 and/or service policies and accounting 165). In some embodiments, the devices 100 are in service control communication with service control 150 via central provider access and

core networks 220 as shown in Figure 1. Service policies and accounting functions 165 are also provided in communication with the central provider access and core networks 220 as shown in Figure 1. In some embodiments, the service policies and accounting functions 165 provides a function or service that is located elsewhere in the network or partially located in elsewhere or integrated with/as part of other network elements (e.g., the service policies and accounting functions 165 can be a function/service of service control 150).

[0018] In some embodiments, the devices 100 network access is initially restricted to service control related access for service processor 115 verification and/or download(s)/update(s) (e.g., a first version service processor installed on the mobile device 100 can limit or direct network access to the service control 150, service processor download 170, and/or service policies and accounting function 165), as described herein with respect to various embodiments. In some embodiments, after this initial restricted access period is completed and/or if the service processor 115 of the mobile device 100 is verified for the device and is current/updated, the device 100 can communicate via the central provider access and core networks 220 to the Internet 120 for access to various Internet sites and/or services 240 as shown in Figure 1 (e.g., Google sites/services, Yahoo sites/services, Blackberry services, Apple iTunes and AppStore, Amazon.com, FaceBook, and/or any other Internet based sites and/or services) based on, for example, the service plan associated with the device 100. In some embodiments, service usage information (e.g., based on network based CDRs or device generated CDRs, such as micro-CDRs generated by the service processor 115, and/or other service usage measures) are used for service control and/or service plan billing and reporting, as described herein with respect to various embodiments.

[0019] Those of ordinary skill in the art will appreciate that various other network architectures can be used for DAS install techniques, and Figure 1 is illustrative of just another such example network architecture for which DAS install techniques described herein can be provided.

[0020] In some embodiments, Figure 1 provides a wireless network architecture that also supports partitioned device groups, in which each device group can be provided independent and secure management. In some embodiments, partitioned device groups are provided. In some

embodiments, each partitioned group of devices (e.g., mobile devices 100) can be uniquely managed with secure admin log-ins. In some embodiments, the partitioned device groups are securely managed using the service processor 115 installed on the devices 100 for that device group. In some embodiments, multi-device, multi-user accounting is provided. In some embodiments, capabilities are provided to support multi-party/multi-service reconciliation records to carriers and carrier partners. In some embodiments, service usage and profitability analytics are provided. For example, a partitioned beta test group of devices can be tested and optimized for various service usage policies and/or service plans, and then the optimized service usage policies and/or service plans can be published to an entire or larger device group. In some embodiments, a carrier can be provided a carrier branded device group, and/or a MVNO can be provided a MVNO branded device group.

[0021] In some embodiments, DAS install clients (e.g., bootstrappers for devices 100) are provided. In some embodiments, a first version service processor provides DAS install client function that facilitates a bootstrapping function for downloading and installing a second version service processor. In some embodiments, DAS install clients are provided for creating/downloading and installing a verifiable service processor for each device (e.g., a network capable device, such as a mobile wireless communications device or intermediate networking device). In some embodiments, a DAS install client downloads a uniquely secured service processer for device 100 (e.g., hashed/encrypted, such as based on device credentials, to prevent, for example, mass hacking or other security vulnerabilities, and/or a signed interface between the service processor and modem). In some embodiments, a non-advertised IP address allocated for each device group is rotated (e.g., to counter denial of service (DoS), distributed denial of service (DDS), and/or other types of attacks and/or vulnerabilities or exploits), and service processors are configured with multiple IP addresses for service control access (e.g., for secured network communication with service control 150 and/or service policies and accounting 165).

[0022] In some embodiments, DAS install techniques include one or more of the following operations. First, in some embodiments, whether a device is in a device group or list that includes an installed, up to date, and/or validated service processor is determined (e.g., verify that SIM, ESN, or other unique device identifier is registered, such as in a Home Location

Register (HLR)/Network Information Repository (NIR) database or other authorized data store, as associated with service settings/policies for that device for service access and send its associated Charging Data Records (CDRs) to the service controller). Second, in some embodiments, if the device does not have an installed, up to date, and/or validated service processor, then the device is directed to, for example, an activation server to, for example, authenticate the device and/or verify a service processor for the device (e.g., ensure that a current and verified service processor version is installed and/or download a current and verified service processor version for the device).

[0023] For example, a DAS install client can be downloaded and installed (e.g., using various bootstrapping techniques, in which, for example, during the installation of the service processor software it is sometimes necessary to update the installer or package manager itself, by using, for example, a small executable file, such as a bootstrapper, that updates the installer and then initiates the new/updated/second version service processor installation after the update, and, in some cases, the bootstrapper can install other prerequisites for the service processor software during the bootstrapping process as well; and using network access to a download server, and/or from a website, including, for example, service processor download function 170) that allows for secure connection from the device (e.g., mobile device 100) to a secure download server (e.g., service processor download 170). In this example, support for a configuration of the device can be determined, such as through a device query or device download of client verification software can be used to verify the device hardware/software configuration). In this example, a user/device validation step can also be performed. For example, an authorization process for a user sign-up can be performed (e.g., based on a user name, MAC address, Turing machine text verification, and/or credit card verification or using other authorization/validation techniques), in which this can be performed automatically or the user/device can be required to enter certain credentials for authorization/validation.

[0024] In some embodiments, the authorization process also includes various security techniques for securely associating a user's identity with the device (e.g., using public key/TLS techniques, SSH techniques for TLS, and/or identity management techniques or other security techniques). For example, a check can also be performed to determine if the device was previously and/or is currently an activated device (e.g., the device is already associated with an

active service plan). For example, whether the device belongs to a registered device group can also be determined during a DAS install, and if not, then the default settings for that type of device can be applied. In some embodiments, the service processor is encrypted, hashed, and/or obfuscated based on the previous determination (e.g., device group association, default device settings, and/or any other settings/criteria).

[0025] In some embodiments, if the device is not associated with a service plan (e.g., based on the device look-up using device based unique identifier(s)/credential(s) or using other techniques, as described herein), then the device can be redirected to a service portal for an activation offer for a service plan (e.g., using an activation server). In some embodiments, the portal utilizes header information to indicate that the device is a managed device (e.g., for a given service provider, MVNO, or other service partner) in the portal request to proxy to an appropriate proxy server for that service provider for the activation process.

[0026] In some embodiments, the device is in probation mode after the new service processor install (e.g., restricted a restricted IP address can be used for the service controller or other network element for service control instead of the secured service controller IP addresses reserved for validated and non-probation mode service processors, which, for example, can reduce the risks of various security risks, such as DoS, DDS, and/or other mass or other types of attacks against publicly or other more easily accessible service controller or download servers). In some embodiments, while in probation mode, the service processor executes more robust service monitoring techniques (e.g., more frequent and/or more robust service integrity checks and/or more frequent heartbeats, for example, to monitor actual device/user behavior with the associated expected behavior, as described herein with respect to various embodiments). In some embodiments, after a probation period ends, the device is provided access based on the associated service plan, which is managed, at least in part, by the service processor (e.g., service processor 115) in communication with, for example, a service controller (e.g., service control 150 and service policies and accounting 165) or other authorized network elements for service control.

[0027] In some embodiments, the various techniques and embodiments described herein can be readily applied to intermediate networking devices (e.g., an intermediate modem or

networking device combination). In some embodiments, intermediate networking devices include, for example, WWAN/WLAN bridges, routers and gateways, cell phones with WWAN/WLAN or WWAN/Bluetooth, WWAN/LAN or WWAN/WPAN capabilities, femto cells, back up cards for wired access routers, and/or other intermediate networking devices. In some embodiments, an intermediate networking device (e.g., an intermediate modem or networking device combination) downloads and sends a service processor to one or more devices communicating via the intermediate networking device. In some embodiments, an appropriate and validated service processor is securely downloaded to the intermediate networking device, and the intermediate networking device performs the service processor functions for various wireless communication devices (e.g., mobile wireless communication devices) in communication with the intermediate networking device. In some embodiments, in which one or more wireless communication devices are in wireless communication via an intermediate networking device, some of the service processor functions are performed on the intermediate networking device (e.g., an appropriate and validated service processor is installed or securely downloaded and installed on the intermediate networking device), and some of the service processor functions are performed on the one or more wireless communication devices (e.g., an appropriate and validated service processor is installed or securely downloaded and installed on the mobile device) (e.g., stack controls can be performed on the mobile device and various other controls can be performed on the intermediate networking device). In some embodiments, the one or more wireless communication devices cannot access the network via the intermediate networking device (e.g., the devices are quarantined) unless the one or more wireless communication devices each have an installed and functioning verified service processor (e.g., using CDRs from intermediate networking device and/or network).

[0028] In some embodiments, a USB WLAN stick or other similar networking device is provided (e.g., including a modem) with DAS install client software that loads onto the device 100 and installs a service processor 115 on the device 100. In some embodiments, software on the device 100 instructs the user to insert a properly configured memory device (e.g., a secured USB memory stick, dongle, or other secured device that can provide a DAS install client software, a service processor image, and/or device credentials for network access). In some embodiments, the USB WLAN installed software assumes control over, for example, the network stack of the device (e.g., for managing network access) and sets various service policies

based on whether the service is communicated via the USB WLAN stick or via the WiFi/other (e.g., including requiring no policies, such that access is open). In some embodiments, the DAS install client software on the USB WLAN stick provides a secure client that installs itself/certain software on the device that provides a DAS install client (e.g., bootstrapper) for the device, and the DAS install client downloads an appropriate service processor onto the device and/or the USB WLAN stick (e.g., the stack can also be located and managed on the USB WLAN stick).

[0029] In some embodiments, DAS install techniques include ensuring that a device's (e.g., the device modem's) credentials for the access network match the unique credentials for the service processor and the unique credentials for the device (e.g., MAC, SIM, MZ, and/or other unique credentials for the device). In some embodiments, DAS install techniques include ensuring that multiple IP addresses are not associated with the same service processor for a particular device. In some embodiments, DAS install techniques include determining that this is the same device/modem that a service processor was previously downloaded for and whether that prior service processor is still active on the network. If so, then, in some embodiments, the user is required to type in, for example, a password to continue, for example, a reimaging of the device (or prevent the new device install or to disable the previously activated other service processor).

[0030] In some embodiments, DAS install techniques include starting with a device that does not include a service processor (e.g., a device, with, for example, a SIM or EVDO ESSN, but with no service processor, attempts to connect to the network, an appropriate service processor for the device is determined, and then a uniquely associated service processor is downloaded and installed on the device, for example, using a bootstrapper, as similarly described herein). In some embodiments, unique device credentials (e.g., MAC, SIM, MZ, and/or other unique credentials for the device) are used to create a secure connection with, for example, the service controller (e.g., service control 150) or a secure download server (e.g., service processor download 170), to download a (e.g., new or replacement) service processor to be securely installed on the device. Accordingly, as similarly described herein, DAS install techniques can be applied to at least one or more of the following situations: a new service processor install; and/or a replacement service processor install (e.g., the originally/previously installed service processor was wiped/reimaged, hardware failure, or otherwise corrupted or deleted, and, thus, a

replacement service processor is needed). In some embodiments, when a device connects to the network without, for example, a service processor, then a look up is performed (e.g., in a data store, such as a database) to determine whether the device is a member of a device group or a new device, and an appropriate service processor (e.g., version and settings) is provided for installation on the device. In some embodiments, when the device attempts an initial access to the network, at that time an updated version of a service processor for that device can be provided based on, for example, device type, device group, master agent, user interface (UI), settings, marketing pages, and/or other features and/or settings, which, for example, can allow for a new, changed, or evolving service plan/program by the time the device logs onto the network to provide, for example, for a dynamic and scalable solution.

[0031] In some embodiments, as similarly discussed above, two versions of the service processor are provided (e.g., a first version/image and a second version/image of the service processor software). In some embodiments, a first version service processor is a general purpose version used, for example, primarily for connecting to the network and loading a second version service processor software that, for example, can be one or more of the following: an updated version, a version tailored to a more specific purpose (e.g., based on a device type, device group, service type, service provider or service provider partner, or any other purpose/criteria), a version that includes additional features/functionality, an encrypted service processor version, a version that includes special service plan settings or capabilities associated with a device group, a version that includes specific branding or features/functionality for a given service provider or service provider partner associated with a device group, a version that includes special marketing materials to motivate the user to try or buy services or transactions associated with a device group, and various other versions as will now be apparent to one of ordinary skill in the art in view of the various embodiments described herein.

[0032] In some embodiments, depending on whether the user has pre-signed up for a service plan, for example, a different version of the service processor software and/or settings is/are downloaded to the device during this initial service processor download process, including, for example, one or more of the following: a different set of options for service plan choices, marketing materials, ambient service settings and service options, service plan settings, and possibly various other features and/or settings.

[0033] In some embodiments, the first version of the service processor is installed during manufacturing or in the distribution channel prior to sale of the device. In some embodiments, the first version of the service processor is installed after the time of sale of the device using various DAS install techniques as described herein with respect to various embodiments.

[0034] In some embodiments, the first version of the service processor is not uniquely encrypted so that a general purpose version of the first service processor image can be distributed to multiple devices (e.g., downloadable via the Internet, such as through a website, or a software update not installed by an operable service processor or a software image that is loaded onto the device before the device credentials or device group associations are available or known). In some embodiments, a non-encrypted generic version of the service processor is used for broad distribution to many devices in which the device credentials are not known at the time of service processor software distribution (e.g., the generic version of the service processor can log onto the network to access a software update function in the service controller or service control 150, service processor downloader or service process download 170, and/or similar authorized network function, then the service controller can obtain the device credentials and/or user information and provide an updated version of the service processor using the various techniques or similar techniques to those described herein). In some embodiments, the second/updated version of the service processor is uniquely encrypted (e.g., based at least in part on the device credentials or device group associations).

[0035] In some embodiments, a first version of the service processor need not be uninstalled and replaced by a new install of a second version of the service processor, as, in some embodiments, the second version of the service processor includes updates to the first version of the service processor, settings changes to the first version of the service processor, and/or encryption or obfuscation of the first version of the service processor to provide a second version of the service processor that is uniquely associated with the device, the device user, the device group, and/or the service plan associated with the device. In some embodiments, the second/updated version of the service processor includes one or more restricted IP addresses providing for access to the secured service control/service controller IP addresses reserved for validated and non-probation mode service processors, which, for example, can reduce the risks of various security risks for the secured service control/service controller(s), such as DoS, DDS,

and/or other mass or security attacks against publicly or other more easily accessible service control/service controller(s) and/or service processor download servers.

[0036] In some embodiments, the second version of the service processor is uniquely associated with some aspect(s) of the device credentials and/or user information with a temporary user account (e.g., also sometimes referred to herein as a dummy user account) or user account. In some embodiments, the second version of the service processor and/or the settings in the service processor are chosen based on a look up of some aspect of the device credentials and/or the user information to determine which device group version of the service processor and/or settings should be loaded. In some embodiments, when there is no appropriate device group association or the user preference takes priority over device group association, the first version of the service processor software is used to log onto the network (e.g., including potentially the service controller) to select a service offer, or device group association that then determines the second version and/or settings of the service processor software that will be loaded onto the device.

[0037] In some embodiments, the first version of the service processor is installed on aftermarket devices, and after installation this more general purpose version of the service processor provides for access to the service control/service controller (or similar network function). In some embodiments, the service control/service controller determines what type of device and/or what operating system (OS) software and/or what modem and modem software is on the device, and then loads an appropriate version of the service processor for that device or facilitates an updating of the first version of the service processor to provide a second version of the service processor for that device.

[0038] In some embodiments, the service processor is distributed on a peripheral device suitable for use with more than one type of device and/or more than one type of OS. Accordingly, in some embodiments, more than one version of the service processor can be shipped with the device for installation on the device once the device type and/or OS type is/are known, with each version of the software either being a first version of the service processor software as discussed above, or a second version or final version of the service processor software as similarly discussed above with respect to various embodiments.

[0039] In some embodiments, the first version/second version service processor software techniques, for example, allow for installations of a new OS version that is not compatible in some way with the present version of the service processor. For example, the installation of such a new and incompatible OS version can render the currently installed service processor version incapable of connecting to the network and updating the service processor. In such an example, a first version service processor software image that is compatible with the new OS can be used to access the network (e.g., connect to the service control/service controller or some other network element) to download and install a new, possibly uniquely encrypted and compatible second service processor image, as similarly discussed above with respect to various embodiments.

[0040] In some embodiments, the first version/second version service processor software techniques, for example, can handle situations in which a device has an inadvertently wiped or damaged service processor image such that the device is no longer capable of logging onto the network with its secure credentials and/or uniquely encrypted service processor software image. In such an example, the first version software processor can then be used as similarly described above with respect to various embodiments to download and install a new/replacement second version service processor on the device.

[0041] In some embodiments, there are multiple types of device log-in to the service control/service controller depending on whether a first or second version service processor is being used. For example, if a second version service processor is being used, which, in some embodiments, includes unique secure credentials, a uniquely encrypted or secure heartbeat channel, and/or a uniquely encrypted service processor software image, then the capabilities of the device and/or service processor to access the network and/or service controller elements can be as similarly described herein with respect to various embodiments. However, if the device is using a first version service processor, which, for example, does not have unique secure credentials, a uniquely encrypted heartbeat control channel, and/or a uniquely encrypted software image, then the heartbeat control channel traffic can be handled in a differential manner as compared to the traffic handling implemented for a second version service processor image. For example, the service controller heartbeat processing elements can detect that the service processor is a first version service processor and can then route the heartbeat traffic through a

different set of security processes that do not rely on all the security aspects present in a second version service processor. As another example, the first version service processor can be a widely distributed software image that does not have unique encryption on the heartbeat channel and can be handled differentially, such as handled with a different server designed to handle insecure traffic and designed to not be disposed or easily exposed to mass or other security attacks (e.g., DoS, DDS attacks, and other types of security related and/or mass/large scale attacks against a network element, such as a download server or web/application server).

[0042] In some embodiments, a device supports two or more operating systems (e.g., different versions of operating systems and/or different operating systems) and for each operating system includes a compatible service processor. For example, when a dual boot configured device boots in a first operating system version, then a first service processor that is compatible with that first operating system version is selected for network access, and when the dual boot configured device boots in a second operating system version, then the second service processor that is compatible with that second operating system version is selected for network access.

[0043] In some embodiments, initial network access for a device is directed to a service controller (e.g., service control 150), service processor downloader (e.g., service processor download 170), and/or similar network element for managing service control. In some embodiments, initial network access is restricted to this initial network access to the service controller, service processor downloader, and/or similar network element for managing service control. In some embodiments, such initial network access is restricted until the device has been verified for network access, as similarly discussed herein with respect to various embodiments. In some embodiments, such initial network access is restricted until the device has been verified for network access and an appropriate service processor has been verified on the device and/or downloaded and installed on the device, as similarly discussed herein with respect to various embodiments. In some embodiments, such initial network access is restricted using various techniques, such as using a first version of a service processor on the device that restricts such initial network access. In some embodiments, such initial network access is restricted to and maintained in probation mode, as similarly described herein (e.g., a restricted IP address can be used for the service controller or other network element for service control instead of the secured

service controller IP addresses reserved for validated and non-probation mode service processors, which, for example, can reduce the risks of various security risks, such as DoS, DDS, and/or other mass attacks against publicly or other more easily accessible service controller or download servers). For example, such initial network access can include access to a common activation server, which the device can access for determination of a supported configuration for a new or second service processor image download. As another example, such initial network access can direct the device to an initial web page including access to a service plan offer and purchase options (e.g., providing for a device credential look up for device group, provide choices of programs to user, or other service plan offer and purchase options). As another example, the initial web page can include access to a service plan offer and purchase options and a service processor verification and download/update function.

[0044] In some embodiments, a network based charging data record (CDR) feed, as described herein with respect to various embodiments, is provided for monitoring service usage by managed devices. In some embodiments, the CDR feed includes device generated CDRs or micro-CDRs generated by the service processor (e.g., service processor 115 can generate CDRs for monitored service usage on the device, which can, for at least some CDRs, include unique transaction codes for uniquely identifying the monitored service usage based on service or other categorizations/criteria) on the device (e.g., a mobile device or an intermediate networking device for that mobile device). In some embodiments, the CDR feed is a real-time (e.g., near real-time) network based CDR feed provided for determining whether any devices have been compromised (e.g., a hack of a first version or second version service processor providing for unrestricted service usage for such devices, and/or any other mass or security attack or vulnerability or exploit). For example, such a CDR feed can be used to determine abnormal or unusual traffic patterns and/or service level usage activities, which, for example, can be used to identify and/or protect against a DoS/DDS attack or other types of security attacks.

[0045] In some embodiments, based on various device and/or network based monitoring techniques, as described herein with respect to various embodiments, a determination is made that the service processor (e.g., service processor 115) is not functioning properly (e.g., may have been damaged and/or compromised/tampered with and, for example, allowing network access beyond the device's associated service plan and/or not properly monitoring/billing for such

service usage) and that a new/replacement service processor should be downloaded. In some embodiments, a new/replacement service processor can be downloaded and installed in such situations, using the various techniques described herein with respect to various embodiments. In some embodiments, based on various criteria (e.g., service usage monitoring, billing, and/or any other criteria) or based on proactive and/or periodic administrative/security measures, a new/replacement service processor can be downloaded and installed, using the various techniques described herein with respect to various embodiments.

[0046] In some embodiments, based on, for example, service plan changes (e.g., user changes to their service plan), service provider changes (e.g., service provider changes to their services/service policies or the associated service plan), device changes (e.g., operating system version or other software platform changes or various hardware changes), a new service processor can be downloaded and installed or the installed service processor can be updated, using the various techniques described herein with respect to various embodiments.

[0047] **Figure 2** illustrates another wireless network architecture for providing DAS install techniques in accordance with some embodiments. As shown, Figure 2 includes a 4G/3G/2G wireless network operated by, for example, a central provider. As shown, various wireless mobile devices 100 are in communication with base stations 125 for wireless network communication with the wireless network, and other devices 100 are in communication with Wi-Fi Access Points (APs) or Mesh 702 for wireless communication to Wi-Fi Access CPE 704 in communication with central provider access network 109. In some embodiments, each of the mobile devices 100 includes a service processor 115 (as shown), which, for example, can be initially installed, downloaded, and/or updated service processors (e.g., first/second version service processor images) using service processor download function 170 as described herein, and each service processor 115 connects through a secure control plane link to a service controller 122. In some embodiments, the service processor download function 170 is located elsewhere in the network or partially located in elsewhere or integrated with/as part of other network elements as will be apparent to one of ordinary skill in the art in view of the various embodiments disclosed herein.

[0048] In some embodiments, service usage information includes network based service usage information (e.g., charging data records (CDRs)), which is obtained from one or more network elements. In some embodiments, service usage information includes micro-CDRs provided by the service processor (e.g., service processor 115) installed on the device (e.g., mobile device 100). In some embodiments, micro-CDRs are used for CDR mediation or reconciliation that provides for service usage accounting on any device activity that is desired, as described herein with respect to various embodiments. In some embodiments, each device activity that is desired to be associated with a billing event is assigned a micro-CDR transaction code, and the service processor 115 is programmed to account for that activity associated with that transaction code. In some embodiments, the service processor 115 periodically reports (e.g., during each heartbeat or based on any other periodic, push, and/or pull communication technique(s)) micro-CDR usage measures to, for example, the service controller 122 or some other network element. In some embodiments, the service controller 122 reformats the heartbeat micro-CDR usage information into a valid CDR format (e.g., a CDR format that is used and can be processed by an SGSN or GGSN) and then transmits it to an authorized network element for CDR mediation (e.g., CDR storage, aggregation, mediation, feed 118, billing system 123, and/or billing interface 127 or another authorized network element/function). In some embodiments, CDR mediation is used to account for the micro-CDR service usage information by depositing it into an appropriate service usage account and deducting it from the user device bulk service usage account. For example, this technique provides for a flexible service usage billing solution that uses pre-existing solutions for CDR mediation and billing. For example, the billing system (e.g., billing system 123 and/or billing interface 127) processes the mediated CDR feed from CDR storage, aggregation, mediation, feed 118, applies the appropriate account billing codes to the aggregated micro-CDR information that was generated by the device, and then generates billing events in a manner that does not require changes to billing systems and/or billing infrastructure (e.g., using new transaction codes to label the new device assisted billing capabilities).

[0049] As shown in Figure 2, a CDR storage, aggregation, mediation, feed 118 is provided. In some embodiments, the CDR storage, aggregation, mediation, feed 118 receives, stores, aggregates and mediates micro-CDRs received from mobile devices 100. In some embodiments, the CDR storage, aggregation, mediation, feed 118 also provides a settlement

platform using the mediated micro-CDRs, as described herein with respect to various embodiments. In some embodiments, another network element provides the settlement platform using aggregated and/or mediated micro-CDRs (e.g., central billing interface 127 and/or another network element). In some embodiments, various techniques for partitioning of device groups are used for partitioning the mobile devices 100 (e.g., allocating a subset of mobile devices 100 for a distributor, an OEM, a MVNO, and/or another partner). As also shown in Figure 2, a MVNO core network 210 also includes a MVNO CDR storage, aggregation, mediation, feed 118, a MVNO billing interface 122, and a MVNO billing system 123. In some embodiments, the MVNO CDR storage, aggregation, mediation, feed 118 receives, stores, aggregates and mediates micro-CDRs received from mobile devices 100 (e.g., MVNO group partitioned devices).

[0050] Those of ordinary skill in the art will appreciate that various other network architectures can be used for providing DAS install techniques, and Figure 2 is illustrative of just one such example network architecture for which DAS install techniques described herein can be provided.

[0051] In some embodiments, CDR storage, aggregation, mediation, feed 118 (e.g., service usage 118, including a billing aggregation data store and rules engine) is a functional descriptor for, in some embodiments, a device/network level service usage information collection, aggregation, mediation, and reporting function located in one or more of the networking equipment apparatus/systems attached to one or more of the sub-networks shown in Figure 2 (e.g., central provider access network 109 and/or central provider core network 110), which is in communication with the service controller 122, and a central billing interface 127. As shown, service usage 118 provides a function in communication with the central provider core network 110. In some embodiments, the CDR storage, aggregation, mediation, feed 118 function is located elsewhere in the network or partially located in elsewhere or integrated with/as part of other network elements. In some embodiments, CDR storage, aggregation, mediation, feed 118 functionality is located or partially located in the AAA server 121 and/or the mobile wireless center/Home Location Register (HLR) 132 (as shown, in communication with a DNS/DHCP server 126). In some embodiments, service usage 118 functionality is located or partially located in the base station, base station controller and/or base station aggregator, collectively referred to as base station 125 in Figure 2. In some embodiments, CDR storage,

aggregation, mediation, feed 118 functionality is located or partially located in a networking component in the central provider access network 109, a networking component in the core network 110, the central billing system 123, the central billing interface 127, and/or in another network component or function. This discussion on the possible locations for the network based and device based service usage information collection, aggregation, mediation, and reporting function (e.g., CDR storage, aggregation, mediation, feed 118) can be easily generalized as described herein and as shown in the other figures described herein as would be apparent to one of ordinary skill in the art. Also as shown in Figure 2, the service controller 122 is in communication with the central billing interface 127 (also sometimes referred to as the external billing management interface or billing communication interface), which is in communication with the central billing system 123. As shown, an order management 180 and a subscriber management 182 are also in communication with the central provider core network 110 for facilitating order and subscriber management of services for the devices 100 in accordance with some embodiments, and a network provisioning system 160 is also provided in communication with the central provider core network 110 for facilitating network provisioning functions.

[0052] In some embodiments, the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) provides a device/network level service usage information collection, aggregation, mediation, and reporting function. In some embodiments, the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) collects device generated usage information for one or more devices on the wireless network (e.g., devices 100); and provides the device generated usage information in a syntax and a communication protocol that can be used by the wireless network to augment or replace network generated usage information for the one or more devices on the wireless network. In some embodiments, the syntax is a charging data record (CDR), and the communication protocol is selected from one or more of the following: 3GPP, 3GPP2, or other communication protocols. In some embodiments, as described herein, the CDR storage, aggregation, mediation, feed 118 collects/receives micro-CDRs for one or more devices on the wireless network (e.g., devices 100). In some embodiments, the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) includes a service usage data store (e.g., a billing aggregator) and a rules engine for aggregating the collected device generated usage information. In some embodiments, the

network device is a CDR feed aggregator, and the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) also aggregates CDRs and/or micro-CDRs for the one or more devices on the wireless network; applies a set of rules to the aggregated CDRs and/or micro-CDRs using a rules engine (e.g., bill by account, transactional billing, revenue sharing model, and/or any other billing or other rules for service usage information collection, aggregation, mediation, and reporting), and communicates a new set of CDRs for the one or more devices on the wireless network to a billing interface or a billing system (e.g., providing a CDR with a billing offset by account/service).

[0053] In some embodiments, the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) communicates a new set of CDRs (e.g., aggregated and mediated CDRs and/or micro-CDRs that are then translated into standard CDRs) for the one or more devices on the wireless network to a billing interface (e.g., central billing interface 127) or a billing system (e.g., central billing system 123). In some embodiments, the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) communicates with a service controller (e.g., service controller 122) to collect the device generated usage information (e.g., micro-CDRs) for the one or more devices on the wireless network. In some embodiments, the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) communicates with a service controller, in which the service controller is in communication with a billing interface or a billing system. In some embodiments, the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) communicates the device generated usage information to a billing interface or a billing system. In some embodiments, the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) communicates with a transport gateway (not shown) and/or a Radio Access Network (RAN) gateway (not shown) to collect the network generated usage information for the one or more devices on the wireless network. In some embodiments, the service controller 122 communicates the device generated service usage information (e.g., micro-CDRs) to the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements).

[0054] In some embodiments, the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) performs rules for performing a bill by account aggregation and mediation function. In some embodiments, the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) performs rules for performing a service billing function, as described herein, and/or for performing a service/transactional revenue sharing function, as described herein. In some embodiments, the service controller 122 in communication with the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) performs a rules engine for aggregating and mediating the device generated usage information (e.g., micro-CDRs). In some embodiments, a rules engine device in communication with the CDR storage, aggregation, mediation, feed 118 (and/or other network elements or combinations of network elements) performs a rules engine for aggregating and mediating the device generated usage information.

[0055] In some embodiments, the rules engine is included in (e.g., integrated with/part of) the CDR storage, aggregation, mediation, feed 118. In some embodiments, the rules engine and associated functions, as discussed herein, is a separate function/device. In some embodiments, the service controller 122 performs some or all of these rules engine based functions, as discussed herein, and communicates with the central billing interface 127. In some embodiments, the service controller 122 performs some or all of these rules engine based functions, as discussed herein, and communicates with the central billing system 123.

[0056] In some embodiments, duplicate CDRs are sent from the network equipment to the billing system 123 that is used for generating service billing. In some embodiments, duplicate CDRs are filtered to send only those CDRs/records for devices controlled by the service controller and/or service processor (e.g., managed devices). For example, this approach can provide for the same level of reporting, lower level of reporting, and/or higher level of reporting as compared to the reporting required by the central billing system 123.

[0057] In some embodiments, the service controller 122 sends the device generated CDRs to the rules engine (e.g., service usage 118), and the rules engine applies one or more rules, such as those described herein and/or any other billing/service usage related rules as would

be apparent to one of ordinary skill in the art. In some embodiments, the service controller 122 generates CDRs similar to other network elements, and the rules (e.g., bill-by-account) are performed in the central billing interface 127. For example, for the service controller 122 to generate CDRs similar to other network elements, in some embodiments, the service controller 122 is provisioned on the wireless network and behaves substantially similar to other CDR generators on the network) as would be apparent to one of ordinary skill in the art.

[0058] In some embodiments, the service controller 122 is provisioned as a new type of networking function that is recognized as a valid and secure source for CDRs by the other necessary elements in the network (e.g., CDR storage, aggregation, mediation, feed 118). In some embodiments, where the network necessary apparatus will only recognize CDRs from certain types of networking equipment (e.g. a RAN gateway or transport gateway), then the service controller 122 can provide authentication credentials to the other networking equipment that indicate it is one of the approved types of equipment. In some embodiments, the link between the service controller 122 and the necessary CDR aggregation and mediation equipment is secured, authenticated, encrypted, and/or signed.

[0059] In some embodiments, the CDR storage, aggregation, mediation, feed 118 discards the network based service usage information (e.g., network based CDRs) received from one or more network elements. In these embodiments, the service controller 122 can provide the device based service usage information (e.g., device based CDRs or micro-CDRs) to the CDR storage, aggregation, mediation, feed 118 (e.g., the CDR storage, aggregation, mediation, feed 118 can just provide a store, aggregate, and communication function(s)), and the device based service usage information is provided to the central billing interface 127 or the central billing system 123.

[0060] In some embodiments, the device based CDRs (e.g., micro-CDRs) and/or new CDRs generated based on execution of a rules engine as described herein are provided only for devices that are managed and/or based on device group, service plan, or any other criteria, categorization, and/or grouping, such as based on ambient service or ambient service provider or transactional service or transactional service provider.

[0061] In some embodiments, based on, for example, service plan changes (e.g., user changes to their service plan), service provider changes (e.g., service provider changes to their services/service policies or the associated service plan), micro-CDR transaction code changes, and/or any other related changes, a new service processor can be downloaded and installed or the installed service processor can be updated to allow, for example, the tracking of one or more service usage activities by the device using micro-CDRs (e.g., for new or previously unmonitored/untracked service usage activities, using, for example, new or updated micro-CDR transaction codes (uniquely) associated with such service usage activities), using the various techniques described herein with respect to various embodiments.

[0062] **Figure 3** illustrates a flow diagram for DAS install techniques in accordance with some embodiments. At 302, the process begins. At 304, whether a device (e.g., mobile device 100) is in a device group is determined. At 306, whether the device includes a service processor is determined. If so, at 308, then the installed service processor is verified (e.g., up to date and/or validated for that device, device group, and/or associated service plan) and network access is allowed (e.g., managed/monitored by the installed and verified service processor according to the associated service plan for the device). Otherwise (e.g., the device does not have an installed service processor), at 310, then an appropriate service processor for the device is determined (e.g., based on the device type, device group, and/or version, such as hardware/software platform of the device, an associated service plan, service provider, and/or any other criteria or settings). At 312, the service processor is downloaded and installed (e.g., using a bootstrap process or other techniques, as described herein with respect to various embodiments) and network access is allowed (e.g., managed/monitored by the installed service processor according to the associated service plan for the device).

[0063] In some embodiments, the device is also directed to, for example, an activation server to, for example, authenticate the device and/or verify a service processor for the device (e.g., ensure that a current and verified service processor version is installed and/or download a current and verified service processor version for the device) prior to allowing such network access. For example, a DAS install client can be downloaded (e.g., using bootstrapping or other/similar techniques, from a download server and/or from a website) that allows for secure connection from the device (e.g., mobile device 100) to a secure download server (e.g., service

processor download 170) (e.g., support for a configuration of the device is determined, such as through a device query or device download of client verification software can be used to verify the device hardware/software configuration). In this example, a user/device validation step can also be performed. For example, an authorization process for a user sign-up can be performed (e.g., based on a user name, MAC address, Turing machine text verification, credit card verification, and/or other authorization/validation techniques), in which this can be performed automatically or the user/device can be required to enter certain credentials for authorization/validation. In some embodiments, the authorization process also includes various techniques for associating a user's identity with the device (e.g., using public key/TLS techniques, SSH techniques for TLS, and/or identity management techniques). In this example, a check can also be performed to determine if the device was previously and/or is currently an activated device (e.g., the device is already associated with a service plan). For example, whether the device belongs to a registered device group can be determined, and if not, then the default settings for that type of device can be applied. In some embodiments, the service processor is encrypted, hashed, and/or obfuscated based on the previous determination (e.g., device group association and/or default device settings). In some embodiments, if the device is not associated with a service plan (e.g., based on the device look-up using device based unique identifier(s)/credential(s), as described herein), then the device can be redirected to a service portal for an activation offer for a service plan (e.g., using an activation server). In some embodiments, the portal utilizes header information to indicate that the device is a managed device (e.g., for a given service provider, MVNO, or other service partner) in the portal request to proxy to an appropriate proxy server for that service provider for the activation process. At 314, the process is completed.

[0064] **Figure 4** illustrates another flow diagram for DAS install techniques in accordance with some embodiments. At 402, the process begins. At 404, whether a device (e.g., mobile device 100) is in a device group is determined (e.g., or other list that indicates that this device includes an installed, up to date, and/or validated service processor, and, for example, to also verify that the SIM, ESN, or other unique device identifier is registered, such as in an HLR/NIR database, as associated with service settings/policies for that device for service access). At 406, whether the device includes a first version service processor is determined. If not (e.g., the device does not have an installed first version service processor), at 408, then a new

service processor is downloaded (e.g., as similarly discussed above with respect to Figure 3) and network access is allowed (e.g., managed/monitored by the installed new service processor according to the associated service plan for the device). Otherwise (e.g., the device includes an installed first version service processor), then at 410, an appropriate second version service processor for the device is determined (e.g., based on the device type and version, such as hardware/software platform, device group, an associated service plan, service provider, and/or any other criteria or settings). At 412, the second version service processor (e.g., secured for the device, using various techniques, as described herein) is downloaded and installed (e.g., using bootstrapping or other/similar techniques, as described herein), or in some embodiments, the first version of the service processor is updated to provide a second version service processor uniquely associated with the device, and network access is allowed (e.g., managed/monitored by the installed second version service processor according to the associated service plan for the device). At 414, the process is completed.

[0065] **Figure 5** illustrates another flow diagram for DAS install techniques in accordance with some embodiments. At 502, the process begins. At 504, whether a device (e.g., mobile device 100) is in a device group is determined (e.g., as similarly described above with respect to Figure 3). At 506, whether the device includes a first version service processor is determined. If not (e.g., the device does not have an installed first version service processor), at 508, then a new service processor is downloaded (e.g., as similarly discussed above with respect to Figure 3) and network access is allowed (e.g., managed/monitored by the installed new service processor according to the associated service plan for the device). Otherwise (e.g., the device includes an installed first version service processor), at 410, then an appropriate second version service processor for the device is determined (e.g., based on the device type and version, such as hardware/software platform, device group, an associated service plan, service provider, and/or any other criteria or settings). At 512, the second version service processor (e.g., secured using various techniques, as described herein) is downloaded and installed (e.g., using a bootstrap process or other/similar techniques, as described herein). At 514, network access is allowed in probation mode, as described herein with respect to various embodiments. For example, the device can be managed in probation mode after the new/second version service processor install (e.g., service control communication can be limited to a particular set of probation mode IP addresses that can be used for the service controller or other network element for service control

instead of the secured service controller IP addresses reserved for validated and non-probation mode service processors, which, for example, can reduce the risks of various security risks, such as DoS, DDS, or other mass or other security attacks against publicly or other more easily accessible service controller or download servers). In some embodiments, while in probation mode, the service processor executes more robust service monitoring techniques (e.g., more frequent and/or more robust service integrity checks and/or more frequent heartbeats, for example, to monitor actual device/user behavior with the associated expected behavior). At 516, after the probation period is completed (e.g., based on time, monitored activities, and/or any other criteria), network access is allowed in normal mode (e.g., the device is no longer operating in the probation mode, as described herein). For example, after a probation period is completed (e.g., based on time, monitored activities, and/or any other criteria), the device is provided access based on the associated service plan, which is managed, at least in part, by the service processor in communication with, for example, a service controller or other network element for service control. At 518, the process is completed.

[0066] In some embodiments, the device OS requires a pre-registered and signed version of the service processor software in order for the OS to allow the service processor to be installed or updated. In such embodiments, a sequence of pre-registered, pre-signed service processor software versions that have differing security parameters (e.g. encryption, signature, obfuscation, differences in code sequences, information for query – response sequences, and/or other security parameters) are provided. In some embodiments, the pre-registered service processors are used to regularly update the service processor software for a portion of devices connected to the network, or for all devices connected to the network. In some embodiments, a specific version of the service processor is assigned to a given device, and other versions with other security parameters will not be allowed to obtain service from the network. For example, more than one version of the software can be registered and distributed at any one time so that a hacker cannot create code that works for all devices. A sequence of service processor versions can be held in reserve and deployed when a successful software hack version is detected in the field for one or more previous service processor versions, and the new versions that have been held in reserve can be used to update devices in the field. As the reserved versions have not yet been distributed prior to the detection of a successful hack, it is not possible for a hacker to have a hacked version of the new software, and by refreshing new versions on a frequent basis it can become

impossible for a hacker to successfully hack the new versions before additional new versions are deployed. Such embodiments can buy time by keeping successful software hacks out of the devices in the field until the successful software hack can be analyzed and a systematic security solution implemented to prevent the hack from remaining effective.

[0067] In some embodiments not all of the service processor software is modified into pre-registered modified security configuration versions that are regularly refreshed, but instead a portion of the service processor software that includes unique security information (e.g., security keys, signatures and/or responses to secure queries, and/or other security information, and/or the capability to analyze the integrity of the other service processor software). In this manner, when a device is suspected of being hacked the new service processor software portion with different security configuration can be updated and used to ascertain the integrity of the existing service processor configuration, which makes the update process shorter and lower bandwidth.

[0068] Although the foregoing embodiments have been described in some detail for purposes of clarity of understanding, the invention is not limited to the details provided. There are many alternative ways of implementing the invention. The disclosed embodiments are illustrative and not restrictive.

[0069] WHAT IS CLAIMED IS:

CLAIMS

1. A system, comprising:

a processor of a network device configured to:

determine if a communications device in communication with a wireless network includes a service processor for assisting control of the communications device use of a service on the wireless network, wherein the service processor includes a service profile that includes a plurality of service policy settings, and wherein the service profile is associated with a service plan that provides for access to the service; and

verify the service processor; and

a memory of the network device coupled to the processor and configured to provide the processor with instructions.

2. The system recited in claim 1, wherein the service processor is uniquely associated with the communications device.

3. The system recited in claim 1, wherein the communications device is activated prior to a point of sale of the communications device, and the service plan is associated with the communications device during activation.

4. The system recited in claim 1, wherein the service plan is associated with the communications device during one or more of the following: a manufacture of the communications device, a distribution of the communications device, or a point of sale of the communications device.

5. The system recited in claim 1, wherein the service plan is an ambient service plan that provides a low cost or free trial service plan that is bundled or provided as an option for purchase at a point of sale of the communications device.

6. The system recited in claim 1, wherein the communications device includes a plurality of service processors for supporting a plurality of operating systems and/or service plans.

7. The system recited in claim 1, wherein the communications device is a mobile communications device or an intermediate networking device, and the service includes one or more Internet based services.

8. The system recited in claim 1, wherein the communications device is a mobile communications device, and the service includes one or more Internet based services, and wherein the mobile communications device includes one or more of the following: a mobile phone, a PDA, an eBook reader, a music device, an entertainment/gaming device, a computer, laptop, a netbook, a tablet, and a home networking system.

9. The system recited in claim 1, wherein the communications device includes a modem, and the processor is located in the modem.

10. The system recited in claim 1, wherein the service policy settings include one or more of the following: access control settings, traffic control settings, billing system settings, user notification with acknowledgement settings, user notification with synchronized service usage information, user privacy settings, user preference settings, authentication settings, admission control settings, application access settings, content access settings, transaction settings, and network or device management communication settings.

11. The system recited in claim 1, wherein the implementation of the first service profile is verified based on one or more of the following: device generated service usage information and network generated service usage information.

12. The system recited in claim 1, wherein the communications device does not include the service processor, and the processor of the network device is further configured to:

download the service processor to the communications device.

13. The system recited in claim 1, wherein the communications device does not include the service processor, and the processor of the network device is further configured to:

download a service processor to the communications device using a bootstrapper.

14. The system recited in claim 1, wherein the communications device includes the service processor, and the processor of the network device is further configured to:

update the service processor.

15. The system recited in claim 1, wherein the communications device includes the service processor, and the processor of the network device is further configured to:

download a replacement service processor.

16. The system recited in claim 1, wherein the communications device includes a first version service processor, and the processor of the network device is further configured to:

download a second version service processor.

17. The system recited in claim 1, wherein the communications device includes a first version service processor, and the processor of the network device is further configured to:

download a second version service processor, wherein the second version service processor is uniquely associated with the communications device.

18. The system recited in claim 1, wherein the communications device includes a first version service processor, and the processor of the network device is further configured to:

determine a device group associated with the communications device; and

download a second version service processor based on the device group.

19. The system recited in claim 1, wherein the communications device includes a first version service processor, and the processor of the network device is further configured to:

determine a device group associated with the communications device; and

download a second version service processor based on the device group, wherein the second version service processor is uniquely associated with the communications device based on one or more device credentials of the communications device.

20. The system recited in claim 1, wherein the communications device includes a first version service processor, and the processor of the network device is further configured to:

download a second version service processor, wherein the second version service processor is uniquely associated with the communications device based on one or more device credentials of the communications device and user information associated with a temporary user account.

21. The system recited in claim 1, wherein the communications device includes a first version service processor, and the processor of the network device is further configured to:

download a service processor update, wherein the service processor update includes one or more updates to the first version service processor.

22. The system recited in claim 1, wherein the communications device includes a first version service processor, and the processor of the network device is further configured to:

download a service processor update, wherein the service processor update includes one or more settings changes to the first version service processor.

23. The system recited in claim 1, wherein the communications device includes a first version service processor, and the processor of the network device is further configured to:

download a service processor update, wherein the service processor update includes one or more encryption or obfuscation computations to perform on the first version service processor to provide a second version of the service processor that is uniquely associated with the communications device, a communications device user, a device group associated with the communications device, and/or the service plan associated with the communications device.

24. The system recited in claim 1, wherein the communications device includes a first version service processor, and the processor of the network device is further configured to:

download a second version service processor, wherein the second version service processor is uniquely associated with the communications device, and wherein the second version service processor includes one or more restricted IP addresses providing for access to a service controller reserved for verified and non-probation mode service processors.

25. The system recited in claim 1, wherein the communications device includes a first version service processor that allows for limited access to the wireless network for purposes of service control and for permitting selection of a new service plan, and the processor of the network device is further configured to:

download a second version service processor based on a new service plan selection for the communications device, wherein the second version service processor is uniquely associated with the communications device.

26. The system recited in claim 1, wherein the communications device includes a first version service processor, and the processor of the network device is further configured to:

download a second version service processor, wherein the second version service processor facilitates a dual boot configuration that provides support for a plurality of operating systems executed on the communications device.

27. The system recited in claim 1, wherein the service plan includes an option to purchase a new service plan for the communications device, wherein the new service plan includes

additional service capabilities, and wherein the processor of the network device is further configured to:

download a new service processor to the communications device, wherein the new service processor is associated with the new service plan.

28. The system recited in claim 1, wherein the communications device includes the service processor, and the processor of the network device is further configured to:

download a new service processor based on one or more of the following: a new service plan selection, an indication of tampering with the service processor, an update availability for the service processor, and a periodic service processor verification request.

29. The system recited in claim 1, wherein the processor of the network device is further configured to:

allow the communications device access to the service in a probation mode, wherein the communications device is initially in a probation mode that allows for access to the service with increased service monitoring and/or limited service capabilities that are limited based on one or more of the following: period of time, network address, service type, content type, application type, bandwidth, and data usage.

30. The system recited in claim 1, wherein the processor of the network device is further configured to:

periodically download an updated or replacement service processor to the communications device .

31. A method, comprising:

determining if a communications device in communication with a wireless network includes a service processor for assisting control of the communications device use of a service on the wireless network, wherein the service processor includes a service profile that includes a

plurality of service policy settings, and wherein the service profile is associated with a service plan that provides for access to the service; and

verifying the service processor.

32. A computer program product, the computer program product being embodied in a computer readable storage medium and comprising computer instructions for:

determining if a communications device in communication with a wireless network includes a service processor for assisting control of the communications device use of a service on the wireless network, wherein the service processor includes a service profile that includes a plurality of service policy settings, and wherein the service profile is associated with a service plan that provides for access to the service; and

verifying the service processor.

DEVICE ASSISTED SERVICES INSTALL

ABSTRACT OF THE DISCLOSURE

[0070] Device assisted services (DAS) install techniques are provided in accordance with some embodiments. In some embodiments, DAS install techniques for providing service processors for mobile devices are provided. In some embodiments, DAS install techniques for downloading/installing new and/or updated service processors for mobile devices are provided. In some embodiments, DAS install techniques for providing verified service processors for mobile devices are provided. In some embodiments, DAS install techniques for providing secured service processors for mobile devices are provided. In some embodiments, DAS install techniques include determining if a communications device in communication with a wireless network includes a service processor for assisting control of the communications device use of a service on the wireless network, in which the service processor includes a service profile that includes a plurality of service policy settings, and in which the service profile is associated with a service plan that provides for access to the service; and verifying the service processor. In some embodiments, DAS install techniques include providing a generic first version service processor for downloading and installing a second version service processor.

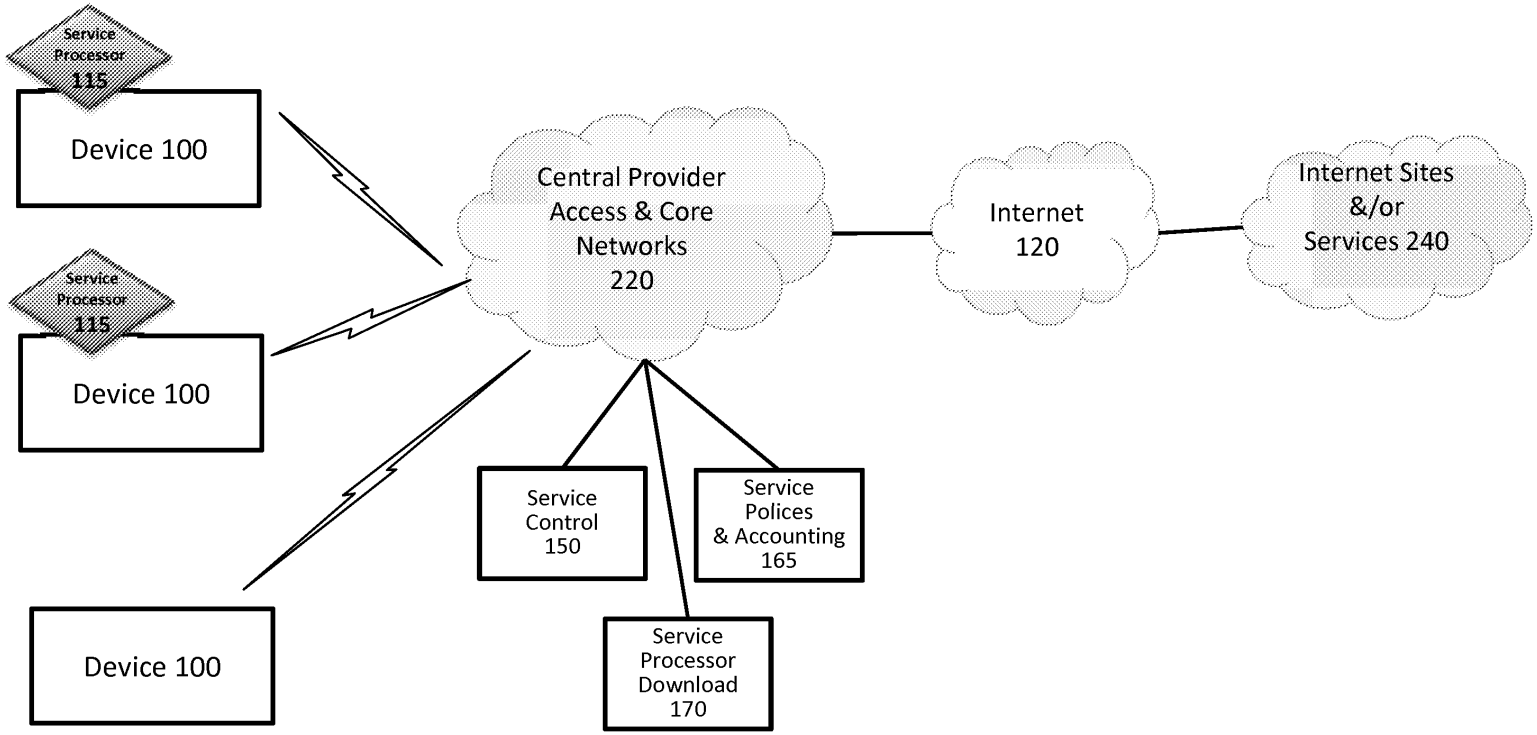

Service Processor 115
Device 100
Service Processor 115
Device 100
Device 100
Central Provider Access & Core Networks 220
Internet 120
Internet Sites &/or Services 240
Service Control 150
Service Polices & Accounting 165
Service Processor Download 170

Figure 1

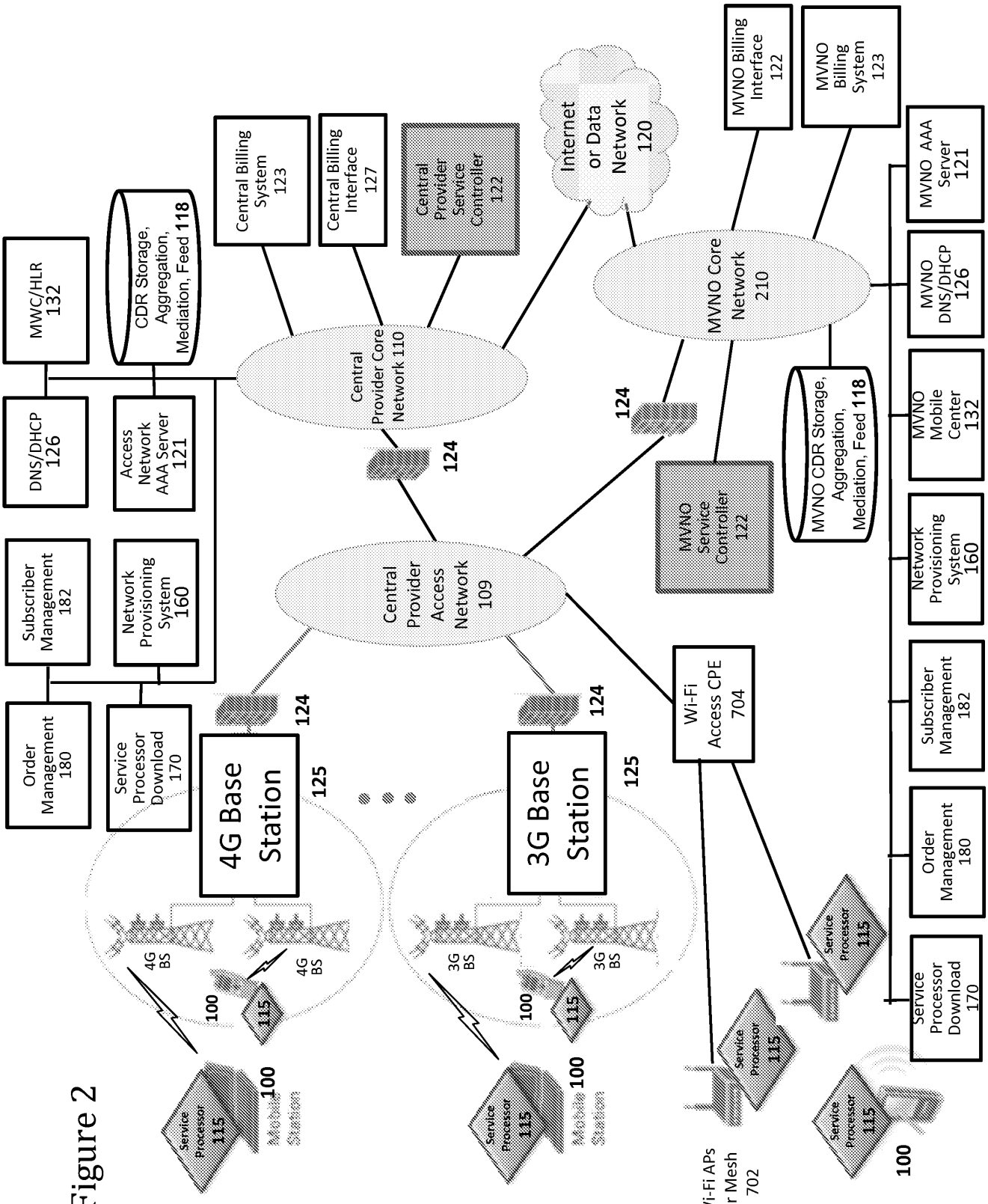

MWC/HLR 132
CDR Storage, Aggregation, Mediation, Feed 118
Central Billing System 123
Central Billing Interface 127
Central Provider Service Controller 122
Internet or Data Network 120
MVNO Billing Interface 122
MVNO Billing System 123
MVNO AAA Server 121
DNS/DHCP 126
Access Network AAA Server 121
Central Provider Core Network 110
MVNO Core Network 210
MVNO DNS/DHCP 126
MVNO Mobile Center 132
Subscriber Management 182
Network Provisioning System 160
Central Provider Access Network 109
MVNO Service Controller 122
MVNO CDR Storage, Aggregation, Mediation, Feed 118
Network Provisioning System 160
Order Management 180
Service Processor Download 170
4G Base Station
3G Base Station
Wi-Fi Access CPE 704
Subscriber Management 182
Order Management 180
Service Processor Download 170
4G BS
3G BS
Service Processor 115
Mobile Station 100
Wi-Fi APs or Mesh 702
124
125

Figure 2

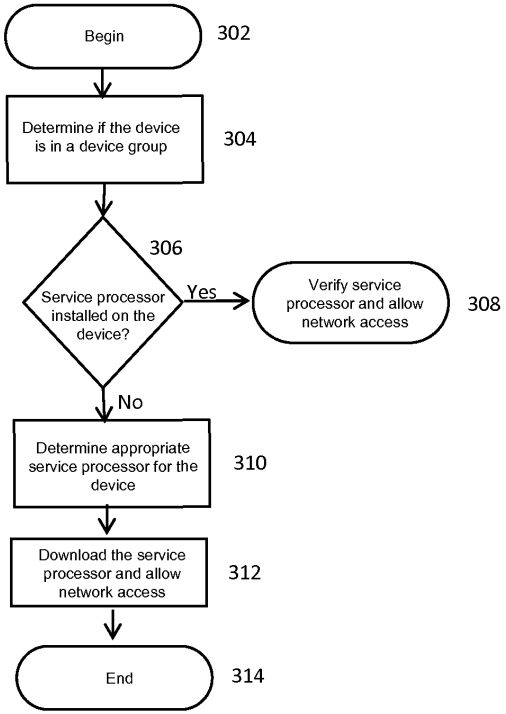

Begin
302
Determine if the device is in a device group
304
306
Service processor installed on the device?
Yes
Verify service processor and allow network access
308
No
Determine appropriate service processor for the device
310
Download the service processor and allow network access
312
End
314

Figure 3

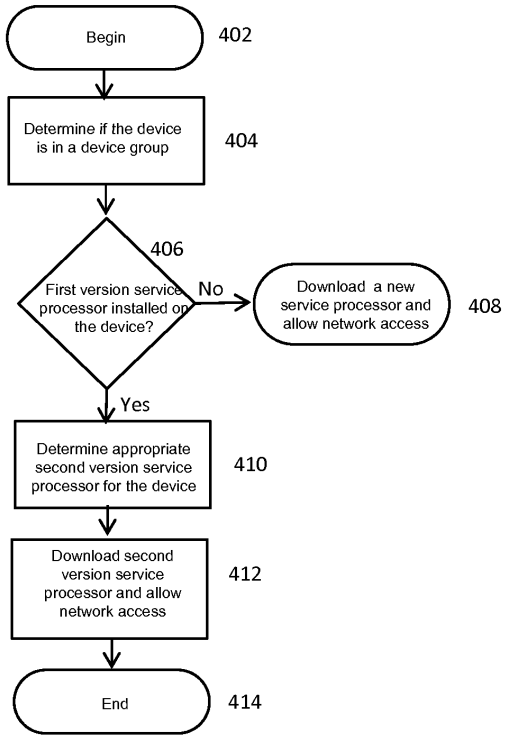

Begin
402
Determine if the device is in a device group
404
406
First version service processor installed on the device?
No
Download a new service processor and allow network access
408
Yes
Determine appropriate second version service processor for the device
410
Download second version service processor and allow network access
412
End
414

Figure 4

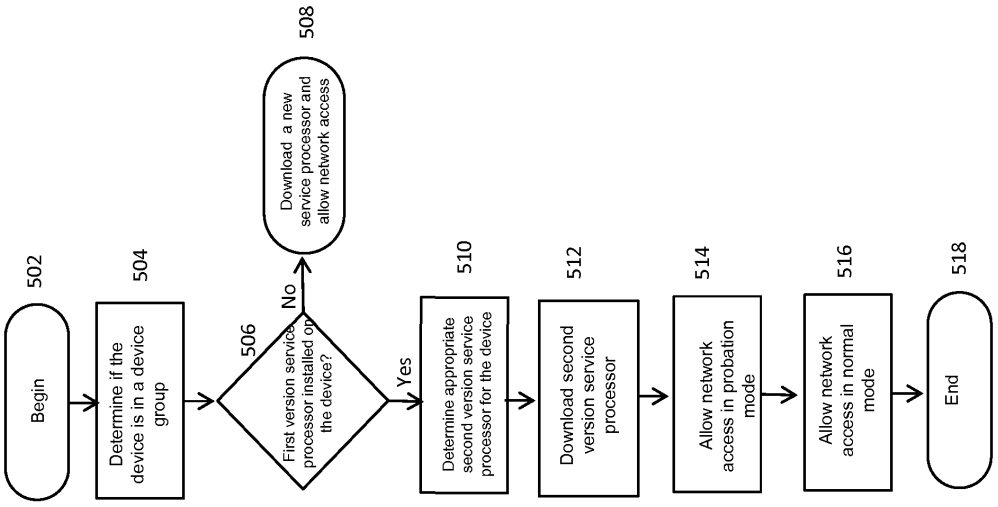

502
Begin
504
Determine if the device is in a device group
506
First version service processor installed on the device?
No
508
Download a new service processor and allow network access
Yes
510
Determine appropriate second version service processor for the device
512
Download second version service processor
514
Allow network access in probation mode
516
Allow network access in normal mode
518
End

Figure 5

Electronic Acknowledgement Receipt	
EFS ID:	6886321
Application Number:	12694455
International Application Number:	
Confirmation Number:	6047
Title of Invention:	DEVICE ASSISTED SERVICES INSTALL
First Named Inventor/Applicant Name:	Gregory G. Raleigh
Customer Number:	21912
Filer:	Michael J. Schallop/Veronica Pula
Filer Authorized By:	Michael J. Schallop
Attorney Docket Number:	RALEP027
Receipt Date:	27-JAN-2010
Filing Date:	
Time Stamp:	12:58:54
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	Application Data Sheet	RALEP027_Application_Data_Sheet_sb0014_fill.pdf	964963 5399205c4f410532d1ca8241c14414c60937cf32	no	5
Warnings:					
Information:					

2		RALEP027_APP.pdf	175280 e3225c202dc37292066b0abb24915853db d03941	yes	39

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Transmittal of New Application	1	1
Specification	2	31
Claims	32	38
Abstract	39	39

Warnings:

Information:

3	Drawings-only black and white line drawings	RALEP027_Figures.pdf	536726 503d4c4b99ef58679dd65b9615e6af60a41 aec59	no	5

Warnings:

Information:

Total Files Size (in bytes):	1676969

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.

PTO/SB/14 (07-07)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RALEP027
	Application Number	
Title of Invention	DEVICE ASSISTED SERVICES INSTALL	

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.)

Applicant Information:

Applicant 1 Remove

Applicant Authority ◉ Inventor ○ Legal Representative under 35 U.S.C. 117 ○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Gregory	G.	Raleigh	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Woodside	State/Province	CA	Country of Residence i	US

Citizenship under 37 CFR 1.41(b) i: US

Mailing Address of Applicant:

Address 1	2995 Woodside Road
Address 2	Suite 400

City	Woodside	State/Province	CA
Postal Code	94062	Country i	

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).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	21912		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	DEVICE ASSISTED SERVICES INSTALL		
Attorney Docket Number	RALEP027	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	5	Suggested Figure for Publication (if any)	

EFS Web 2.2.2

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RALEP027
	Application Number	
Title of Invention	DEVICE ASSISTED SERVICES INSTALL	

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). Enter either 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	21912		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this 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(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation in part of	12380780	2009-03-02
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61206354	2009-01-28
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61206944	2009-02-04
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61207393	2009-02-10
Prior Application Status			Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61207739	2009-02-13
Prior Application Status			Remove

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RALEP027
	Application Number	
Title of Invention	DEVICE ASSISTED SERVICES INSTALL	

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61264120	2009-11-24

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 benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. 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(a).

Remove

Application Number	Country [i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			(•) Yes ( ) No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1 Remove

If the Assignee is an Organization check here. [X]

Organization Name	Headwater Partners I LLC		
Mailing Address Information:			
Address 1	2995 Woodside Road		
Address 2	Suite 400		
City	Woodside	**State/Province**	CA
Country [i]	US	Postal Code	94062
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button. Add

Signature:

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 J. Schallop/			Date (YYYY-MM-DD)	2010-01-27
First Name	Michael	Last Name	Schallop	Registration Number	44319

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RALEP027
	Application Number	
Title of Invention	DEVICE ASSISTED SERVICES INSTALL	

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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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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.

SCORE Placeholder Sheet for IFW Content

Application Number: 12694455 Document Date: 1/27/2010

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

- Drawings – Other than Black and White Line Drawings

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

To access the documents in the SCORE database, refer to instructions developed by SIRA.

At the time of document entry (noted above):

- Examiners may access SCORE content via the eDAN interface.
- Other USPTO employees can bookmark the current SCORE URL (http://es/ScoreAccessWeb/).
- External customers may access SCORE content via the Public and Private PAIR interfaces.

Form Revision Date: February 8, 2006

PTO/SB/06 (12-04)

Date: **01/27/10**

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PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

Application or Docket Number: 12/694,455

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			N/A	**330**
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	**540**
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	**220**
TOTAL CLAIMS (37 CFR 1.16(i))	**32** minus 20 =	**12**	x$26		OR	x$52	**624**
INDEPENDENT CLAIMS (37 CFR 1.16(h))	**3** minus 3 =	*	x$110			x$220	
APPLICATION SIZE * FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $260 ($130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			195			390	
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	**1714**

APPLICATION AS AMENDED – PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDI-TIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDI-TIONAL FEE ($)
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))					N/A		OR	N/A	
					TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDI-TIONAL FEE ($)	OR	RATE ($)	ADDI-TIONAL FEE ($)
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))					N/A		OR	N/A	
					TOTAL ADD'T FEE		OR	TOTAL ADD'T 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 number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. 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, 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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