AO 120 (Rev. 08/10)

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

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

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

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:22-cv-00973	9/16/2022	Western District of Texas, Waco Division

PLAINTIFF	DEFENDANT
ALD SOCIAL, LLC	T-MOBILE US, INC.

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 9,198,054	11/24/2015	ALD SOCIAL, LLC
2 US 9,402,158	7/26/2016	ALD SOCIAL, LLC
3		
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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
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5		

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

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

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

AO 120 (Rev. 08/10)

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

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

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

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:22-cv-00972	9/16/2022	Western District of Texas, Waco Division

PLAINTIFF	DEFENDANT
ALD SOCIAL, LLC	GOOGLE, LLC

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	US 9,198,054	11/24/2015	ALD SOCIAL, LLC
2	US 9,402,158	7/26/2016	ALD SOCIAL, LLC
3			
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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		
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

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

AO 120 (Rev. 08/10)

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

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

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

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:22-cv-00970	9/16/2022	Western District of Texas, Waco Division

PLAINTIFF	DEFENDANT
ALD SOCIAL, LLC	AT&T, INC.

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 9,198,054	11/24/2015	ALD SOCIAL, LLC
2 US 9,402,158	7/26/2016	ALD SOCIAL, LLC
3		
4		
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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		
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

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

AO 120 (Rev. 08/10)

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

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

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

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:22-cv-00969	9/16/2022	Western District of Texas, Waco Division

PLAINTIFF	DEFENDANT
ALD SOCIAL, LLC	APPLE, INC.

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 9,198,054	11/24/2015	ALD SOCIAL, LLC
2 US 9,402,158	7/26/2016	ALD SOCIAL, LLC
3		
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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
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5		

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

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

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

AO 120 (Rev. 08/10)

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

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

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

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:22-cv-00959	9/15/2022	Western District of Texas, Waco Division

PLAINTIFF	DEFENDANT
ALD SOCIAL, LLC	ALERT MEDIA, INC.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	US 9,198,054	11/24/2015	ALD SOCIAL, LLC
2	US 9,402,158	7/26/2016	ALD SOCIAL, LLC
3			
4			
5			

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

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/885,136	10/16/2015	Michael A. Cuff	TCS-025524 US CON 1-2

CONFIRMATION NO. 1789

116950
TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P.
1300 EAST NINTH STREET, SUITE 1700
CLEVELAND, OH 44114

POA ACCEPTANCE LETTER

OC000000086682859

Date Mailed: 10/24/2016

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/13/2016.

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

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

/rmturner myles/

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/885,136	10/16/2015	Michael A. Cuff	TCS-025524 US CON 1-2

CONFIRMATION NO. 1789

POWER OF ATTORNEY NOTICE

117657
Tarolli, Sundheim, Covell & Tummino LLP
1300 East Ninth Street Suite 1700
Cleveland, OH 44114

OC000000086682818

Date Mailed: 10/24/2016

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/13/2016.

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

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

/rmturner myles/

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82A (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
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.

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/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	14/885136
Filing Date	16 October 2015
First Named Inventor	Michael A. Cuff
Title	Aggregate Location Dynometer (ALD)
Art Unit	2641
Examiner Name	Olumide Ajibade Akonai
Attorney Docket Number	TCS-025524 US CON 1-2

SIGNATURE of Applicant or Patent Practitioner

Signature	/Christopher P Harris/	Date (Optional)	13 October 2016
Name	Christopher P. Harris	Registration Number	43660
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 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82B (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
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 APPLICANT

I 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

(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: 116950

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):

☐ 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)	5/7/2014
Name	Stanton D. Sloane		
Title	President of TeleCommunication Systems, Inc.		

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 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Electronic Acknowledgement Receipt

EFS ID:	27202195
Application Number:	14885136
International Application Number:	
Confirmation Number:	1789
Title of Invention:	Aggregate Location Dynometer (ALD)
First Named Inventor/Applicant Name:	Michael A. Cuff
Customer Number:	117657
Filer:	Christopher Harris/Sarah Belmonte
Filer Authorized By:	Christopher Harris
Attorney Docket Number:	40308
Receipt Date:	13-OCT-2016
Filing Date:	16-OCT-2015
Time Stamp:	12:12:40
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	025524POA.pdf	673606 5f83752a227a722703bac1ea2df0b20011718f08	no	2

Warnings:

Information:	
Total Files Size (in bytes):	673606

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/885,136	07/26/2016	9402158	40308	1789

117657 7590 07/05/2016
Tarolli, Sundheim, Covell & Tummino LLP
1300 East Ninth Street Suite 1700
Cleveland, OH 44114

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):

Michael A. Cuff, Clyde Hill, WA;
TeleCommunication Systems, Inc., Annapolis, MD;
Todd Gehrke, Seattle, WA;
Farhad Kasad, Bothell, WA;

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.

IR103 (Rev. 10/09)

Receipt date: 02/10/2016 14885136 - GAU: 2641

FORM PTO-1449 To: U.S. Department of Commerce

Atty.	M#	Client Ref.
Bollman	40308	40308

Applicant: CUFF

Appln. No.: 14/885,136

Filing Date: October 16, 2015

Examiner: AJIBADE Group Art Unit: 2641

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 24 of 28

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	~~2005/01749987~~	8/2005	20050174987 Raghav			
	BR	2005/0246217	11/2005	Horn			
	CR	2006/0058045	3/2006	Nilsen			
	DR	2006/0074618	4/2006	Miller			
	ER	2006/0090136	4/2006	Miller			
	FR	7071814	7/2006	Schorman			
	GR	2007/00309734	2/2007	Mikan			
	HR	6650288	11/2003	~~SEITZ~~ Pitt et al.			
	IR	2002/0198632	12/2002	Breed			
	JR	2005/0003797	1/2005	Baldwin			
	KR	6118403	9/2000	Lang			
	LR	6204798	3/2001	Fleming			
	MR	2002/0135504	9/2002	Singer			
	NR	6567035	5/2003	Elliott			

Change(s) applied to document. /J.E./ 4/5/2016

FOREIGN PATENT DOCUMENTS

		Document Number	Date MM/YYYY	Country	Inventor Name	Class	SubClass	English Enclosed	English No	Translation Enclosed	Translation No
	OR										
	PR										
	QR										
	RR										
	SR										
	TR										
	UR										
	VR										

OTHER (Including in **this order** Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

	WR				
	XR				
	YR				
	ZR				
	AAR				
	BBR				

Examiner /OLUMIDE AJIBADE AKONAI/ Date Considered: 03/07/2016

*EXAMINER: Initial if citation 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.

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

Receipt date: 02/10/2016 14885136 - GAU: 2641

FORM PTO-1449 To: U.S. Department of Commerce

Atty.	M#	Client Ref.
Bollman	40308	40308

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015

Date: February 10, 2016 Page 23 of 28 Examiner: AJIBADE Group Art Unit: 2641

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	20060212558	9/2006	SAHINOJA			
	BR	20060212562	9/2006	KUSHWAHA			
	CR	20060234639	10/2006	KUSHWAHA			
	DR	20060234698	10/2006	~~FOLK~~ Fok et al.			
	ER	20070026854	2/2007	NATH			
	FR	20070030539	2/2007	NATH			
	GR	2004/0064550	4/2004	Sakata			
	HR	5633630	5/1997	Park			
	IR	6360102	3/2002	Havinis			
	JR	20020173317	11/2002	Nykanen			
	KR	6121923	9/2000	King			
	LR	2005/0086340	4/2005	Kang			
	MR	2005/0136895	6/2005	Thenthiuperai			
	NR	2005/0172217	8/2005	Leung			

Change(s) applied to document /J.E./ 4/5/2016

FOREIGN PATENT DOCUMENTS

		Document Number	Date MM/YYYY	Country	Inventor Name	Class	SubClass	English Enclosed	English No	Translation Enclosed	Translation No
	OR										
	PR										
	QR										
	RR										
	SR										
	TR										
	UR										
	VR										

OTHER (Including in **this order** Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

	WR				
	XR				
	YR				
	ZR				
	AAR				
	BBR				

Examiner /OLUMIDE AJIBADE AKONAI/ Date Considered: 03/07/2016

*EXAMINER: Initial if citation 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.

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

Receipt date: 02/10/2016 14885136 - GAU: 2641

FORM PTO-1449 To: U.S. Department of Commerce

Atty.	M#	Client Ref.
Bollman	40308	40308

Applicant: CUFF

Appln. No.: 14/885,136

Filing Date: October 16, 2015

Examiner: AJIBADE Group Art Unit: 2641

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 21 of 28

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	20030101341	5/2003	KETTLER			
	BR	20030103484	6/2003	OOMMEN			
	CR	20030114157	6/2003	SPITZ			
	DR	20030119528	6/2003	PEW			
	ER	20030153340	8/2003	CROCKETT			
	FR	20030153341	8/2203	CROCKETT			
	GR	20030153342	8/2003	CROCKETT			
	HR	20030153343	8/2003	CROCKETT			
	IR	20030161298	8/2003	BERGMAN			
	JR	20030204640	10/2003	~~SAHINAJA~~ Sahinoja et al.			
	KR	20030223381	12/2003	SCHRODERUS			
	LR	20040002326	1/2004	MAHER			
	MR	20040044623	3/2004	WAKE			
	NR	20040068724	4/2004	GARDNER			

Change(s) applied to document /J.E./ 4/5/2016

FOREIGN PATENT DOCUMENTS

		Document Number	Date MM/YYYY	Country	Inventor Name	Class	SubClass	English Enclosed	English No	Translation Enclosed	Translation No
	OR										
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Examiner /OLUMIDE AJIBADE AKONAI/ Date Considered: 03/07/2016

*EXAMINER: Initial if citation 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.

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

Receipt date: 02/10/2016 14885136 - GAU: 2641

FORM PTO-1449 To: U.S. Department of Commerce

Atty.	M#	Client Ref.
Bollman	40308	40308

Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015
Examiner: AJIBADE Group Art Unit: 2641

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 19 of 28

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
Change(s) applied to document /J.E./ 4/5/2016	AR	7064656	6/2006	~~BEKCHER~~ Belcher et al.			
	BR	7065351	6/2006	CARTER			
	CR	7065507	6/2006	MOHAMMED			
	DR	7079857	7/2006	MAGGENTI			
	ER	7103018	9/2006	HASEN			
	FR	7103574	9/2006	PEINADO			
	GR	7106717	9/2006	ROSSEAU			
	HR	7136838	11/2006	PEINADO			
	IR	7151946	12/2006	MAGENNTI			
	JR	7209969	4/2007	LAHTI			
	KR	7218940	5/2007	NIEMENNA			
	LR	7221959	5/2007	LINDQUIST			
	MR	20010011247	8/2001	O'FLAHERTY			
	NR	US2010/0050251	2/2010	Speyer			

FOREIGN PATENT DOCUMENTS

		Document Number	Date MM/YYYY	Country	Inventor Name	Class	SubClass	English Enclosed	English No	Translation Enclosed	Translation No
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	QR										
	RR										
	SR										
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Examiner /OLUMIDE AJIBADE AKONAI/ Date Considered: 03/07/2016

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 18 of 28

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	6965754	11/2005	KING			
	BR	6965767	11/2005	MAGGENTI			
	CR	6970917	11/2005	KUSHWAHA			
	DR	6973166	12/2005	TSUMPES			
	ER	6973320	12/2005	BROWN			
	FR	6975266	12/2005	ABRAHAM			
	GR	6978453	12/2005	RAO			
	HR	6980816	12/2005	ROHLES			
	IR	6985105	1/2006	~~SEITZ~~ Pitt et al.			
	JR	6996720	2/2006	DeMELLO			
	KR	6999782	2/2006	SHAUGHNESSY			
	LR	7024321	4/2006	DENIGER			
	MR	7024393	4/2006	PEINADO			
	NR	7047411	5/2006	DeMELLO			

Change(s) applied to document /J.E./ 4/5/2016

FOREIGN PATENT DOCUMENTS

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Appln. No.: 14/885,136

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 15 of 28

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	6813560	11/2004	van DIGGELEN			
	BR	6816111	11/2004	KRASNER			
	CR	6816710	11/2004	KRASNER			
	DR	6816719	11/2004	HEINONEN			
	ER	6816734	11/2004	WONG			
	FR	6820269	11/2004	~~KOGAN~~ Baucke et al.			
	GR	6829475	12/2004	LEE			
	HR	6832373	12/2004	O'NEILL			
	IR	6833785	12/2004	BROWN			
	JR	6839020	1/2005	GEIER			
	KR	6839021	1/2005	SHEYNBLAT			
	LR	6842715	1/2005	GAAL			
	MR	6853916	2/2005	FUCHS			
	NR	6856282	2/2005	MAURO			

Change(s) applied to document. /JE/ 4/5/2016

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Appln. No.: 14/885,136

Filing Date: October 16, 2015

Examiner: AJIBADE Group Art Unit: 2641

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 11 of 28

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	6603973	8/2003	FOLADARE			
	BR	6606495	8/2003	KORPI			
	CR	6606554	8/2003	EDGE			
	DR	6609004	8/2003	MORSE			
	ER	6611757	8/2003	BRODIE			
	FR	6618670	9/2003	CHANSARKAR			
	GR	6621452	9/2003	KNOCKHEART			
	HR	6628233	9/2003	KNOCKHEART			
	IR	6633255	10/2003	KRASNER			
	JR	6640184	10/2003	RABE			
	KR	6650288	11/2003	~~SEITZ~~ Pitt et al.			
	LR	6661372	12/2003	GIRERD			
	MR	6665539	12/2003	SIH			
	NR	6665541	12/2003	KRASNER			

Change(s) applied to document /J.E./ 4/5/2016

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Receipt date: 02/10/2016 14885136 - GAU: 2641

FORM PTO-1449 To: U.S. Department of Commerce

Atty.	M#	Client Ref.
Bollman	40308	40308

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015

Date: February 10, 2016 Page 7 of 28 Examiner: AJIBADE Group Art Unit: 2641

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	6260147	7/2001	QUICK, JR.			
	BR	6275692	8/2001	SKOG			
	CR	6275849	8/2001	LUDWIG			
	DR	6297768	10/2001	ALLEN,JR.			
	ER	6307504	10/2001	SHEYNBLAT			
	FR	6308269	10/2001	PROIDL			
	GR	6313786	11/2001	SHEYNBLAT			
	HR	6321257	11/2001	KOTALA			
	IR	6324542	11/2001	~~LENT~~ Wright, Jr. et al.			
	JR	6327473	12/2001	SOLIMAN			
	KR	6333919	12/2001	GAFFNEY			
	LR	6360093	3/2002	ROSS			
	MR	6363254	3/2002	JONES			
	NR	6367019	4/2002	ANSELL			

Change(s) applied to document /J.E./ 4/5/2016

FOREIGN PATENT DOCUMENTS

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Examiner /OLUMIDE AJIBADE AKONAI/ Date Considered: 03/07/2016

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

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)

117657 7590 03/24/2016
TeleCommunication Systems, Inc.
275 West Street
Annapolis, MD 21401

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.

Jennifer Watring (Depositor's name)
(Signature)
6-29-16 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/885,136	10/16/2015	Michael A. Cuff	40308	1789

TITLE OF INVENTION: Aggregate Location Dynometer (ALD)

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	06/24/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
AJIBADE AKONAI, OLUMIDE	2641	455-456500

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 Tarolli, Sundheim, Covell & Tummino LLP
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: Telecommunication Systems, Inc.
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Annapolis, Maryland

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 200090 (enclose an extra copy of this form).

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

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

Authorized Signature: Christopher P. Harris — Date: 6-6-2016
Typed or printed name: Christopher P. Harris — Registration No. 43660

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

Electronic Patent Application Fee Transmittal

Application Number:	14885136
Filing Date:	16-Oct-2015
Title of Invention:	Aggregate Location Dynometer (ALD)
First Named Inventor/Applicant Name:	Michael A. Cuff
Filer:	Christopher Harris/Jennifer Watring
Attorney Docket Number:	40308

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Utility Appl Issue Fee	1501	1	960	960
Publ. Fee- Early, Voluntary, or Normal	1504	1	0	0
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**960**

Electronic Acknowledgement Receipt

EFS ID:	26135203
Application Number:	14885136
International Application Number:	
Confirmation Number:	1789
Title of Invention:	Aggregate Location Dynometer (ALD)
First Named Inventor/Applicant Name:	Michael A. Cuff
Customer Number:	117657
Filer:	Christopher Harris/Jennifer Watring
Filer Authorized By:	Christopher Harris
Attorney Docket Number:	40308
Receipt Date:	22-JUN-2016
Filing Date:	16-OCT-2015
Time Stamp:	08:40:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$960
RAM confirmation Number	9119
Deposit Account	200090
Authorized User	HARRIS, CHRISTOPHER P
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

Charge any Additional Fees required under 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	14885136IssueFeePaid6-22-2016.pdf	567604 798dd1dea3c3eb85c7115342c2484c87533c0978	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	32227 e511e69e9ee825b5e8cad3421e390fef6796285c	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	599831	

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

117657 7590 03/24/2016
TeleCommunication Systems, Inc.
275 West Street
Annapolis, MD 21401

EXAMINER
AJIBADE AKONAI, OLUMIDE

ART UNIT	PAPER NUMBER
2641	

DATE MAILED: 03/24/2016

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/885,136	10/16/2015	Michael A. Cuff	40308	1789

TITLE OF INVENTION: Aggregate Location Dynometer (ALD)

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	06/24/2016

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.

PTOL-85 (Rev. 02/11)

PART B - FEE(S) TRANSMITTAL

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/885,136	10/16/2015	Michael A. Cuff	40308	1789

TITLE OF INVENTION: Aggregate Location Dynometer (ALD)

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nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	06/24/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
AJIBADE AKONAI, OLUMIDE	2641	455-456500

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

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

1_____
2_____
3_____

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

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

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

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

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

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

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

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

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/885,136	10/16/2015	Michael A. Cuff	40308	1789

117657 7590 03/24/2016
TeleCommunication Systems, Inc.
275 West Street
Annapolis, MD 21401

EXAMINER
AJIBADE AKONAI, OLUMIDE

ART UNIT	PAPER NUMBER
2641	

DATE MAILED: 03/24/2016

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

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

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

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

PTOL-85 (Rev. 02/11)

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

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

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

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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. 14/885,136	Applicant(s) CUFF ET AL.	
	Examiner OLUMIDE T. AJIBADE AKONAI	Art Unit 2641	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 *claims submitted 02/08/2016*.
   ☐ 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 *13-28*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .

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

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

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

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

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

/OLUMIDE T AJIBADE AKONAI/
Primary Examiner, Art Unit 2641

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

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on 02/08/2016 and 03/09/2016 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent Nos. 8,649,806 and 9,198,054 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Allowable Subject Matter

2. Claims 13-28 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUMIDE T. AJIBADE AKONAI whose telephone number is (571)272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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

/OLUMIDE T AJIBADE AKONAI/
Primary Examiner, Art Unit 2641

Receipt date: 02/10/2016 14885136 - GAU: 2641

FORM PTO-1449 To: U.S. Department of Commerce

Atty.	M#	Client Ref.
Bollman	40308	40308

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015

Date: February 10, 2016 Page 1 of 28

Examiner: AJIBADE AKONAI Group Art Unit: 2641

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	4445118	4/1984	Taylor			
	BR	4928107	5/1990	KURODA			
	CR	4972484	11/1990	THEILE			
	DR	5126722	6/1992	KAMIS			
	ER	5283570	2/1994	DELUCA			
	FR	5301354	4/1994	SCHWENDEMAN			
	GR	5311516	5/1994	KUZNICKI			
	HR	5327529	7/1994	FULTS			
	IR	5335246	8/1994	YOKEV			
	JR	5351235	9/1994	LAHTINEN			
	KR	5365451	11/1994	WANG			
	LR	5418537	5/1995	BIRD			
	MR	5422813	6/1995	SCHUCHMAN			
	NR	5479408	12/1995	WILL			

FOREIGN PATENT DOCUMENTS

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	SR										
	TR										
	UR										
	VR										

OTHER (Including in **this order** Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

WR	Internal Search Report received in PCT/US2009/05575 dated January 14, 2011.				
XR	Internal Search Report received in PCT/US2009/05575 dated December 3, 2009.				
YR	International Search Report received in PCT/US2011/01198 dated August 6, 2012.				
ZR	Internal Search Report received in PCT/US2011/000671 dated July 27, 2011.				
AAR	Internal Search Report received in PCT/US2011/000671 dated April 25, 2012.				
BBR	International Search Report in PCT/US2010/001134 dated October 31, 2011.				

Examiner /OLUMIDE AJIBADE AKONAI/ Date Considered: 03/07/2016

*EXAMINER: Initial if citation 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.

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

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U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	5485163	11/1996	SINGER			
	BR	5504491	4/1996	CHAPMAN			
	CR	5506886	4/1996	MAINE			
	DR	5517199	5/1996	DiMATTEI			
	ER	5530655	6/1996	LOKHOFF			
	FR	5530914	6/1996	McPHETERS			
	GR	5539395	7/1996	BUSS			
	HR	5539829	7/1996	LOKHOFF			
	IR	5546445	8/1996	DENNISON			
	JR	5568153	10/1996	BELIVEAU			
	KR	5583774	12/1996	DIESEL			
	LR	5594780	1/1997	WEIDEMAN			
	MR	5606618	2/1997	LOKHOFF			
	NR	5629693	5/1997	JANKY			

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	WR	Internal Search Report received in PCT/US2011/00950 dated September 16, 2011.				
	XR	International Search Report in PCT/US2011/00950 dated April 30, 2012.				
	YR	International Search Report received in PCT/US2012/000374 dated November 20, 2012.				
	ZR	International Report on Patentability received in PCT/US2012/000374 dated September 5, 2013.				
	AAR					
	BBR					

Examiner /OLUMIDE AJIBADE AKONAI/ Date Considered: 03/07/2016

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	AR	5636276	6/1997	BRUGGER			
	BR	5661652	8/1997	SPRAGUE			
	CR	5661755	8/1997	VAN de KERKHOF			
	DR	5689245	11/1997	NOREEN			
	ER	5699053	12/1997	JONSSON			
	FR	5704029	12/1997	WRIGHT, JR.			
	GR	5721781	2/1998	DEO			
	HR	5731785	3/1998	LEMELSON			
	IR	5765152	6/1998	ERICKSON			
	JR	5771353	6/1998	EGGLESTON			
	KR	5774670	6/1998	MONTULLI			
	LR	5809415	9/1998	ROSSMAN			
	MR	5812086	9/1998	BERTIGER			
	NR	5812087	9/1998	KRASNER			

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	AR	5841396	11/1998	KRASNER			
	BR	5857201	1/1999	WRIGHT, JR.,			
	CR	5864667	1/1999	BARKAM			
	DR	5874914	2/1999	Krasner			
	ER	5896369	4/1999	WARSTA			
	FR	5922074	7/1999	RICHARD			
	GR	5930250	7/1999	KLOK			
	HR	5945944	8/1999	KRASNER			
	IR	5946629	8/1999	SAWYER			
	JR	5950137	9/1999	KIM			
	KR	5960362	9/1999	GROB			
	LR	5983099	11/1999	YAO			
	MR	5999124	12/1999	SHEYNBLAT			
	NR	6032051	2/2000	HALL			

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Date: February 10, 2016 Page 5 of 28 Examiner: AJIBADE Group Art Unit: 2641

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	AR	6052081	4/2000	KRASNER			
	BR	6058338	5/2000	AGASHE			
	CR	6061018	5/2000	SHEYNBLAT			
	DR	6064336	5/2000	KRASNER			
	ER	6067045	5/2000	CASTELLOE			
	FR	6081229	6/2000	SOLIMAN			
	GR	6085320	7/2000	KALISKI, JR.			
	HR	6124810	9/2000	SEGAL			
	IR	6131067	10/2000	GIRERD			
	JR	6133874	10/2000	KRASNER			
	KR	6134483	10/2000	VAYANOS			
	LR	6150980	11/2000	KRASNER			
	MR	6154172	11/2000	PICCIONELLI			
	NR	6169901	1/2001	BOUCHER			

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Examiner: AJIBADE Group Art Unit: 2641

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	AR	6169902	1/2001	KAWAMOTO			
	BR	6178506	1/2001	QUICK, JR,.			
	CR	6185427	2/2001	KRASNER			
	DR	6188354	2/2001	SOLIMAN			
	ER	6188909	2/2001	ALANARA			
	FR	6189098	2/2001	KALISKI, JR.			
	GR	6195557	2/2001	HAVINIS			
	HR	6205330	3/2001	WINBLADH			
	IR	6208290	3/2001	KRASNER			
	JR	6215441	4/2001	MOEGLEIN			
	KR	6239742	5/2001	KRASNER			
	LR	6247135	6/2001	FEAGUE			
	MR	6249873	6/2001	RICHARD			
	NR	6253203	6/2001	O'FLAHERTY			

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Bollman	40308	40308

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	AR	6260147	7/2001	QUICK, JR.			
	BR	6275692	8/2001	SKOG			
	CR	6275849	8/2001	LUDWIG			
	DR	6297768	10/2001	ALLEN,JR.			
	ER	6307504	10/2001	SHEYNBLAT			
	FR	6308269	10/2001	PROIDL			
	GR	6313786	11/2001	SHEYNBLAT			
	HR	6321257	11/2001	KOTALA			
	IR	6324542	11/2001	LENT			
	JR	6327473	12/2001	SOLIMAN			
	KR	6333919	12/2001	GAFFNEY			
	LR	6360093	3/2002	ROSS			
	MR	6363254	3/2002	JONES			
	NR	6367019	4/2002	ANSELL			

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	AR	6370389	4/2002	ISOMURSU			
	BR	6377209	4/2002	KRASNER			
	CR	6400314	6/2002	KRASNER			
	DR	6400958	6/2002	ISOMURSU			
	ER	6411254	6/2002	MOEGLEIN			
	FR	6421002	7/2002	KRASNER			
	GR	6430504	8/2002	GILBERT			
	HR	6433734	8/2002	KRASNER			
	IR	6442391	8/2002	JOHANSSON			
	JR	6449473	9/2002	RAIVISTO			
	KR	6449476	9/2002	HUTCHISON, IV			
	LR	6456852	9/2002	BAR			
	MR	6463272	10/2002	WALLACE			
	NR	6477150	11/2002	MAGGENTI			

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Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	6505049	1/2003	DORENBOSCH			
	BR	6510387	1/2003	FUCHS			
	CR	6512922	1/2003	BURG			
	DR	6512930	1/2003	SANDEGREN			
	ER	6515623	2/2003	JOHNSON			
	FR	6519466	2/2003	PANDE			
	GR	6522682	2/2003	KOHLI			
	HR	6525687	2/2003	ROY			
	IR	6525688	2/2003	CHOU			
	JR	6529829	3/2003	TURETZKY			
	KR	6531982	3/2003	WHITE			
	LR	6538757	3/2003	SANSONE			
	MR	6539200	3/2003	SCHIFF			
	NR	6539304	3/2003	CHANSARKAR			

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	AR	6542464	4/2003	TAKEDA			
	BR	6542734	4/2003	ABROL			
	CR	6542743	4/2003	SOLIMAN			
	DR	6549776	4/2003	JOONG			
	ER	6549844	4/2003	EGBERTS			
	FR	6556832	4/2003	SOLIMAN			
	GR	6560461	5/2003	FOMUKONG			
	HR	6560534	5/2003	ABRAHAM			
	IR	6570530	5/2003	GAAL			
	JR	6574558	6/2003	KOHLI			
	KR	6580390	6/2003	HAY			
	LR	6584552	6/2003	KUNO			
	MR	6594500	7/2003	BENDER			
	NR	6597311	7/2003	SHEYNBLAT			

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	AR	6603973	8/2003	FOLADARE			
	BR	6606495	8/2003	KORPI			
	CR	6606554	8/2003	EDGE			
	DR	6609004	8/2003	MORSE			
	ER	6611757	8/2003	BRODIE			
	FR	6618670	9/2003	CHANSARKAR			
	GR	6621452	9/2003	KNOCKHEART			
	HR	6628233	9/2003	KNOCKHEART			
	IR	6633255	10/2003	KRASNER			
	JR	6640184	10/2003	RABE			
	KR	6650288	11/2003	SEITZ			
	LR	6661372	12/2003	GIRERD			
	MR	6665539	12/2003	SIH			
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	AR	6671620	12/2003	GARIN			
	BR	6677894	1/2004	SHEYNBALT			
	CR	6680694	1/2004	KNOCKHEART			
	DR	6680695	1/2004	TURETZKY			
	ER	6691019	2/2004	SEELEY			
	FR	6694258	2/2004	JOHNSON			
	GR	6697629	2/2004	GRILLI			
	HR	6698195	3/2004	HELLINGER			
	IR	6701144	3/2004	KIRBAS			
	JR	6703971	3/2004	PANDE			
	KR	6703972	3/2004	van DIGGELEN			
	LR	6704651	3/2004	Van DIGGELEN			
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	AR	6721871	4/2004	PIISPANEN			
	BR	6724342	4/2004	BLOEBAUM			
	CR	6725159	4/2004	KRASNER			
	DR	6731940	5/2004	NAGENDRAN			
	ER	6734821	5/2004	Van DIGGELEN			
	FR	6738013	5/2004	ORLER			
	GR	6738800	5/2004	AGUILON			
	HR	6741842	5/2004	GOLDBERG			
	IR	6745038	6/2004	CALLAWAY, JR.			
	JR	6747596	6/2004	ORLER			
	KR	6748195	6/2004	PHILLIPS			
	LR	6751464	6/2004	BURG			
	MR	6756938	6/2004	ZHAO			
	NR	6757544	6/2004	RANGARAJAN			

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	AR	6772340	8/2004	PEINADO			
	BR	6775655	8/2004	PEINADO			
	CR	6775802	8/2004	GAAL			
	DR	6778136	8/2004	GRONOMEYER			
	ER	6778885	8/2004	AGASHE			
	FR	6781963	8/2004	CROCKETT			
	GR	6788249	9/2004	FARMER			
	HR	6795699	9/2004	McCRAW			
	IR	6799050	9/2004	KRASNER			
	JR	6801124	10/2004	NAITOU			
	KR	6801159	10/2004	SWOPE			
	LR	6804524	10/2004	VANDERMAIJDEN			
	MR	6807534	10/2004	ERICKSON			
	NR	6810323	10/2004	BULLOCK			

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	AR	6813560	11/2004	van DIGGELEN			
	BR	6816111	11/2004	KRASNER			
	CR	6816710	11/2004	KRASNER			
	DR	6816719	11/2004	HEINONEN			
	ER	6816734	11/2004	WONG			
	FR	6820269	11/2004	KOGAN			
	GR	6829475	12/2004	LEE			
	HR	6832373	12/2004	O'NEILL			
	IR	6833785	12/2004	BROWN			
	JR	6839020	1/2005	GEIER			
	KR	6839021	1/2005	SHEYNBLAT			
	LR	6842715	1/2005	GAAL			
	MR	6853916	2/2005	FUCHS			
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	AR	6861980	3/2005	ROWITCH			
	BR	6865171	3/2005	NILSSON			
	CR	6865395	3/2005	RILEY			
	DR	6867734	3/2005	VOOR			
	ER	6873854	3/2005	CROCKETT			
	FR	6885940	4/2005	BRODIE			
	GR	6888497	5/2005	KING			
	HR	6888932	5/2005	SNIP			
	IR	6895238	5/2005	NEWELL			
	JR	6895249	5/2005	GAAL			
	KR	6900758	5/2005	MANN			
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	MR	6904029	6/2005	FORS			
	NR	6907224	6/2005	YOUNIS			

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	AR	6907238	6/2005	LEUNG			
	BR	6912395	6/2005	BENES			
	CR	6915208	7/2005	GARIN			
	DR	6917331	7/2005	GRONEMEYER			
	ER	6930634	8/2005	PENG			
	FR	6937187	8/2005	VAN DIGGELEN			
	GR	6937872	8/2005	KRASNER			
	HR	6941144	9/2005	STEIN			
	IR	6944540	9/2005	KING			
	JR	6947772	9/2005	MINEAR			
	KR	6950058	9/2005	DAVIS			
	LR	6956467	10/2005	MERCADO, JR.			
	MR	6957073	10/2005	BYE			
	NR	6961562	11/2005	ROSS			

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	CR	6970917	11/2005	KUSHWAHA			
	DR	6973166	12/2005	TSUMPES			
	ER	6973320	12/2005	BROWN			
	FR	6975266	12/2005	ABRAHAM			
	GR	6978453	12/2005	RAO			
	HR	6980816	12/2005	ROHLES			
	IR	6985105	1/2006	SEITZ			
	JR	6996720	2/2006	DeMELLO			
	KR	6999782	2/2006	SHAUGHNESSY			
	LR	7024321	4/2006	DENIGER			
	MR	7024393	4/2006	PEINADO			
	NR	7047411	5/2006	DeMELLO			

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Appln. No.: 14/885,136
Filing Date: October 16, 2015

Date: February 10, 2016 Page 19 of 28 Examiner: AJIBADE Group Art Unit: 2641

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	CR	7065507	6/2006	MOHAMMED			
	DR	7079857	7/2006	MAGGENTI			
	ER	7103018	9/2006	HASEN			
	FR	7103574	9/2006	PEINADO			
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Examiner /OLUMIDE AJIBADE AKONAI/ Date Considered: 03/07/2016

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FORM PTO-1449 To: U.S. Department of Commerce

Atty.	M#	Client Ref.
Bollman	40308	40308

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	KR	20030078064	4/2003	CHAN			
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	BR	20030103484	6/2003	OOMMEN			
	CR	20030114157	6/2003	SPITZ			
	DR	20030119528	6/2003	PEW			
	ER	20030153340	8/2003	CROCKETT			
	FR	20030153341	8/2203	CROCKETT			
	GR	20030153342	8/2003	CROCKETT			
	HR	20030153343	8/2003	CROCKETT			
	IR	20030161298	8/2003	BERGMAN			
	JR	20030204640	10/2003	SAHINAJA			
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	BR	20040204806	10/2004	CHEN			
	CR	20040205151	10/2004	SPRIGG			
	DR	20040229632	11/2004	FLYNN			
	ER	20050003797	1/2005	BALDWIN			
	FR	20050028034	2/2005	GANTMAN			
	GR	20050039178	2/2005	MAROLIA			
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	CR	20060234639	10/2006	KUSHWAHA			
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	ER	20070026854	2/2007	NATH			
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	GR	2004/0064550	4/2004	Sakata			
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	KR	6121923	9/2000	King			
	LR	2005/0086340	4/2005	Kang			
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Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
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	CR	2006/0058045	3/2006	Nilsen			
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	HR	6650288	11/2003	SEITZ			
	IR	2002/0198632	12/2002	Breed			
	JR	2005/0003797	1/2005	Baldwin			
	KR	6118403	9/2000	Lang			
	LR	6204798	3/2001	Fleming			
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	NR	US2004/0046667	3/2004	Copley			

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	IR	US2004/0257273	12/2004	Benco			
	JR	US2008/0198989	8/2008	Contractor			
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	JR	US2006/0073810	4/2006	Pyhalammi			
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	LR	US2009/0311992	12/2009	Jagetiya			
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14885136	CUFF ET AL.
	Examiner	**Art Unit**
	OLUMIDE T AJIBADE AKONAI	2641

CPC- SEARCHED

Symbol	Date	Examiner
H04W 4/22 4/02 4/028 76/007 4/023 64/006 4/025	11/16/2015	OA
H04M11/04 2242/04	11/16/2015	OA
G06Q 30/0201	11/16/2015	OA
H04W 4/22 4/02 4/028 76/007 4/023 64/006 4/025	3/21/2016	OA
H04M11/04 2242/04	3/21/2016	OA
G06Q 30/0201	3/21/2016	OA

CPC COMBINATION SETS - SEARCHED

Symbol	Date	Examiner

US CLASSIFICATION SEARCHED

Class	Subclass	Date	Examiner
455	414.1,456.1-456.6,457,404.1,404.2	11/16/2015	OA
455	414.1,456.1-456.6,457,404.1,404.2	3/21/2016	OA

SEARCH NOTES

Search Notes	Date	Examiner
EAST search	11/16/2015	OA
EAST SEARCH	3/21/2016	OA

INTERFERENCE SEARCH

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
455	414.1,456.1-456.6,457,404.1,404.2	3/21/2016	OA
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H04M	11/04 2242/04	3/21/2016	OA
G06Q	30/0201	3/21/2016	OA

	/OLUMIDE T AJIBADE AKONAI/ Primary Examiner.Art Unit 2641

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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	Examiner	**Art Unit**
	OLUMIDE T AJIBADE AKONAI	2641

CPC

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CLASS	SUBCLASS	CLAIMED	NON-CLAIMED
		H 0 4 W 4 / 00 (2009.01.01)	

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 16	
/OLUMIDE T AJIBADE AKONAI/ Primary Examiner.Art Unit 2641 (Primary Examiner)	03/21/2016 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office

Part of Paper No.

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14885136	CUFF ET AL.
	Examiner	**Art Unit**
	OLUMIDE T AJIBADE AKONAI	2641

☐ 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
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-	2	6	18												
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-	8	12	24												
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-	12	16	28												
1	13														
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3	15														
4	16														

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 16	
/OLUMIDE T AJIBADE AKONAI/ Primary Examiner.Art Unit 2641 (Primary Examiner)	03/21/2016 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

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Part of Paper No.

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	14/885,136	CUFF ET AL.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
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TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional) 40308

In re Application of: CUFF

Application No.: 14885136

Filed: October 16, 2015

For: Aggregate Location Dynometer (ALD)

The applicant, TeleCommunication Systems, Inc., owner of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of **prior patent** No. 9198054 as the term of said **prior patent** is presently shortened by any terminal disclaimer. The applicant hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the applicant does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

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is held unenforceable;
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2. ☑ The undersigned is an attorney or agent of record. Reg. No. 36457

/William H. Bollman/	March 9, 2016
Signature	Date
William H. Bollman	
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Title	Telephone Number

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EFS ID:	25142675
Application Number:	14885136
International Application Number:	
Confirmation Number:	1789
Title of Invention:	Aggregate Location Dynometer (ALD)
First Named Inventor/Applicant Name:	Michael A. Cuff
Customer Number:	117657
Filer:	William H Bollman
Filer Authorized By:	
Attorney Docket Number:	40308
Receipt Date:	09-MAR-2016
Filing Date:	16-OCT-2015
Time Stamp:	10:01:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	2016-3-9-Transmittal-40308.pdf	18875 6dd2f86c4500e6425a87b574ed3b815a918ece9b	no	1

Warnings:

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2	Terminal Disclaimer Filed	2016-3-9-Terminal-Disclaimer-40308.pdf	309605 56bb28868511bc368c9f2495a0f6a2a7b43e4b3d	no	2
Warnings:					
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER (Large Entity)

Application Number: **14/885,136**

Group Art Unit: **2641**

Filed: **October 16, 2015**

Examiner Name: **AJIBADE AKONAI, Olumide**

Applicant: **CUFF et al.**

Attorney Docket Number: **40308**

TITLE: Aggregate Location Dynometer (ALD)

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

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1. Terminal Disclaimer – 2 pages.

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Respectfully submitted,

/William H. Bollman/

William H. Bollman
Reg. No.: 36,457
Attorney for Applicant(s)

Date: March 9, 2016

Manelli Selter PLLC
2000 M Street, NW 7th Floor
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(202) 261-1020

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	14/885,136	CUFF ET AL.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 2/8/16	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
ANDRE ROBINSON

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Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	14/885,136	CUFF ET AL.	

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14.32)
[X] The SERIAL NUMBER of the PATENT which forms the basis for the double patenting is incorrect in the TD. (See FP 14.32)

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/885,136	10/16/2015	Michael A. Cuff	40308

CONFIRMATION NO. 1789

PUBLICATION NOTICE

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117657
TeleCommunication Systems, Inc.
275 West Street
Annapolis, MD 21401

Title: Aggregate Location Dynometer (ALD)

Publication No.US-2016-0044461-A1
Publication Date:02/11/2016

NOTICE OF PUBLICATION OF APPLICATION

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

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 1 of 28

Atty.	M#	Client Ref.
Bollman	40308	40308

Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015
Examiner: AJIBADE AKONAI Group Art Unit: 2641

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	4445118	4/1984	Taylor			
	BR	4928107	5/1990	KURODA			
	CR	4972484	11/1990	THEILE			
	DR	5126722	6/1992	KAMIS			
	ER	5283570	2/1994	DELUCA			
	FR	5301354	4/1994	SCHWENDEMAN			
	GR	5311516	5/1994	KUZNICKI			
	HR	5327529	7/1994	FULTS			
	IR	5335246	8/1994	YOKEV			
	JR	5351235	9/1994	LAHTINEN			
	KR	5365451	11/1994	WANG			
	LR	5418537	5/1995	BIRD			
	MR	5422813	6/1995	SCHUCHMAN			
	NR	5479408	12/1995	WILL			

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		Document Number	Date MM/YYYY	Country	Inventor Name	Class	SubClass	English Translation Enclosed	English Translation No	Translation Enclosed	Translation No
	OR										
	PR										
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	RR										
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OTHER (Including in **this order** Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

	WR	Internal Search Report received in PCT/US2009/05575 dated January 14, 2011.				
	XR	Internal Search Report received in PCT/US2009/05575 dated December 3, 2009.				
	YR	International Search Report received in PCT/US2011/01198 dated August 6, 2012.				
	ZR	Internal Search Report received in PCT/US2011/000671 dated July 27, 2011.				
	AAR	Internal Search Report received in PCT/US2011/000671 dated April 25, 2012.				
	BBR	International Search Report in PCT/US2010/001134 dated October 31, 2011.				

Examiner Date Considered:

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 2 of 28

Atty.	M#	Client Ref.
Bollman	40308	40308

Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015
Examiner: AJIBADE Group Art Unit: 2641

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	5485163	11/1996	SINGER			
	BR	5504491	4/1996	CHAPMAN			
	CR	5506886	4/1996	MAINE			
	DR	5517199	5/1996	DiMATTEI			
	ER	5530655	6/1996	LOKHOFF			
	FR	5530914	6/1996	McPHETERS			
	GR	5539395	7/1996	BUSS			
	HR	5539829	7/1996	LOKHOFF			
	IR	5546445	8/1996	DENNISON			
	JR	5568153	10/1996	BELIVEAU			
	KR	5583774	12/1996	DIESEL			
	LR	5594780	1/1997	WEIDEMAN			
	MR	5606618	2/1997	LOKHOFF			
	NR	5629693	5/1997	JANKY			

FOREIGN PATENT DOCUMENTS

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	WR	Internal Search Report received in PCT/US2011/00950 dated September 16, 2011.				
	XR	International Search Report in PCT/US2011/00950 dated April 30, 2012.				
	YR	International Search Report received in PCT/US2012/000374 dated November 20, 2012.				
	ZR	International Report on Patentability received in PCT/US2012/000374 dated September 5, 2013.				
	AAR					
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 3 of 28

Atty.	M#	Client Ref.
Bollman	40308	40308

Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015
Examiner: AJIBADE Group Art Unit: 2641

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	5636276	6/1997	BRUGGER			
	BR	5661652	8/1997	SPRAGUE			
	CR	5661755	8/1997	VAN de KERKHOF			
	DR	5689245	11/1997	NOREEN			
	ER	5699053	12/1997	JONSSON			
	FR	5704029	12/1997	WRIGHT, JR.			
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	HR	5731785	3/1998	LEMELSON			
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	KR	5774670	6/1998	MONTULLI			
	LR	5809415	9/1998	ROSSMAN			
	MR	5812086	9/1998	BERTIGER			
	NR	5812087	9/1998	KRASNER			

FOREIGN PATENT DOCUMENTS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 4 of 28

Atty.	M#	Client Ref.
Bollman	40308	40308

Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015
Examiner: AJIBADE Group Art Unit: 2641

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	5841396	11/1998	KRASNER			
	BR	5857201	1/1999	WRIGHT, JR.,			
	CR	5864667	1/1999	BARKAM			
	DR	5874914	2/1999	Krasner			
	ER	5896369	4/1999	WARSTA			
	FR	5922074	7/1999	RICHARD			
	GR	5930250	7/1999	KLOK			
	HR	5945944	8/1999	KRASNER			
	IR	5946629	8/1999	SAWYER			
	JR	5950137	9/1999	KIM			
	KR	5960362	9/1999	GROB			
	LR	5983099	11/1999	YAO			
	MR	5999124	12/1999	SHEYNBLAT			
	NR	6032051	2/2000	HALL			

FOREIGN PATENT DOCUMENTS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 5 of 28

Atty.	M#	Client Ref.
Bollman	40308	40308

Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015
Examiner: AJIBADE Group Art Unit: 2641

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	6052081	4/2000	KRASNER			
	BR	6058338	5/2000	AGASHE			
	CR	6061018	5/2000	SHEYNBLAT			
	DR	6064336	5/2000	KRASNER			
	ER	6067045	5/2000	CASTELLOE			
	FR	6081229	6/2000	SOLIMAN			
	GR	6085320	7/2000	KALISKI, JR.			
	HR	6124810	9/2000	SEGAL			
	IR	6131067	10/2000	GIRERD			
	JR	6133874	10/2000	KRASNER			
	KR	6134483	10/2000	VAYANOS			
	LR	6150980	11/2000	KRASNER			
	MR	6154172	11/2000	PICCIONELLI			
	NR	6169901	1/2001	BOUCHER			

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		Document Number	Date MM/YYYY	Country	Inventor Name	Class	SubClass	English Translation Enclosed	English Translation No	Translation Enclosed	Translation No
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 6 of 28

Atty.	M#	Client Ref.
Bollman	40308	40308

Applicant: CUFF
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U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	6169902	1/2001	KAWAMOTO			
	BR	6178506	1/2001	QUICK, JR,.			
	CR	6185427	2/2001	KRASNER			
	DR	6188354	2/2001	SOLIMAN			
	ER	6188909	2/2001	ALANARA			
	FR	6189098	2/2001	KALISKI, JR.			
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	HR	6205330	3/2001	WINBLADH			
	IR	6208290	3/2001	KRASNER			
	JR	6215441	4/2001	MOEGLEIN			
	KR	6239742	5/2001	KRASNER			
	LR	6247135	6/2001	FEAGUE			
	MR	6249873	6/2001	RICHARD			
	NR	6253203	6/2001	O'FLAHERTY			

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Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015
Examiner: AJIBADE Group Art Unit: 2641

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	6260147	7/2001	QUICK, JR.			
	BR	6275692	8/2001	SKOG			
	CR	6275849	8/2001	LUDWIG			
	DR	6297768	10/2001	ALLEN,JR.			
	ER	6307504	10/2001	SHEYNBLAT			
	FR	6308269	10/2001	PROIDL			
	GR	6313786	11/2001	SHEYNBLAT			
	HR	6321257	11/2001	KOTALA			
	IR	6324542	11/2001	LENT			
	JR	6327473	12/2001	SOLIMAN			
	KR	6333919	12/2001	GAFFNEY			
	LR	6360093	3/2002	ROSS			
	MR	6363254	3/2002	JONES			
	NR	6367019	4/2002	ANSELL			

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	AR	6370389	4/2002	ISOMURSU			
	BR	6377209	4/2002	KRASNER			
	CR	6400314	6/2002	KRASNER			
	DR	6400958	6/2002	ISOMURSU			
	ER	6411254	6/2002	MOEGLEIN			
	FR	6421002	7/2002	KRASNER			
	GR	6430504	8/2002	GILBERT			
	HR	6433734	8/2002	KRASNER			
	IR	6442391	8/2002	JOHANSSON			
	JR	6449473	9/2002	RAIVISTO			
	KR	6449476	9/2002	HUTCHISON, IV			
	LR	6456852	9/2002	BAR			
	MR	6463272	10/2002	WALLACE			
	NR	6477150	11/2002	MAGGENTI			

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	AR	6505049	1/2003	DORENBOSCH			
	BR	6510387	1/2003	FUCHS			
	CR	6512922	1/2003	BURG			
	DR	6512930	1/2003	SANDEGREN			
	ER	6515623	2/2003	JOHNSON			
	FR	6519466	2/2003	PANDE			
	GR	6522682	2/2003	KOHLI			
	HR	6525687	2/2003	ROY			
	IR	6525688	2/2003	CHOU			
	JR	6529829	3/2003	TURETZKY			
	KR	6531982	3/2003	WHITE			
	LR	6538757	3/2003	SANSONE			
	MR	6539200	3/2003	SCHIFF			
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	AR	6542464	4/2003	TAKEDA			
	BR	6542734	4/2003	ABROL			
	CR	6542743	4/2003	SOLIMAN			
	DR	6549776	4/2003	JOONG			
	ER	6549844	4/2003	EGBERTS			
	FR	6556832	4/2003	SOLIMAN			
	GR	6560461	5/2003	FOMUKONG			
	HR	6560534	5/2003	ABRAHAM			
	IR	6570530	5/2003	GAAL			
	JR	6574558	6/2003	KOHLI			
	KR	6580390	6/2003	HAY			
	LR	6584552	6/2003	KUNO			
	MR	6594500	7/2003	BENDER			
	NR	6597311	7/2003	SHEYNBLAT			

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	AR	6603973	8/2003	FOLADARE			
	BR	6606495	8/2003	KORPI			
	CR	6606554	8/2003	EDGE			
	DR	6609004	8/2003	MORSE			
	ER	6611757	8/2003	BRODIE			
	FR	6618670	9/2003	CHANSARKAR			
	GR	6621452	9/2003	KNOCKHEART			
	HR	6628233	9/2003	KNOCKHEART			
	IR	6633255	10/2003	KRASNER			
	JR	6640184	10/2003	RABE			
	KR	6650288	11/2003	SEITZ			
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	MR	6665539	12/2003	SIH			
	NR	6665541	12/2003	KRASNER			

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	AR	6671620	12/2003	GARIN			
	BR	6677894	1/2004	SHEYNBALT			
	CR	6680694	1/2004	KNOCKHEART			
	DR	6680695	1/2004	TURETZKY			
	ER	6691019	2/2004	SEELEY			
	FR	6694258	2/2004	JOHNSON			
	GR	6697629	2/2004	GRILLI			
	HR	6698195	3/2004	HELLINGER			
	IR	6701144	3/2004	KIRBAS			
	JR	6703971	3/2004	PANDE			
	KR	6703972	3/2004	van DIGGELEN			
	LR	6704651	3/2004	Van DIGGELEN			
	MR	6707421	3/2004	DRURY			
	NR	6714793	3/2004	CAREY			

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	AR	6721871	4/2004	PIISPANEN			
	BR	6724342	4/2004	BLOEBAUM			
	CR	6725159	4/2004	KRASNER			
	DR	6731940	5/2004	NAGENDRAN			
	ER	6734821	5/2004	Van DIGGELEN			
	FR	6738013	5/2004	ORLER			
	GR	6738800	5/2004	AGUILON			
	HR	6741842	5/2004	GOLDBERG			
	IR	6745038	6/2004	CALLAWAY, JR.			
	JR	6747596	6/2004	ORLER			
	KR	6748195	6/2004	PHILLIPS			
	LR	6751464	6/2004	BURG			
	MR	6756938	6/2004	ZHAO			
	NR	6757544	6/2004	RANGARAJAN			

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	AR	6772340	8/2004	PEINADO			
	BR	6775655	8/2004	PEINADO			
	CR	6775802	8/2004	GAAL			
	DR	6778136	8/2004	GRONOMEYER			
	ER	6778885	8/2004	AGASHE			
	FR	6781963	8/2004	CROCKETT			
	GR	6788249	9/2004	FARMER			
	HR	6795699	9/2004	McCRAW			
	IR	6799050	9/2004	KRASNER			
	JR	6801124	10/2004	NAITOU			
	KR	6801159	10/2004	SWOPE			
	LR	6804524	10/2004	VANDERMAIJDEN			
	MR	6807534	10/2004	ERICKSON			
	NR	6810323	10/2004	BULLOCK			

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	AR	6813560	11/2004	van DIGGELEN			
	BR	6816111	11/2004	KRASNER			
	CR	6816710	11/2004	KRASNER			
	DR	6816719	11/2004	HEINONEN			
	ER	6816734	11/2004	WONG			
	FR	6820269	11/2004	KOGAN			
	GR	6829475	12/2004	LEE			
	HR	6832373	12/2004	O'NEILL			
	IR	6833785	12/2004	BROWN			
	JR	6839020	1/2005	GEIER			
	KR	6839021	1/2005	SHEYNBLAT			
	LR	6842715	1/2005	GAAL			
	MR	6853916	2/2005	FUCHS			
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	AR	6861980	3/2005	ROWITCH			
	BR	6865171	3/2005	NILSSON			
	CR	6865395	3/2005	RILEY			
	DR	6867734	3/2005	VOOR			
	ER	6873854	3/2005	CROCKETT			
	FR	6885940	4/2005	BRODIE			
	GR	6888497	5/2005	KING			
	HR	6888932	5/2005	SNIP			
	IR	6895238	5/2005	NEWELL			
	JR	6895249	5/2005	GAAL			
	KR	6900758	5/2005	MANN			
	LR	6903684	6/2005	SIMIC			
	MR	6904029	6/2005	FORS			
	NR	6907224	6/2005	YOUNIS			

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	BR	6912395	6/2005	BENES			
	CR	6915208	7/2005	GARIN			
	DR	6917331	7/2005	GRONEMEYER			
	ER	6930634	8/2005	PENG			
	FR	6937187	8/2005	VAN DIGGELEN			
	GR	6937872	8/2005	KRASNER			
	HR	6941144	9/2005	STEIN			
	IR	6944540	9/2005	KING			
	JR	6947772	9/2005	MINEAR			
	KR	6950058	9/2005	DAVIS			
	LR	6956467	10/2005	MERCADO, JR.			
	MR	6957073	10/2005	BYE			
	NR	6961562	11/2005	ROSS			

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	AR	6965754	11/2005	KING			
	BR	6965767	11/2005	MAGGENTI			
	CR	6970917	11/2005	KUSHWAHA			
	DR	6973166	12/2005	TSUMPES			
	ER	6973320	12/2005	BROWN			
	FR	6975266	12/2005	ABRAHAM			
	GR	6978453	12/2005	RAO			
	HR	6980816	12/2005	ROHLES			
	IR	6985105	1/2006	SEITZ			
	JR	6996720	2/2006	DeMELLO			
	KR	6999782	2/2006	SHAUGHNESSY			
	LR	7024321	4/2006	DENIGER			
	MR	7024393	4/2006	PEINADO			
	NR	7047411	5/2006	DeMELLO			

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	AR	7064656	6/2006	BEKCHER			
	BR	7065351	6/2006	CARTER			
	CR	7065507	6/2006	MOHAMMED			
	DR	7079857	7/2006	MAGGENTI			
	ER	7103018	9/2006	HASEN			
	FR	7103574	9/2006	PEINADO			
	GR	7106717	9/2006	ROSSEAU			
	HR	7136838	11/2006	PEINADO			
	IR	7151946	12/2006	MAGENNTI			
	JR	7209969	4/2007	LAHTI			
	KR	7218940	5/2007	NIEMENNA			
	LR	7221959	5/2007	LINDQUIST			
	MR	20010011247	8/2001	O'FLAHERTY			
	NR	US2010/0050251	2/2010	Speyer			

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FORM PTO-1449 To: U.S. Department of Commerce

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 20 of 28

Atty.	M#	Client Ref.
Bollman	40308	40308

Applicant: CUFF
Appln. No.: 14/885,136
Filing Date: October 16, 2015
Examiner: AJIBADE Group Art Unit: 2641

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	SubClass	Filing Date (if appropriate)
	AR	20020037735	3/2002	MAGGENTI			
	BR	20020052214	5/2002	MAGGENTI			
	CR	20020061760	5/2002	MAGGENTI			
	DR	20020069529	6/2002	WIERES			
	ER	20020102999	8/2002	MAGGENTI			
	FR	20020112047	8/2002	KUSHWAHA			
	GR	US2007/0030116	2/2007	Feher			
	HR	20030009602	1/2003	JACOBS			
	IR	20030037163	2/2003	KITADA			
	JR	20030065788	4/2003	SALOMAKI			
	KR	20030078064	4/2003	CHAN			
	LR	US2007/0186105	8/2007	Bailey			
	MR	20030081557	5/2003	METTALA			
	NR	20030101329	5/2003	LAHTI			

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	AR	20030101341	5/2003	KETTLER			
	BR	20030103484	6/2003	OOMMEN			
	CR	20030114157	6/2003	SPITZ			
	DR	20030119528	6/2003	PEW			
	ER	20030153340	8/2003	CROCKETT			
	FR	20030153341	8/2203	CROCKETT			
	GR	20030153342	8/2003	CROCKETT			
	HR	20030153343	8/2003	CROCKETT			
	IR	20030161298	8/2003	BERGMAN			
	JR	20030204640	10/2003	SAHINAJA			
	KR	20030223381	12/2003	SCHRODERUS			
	LR	20040002326	1/2004	MAHER			
	MR	20040044623	3/2004	WAKE			
	NR	20040068724	4/2004	GARDNER			

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	AR	20040090121	5/2004	SIMONDS			
	BR	20040204806	10/2004	CHEN			
	CR	20040205151	10/2004	SPRIGG			
	DR	20040229632	11/2004	FLYNN			
	ER	20050003797	1/2005	BALDWIN			
	FR	20050028034	2/2005	GANTMAN			
	GR	20050039178	2/2005	MAROLIA			
	HR	20050041578	2/2005	HUOTARI			
	IR	20050086467	4/2005	ASOKAN			
	JR	20050112030	5/2005	GAUSS			
	KR	20050209995	9/2005	AKSU			
	LR	20050259675	11/2005	TUOHINO			
	MR	7177623	2/2007	Baldwin			
	NR	20060053225	3/2006	POIKLESKA			

FOREIGN PATENT DOCUMENTS

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FORM PTO-1449 To: U.S. Department of Commerce

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date: February 10, 2016 Page 23 of 28

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	AR	20060212558	9/2006	SAHINOJA			
	BR	20060212562	9/2006	KUSHWAHA			
	CR	20060234639	10/2006	KUSHWAHA			
	DR	20060234698	10/2006	FOLK			
	ER	20070026854	2/2007	NATH			
	FR	20070030539	2/2007	NATH			
	GR	2004/0064550	4/2004	Sakata			
	HR	5633630	5/1997	Park			
	IR	6360102	3/2002	Havinis			
	JR	20020173317	11/2002	Nykanen			
	KR	6121923	9/2000	King			
	LR	2005/0086340	4/2005	Kang			
	MR	2005/0136895	6/2005	Thenthiuperai			
	NR	2005/0172217	8/2005	Leung			

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	AR	2005/01749987	8/2005	Raghav			
	BR	2005/0246217	11/2005	Horn			
	CR	2006/0058045	3/2006	Nilsen			
	DR	2006/0074618	4/2006	Miller			
	ER	2006/0090136	4/2006	Miller			
	FR	7071814	7/2006	Schorman			
	GR	2007/00309734	2/2007	Mikan			
	HR	6650288	11/2003	SEITZ			
	IR	2002/0198632	12/2002	Breed			
	JR	2005/0003797	1/2005	Baldwin			
	KR	6118403	9/2000	Lang			
	LR	6204798	3/2001	Fleming			
	MR	2002/0135504	9/2002	Singer			
	NR	6567035	5/2003	Elliott			

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	AR	6677894	1/2004	Sheynblat			
	BR	6757544	6/2004	Rangarajan			
	CR	6751464	6/2004	Burg			
	DR	2005/0003797	1/2005	Baldwin			
	ER	6853849	2/2005	Tognazzini			
	FR	6895324	5/2005	Straub			
	GR	7301494	11/2007	Waters			
	HR	6360102	3/2002	Havinis			
	IR	2002/0173317	11/2002	Nykanen			
	JR	6121923	9/2000	King			
	KR	6147598	11/2000	Murphy			
	LR	6567035	5/2003	Elliott			
	MR	US2006/0097866	5/2006	Adamczyk			
	NR	US2004/0046667	3/2004	Copley			

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	AR	US2006/0246920	11/2006	Shim			
	BR	US2009/0328135	12/2009	Szabo			
	CR	7269413	9/2007	Kraft			
	DR	US2006/0246920	11/2006	Shim			
	ER	Us2009/0328135	12/2009	Szabo			
	FR	7203752	4/2007	Rice			
	GR	US2010/0024045	1/2010	Sastry			
	HR	RE 42,927	11/2011	Want			
	IR	US2004/0257273	12/2004	Benco			
	JR	US2008/0198989	8/2008	Contractor			
	KR	7324823	1/2008	Rosen			
	LR	5727057	3/1998	Emery			
	MR	6049718	4/2000	Stewart			
	NR	US2009/0222388	9/2009	Hua			

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	BR	US2007/0191025	8/2007	McBrierty			
	CR	US2003/0112941	6/2003	Brown			
	DR	US2008/0160980	7/2008	Harris			
	ER	US2007/0049287	3/2007	Dunn			
	FR	US2005/0233735	10/2005	Karaoguz			
	GR	8190169	5/2012	Shim			
	HR	US2008/0026723	1/2008	Han			
	IR	US2009/0058830	3/2009	Herz			
	JR	US2006/0073810	4/2006	Pyhalammi			
	KR	US2005/0170856	8/2005	Keyani			
	LR	US2009/0311992	12/2009	Jagetiya			
	MR	US2009/0271486	10/2009	Ligh			
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	BR	US2009/0204815	8/2009	Dennis			
	CR	US2010/0285763	11/2010	Ingrassia			
	DR	US2008/0318591	12/2008	Olivier			
	ER	US2010/0308993	12/2010	Ma			
	FR	6998985	2/2006	Reisman			
	GR	8442807	5/2013	Ramachandran			
	HR	8314683	11/2012	Pfeffer			
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	KR	US2009/0140851	6/2009	Graves			
	LR	US2010/0197318	8/2010	Petersen			
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Doc Code: R.78F.LIST

PTO/SB/206 (11-07)
Approved for use through 11/30/2007. OMB 0651-0031
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LISTING OF COMMONLY OWNED APPLICATIONS AND PATENTS
37 CFR 1.78(f)

Attorney Docket Number: 40308	**First Named Inventor:** CUFF
Application Number (if known): 14/885,136	**Title:** Aggregate Location Dynometer (ALD)
Filing Date of the Application: 10/16/2015	**Classification (class and subclass):**

Applicant is providing the listing of commonly owned applications and patents in compliance with 37 CFR 1.78(f)(1) below. If the application or patent also meets the conditions set forth in 37 CFR 1.78(f)(2)(i), applicant must also either: (1) rebut the presumption that the application or patent contains at least one patentably indistinct claim; or (2) submit a terminal disclaimer in accordance with 37 CFR 1.321(c). In addition, if applicant files a terminal disclaimer for a pending application in the above-identified application, applicant must provide an explanation why there are two or more pending nonprovisional applications containing patentably indistinct claims. See 37 CFR 1.78(f)(2)(ii)(B).

If rebuttable presumption under 37 CFR 1.78(f)(2) also exists			Application Numbers under 37 CFR 1.78(f)(1) (Required for applications and patents)	Patent Numbers (Required for patents)
Rebuttal attached	Terminal disclaimer attached	Explanation		
☐	☐	☐	13/317,996	8,649,806
☐	☐	☐	13/645,961	
☐	☐	☐	14/176,691	9,198,054
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Signature	2/10/2016 Date
Name (Print/Typed) William H. Bollman	36457 Registration Number

Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for signature requirements. If necessary, submit multiple forms for more than one signature, see below.*

[1] *Total of 1 forms are submitted.

The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
WILLIAM H. BOLLMAN
MANELLI SELTER PLLC
2000 M STREET, NW, 7TH FLOOR
WASHINGTON, DC 20036-3307
USA

PCT

NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Rule 71.1)

Date of mailing (*day/month/year*)	30 APR 2012
Applicant's or agent's file reference 20-250	**IMPORTANT NOTIFICATION**

International application No.	International filing date (*day/month/year*)	Priority date (*day/month/year*)
PCT/US11/00950	26 May 2011 (26.05.2011)	27 May 2010 (27.05.2010)

Applicant

TELECOMMUNICATIONS SYSTEMS, INC.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide.*

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the IPEA/ US	Authorized officer
Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Kim Huynh Telephone No. 571-272-2431

Form PCT/IPEA/416 (January 2004)

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 20-250	**FOR FURTHER ACTION**	See Form PCT/IPEA/416
International application No. PCT/US11/00950	International filing date *(day/month/year)* 26 May 2011 (26.05.2011)	Priority date *(day/month/year)* 27 May 2010 (27.05.2010)
International Patent Classification (IPC) or national classification and IPC IPC: **G06F 21/00** (2011.01) USPC: 713/185		
Applicant TELECOMMUNICATIONS SYSTEMS, INC.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 10 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☑ *(sent to the applicant and to the International Bureau)* a total of 0 sheets, as follows:
      - ☐ sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions).
      - ☐ sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (Rules 66.4*bis*, 70.2(e), 70.16 and 91.2).
      - ☐ superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No.I and the Supplemental Box (see Rule 70.16(b)).

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see paragraph 3*bis* of Annex C of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand 23 December 2011 (23.12.2011)	Date of completion of this report 26 April 2012 (26.04.2012)
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Kim Huynh Telephone No. 571-272-2431

Form PCT/IPEA/409 (cover sheet) (July 2011)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US11/00950

Box No. I Basis of the report

1. With regard to the **language**, this report is based on:
   - [x] the international application in the language in which it was filed.
   - [ ] a translation of the international application into English which is the language of a translation furnished for the purposes of:
     - [ ] international search (Rules 12.3(a) and 23.1(b)).
     - [ ] publication of the international application (Rule 12.4(a)).
     - [ ] international preliminary examination (Rules 55.2(a) and/or 55.3(a) and (b)).
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
   - [x] the international application as originally filed/furnished
   - [x] the description:
     pages 1-9 as originally filed/furnished
     pages* NONE received by this Authority on
     pages* NONE received by this Authority on
   - [x] the claims:
     pages 10-12 as originally filed/furnished
     pages* NONE as amended (together with any statement) under Article 19
     pages* NONE received by this Authority on
     pages* NONE received by this Authority on
   - [x] the drawings:
     pages 1/3-3/3 as originally filed/furnished
     pages* NONE received by this Authority on
     pages* NONE received by this Authority on
   - [ ] a sequence listing - see Supplemental Box Relating to Sequence Listing.
3. [ ] The amendments have resulted in the cancellation of:
   - [ ] the description, pages
   - [ ] the claims, Nos.
   - [ ] the drawings, sheets/figs
   - [ ] the sequence listing (*specify*):
4. [ ] This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since either they are considered to go beyond the disclosure as filed, or they were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in the Supplemental Box (Rules 70.2(c) and(*c-bis*)):
   - [ ] the description, pages
   - [ ] the claims, Nos.
   - [ ] the drawings, sheets/figs
   - [ ] the sequence listing (*specify*):
5. [ ] This report has been established:
   - [ ] taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.1(d-*bis*) and 70.2(e)).
   - [ ] without taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.4*bis*) and 70.2(e)).
6. [ ] Supplementary international search report(s) from Authority(ies) _____ has/have been received and taken into account in establishing this report (Rule 45*bis*.8(b) and (c)).

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US11/00950

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-13	YES
	Claims NONE	NO
Inventive Step (IS)	Claims NONE	YES
	Claims 1-13	NO
Industrial Applicability (IA)	Claims 1-13	YES
	Claims NONE	NO

2. Citations and Explanations (Rule 70.7)
Please See Continuation Sheet

Form PCT/IPEA/409 (Box No. V) (July 2011)

Supplemental Box

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

V. 2. Citations and Explanations:
Claims 1-5, 7, 9, 10 and 12 lack an inventive step under PCT Article 33(3) as being obvious over US 2007/0271596 A1 to Boubion et aL (hereinafter, 'Boubion') in view of US 200910204815 A1 to Dennis et al. (hereinafter, 'Dennis').

As to claim 1, Boubion teaches an authentication token having at least three levels of security (para [0043] - another level of security), comprising: an authorization request module to trigger a wireless authorization request to a network being accessed, including a current location of an associated physical authentication token (pare [0012] - triggered; pare [0019]-[0021] - wireless authentication.., secure physical location.., fob, dongle, token.., authenticate the identity of a user.., hardware); and a passcode entry module to accept entry of a passcode authorizing access to said network being accessed (para [0022] - secured from access by unauthorized individuals or devices. For example, protected information may be password protected); but fails to explicitly disclose wherein authorization of access to said network being accessed is contingent upon both said current location being in an authorized location for said physical authentication token, and said passcode being an authorized passcode.
However, Dennis does teach wherein authorization of access to said network being accessed is contingent upon both said current location being in an authorized location for said physical authentication token, and said passcode being an authorized passcode (para [0034]-[0035] - current location.., passwords; para [0051] - authentication.., geographic place name, latitude and longitude coordinates; para [0053] - Secure Key Information Storage associated with the wireless device).
It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the security, storage and communication system of Boubion with the system and method for wireless device based user authentication of Dennis, because Boubion and Dennis are directed to systems and methods for a location-based security token. Furthermore, users and designers benefit from systems and/or methods adapted for allowing Applications Requiring Secure Access to be Internet website applications such as on-line banking applications, on-line merchant applications or any website application requiring secure access - in these examples, the website applications may be rendered on a personal computer supporting BLUETOOTH communications, Wi-Fi communications, RFID, NFC or the like, because such systems/methods provide a system for preventing identify theft of an entity using the entity's wireless device as an authentication factor (Dennis, para [0015]).

Supplemental Box

As to claim 2, in combination with Boubion, Dennis further discloses wherein: said authorized location is maintained in a user authorized locations database accessible by said network being accessed (para |0051]).

As to claim 3, in combination with Boubion, Dennis further discloses wherein: said authorized passcode is maintained in said user authorized locations database accessible by said network being accessed (para [0051]).

As to claim 4, in combination with Boubion, Dennis further discloses wherein: said authorized passcode is maintained in a user authorized locations database accessible by said network being accessed (pare [0051]).

As to claim 5, Boubion teaches a method of providing a third level of security to an authentication token fob (para [0020] - fob, dongle, token.., authenticate the identity of a user, para [0043] - another level of security), comprising: obtaining a current location of an authentication token fob associated with an attempt to access a relevant secure network resource (para [0007] - where the user is-e.g., a GPS location; para [0113] ° Communication... resources); combining said obtained current location with a passcode entered by a current user associated with said authentication token fob to form a passcode key (para [0022] - secured from access by unauthorized individuals or devices. For example, protected information may be password protected); but fails to explicitly disclose comparing said passcode key to a database of authorized passcode keys associated with said authentication token fob, to determine authorization for access to said relevant secure network resource; wherein physical possession of said authentication token fob and entry of an authorized passcode are combined with a determination of an authorized location for use of said authentication token fob to provide three levels of security for access to said relevant secure network resource.
However, Dennis does teach comparing said passcode key to a database of authorized passcode keys associated with said authentication token fob, to determine authorization for access to said relevant secure network resource (para [0034]-[0035] - current location.., passwords; pare [0051] - authentication.., geographic place name, latitude and longitude coordinates; para [0053] - Secure Key Information Storage associated with the wireless device.., knowledge-based authentication factors); wherein physical possession of said authentication token fob and entry of an authorized passcode are combined with a determination of an authorized location for use of said authentication token fob to provide three levels of security for access to said relevant secure network resource (pare [0034]-[0035] - current location.., passwords; para [0051] - authentication.., geographic place name, latitude and longitude coordinates; para [0053] - Secure Key Information Storage associated with the wireless device).
It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the security, storage and communication system of Boubion with the system and method for wireless device based user authentication of Dennis, because Boubion and Dennis are directed to systems and methods for a location-based security token. Furthermore, users and designers benefit from systems and/or methods adapted for allowing Applications Requiring Secure Access to be Internet website applications such as on-line banking applications, on-line merchant applications or any website application requiring secure access - in these examples, the website applications may be rendered on a personal computer supporting BLUETOOTH communications, Wi-Fi communications, RFID, NFC or the like, because such systems/methods provide a system for preventing identify theft of an entity using the entity's wireless device as an authentication factor (Dennis, para [0015]).

As to claim 9, Boubion teaches a method of providing a location-based level of security to an authentication token (para [0020] - fob, dongle, token.., authenticate the identity of a user;, para [0043] - another level of security), comprising: obtaining a current location of an authentication token associated with an attempt to access a relevant secure network resource (para [0022] - secured from access by unauthorized individuals or devices. For example, protected information may be password protected); but fails to explicitly disclose comparing said current location of said authentication token to a database of authorized locations for use of said authentication token, to determine authorization for access to said relevant secure network resource; wherein access to said relevant secure network resource is gained only when said authentication token is in an authorized region for authorized use.
However, Dennis does teach comparing said current location of said authentication token to a database of authorized locations for use of said authentication token, to determine authorization for access to said relevant secure network resource (para [0034]-[0035] - current location.., passwords; pare [0051] - authentication.., geographic place name, latitude and longitude coordinates; para [0053] - Secure Key Information Storage associated with the wireless device.., knowledge-based authentication factors); wherein access to said relevant secure network resource is gained only when said authentication token is in an authorized region for authorized use (para [0034]-[0035] - current location.., passwords; para [0051] - authentication.., identifier associated with the location, a geographic place name, latitude and longitude coordinates; pare [0053] - Secure Key Information Storage associated with the wireless device).
It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the security, storage and communication system of Boubion with the system and method for wireless device based user authentication of Dennis, because Boubion and Dennis are directed to systems and methods for a location-based security token. Furthermore, users and designers benefit from systems and/or methods adapted for allowing Applications Requiring Secure Access to be Internet website applications such as on-line banking applications, on-line merchant applications or any website application requiring secure access - in these examples, the website applications may be rendered on a personal computer supporting BLUETOOTH communications, Wi-Fi communications, RFID, NFC or the like, because such systems/methods provide a system for preventing identify theft of an entity using the entity's wireless device as an authentication factor (Dennis, pare [0015]).

As to claims 7 and 12, in combination with Dennis, Boubion further discloses wherein: said current location is obtained from a physical wireless network location server (para [0019]).

Supplemental Box

As to claim 10, in combination with Boubion, Dennis further discloses wherein: said authorized region is a coarse GPS location (para [0051] - standard and commonly available wireless or cellular network location).

Claims 6 and 11 lack an inventive step under PCT Article 33(3) as being obvious over Boubion in view of Dennis, and further in view of US 2007/0186105 A1 to Bailey et al. (hereinafter, 'Bailey').

As to claims 6 and 11, the combination of Boubion and Dennis teaches the method of providing a third level of security to an authentication token fob according to claim 5 and the method of providing a location-based level of security to an authentication token according to claim 9, but fails to explicitly disclose wherein: said current location is obtained from a satellite chip on said authentication token fob itself.
However, Bailey does teach wherein: said current location is obtained from a satellite chip on said authentication token fob itself (para [0223] - GPS; para [0262] - Chips).
It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the security, storage and communication system of Boubion (as enhanced by Dennis) with the wireless authentication methods and apparatus of Bailey, because Boubion, Dennis and Bailey are directed to systems and methods for a location-based security token. Furthermore, users and designers benefit from systems and/or methods adapted for providing protocols for encryption of authentication information transmitted by the token, and protocols for support of encryption on a computer, because such systems/methods allow for a wireless authentication token that provides authentication information to a computer by "tunneling" such information in otherwise standard communications of a wireless local area network protocol (Bailey, para [0008]).

Claims 8 and 13 lack an inventive step under PCT Article 33(3) as being obvious over Boubion in view of Dennis, and further in view of US 2007/0030116 A1 (Feher).

As to claims 8 and 13, the combination of Boubion and Dennis teaches the method of providing a third level of security to an authentication token fob according to claim 7 and the method of providing a location-based level of security to an authentication token according to claim 12, but fails to explicitly disclose wherein: said physical wireless network location server is a position determining entity (PDE).
However, Feher does teach wherein: said physical wireless network location server is a position determining entity (PDE) (para [0231]).
It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the security, storage and communication system of Boubion (as enhanced by Dennis) with the multimode communication system of Feher, because Boubion, Dennis and Feher are directed to systems and methods for a location-based security token. Furthermore, users and designers benefit from systems and/or methods adapted for enabling GPS signals and or land line and or web-internet information signals and it includes Transmit Section of Multiple Communicator Devices. Elements (also designated as Units or Devices) are single or multiple antennas which receive and or transmit signals from to a Position Determining Entity (PDE) transmitter or to one or more Base Station Transceivers (BTS) devices and/or to subscriber units, including peer to peer direct communication between subscribers; in some of the implementations transmitters of PDE signals include one or more satellite systems, such as GPS satellites, cellular base stations, wireless base stations or other wireless transmitters such as cellular phones PDA wireless transmitters, Remote Control (RC) transmitters, infrared or any other transmitters; some units are interface units and or front end ports respectively, for reception of the PDE signals from the antennas, from infrared transmitters, from laser transmitters and or from wired connections or from the internet. Wired connections include fiber optics, copper, cable and any other connection. In some embodiments the Position Determining Entity (PDE) front end is a Remote Front end while in other cases it is co-located with the entire receiver, because such systems/methods allow for deployment of multiuse and or multipurpose applications, devices and systems, including systems for: position determination, location finding based services (Feher, para [0181]).

Claims 1 - 13 have industrial applicability as defined by PCT Article 33(4), because the subject matter can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
WILLIAM H. BOLLMAN
MANELLI DENISON & SELTER PLLC
2000 M STREET, NW, 7TH FLOOR
WASHINGTON, DC 20036

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	16 SEP 2011
Applicant's or agent's file reference 20-250	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US 11/00950	International filing date *(day/month/year)* 26 May 2011 (26.05.2011)
Applicant TELECOMMUNICATION SYSTEM, INC.	

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

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

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

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

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

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

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

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

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 20-250	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US 11/00950	International filing date *(day/month/year)* 26 May 2011 (26.05.2011)	(Earliest) Priority Date *(day/month/year)* 27 May 2010 (27.05.2010)
Applicant TELECOMMUNICATION SYSTEM, INC.		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**
   a. With regard to the **language**, the international search was carried out on the basis of:
      ☒ the international application in the language in which it was filed.
      ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).
   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.
2. ☐ **Certain claims were found unsearchable** (see Box No. II).
3. ☐ **Unity of invention is lacking** (see Box No. III).
4. With regard to the **title**,
   ☒ the text is approved as submitted by the applicant.
   ☐ the text has been established by this Authority to read as follows:
5. With regard to the **abstract**,
   ☒ the text is approved as submitted by the applicant.
   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. With regard to the **drawings**,
   a. the figure of the **drawings** to be published with the abstract is Figure No. 1
      ☒ as suggested by the applicant.
      ☐ as selected by this Authority, because the applicant failed to suggest a figure.
      ☐ as selected by this Authority, because this figure better characterizes the invention.
   b. ☐ none of the figures is to be published with the abstract.

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 11/00950

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 21/00 (2011.01)
USPC - 713/185
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8): G06F 21/00 (2011.01)
USPC: 713/185

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 726/2; 726/20; 340/539.13; 340/8.1 (keyword limited; terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWest; Google Scholar; Google Patents; FreePatentsOnline. Search terms used: secure security, communications network Internet web, wireless wi-fi wifi radio mobile cellular, authorize authenticate prove-identity, security-fob security-token authentication-token cryptographic-token hardware-token hard-token security-key-fob ...

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2007/0271596 A1 (BOUBION et al.) 22 November 2007 (22.11.2007) entire document, especially Abstract; para [0007], [0012], [0019]-[0022], [0043], [0113]	1 - 13
Y	US 2009/0204815 A1 (DENNIS et al.) 13 August 2009 (13.08.2009) entire document, especially Abstract; para [0015], [0034], [0035], [0051], [0053]	1 - 13
Y	US 2007/0186105 A1 (BAILEY et al.) 09 August 2007 (09.08.2007) entire document, especially Abstract; para [0008], [0223], [0262]	6, 11
Y	US 2007/0030116 A1 (FEHER) 08 February 2007 (08.02.2007) entire document, especially Abstract; para [0181], [0231]	8, 13
A	US 2010/0050251 A1 (SPEYER et al.) 25 February 2010 (25.02.2010) entire document	1 - 13

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

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

Date of the actual completion of the international search	Date of mailing of the international search report
07 September 2011 (07.09.2011)	16 SEP 2011
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: WILLIAM H. BOLLMAN
MANELLI DENISON & SELTER PLLC
2000 M STREET, NW, 7TH FLOOR
WASHINGTON, DC 20036

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	16 SEP 2011
Applicant's or agent's file reference 20-250	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US 11/00950	26 May 2011 (26.05.2011)	27 May 2010 (27.05.2010)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 21/00 (2011.01)
USPC - 713/185

Applicant TELECOMMUNICATION SYSTEM, INC.

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	07 September 2011 (07.09.2011)	Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 11/00950

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

1. Statement

Novelty (N)	Claims	1 - 13	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1 - 13	NO
Industrial applicability (IA)	Claims	1 - 13	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-5, 7, 9, 10 and 12 lack an inventive step under PCT Article 33(3) as being obvious over US 2007/0271596 A1 to Boubion et al. (hereinafter, 'Boubion') in view of US 2009/0204815 A1 to Dennis et al. (hereinafter, 'Dennis').

As to claim 1, Boubion teaches an authentication token having at least three levels of security (para [0043] - another level of security), comprising: an authorization request module to trigger a wireless authorization request to a network being accessed, including a current location of an associated physical authentication token (para [0012] - triggered; para [0019]-[0021] - wireless authentication... secure physical location... fob, dongle, token... authenticate the identity of a user... hardware); and a passcode entry module to accept entry of a passcode authorizing access to said network being accessed (para [0022] - secured from access by unauthorized individuals or devices. For example, protected information may be password protected);

but fails to explicitly disclose wherein authorization of access to said network being accessed is contingent upon both said current location being in an authorized location for said physical authentication token, and said passcode being an authorized passcode.

However, Dennis does teach wherein authorization of access to said network being accessed is contingent upon both said current location being in an authorized location for said physical authentication token, and said passcode being an authorized passcode (para [0034]-[0035] - current location... passwords; para [0051] - authentication... geographic place name, latitude and longitude coordinates; para [0053] - Secure Key Information Storage associated with the wireless device).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the security, storage and communication system of Boubion with the system and method for wireless device based user authentication of Dennis, because Boubion and Dennis are directed to systems and methods for a location-based security token. Furthermore, users and designers benefit from systems and/or methods adapted for allowing Applications Requiring Secure Access to be Internet website applications such as on-line banking applications, on-line merchant applications or any website application requiring secure access - in these examples, the website applications may be rendered on a personal computer supporting BLUETOOTH communications, Wi-Fi communications, RFID, NFC or the like, because such systems/methods provide a system for preventing identify theft of an entity using the entity's wireless device as an authentication factor (Dennis, para [0015]).

As to claim 2, in combination with Boubion, Dennis further discloses wherein: said authorized location is maintained in a user authorized locations database accessible by said network being accessed (para [0051]).

As to claim 3, in combination with Boubion, Dennis further discloses wherein: said authorized passcode is maintained in said user authorized locations database accessible by said network being accessed (para [0051]).

As to claim 4, in combination with Boubion, Dennis further discloses wherein: said authorized passcode is maintained in a user authorized locations database accessible by said network being accessed (para [0051]).

- Please See Supplemental Box -

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:
Box V.2. Citations and explanations:

Claims 6 and 11 lack an inventive step under PCT Article 33(3) as being obvious over Boubion in view of Dennis, and further in view of US 2007/0186105 A1 to Bailey et al. (hereinafter, 'Bailey').

As to claims 6 and 11, the combination of Boubion and Dennis teaches the method of providing a third level of security to an authentication token fob according to claim 5 and the method of providing a location-based level of security to an authentication token according to claim 9, but fails to explicitly disclose wherein: said current location is obtained from a satellite chip on said authentication token fob itself.
However, Bailey does teach wherein: said current location is obtained from a satellite chip on said authentication token fob itself (para [0223] - GPS; para [0262] - Chips).
It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the security, storage and communication system of Boubion (as enhanced by Dennis) with the wireless authentication methods and apparatus of Bailey, because Boubion, Dennis and Bailey are directed to systems and methods for a location-based security token. Furthermore, users and designers benefit from systems and/or methods adapted for providing protocols for encryption of authentication information transmitted by the token, and protocols for support of encryption on a computer, because such systems/methods allow for a wireless authentication token that provides authentication information to a computer by "tunneling" such information in otherwise standard communications of a wireless local area network protocol (Bailey, para [0008]).

Claims 8 and 13 lack an inventive step under PCT Article 33(3) as being obvious over Boubion in view of Dennis, and further in view of US 2007/0030116 A1 (Feher).

As to claims 8 and 13, the combination of Boubion and Dennis teaches the method of providing a third level of security to an authentication token fob according to claim 7 and the method of providing a location-based level of security to an authentication token according to claim 12, but fails to explicitly disclose wherein: said physical wireless network location server is a position determining entity (PDE).
However, Feher does teach wherein: said physical wireless network location server is a position determining entity (PDE) (para [0231]).
It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the security, storage and communication system of Boubion (as enhanced by Dennis) with the multimode communication system of Feher, because Boubion, Dennis and Feher are directed to systems and methods for a location-based security token. Furthermore, users and designers benefit from systems and/or methods adapted for enabling GPS signals and or land line and or web-internet information signals and it includes Transmit Section of Multiple Communicator Devices. Elements (also designated as Units or Devices) are single or multiple antennas which receive and or transmit signals from to a Position Determining Entity (PDE) transmitter or to one or more Base Station Transceivers (BTS) devices and/or to subscriber units, including peer to peer direct communication between subscribers; in some of the implementations transmitters of PDE signals include one or more satellite systems, such as GPS satellites, cellular base stations, wireless base stations or other wireless transmitters such as cellular phones PDA wireless transmitters, Remote Control (RC) transmitters, infrared or any other transmitters; some units are interface units and or front end ports respectively, for reception of the PDE signals from the antennas, from infrared transmitters, from laser transmitters and or from wired connections or from the internet. Wired connections include fiber optics, copper, cable and any other connection. In some embodiments the Position Determining Entity (PDE) front end is a Remote Front end while in other cases it is co-located with the entire receiver, because such systems/methods allow for deployment of multiuse and or multipurpose applications, devices and systems, including systems for: position determination, location finding based services (Feher, para [0181]).

Claims 1 - 13 have industrial applicability as defined by PCT Article 33(4), because the subject matter can be made or used in industry.

SEARCH HISTORY

Application Number	PCT/US 11/00950
Search Conducted By	RC
Search Approved By	PJN

US/IPC Classifications Searched	IPC(8): G06F 21/00 (2011.01) USPC: 713/185
Date Conducted	07 September 2011 (07.09.2011)

Documentation Searched	USPC: 726/2; 726/20; 340/539.13; 340/8.1 (keyword limited; terms below)
Search Terms Used	PubWest; Google Scholar; Google Patents; FreePatentsOnline. Search terms used: secure security, communications network Internet web, wireless wi-fi wifi radio mobile cellular, authorize authenticate prove-identity, security-fob security-token authentication-token cryptographic-token hardware-token hard-token security-key-fob SecurID-token VeriSign-token DigiPass-token one-time-password OTP SecureOTP SmartCard physical-token physical-authentication-device physical-authentication-apparatus security-device security-apparatus, current instant instantaneous present present-time "now", pass-code passcode password personal-identification-number PIN personal-ID, physical geographic GPS global-positioning-system satellite, location position coordinates, authorized-locations authorized-positions authorized-coordinates, database, three-level tri-level 3-level
Date Conducted	07 September 2011 (07.09.2011)

Electronic Database Searched	PubWEST
Files Searched	PGPB, USPT, EPAB, JPAB
Date Conducted	07 September 2011 (07.09.2011)
Search Logic:	

DATE: Wednesday, September 07, 2011 Purge Queries Printable Copy Create Case

SEARCH HISTORY

Set Name Side by Side	Query	Hit Count	Set Name Result Set	Set Name Grid
	DB=PGPB,USPT,EPAB,JPAB; PLUR=YES; OP=OR			
L21	L20 and (L3 (713/$).ccls. (726/$).ccls. (340/$).ccls.)	382	L21	L21
L20	L19 and @PD<20100527	1048	L20	L20
L19	L18 and (authori$6 near4 (locat$4 position$4)) and (database) and ((three tri 3 secur$6) near4 level)	1283	L19	L19
L18	L17 and (((secur$6 cryptograph$6 hard$4 physical$4 smart identi$9 ID) near4 (fob token$4 key device apparatus card authentic$6)) SecurID VeriSign DigiPass SecureOTP SmartCard one-time-pass$4 OTP) and (current$4 instant$4 instantaneous$4 present$4 (present$4 near4 time) "now") and (pass-code passcode password (personal$4 near4 (ID identif$9) near4 number) PIN personal$4-ID) and (physical$4 geographic$4 GPS global$4-position$4-system satellite) and (locat$4 position$4 coordinate)	47934	L18	L18
L17	(secur$6 crypt$9) and (communicat$6 network$4 Internet web$4) and (wireless$4 wi-fi wifi radio mobile cell$4) and (authoriz$4 authenticat$4 (prove$4 near4 (ID ident$9)))	139242	L17	L17
L16	L15 and @PD<20100527	62	L16	L16
L15	L14 and ((three tri 3 secur$6) near4 level)	83	L15	L15
L14	L13 and (authori$6 near4 (locat$4 position$4)) and (database)	186	L14	L14
L13	L12 and (locat$4 position$4 coordinate)	2155	L13	L13
L12	L11 and (physical$4 geographic$4 GPS global$4-position$4-system satellite)	2349	L12	L12
L11	L10 and (pass-code passcode password (personal$4 near4 (ID identif$9) near4 number) PIN personal$4-ID)	3000	L11	L11
L10	L9 and (current$4 instant$4 instantaneous$4 present$4 (present$4 near4 time) "now")	4630	L10	L10
L9	L8 and (((secur$6 cryptograph$6 hard$4 physical$4 smart identi$9 ID) near4 (fob token$4 key device apparatus card authentic$6)) SecurID VeriSign DigiPass SecureOTP SmartCard one-time-pass$4 OTP)	5273	L9	L9

SEARCH HISTORY

L8	L7 and (authoriz$4 authenticat$4 (prove$4 near4 (ID ident$9)))	5619	L8	L8
L7	L6 and (wireless$4 wi-fi wifi radio mobile cell$4)	7605	L7	L7
L6	L5 and (communicat$6 network$4 Internet web$4)	10195	L6	L6
L5	L4 and (secur$6 crypt$9)	10560	L5	L5
L4	L1 L2 L3	13818	L4	L4
L3	(G06F21/00).ipc,epc.	6885	L3	L3
L2	(726/2;726/20;340/539.13;340/8.1).ccls.	6374	L2	L2
L1	(713/185).ccls.	1223	L1	L1

END OF SEARCH HISTORY

Electronic Database Searched	Google
Files Searched	Google Scholar
Date Conducted	07 September 2011 (07.09.2011)
Search Logic:	
security cryptographic coordinates location GPS token fob mobile wireless password passcode database Results **1** - **39** of **39**. (**0.18** sec)	

Electronic Database Searched	Google
Files Searched	Google Patents
Date Conducted	07 September 2011 (07.09.2011)
Search Logic:	
Patents **1** - **16** on **security cryptographic coordinates OR location OR GPS token fob mobile wireless password OR passcode OR one-time-password database**. (**0.27** seconds)	

SEARCH HISTORY

Electronic Database Searched	FreePatentsOnline.com
Files Searched	US Patents, US Patent Applications, EP documents, Abstracts of Japan and WIPO (PCT)
Date Conducted	07 September 2011 (07.09.2011)

Search Logic:

(PD/1/1/1976->5/27/2010 and spec/((security OR cryptography)(communications OR network OR Internet OR web)(wireless OR wi-fi OR wifi OR radio OR mobile OR cellular)(authorize OR authenticate OR "prove identity"~4)("security fob"~4 OR "security token"~4 OR "authentication token"~4 OR "cryptographic token"~4 OR "hardware token"~4 OR "hard token"~4 OR "security key fob"~9 OR "SecurID token"~4 OR "VeriSign token"~4 OR "DigiPass token"~4 OR one-time-password OR one-time-passcode OR OTP OR SecureOTP OR SmartCard OR "physical token"~4 OR "physical authentication device"~9 OR "physical authentication apparatus"~9 OR "security device"~4 OR "security apparatus"~4)(current OR instant OR instantaneous OR present OR "present time"~4 OR "now")(pass-code OR passcode OR password OR personal-identification-number OR PIN OR personal-ID)(physical OR geographic OR GPS OR global-positioning-system OR satellite)(location OR position OR coordinates)("authorized locations"~4 OR "authorized positions"~4 OR "authorized coordinates"~4)(database)("three security level"~9 OR tri-level OR "3 security level"~9)))
Matches 1 - 27 out of 27

(PD/1/1/1976->5/27/2010 and (CCL/713/* or CCL/726/* or CCL/340/* or ICL/G06F021/00 or ICL/G06F0021/00) and spec/((security OR cryptography)(communications OR network OR Internet OR web)(wireless OR wi-fi OR wifi OR radio OR mobile OR cellular)(authorize OR authenticate OR "prove identity"~4)("security fob"~4 OR "security token"~4 OR "authentication token"~4 OR "cryptographic token"~4 OR "hardware token"~4 OR "hard token"~4 OR "security key fob"~9 OR "SecurID token"~4 OR "VeriSign token"~4 OR "DigiPass token"~4 OR one-time-password OR one-time-passcode OR OTP OR SecureOTP OR SmartCard OR "physical token"~4 OR "physical authentication device"~9 OR "physical authentication apparatus"~9 OR "security device"~4 OR "security apparatus"~4)(current OR instant OR instantaneous OR present OR "present time"~4 OR "now")(pass-code OR passcode OR password OR personal-identification-number OR PIN OR personal-ID)(physical OR geographic OR GPS OR global-positioning-system OR satellite)(location OR position OR coordinates)("authorized locations"~4 OR "authorized positions"~4 OR "authorized coordinates"~4 OR database OR "three security level"~9 OR tri-level OR "3 security level"~9)))
Matches 1 - 50 out of 889

(PD/1/1/1976->5/27/2010 and (CCL/713/185 or CCL/726/2 or CCL/726/20 or CCL/340/539.13 or CCL/340/8.1 or ICL/G06F021/00 or ICL/G06F0021/00) and spec/((security OR cryptography)(communications OR network OR Internet OR web)(wireless OR wi-fi OR wifi OR radio OR mobile OR cellular)(authorize OR authenticate OR "prove identity"~4)("security fob"~4 OR "security token"~4 OR "authentication token"~4 OR "cryptographic token"~4 OR "hardware token"~4 OR "hard token"~4 OR "security key fob"~9 OR "SecurID token"~4 OR "VeriSign token"~4 OR "DigiPass token"~4 OR one-time-password OR one-time-passcode OR OTP OR SecureOTP OR SmartCard OR "physical token"~4 OR "physical authentication device"~9 OR "physical authentication apparatus"~9 OR "security device"~4 OR "security apparatus"~4)(current OR instant OR instantaneous OR present OR "present time"~4 OR "now")(pass-code OR passcode OR password OR personal-identification-number OR PIN OR personal-ID)(physical OR geographic OR GPS OR global-positioning-system OR satellite)(location OR position OR coordinates)("authorized locations"~4 OR "authorized positions"~4 OR "authorized coordinates"~4 OR database OR "three security level"~9 OR tri-level OR "3 security level"~9)))
Matches 1 - 50 out of 114

SEARCH HISTORY

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: WILLIAM BOLLMAN
MANELLI SELTER PLLC
2000 M STREET, 7TH FLOOR
WASHINGTON, DC 20036

PCT

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

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 31 OCT 2011
Applicant's or agent's file reference 20-257	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2011/001134	International filing date *(day/month/year)* 24 June 2011
Applicant TELECOMMUNICATION SYSTEMS, INC.	

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

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

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

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

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

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

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

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

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

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

Form PCT/ISA/220 (July 2010)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/001134

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04M 11/00 (2011.01)
USPC - 455/407
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04M 11/00; H04W 4/12, 4/02 (2011.01)
USPC - 455/407, 466, 412.1; 709/206

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 practicable, search terms used)
MicroPatent, Google Patent, Google Scholar, IP.com

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/0073810 A1 (PYHALAMMI et al) 06 April 2006 (06.04.2006) entire document	1, 3-9, 9A, 10-11, 13-22
–		----
Y		2, 12, 18
Y	US 2005/0170856 A1 (KEYANI et al) 04 August 2005 (04.08.2005) entire document	2, 12, 18
A	US 2009/0311992 A1 (JAGETIYA) 17 December 2009 (17.12.2009) entire document	1-9, 9A, 10-22
A	US 2009/0271486 A1 (LIGH et al) 29 October 2009 (29.10.2009) entire document	1-9, 9A, 10-22

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

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

Date of the actual completion of the international search	Date of mailing of the international search report
14 October 2011	31 OCT 2011
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: WILLIAM BOLLMAN
MANELLI SELTER PLLC
2000 M STREET, 7TH FLOOR
WASHINGTON, DC 20036

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	31 OCT 2011
Applicant's or agent's file reference 20-257	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2011/001134	24 June 2011	24 June 2010

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04M 11/00 (2011.01)
USPC - 455/407

Applicant TELECOMMUNICATION SYSTEMS, INC.

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	14 Octover 2011	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2011/001134

Box No. I **Basis of this opinion**

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

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

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

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

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

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2011/001134

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

1. Statement

Novelty (N)	Claims	2, 4, 7-8, 10, 12, 16, 18	YES
	Claims	1, 3, 5-6, 9, 9A, 11, 13-15, 17, 19-21	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-9, 9A, 10-22	NO
Industrial applicability (IA)	Claims	1-9, 9A, 10-22	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1, 3, 5-6, 9, 9A, 11, 13-15, 17, and 19-21 lack novelty under PCT Article 33(2) as being anticipated by Pyhalammi et al., hereinafter referred to as Pyhalammi.

Regarding claim 1, Pyhalammi discloses a method of delaying delivery of a content message to a mobile device (scheduling a delivery time window of the content, and once the scheduled delivery time window has arrived [delaying delivery], the content is delivered to the end-user at the wireless terminal device 30 [mobile device], para. 0020; fig. 2), comprising:
receiving a control message, associated with a mobile device, based on location information associated with said mobile device (sending the message to the wireless terminal device 30 [mobile device] based on the specified class of delivery, and the user handset location, para. 0024; the class of delivery or message content can be selected by the user on a transaction basis... para. 0006; the MCD system 11 schedules a delivery time window of the content by analyzing the delivery class, wireless device location..., para. 0018; and the specified class of delivery is selected by the user from three delivery classes: "Deliver Now", "Specified Time Delay" delivery, or, "Overnight Delivery", para. 0022 [the specified class of delivery is interpreted as control message]);
receiving a content message for said mobile device (sending the large content [content message], but it is stored in the mobile content delivery system 11 instead of being sent to the wireless terminal device 30, para. 0020); and
delaying delivery of said content message to said mobile device based on said control message (scheduling a delivery time window of the content [content message], and once the scheduled delivery time window has arrived, the content is delivered to the end-user at the wireless terminal device 30, para. 0030 based on the specified class of delivery, the user handset location, para. 0024 and the specified class of delivery is selected by the user from three delivery classes: "Deliver Now", "Specified Time Delay" delivery, or, "Overnight Delivery", para. 0022 [the specified class of delivery is interpreted as control message]).

Regarding claim 11, Pyhalammi discloses a mobile device for delaying delivery of a content message (scheduling a delivery time window of the content, and once the scheduled delivery time window has arrived [delaying delivery], the content is delivered to the end-user at the wireless terminal device 30 [mobile device], para. 0020; fig. 2), comprising:
a receiver to receiving a control message based on location information associated with said mobile device (sending the message to the wireless terminal device 30 based on the specified class of delivery, and the user handset location, para. 0024; the class of delivery or message content can be selected by the user on a transaction basis... para. 0006; the MCD system 11 schedules a delivery time window of the content by analyzing the delivery class, wireless device location..., para. 0018; and the specified class of delivery is selected by the user from three delivery classes: "Deliver Now", "Specified Time Delay" delivery, or, "Overnight Delivery", para. 0022 [the specified class of delivery is interpreted as control message]) and a content message for said mobile device (sending the large content [content message], but it is stored in the mobile content delivery system 11 instead of being sent to the wireless terminal device 30, para. 0020); and
a delay module to delay delivery of said content message on said mobile device based on said control message (scheduling a delivery time window of the content [content message], and once the scheduled delivery time window has arrived, the content is delivered to the end-user at the wireless terminal device 30, para. 0030 based on the specified class of delivery, the user handset location,, para. 0024 and the specified class of delivery is selected by the user from three delivery classes: "Deliver Now", "Specified Time Delay" delivery, or, "Overnight Delivery", para. 0022 [the specified class of delivery is interpreted as control message]).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2011/001134

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claim 9 is objected to under PCT Rule 66.2(a)(iii) as containing the following defect in the form or contents thereof:

As per calim 9, there are two consecutive claims numbered 9 in the PCT application. This seems to be a typo in numbering of these claims. For the purpose of this written opinion, the second claim 9 is interpreted as claim 9A.

Supplemental Box

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

Regarding claim 17, Pyhalammi discloses a supporting infrastructure server (delivery server, para. 0021; fig. 3) for delaying delivery of a content message (scheduling a delivery time window of the content, and once the scheduled delivery time window has arrived [delaying delivery], the content is delivered to the end-user at the wireless terminal device 30 [mobile device], para. 0020; fig. 2-3), comprising: a receiver to receiving a control message based on location information associated with a mobile device (sending the message to the wireless terminal device 30 based on the specified class of delivery, and the user handset location, para. 0024; the class of delivery or message content can be selected by the user on a transaction basis... para. 0006; the MCD system 11 schedules a delivery time window of the content by analyzing the delivery class, wireless device location..., para. 0018; and the specified class of delivery is selected by the user from three delivery classes: "Deliver Now", "Specified Time Delay" delivery, or, "Overnight Delivery", para. 0022 [the specified class of delivery is interpreted as control message]) and a content message for said mobile device (sending the large content [content message], but it is stored in the mobile content delivery system 11 instead of being sent to the wireless terminal device 30, para. 0020); and a delay module to delay delivery of said content message to said mobile device based on said control message (scheduling a delivery time window of the content [content message], and once the scheduled delivery time window has arrived, the content is delivered to the end-user at the wireless terminal device 30, para. 0030 based on the specified class of delivery, the user handset location, para. 0024 and the specified class of delivery is selected by the user from three delivery classes: "Deliver Now", "Specified Time Delay" delivery, or, "Overnight Delivery", para. 0022 [the specified class of delivery is interpreted as control message]).

Regarding claims 3, 13, and 19, Pyhalammi also discloses said content message is a short message service (SMS) message (SMS message, para. 0025).

Regarding claim 4, Pyhalammi also discloses said receiving said control message is performed by said mobile device (on the screen of his wireless terminal device 30, the end-user selects the desired class of delivery; in this example implementation the user selects a delivery class from three delivery classes: "Deliver Now", "Specified Time Delay" delivery,or, "Overnight Delivery", para. 0022 [the specified class of delivery is interpreted as control message]).

Regarding claims 5, 14, and 20, Pyhalammi also discloses said control message is performed by a control server (the MCD system 11 [control server] can be delivery server 33 also preferably tracks previous message deliveries in order to properly predict and schedule future message deliveries [control message] at a more cost-effective network activity time window without surpassing the agreed upon user maximum delivery time, para. 0018 and 0024).

Regarding claim 6, Pyhalammi also discloses said delaying delivery delays transmission of said content message to said mobile device (scheduling a delivery time window of the content [delaying transmission], and once the scheduled delivery time window has arrived, the content is delivered to the end-user at the wireless terminal device 30 [mobile device], para. 0020; fig. 2-3).

Regarding claim 9, Pyhalammi also discloses said method of delaying delivery of said content message to said mobile device is implemented on at least one server remote from said mobile device (the mobile content delivery system 11 [server remote] schedules a delivery time window of the content using methods described earlier, and once the scheduled delivery time window has arrived, the content is delivered to the end-user at the wireless terminal device 30, para. 0020).

Regarding claim 9A, Pyhalammi also discloses said location information is produced by a location-aware user-agent remote from said mobile device (querying Cellular Network 51 [a location-aware user-agent remote] in real time for the cell ID corresponding to the cell in which the wireless terminal device 30 is currently located, para. 0027 and 0024).

Regarding claims 15 and 21, Pyhalammi also discloses said location information is received from a location-aware user-agent remote from said mobile device (querying Cellular Network 51 [a location-aware user-agent remote] in real time for the cell ID corresponding to the cell in which the wireless terminal device 30 is currently located, para. 0027 and 0024).

Claims 2, 12, and 18 lack an inventive step under PCT Article 33(3) as being obvious over Pyhalammi in view of Keyani et al., hereinafter referred to as Keyani.

Regarding claims 2, 12, and 18, Pyhalammi lacks the teaching of said mobile device is a smart-phone.
However, Keyani is in the field of command based group SMS with mobile message receiver and server and teaches said mobile device is a smart-phone (mobile communication device 210 such as smart phone, para. 0042).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Heyani to incorporate the above features into the invention of Pyhalammi to facilitate group communication using SMS text messaging and a plurality of SMS based commands (Keyani: Abstract).

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:
Claims 7-8, 10, 16, and 22 lack an inventive step under PCT Article 33(3) as being obvious over Pyhalammi.

Regarding claim 7, Pyhalammi lacks the teaching of said delaying delivery delays display of said content message on said mobile device.
However, Pyhalammi teaches said delaying delivery delays transmission of said content message to said mobile device (scheduling a delivery time window of the content [delaying transmission], and once the scheduled delivery time window has arrived, the content is delivered to the end-user at the wireless terminal device 30 [mobile device], para. 0020; fig. 2-3) and a browsing screen 31 on the display of the wireless terminal device 30 (Fig. 3, para. 0022).
Furthermore, delaying the display of a content on a terminal is well known practice in the art and the specifics are the matter of displaying options design choice.
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the above features into the invention of Pyhalammi in order to ease of operation and increased efficiency.

Regarding claim 8, Pyhalammi lacks the teaching of said method of delaying delivery of said content message to said mobile device is implemented on said mobile device.
However, Pyhalammi teaches said method of delaying delivery of said content message to said mobile device is implemented on at least one server remote from said mobile device (the mobile content delivery system 11 [server remote] schedules a delivery time window of the content using methods described earlier, and once the scheduled delivery time window has arrived, the content is delivered to the end-user at the wireless terminal device 30, para. 0020).
Furthermore, implementin a method such as the delaying delivery discussed above on mobile devices (such as device 30 discussed above) is well known practice in the art and the specifics are the matter of communications networking design choice.
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the above features into the invention of Pyhalammi in order to ease of operation and increased efficiency.

Regarding claims 10, 16, and 22, Pyhalammi lacks the teaching of said location information is produced by said mobile device.
However, Pyhalammi teaches said location information is produced by a location-aware user-agent remote from said mobile device (querying Cellular Network 51 [a location-aware user-agent remote] in real time for the cell ID corresponding to the cell in which the wireless terminal device 30 is currently located, para. 0027 and 0024).
Furthermore, producing location information by a mobile device (such as using a GPS component) is known practice in the art and the specifics are the matter of communications networking design choice.
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the above features into the invention of Pyhalammi in order to ease of operation and increased efficiency.

Claims 1-22 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

Search History:

Limited Classification Search

The Patent Analyst performed a limited classification search within the following US, IPC, ECLA, or F-Term classification areas:

U.S. Class/Subclass(es): 455/407, 466, 412.1; 709/206

IPC (8) Class/Subclass(es): H04M 11/00; H04W 4/12, 4/02 (2011.01)

See Global Search Results.

Global Patent Literature Text Search

The Patent Analyst performed the following global text search, which was not limited by classification but may or may not have been limited by other criteria:

MICROPAT

21	7271 hits	Any Classification	H04W000402
		Issue/Publication Date	<20100624
		Databases	EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
20	4185 hits	Any Classification	H04W000412
		Issue/Publication Date	<20100624
		Databases	EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
19	157774 hits	Any Classification	H04W
		Issue/Publication Date	<20100624
		Databases	EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
18	60358 hits	Any Classification	H04M001100
		Issue/Publication Date	<20100624
		Databases	EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
17	304031 hits	Any Classification	H04M
		Issue/Publication Date	<20100624
		Databases	EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011

16	8985 hits	Any Classification	709206
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
15	94511 hits	Any Classification	709
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
14	2152 hits	Any Classification	455412.1
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
13	3908 hits	Any Classification	455466
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
12	423 hits	Any Classification	455407
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
11	131925 hits	Any Classification	455
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
10	126 hits	Any Classification	455
		Full patent spec.	(mobile adj phone) near (smart-phone or smartphone)
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
9	7 hits	Full patent spec.	SMS or smart-phone or (smart adj phone) or smartphone
		Patent/Publication No.	US20060085273 or US20080014971 or US20070083410 or US20030083080 or US20090311992 or US20100054193 or

			US20060073810 or US20020044067 or US20090271486
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
		Full patent spec.	((delay*3 or hold*3) or delivery or (message*1 or SMS) or mobile) or location or restrict*3 or parent*1 or content or control*3 or receiv*3 or smart-phone or server or transmission or display*3 or remote
8	9 hits	Patent/Publication No.	US20060085273 or US20080014971 or US20070083410 or US20030083080 or US20090311992 or US20100054193 or US20060073810 or US20020044067 or US20090271486
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
		Full patent spec.	((delay*3 or hold*3) same delivery same (message*1 or SMS) same mobile) and location and restrict*3 and parent*1
7	55 hits	Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
		Full patent spec.	((delay*3 or hold*3) same delivery same (message*1 or SMS) same mobile same location)
6	121 hits	Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
		Full patent spec.	((delay*3 or hold*3) same delivery same (message*1 or SMS) same mobile)
5	782 hits	Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
4	3 hits	Full patent spec.	(delay*3 same delivery same content same message*1

			same mobile) and (control near message*1)
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
3	68 hits	Full patent spec.	(delay*3 same delivery same content same message*1 same mobile)
		Issue/Publication Date	<20100624
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
		Assignee/Applicant	Telecommunication
2	13 hits	Full patent spec.	message and content and control and location and delay*3 and delivery
		Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011
		Assignee/Applicant	Telecommunication
1	3083 hits	Databases	USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA
		Years	1836-2011

GOOGLE PATENT http://www.google.com/advanced_patent_search

No. of Hits	Text String
396	delivery SMS holding OR delaying
10	delivery SMS holding OR delaying restriction
394	delivery SMS holding OR delaying mobile
394	delivery SMS mobile location holding OR delaying
24	delivery SMS mobile location restrict holding OR delaying
134	delivery SMS mobile location restrict hold OR delay
1	delivery SMS mobile location "auto reply" hold OR delay

GOOGLE SCHOLAR http://www.google.com/advanced_scholar_search

No. of Hits	Text String
1490	notification SMS delivery delay mobile location -patent
2000	notification SMS delivery delay mobile location transmission display -patent
168	notification SMS delivery delay mobile location transmission display restrict holding -patent
131	notification SMS delivery delay mobile location transmission display restriction "control message" -patent
5	notification SMS delivery delay mobile location transmission display restriction "content message" -patent
140	notification SMS delivery delay mobile location transmission display "control message" -patent

IP.COM http://www.ip.com/

No. of Hits	Text String
175	notification and SMS and delaying and delivery and mobile and location
648	notification and delaying and delivery and mobile and location and GPS and server
925	notification and delaying and delivery and mobile and location and transmission and displaying
1085	notification and delaying and delivery and mobile and location and transmission and displaying and SMS
882	notification and delaying and delivery and mobile and location and transmission and displaying and SMS and GPS and remote

Date search was completed: 14 October 2011

HN/JG

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: WILLIAM BOLLMAN
MANELLI DENISON & SELTER PLLC
7TH FLOOR
2000 M STREET, NW
WASHINGTON, DC 20036

PCT

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

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 27 JUL 2011
Applicant's or agent's file reference 20-239	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2011/000671	International filing date *(day/month/year)* 13 April 2011
Applicant TELECOMMUNICATION SYSTEMS, INC.	

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

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

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

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

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

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

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

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

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

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

Form PCT/ISA/220 (July 2010)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/000671

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04W 24/00 (2011.01)
USPC - 455/457
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04W 24/00, 36/00; G01S 19/39 (2011.01)
USPC - 455/404.2, 414.2, 440, 456.1, 456.2, 456.3, 457; 342/357.22

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 practicable, search terms used)
USPTO WEST System (US-PGPUB; USPAT; USOCR; EPO; JPO) Google Patents, PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7,269,413 B2 (KRAFT) 11 September 2007 (11.09.2007) entire document	1-10
A	US 2007/0191025 A1 (MCBRIERTY et al) 16 August 2007 (16.08.2007) entire document	1-10
A	US 2003/0112941 A1 (BROWN et al) 19 June 2003 (19.06.2003) entire document	1-10
A	US 2008/0160980 A1 (HARRIS et al) 03 Jult 2008 (03.07.2008) entire document	1-10
A	US 2007/0049287 A1 (DUNN) 01 March 2007 (01.03.2007) entire document	1-10
A	US 2005/0233735 A1 (KARAOGUZ et al) 20 October 2005 (20.10.2005) entire document	1-10

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

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

Date of the actual completion of the international search	Date of mailing of the international search report
20 July 2011	27 JUL 2011
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: WILLIAM BOLLMAN
MANELLI DENISON & SELTER PLLC
7TH FLOOR
2000 M STREET, NW
WASHINGTON, DC 20036

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	27 JUL 2011
Applicant's or agent's file reference 20-239	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2011/000671	13 April 2011	16 April 2010

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04W 24/00 (2011.01)
USPC - 455/457

Applicant TELECOMMUNICATION SYSTEMS, INC.

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

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

2. **FURTHER ACTION**

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

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

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

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	20 July 2011	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2011/000671

Box No. I **Basis of this opinion**

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

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

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

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

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

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2011/000671

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

1. Statement

Novelty (N)	Claims	6, 8	YES
	Claims	1-5, 7, 9, 10	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-10	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-5, 7, 9 and 10 lack novelty under PCT Article 33(2) as being anticipated by Kraft (US 7,269,413 B2).

As per claim 1, Kraft discloses a method of receiving call related location information of a caller at a called device (one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 45-49), comprising: receiving a call request from a calling device to a called device (The called telephone, upon receiving the call, displays a message related to the location of the calling telephone, col. 1, lines 45-47), before accepting said call request at said called device, receiving a current location of said calling device (as one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 47-49; FIG. 1 shows a cellular telephone with a display window. On the display window, a caller ID is displayed (usually shown when the telephone rings). The caller ID contains LOCATIQN. After the word LOCATION, a human readable form of the location of the caller is shown, col. 2, lines 41-48; col. 2, lines 56-58; col. 3, lines 39-45: the called telephone can display... the location text (which can be transmitted along with the normal caller ID) - i.e, receiving the location text before accepting the call request), and displaying, as said called device alerts to an incoming call, said current location of said calling device at said called device (FIG. 1 shows a cellular telephone with a display window. On the display window, a caller ID is displayed (usually shown when the telephone rings). The caller ID contains LOCATION. After the word LOCATION, a human readable form of the location of the caller is shown, col. 2, lines 41-48).

As per claim 5, Kraft discloses a method of providing call related location services to a called party (one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 45-49), comprising: receiving a call request from a calling party (The called telephone, upon receiving the call, displays a message related to the location of the calling telephone, col. 1, lines 45-47), transmitting a location request to a location based services (LBS) server (request location using a GPS which reads on LBS, col. 1, lines 47-51, col. 3, lines 20-26), receiving a response to said location request containing a current location of said calling party (the calling party location is displayed to the called party prior to accepting a call request from the calling party is interpreted as one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 47-49; FIG. 1 shows a cellular telephone with a display window. On the display window, a caller ID is displayed (usually shown when the telephone rings). The caller ID contains LOCATION. After the word LOCATION, a human readable form of the location of the caller is shown, col. 2, lines 41-48), and providing said current location to a party called by said calling party (one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 45-49).

As per claim 7, Kraft discloses a method of receiving call related location of a calling party by a called party (one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 45-49), comprising: receiving a call request from a calling party (The called telephone, upon receiving the call, displays a message related to the location of the calling telephone, col. 1, lines 45-47), before said call request is answered by said called party, receiving a GPS-obtained current location of said calling party, from said calling party (If the calling telephone is a mobile phone, the cellular service can determine its location by any of several methods known in the art including assisted GPS, col. 1, lines 49-51, col. 3, lines 20-26; as one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 47-51; FIG. 1 shows a cellular telephone with a display window. On the display window, a caller ID is displayed (usually shown when the telephone rings). The caller ID contains LOCATION. After the word LOCATION, a human readable form of the location of the caller is shown, col. 2, lines 41-48, col. 3, lines 20-26), and displaying said GPS-obtained current location of said calling party on said called device (If the calling telephone is a mobile phone, the cellular service can determine its location by any of several methods known in the art including assisted GPS, col. 1, lines 49-51; FIG. 1 shows a cellular telephone with a display window. On the display window, a caller ID is displayed (usually shown when the telephone rings). The caller ID contains LOCATION. After the word LOCATION, a human readable form of the location of the caller is shown, col. 2, lines 41-48, col. 3, lines 20-26).

As per claim 2, Kraft further discloses requesting a current location of said calling device from a location based services (LBS) server (request location using a GPS which can reads on LBS, col. 1, lines 47-51, col. 3, lines 20-26).

Supplemental Box

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

As per claim 3, Kraft further discloses the current location is received by said called device as a street address of said calling party (a location is an address as shown in fig 2B).

As per claim 4, Kraft further discloses the current location is received by said called device as a latitude/longitude of said calling party (reporting a GPS location as latitude and longitude, col. 1, lines 60-65, col. 2, lines 33-36, col. 3, lines 1-4).

As per claim 9, Kraft further discloses the GPS-obtained current location of said calling party is a street address (a location is an address as shown in fig 2B).

As per claim 10, Kraft further discloses the GPS-obtained current location of said calling party is a latitude/longitude (reporting a GPS location as latitude and longitude col. 1, lines 60-65, col. 2, lines 33-36, col. 3, lines 1-4).

Claims 6 and 8 lack an inventive step under PCT Article 33(3) as being obvious over Kraft.

As per claim 6, Kraft does not explicitly teach authorizing said called device for receipt of said current location of said calling party.
However, Kraft teaches transmitting the location of the calling telephone to the called telephone during the ring interval along with standard caller ID (col. 1, lines 42-47; col. 2, lines 56-58; col. 3, lines 39-47).
Furthermore, it is well known in the art that in order to receive the caller ID data the called device must be registered (authorized) for the service with the telephone carrier services. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the above feature in the invention of Kraft to enable the called telephone to identify a location of the calling telephone for various purposes including parents becoming aware of whereabout of their calling in childern.

As per claim 8, Kraft further does not explicitly teach obtaining authorization for said called device to receive said GPS obtained current location.

However, Kraft teaches a cellular service determining the location of a calling mobile phone using GPS (col. 1, lines 47-51), and transmitting the location of the calling telephone to the called telephone during the ring interval along with standard caller ID (col. 1, lines 42-47; col. 2, lines 56-58; col. 3, lines 39-47).
Furthermore, it is well known in the art for the caller ID as the one found in Kraft to be registered (i.e. authorized) in order to be able to track a location of the calling telephone.
Furthermore, it is well known in the art that in order to receive the caller ID data the called device must be registered (authorized) for the service with the telephone carrier services. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the above feature in the invention of Kraft to enable the called telephone to identify a location of the calling telephone for various purposes including parents becoming aware of whereabout of their childern calling in with mobile phone.

Claims 1-10 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

Complete Classification Search

The Patent Analyst performed a complete classification search within the following US, IPC, ECLA, or F-Term classification areas:

U.S. Class/Subclasses: 455/404.2, 414.2, 440, 456.1, 456.2, 456.3, 457; 342/357.22

IPC (8) Class/Subclasses: H04W 24/00, 36/00; G01S 19/39 (2011.01)

See global search results.

Limited Classification Search

The Patent Analyst performed a limited classification search within the following US classes: 455, 342

See global search results.

Global Patent Literature Text Search

Google Patent http://www.google.com/advanced_patent_search

No. of Hits	Document Part: Text String
3	"before answering" caller location GPS
4	"before accepting" call location GPS displaying
1	"displaying caller address"
5 pages	"caller ID" (subscription OR authorization OR registration) services caller**location

USPTO West

DB=PGPB,USPT,USOC,EPAB,JPAB; PLUR=NO; OP=ADJ

L30	(caller ID) same caller same (called or callee) same GPS same (location or position or geographical)	24
L29	342/357.22.ccls.	97
L28	455/457.ccls.	935
L27	455/456.3.ccls.	1760
L26	455/456.2.ccls.	1224
L25	455/456.1.ccls.	5852
L24	455/440.ccls.	720

L23	455/414.2.ccls.	980
L22	455/404.2.ccls.	1414
L21	L19 and l3 and l1	15
L20	L18 and l3 and l1	53
L19	455/404.2.ccls. or 455/414.2.ccls. or 455/440.ccls. or 455/456.1.ccls. or 455/456.2.ccls. or 455/456.3.ccls. or 455/457.ccls. or 342/357.22.ccls.	9799
L18	455/$.ccls. or 342/$.ccls.	232409
L17	L16 and latitude and address	13
L16	L15 and l1	42
L15	(before adj (accepting or answering)) and (current adj (location or position)) and display$7 and GPS	57
L14	(before adj (accepting or answering)) same (current adj (location or position)) same display$7 same GPS	1
L13	l11 and l1	197
L12	(before adj (accepting or answering)) same (location or position) same display$7 same GPS	1
L11	(before adj (accepting or answering)) and (location or position) and display$7 and GPS	241
L10	L9 and GPS	0
L9	L8 and l1	36
L8	(before adj (accepting or answering)) same display$7 same (location or position)	47
L7	L6 and l2 and l1	3
L6	TELECOMMUNICATION-SYSTEMS-INC.as.	106
L5	L4 and l1	57
L4	(before adj (accepting or answering)) same (location or position) same device	60
L3	(before adj (accepting or answering)) same (location or position)	280
L2	before same (accepting or receiving or answering) same (location or position)	89973
L1	@pd<20100416	27155346

PatBase

1) pd<20100416 (100000)
2) (before (accept* or answer*)) and (current (location or position)) and display* and GPS (6071)
3) (ic=H04W24/00) or (ic=H04W36/00) or (ic=G01S19/39) (17270)
4) 1 and 2 and 3 (156)

Date search was completed: 20 July 2011
GD/JG

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
WILLIAM H. BOLLMAN
MANELLI SELTER PLLC
2000 M STREET, NW
7TH FLOOR
WASHINGTON, DC 20036
USA

PCT

NOTIFICATION OF TRANSMITTAL OF
INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Rule 71.1)

Date of mailing (*day/month/year*) 25 APR 2012

Applicant's or agent's file reference	IMPORTANT NOTIFICATION
20-239	

International application No.	International filing date (*day/month/year*)	Priority date (*day/month/year*)
PCT/US11/00671	13 April 2011 (13.04.2011)	16 April 2010 (16.04.2010)

Applicant

TELECOMMUNICATIONS SYSTEMS, INC.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the IPEA/ US	Authorized officer
Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Ken Wieder Telephone No. 571-272-2986

Form PCT/IPEA/416 (January 2004)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 20-239	**FOR FURTHER ACTION**	See Form PCT/IPEA/416
International application No. PCT/US11/00671	International filing date *(day/month/year)* 13 April 2011 (13.04.2011)	Priority date *(day/month/year)* 16 April 2010 (16.04.2010)
International Patent Classification (IPC) or national classification and IPC IPC: **H04W 24/00**(2011.01) USPC: 455/457		
Applicant TELECOMMUNICATIONS SYSTEMS, INC.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:

   a. ☑ *(sent to the applicant and to the International Bureau)* a total of 0 sheets, as follows:

   ☐ sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions).

   ☐ sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (Rules 66.4*bis*, 70.2(e), 70.16 and 91.2).

   ☐ superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No.I and the Supplemental Box (see Rule 70.16(b)).

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see paragraph 3*bis* of Annex C of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand 14 October 2011 (14.10.2011)	Date of completion of this report 24 April 2012 (24.04.2012)
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Ken Wieder Telephone No. 571-272-2986

Form PCT/IPEA/409 (cover sheet) (July 2011)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US11/00671

Box No. I Basis of the report

1. With regard to the **language**, this report is based on:
   - [x] the international application in the language in which it was filed.
   - [ ] a translation of the international application into English which is the language of a translation furnished for the purposes of:
     - [ ] international search (Rules 12.3(a) and 23.1(b)).
     - [ ] publication of the international application (Rule 12.4(a)).
     - [ ] international preliminary examination (Rules 55.2(a) and/or 55.3(a) and (b)).
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
   - [x] the international application as originally filed/furnished
   - [x] the description:
     pages 1-10 as originally filed/furnished
     pages* NONE received by this Authority on
     pages* NONE received by this Authority on
   - [x] the claims:
     pages 11-13 as originally filed/furnished
     pages* NONE as amended (together with any statement) under Article 19
     pages* NONE received by this Authority on
     pages* NONE received by this Authority on
   - [x] the drawings:
     pages 1/5-5/5 as originally filed/furnished
     pages* NONE received by this Authority on
     pages* NONE received by this Authority on
   - [ ] a sequence listing - see Supplemental Box Relating to Sequence Listing.
3. [ ] The amendments have resulted in the cancellation of:
   - [ ] the description, pages
   - [ ] the claims, Nos.
   - [ ] the drawings, sheets/figs
   - [ ] the sequence listing (*specify*):
4. [ ] This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since either they are considered to go beyond the disclosure as filed, or they were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in the Supplemental Box (Rules 70.2(c) and(*c-bis*)):
   - [ ] the description, pages
   - [ ] the claims, Nos.
   - [ ] the drawings, sheets/figs
   - [ ] the sequence listing (*specify*):
5. [ ] This report has been established:
   - [ ] taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.1(d-*bis*) and 70.2(e)).
   - [ ] without taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.4*bis*) and 70.2(e)).
6. [ ] Supplementary international search report(s) from Authority(ies) _____ has/have been received and taken into account in establishing this report (Rule 45*bis*.8(b) and (c)).

** If item 4 applies, some or all of those sheets may be marked "superseded."*

Form PCT/IPEA/409 (Box No. I) (July 2011)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US11/00671

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 6,8	YES
	Claims 1-5,7,9,10	NO
Inventive Step (IS)	Claims NONE	YES
	Claims 1-10	NO
Industrial Applicability (IA)	Claims 1-10	YES
	Claims NONE	NO

2. Citations and Explanations (Rule 70.7)
Please See Continuation Sheet

Form PCT/IPEA/409 (Box No. V) (July 2011)

Supplemental Box

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

V. 2. Citations and Explanations:
Claims 1-5, 7, 9 and 10 lack novelty under PCT Article 33(2) as being anticipated by Kraft (US 7,269,413 B2).

As per claim 1, Kraft discloses a method of receiving call related location information of a caller at a called device (one telephone carrier service transmits the location of the calling telephone to the celled telephone, col. 1, lines 45-49), comprising: receiving a call request from a calling device to a called device (The called telephone, upon receiving the call, displays a message related to the location of the calling telephone, col. 1, lines 45-47), before accepting said call request at said called device, receiving a current location of said calling device (as one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 47-49; FIG. 1 shows a cellular telephone with a display window. On the display window, a caller ID is displayed (usually shown when the telephone rings). The caller ID contains LOCATION. After the word LOCATION, a human readable form of the location of the caller is shown, col. 2, lines 41-48; col. 2, lines 56-58; col. 3, lines 39-45: the celled telephone can display... the location text (which can be transmitted along with the normal caller ID) - i.e, receiving the location text before accepting the call request), and displaying, as said called device alerts to an incoming call, said current location of said calling device at said called device (FIG. 1 shows a cellular telephone with a display window. On the display window, a caller ID is displayed (usually shown when the telephone rings). The caller ID contains LOCATION. After the word LOCATION, a human readable form of the location of the caller is shown, col. 2, lines 41-48).

As per claim 5, Kraft discloses a method of providing call related location services to a called party (one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 45-49), comprising: receiving a call request from a calling party (The called telephone, upon receiving the call, displays a message related to the location of the calling telephone, col. 1, lines 45-47), transmitting a location request to a location based services (LBS) server (request location using a GPS which reads on LBS, col. 1, lines 47-51, col. 3, lines 20-26), receiving a response to said location request containing a current location of said calling party (the calling party location is displayed to the called party prior to accepting a call request from the calling party is interpreted as one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 47-49; FIG. 1 shows a cellular telephone with a display window. On the display window, a caller ID is displayed (usually shown when the telephone rings). The

Supplemental Box

caller ID contains LOCATION. After the word LOCATION, a human readable form of the location of the caller is shown, col. 2, lines 41-48), and providing said current location to a party called by said calling party (one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 45-49).

As per claim 7, Kraft discloses a method of receiving call related location of a calling party by a called party (one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 45-49), comprising: receiving a call request from a calling party (The celled telephone, upon receiving the cell, displays a message related to the location of the calling telephone, col. 1, lines 45-47), before said call request is answered by said called party, receiving a GPS-obtained current location of said calling party, from said calling party (If the calling telephone is a mobile phone, the cellular service can determine its location by any of several methods known in the art including assisted GPS, col. 1, lines 49-51, col. 3, lines 20-26; as one telephone carrier service transmits the location of the calling telephone to the called telephone, col. 1, lines 47-51; FIG. 1 shows a cellular telephone with a display window. On the display window, a caller ID is displayed (usually shown when the telephone rings). The caller ID contains LOCATION. After the word LOCATION, a human readable form of the location of the caller is shown, col. 2, lines 41-48, col. 3, lines 20-26), and displaying said GPS-obtained current location of said calling party on said called device (If the calling telephone is a mobile phone, the cellular service can determine its location by any of several methods known in the art including assisted GPS, col. 1, lines 49-51; FIG. 1 shows a cellular telephone with a display window. On the display window, a caller ID is displayed (usually shown when the telephone rings). The caller ID contains LOCATION. After the word LOCATION, a human readable form of the location of the caller is shown, col. 2, lines 41-48, col. 3, lines 20-26).

As per claim 2, Kraft further discloses requesting a current location of said calling device from a location based services (LBS) server (request location using a GPS which can reads on LBS, col. 1, lines 47-51, col. 3, lines 20-26).

As per claim 3, Kraft further discloses the current location is received by said called device as a street address of said calling party (a location is an address as shown in fig 2B).

As per claim 4, Kraft further discloses the current location is received by said called device as a latitude/longitude of said calling party (reporting a GPS location as latitude and longitude, col. 1, lines 60-65, col. 2, lines 33-36, col. 3, lines 1-4).
As per claim 9, Kraft further discloses the GPS-obtained current location of said calling party is a street address (a location is an address as shown in fig 2B).

As per claim 10, Kraft further discloses the GPS-obtained current location of said calling party is a latitude/longitude (reporting a GPS location as latitude and longitude col. 1, lines 60-65, col. 2, lines 33-36, col. 3, lines 1-4).

Claims 6 and 8 lack an inventive step under PCT Article 33(3) as being obvious over Kraft.

As per claim 6, Kraft does not explicitly teach authorizing said called device for receipt of said current location of said calling party. However, Kraft teaches transmitting the location of the calling telephone to the called telephone during the ring interval along with standard caller ID (col. 1, lines 42-47; col. 2, lines 56-58; col. 3, lines 39-47).
Furthermore, it is well known in the art that in order to receive the caller ID data the called device must be registered (authorized) for the service with the telephone carrier services. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the above feature in the invention of Kraft to enable the called telephone to identify a location of the calling telephone for various purposes including parents becoming aware of whereabout of their calling in children.

As per claim 8, Kraft further does not explicitly teach obtaining authorization for said called device to receive said GPS obtained current location.

However, Kraft teaches a cellular service determining the location of a calling mobile phone using GPS (col. 1, lines 47-51), and transmitting the location of the calling telephone to the called telephone during the ring interval along with standard caller ID (col. 1, lines 42-47; col. 2, lines 56-58; col. 3, lines 39-47).
Furthermore, it is well known in the art for the caller ID as the one found in Kraft to be registered (i.e. authorized) in order to be able to track a location of the calling telephone.
Furthermore, it is well known in the art that in order to receive the caller ID data the called device must be registered (authorized) for the service with the telephone carrier services. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the above feature in the invention of Kraft to enable the called telephone to identify a location of the calling telephone for various purposes including parents becoming aware of whereabout of their children calling in with mobile phone.

Claims 1-10 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.