

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Eastern District of Texas, Marshall Division on the following

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

DOCKET NO. 2:24-cv-00133	DATE FILED 2/23/2024	U.S. DISTRICT COURT for the Eastern District of Texas, Marshall Division
PLAINTIFF Avant Location Technologies LLC		DEFENDANT Samsung Electronics Co., Ltd. an Samsung Electronics America, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,738,040	5/27/2014	Avant Location Technologies LLC
2 10,009,720	6/26/2018	Avant Location Technologies LLC
3 9,042,910	5/26/2015	Avant Location Technologies LLC
4 8,934,922	1/13/2015	Avant Location Technologies LLC
5 9,119,030	8/25/2015	Avant Location Technologies LLC

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

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

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

DECISION/JUDGEMENT

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



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/315,703	01/13/2015	8934922	122358-367401	5654
26694	7590	12/23/2014		
VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998				

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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

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

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

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

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

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

AFIRMA CONSULTING & TECHNOLOGIES, S.L., Madrid, SPAIN, Assignee (with 37 CFR 1.172 Interest);
CARLOS A. PEREZ LAFUENTE, Madrid, SPAIN;

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



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
14/315,703	06/26/2014	2643	730	122358-367401	16	1

CONFIRMATION NO. 5654

CORRECTED FILING RECEIPT

26694
VENABLE LLP
P.O. BOX 34385
WASHINGTON, DC 20043-9998



Date Mailed: 12/09/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

CARLOS A. PEREZ LAFUENTE, Madrid, SPAIN;

Applicant(s)

AFIRMA CONSULTING & TECHNOLOGIES, S.L., Madrid, SPAIN

Power of Attorney: The patent practitioners associated with Customer Number 26694

Domestic Priority data as claimed by applicant

This application is a CON of 14/250,517 04/11/2014
which is a CON of 12/294,641 04/12/2010 PAT 8738040 *
which is a 371 of PCT/EP2007/052939 03/27/2007

(*)Data provided by applicant is not consistent with PTO records.

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)
EUROPEAN PATENT OFFICE (EPO) 06111804.8 03/28/2006

If Required, Foreign Filing License Granted: 07/08/2014

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/315,703**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA

Preliminary Class

455

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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 Assets Control, 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).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

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)

VENABLE LLP
P.O. Box 34385
Washington, DC 20043-9998

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.
14/315,703	06/26/2014	Carlos A. Perez Lafuente	122358-367401	5654

TITLE OF INVENTION: METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480.00			\$480.00	01/31/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
J. Chang	2643	

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 Venable LLP

2 Jeffri A. Kaminski

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)

AFIRMA CONSULTING & TECHNOLOGIES, S.L.

Madrid, Spain

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 22-0261 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature /Jeffri A. Kaminski/

Date December 5, 2014

Typed or printed name Jeffri A. Kaminski

Registration No. 42,709

Electronic Patent Application Fee Transmittal				
Application Number:		14315703		
Filing Date:		26-Jun-2014		
Title of Invention:		METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA		
First Named Inventor/Applicant Name:		CARLOS A. PEREZ LAFUENTE		
Filer:		Jeffri Kaminski/l hayes		
Attorney Docket Number:		122358-367401		
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	480	480
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				480

Electronic Acknowledgement Receipt	
EFS ID:	20876312
Application Number:	14315703
International Application Number:	
Confirmation Number:	5654
Title of Invention:	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA
First Named Inventor/Applicant Name:	CARLOS A. PEREZ LAFUENTE
Customer Number:	26694
Filer:	Jeffri Kaminski/I hayes
Filer Authorized By:	Jeffri Kaminski
Attorney Docket Number:	122358-367401
Receipt Date:	05-DEC-2014
Filing Date:	26-JUN-2014
Time Stamp:	12:12:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$480
RAM confirmation Number	9110
Deposit Account	220261
Authorized User	
<p>The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:</p> <p>Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)</p> <p>Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)</p>	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	issuetransmittal.pdf	104122	no	1
			63e69d91700416bb442eb93eb47a8f342660f814		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30347	no	2
			3fc14d332a23d4814b24c52bd2a96d12cc5e908a		
Warnings:					
Information:					
Total Files Size (in bytes):			134469		
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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
14/315,703	06/26/2014	CARLOS A. PEREZ LAFUENTE	122358-367401

26694
VENABLE LLP
P.O. BOX 34385
WASHINGTON, DC 20043-9998

CONFIRMATION NO. 5654
POA ACCEPTANCE LETTER



Date Mailed: 11/06/2014

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 11/03/2014.

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.

/ytbedada/

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Carlos A. Perez LaPuenta

Art Unit: 2643

Application No: 14/315,703

Examiner: Jean Chang

Confirmation No: 5654

Filed: June 26, 2014

Atty. Docket No: 122358-367401

Customer No:

For: METHOD AND SYSTEM FOR MONITORING
A MOBILE STATION PRESENCE IN A
SPECIAL AREA

26694

PATENT & TRADEMARK OFFICE

RESUBMISSION OF POWER OF ATTORNEY

MS Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

Applicants respectfully submit a Power of Attorney by Applicant, and Transmittal for Power of Attorney for the above-referenced application.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 22-0261, under Order No. 122358-367401.

Dated: November 3, 2014

Respectfully submitted,

By: /Jeffri A. Kaminski/

Jeffri A. Kaminski

Registration No.: 42,709

VENABLE LLP

P.O. Box 34385

Washington, DC 20043-9998

(202) 344-4000

(202) 344-8300 (Fax)

Attorney/Agent For Applicant

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	14/315,703
Filing Date	June 26, 2014
First Named Inventor	Carlos A. Perez LaFuente
Title	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA
Art Unit	2642
Examiner Name	Jean Chang
Attorney Docket Number	122358-367401

SIGNATURE of Applicant or Patent Practitioner

Signature	/Jeffri A. Kaminski/	Date (Optional)	11/3/2014
Name	Jeffri A. Kaminski	Registration Number	42,709
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☒	*Total of <u>1</u> forms are submitted.
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Doc Code: PA.

Document Description: Power of Attorney

PTO/AIA/62B (07-13)

Approved for use through 11/30/2014. OMB 0661-0061

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 BY APPLICANTI hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date
14/315,703	June 26, 2014

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☒ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 26694

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☒ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the Applicant (If the Applicant is a juristic entity, list the Applicant name in the box):

Afirma Consulting & Technologies, S.L.

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature

Date (Optional)

Name

Title

CEO, Afirma Consulting & Technologies, S.L.

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.☒Total of 1 forms are submitted.

Electronic Acknowledgement Receipt	
EFS ID:	20587849
Application Number:	14315703
International Application Number:	
Confirmation Number:	5654
Title of Invention:	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA
First Named Inventor/Applicant Name:	CARLOS A. PEREZ LAFUENTE
Customer Number:	26694
Filer:	Jeffri Kaminski/I hayes
Filer Authorized By:	Jeffri Kaminski
Attorney Docket Number:	122358-367401
Receipt Date:	03-NOV-2014
Filing Date:	26-JUN-2014
Time Stamp:	13:55:01
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	Power of Attorney	POA367401.pdf	74952	no	3
			7b03296367db9b6b668c76d201aa3c3407e18b05		

Warnings:

Information:

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

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NOTICE OF ALLOWANCE AND FEE(S) DUE

26694 7590 10/31/2014
VENABLE LLP
P.O. BOX 34385
WASHINGTON, DC 20043-9998

EXAMINER

CHANG, JEAN

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 10/31/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/315,703	06/26/2014	CARLOS A. PEREZ LAFUENTE	122358-367401	5654

TITLE OF INVENTION: METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	02/02/2015

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

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

HOW TO REPLY TO THIS NOTICE:

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

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

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

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

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

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

IMPORTANT REMINDER: 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.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **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)

26694 7590 10/31/2014
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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.
14/315,703	06/26/2014	CARLOS A. PEREZ LAFUENTE	122358-367401	5654

TITLE OF INVENTION: METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	02/02/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHANG, JEAN	2643	455-456400

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, 1 _____
- (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. 2 _____
- 3 _____

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

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

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

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

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/315,703	06/26/2014	CARLOS A. PEREZ LAFUENTE	122358-367401	5654

26694 7590 10/31/2014
VENABLE LLP
P.O. BOX 34385
WASHINGTON, DC 20043-9998

EXAMINER

CHANG, JEAN

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 10/31/2014

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(Applications filed on or after May 29, 2000)

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

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

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

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

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

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

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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. 14/315,703	Applicant(s) LAFUENTE, CARLOS A. PEREZ	
	Examiner JEAN CHANG	Art Unit 2643	AIA (First Inventor to File) Status No

-- 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 communication filed on 06/26/2014.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-16. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
Certified copies:
a) ☐ All b) ☐ Some *c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 12/294,641.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

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

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

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

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

Allowable Subject Matter

3. Claims 1-16 are allowed.

Reasons for allowance

4. The following is an examiner's statement of reasons for allowance:

Applicant's claimed invention distinguished over the prior art for the following reasons. The claims are allowable over the prior art of record because none of the references, either alone or in combination, discloses or renders obvious the method associated with one or more providers of presence related services in connection with the use of a mobile station and at least a first radio communication defining device that transmits a first distinctive defining signal and a second radio communication defining device that transmits a second distinctive defining signal, the first distinctive defining signal at least partly defines a first special area by its coverage, the second distinctive defining signal at least partly defining a second special area by its coverage, the method comprising the steps of electronically storing in one or more memories data capable of linking the

mobile station to the first and second special areas, the data including a first checking data of the first radio communication defining device, a second checking data of the second radio communication defining device, and a first identifier related to the mobile station, transmitting via a mobile telephone network to the mobile station at least a portion of the first checking data, and transmitting via the mobile telephone network to the mobile station at least a portion of the second checking data, receiving from the mobile station via the mobile telephone network a first updating signal uncorrelated to any mobile station phone call establishment that identifies the mobile station's presence in at least the first special area, and receiving from the mobile station via the mobile telephone network a second updating signal uncorrelated to any mobile station phone call establishment that identifies the mobile station's presence in at least the second special area, the first updating signal including a second identifier related to the mobile station, the second updating signal including a third identifier related to the mobile station.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Chang whose telephone number is (571) 270-7979. The examiner can normally be reached on Mon-Thursday from 9:00-5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Jinsong Hu can be reached on (571) 272-3965. 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).

/Jean Chang/

Examiner, Art Unit 2643

/JINSONG HU/

Supervisory Patent Examiner, Art Unit 2643

Notice of References Cited	Application/Control No. 14/315,703	Applicant(s)/Patent Under Reexamination LAFUENTE, CARLOS A. PERE	
	Examiner JEAN CHANG	Art Unit 2643	Page 1 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,334,052 B1	12-2001	Nordstrand, Ingrid	455/411
*	B	US-2002/0094801 A1	07-2002	Atorf, Manfred	455/406
*	C	US-6,516,193 B1	02-2003	Salmela et al.	455/432.3
*	D	US-6,516,190 B1	02-2003	Linkola, Janne	455/408
*	E	US-2003/0092450 A1	05-2003	Juppi et al.	455/456
*	F	US-6,625,442 B1	09-2003	Kojima, Jun-Ichiroh	455/414.1
*	G	US-6,671,506 B1	12-2003	Lee, Yun-Hee	455/406
*	H	US-6,785,536 B1	08-2004	Lee et al.	455/408
*	I	US-2004/0192267 A1	09-2004	Kettunen et al.	455/414.1
*	J	US-2004/0224682 A1	11-2004	Kang, Myung-Seok	455/433
*	K	US-6,826,414 B1	11-2004	Reynolds et al.	455/555
*	L	US-6,836,653 B1	12-2004	Kang, Myung-Seok	455/408
*	M	US-2005/0075124 A1	04-2005	Willenegger et al.	455/522

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.

Notice of References Cited	Application/Control No. 14/315,703		Applicant(s)/Patent Under Reexamination LAFUENTE, CARLOS A. PERE	
	Examiner JEAN CHANG		Art Unit 2643	Page 2 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,920,317 B1	07-2005	Muhonen, Ahti	455/405
*	B	US-2005/0148297 A1	07-2005	Lu et al.	455/003.06
*	C	US-7,142,869 B2	11-2006	Juppi et al.	455/456.1
*	D	US-7,171,189 B2	01-2007	Bianconi et al.	455/408
*	E	US-7,266,366 B2	09-2007	Kall, Jan	455/414.1
*	F	US-2008/0004045 A1	01-2008	Srey et al.	455/458
*	G	US-2008/0261604 A1	10-2008	Ritter, Rudolf	455/446
*	H	US-7,634,255 B2	12-2009	Ko et al.	455/414.1
*	I	US-2010/0167725 A1	07-2010	Noldus et al.	455/433
*	J	US-7,778,652 B2	08-2010	Srey et al.	455/458
	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.

PTO/SB/08b (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.

Substitute for form 1449/PTO				<div>Complete if Known</div>	
<div>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</div> <div>(Use as many sheets as necessary)</div>				Application Number	Not Yet Assigned
				Filing Date	June 26, 2014
				First Named Inventor	Carlos A. Perez Lafuente
				Art Unit	Not Yet Assigned 2643
				Examiner Name	Not Yet Assigned Jean Chang
Sheet	1	of	1	Attorney Docket Number	122358-367401

[illegible][illegible]

Examiner Signature	/Jean Chang/	Date Considered	10/16/2014
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*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. * CITE NO.: Those application(s) which are marked with an single asterisk (*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. 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.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.C./

Search Notes 	Application/Control No. 14315703	Applicant(s)/Patent Under Reexamination LAFUENTE, CARLOS A. PEREZ
	Examiner JEAN CHANG	Art Unit 2643

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	456.4, 456.1, 433, 432.2, 406, 458, 414.1, 446	10/16/2014	jc

SEARCH NOTES		
Search Notes	Date	Examiner
inventor search and text search on East database for mobile station identifying sending signal presence at first second special area	10/16/2014	jc

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
455	456.4, 456.1, 433, 432.2, 406, 458, 414.1, 446	10/16/2014	jc

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Issue Classification 	Application/Control No. 14315703	Applicant(s)/Patent Under Reexamination LAFUENTE, CARLOS A. PEREZ
	Examiner JEAN CHANG	Art Unit 2643

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION														
CLASS			SUBCLASS			CLAIMED					NON-CLAIMED									
455			456.4			H	0	4	W	64 / 00 (2009.01.01)										
CROSS REFERENCE(S)																				
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																			
455	456.1	433	432.2																	

/JEAN CHANG/ Examiner.Art Unit 2643 (Assistant Examiner)	10/16/2014 (Date)	Total Claims Allowed: 16	
/JINSONG HU/ Supervisory Patent Examiner.Art Unit 2643 (Primary Examiner)	10/20/2014 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 7

Issue Classification 	Application/Control No. 14315703	Applicant(s)/Patent Under Reexamination LAFUENTE, CARLOS A. PEREZ
	Examiner JEAN CHANG	Art Unit 2643

☒ Claims renumbered in the same order as presented by applicant								☒ CPA		☐ T.D.		☐ R.1.47			
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1														
	2														
	3														
	4														
	5														
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	10														
	11														
	12														
	13														
	14														
	15														
	16														

/JEAN CHANG/ Examiner.Art Unit 2643 (Assistant Examiner)	10/16/2014 (Date)	Total Claims Allowed: 16	
/JINSONG HU/ Supervisory Patent Examiner.Art Unit 2643 (Primary Examiner)	10/20/2014 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 7



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BIB DATA SHEET

CONFIRMATION NO. 5654

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
14/315,703	06/26/2014	455	2643	122358-367401		
RULE						
APPLICANTS AFIRMA CONSULTING & TECHNOLOGIES, S.L., Madrid, SPAIN, Assignee (with 37 CFR 1.172 Interest); INVENTORS CARLOS A. PEREZ LAFUENTE, Madrid, SPAIN; ** CONTINUING DATA ***** This application is a CON of 14/250,517 04/11/2014 which is a CON of 12/294,641 04/12/2010 PAT 8738040 * (*)Data provided by applicant is not consistent with PTO records. ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 07/08/2014						
Foreign Priority claimed ☒ Yes ☐ No 35 USC 119(a-d) conditions met ☒ Yes ☐ No Verified and Acknowledged <u>/JEAN CHANG/</u> Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
			SPAIN	7	16	1
ADDRESS						
VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998 UNITED STATES						
TITLE						
METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA						
FILING FEE RECEIVED 730	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						

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	30	(US-20020094801-\$ or US-20080004045-\$ or US-20030092450-\$ or US-20080261604-\$ or US-20050148297-\$ or US-20050075124-\$ or US-20040224682-\$ or US-20040192267-\$ or US-20100167725-\$ or US-20080171531-\$ or US-20020077144-\$).did. or (US-6334052-\$ or US-6625442-\$ or US-6785536-\$ or US-6826414-\$ or US-7778652-\$ or US-7142869-\$ or US-7171189-\$ or US-6836653-\$ or US-6516193-\$ or US-6671506-\$ or US-7634255-\$ or US-7266366-\$ or US-6920317-\$ or US-6516190-\$).did. or (WO-2007009297-\$).did. or (WO-0027152-\$ or WO-9858505-\$ or WO-2007014714-\$ or JP-2000050335-\$).did.	US-PGPUB; USPAT; EPO; DERWENT	ADJ	ON	2014/10/16 01:40
L4	7	l3 and enter\$4 near10 area	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/16 01:41
L5	4	l3 and enter\$4 same signal	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/16 01:45
L6	7	l3 and (enter\$4 or presence or present) same (signal or send\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/16 01:50
L7	7	l3 and (enter\$4 or presence or present or exit) same (signal or send\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/16 01:51
L8	22	l3 and (enter\$4 or presence or present or in or outside or exit) same (signal or send\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	ADJ	ON	2014/10/16 01:52

			DERWENT; IBM_TDB			
L10	6	((mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) same (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near20 (periodically or enter\$4 or exit\$4 or leav\$4 or presence or outside or updat\$4) near10 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same first same second).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/16 02:04
L11	15	((mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) same (detect\$4 or identif\$5 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near20 (periodically or enter\$4 or exit\$4 or leav\$4 or presence or outside or updat\$4) near10 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same first same second)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/16 02:06
S1	29	"6334052"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/26 17:50
S2	5	"6785536"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/26 17:55
S3	20	"6826414"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	ADJ	ON	2011/09/26 17:56

			IBM_TDB			
S4	4	"20020094801"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 08:40
S5	4	"2000027152"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 08:42
S6	4	"7212804"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 08:44
S7	3	"20080004045"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 09:17
S8	3	"20030092450"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 09:20
S9	14589	(special or distint or different or preferred or discount) near10 (service or tarrif or rate) near10 (area or coverage)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 09:27
S10	2969	(special or distint or different or preferred or discount) near10 (service or tarrif or rate) near10 (area or coverage) same (signal or code or identifier or identification or parameter or flag)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 09:29
S11	607	(special or distint or different or preferred or discount) near10 (service or tarrif or rate) near10 (area or coverage) same (signal or code or identifier or identification or parameter or flag) same ((base station) or cell or AP)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 09:30
S12	236	(special or distint or different or preferred or discount) near10 (service or tarrif or rate) near10 (area or coverage) same (signal or code or identifier or	US-PGPUB; USPAT; USOCR; FPRS;	ADJ	ON	2011/09/28 09:30

		identification or parameter or flag) same ((base station) or cell or AP) and monitor	EPO; JPO; DERWENT; IBM_TDB			
S13	308	(special or distint or different or preferred or discount) near10 (service or tarrif or rate) near10 (area or coverage) same (signal or code or identifier or identification or parameter or flag) same ((base station) or cell or AP) and (monitor or presence)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 09:31
S14	52	(special or distint or different or preferred or discount) near10 (service or tarrif or rate) near10 (area or coverage) same (signal or code or identifier or identification or parameter or flag) same ((base station) or cell or AP) and (monitor or presence) and multimedia	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 09:31
S15	1006	(special or distint or different or preferred or discount) near20 (service or tarrif or rate or billing or charg\$3 or zone) near20 (area or coverage) same (signal or code or identifier or identification or parameter or flag) same ((base station) or cell or AP)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 10:44
S16	399	S15 not S11	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 10:44
S17	16	S16 and special service	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 10:45
S18	18	S16 and (special or distinct) (service or zone)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 10:45
S19	19	S16 and (special or distinct) (service or zone or area)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 10:45
S20	313	455/456.4.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 10:48
S21	6	"lafuente, carlos".inv.	US-PGPUB; USPAT;	ADJ	ON	2011/09/28 10:48

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S22	1	S20 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 10:49
S23	16	"6625442"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 10:49
S24	20	"6516193"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/28 10:52
S25	5	"6785536"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/30 18:40
S26	6	"6920317"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/09/30 18:42
S27	1182	(special or limited or distint or different or preferred or discount or home) near10 (service or tarrif or rate) near10 (area or coverage or location or zone) same (signal or code or identifier or identification or parameter or flag) same ((base station) or cell or AP or device) same (wireless or mobile) and (monitor or presence)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2012/06/21 10:39
S28	15	(special or limited or distint or different or preferred or discount or home) near10 (service or tarrif or rate) near10 (area or coverage or location or zone) same (signal or code or identifier or identification or parameter or flag) same ((base station) or cell or AP or device) same (wireless or mobile) and (monitor or presence) near10 (mobile or wireless) (station or device or phone) near10 (determin\$4 or recogniz\$4 or realiz\$3 or check\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2012/06/21 10:44

S29	368	455/456.4.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2012/06/21 11:35
S30	6	"lafuente, carlos".inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2012/06/21 11:36
S31	15	(special or limited or distint or different or preferred or discount or home) near10 (service or tarrif or rate) near10 (area or coverage or location or zone) same (signal or code or identifier or identification or parameter or flag) same ((base station) or cell or AP or device) same (wireless or mobile) and (monitor or presence) near10 (mobile or wireless) (station or device or phone) near10 (determin\$4 or recogniz\$4 or realiz\$3 or check\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2012/06/21 11:36
S32	0	S31 and S29	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2012/06/21 11:36
S33	18	(special or limited or distint or different or preferred or discount or home) near10 (service or tarrif or rate) near10 (area or coverage or location or zone) same (signal or code or identifier or identification or parameter or flag) same ((base station) or cell or AP or device) same (wireless or mobile) and (monitor or presence) near10 (mobile or wireless) (station or device or phone) near10 (determin\$4 or recogniz\$4 or realiz\$3 or check\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2012/06/25 01:08
S34	6	"lafuente, carlos".inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2012/06/25 01:10
S35	1	S33 and S34	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2012/06/25 01:10
S36	1	"12294641"	US-PGPUB; USPAT; USOCR;	ADJ	ON	2012/06/25 18:36

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S37	771	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4 or detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or realiz\$3 or check\$3) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same (send\$4 or transmit\$5 or transmi\$6) near10 (signal or code or identifier or identification or parameter or flag or messag\$3) same ((base station) or cell or AP or device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 12:34
S38	211	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4 or detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or realiz\$3 or check\$3) near10 (special or limited or distint or different or preferred or discount or home) near5 ((service or tarrif or rate) or (area or coverage or location or zone)) near10 (send\$4 or transmit\$5 or transmi\$6) near10 (signal or code or identifier or identification or parameter or flag or messag\$3) near10 ((base station) or cell or AP or device or network)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 12:38
S39	150	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4 or detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or realiz\$3 or check\$3) near10 (special or limited or distint or different or preferred or discount or home) near5 ((service or tarrif or rate) or (area or coverage or location or zone)) near10 (send\$4 or transmit\$5 or transmi\$6) near10 (signal or code or identifier or identification or parameter or flag or messag\$3) near10 ((base station) or cell or AP or device or network)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	OFF	2013/06/01 12:49
S40	1	"12294641"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 13:53
S41	30	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (enter\$4 or exit\$4 or leav\$4) near10	US-PGPUB; USPAT; USOCR; FPRS;	ADJ	OFF	2013/06/01 19:14

		(special or limited or distint or different or preferred or discount or home) near5 ((service or tarrif or rate) or (area or coverage or location or zone)) near10 (send\$4 or transmit\$5 or transmi\$6) near10 (signal or code or identifier or identification or parameter or flag or messag\$3) near10 ((base station) or cell or AP or device or network)	EPO; JPO; DERWENT; IBM_TDB			
S42	771	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4 or detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or realiz\$3 or check\$3) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same (send\$4 or transmit\$5 or transmi\$6) near10 (signal or code or identifier or identification or parameter or flag or messag\$3) same ((base station) or cell or AP or device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 19:20
S43	106	S42 and (location or zone or area) service	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 19:20
S44	11	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) (area or coverage or location or zone)) same (send\$4 or transmit\$5 or transmi\$6) near10 (signal or code or identifier or identification or parameter or flag or messag\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 19:29
S45	19	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) near5 (area or coverage or location or zone)) same (send\$4 or transmit\$5 or transmi\$6) near10 (signal or code or identifier or identification or parameter or flag or messag\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 19:30
S46	81	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 19:36

		tarrif or rate) near5 (area or coverage or location or zone)) and (LBS or (location near6 service))				
S47	81	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) near5 (area or coverage or location or zone)) and (LBS or ((location or geo\$6) near6 service))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 19:36
S48	128	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) near5 (area or coverage or location or zone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 19:59
S49	39	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) near5 (area or coverage or location or zone)) same (report\$4 or send\$4 or transmi\$5 or notify\$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 20:01
S50	128	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) near10 (presence or enter\$4 or exit\$4 or leav\$4) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) near5 (area or coverage or location or zone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 20:05
S51	89	S50 not S49	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 20:07
S52	3	"2008171531"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 22:55
S53	2	"20080171531"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 22:55

S54	29	(US-20020094801-\$ or US-20080004045-\$ or US-20030092450-\$ or US-20080261604-\$ or US-20050148297-\$ or US-20050075124-\$ or US-20040224682-\$ or US-20040192267-\$ or US-20100167725-\$ or US-20080171531-\$).did. or (US-6334052-\$ or US-6625442-\$ or US-6785536-\$ or US-6826414-\$ or US-7778652-\$ or US-7142869-\$ or US-7171189-\$ or US-6836653-\$ or US-6516193-\$ or US-6671506-\$ or US-7634255-\$ or US-7266366-\$ or US-6920317-\$ or US-6516190-\$).did. or (WO-2007009297-\$).did. or (WO-0027152-\$ or WO-9858505-\$ or WO-2007014714-\$ or JP-2000050335-\$).did.	US-PGPUB; USPAT; EPO; DERWENT	ADJ	ON	2013/06/01 23:06
S55	9	S54 and (enter\$4 or exit\$4 or leav\$4) same (zone or (service area))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 23:07
S56	3822	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (presence or enter\$4 or exit\$4 or leav\$4 or detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or realiz\$3 or check\$3) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 23:12
S57	1223	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (presence or enter\$4 or exit\$4 or leav\$4 or detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or realiz\$3 or check\$3) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5) and (zone or (service area) or LSA)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 23:14
S58	197	S57 and (enter\$4 or exit\$4) near10 (zone or (service area))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/01 23:16
S59	6	"lafuente, carlos".inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	ADJ	ON	2013/06/02 23:49

			DERWENT; IBM_TDB			
S60	22527	455/456.4.ccls. or 455/555.ccls. or 455/408.ccls. or 455/432.2.ccls. or 455/406.ccls. or 455/458.ccls. or 455/414.1.ccls. or 455/446.ccls. or 455/456.1.ccls. or 455/433.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/02 23:51
S61	1222	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (presence or enter\$4 or exit\$4 or leav\$4 or detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or realiz\$3 or check\$3) near10 (special or limited or distint or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5) and (zone or (service area) or LSA)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/02 23:52
S62	197	S61 and (enter\$4 or exit\$4) near10 (zone or (service area))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/02 23:52
S63	0	S62 and S59	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/02 23:52
S64	59	S62 and S60	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2013/06/02 23:52
S65	1	"12294641"	US-PGPUB; USPAT; EPO; DERWENT	ADJ	ON	2014/01/06 23:30
S66	1	S65 and updating signal	US-PGPUB; USPAT; EPO; DERWENT	ADJ	ON	2014/01/06 23:30
S67	1	S65 and updating signal same (period\$5 or enter\$4 or exit\$4)	US-PGPUB; USPAT; EPO; DERWENT	ADJ	ON	2014/01/06 23:46
S68	1	S65 and updating signal and (period\$5 or enter\$4 or exit\$4)	US-PGPUB; USPAT; EPO; DERWENT	ADJ	ON	2014/01/06 23:50
S69	1	S65 and updating signal and	US-PGPUB;	ADJ	ON	2014/01/07

		(periodically or enter\$4 or exit\$4)	USPAT; EPO; DERWENT			00:31
S70	1	"12294641"	US-PGPUB; USPAT; EPO; DERWENT	ADJ	ON	2014/01/20 18:22
S71	24	"lafuente, carlos".inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 19:24
S72	30466	455/456.4.ccls. or 455/555.ccls. or 455/408.ccls. or 455/432.2.ccls. or 455/406.ccls. or 455/458.ccls. or 455/414.1.ccls. or 455/446.ccls. or 455/456.1.ccls. or 455/433.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 19:25
S73	987	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (presence or enter\$4 or exit\$4 or leav\$4 or detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or realiz\$3 or check\$3) near15 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tariff or rate) or (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) and (zone or (service area) or LSA)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 19:27
S74	247	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (presence or enter\$4 or exit\$4 or leav\$4 or detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or realiz\$3 or check\$3) near15 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tariff or rate) or (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) same (memory or stor\$4) near10 (data or check\$4 or identifier or identification)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 19:32
S75	42	((mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (presence or enter\$4 or exit\$4 or leav\$4 or detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or realiz\$3 or check\$3) near15 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tariff or rate) or (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 19:34

		signal\$4) same (memory or stor\$4) near10 (data or check\$4 or identifier or identification)).clm.				
S76	1	S74 and S71	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 19:34
S77	60	S74 and S72	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 19:34
S78	48	S77 not S75	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 20:05
S79	13	S78 and (special or limited or preferred or discount\$4) near5 (area or zone or service)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 20:06
S80	2	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) near15 (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near15 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near10 (periodically or enter\$4 or exit\$4 or leav\$4 or presence) near5 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tarrif or rate) (area or coverage or location or zone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 23:05
S81	19	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) near30 (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 23:13

		report\$5 or notify\$5 or signal\$4) near10 (periodically or enter\$4 or exit\$4 or leav\$4 or presence) near10 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone))				
S82	24	"lafuente, carlos".inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 23:27
S83	30466	455/456.4.ccls. or 455/555.ccls. or 455/408.ccls. or 455/432.2.ccls. or 455/406.ccls. or 455/458.ccls. or 455/414.1.ccls. or 455/446.ccls. or 455/456.1.ccls. or 455/433.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 23:27
S84	1	S81 and S82	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 23:27
S85	6	S81 and S83	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 23:27
S86	4	((mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) near30 (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near10 (periodically or enter\$4 or exit\$4 or leav\$4 or presence) near10 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone))) .clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/01/20 23:30
S93	3	"12294641"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/09/19 13:31
S94	1	"14250517"	US-PGPUB;	ADJ	ON	2014/09/19

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			13:33
S95	4	"8723664"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 17:31
S96	0	wo0103372	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 17:36
S97	0	wo01003372	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 17:37
S98	28	"200103372"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 17:37
S99	61	"0103372"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 17:37
S100	64	"6334052"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 17:40
S101	81	"6826414"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 17:59
S102	1	"14250517"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	ADJ	ON	2014/10/15 18:22

			IBM_TDB			
S103	1	S102 and outside near10 special area	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 18:22
S104	1	S102 and send\$4 near10 updat\$3 signal	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 18:25
S105	0	S102 and updat\$4 near5 signal same presence and periodically and (enter\$4 or exit\$4) and remain\$4 near10 (in or outside) near5 area	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 18:29
S106	0	S102 and updat\$4 near5 signal same presence and periodically and (enter\$4 or exit\$4) and remain\$4 near10 (in or outside) area	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 18:30
S107	1	S102 and updat\$4 near5 signal same presence and periodically and (enter\$4 or exit\$4) and (in or outside) near10 area	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 18:30
S108	1	S102 and updat\$4 near5 signal same presence and periodically and (enter\$4 or exit\$4) and (outside) near10 area	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 18:56
S109	33	"lafuente, carlos".inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 23:16
S110	6	((mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) near30 (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) near20	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 23:29

		(send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near20 (periodically or enter\$4 or exit\$4 or leav\$4 or presence or outside) near10 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone))).clm.				
S112	27	((mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) near30 (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near20 (periodically or enter\$4 or exit\$4 or leav\$4 or presence or outside) near10 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 23:30
S113	3	S112 and S109	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/10/15 23:32

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L9	6	((mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) same (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near20 (periodically or enter\$4 or exit\$4 or leav\$4 or presence or outside or updat\$4) near10 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) same first same second).clm.	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/10/16 02:01
S87	16	(mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/01/20 23:33

		data) near30 (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near10 (periodically or enter\$4 or exit\$4 or leav\$4 or presence) near10 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone))				
S88	4	"lafuente, carlos".inv.	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/01/20 23:33
S89	25021	455/456.4.ccls. or 455/555.ccls. or 455/408.ccls. or 455/432.2.ccls. or 455/406.ccls. or 455/458.ccls. or 455/414.1.ccls. or 455/446.ccls. or 455/456.1.ccls. or 455/433.ccls.	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/01/20 23:33
S90	4	((mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) near30 (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near10 (periodically or enter\$4 or exit\$4 or leav\$4 or presence) near10 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone))) .clm.	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/01/20 23:33
S91	1	S87 and S88	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/01/20 23:34
S92	6	S87 and S89	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/01/20 23:34
S115	6	((mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) near30 (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tarrif or rate) or (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near10 (periodically or enter\$4 or exit\$4 or leav\$4 or presence or outside) near10 (special or limited or distinct\$5 or preferred or discount	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/10/15 23:18

		or home) near10 ((service or tariff or rate) or (area or coverage or location or zone))).clm.				
S116	6	((mobile or wireless or electronic or communication) (station or device or phone or terminal or equipment) same (receiv\$4) near5 (signal or transmission or broadcast or data) near30 (detect\$4 or identify\$4 or determin\$4 or recogniz\$4 or presence) near20 (special or limited or distinct\$5 or different or preferred or discount or home) near10 ((service or tariff or rate) or (area or coverage or location or zone)) near20 (send\$4 or transmit\$5 or transmi\$6 or report\$5 or notify\$5 or signal\$4) near20 (periodically or enter\$4 or exit\$4 or leav\$4 or presence or outside) near10 (special or limited or distinct\$5 or preferred or discount or home) near10 ((service or tariff or rate) or (area or coverage or location or zone))).clm.	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/10/15 23:21
S117	6	"lafuente, carlos".inv.	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/10/15 23:26
S118	32084	455/456.4.ccls. or 455/555.ccls. or 455/408.ccls. or 455/432.2.ccls. or 455/406.ccls. or 455/458.ccls. or 455/414.1.ccls. or 455/446.ccls. or 455/456.1.ccls. or 455/433.ccls. or (H04W64/00).CPC.	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/10/15 23:27
S121	3	S116 and S117	US-PGPUB; USPAT; UPAD	ADJ	ON	2014/10/15 23:28

10/16/2014 2:10:44 AM

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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 1449/PTO				<div>Complete if Known</div> <div>Application Number 14/315,703-Conf. #5654</div> <div>Filing Date June 26, 2014</div> <div>First Named Inventor Carlos A. Perez Lafuente</div> <div>Art Unit 2642 2643</div> <div>Examiner Name Not yet Assigned Jean Chan</div>	
<div>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</div> <div>(Use as many sheets as necessary)</div>				<div>Attorney Docket Number 122358-367401</div>	
Sheet	1	of	2		

[illegible][illegible]

Examiner Signature	/Jean Chang/	Date Considered	10/16/2014
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¹ 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. * CITE NO.: Those application(s) which are marked with an single asterisk (*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. 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.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.C./

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Complete if Known			
		Application Number	14/315,703-Conf. #5654		
		Filing Date	June 26, 2014		
		First Named Inventor	Carlos A. Perez Lafuente		
		Art Unit	2642 2643		
		Examiner Name	Not Yet Assigned Jean Chang		
Sheet	2	of	2	Attorney Docket Number	122358-367401

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
	CA	International Search Report issued in PCT/EP2007/052939 dated June 21, 2007	

Examiner Signature	/Jean Chang/	Date Considered	10/16/2014
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¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/315,703	06/26/2014	CARLOS A. PEREZ LAFUENTE	122358-367401

CONFIRMATION NO. 5654

26694
VENABLE LLP
P.O. BOX 34385
WASHINGTON, DC 20043-9998

PUBLICATION NOTICE



Title:METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA

Publication No.US-2014-0308981-A1

Publication Date:10/16/2014

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CONFIRMATION NO. 5654
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NOTICE REGARDING POWER OF ATTORNEY

This is in response to the power of attorney filed 09/12/2014. The power of attorney in this application is not accepted for the reason(s) listed below:

- The power of attorney you provided did not comply with the power of attorney rules that became effective on June 25, 2004. See 37 CFR 1.32 and 69 Fed. Reg. 29865.

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				Application Number	14/315,703-Conf. #5654
				Filing Date	June 26, 2014
				First Named Inventor	Carlos A. Perez Lafuente
				Art Unit	2642
				Examiner Name	Not Yet Assigned
				Attorney Docket Number	122358-367401
Sheet	1	of	2		

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(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



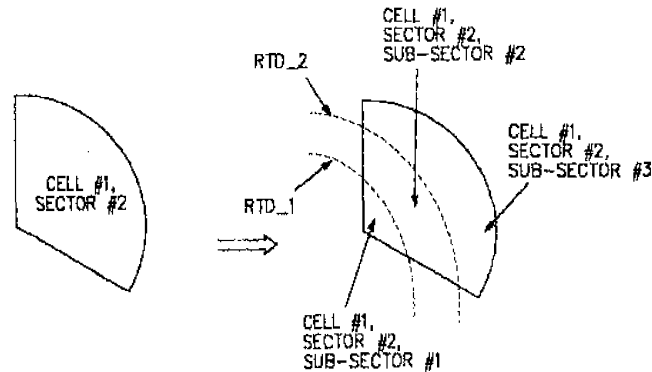
(43) International Publication Date
11 January 2001 (11.01.2001)

PCT

(10) International Publication Number
WO 01/03372 A1

- (51) International Patent Classification⁷: **H04L 12/14**
- (21) International Application Number: **PCT/KR00/00712**
- (22) International Filing Date: **3 July 2000 (03.07.2000)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
1999/26956 5 July 1999 (05.07.1999) **KR**
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- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
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NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,
TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): European patent (AT, BE,
CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,
NL, PT, SE).
- Published:
— With international search report.
- For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: **HOME ZONE SERVICE METHOD FOR MOBILE TELEPHONE SUBSCRIBERS IN MOBILE RADIO COMMU-
NICATION SYSTEM**



(57) Abstract: Disclosed is a home zone service method for assigning a specified zone to a mobile telephone subscriber and charging the subscriber at different billing rate accordingly as the subscriber makes a telephone call inside or outside the zone. According to the home zone service method, a zone which is defined by a first measurement value and a second measurement value as a sub-sector is determined by measuring a round trip delay from a fixed location in a sector of a cell to the neighbor base stations to which the subscriber belongs, so that a predetermined home zone database including the first value and the second value is prepared. The round trip delay is measured from a specified signal if a portable mobile terminal of the subscriber generates a request signal to establish a call connection. Then, it is determined whether the subscriber is located inside the sub-sector if the measured round trip delay falls between the first value and the second value of the home zone database.

WO 01/03372 A1

- 1 -

**HOME ZONE SERVICE METHOD FOR MOBILE TELEPHONE
SUBSCRIBERS IN MOBILE RADIO COMMUNICATION SYSTEM**

BACKGROUND OF THE INVENTION

5 1. Field of the Invention

The present invention relates to a home zone service for a portable mobile telephone subscriber within a mobile telecommunication network. More particularly, the present invention relates to a method for improving accuracy and performance in providing a home zone service.

10 2. Description of the Related Art

A home zone service is known as allocating a predefined zone, known as "home zone", so that a different charging rate can be applied to a mobile telephone subscriber, depending on whether the subscriber is located within the home zone when placing a call. Thus, a mobile subscriber can selectively designate a number of different home zones at a given time as the mobile subscriber moves from one geographic location to another geographic location.

If the vicinity of a subscriber's residential area were defined as the home zone service area, a service charge equivalent to a local wired telephone service can be applied to a mobile phone subscriber. But, if a call is made outside of the home zone, a higher charging rate corresponding to a radio telephone call rate is applied to the subscriber.

If a subscriber requests a home zone service, the boundary of the home zone is determined according to various factors, such as the position (latitude/longitude) of the base station with respect to the subscriber's address, the base station coverage area, the installation conditions of the base station, the multi-path characteristics of the base station area, etc.

With reference to Fig. 1, a cell site is divided into a plurality of sectors. Accordingly, a home zone can be defined to include the whole cell area (base station) or one of the sectors. In determining the home zone, however, the accuracy of home zone recognition is important to the service providers in terms of the amount of revenue they can generate. A minor error in determining the home zone boundary, causing the widening of the home zone boundary, can cost a significant revenue loss to the service providers. Thus, the ability to accurately recognize the home zone boundary when a subscriber originates (or terminates) a call within the home zone is important in boosting revenue for service providers.

- 2 -

SUMMARY OF THE INVENTION

Accordingly, the present invention has been made in an effort to solve the problems occurring in the related art, and an object of the present invention is to provide
5 a home zone service method which can perform a more accurate way of determining whether a mobile subscriber is located within the home zone service when making a call connection.

In order to achieve the above object, according to the present invention, there is
10 provided a home zone service method for associating a predetermined zone to a mobile telephone subscriber and charging the subscriber at different billing rates based on whether the subscriber makes a telephone call inside or outside the home zone. The method includes the steps of: associating a plurality of reduced charging areas with a mobile subscriber, wherein the boundary of reduced charging area is defined as a first
15 measurement value and a second measurement value, and wherein the first value and the second value are measured based on a mean round trip delay from a plurality of locations within the sector of a cell site to which the subscriber is located in relation to the neighboring base stations, then preparing a home zone database including the measured first value and the second value; calculating a round trip delay of a request
20 signal of the mobile subscriber to establish a call connection; and, determining whether the subscriber is inside the home zone if the calculated round trip delay falls between the first value and the second value retrieved from the home zone database.

According to one aspect of the present invention, if the mobile phone is located within the home zone, the subscriber is informed of whether he/she is located within the
25 home zone.

According to another aspect of the present invention, the predetermined home zone data base is stored and retrieved from a data base management center.

BRIEF DESCRIPTION OF THE DRAWINGS

30 The above object and advantages of the present invention will become more apparent by describing the preferred embodiment in detail with reference to the attached drawings in which:

Fig. 1 is a view explaining the concept of a sector based home zone;

Fig. 2 is a view explaining the concept of a sub-sector based home zone
35 according to the embodiment of the present invention;

- 3 -

Figs. 3A and 3B are other views explaining the concept of a sub-sector based home zone according to the embodiment of the present invention;

Fig. 4 is a table exemplifying a subscriber information database for the home zone service according to the embodiment of the present invention;

5 Fig. 5 is a flowchart illustrating the home zone identifying process performed directly by a subscriber according to the embodiment of the present invention; and,

Fig. 6 is a flowchart illustrating the home zone identifying process performed by a mobile terminal according to the embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

10

Reference will now be made in greater detail to the preferred embodiment of the present invention. In the drawings, the same elements are denoted by the same reference numerals even though they are depicted in different drawings. For the purpose of clarity, a detailed description of well-known functions and configurations incorporated herein will be omitted as it may make the subject matter of the present invention unclear.

15

20

Fig. 2 is a view illustrating the concept of a sub-sector defining a home zone according to the embodiment of the present invention. A home zone can be defined based on a cell site (base station) or one of the sectors of the cell site. The home zone designated within the sector may be called a sub-sector based home zone, as shown in Fig. 2.

25

As illustrated in Fig. 2, a sector #2 of a cell #1 is divided into, for example, a plurality of sub-sectors #1 - #3. This division of a sector into different sub-sector zones is performed using a round trip delay (RTD) value. As an example, the division of the sub-sectors #1 and #2 is realized based on the RTD₁ boundary and the division of the sub-sectors #2 and #3 is realized based on the RTD₂ boundary. The calculation of the RTD₁ and the RTD₂ used to designate different home zones is discussed later in the specification.

30

Figs. 3A and 3B are other views illustrating the concept of determining a sub-sector based home zone according to the embodiment of the present invention.

35

As shown in Fig. 3A, if a subscriber 100 is positioned at a given location, a portion of the sector #2 of a cell #10 can overlap a portion of the sector #1 of a cell #11. As shown in Fig. 3B, the location of the subscriber can be overlapped by two different home zones. Thus, the subscriber 100 belongs not only to the sub-sector defined by the RTD_{2,max} boundary and the RTD_{2,min} boundary in the sector #2 of the cell #10, but it also belongs to the sub-sector defined by the RTD_{1,max} boundary and the RTD_{1,min}

- 4 -

boundary in the sector #1 of the cell #11. Thus, if a subscriber 100 makes a telephone call in either of the two sub-sectors, a fee corresponding to a local call will be charged to the mobile phone subscriber.

5 Now, the process of calculating the RTD to define a home zone will be explained in detail.

10 If it is assumed that a circular home zone is determined to include a fixed region (for example, around the house of the mobile subscriber), the maximum and the minimum distance between the home zone and a neighboring base station can be defined according to a service provider or user. At this time, the minimum distance is the shortest distance among lineal distances leading from the base station to the inner boundary of the home zone. The maximum distance is the longest distance among lineal distances leading from the base station to the outer boundary of the home zone which is in the opposite direction of the inner boundary of the home zone. These distances can be determined using a round trip delay (RTD). The RTD represents the value obtained by dividing the distance by the propagating speed (i.e., $C = 300,000\text{Km/sec}$), then multiplying the divided value by 2 to counter for the turnaround distance. The base station measures the turnaround time by measuring the time during which a radio wave radiated from the base station reaches the mobile terminal and return back to the base station. This can be expressed by the following equation:

$$\text{RTD}_i = 2 \times (D_i / C).$$

25 Here, "i" represents 1 or 2. "D_i" represents a variable that represents a minimum distance when "i" is 1 and represents a maximum distance when "i" is 2.

 In order to enhance the accuracy of the boundary of the home zone using the RTD values, the following complementary measures are further performed.

30 An approximate distance from the base station to the respective location can be linearly calculated. Since the turnaround time between the base station and the mobile terminal is calculated by a digital signal processor (DSP) of the base station, the RTD value can be obtained by dividing the calculated distance by the propagation speed then multiplying the divided value by 2. However, the radio wave is transmitted in a multipath characteristic environment. Thus, a delay time caused by the multipath characteristics of the radio wave can affect the RTD calculation. Typically, the delay time involved in similar background areas exhibit similar delay characteristic. Thus, in the embodiment of the present invention, the delay time involved in different background is collectively measured and their mean values are measured to create a database, which defines the reduced charging area. The delay times vary depending on different location where the mobile phone might be located, such as a downtown area, a

- 5 -

shopping center, apartment or factory building area, etc. Thus, using the previously determined database which accounts for various multipath characteristics, a more accurate RTD value can be obtained to define the home zone.

5 In order to provide a more accurate RTD, an initial database is added with a delay time obtained by collecting and averaging different delay times at a given rate between various locations and its neighboring base stations in a real world environment. Then, a mean RTD value can be obtained at a given location of the mobile phone. As part of the effort to determine an accurate RTD value, which is used to designate the reduced charging area, another factor is measured in deriving the test database. Since 10 most users would tend to define their residential areas as the home zone to benefit the lower billing rate, the test database is obtained by estimating the time that the users will most likely be at their residence. For instance, since there is a greater possibility that the subscriber stays in his/her house during the time period between 24:00 to 06:00, the 15 experimented mean RTD value is measured at this time duration.

Fig. 4 is a table exemplifying the subscriber information database for the home zone service according to the embodiment of the present invention. The database shows that two subscribers have been registered.

20 With reference to Fig. 2, the first subscriber, Mr. Gil-dong Hong, who resides in 123 Seohyun-Dong, Bundang-Ku, uses 0342-779-8180 as a local number inside the home zone and uses 011-779-xxxx as a mobile number outside his home zone. Mr. Hong's house is under the service provided by three neighboring base stations. The 25 home zone registered by Mr. Hong is defined by the region within the range of 16 - 40 chips from an α sector of a base station 1. At this time, the values of 16 and 40 represent the minimum RTD and the maximum RTD, respectively, but the actual distance corresponds in the range of 8 - 20 chips from the base station since the RTD takes into account the round trip between the base station and the mobile phone. Thus, 30 the home zone is associated in the range of 10 - 22 chips for the β sector of a base station 2 and in the range of 12 ~ 24 chips for the γ section of a base station 3. Here, the distance of one chip represents 245m, which is obtained by dividing the distance by the radio propagation speed, 300,000Km/sec, by the code division multiple access (CDMA) modulation frequency of 1.2244MHz.

35 Fig. 5 is a flowchart illustrating the home zone identifying process operated directly by the subscriber according to the embodiment of the present invention.

40 With reference to Fig. 5, a subscriber can directly dial the specified keys (for example, *89) of the mobile terminal to ascertain whether he/she is within the home zone using a mobile terminal MS. The dial information according to the above call is

- 6 -

transmitted to the base station BS (step 51). The base station receives the dial information and simultaneously calculates the RTD accordingly (step 52). Then, the base station transmits the dial information and the calculated RTD to a mobile switching center (step 53). The mobile switching center requests to retrieve the database from a database management center (DBM) and in turn receives the corresponding database from the DBM (steps 54 and 55). Here, for convenience, the DBM is used as a term which includes the home location registration (HLR), the visitor location registration (VLR), the location determination module, the service provision center (LDSPC), the customer care center (CCC), etc. Performing various operations among the HLR, VLR, LDSPC, and CCC and performing communication between the mobile switching center and the DBM should be obvious to those in this art.

Thereafter, the base station checks the service class of the subscriber, the maximum RTD value (RTD_{ma}) and the minimum RTD value (RTD_{min}) based on the retrieved database (step 56). The subscriber selects the service class when he/she requests the home zone service. Then, the subscriber can select the service either in the home zone only or both services including the home zone and the mobile zone, which is outside of the home zone.

If the subscriber is registered for the home zone service and requests such service, the base station, after checking that the subscriber qualifies for the home zone service based on the retrieved database, transmits a home-zone identifying signal to the mobile terminal through a traffic channel. If the condition is not satisfied, the base station transmits a non-home-zone identifying sound (step 57). At this time, the mobile terminal displays the information whether or not the current location of the mobile terminal is within the home zone, so that the subscriber can be informed (step 58).

Fig. 6 is a flowchart illustrating the home zone identifying process operated by a mobile terminal according to the embodiment of the present invention. The home zone identifying process enables the mobile terminal to identify whether the mobile terminal is located within the home zone and enables the mobile terminal to automatically display a deviation signal if the mobile terminal deviates outside of the home zone. Thus, the mobile station stores the home zone list (step 61).

The base station transmits the base station ID and the sector ID to the mobile terminal (step 62). Then, the mobile terminal ascertains whether the base station belongs to its home zone with reference to a home zone list (step 63) and transmits a location registration request if the base station belongs to the home zone (step 64). The base station receives the location registration request and simultaneously calculates the RTD (RTD₁) accordingly (step 65). The mobile switching center transmits a location registration request, the base station information, and the calculated RTD (RTD₁) to the DBM (step 66). At this time, the DBM transmits a response including a predetermined

- 7 -

base station information based on the home zone database to the mobile switching center. That is, information corresponding to the maximum RTD value (RTDmax) and the minimum RTD (RTDmin) relating to the subscriber is obtained (step 68). The mobile switching center checks whether the calculated RTD (RTD1) falls within the range
5 between the maximum RTD (RTDmax) and the minimum RTD (RTDmin) based on the predetermined database (step 69). If the condition is satisfied, the mobile switching center transmits a home-zone identifying signal to the mobile terminal through the traffic channel (step 70a), while if the condition is not satisfied, the mobile switching center transmits a non-home-zone identifying signal to the mobile terminal (step 70b). Then,
10 the mobile terminal displays whether its current location is located within the home zone to inform the subscriber (step 71).

As described above, the present invention has advantages in that it can perform a more accurate and efficient home zone service by determining whether the mobile
15 terminal is located within the home zone by comparing the predetermined sector-based home zone range to the current location of the mobile terminal.

While this invention has been described in connection with what is presently considered to be the most practical and preferred embodiment, it is to be understood that
20 other modifications thereof may be made without departing from the scope of the invention. Thus, the invention should not be limited to the disclosed embodiment but should be defined by the scope of the appended claims and their equivalents.

- 8 -

WHAT IS CLAIMED IS:

1. A method for determining whether the subscriber of a mobile phone is located within a home zone service to qualify for a different charging rate, comprising the steps of:

5 (a) measuring a round trip delay (RTD) from a plurality of testing locations within a sector of a cell site in relation to a plurality of neighboring base stations to determine a plurality of reduced charging areas with a mobile phone subscription, wherein the boundary of the reduced charging areas are defined by a first mean RTD value and a second mean RTD value;

10 (b) preparing a predetermined home zone database by associating the plurality of the reduced charging areas with the mobile phone subscription using the first value and the second value;

(c) calculating a round trip delay (RTD) if the mobile phone generates a request signal to establish a call connection; and,

15 (d) determining whether the measured RTD falls within a range between the first value and the second value associated with the mobile phone in the home zone database to determine whether the mobile phone is located within the home zone service.

2. The method as claimed in Claim 1, wherein the first value and the second value correspond to a minimum value and a maximum value of the round trip delay, respectively.

3. The method as claimed in Claim 1, further comprises the step of notifying the subscriber of the mobile phone if the mobile phone is located within the home zone service.

25 4. The method as claimed in Claim 1, wherein the step (c) further comprises the steps of:

receiving the request signal by a base station currently serving the mobile phone; and,

30 transmitting the calculated RTD to a mobile switch center in communication with the base station;

5. The method as claimed in Claim 1, wherein the step (d) further comprises the step of retrieving the predetermined home zone database from a database management center.

40 6. A method for determining whether a subscriber is making a call connection within a home zone area using a predetermined home zone database, which includes a first round trip delay value and a second round trip delay value defining the home zone area for a mobile phone subscriber, and wherein a different charging rate is

- 9 -

applied if a request for a call connection is made within the home zone area, the method comprising the steps of:

(a) transmitting, by the mobile phone, an originating signal to a base station to establish a call connection;

5 (b) upon receiving the originating signal, calculating a round trip delay (RTD) of the originating signal by the base station;

(c) transmitting, by the base station, the calculated round trip delay and the originating signal to a mobile switching center;

10 (d) determining, by the mobile switching center, whether the calculated round trip delay falls within a range between the first value and the second value associated with the mobile phone in the predetermined home zone database; and,

(e) if the measured RTD value falls within the first value and the second value, allocating a communication channel to the mobile phone by the base station.

15 7. A method for determining whether a subscriber is making a call connection within a home zone area using a predetermined home zone database, which includes a first round trip delay value and a second round trip delay value defining the home zone area for a mobile phone subscriber, and wherein a different charging rate is applied if a request for a call connection is made within the home zone area, the method comprising the steps of:

20 (a) transmitting, by the mobile phone subscriber, an originating signal to a base station to establish a call connection;

(b) upon receiving the originating signal, calculating a round trip delay (RTD) of the originating signal by the base station;

25 (c) transmitting, by the base station, the calculated round trip delay and the originating signal to a mobile switching center;

(d) determining, by the mobile switching center, whether the calculated round trip delay falls within a range between the first value and the second value associated with the mobile phone subscriber in the predetermined home zone database; and,

30 (e) if the calculated RTD value falls within the first value and the second value, transmitting a home zone identifying signal to the mobile phone subscriber by the mobile switching center.

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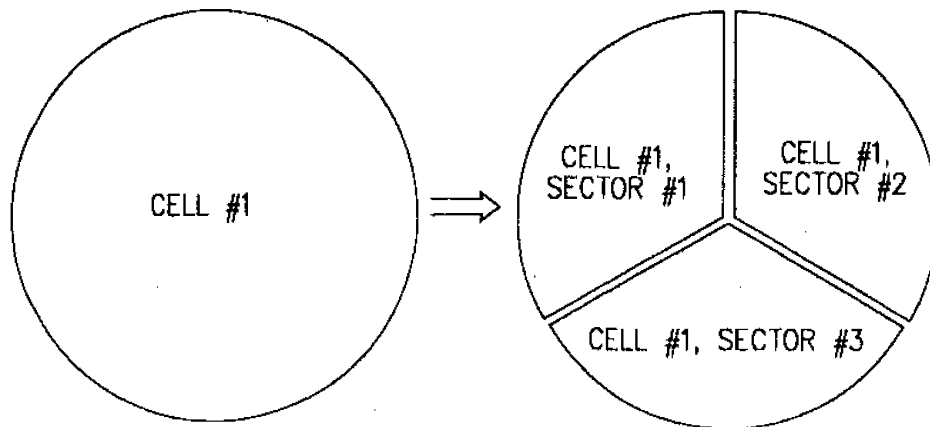


FIG. 1

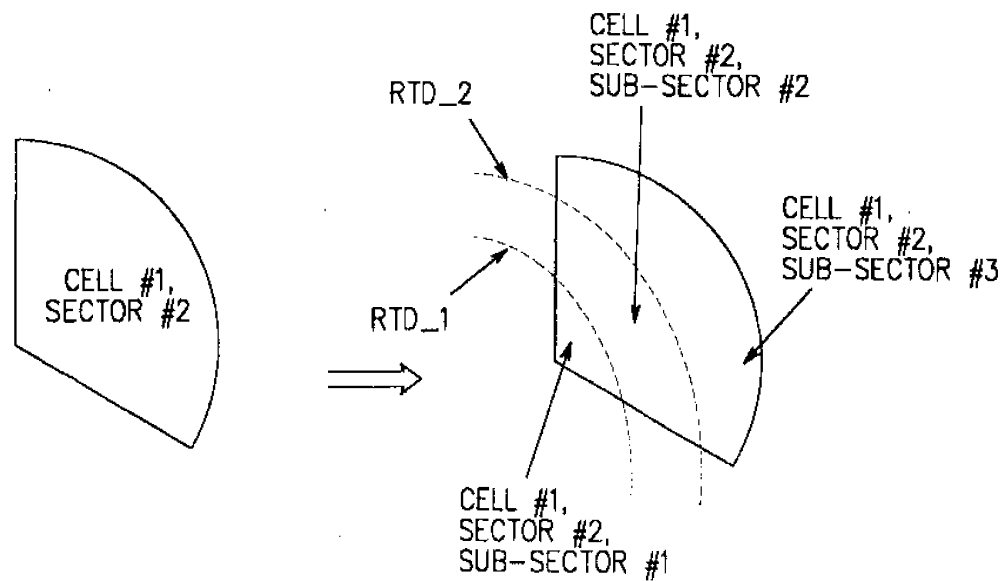


FIG. 2

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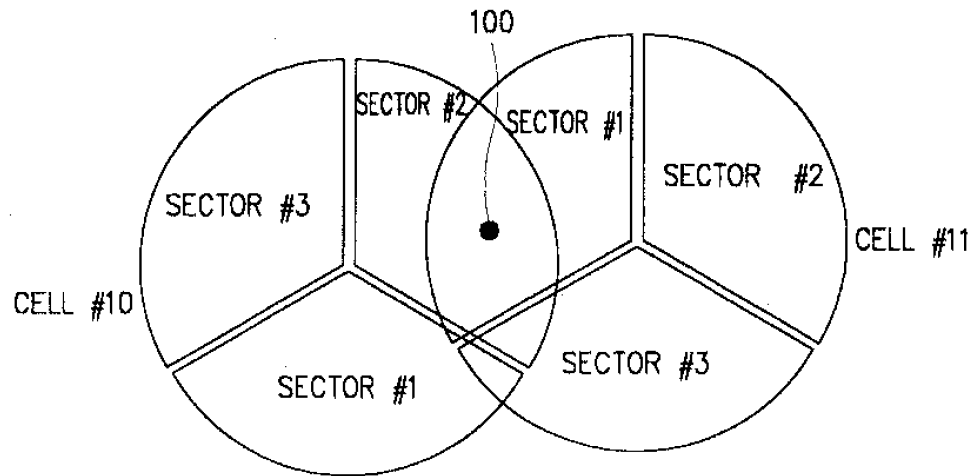


FIG. 3A

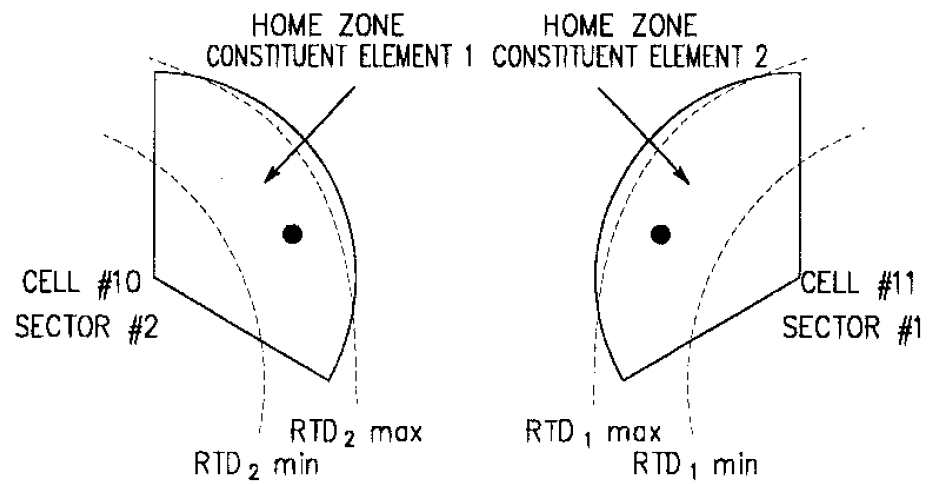


FIG. 3B

FIG. 4

NAME	ADDRESS	TELEPHONE NUMBER 1 (NSN)	TELEPHONE NUMBER 2 (MTN)	BASE STATION, SECTOR ID, RTD (MAX/MIN)		
GIL-DONG HONG	SEOHYUN-DONG, BUNDANG-KU	0342-779 -8180	011-779 -xxxx	1, α , 16/40	1, β , 20/44	3, γ , 24/48
DU-SAN PAIK	HAMKYUNG-DO	0999-999 -9999	011-yyy -yyy	3, α , 10/34	4, β , 10/34	5, γ , 22/46

4/5

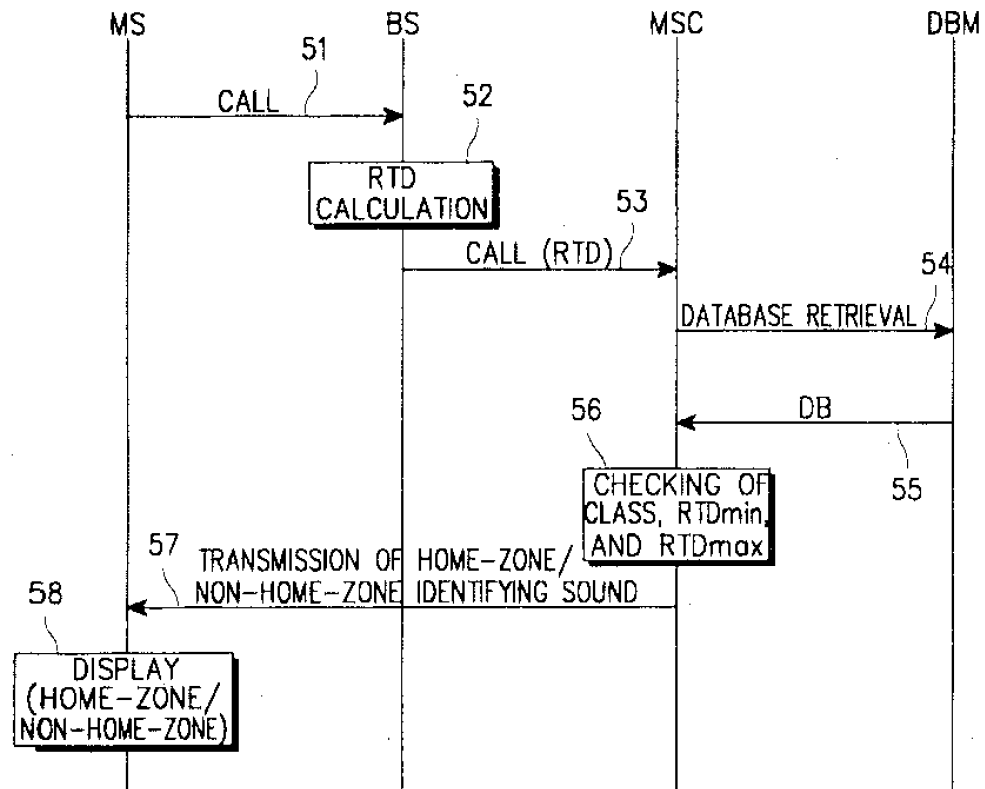


FIG. 5

5/5

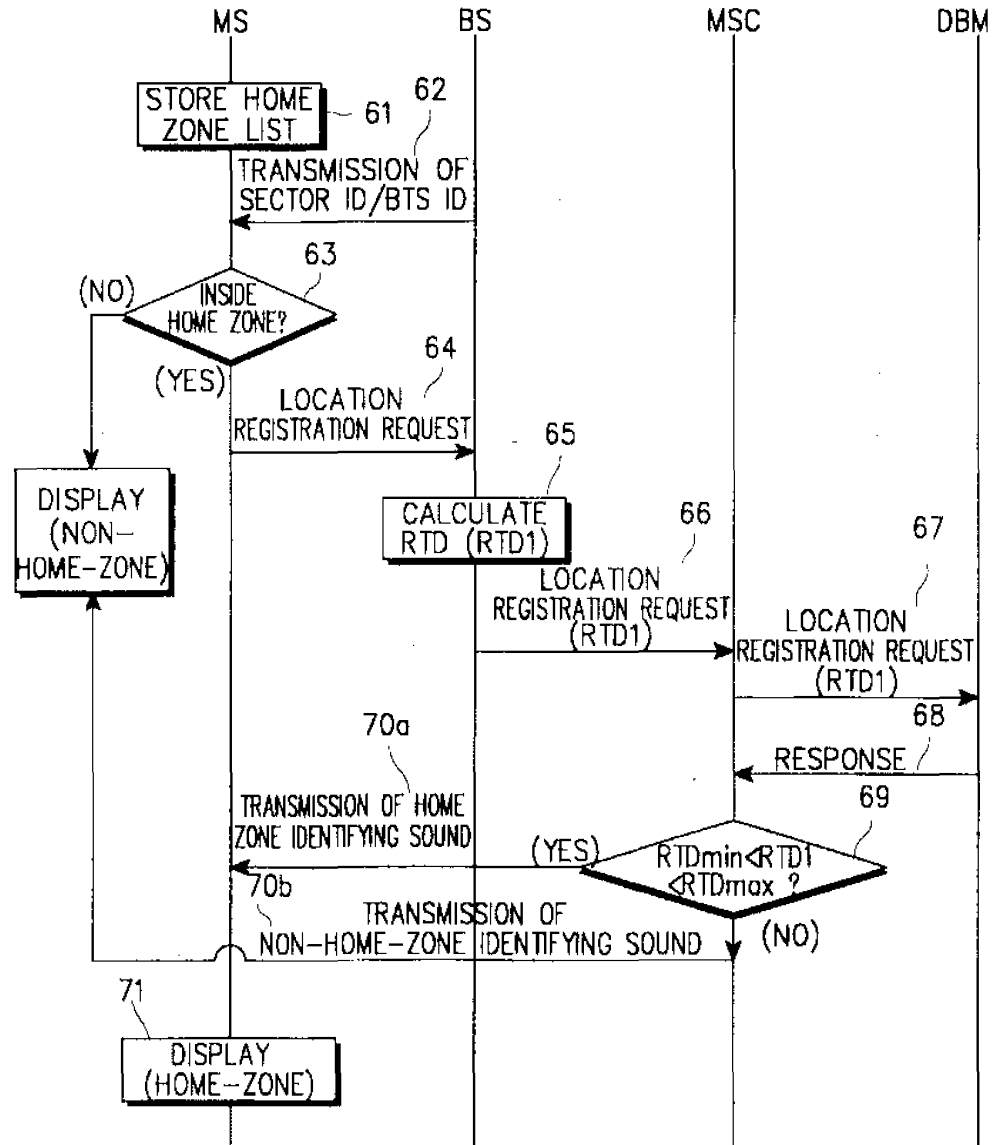


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR00/00712

A. CLASSIFICATION OF SUBJECT MATTER		
IPC7 H04L 12/14		
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)		
IPC7 : H04L, H04Q, H04M		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Korean Patents and Applications for Inventions since 1975 Korean Utility models and Applications for Utility models since 1975		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97/13397 10 April 1997 published : pp. 4 line 12 - line 23, pp. 7 line 4 - line 12	1 - 7 6 - 7
A	US 6,044,261 28 Mar 2000 : column 2, line 31 - line 44 column 3, line 46 - line 59 column 4, line 41 - line 48 column 5, line 47 - line 56	1 - 7
☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* 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 citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
12 OCTOBER 2000 (12.10.2000)		16 OCTOBER 2000 (16.10.2000)
Name and mailing address of the ISA/KR		Authorized officer
Korean Industrial Property Office Government Complex-Taejon, Dunsan-dong, So-ku, Taejon Metropolitan City 302-701, Republic of Korea		LEE, Saang Woong
Facsimile No. 82-42-472-7140		Telephone No. 82-42-481-5714

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR00/00712

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 97/13387 A	10 April 1997	9503521-8 SE	5 Oct 1995
US 6,044,261 A	28 Mar 2000	None	

Form PCT/ISA/210 (patent family annex) (July 1998)

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2007/052939

A. CLASSIFICATION OF SUBJECT MATTER
INV. H04Q7/38 H04Q7/32

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)
H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 334 052 B1 (NORDSTRAND INGRID) 25 December 2001 (2001-12-25) abstract figures 2-5 column 1, line 51 - line 64 column 4, line 29 - line 50 column 5, line 17 - line 21 column 5, line 46 - column 6, line 3 column 7, line 10 - column 9, line 3 column 11, line 4 - line 10 column 12, line 10 - line 33 claim 1	1-17
X	WO 01/03372 A (SAMSUNG ELECTRONICS CO., LTD) 11 January 2001 (2001-01-11) abstract page 6, line 20 - page 7, line 11 figures 4-6	1-17

-/-

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

☒ See patent family annex.

* 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 document but published on or after the International filing date

I 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

I 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.

Z document member of the same patent family

Date of the actual completion of the International search

21 June 2007

Date of mailing of the International search report

29/06/2007

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 opo nl,
Fax: (+31-70) 340-3018

Authorized officer

Matt, Stefan

Electronic Acknowledgement Receipt	
EFS ID:	20172323
Application Number:	14315703
International Application Number:	
Confirmation Number:	5654
Title of Invention:	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA
First Named Inventor/Applicant Name:	CARLOS A. PEREZ LAFUENTE
Customer Number:	26694
Filer:	Jeffri Kaminski/I hayes
Filer Authorized By:	Jeffri Kaminski
Attorney Docket Number:	122358-367401
Receipt Date:	18-SEP-2014
Filing Date:	26-JUN-2014
Time Stamp:	09:42:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	ids.pdf	84083	no	2
			2d2debe848ca297b0449ab4b382f2076dc1ec83e		

Warnings:

Information:

2	Information Disclosure Statement (IDS) Form (SB08)	sb08.pdf	181089	no	2
			11ab336b36c5799d321b43c750326d96ab90d35c		
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	WO0103372.pdf	347559	no	17
			538d197a075d090d1d62c4e93182728721c64357		
Warnings:					
Information:					
4	Non Patent Literature	ISR.pdf	28960	no	1
			434a6ba39e5cf34d1912d2117ebb1c7b0e1dc78		
Warnings:					
Information:					
Total Files Size (in bytes):			641691		
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Carlos A. Perez Lafuente

Art Unit: 2642

Application No: 14/315,703

Examiner: Not Yet Assigned

Confirmation No: 5654

Filed: June 26, 2014

Atty. Docket No: 122358-367401

For: METHOD AND SYSTEM FOR
MONITORING A MOBILE STATION
PRESENCE IN A SPECIAL AREA

Customer No:

26694

PATENT & TRADEMARK OFFICE

SECOND INFORMATION DISCLOSURE STATEMENT (IDS)

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

Dear Madam:

Pursuant to 37 C.F.R. § 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 C.F.R. § 1.97(b)(3)).

In accordance with 37 C.F.R. § 1.98(a)(2)(ii), Applicant has not submitted copies of U.S. patents (documents **AA**) and U.S. patent applications. Applicant submits herewith copies of foreign patents (document **BA**) and non-patent literature (document **CA**) accordance with 37 C.F.R. § 1.98(a)(2).

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(a) exists. In accordance with 37 C.F.R. § 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is “prior art” for this invention unless specifically designated as such.

Document **CA** is an International Search Report for the related application PCT/EP2007/052939. Documents were cited in Document **CA**.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 22-0261, under Order No. 122358-367401.

Dated: September 18, 2014

Respectfully submitted,

By: /Jeffri A. Kaminski/
Jeffri A. Kaminski
Registration No.: 42,709
VENABLE LLP
P.O. Box 34385
Washington, DC 20043-9998
(202) 344-4000
(202) 344-8300 (Fax)
Attorney/Agent For Applicant

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Carlos A. P. LaFuenta

Art Unit: Not Yet Assigned

Application No: 14/315,703

Examiner: Not Yet Assigned

Confirmation No: 5654

Filed: June 26, 2014

Atty. Docket No: 122358-367401

For: METHOD AND SYSTEM FOR
MONITORING A MOBILE STATION
PRESENCE IN A SPECIAL AREA

Customer No:

26694

PATENT & TRADEMARK OFFICE

SUBMISSION OF POWER OF ATTORNEY

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

Dear Madam:

Applicants submit herewith an executed Power of Attorney for the application referenced above.

Dated: September 12, 2014

Respectfully submitted,

Electronic signature: /Jeffri A. Kaminski/

Jeffri A. Kaminski

Registration No.: 42,709

VENABLE LLP

P.O. Box 34385

Washington, DC 20043-9998

(202) 344-4000

(202) 344-8300 (Fax)

Attorney/Agent For Applicant

**HOJA DE TRAMITE PARA PODER OTORGADO A UNO O MAS PROFESIONALES REGISTRADOS
TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS**

NOTA: Presente este formulario junto con el formulario de Poder Otorgado por el Solicitante (PTO/AIA/82B) para identificar la solicitud a la cual se dirige el Poder, de conformidad con 37 CFR 1.5, a menos que el número de solicitud y la fecha de presentación se identifiquen en el formulario de Poder Otorgado por el Solicitante. Si el formulario PTO/AIA/82A o el formulario PTO/AIA/82B no identifican la solicitud a la cual se dirige el Poder, no se reconocerá el Poder en la solicitud.

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Número de solicitud Application Number	14/315,703
Fecha de presentación Filing Date	June 26, 2014
Primer inventor nombrado First Named Inventor	Carlos A. Perez Lafuente
Título Title	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA
Unidad de ART Art Unit	2642
Nombre de examinador Examiner Name	Not Yet Assigned
Número de expediente de abogado Attorney Docket Number	122358-367401

**FIRMA del solicitante o profesional de patentes
SIGNATURE of Applicant or Patent Practitioner**

Firma Signature	/Jeffri A. Kaminski/	Fecha (opcional) Date (Optional)	9/12/2014
Nombre Name	Jeffri A. Kaminski	Número de registro Registration Number	42,709
Título (si el solicitante es una entidad jurídica) Title (if Applicant is a juristic entity)			
Nombre del solicitante (si el solicitante es una entidad jurídica) Applicant Name (if Applicant is a juristic entity)			

NOTA: Debe firmar este formulario de conformidad con 37 CFR 1.33. Véase 37 CFR 1.4(d) para los requisitos de firma y certificaciones. Si hay más un de solicitante, utilice más de un formulario.

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ *Se presenta un total de 1 formularios.
*Total of 1 forms are submitted.

PODER OTORGADO POR EL SOLICITANTE POWER OF ATTORNEY BY APPLICANT

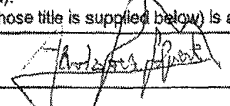
Soy el solicitante (si el solicitante es una entidad jurídica, indique el nombre del solicitante en la casilla):
I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

AFIRMA CONSULTING & TECHNOLOGIES, S.L.

- ☐ Inventor o inventor conjunto (no se requiere el título más adelante)
Inventor or Joint Inventor (title not required below)
- ☐ Representante legal de un inventor fallecido o legalmente incapacitado (no se requiere el título más adelante)
Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☒ Cesionario o persona a quien el inventor esté obligado a ceder (propvea el título del signatario si el solicitante es una entidad jurídica)
Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ Persona que demuestre un interés propietario suficiente (por ejemplo, se concedió una solicitud al amparo de 37 CFR 1.46(b)(2) en la solicitud o se presenta simultáneamente con este documento) (propvea el título del signatario si el solicitante es una entidad jurídica)
Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

FIRMA del solicitante de patentes SIGNATURE of Applicant for Patent

El signatario (cuyo título se indica más adelante) está autorizado a actuar en nombre del solicitante (por ejemplo, cuando el solicitante es una entidad jurídica).
The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Firma Signature		Fecha (opcional) Date (Optional)	09/03/2014
Nombre Name	CARLOS ALBERTO PEREZ LAFUENTE		
Título Title	CEO		

NOTA: Firma - El solicitante debe firmar este formulario de conformidad con 37 CFR 1.33. Véase 37 CFR 1.4 para los requisitos de firma y certificaciones. Si hay más un de solicitante, utilice más de un formulario.
NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Se presenta un total de 1 formularios.
Total of 1 forms are submitted.

Electronic Acknowledgement Receipt	
EFS ID:	20119482
Application Number:	14315703
International Application Number:	
Confirmation Number:	5654
Title of Invention:	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA
First Named Inventor/Applicant Name:	CARLOS A. PEREZ LAFUENTE
Customer Number:	26694
Filer:	Jeffri Kaminski/I hayes
Filer Authorized By:	Jeffri Kaminski
Attorney Docket Number:	122358-367401
Receipt Date:	12-SEP-2014
Filing Date:	26-JUN-2014
Time Stamp:	10:01:15
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	Power of Attorney	POA367401.pdf	202108	no	3
			53109a4334e36cd794cd164e84e745816dc50442		

Warnings:

Information:

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	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
14/315,703	06/26/2014	2642	730	122358-367401	16	1

CONFIRMATION NO. 5654

FILING RECEIPT

26694
VENABLE LLP
P.O. BOX 34385
WASHINGTON, DC 20043-9998



0C00000069468506

Date Mailed: 07/10/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

CARLOS A. PEREZ LAFUENTE, Madrid, SPAIN;

Applicant(s)

AFIRMA CONSULTING & TECHNOLOGIES, S.L., Madrid, SPAIN

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 14/250,517 04/11/2014
which is a CON of 12/294,641 04/12/2010 PAT 8738040 *
(*)Data provided by applicant is not consistent with PTO records.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 07/08/2014

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/315,703**

Projected Publication Date: 10/16/2014

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA

Preliminary Class

455

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

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 Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 14/315,703	
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		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	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	16	minus 20 = *	x 40 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1	minus 3 = *	x 210 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
			TOTAL	730		TOTAL	
* If the difference in column 1 is less than zero, enter "0" in column 2.							
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =		x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =		x =
	Application Size Fee (37 CFR 1.16(s))						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
				TOTAL ADD'L FEE		TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =		x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =		x =
	Application Size Fee (37 CFR 1.16(s))						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
				TOTAL ADD'L FEE		TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.							



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/315,703	06/26/2014	CARLOS A. PEREZ LAFUENTE	122358-367401

CONFIRMATION NO. 5654

IMPROPER CFR REQUEST

26694
VENABLE LLP
P.O. BOX 34385
WASHINGTON, DC 20043-9998



Date Mailed: 07/10/2014

RESPONSE TO REQUEST FOR CORRECTED FILING RECEIPT

Continuity, Priority Claims, Petitions, and Non-Publication Requests

In response to your request for a corrected Filing Receipt, the Office is unable to comply with your request because:

Improper Priority Claim(s) to Prior-Filed Foreign Application(s)

The instant application was not filed within twelve (12) months from the filing date of the prior-filed foreign application, and there is no benefit claim to an intermediate nonprovisional or international application designating the United States filed within 12 months of the filing date of the foreign application. Applicant should review each priority claim submitted and, if appropriate, provide the proper reference to any intermediate application filed within 12 months of the filing date of the foreign application in compliance with 37 CFR 1.78, or delete the priority claim. For applications filed on or after September 16, 2012, applicant must submit a corrected application data sheet (ADS) to include a specific reference.

Alternatively, if the instant application (or intermediate application) was filed within 14 months of the prior foreign application, applicant may file a petition (in the instant application) to restore the right of priority if the delay in filing the application within the 12 month time period was unintentional. See 37 CFR 1.55 for the requirements of a petition to restore the right of priority.

For applications filed on or after September 16, 2012, applicant must submit a corrected application data sheet (ADS) to include a foreign priority claim.

Timeliness: The required reference for the benefit claim to an intermediate nonprovisional or international application designating the United States must be filed during the pendency of the instant application and within the later of: (1) four months from the actual filing date of the instant application, or the national stage commencement date if the instant application is a national stage application under 35 U.S.C. 371; or (2) sixteen months from the filing date of the prior-filed application. Failure to timely file the required reference is considered a waiver of any benefit claim, unless a grantable petition to accept an unintentionally delayed claim under 37 CFR 1.78, the petition fee set forth in 37 CFR 1.17(m), and the required reference are filed.

/mhaile/

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	Not Yet Assigned
				Filing Date	June 26, 2014
				First Named Inventor	Carlos A. Perez Lafuente
				Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet	1	of	1	Attorney Docket Number	122358-367401

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	AA*	US-2002/0094801	07-18-2002	Atorf	
	AB*	US-6,516,190	02-04-2003	Linkola	
	AC*	US-6,516,193	02-04-2003	Salmela et al.	
	AD*	US-6,826,414	11-30-2004	Reynolds et al.	
	AE*	US-6,920,317	07-19-2005	Muhonen	
	AF*	US-6,671,506	12-30-2003	Lee	
	AG*	US-6,785,536	08-31-2004	Lee et al.	
	AH*	US-6,334,052	12-25-2001	Nordstrand	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	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
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	
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*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. * CITE NO.: Those application(s) which are marked with an single asterisk (*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. 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.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA		
First Named Inventor/Applicant Name:		CARLOS A. PEREZ LAFUENTE		
Filer:		Jeffri Kaminski/l hayes		
Attorney Docket Number:		122358-367401		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				730

Electronic Acknowledgement Receipt	
EFS ID:	19421016
Application Number:	14315703
International Application Number:	
Confirmation Number:	5654
Title of Invention:	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA
First Named Inventor/Applicant Name:	CARLOS A. PEREZ LAFUENTE
Customer Number:	26694
Filer:	Jeffri Kaminski/I hayes
Filer Authorized By:	Jeffri Kaminski
Attorney Docket Number:	122358-367401
Receipt Date:	26-JUN-2014
Filing Date:	
Time Stamp:	13:58:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$730
RAM confirmation Number	219
Deposit Account	220261
Authorized User	
<p>The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:</p> <p>Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)</p> <p>Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)</p>	

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 of New Application	transmittal.pdf	140653 37fd31334190db067466fa0419c2e8084c0e f850	no	1
Warnings:					
Information:					
2		application.pdf	176172 242d123dd43241d4220b859ae9b183315b cb9a81	yes	39
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	34	
	Claims		35	38	
	Abstract		39	39	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	figures.pdf	145957 84047cc97293548228a35ed007ab6a48b50 4ba7e	no	7
Warnings:					
Information:					
4	Application Data Sheet	ads.pdf	2640524 48c54d787a8ef2525a0440c3e3912699dc2 34587	no	7
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
5	Oath or Declaration filed	declaration.pdf	84203 4c41d2dabe0a4fd8eebe2033c924b84db63 e2da3	no	1
Warnings:					
Information:					
6	Transmittal Letter	ids.pdf	83520 a2486ff07465dbda4f1aa33e4dc342ca202a 61ce	no	2
Warnings:					
Information:					

7	Information Disclosure Statement (IDS) Form (SB08)	sb08.pdf	126370	no	1				
			324cfac96f963b0da3229524a9388b34687b10e						
Warnings:									
Information:									
This is not an USPTO supplied IDS fillable form									
8	Fee Worksheet (SB06)	fee-info.pdf	33177	no	2				
			0de46023fabae76ade24d6d8a10bc2011a54aa19						
Warnings:									
Information:									
Total Files Size (in bytes):			3430576						
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>									

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.

UTILITY PATENT APPLICATION TRANSMITTAL <small>(ONLY FOR NEW NONPROVISIONAL APPLICATIONS UNDER 37 CFR 1.53(B))</small>		Attorney Docket No. 122358-367401	
		First Named Inventor Carlos A. Perez Lafuente	
		Title	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA
		Express Mail Label No.	

APPLICATION ELEMENTS <small>See MPEP chapter 600 concerning utility patent application contents.</small>	Commissioner for Patents ADDRESS TO: P.O. Box 1450 Alexandria, VA 22313-1450
1. ☐ Fee Transmittal Form <small>(PTO/SB/17 or equivalent)</small> 2. ☒ Applicant asserts small entity status. <small>See 37 CFR 1.27</small> 3. ☐ Applicant certifies micro entity status. See 37 CFR 1.29. <small>Applicant must attach form PTO/SB/15A or B or equivalent.</small> 4. ☒ Specification [Total Pages <u>39</u>] <small>Both the claims and abstract must start on a new page. (See MPEP § 608.01(a) for information on the preferred arrangement)</small> 5. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets <u>7</u>] 6. Inventor's Oath or Declaration [Total Pages <u>1</u>] <small>(including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))</small> a. ☐ Newly executed (original or copy) b. ☒ A copy from a prior application (37 CFR 1.63(d)) 7. ☒ Application Data Sheet *See note below. <small>See 37 CFR 1.76 (PTO/AIA/14 or equivalent)</small> 8. ☐ CD-ROM or CD-R <small>In duplicate, large table, or Computer Program (Appendix)</small> ☐ Landscape Table on CD 9. Nucleotide and/or Amino Acid Sequence Submission <small>(if applicable, items a. – c. are required)</small> a. ☐ Computer Readable Form (CRF) b. Specification Sequence Listing on: i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statements verifying identity of above copies	ACCOMPANYING APPLICATION PARTS 10. ☐ Assignment Papers <small>(cover sheet & document(s))</small> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div> 11. ☐ 37 CFR 3.73(c) Statement ☐ Power of Attorney <small>(when there is an assignee)</small> 12. ☐ English Translation Document (if applicable) 13. ☒ Information Disclosure Statement <small>(PTO/SB/08 or PTO-1449)</small> ☐ Copies of citations attached 14. ☐ Preliminary Amendment 15. ☐ Return Receipt Postcard <small>(MPEP § 503) (Should be specifically itemized)</small> 16. ☐ Certified Copy of Priority Document(s) <small>(if foreign priority is claimed)</small> 17. ☐ Nonpublication Request <small>Under 35 U.S.C.122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.</small> 18. ☐ Other: <div style="border: 1px solid black; height: 30px; width: 100%;"></div>
*Note: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 must be included in an Application Data Sheet (ADS). (2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).	
18. CORRESPONDENCE ADDRESS	
☒ The address associated with Customer Number: <div style="border: 1px solid black; padding: 2px 20px;">26694</div> OR ☐ Correspondence address below	
Name	
Address	
City	State Zip Code
Country	Telephone Email
Signature	/Jeffri A. Kaminski/ Date June 26, 2014
Name (Print/Type)	Jeffri A. Kaminski Registration No. (Attorney/Agent) 42,709

METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN
A SPECIAL AREA

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation U.S. Application No. 14/250,517, filed April 11, 2014 which is a continuation of U.S. National Phase Application No. 12/294,641, filed April 12, 2010 which claims priority to International Application No. PCT/EP2007/052939 filed March 27, 2007 which claims benefit of the European Patent Application No. 06111804.8 filed March 28, 2006 each of which is hereby incorporated herein by reference in their entireties.

BACKGROUND ART

[0002] This invention relates to a method for monitoring a mobile station presence in a special area. This invention relates also to a mobile system, a server, a radio transmitting device, and a mobile station suitable for carrying out such a method.

[0003] Development of short range wireless communication solutions based on the use of Bluetooth, DECT and WIFI within a small area such as homes is strong competition for mobile operators owning wide mobile networks. A mobile telephone network (called also mobile network) includes a large number of base stations and all the data processing means required to provide the telecommunication service to each mobile station serviced by said mobile network.

[0004] These short range wireless communication solutions can provide direct connection to fixed networks whose operators offer cheaper rates than those offered by mobile networks. It can therefore be of interest for mobile network operators to offer different rates depending on the instantaneous location of a mobile station connected to its mobile network, in particular in areas; called special areas, where it could face strong competition from some short range wireless communication solutions.

[0005] The published patent application n^o US20020094801 describes a technical solution: a fixed station sends an encoded first signal and the coverage of said first signal defines a special area. The fixed station and a mobile station using the special area are linked one another via the signal code. But this document does not disclose anything about the content of said coded signal. In order to realize protection against the abuse of the system, in an embodiment, this document proposes to provide the fixed station with receiving and comparison means for an access code that is to be applied to the fixed station via the mobile station in order to put the fixed station into operation.

[0006] The international application WO 00/27152 offers another solution for locating a mobile station based on the use of a guide unit that broadcasts a short range radio signal which defines a home area. This document discloses that the short range radio signal contains the identity code of said mobile station that has to identify its own identity code in order to notice to a mobile switching centre that it is located in its home area. This mobile station transmits then a home message to the mobile network, this home message being possibly used notably for defining the price/service connected to telephone calls. In this last, technical solution, the guideunit has to know the identity of the mobile station and this last solution is thought to be used for a home special area.

[0007] However, this last technical solution does not allow the mobile network, to add for a mobile station one or more special areas wherein the presence of a mobile station is monitored without having to at least modify one or more guide units broadcasting in such areas. It lacks therefore of flexibility.

DISCLOSURE OF THE INVENTION

[0008] An object of the invention is therefore to provide a method for monitoring the presence of a mobile station in at least one special area, said method providing the flexibility to the mobile telephone network of associating new special areas for this mobile station in a secure way without modifying any radio transmitting device.

[0009] This object is achieved in accordance with claim 1 by providing a method for monitoring the presence of a mobile station in at least one special area associated to the mobile station, the method comprising the following steps:

- a. at least one radio communication defining device transmits repeatedly in at least a channel one radio distinctive defining signal that defines the special area by its coverage
- b. the mobile station observes the channel and process any signal received in order to determine whether or not it is receiving any defining signal,
- c. the mobile station processes any defining signal received in order to determine whether or not the defining signal received is a distinctive defining signal that defines the special area,
- d. the mobile station sends an updating signal to a mobile telephone network about its presence in the special area,
- e. the mobile telephone network routes the updating signal to special operating means that adapt the value of at least one operating parameter depending on the presence of the mobile station in the special area, the said method is characterized in that the special area is associated to the mobile station by transmitting to the mobile station a checking data, this checking data being used by the mobile station for determining whether or not the defining signal received is a distinctive defining signal that defines, alone or with other distinctive defining signals, the special area associated to the mobile station and the same checking data being sent to any mobile station whose presence in this special area is monitored.

[0010] Advantageously from the operator's point of view, the invention brings the flexibility needed to activate a special way of operating a mobile station in a special area by transmitting a checking data that will be stored in a mobile station database without having to modify, by way of introducing any new data (notably the identity code of said mobile station), at least one radio communication defining device like in the aforementioned international patent application WO 00/27152. Therefore, a radio communication defining device is not required to store all the mobile stations identity codes using the special area defined by at least the coverage of its defining signal(s).

[0011] According to the present invention, a special area associated to a mobile station can be defined by one or more defining signals. Therefore the checking data may preferably contain information included in every defining signals defining completely a special area (each one defines it partially) and the mobile station try to find any of this information in any defining

signal received with comparison means. The mobile station may receive defining signals that do not define any special area for it. In the case where the special area is defined by two or more defining signals, this special area may be the intersection of all or part of them or the global coverage of the defining signals.

[0012] In addition, a method according to the invention is specially suitable to be used in environments like for example airports, company's premises or business centres where the number of different mobile stations to be serviced by the mobile telephone network would be high. With the solution of the aforementioned international patent application WO 00/27152, it would be necessary to store and transmit in and from a single radio communication defining device all the mobile station identity codes of the potential mobile stations using a special area defined in such environment, operation which would be difficult or even impossible considering that the radio spectrum is a limited resource. Therefore, the application WO 00/27152 has a narrower geographical scope of usability. It is also not required, thanks to the invention, to send any activation code to activate a radio communication defining device and it is not required to store all the mobile stations activation codes in the radio communication defining device, as in one embodiment of the published patent application n2US20020094801. Therefore, it is easier with this present invention to realize protection against abuse of the system.

[0013] The special operating means may be at least partly included in the data processing means of the mobile telephone network. All of them or part of them may be owned or operated by an external provider of the mobile telephone network.

[0014] In a particular embodiment, the special area is deactivated for the mobile station by the mobile telephone network sending a deactivation signal to the mobile station to stop the mobile station from recognizing a defining signal that defines that special area as a distinctive one.

[0015] In a particular embodiment, the special operating means acknowledge the reception of the updating signal and transmit an acknowledgement signal to the mobile station. In this embodiment, the mobile station knows advantageously if the mobile telephone network received the updating signal or not.

[0016] In a particular embodiment, at least one radio communication defining device is a wireless device whose radio defining signal that defines the special area is distinctive wireless signal transmitted by the wireless device in a frequency range outside the frequency range allocated for the mobile telephone network. Preferably, the said distinctive wireless signal contains wireless device identification data and reliable information confirming that the wireless device is effectively located into a predetermined environment. The operator of the mobile telephone network advantageously avoids fraud linked to a possible shifting of the wireless device. The checking data associated to this wireless device includes this wireless device identification data.

[0017] In another particular embodiment, at least one radio communication defining device is a base station whose radio distinctive defining signal that defines the special area is a distinctive signal comprising a special mobile telephone network identification code, the checking data associated to this base station includes this special mobile telephone network identification code.

[0018] In another particular embodiment, at least one radio communication defining device is a base station whose radio distinctive defining signal that defines the special area is a distinctive base station identity signal comprising an identification code of the base station, the checking data associated to this base station includes this base station identification code. The mobile telephone network operator controls and knows the location of all the base stations broadcasting identification codes contained into the mobile station database and therefore advantageously controls the location of the special area.

[0019] In an embodiment of this invention, the special operating means store a parameters database linking the special area to the mobile station and to a set of at least the operating parameter; and the special operating means adapt the value of at least an operational parameter of this set when they receive an updating signal signalling that the mobile station exits or enters the special area. Thanks to this embodiment of the invention, the processing of these operating parameters is centralized in the special operating means and it is not done in each base station. In case the mobile station will be switch off, the mobile network operator will decide whether or not the values of the operating parameters associated to the presence of the mobile station into special operating areas remain unchanged or are disabled into the

database containing the set of operating parameters as consequence of the switching off process.

[0020] In a particular embodiment, the operating parameter is a tariff or a service flag that enables or disables a special tariff or a service for the mobile station. Advantageously, the operator's services offer can therefore being dependent on the location of the mobile station.

[0021] In a particular embodiment, the updating signal includes a request to access to a service or to a multimedia content and the mobile telephone network routes this request to a part of the special operating means that allow or forbid the provision of this service or multimedia content depending on whether or not the mobile station is into the special area. This part of the special operating means may be operated by the mobile telephone network operator or by a different provider.

[0022] In a particular embodiment, the transmission of the checking data to the mobile station is done via the mobile telephone network or via a signal of at least one radio device or via a person introducing the checking data in the mobile station.

[0023] According to the present invention, there is further provided a mobile system for monitoring the presence of a mobile station in a special area defined for this mobile station, said system comprising :

- checking means for detecting the presence of the mobile station in the special area associated to this mobile station, said checking means including
 - At least one radio communication defining device transmitting repeatedly in at least a channel a radio distinctive defining signal that defines the special area,
 - in the mobile station, observing means for observing the channel and processing means for processing any signal received in the channel in order to determine whether or not the signal received is a defining signal and, if the signal received is a defining signal, whether or not the signal received is a distinctive defining signal that defines the special area,
- transmission means for sending an updating signal regarding the presence of the mobile station in the special area from the processing means to special operating means

included at least partly in data processing means of the mobile telephone network,

- the special operating means for adapting the value of at least one operating parameter depending on the presence of the mobile station in the special area, characterized in that the said mobile system comprises storing means for storing a checking data in the mobile station, the processing means include means for using this checking data for determining whether or not the defining signal received is a distinctive defining signal that defines, alone or with other distinctive defining signals, the special area and the same checking data is sent to any mobile station whose presence in this special area is monitored.

[0024] In a particular embodiment of the invention, the mobile system comprises special area location monitoring means for monitoring the correct location of at least a part of the special area. It is then harder to fraud by moving the radio communication defining device. In a particular embodiment of the invention, the mobile system carries out a method according to the present invention.

[0025] This invention also concerns a server. According to the invention, this server is characterized in that it contains at least some of the special operating means included in the mobile system according to the present invention. This server may contain the whole or part of the special operating means. In this last case, the special operating means may be spread in several servers or computers.

[0026] According to the present invention, there is further provided a radio communication defining device, characterized in that it carries out a method according to the present invention. In a particular embodiment, the said radio communication defining device of the invention is a wireless device and it contains means for transmitting the distinctive wireless signal that defines the special area and means for obtaining reliable information indicating whether or not the said wireless device is located into a predetermined environment.

[0027] This invention also concerns a mobile station, characterized in that this mobile station is suitable to carry out a method according to the present invention. This mobile station may be a mobile telephone or a Personal Digital Assistant for example.

BRIEF DESCRIPTION OF THE DRAWINGS

[0028] In the following detailed description of some possible embodiments, other features and advantages of the invention will appear, each description being made with reference to the following drawings:

[0029] Figure 1 is a schematic diagram illustrating an embodiment of a mobile system according to the invention;

[0030] Figure 2 is a schematic diagram illustrating another embodiment of a mobile system according to the invention;

[0031] Figure 3 is a schematic diagram illustrating another embodiment of a mobile system according to the invention;

[0032] Figure 4 is a flow chart illustrating partly an embodiment of a method according to the invention;

[0033] Figure 5 is a flow chart illustrating another part of an embodiment of a method according to the invention;

[0034] Figure 6 is a schematic diagram of a part of an operating parameters database in an embodiment of the invention;

[0035] Figure 7 is a schematic diagram of a part of another operating parameters database in an embodiment of the invention.

DETAILED DESCRIPTION

[0036] A mobile station serviced by the mobile telephone network. The mobile telephone network may be cellular or not.

[0037] In this description and in the claims, it is supposed, in the case that the mobile telephone network is cellular, that each base station of the cellular mobile telephone network is associated to a unique cell. Therefore, some base stations of the cellular mobile network can be located in the same location and share technical means. For example, a tower may incorporate three sets of antennas, each set being part of a different base station of the same mobile network.

[0038] Figure 1, figure 2 and figure 3 are three schematic figures describing three particular embodiments of mobile systems according to the invention.

[0039] Figure 1 is a schematic diagram illustrating an embodiment of the invention wherein:

- any base station 107 or 105 of a mobile telephone network of an operator is a radio communication defining device transmitting a radio defining signal in a channel used by the mobile telephone network,

- the distinctive radio defining signal that defines the special area is a distinctive signal transmitted by some selected base stations 105, said distinctive signal comprising a special mobile telephone network identification code. The sum of the coverage of these selected base stations 105 defines a special area (the shaded area of figure 1).

- the checking data includes this special mobile telephone network identification code.

[0040] More precisely, Figure 1 shows a geographical area 102 covered by the mobile telephone network. The radio coverage of the mobile telephone network in this geographical area 102 is the addition of the radio coverage 104 and 106 of several base stations 105 and 107. The mobile telephone network includes data-processing means that comprise a server according to the invention including special operating means according to the invention.

- [0041] Each base station is transmitting network data, including a mobile telephone network identification code, which allows a mobile station 100 in the geographical area 102 to select the appropriate mobile telephone network.
- [0042] The operator of the mobile telephone network defines one special mobile telephone network identification code, called IC2, (in another embodiment, the operator may create more than one special mobile telephone network identification code) different from a normal mobile telephone network identification code, called IC1. Then the operator configures its mobile telephone network in such a way that some base stations 107 (in general the majority of them) transmit a radio defining signal comprising the normal mobile telephone network identification code and the selected base stations 105 (in general a minority of them) transmit a distinctive defining signal comprising a special mobile telephone network identification code.
- [0043] The checking data (i.e. IC2) is stored into an internal mobile station database included in mobile station 100 storing means, this mobile station 100 being associated to this special area. The same checking data is sent to any mobile station whose presence in this special area is monitored.
- [0044] The mobile station 100 contains observing means and processing means for determining that the distinctive defining signal transmitted by any base station 105 is received. These processing means include means for using the checking data that include, in this embodiment, comparing means: Thanks to these comparing means, the mobile telephone network identification codes received by the mobile station are compared to IC2 stored into the internal mobile station database: If the mobile station is in a position like the position (a) in figure 1, i.e. inside the special area, the mobile telephone network identification code received is equal to IC2 and therefore the mobile station 100 determines that it is into the special area. Otherwise, if the mobile station 100 is in position like the position (b) in figure 1, i.e. outside the special area, the mobile station 100 receives a defining signal containing 101 different from IC2 and determines that it is not receiving any distinctive defining signal and therefore that it is not into the special area.

[0045] For example, if the mobile station 100 is a GSM mobile station operating into a GSM mobile telephone network, the mobile station 100 has the capability to store the received mobile telephone networks identification codes into a mobile station 100 memory. In that case, the mobile station 100 may access to such internal memory to get data to determine, together with the checking data (i.e. IC2), whether or not it is receiving any distinctive defining signal.

[0046] With the exception of the processes concerning the invention, a special mobile telephone network identification code (IC2) is equivalent, from the perspective of both the mobile station and the mobile telephone network, to a normal mobile telephone network identification code (IC1). In this context, processes such as network selection, selection / reselection of base stations and handover will not be influenced because some base stations transmit IC1 and some other transmit IC2, such lack of influence meaning that all the mobile station and the mobile telephone network processes (except the processes concerning the invention) will be handle as if IC1 and IC2 would be the same code.

[0047] For example, a mobile telephone network operator can use this embodiment of the invention to offer one set of normal billing rates in-an urban environment of a country, and another set of special billing rates for a rural environment. Another example of the application of this embodiment of the invention is for a mobile telephone network operator to offer normal billing rates for the whole country except in industrial areas or business districts.

[0048] Figure 2 is a schematic diagram illustrating an example of another embodiment of a mobile system according to the invention wherein the radio communication defining device is a wireless device (212 or 212b), e.g. a WIFI, Bluetooth or DECT device, the radio distinctive defining signal that defines the special area is a distinctive wireless signal 214 or 214b (e.g. a WIFI, Bluetooth or DECT signal) transmitted by the wireless device (212 or 212b) in a frequency range outside the frequency range allocated for the mobile telephone network. A mobile station 200 whose presence in the special area is monitored includes observing means and processing means for

determining whether or not any defining signal is received in the frequency range used by the wireless device.

[0049] Each distinctive wireless signal contains wireless device identification data and reliable information confirming that its transmitting wireless device (212 or 212b in figure 2) is effectively located into a predetermined environment. The checking data comprises a set of at least one wireless device identification data.

[0050] The predetermined environment may be one or more specific geographical locations (for example several fixed points into a restaurant) or a physical environment that can be mobile (for example a car, a plane or a boat). The predetermined environment is defined by the operator of the mobile telephone network.

[0051] The distinctive wireless signals are preferably coded and the mobile station 15 processing means include decoding means to decode the wireless signals received.

[0052] The mobile system comprises special area location monitoring means for monitoring the correct location of any wireless device that may transmit a distinctive wireless signal into this predetermined environment and therefore for monitoring at least a part of the special area.

[0053] In a particular embodiment of the special area location monitoring means, the reliable information comprised into the wireless signal confirms that the wireless device is effectively located into a predetermined geographical environment defined by the operator of the mobile telephone network when:

the wireless device able to receive a RBU signal from at least one radio broadcasting unit (RBU)

RBU identification data is comprised into the RBU signal,

the wireless device receives, through the RBU signal from the RBU, the RBU identification data that are included into a RBU identification database of the wireless device..

[0054] The storage of the RBU identification data into the wireless device RBU identification data database may be done at the Wireless device configuration stage. In the particular example of figure 2 and the wireless device 212, the RBU is a base

station 205 of the mobile telephone network, the RBU identification data is a base station identification code. The wireless device 212 is authenticated into the mobile telephone network comprising the base station 205 and may receive the base station signal 220 when it is located within the range of coverage 204 of the base station 205.

[0055] In a second example of embodiment of the special area location monitoring means, the reliable information comprised into the wireless signal confirms that the wireless device is effectively located into a predetermined geographical environment defined by the operator of the mobile telephone network when it is physically connected to any fixed network connection points defined by the operator of the mobile telephone network for the special area and it is also authenticated into the said fixed network through any of the mentioned fixed network connection points. In this embodiment, the wireless device also comprises means for communicating with the fixed network. In a particular example of this embodiment, some parameters are stored into the wireless device during its configuration stage and such parameters are used by the wireless device to perform the said authentication process into the fixed network.

[0056] These connection points may be PSTN ('Public Switching Telephony Network') connectors for ADSL network services or electrical sockets for PLC ('Power Line Communication') home network services for example. In the particular example of figure 2 and the wireless device 212b, the wireless device 212b has to be connected to a connection point 230 of a fixed network and authenticated in this fixed network so that the reliable information comprised into the wireless signal 214b confirms that the wireless device is effectively located into a predetermined geographical environment.

[0057] In the third example of an embodiment of the special area location monitoring means (not illustrated in figure 2), the reliable information comprised into the wireless signal confirms that the wireless device is effectively located into a predetermined physical environment defined by the operator of the mobile telephone network when:

the wireless device is physically connected to a system registered and authorised by the mobile telephone network operator for the purposes of the invention and

the wireless device is authenticated into the mentioned system.

[0058] In a particular example of this embodiment some parameters are stored into the wireless device during its configuration stage and such parameters are used by the wireless device to perform the referred authentication process into the system. This system may be, in an example, embedded in a mobile device such as a car or a boat.

[0059] More precisely, Figure 2 shows a geographical area 202 covered by a mobile telephone network of an operator, the radio coverage of the mobile telephone network in this geographical area 202 being the addition of the radio coverage of several base stations 205 and 207. The mobile telephone network includes a server according to the invention comprising special operating means. In this embodiment, a wireless device 212 is located in a geographical environment agreed between the operator and the user, such as for example near to the user's house or near his/her work place. The wireless device 212b is located either into a geographical environment, such as for example the user's home, or into a physical environment, which may be mobile, such as for example the user's car, such environments being agreed between the operator and the user.

[0060] The checking data associated to a special area is stored into an internal mobile station database included in a memory (storing means) of a mobile station 200 associated to this special area.

[0061] Processing means comprised in the mobile station 200 compare any wireless device identification data received with the checking data stored in its internal mobile station database and determines that a wireless signal received is a distinctive wireless signal when:

such wireless signal is coded in a format predefined for a distinctive wireless signal and

the wireless device identification data comprised into the wireless signal is equal to at least one of the wireless device identification data stored into the internal mobile station database and

the reliable information comprised into the wireless signal confirms that the wireless device is effectively located into a predetermined environment.

[0062] Otherwise the mobile station 200 determines that the wireless signal received is not a distinctive wireless signal.

[0063] In the embodiment illustrated by the figure 2, the sum of the coverage (203,203b) of the wireless devices 212 and 212b transmitting distinctive wireless signals 214 and 214b defines a special area for the mobile station 200 according to the invention.

[0064] Transmission means for sending an updating signal regarding the presence of the mobile station 200 in the special area (203, 203b) from the processing means to the special operating means are partly comprised in the mobile station 200 and in the mobile telephone network. The updating signal may comprise the result of the last determination performed by the mobile station about its presence into the special area. In another embodiment, the reliable information related to whether or not the wireless device 212 or 212b is or not effectively located into its predetermined environment is also included into the updating signal.

[0065] In this embodiment, an operator of a mobile telephone network covering a geographical area 202 may offer cheaper rates, called special billing rates, to the user of a mobile station 200 if he uses his/her mobile station 200 within the range of coverage 203 of the wireless device 212 (position (a) of the mobile station 200) or within the range of coverage 203b of the wireless device 212b (position (b) of the mobile station 200).

[0066] As an example, a mobile telephone network operator can use this embodiment of the invention to offer one set of special billing rates in premises associated to the

user of the mobile station 200 as may be houses, cars or boats, and another set of normal billing rates for the rest of the environments where the user may use the mobile station 200. Another example of the application of this embodiment of the invention is for a mobile telephone network operator to offer normal billing rates for the whole country except in industrial areas, airports or restaurants.

[0067] Figure 3 is a schematic diagram illustrating an example of another embodiment of a mobile system according to the invention wherein the radio communication defining device is a base station, the radio defining signal that defines the special area is a distinctive base station identity signal comprising an identification code that identifies this base station, the checking data includes a set of at least one base station identification code.

[0068] Figure 3 shows a geographical area 302 covered by a mobile telephone network of an operator, the radio coverage of the mobile telephone network in this geographical area 302 being the addition of the radio coverage 304 and 306 of several base stations 305 and 307. The mobile telephone network includes a server according to the invention comprising special operating means.

[0069] Any mobile station 300 whose presence in the special area is monitored includes observing means and processing means for observing and processing the base station identity signal of the mobile telephone network base stations 305 and 307.

[0070] The checking data is stored into an internal mobile station database included in a memory (storing means) of a mobile station 300 associated to this special area.

[0071] Processing means of the mobile station 300 process the base stations identity signals received and compare their base station identification codes to the checking data and determine that at least one distinctive base station identification code signal is received (i.e. the mobile station 300 is in position (a)) when any of the base station identification codes received is equal to at least one of the base station identification codes stored into the internal mobile station database and otherwise determine that it is not receiving any distinctive base station identification code signal (i.e. the mobile station 300 is in position (b)).

[0072] For example, when a GSM mobile station is operating into a GSM mobile telephone network, the GSM mobile station 300 receives the identification code of the active base station and also the identification codes of some available neighbours base stations. The GSM mobile station 300 may consequently process the base station identification codes received to determine, together with the checking data, whether or not it is receiving any distinctive base station identification code signal.

[0073] The sum of the coverages 304 of the base stations 305 transmitting distinctive base station identification code signals defines a special area for the mobile station 300 according to the invention.

[0074] In this embodiment, an operator of a mobile telephone network covering a geographical area 302 may offer special services to the user of a mobile station 300 if he uses his/her mobile station 300 within the range of coverage of the base stations 305.

[0075] As an example a mobile telephone network operator can use this embodiment of the invention to offer one set of normal billing rates in an urban environment of a country, and another set of special billing rates for a rural environment. Another example of the application of this embodiment of the invention is for a mobile telephone network operator to offer normal billing rates for the whole country except in industrial areas or small towns.

[0076] Any combination of the embodiments of a mobile system according to the invention described herein is another embodiment here below of a mobile system according to the invention. That combination can be the result from 'N' different distinctive defining signals, each one comprising a different special mobile telephone network identification code or a different wireless device identification data or a different base station identification code..

[0077] For example, the mobile telephone network operator can then propose 'N' different sets of rates for 'N' different kinds of special areas for a given mobile station. In an example, an operator installs in the user's house a wireless device whose position is controlled by being or not in the range of coverage of a particular base station of the mobile network, another wireless device whose position is controlled by its

connection to a fix network in the user's holiday cottage and a third wireless device whose position is controlled by its connection to a system embedded in the user's car. The operator creates a special mobile telephone network identification code transmitted by the all the base stations of the user's city. Then the operator stores in the storing means of the user's mobile station the three wireless devices identification data, the user's city special mobile telephone network identification code and several sets of base stations identification codes, each set being the set of identification of base stations covering public places like airports and train stations. Then, the operator can adapt the tariffs charged and the services provided to the user depending notably whether his/her mobile station is in its city or outside, in its house, holiday cottage or car and / or in public places.

[0078] An embodiment of a method for monitoring the presence of a mobile station in atleast one special area according to the invention may include at least three parts:

a first part, illustrated in figure 4, that includes the steps needed to successfully transmit, store, erase and maintain checking data in a mobile station according to the invention,

a second part, illustrated in figure 5, that includes the steps needed for the mobile station to monitor its location in the special areas using the checking data that were transmitted to it and

a third part, illustrated in figure 6 and 7, that includes the adaptation of the operational parameters depending on the presence of the mobile station in any special area where this mobile station is monitoring its presence.

[0079] This embodiment of such method according to the invention may be carried out for example using any of the embodiments of mobile systems according to the invention described before.

[0080] Figure 4 is a flowchart of the first part 400 of a method according to one embodiment of the invention for successfully transmit, store, erase and maintain checking data in a mobile station according to the invention.

- [0081] A mobile telephone network comprises in this embodiment data processing means that includes special operating means; the special operating means are included in a server and therefore are advantageously centralised and not distributed between each base station of the mobile telephone network.
- [0082] An operator of a mobile telephone network (i.e. the company that operates this mobile telephone network) wishes to propose special billing rates and/or special services to users of its mobile telephone network, each user carrying a mobile station, when said users are within special areas of the invention.
- [0083] The part 400 of this embodiment starts in step 402 when the operator wishes to monitor the presence of a mobile station in a special area.
- [0084] In step 404, the operator defines a new special area if the operator wishes to create a new one. The special areas may be agreed between the operator and the user or simply defined by the operator.
- [0085] The definition of the special area can be done by the coverage of one or several radio defining signals or by the intersection of the coverage of two or more radio defining signals.
- [0086] In step 406, the operator updates a parameters database included in the special operating means. The parameters database associates each special area defined with the mobile stations whose presence in such special area is monitored. For the purposes of such association, each mobile station is identified into the parameters database by means of a mobile station identifier. In the parameters database, each mobile station identifier is associated with special tariffs and/or services which may be or not available for the mobile station depending on the presence of such mobile station into a given special area (and also depending on whether such tariffs and/or services are enabled or disabled into the parameters database for such mobile station).
- [0087] The operating parameter(s) that may be adapted depending on the presence of the mobile station in one or more special areas at the same time may be notably related to activation or deactivation flags of tariffs and/or services provided to the mobile station by the mobile telephone network. Therefore, tariffs may be more or less

expensive for the said mobile station in predetermined special areas and / or the mobile station may be able or unable to use predetermined services offered by the operator of the mobile telephone network in predetermined special areas.

[0088] In step 408, the special operating means send a checking data to the mobile 15 station.

[0089] The checking data transmission can notably be done:

1) by sending the checking data stored in a server of the mobile telephone network to the mobile station through the mobile telephone network transmission channels. In a particular example, the mobile telephone network is a GSM network and the checking data from the server will be sent to the mobile station via encrypted short messages using an 'Over the Air' platform. The mobile station is able to decode the short messages and to store the checking data into an internal mobile station database,

2) through the use of a mobile station special software able to store into an internal mobile station database checking data obtained by the mobile station from at least one radio communication defining device. In a particular example, it may be necessary that an operator's representative introduces a password to allow the mobile station special software to operate. The mobile station special software may ask the operator's representative to validate the storage of the checking data through the mobile telephone keyboard,

3) or via a person (e.g. an operator's representative) who enters the checking data into the mobile station using the mobile station keyboard.

[0090] Regarding the second option, two examples are provided. In a first example, the mobile station is operating in a GSM network, the mobile station obtains from the active cell its cell identification code and from other neighbouring cells, if available, their cell identification codes. When the special software is run for example in the user's home, it is able to obtain such cells identification codes and store them in the internal mobile station database of checking data, associating them with the user's home special area.

- [0091] In a second example, the mobile station can obtain, by using a WIFI device embedded into the mobile station, neighbouring WIFI devices identification data. When the special software is run for example in the user's home, it is able to obtain such WIFI device identification data and store them in the internal mobile station database of checking data, associating them with the user's home special area.
- [0092] Once the checking data has been successfully stored into the internal mobile station database, a confirmation of new checking data is sent to the parameters database. In addition, notably regarding to the second and third options to transmit checking data to the mobile station, the stored checking data may be sent by the mobile station to the parameters database through the mobile telephone network for the mobile telephone network to know this checking data..
- [0093] In step 410, the special operating means wait for the confirmation of new checking data from the mobile station. Once the information is received, it is stored into the parameters database and the special operating means transmit an acknowledgment to the mobile station. In case the mobile station does not receive the acknowledgment after a certain time, the mobile station sends the confirmation of new checking data again until it receives the acknowledgment or until it resents the information up to a maximum number of times.
- [0094] It is advantageous to store the checking data into the mobile station, mainly in comparison to the prior art where it was necessary to store mobile station identity codes and/or activation signals into a fix unit.
- [0095] If the confirmation of new checking data is not received (possibility 412) by the special operating means, the special operating means transmit again the checking data to the mobile station (step 408).
- [0096] When the confirmation of new checking data from the mobile station is received (possibility 414) by the special operating means, the special operating means know in step 416 that the mobile station updated its internal mobile station database and the internal mobile station database is in accordance with the operator wishes.

- [0097] After the first special area checking data or set of checking data is stored in the internal mobile station database, the operator can add more in the same way.
- [0098] In another hand, in this embodiment of a method according to the invention, the operator can deactivate a special area following the steps 430 to 440.
- [0099] In step 430, the operator chooses to deactivate a special area for a mobile station, with or without the agreement of the mobile station user. In step 432, the operator deactivates into the parameters database all the special tariffs and/or services associated to the presence of the mobile station into the special area. In step 434, the special operating means transmit a deactivation signal to the mobile station (using the mobile telephone network) asking the mobile station to erase, into its internal mobile station database, the checking data associated with the special area that the operator wishes to deactivate.
- [00100] In another embodiment, the deactivation signal just blocks into the mobile station the use of the special area checking data but does not erase it. The result is the same: the deactivation signal avoids the mobile station recognising the special area(s) associated with this deactivation signal.
- [00101] The transmission of the deactivation signal may be done notably as in the first and third options for transmitting the checking data (as seen in description of step 408).
- [00102] Once the deactivation signal has been successfully received and processed by the mobile station, a confirmation of deactivation is sent to the parameters database. In step 436, the special operating means wait for the confirmation of deactivation from the mobile station. Once the confirmation of deactivation is received by the special operating means (possibility 440), this fact is stored into the parameters database and the special operating means transmit an acknowledgment to the mobile station. In case the mobile station does not receive the acknowledgment after a certain time, the mobile station sends the confirmation of deactivation again until it receives the acknowledgment or, in another embodiment, until it resends the confirmation of deactivation up to a maximum number of times.

[00103] If the confirmation of deactivation is not received (possibility 438) by the special operating means, the special operating means transmit again a deactivation signal to the mobile station (step 434).

[00104] When the confirmation from the mobile station regarding the successful reception and process of the deactivation signal is received (possibility 440) by the operating means, the operating means know in step 416 that the mobile station updated its internal checking data database and the internal mobile station database is in accordance with the operator wishes.

[00105] In another hand, in this embodiment of a method according to the invention, the operator can modify a special area following the steps 450 to 460 to adapt the internal mobile station database to the operator's wishes. In step 450, the operator chooses to modify a special area for a given mobile station, with or without the agreement of the mobile station user, and defines such modified special area. For example, this can be done by including in the checking data associated to one special area, some additional checking data for the special area being not only the coverage of one distinctive defining signal but the intersection (or the sum) of the coverage of the former one and the coverage of a new one. This can be done too by erasing in a set of checking data associated to one special area, some checking data in order to, for example, transform a special area defined as the intersection (or the sum) of the coverage of two distinctive defining signals into a special area defined as the coverage of one only distinctive defining signal.

[00106] In case the operator wishes to add a new checking data (the steps for erasing one can be easily inferred by analogy), in step 452, the operator updates the parameters database in order to include, if known, the new checking data associated to the mobile station and the modified special area.

[00107] In step 454, the special operating means send, by using any of the three options for transmitting checking data described in step 408, the new checking data to the mobile station using the mobile telephone network.

[00108] Once the new checking data has been successfully stored into the part of the internal mobile station database that contains the checking data linked to the special area that has to be modified, a confirmation of modification of checking data is sent to the parameters database. In addition, typically regarding to the second and third options to transmit checking data to the mobile station described in step 408, the stored new checking data may be sent by the mobile station to the parameters database through the mobile telephone network. In step 456, the special operating means wait for the confirmation of modification of checking data from the mobile station. Once the confirmation of modification is received, this fact is stored into the parameters database and the special operating means transmit an acknowledgment to the mobile station. In case the mobile station does not receive the acknowledgment after a certain time, the mobile station sends the information again until it receives the acknowledgment or, in another embodiment, until it resends the information up to a maximum number of times.

[00109] If the confirmation of modification of checking data is not received (possibility 458) by the special operating means, the special operating means send again the new checking data to the mobile station (step 454).

[00110] When the confirmation of modification sent from the mobile station is received by the special operating means (possibility 460), the special operating means know that in step 416, the mobile station updated its internal checking data database and the internal mobile station database is in accordance with the operator wishes.

[00111] The second part of this embodiment of a method according to the invention is illustrated in figure 5 and includes the steps needed for the mobile station to monitor its location in the special areas using the checking data that were transmitted into it.

[00112] In step 500, a mobile station is switched on. In an embodiment, the mobile telephone network sets the values of the operating parameters managed in the parameters database to a set of initial values when the mobile station is switched off (as at that time it is not present in any special area) in order to start operating the mobile station when it is just switched on. In step 510, the mobile station observes, through the appropriate channel(s), any signal received and process it to determine

whether or not it is receiving any defining signal from . radio communication defining devices (e.g. from the base stations of a mobile telephone network or from wireless devices).

[00113] In one embodiment, the defining signal is coded (or part of the data contained in such a defining signal). In this embodiment, the mobile station is able to decode the information as part of the processing of the defining signals received.

[00114] A radio defining signal from a radio communication defining device may be transmitted on a continuous or periodical basis. The mobile station observation as to whether or not it is receiving any defining signal can be continuous or periodical. In step 512, the mobile station decide if it receives a defining signal (possibility 516) or not (possibility 514) after observing and processing any signal received.

[00115] When one or several defining signals are received, they are processed in step 518 by the mobile station notably in order to compare, in this embodiment, the appropriate part of their content with any checking data stored in the internal mobile station database.

[00116] When a defining signal received is from a wireless device (transmitted in a frequency range outside the frequency range allocated for the mobile telephone network), the mobile station preferably also search in step 518 whether or not the defining signal received contains reliable information confirming (or not) that the wireless device is effectively located into a predetermined environment defined by the operator of the mobile telephone network.

[00117] Then, in step 520, depending on the result of the internal process carried out in step 518, the mobile station decides whether (possibility 524) or not (possibility 522) the defining signal received is a distinctive defining signal that defines a special area for this mobile station, therefore validating or not the defining signal received as a distinctive defining signal.

[00118] If the special area is defined by the sum of the coverage of several distinctive defining signals, the mobile station has to recognize at least one of the three

distinctive defining signals at one time in order to determine that it is into this special area.

[00119] In another example, the mobile station knows that it is into a special area defined as the intersection of the coverage of several distinctive defining signals when it is observing and recognizing at one time all these distinctive defining signals.

[00120] The mobile station may be prepared to display a text or an icon (e.g. 'home' or airport' icon) when the mobile station determines that it is included in a particular special area for this mobile station.

[00121] In step 526, the mobile station sends an updating signal to the mobile telephone network about its presence in the special area.

[00122] In particular embodiment, the mobile station sends periodically (for example every 30 seconds) an updating signal about its presence into a special area, such updating signal comprising the result of the last determination performed by the mobile station about its presence into the special area.

[00123] In another particular embodiment the mobile station only sends to the mobile telephone network an updating signal about its presence into a special area when it enters into or exit from such special area.

[00124] For a special area defined by the sum of the coverage of several distinctive defining signals:

If the mobile station processing of the defining signals received in a certain moment determines that at least one distinctive defining signal associated to this special area is received:

- If the previous processing of the defining signals received determined that no distinctive defining signal associated to this special area was received at that time then the mobile station interprets that it has recently entered into this special area.
- If the next processing of the defining signals received determines that at least one distinctive defining signal associated to this special area is still being

received then the mobile station interprets that it remains located into this special area;

- If the mobile station processing of the defining signals received in a certain moment determines that no distinctive defining signal associated to this special area is received:
- If the previous processing of the defining signals received determined that at least one distinctive defining signal associated to this special area was received at that time then the mobile station interprets that it has recently left this special area.
- If the next processing of the defining signals received determines that no distinctive defining signal associated to this special area is still being received then the mobile station interprets that it remains out of this special area.

[00125] For a special area defined by the intersection of the coverage of several distinctive defining signals a procedure equivalent to the one above can be easily inferred by analogy.

[00126] The updating signal may be sent through a diversity of channels provided by the mobile telephone network. For example, in a GSM mobile network, the updating signals can be sent using the USSD ('Unstructured Supplementary Service Data', GSM standards) channel. The data comprised into the updating signal will typically be coded by the mobile station and decoded by the special operating means of the server.

[00127] In this embodiment, the updating signals are sent from the mobile station to the special operating means of the mobile telephone network requesting an acknowledgement from the special operating means.

[00128] In step 530, the mobile station search for the acknowledgment from the special operating means.

[00129] If the acknowledgement is not received in the mobile station (possibility 532) because the updating signal does not reach the special operating means or the mobile station detects a failure in the transmission of the updating signal or there is a failure in the transmission of the acknowledgment, then the mobile station may send

the updating signal again up to a predetermined number of times according to a predefined retransmissions policy.

[00130] When the acknowledgment is received (possibility 531) into the mobile station, the mobile station knows in step 534 that the special operating means will make the appropriate adaptations in the operating parameters of the special areas database.

[00131] More generally, the special operating means area waiting for any updating signal from any mobile station whose identification code is into the parameters database. When the special operating means receive an updating signal from a mobile station, they then adapt the operational parameters of the special areas database that depend on the presence of this mobile station in a special area associated with this mobile station and send the acknowledgement.

[00132] In one embodiment, the updating signal contains a request to access to services and/or to download contents provided direct or indirectly by the mobile telephone network of the operator. Then, an access or downloading right is granted or denied by the mobile telephone network depending on the presence of the mobile station in a special area.

[00133] The acknowledgment signals of the updating signal from the special operating means are preferably coded. In that case, the mobile station processing means are able to decode the acknowledgments of the updating signals.

[00134] The operator of the mobile telephone network has therefore a guarantee that the mobile telephone network will know at least a change on the presence of the mobile station in one or more special areas even if the radio communication link between the mobile station and the mobile telephone network is temporarily unavailable.

[00135] In a particular embodiment the mobile telephone network may enable or disable to the mobile station to use predetermined services depending on the presence of the mobile station into a special area.

[00136] As an example, the mobile station may incorporate special checking software able to generate statistics about the use of the mobile telephone (phone calls, messages, etc.) into special areas. This software may be enabled for operation by the mobile telephone network when the mobile station enters into a predetermined special area and disabled when the mobile station exits such special area.

[00137] As another example, the mobile telephone network may broadcast certain messages associated to a special area (e.g. airport information). The mobile station can be enabled by the mobile telephone network to accept and display those broadcasted messages when it is located within this special area and disabled when it exits the special area.

[00138] The third part of this embodiment of a method according to the invention is illustrated in figures 6 and 7 and includes the adaptation of the operational parameters to the presence of the mobile station in any special area where this mobile station is monitoring its presence.

[00139] When the mobile telephone network receives an updating signal, the special operating means of the server adjust the value of at least one operating parameter of a parameters database linking the special area and the mobile station. The value of the operating parameter(s) depends on the information contained into the updating signal about the presence of the mobile station into the special area.

[00140] In a particular example, operating parameters related to a special tariff and some services are enabled or remains enabled into the referred parameters database when the information contained into the updating signal indicates that the mobile station has recently entered or remains located into the special area. In the same example, the special tariff and the services are disabled or remains disabled into the referred parameters database when the information contained into the updating signal indicates that the mobile station recently left or remains out of the special area.

[00141] More precisely, Figure 6 is a schematic illustration of an example of a part of the parameters database 600 of operating parameters included in the special operating means according to an embodiment of the invention. The illustrated part of the special operating means database 600 links two special areas SA1 606 and SA2

608 with 3 mobile stations identification codes MS(i-1), MS(i) and MS(I+1), each of which having an entry 603, 604 and 605.

[00142] The column 602 of the database comprises the mobile stations identification codes. A mobile station identification code refers to a code that is associated with the subscription of the mobile station user into the mobile telephone network. As an example, in a GSM network the referred mobile station identification code may be the MSISDN.

[00143] In this example, the set of checking data of mobile "station MS(i) for the special area SA1 606, defined in the column 610/606 of the entry 604 contains :

a checking data 650 comprised into the distinctive defining signal of a first base station BS1 (e.g. the identification code of BS1), such distinctive defining signal defines the special area SA1 606,

a checking data 652 comprised into the distinctive defining signal of a second base station BS2 (e.g. the identification code of BS1), such distinctive defining signal also defines the special area SA1 606, and a checking data 654 comprised into the distinctive defining signal of a wireless device WD1 (e.g. the identification data of WD1), such distinctive defining signal also defines the special area SA1 606,

for the special area SA1. The mobile station determines that it is located into the special area SA1 606 when it receives at least one of the three identifiers 650, 652, 654 comprised into the distinctive defining signals coming from BS1, BS2 and WD1, i.e. when it is located within the range of coverage of any of the three distinctive defining signals (according to one of the embodiments of the invention, in the case of the defining signal of WD1, in order to consider that such defining signal is a distinctive defining signal, it will additionally be necessary that the reliable information comprised into the defining signal confirms that WD1 is effectively located into a predetermined environment).

[00144] In this example, the value of column 611/606 for the mobile station MS(i) and for the special area 606 is enabled ('-i-') or disabled ('-') at a given time depending

on whether or not the mobile telephone network receives a confirmation of new checking data (see description of figure 4) from this mobile station confirming that all the checking data corresponding with the special area has been stored into this mobile station (based on the same principle, it would also be possible to add another column in the parameters database to monitor the reception of confirmations of deactivation of checking data and another one to monitor the reception of confirmations of modification of checking data for a given special area 32: see description of figure 4).

[00145] In this example, the value of column 611/606 for MS(i) is enabled (+) for the special area SA1 606. In another example, the value of column 611/606 for the mobile station MS (i) and for the special area 606 contains a set of values enabled (+) or disabled (-), one for each checking data.

[00146] The column 612/606 corresponding to the operating parameter "Mobile Station Control Flag" is enabled (+) or disabled (-) at a given time for the mobile station MS (i) and for the special area SA1 606 depending on the information comprised into the updating signals received about the presence of the mobile station into the special area 606. In this example, at a given time, the mobile station MS(i) is supposed to be in SA1 606 as the operating parameter "Mobile Station Control Flag" 612/606 is enabled (+1).

[00147] When the "Mobile Station Control Flag" is enabled (+) at a given time for the mobile station MS(i) and for the special area 606, certain tariffs or services related to such special area may be available for the user of the mobile station depending on the value (+) or (-) of the corresponding tariff or service flags for such mobile station and special area into the operating parameters database. In this example, at a given time, in the column 'Tariff identifier' 614/606, the parameter is then set at 'XXX' and in the column 616/606, the 'Tariff Flag' is enabled (+). In the column 618/606, the 'Service identifier' parameter is then set at 'YYY' and in the column 620/606, the 'Service Flag' of said service 'YYY' is enabled (+). In the column 622/606, the 'Service identifier' parameter is set at 'ZZZ' and in the column 624/606, the 'Service Flag' of said service 'ZZZ' is disabled (-) because service ZZZ is disabled at that time for the mobile station MS(i) and the special area SA1 606.

[00148] The set of columns 610/608 to 624/608 provides the same kind of information for the special area SA2 608. The set of checking data of mobile station MS(i) (column 610/608) refers to wireless devices WD1 with the checking data 656, WD2 with the checking data 658 and WD3 with the checking data 660 for the special area SA2 608. In this special area, at that time, the value of column 611/608 for MS(i) is disabled (-), the operating parameter "Mobile Station Control Flag" (column 612/608) is disabled ('-'). Tariff 'PPP' (column 614/608) is enabled ('+' in column 616/608), service 'QQQ' (column 618/608) is enabled ('+' in column 620/608) and service 'RRR' (column 622/608) is enabled ('+' in column 624/608). The tariff PPP and the services QQQ and RRR are associated to mobile station MS(i) when it is in the special area SA2 608.

[00149] In another embodiment of the invention, the special operating means are distributed into different servers of the mobile telephone network or of service providers associated with the mobile telephone network and an updating signal may be sent to any of those servers.

[00150] In a particular example of this embodiment, there will be a server containing a part of the special operating means that stores a parameters database (e.g. the database illustrated in figure 6) of operating parameters containing the special areas checking data. In this example part of the updating signals from the mobile stations may be sent to this server of the mobile telephone network and processed by the part of the special operating means that this server contains.

[00151] In this example there will be at least another server, called switch server, into the mobile telephone network or associated to it, server that is including another part of the special operating means that include another parameters database of operating parameters, called switch parameters database, that does not contain checking data. The part of special operating means included in this other server allows or forbids the provision of some multimedia contents and applications available to mobile stations (and may preferably provide them itself) depending on the presence, in any special area registered in this switch parameters database, of any mobile station associated with this special area in this switch parameters database.

[00152] Figure 7 illustrates an example of part of a switch parameters database 700 where 702, 703, 704, 705, 706, 708, 712/706 and 712/708 have the same meaning than respectively 602, 603, 604, 605, 606, 608, 612/606 and 612/608 of Figure 6. The contents and applications 'AAA' are available to the mobile station MS(i) when it is into the special area SA1 706. The contents and applications 'BBB' are available to the mobile station MS(i) when it is into the special area SA2 708.

[00153] In the example of figure 7, the part of the special operating means included into the switch server receives, embedded into an updating signal from MS(i), a request to download a content or an application 'AAA', and the downloading right is granted because such updating signal from MS(i) also indicates (value '+' in column 712/706) that it is located in the special area 706 at that time.

[00154] In the same manner, in the example of figure 7, the-part of the special operating means included into the switch server receives, embedded into an updating signal from MS(i), a request to download a content or an application 'BBB', but the downloading right is not granted because such updating signal from MS(i) also indicates (value in column 712/708) that it is not located in the special area 708 at that time.

[00155] In some cases the switch server is entirely property of the mobile telephone network operator while in some others there is an agreement in place with a third party.

[00156] Although the present invention has been described in detail for purpose of illustration, it is understood that such detail is solely for that purpose, and variations can be made therein by those skilled in the art without departing from the scope of the invention. Thus, while the preferred embodiments of the method and of the mobile system have been described in reference to the environment in which they were developed, they are merely illustrative of the principles of the invention. Other embodiments and configurations may be devised without departing from the scope of the appended claims.

[00157] Further, although the embodiments of the invention describe with reference to the drawings comprise computer apparatus and proceqs performed in computer

apparatus, the invention also extends to computer programs, particularly computer programs on or in a carrier, adapted for putting the invention into practice. The program may be in the form of source code, object code, a code intermediate source and object code such as in partially compiled form, or in any other form suitable for use in the implementation of the processes according to the invention. The carrier may be any entity or device capable of carrying the program. For example, the carrier may comprise storage medium, such as a ROM, for example a CD ROM or a semiconductor ROM, or a magnetic recording medium, for example a floppy disc or hard disk. Further, the carrier may be a transmissible carrier such as an electrical or optical signal which may be conveyed via electrical or optical cable or by radio or other means. When the program is embodied in a signal which may be conveyed directly by a cable or other device or means, the carrier may be constituted by such cable or other device or means. Alternatively, the carrier may be an integrated circuit in which the program is embedded, the integrated circuit being adapted for performing, or for use in the performance of, the relevant processes.

CLAIMS

1. A method associated with one or more providers of presence related services in connection with the use of a mobile station and at least a first radio communication defining device that transmits a first distinctive defining signal and a second radio communication defining device that transmits a second distinctive defining signal, the first distinctive defining signal at least partly defines a first special area by its coverage, the second distinctive defining signal at least partly defining a second special area by its coverage, the method comprising:
 - electronically storing in one or more memories data capable of linking the mobile station to the first and second special areas, the data including a first checking data of the first radio communication defining device, a second checking data of the second radio communication defining device, and a first identifier related to the mobile station,
 - transmitting via a mobile telephone network to the mobile station at least a portion of the first checking data, and transmitting via the mobile telephone network to the mobile station at least a portion of the second checking data,
 - receiving from the mobile station via the mobile telephone network a first updating signal uncorrelated to any mobile station phone call establishment that identifies the mobile station's presence in at least the first special area, and receiving from the mobile station via the mobile telephone network a second updating signal uncorrelated to any mobile station phone call establishment that identifies the mobile station's presence in at least the second special area, the first updating signal including a second identifier related to the mobile station, the second updating signal including a third identifier related to the mobile station,
 - deriving from the first updating signal by one or more processing devices having access to at least a portion of the data whether or not the mobile station is present in the first special area, and deriving from the second updating signal by the one or more processing devices whether or not the mobile station is present in the second special area; and
 - enabling or disabling by use of the one or more processing devices a presence related service based upon the mobile station's presence or non-presence in the first special area, and enabling or disabling by use of the one or more processing devices a presence related service based upon the mobile station's presence or non-presence in the second special area.

2. The method according to claim 1, wherein the data stored in the one or more memories related to the first special area is stored in a first memory or set of memories of a first provider of presence related services and the data stored in the one or more memories related to the second special area is stored in a second memory or set of memories of a second provider of presence related services.
3. The method according to claim 1, wherein the mobile telephone network transmits to the mobile station the at least portion of the first checking data and the at least portion of the second checking data at different times.
4. The method according to claim 1, wherein the one or more processing devices has access to at least a portion of the data and updates at least one operating parameter in a database of the one or more providers of presence related services depending on the presence of the mobile station in the first special area and/or second special area.
5. The method according to claim 4, wherein the operating parameter is a tariff flag or a service flag that enables or disables a special tariff or a service for the mobile station.
6. The method according to claim 1, wherein the one or more processing devices include a first processing device associated with a first provider of presence related services and a second processing device associated with a second provider of presence related services.
7. The method according to claim 6, wherein the first processing device has access to at least a portion of the data and updates at least one operating parameter in a database of the first provider of presence related services depending on the presence of the mobile station in the first special area, and the second processing device has access to at least a portion of the data and updates at least one operating parameter in a database of the second provider of presence related services depending on the presence of the mobile station in the second special area.

8. The method according to claim 7, wherein the operating parameter is a tariff flag or a service flag that enables or disables a special tariff or a service for the mobile station.
9. The method according to claim 1, wherein the first, second and third identifiers related to the mobile station are the same.
10. The method according to claim 1, wherein the enabling or disabling of the first and/or second presence related service includes transmitting via the mobile telephone network a signal to the mobile station that is capable of being used to enable or disable one or more related functions in the mobile station.
11. The method according to claim 1, wherein the one or more memories and the one or more processing devices reside in one or more servers of the one or more providers of presence related services and/or in one or more servers of the mobile telephone network.
12. The method according to claim 1, wherein the storing of the first and second checking data in the one or more memories comprises electronically receiving from the mobile station the first and second checking data.
13. The method according to claim 1, wherein the mobile telephone network is cellular.
14. The method according to claim 1, wherein at least one of the first and second updating signals comprises the result of a previous determination performed by the mobile station about the mobile station's presence in the first and second special areas, respectively.
15. The method according to claim 1, wherein at least one of the first and second updating signals is received via the mobile telephone network from the mobile station at least one of (i) periodically, (ii) at times recent to when the mobile station respectively enters into or exists from the first special area and/or second special area, (iii) when the mobile station respectively remains in the first special area and/or the second special area, and (iv) when the mobile station respectively remains outside the first special area and/or second special area.

16. The method according to claim 1, wherein at least one of the first and second updating signals comprises a request to access to a service or to a multimedia content and the one or more providers of presence related services enable or disable the provision of the service or multimedia content depending on the presence of the mobile station into the first and second special area, respectively.

ABSTRACT

Method for monitoring the presence of a mobile station in at least one special area, wherein a radio communication defining device transmits one radio distinctive defining signal that define the special area by its coverage, the mobile station processes a signal received in order to determine whether or not it is defining signal and more precisely a distinctive one that defines the special area, the mobile station sends an updating signal to a mobile telephone network, the network routes the updating signal to special operating means that adapt the value of an operating parameter. According to the invention, the special area is associated to the mobile station by transmitting to the mobile station a checking data used by the mobile station for determining whether or not the defining signal received is distinctive defining signal.

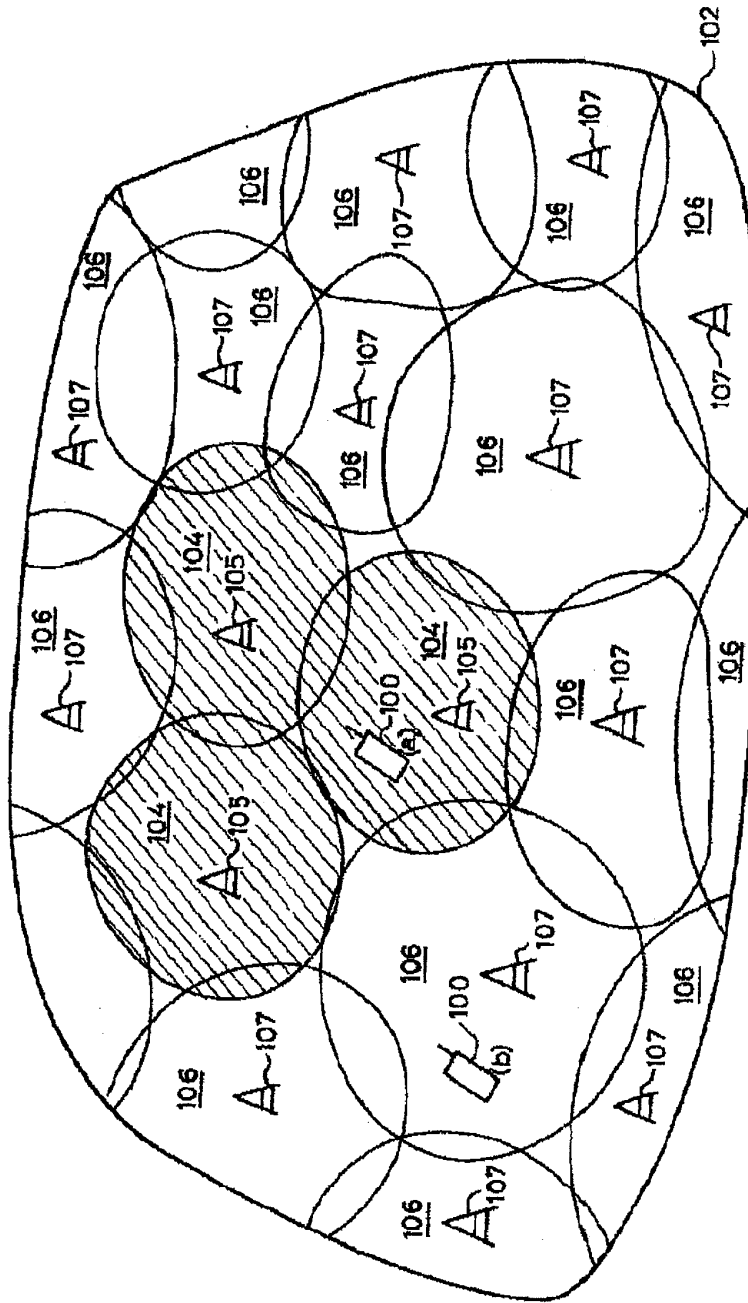


FIG. 1

FIG-2

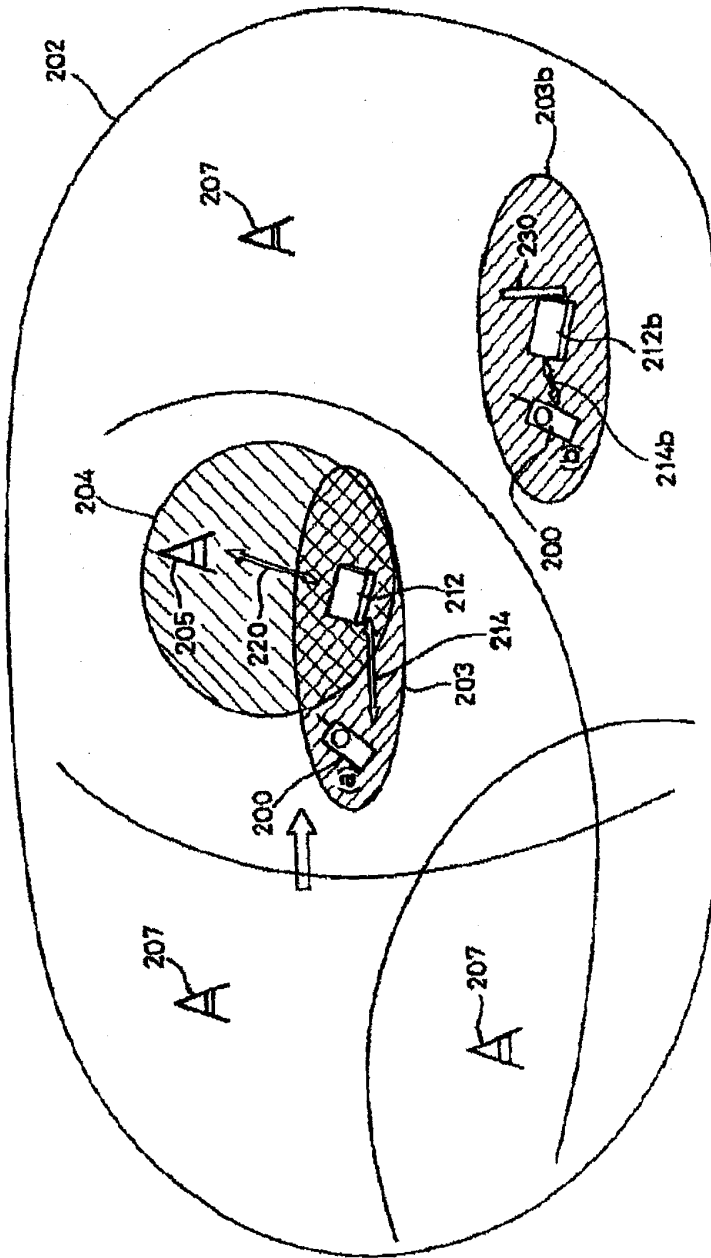


FIG. 3

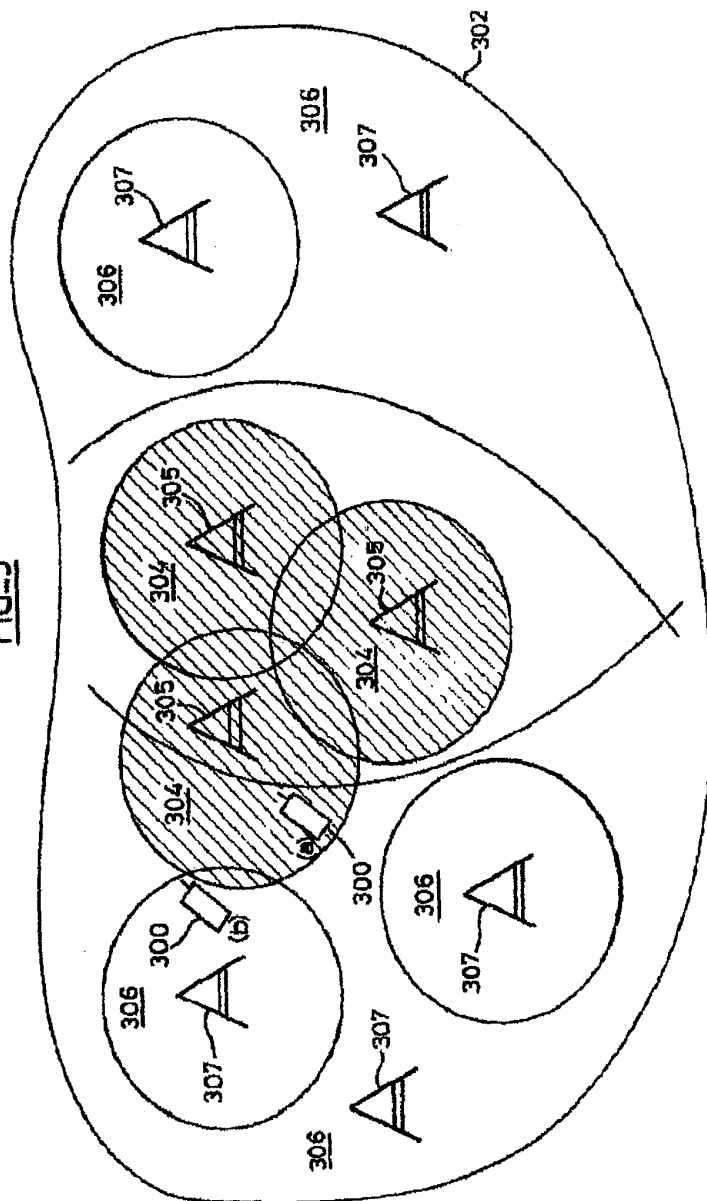


FIG. 4

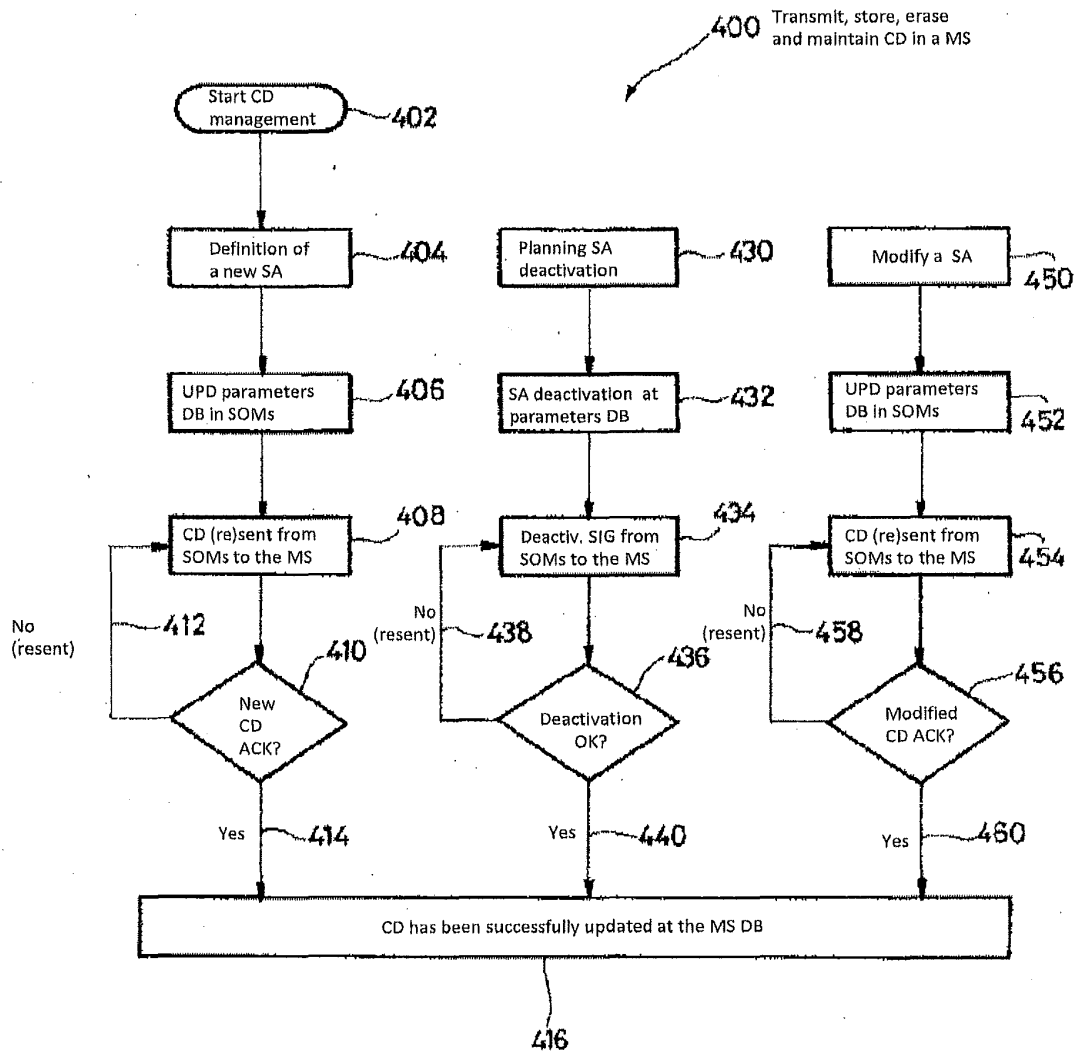


FIG. 5

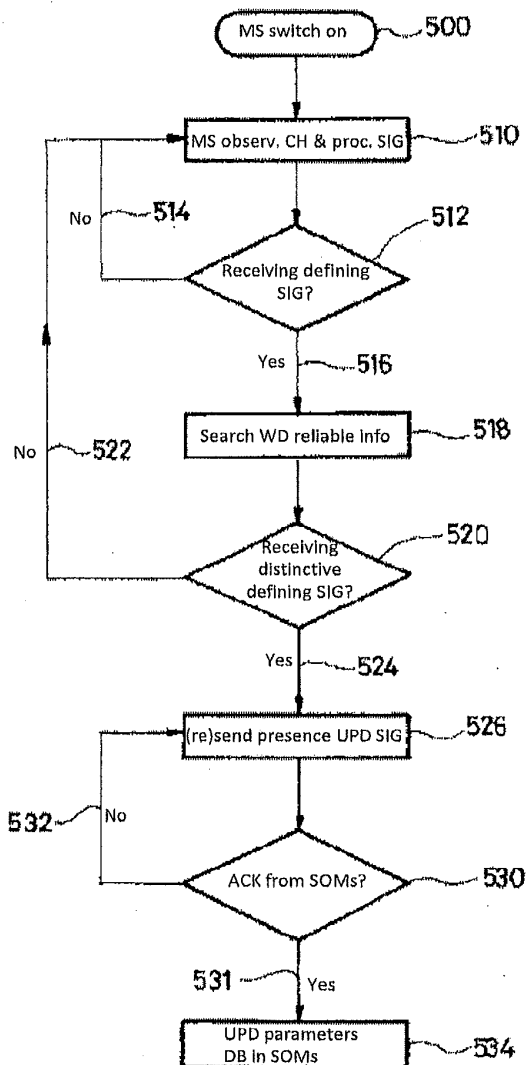


FIG-6

602			600										608		
	$\frac{610}{606}$	$\frac{611}{606}$	$\frac{612}{606}$	$\frac{614}{606}$	$\frac{616}{606}$	$\frac{618}{606}$	$\frac{620}{606}$	$\frac{622}{606}$	$\frac{624}{606}$	$\frac{610}{608}$	$\frac{611}{608}$	$\frac{612}{608}$	$\frac{614}{608}$	$\frac{616}{608}$	$\frac{618}{608}$
MS(i-1)															
MS(i)	650	+	+	XXX	+	VYY	+	ZZZ	-	656	-	-	PPP	+	QQQ
	652									658					
	654									660					
MS(i+1)															

603

604

605

FIG. 7

700

	702	706	708	
		712/706	714/706	712/708
703	MS(i-1)			
704	MS(i)	+	AAA	-
705	MS(i+1)			BBB

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	122358-367401
		Application Number	
Title of Invention	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA		
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.			

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☐ 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.)
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Title of the Invention	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA		
Attorney Docket Number	122358-367401	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	7	Suggested Figure for Publication (if any)	

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	122358-367401
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For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

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☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

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When referring to the current application, please leave the application number blank.

Prior Application Status	Pending	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
	Continuation of	14250517	2014-04-11		
Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14250517	Continuation of	12294641	2007-03-27	8738040	2014-05-27

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	122358-367401
		Application Number	
Title of Invention	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA		

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Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ^j (if applicable)
PCT/EP2007/052939	WO	2007-03-27	
Remove			
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ^j (if applicable)
06111804.4	EP	2006-03-28	
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Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	122358-367401
		Application Number	
Title of Invention	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA		

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Applicant 1			
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.			
<input type="button" value="Clear"/>			
☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor	
☐ Person to whom the inventor is obligated to assign.		☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor : <input type="text"/>			
If the Applicant is an Organization check here. ☒			
Organization Name	AFIRMA CONSULTING & TECHNOLOGIES, S.L.		
Mailing Address Information For Applicant:			
Address 1	C/Julio Palacio 13, 8		
Address 2			
City	Madrid	State/Province	
Country	ES	Postal Code	28029
Phone Number		Fax Number	

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	122358-367401
		Application Number	
Title of Invention	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA		
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button.			

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
If the Assignee or Non-Applicant Assignee is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.				
Signature	/Jeffri A. Kaminski/		Date (YYYY-MM-DD)	2014-06-26
First Name	Jeffri	Last Name	Kaminski	Registration Number
Additional Signature may be generated within this form by selecting the Add button.				

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	122358-367401
		Application Number	
Title of Invention	METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A SPECIAL AREA		

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.**

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.

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.

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)****Title of
Invention****METHOD AND SYSTEM FOR MONITORING A MOBILE STATION PRESENCE IN A
SPECIAL AREA**

As the below named inventor, I hereby declare that:

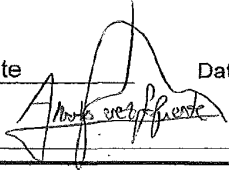
This declaration ☐ The attached application, or
is directed to:☒ United States application or PCT international application number 14/250,517
filed on April 11, 2014

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001
by fine or imprisonment of not more than five (5) years, or both.**WARNING:**

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTORInventor: Carlos A. Perez LafuenteDate (Optional): APRIL 14, 2014Signature: 

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Carlos A. Perez Lafuente

Art Unit: Not Yet Assigned

Application No: Not Yet Assigned

Examiner: Not Yet Assigned

Confirmation No: Not Yet Assigned

Filed: June 26, 2014

Atty. Docket No: 122358-367401

For: METHOD AND SYSTEM FOR
MONITORING A MOBILE STATION
PRESENCE IN A SPECIAL AREA

Customer No:

26694
PATENT & TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT (IDS)

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

Dear Madam:

Pursuant to 37 C.F.R. § 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement accompanies the new patent application submitted herewith.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(a) exists. In accordance with 37 C.F.R. § 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any

Application No.: Not Yet Assigned

Docket No.: 122358-367401

patent, publication or other information referred to therein is “prior art” for this invention unless specifically designated as such.

All of the references listed on the PTO/SB/08 are of record in parent Application No. 14/250,517, where copies may be obtained in accordance with customary PTO practice. Accordingly, copies of the references are not provided. Applicants request that these documents be considered and listed on the face of any patent granted in this application.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 22-0261, under Order No. 122358-367401.

Dated: June 26, 2014

Respectfully submitted,

By: Jeffri A. Kaminski/

Jeffri A. Kaminski

Registration No.: 42,709

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