

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT3605279

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
Name		Execution Date
MAPLE ACQUISITION LLC		11/06/2015
RECEIVING PARTY DATA		
Name:	TELECOMMUNICATION SYSTEMS, INC.	
Street Address:	275 WEST STREET	
City:	ANNAPOLIS	
State/Country:	MARYLAND	
Postal Code:	21401	
PROPERTY NUMBERS Total: 52		
Property Type	Number	
Patent Number:	8380223	
Patent Number:	8378888	
Patent Number:	8350756	
Patent Number:	8325087	
Patent Number:	8301160	
Patent Number:	8299961	
Patent Number:	8290510	
Patent Number:	8217832	
Patent Number:	8213955	
Patent Number:	8160610	
Patent Number:	8125377	
Patent Number:	8085193	
Patent Number:	8081109	
Patent Number:	8035557	
Patent Number:	8019339	
Patent Number:	8000702	
Patent Number:	8000701	
Patent Number:	7999730	
Patent Number:	7986266	
Patent Number:	7956803	

PATENT

Property Type	Number
Patent Number:	7948435
Patent Number:	7940213
Patent Number:	7928903
Patent Number:	7920091
Patent Number:	7916071
Patent Number:	7847728
Patent Number:	7825855
Patent Number:	7800533
Patent Number:	7800530
Patent Number:	7733268
Patent Number:	7696922
Patent Number:	7692577
Patent Number:	7436355
Patent Number:	7209077
Patent Number:	6903683
Patent Number:	6236359
Patent Number:	6091957
Application Number:	61737480
Application Number:	13834057
Application Number:	13768360
Application Number:	13690136
Application Number:	13678888
Application Number:	13418689
Application Number:	13123306
Application Number:	13112669
Application Number:	13101243
Application Number:	12873470
Application Number:	12780496
Application Number:	12437969
Application Number:	12406378
Application Number:	12392400
Application Number:	12333820

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: TCS-024877USGEN

NAME OF SUBMITTER: CHRISTOPHER P. HARRIS

SIGNATURE: /Christopher P Harris/

DATE SIGNED: 11/06/2015

Total Attachments: 13

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ASSIGNMENT OF PATENT RIGHTS

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Maple Acquisition LLC, a Maryland corporation, having offices at 275 West Street, Annapolis, Maryland 21401 ("Assignors") do hereby sell, assign, transfer, and convey unto TeleCommunication Systems, Inc, a Maryland corporation, having offices at 275 West Street, Annapolis, Maryland 21401 ("Assignee"), or its designees, subject to a nonexclusive license to Assignors pursuant to the Intellectual Property License Agreement between Assignors and Assignee of even date, all right, title, and interest that exist today and may exist in the future in and to all of the following (collectively, the "Assigned Patents") effective as of 5 November 2015 (the "Effective Date"):

(a) the patents and patent applications listed in Schedule I hereto and all issuances, division, continuations, continuations in-part, reissues, extensions, reexaminations and renewals thereof (the "Patents");

(b) all rights of any kind whatsoever to apply in any or all countries of the world for patents, certificates of invention, utility models, industrial design protections, design patent protections, or other governmental grants or issuances of any type related to the Patents including, without limitation, under the Paris Convention for the Protection of Industrial Property, the International Patent Cooperation Treaty, or any other convention, treaty, agreement, or understanding;

(c) any and all causes of action (whether currently pending, filed, or otherwise) and other enforcement rights, including, without limitation, all rights under any of the foregoing to:

- (i) damages,
- (ii) injunctive relief; and
- (iii) other remedies of any kind for past, current, and future infringement; and

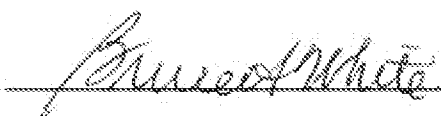
(d) any and all rights to collect royalties and other payments under or on account of any of the foregoing, whether accruing before, on and/or after the Effective Date.

Assignors hereby authorize the Commissioner for Patents and any other respective patent office or governmental agency in each jurisdiction to issue any and all patents, certificates of invention, utility models or other governmental grants or issuances that may be granted upon any of the Assigned Patents in the name of Assignee, as the assignee to the entire interest therein. Assignee shall take such steps and actions following the date hereof, including the execution of any documents, files, registrations, or other similar items, to ensure that the Assigned Patents are properly assigned to Assignee, or any assignee or successor thereto. Assignors agree to assist with any reasonable requests from Assignee to perfect the assignment rights as needed.

IN WITNESS WHEREOF this Assignment of Patent Rights is executed on this 6th day of November, 2015.

ASSIGNOR:

MAPLE ACQUISITION LLC, a corporation of the state of Maryland:

By: 

Name: Bruce A. White

Title: Senior Vice President, & General Counsel

Title	Application	Publication	Patent	International Registration Number	PCT
ENHANCED CELL ID LOCATION METHOD USING NON UNIFORM SUBSECTORS AND NEIGHBORING CELL CENTROID Inventors: Khalid Al-Mufti, Ariful Hannan, Suryanarayana Kalenahalli, Navin Srinivasan	13834057 Mar 15, 2013	20140171105 Jun 19, 2014	9176216 Nov 3, 2015		
System and Method for Determining the Location of a Mobile Device Inventors: Neil Harper, Martin Dawson	13768360 Feb 15, 2013	20130172008 Jul 4, 2013			
ENABLING LOCATION DETERMINATION OF USER DEVICE ORIGINATING EMERGENCY SERVICE CALL Inventors: Anthony James Winterbottom, Marlin Christopher Dawson	13690136 Nov 30, 2012	20130143516 Jun 6, 2013	8929855 Jan 6, 2015		
ENHANCING A-GPS LOCATION ACCURACY AND YIELD WITH LOCATION MEASUREMENT UNITS AND NETWORK TIMING MEASUREMENTS	13678888 Nov 16, 2012	20130122929 May 16, 2013	8805410 Aug 12, 2014		

Inventors: Khalid Al-Mufti,
Suryanarayana
Kalenahalli

SYSTEM AND METHOD FOR LOCATING MOBILE DEVICE IN WIRELESS COMMUNICATION NETWORK	13418689	20120169533
	Mar 13, 2012	Jul 5, 2012

Inventors: Martin
THOMSON, Neil HARPER

System and Method for Routing SUPL Proxy- Mode Traffic When Multiple Nodes are Deployed in a Network	13123306	20110231561	8977760
	Apr 8, 2011	Sep 22, 2011	Mar 10, 2015

Inventors: Darren
Pawson, Chas Singh

System and Method for Location Assurance of A Mobile Device	13112669	20110287779	8718673
	May 20, 2011	Nov 24, 2011	May 6, 2014

Inventors: Neil Harper

MAINTAINING TRIGGERED SESSION STATE IN SECURE USER PLANE LOCATION (SUPL) ENABLED SYSTEM	13101243	20110296184	9112683
	May 5, 2011	Dec 1, 2011	Aug 18, 2015

Inventors: Nguyen Khiem
TRAN, Martin Wyville
THOMSON, Darren
PAWSON

METHOD AND SYSTEM FOR PROVIDING ASSISTANCE DATA FOR	12873470	20100328148	8638259
	Sep 1, 2010	Dec 30, 2010	Jan 28, 2014

**A-GPS LOCATION OF
HANDSETS IN**

WIRELESS NETWORKS

Inventors: Neil Harper,
Martin Dawson, Martin
Thomson

Generating Accurate Time Assistance Data for An LTE Network	12780496 May 14, 2010	20110279312 Nov 17, 2011
Inventors: Martin Wyville Thomson		

SYSTEM AND METHOD FOR DETERMINING A REFERENCE LOCATION USING CELL TABLE DATA MINING	12437969 May 8, 2009	20100285813 Nov 11, 2010	8467805 Jun 18, 2013
Inventors: Neil Harper			

SYSTEM AND METHOD FOR CONCURRENTLY DETERMINING LOCATIONS OF MOBILE DEVICE IN WIRELESS COMMUNICATION NETWORK	12406378 Mar 18, 2009	20100238070 Sep 23, 2010
Inventors: Neil HARPER, Martin DAWSON		

METHOD AND SYSTEM FOR SELECTING OPTIMAL SATELLITES FOR A-GPS LOCATION OF HANDSETS IN WIRELESS NETWORKS	12392400 Feb 25, 2009	20100171655 Jul 8, 2010	9140799
Inventors:			

12333820	20100149031
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SYSTEM AND METHOD
FOR DETERMINING
FORGED RADIO
FREQUENCY
MEASUREMENTS
Inventors: Martin
DAWSON, Neil HARPER

Dec 12,
2008 Jun 17, 2010

SYSTEM AND METHOD
FOR PROVIDING
CENTRALIZED
POSITIONING
DETERMINATION FOR
MULTIPLE RADIO
ACCESS NETWORKS
Inventors: Darren
PAWSON, Nguyen Khlem
TRAN

12560662 20110065454 8380223
Sep 16, Mar 17, 2011 Feb 19,
2009 2013

System and Method for
Determining the
Location of a Mobile
Device
Inventors: Neil Harper,
Martin Dawson

13406661 20120154220 8378888
Feb 28, Jun 21, 2012 Feb 19,
2012 2013

DETECTING AND
COMPENSATING FOR
ERRONEOUS TIME
MEASUREMENT FOR
MOBILE DEVICE
POSITION
CALCULATION
Inventors: Martin Wyville
Thomson, Neil Lindsay
Harper

12815640 20110169691 8350756
Jun 15, Jul 14, 2011 Jan 8,
2010 2013

SYSTEM AND METHOD
FOR SERVER SIDE
DETECTION OF

13269729 20120026037 8325087
Oct 10, Feb 2, 2012 Dec 4,
2011 2012

**FALSIFIED SATELLITE
MEASUREMENTS**

Inventors: Martin
Thomson, Neil Harper

SYSTEM AND METHOD FOR SUPL ROAMING USING A HELD CLIENT	12813278 Jun 10, 2010	20100311439 Dec 9, 2010	8301160 Oct 30, 2012
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Inventors: Nguyen Khiem
Tran, Anthony James
Winterbottom, Martin
Thomson

METHOD AND SYSTEM FOR SELECTING OPTIMAL SATELLITES IN VIEW	13190048 Jul 25, 2011	20120007774 Jan 12, 2012	8299961 Oct 30, 2012
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Inventors: Neil Harper

SYSTEM AND METHOD FOR SUPL HELD INTERWORKING	12782920 May 19, 2010	20100316006 Dec 16, 2010	8290510 Oct 16, 2012
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Inventors: Martin
Thomson, Anthony James
Winterbottom, Nguyen
Khiem Tran

ENHANCING LOCATION ACCURACY USING MULTIPLE SATELLITE MEASUREMENTS BASED ON ENVIRONMENT	12565395 Sep 23, 2009	20110068977 Mar 24, 2011	8217832 Jul 10, 2012
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Inventors: Martin Wyville
THOMSON, Neil Lindsay
HARPER, Nguyen Khiem
TRAN

12113476 May 1, 2008	20090275344 Nov 5, 2009	8213955 Jul 3,
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NETWORK
MEASUREMENT
REPORT CACHING FOR
LOCATION OF MOBILE
DEVICES
Inventors: John Carlson,
Martin Dawson

2012

SYSTEM AND METHOD
FOR LOCATING MOBILE
DEVICE IN WIRELESS
COMMUNICATION
NETWORK
Inventors: Neil HARPER,
Martin THOMSON

12406384
Mar 18,
2009

20100240389
Sep 23, 2010

8160610
Apr 17,
2012

SYSTEM AND METHOD
FOR DETERMINING THE
LOCATION OF A
MOBILE DEVICE
Inventors: Martin
Dawson, Neil Harper

12272046
Nov 17,
2008

20100123622
May 20, 2010

8125377
Feb 28,
2012

SYSTEM AND METHOD
FOR PREVENTING A-
GPS DEVICES FROM
SEARCHING FOR
SPECIFIC SATELLITES
Inventors: Martin
Thomson, Neil Harper

12100290
Apr 9, 2008

20090146877
Jun 11, 2009

8085193
Dec 27,
2011

METHOD AND
APPARATUS FOR
DETERMINING THE
GEOGRAPHIC
LOCATION OF A DEVICE
Inventors: Neil HARPER,
Peter NICHOLSON

12717239
Mar 4, 2010

20100156707
Jun 24, 2010

8081109
Dec 20,
2011

SYSTEM AND METHOD FOR SERVER SIDE DETECTION OF FALSIFIED SATELLITE MEASUREMENTS	12276917 Nov 24, 2008	20100127928 May 27, 2010	8035557 Oct 11, 2011
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Inventors: Martin
Thomson, Neil Harper

USING SERVING AREA IDENTIFICATION IN A MIXED ACCESS NETWORK ENVIRONMENT	11749634 May 16, 2007	20070293215 Dec 20, 2007	8019339 Sep 13, 2011
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Inventors: Martin
Christopher Dawson

OPTIMIZING LOCATION SERVICES PERFORMANCE BY COMBINING USER PLANE AND CONTROL PLANE ARCHITECTURES	11749647 May 16, 2007	20070293239 Dec 20, 2007	8000702 Aug 16, 2011
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Inventors: Martin
Christopher Dawson,
Greg Burdett

A CORRELATION MECHANISM TO COMMUNICATE IN A DUAL-PLANE ARCHITECTURE	11749621 May 16, 2007	20070298793 Dec 27, 2007	8000701 Aug 16, 2011
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Inventors: Martin
Christopher Dawson

SYSTEM AND METHOD FOR PROVIDING GNSS ASSISTANT DATA	12314164 Dec 5, 2008	20100141516 Jun 10, 2010	7999730 Aug 16, 2011
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**WITHOUT DEDICATED
RECEIVERS**

Inventors: Martin
Thomson

METHOD AND SYSTEM FOR SELECTING OPTIMAL SATELLITES IN VIEW	12403454 Mar 13, 2009	20100231448 Sep 16, 2010	7986266 Jul 26, 2011
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Inventors: Neil Harper

SYSTEM AND METHOD FOR PROTECTING AGAINST SPOOFED A- GNSS MEASUREMENT DATA	12325612 Dec 1, 2008	20100134352 Jun 3, 2010	7956803 Jun 7, 2011
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Inventors: Martin
Thomson, Neil Harper

METHOD AND APPARATUS FOR DETERMINING THE GEOGRAPHIC LOCATION OF A DEVICE	12717233 Mar 4, 2010	20100156704 Jun 24, 2010	7948435 May 24, 2011
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Inventors: Neil Harper,
Peter Nicholson

SYSTEM AND METHOD FOR DETERMINING FALSIFIED SATELLITE MEASUREMENTS	12276804 Nov 24, 2008	20100127923 May 27, 2010	7940213 May 10, 2011
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Inventors: Neil Harper,
Martin Thomson

METHOD AND SYSTEM FOR SELECTING OPTIMAL SATELLITES	12395803 Mar 2, 2009	20090213004 Aug 27, 2009	7928903 Apr 19, 2011
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**FOR A-GPS LOCATION
OF HANDSETS IN
WIRELESS NETWORKS**

Inventors: Peter John
Rhodes, Neil Harper

SYSTEM AND METHOD FOR A-GPS POSITIONING OF A MOBILE DEVICE	12849493 Aug 3, 2010	20100302098 Dec 2, 2010	7920091 Apr 5, 2011
Inventors: Martin Thomson, Neil Harper, Khiem Tran			

SYSTEM AND METHOD FOR DETERMINING A REFERENCE LOCATION OF A MOBILE DEVICE	12389734 Feb 20, 2009	20100155713 Jun 24, 2010	7916071 Mar 29, 2011
Inventors: Neil Harper			

SYSTEM AND METHOD FOR A-GPS POSITIONING OF A MOBILE DEVICE	12099694 Apr 8, 2008	20090146876 Jun 11, 2009	7847728 Dec 7, 2010
Inventors: Martin THOMSON, Neil Harper, Khiem Tran			

ASSISTED GLOBAL POSITIONING SYSTEM LOCATION DETERMINATION	10783434 Feb 20, 2004		7825855 Nov 2, 2010
Inventors: Peter Nicholson			

SYSTEM AND METHOD FOR DETERMINING FALSIFIED	12276852 Nov 24, 2008	20100127920 May 27, 2010	7800533 Sep 21, 2010
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**GEOGRAPHIC
LOCATION OF A
MOBILE DEVICE**

Inventors: Neil Harper,
Martin Thomson

METHOD AND SYSTEM FOR PROVIDING ASSISTANCE DATA FOR A-GPS LOCATION OF HANDSETS IN WIRELESS NETWORKS	12050794 Mar 18, 2008	20090146872 Jun 11, 2009	7800530 Sep 21, 2010
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Inventors: Neil Harper,
Martin Dawson, Martin
Thomson

METHOD AND APPARATUS FOR DETERMINING THE GEOGRAPHIC LOCATION OF A DEVICE	11525132 Sep 22, 2006	20080074317 Mar 27, 2008	7733268 Jun 8, 2010
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Inventors: Neil Harper,
Peter Nicholson

METHOD AND APPARATUS FOR GEOLOCATION DETERMINATION	12201252 Aug 29, 2008	20090085802 Apr 2, 2009	7696922 Apr 13, 2010
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Inventors: Peter
NICHOLSON, Neil Harper

METHOD AND APPARATUS FOR GEOLOCATION DETERMINATION	12201279 Aug 29, 2008	20090079623 Mar 26, 2009	7692577 Apr 6, 2010
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Inventors: Peter
NICHOLSON, Neil Harper

	11405404	20070241958	7436355
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METHOD AND APPARATUS FOR GEOLOCATION DETERMINATION	Apr 18, 2006	Oct 18, 2007	Oct 14, 2008
Inventors: Peter Nicholson, Neil Harper			

GLOBAL POSITIONING SYSTEM SIGNAL ACQUISITION ASSISTANCE	10980476 Nov 3, 2004	20050285783 Dec 29, 2005	7209077 Apr 24, 2007
Inventors: Neil Harper			

METHOD FOR DELIVERING ASSISTANCE DATA IN AN UNSYNCHRONISED WIRELESS NETWORK	10718416 Nov 19, 2003		6903683 Jun 7, 2005
Inventors: Peter Nicholson			

CELLULAR TERMINAL LOCATION USING GPS SIGNALS IN THE CELLULAR BAND	09078444 May 14, 1998		6236359 May 22, 2001
Inventors: LEO STRAWCZYNSKI, J. MICHAEL WATTERS, DAVID G. STEER			

SYSTEM AND METHOD FOR PROVIDING A GEOGRAPHIC LOCATION OF A MOBILE TELECOMMUNICATIONS UNIT	08874061 Jun 12, 1997		6091957 Jul 18, 2000
Inventors: JOHN PRUETT LARKINS, GARY BOYD STEPHENS			