PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CARRIER IQ, INC.	11/18/2015

RECEIVING PARTY DATA

Name:	AT&T MOBILITY IP, LLC	
Street Address:	1025 LENOX PARK BLVD. NE	
City:	ATLANTA	
State/Country:	GEORGIA	
Postal Code:	30319	

PROPERTY NUMBERS Total: 43

Property Type	Number
Patent Number:	9178882
Patent Number:	9154375
Patent Number:	8565746
Patent Number:	8509100
Patent Number:	8385942
Patent Number:	8219037
Patent Number:	8208861
Patent Number:	8204447
Patent Number:	8200163
Patent Number:	8010081
Patent Number:	7941148
Patent Number:	7865194
Patent Number:	7826847
Patent Number:	7783303
Patent Number:	7764959
Patent Number:	7609650
Patent Number:	7551922
Application Number:	14880350
Application Number:	14860308
Application Number:	14565294

PATENT REEL: 037576 FRAME: 0085

503663199

Property Type	Number
Application Number:	14552380
Application Number:	14511442
Application Number:	14277999
Application Number:	14221545
Application Number:	61897435
Application Number:	61770321
Application Number:	14142880
Application Number:	14142204
Application Number:	14140504
Application Number:	13933126
Application Number:	13726580
Application Number:	13686821
Application Number:	13680045
Application Number:	13653313
Application Number:	13572473
Application Number:	13536983
Application Number:	13536952
Application Number:	13267849
Application Number:	13245860
Application Number:	13050310
Application Number:	12887507
Application Number:	12371190
Application Number:	11777949

CORRESPONDENCE DATA

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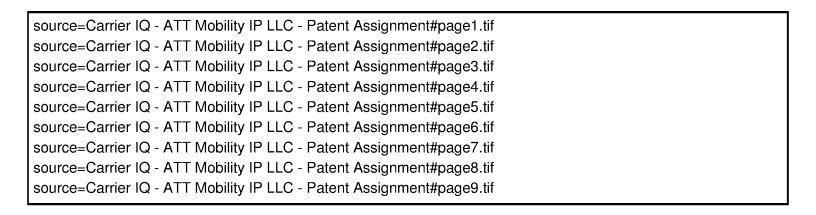
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ATTORNEY DOCKET NUMBER:	20769.0
NAME OF SUBMITTER:	PETER F. MALEN JR.
SIGNATURE:	/Peter F. Malen Jr./
DATE SIGNED:	01/25/2016

Total Attachments: 9



PATENT ASSIGNMENT AGREEMENT

THIS PATENT ASSIGNMENT AGREEMENT (this "<u>Assignment</u>") is made as of this 18th day of November, 2015, by Carrier IQ, Inc., a Delaware corporation with its principal place of business at 640 West California Avenue #100, Sunnyvale, California 94086 ("<u>Assignor</u>"), to AT&T Mobility IP, LLC, a Delaware limited liability company with its principal place of business at 1025 Lenox Park Blvd. NE, Atlanta, GA 30319 ("<u>Assignee</u>"). All capitalized terms used but not defined herein shall have the meanings set forth in the Purchase Agreement (as defined below).

RECITALS

WHEREAS, Assignor and Assignee are parties to that certain Asset Purchase Agreement, dated as of November 18th, 2015 (the "<u>Purchase Agreement</u>"), pursuant to which Assignor has agreed to sell, assign, transfer, convey and deliver to Assignee, and Assignee has agreed to acquire from Assignor, all right, authorization, title and interest in the Transferred Assets, free and clear of any Liens, including, without limitation, the Transferred Patents (as defined in the Purchase Agreement), including without limitation those Patents listed on Schedule A annexed hereto and incorporated herein by reference;

WHEREAS, pursuant to the Purchase Agreement, Assignor has agreed to execute this Assignment; and

NOW, THEREFORE, for and in consideration of the mutual covenants contained herein and in the Purchase Agreement and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor hereby sells, assigns, transfers, conveys and delivers to Assignee, and Assignee hereby acquires all worldwide right, title and interest in, to and under the Transferred Patents, together with the goodwill of the business associated therewith and which is symbolized thereby, all rights to sue for any damages and other remedies in respect of any infringement of any Transferred Patent, whether arising prior to or subsequent to the date of this Assignment, and all rights to claim any applicable priority rights arising from any of the Transferred Patents as may be required for any corresponding future Untied States or foreign patents and applications under the terms of any applicable conventions, treaties, statutes, or regulations, the same to be held and enjoyed by the said Assignee, its successors and assigns from and after the date hereof as fully and entirely as the same would have been held and enjoyed by the said Assignor had this Assignment not been made.

Notwithstanding anything to the contrary contained herein, the terms of this Assignment are subject to the terms, provisions, conditions and limitations set forth in the Purchase Agreement, and Assignor and Assignee hereby acknowledge and agree that none of the representations, warranties, covenants and agreements, nor the rights, remedies or obligations of the parties to the Purchase Agreement shall be deemed to be enlarged, diminished, modified or altered in any way by this Assignment, but shall remain in full force and effect to the full extent provided therein. In the event the terms of this Assignment conflict with the terms of the Purchase Agreement, the terms of the Purchase Agreement shall govern.

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Except to the extent that federal law preempts state law with respect to the matters covered hereby, this Assignment shall be governed by and construed in accordance with the laws of the State of New York without giving effect to the principles of conflicts of laws thereof.

[Signatures on following page]

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IN WITNESS WHEREOF, the Assignor has caused its duly authorized officer to execute this Patent Assignment Agreement as of this 2015.
Assignor
AGREED TO AND ACCEPTED:
Assignee
AT&T MOBILITY IP, LLC
By: Name: Title:
State of Vinginia) State of Vinginia) Ss.: County of Fair Are)
On this day of Nov., 20 5, before me,, personally appeared magnotice to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
Witness my hand and official seal. VIRGINIA ANN COLE NOTARY PUBLIC REGISTRATION # 7568707 COMMONWEALTH OF VIRGINIA MY COMMISSION EXPIRES AUGUST 31, 2017

[Signature page to Patent Assignment Agreement]

IN WITNESS WHEREOF, the Assignor has caused its duly authorized officer to execute this Patent Assignment Agreement as of this [1] day of NOVEMBER . 2015. Assignor CARRIER 10, INC. By:_____ Name: Title: AGREED TO AND ACCEPTED: Assignee AT&T MOBILITY IP, LLC Title: Authorized Representative State of Texas 88.0 County of Dallas On this day of November, 2015, before me, Torney Endley, personally appeared Martin Clifford, Authorized Representative of AT&T Mobility IP, LLC, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

TAMMY FINDLEY
Hotery Public, State of Texas
My Commission Expires
Jonisary 21, 2018

Witness my hand and official seal.

Notary Public

SCHEDULE A

US Issued Pat 9178882	Concurrent, diverse party multi-	A system includes a bidirectional signal bus
)1,000 <u>1</u>	processor wireless quality metric collection circuits and method of operation	controlled by an M×S master/slave bridge circuit. An application processor having at least one core is communicatively coupled by the bidirectional signal bus to a radio processor having at least one virtual machine.
9154375	Method for recording user experience or performance of a peripheral device	Systems for subscribing to indicia related to a user experience or a peripheral device,a broadband wireless modem, recording selected indicia, and forwarding them to a server
8565746	Programmable agent for monitoring mobile communication in a wireless communication network	Systems and methods for collecting data related to events that occur in a wireless network. The method comprises receiving a data reporting profile which includes a series of executable commands
8509100	User-initiated reporting of mobile communication system errors	Systems and methods that automatically collect data associated with system-identified errors as well as data associated with events associated with user-initiated actions. A data collection profile
8385942	End-user interaction framework	A method operable at a device to trigger on observable events, to evaluate a process, to present a flow to an end-user, to record the end-user's responses, and transmit the responses to a server.
8219037	Baseband processor apparatus and method for monitoring a wireless communication network	A baseband processor of a distributed architecture for monitoring mobile communication in a wireless communication network is claimed. Systems and methods enable receiving reporting data related to
8208861	Data management system server apparatus and method for monitoring a wireless communication network	A data management system of a distributed architecture for monitoring mobile communication in a wireless communication network is claimed. Systems and methods enable receiving reporting data
8204447	Application processor apparatus and method for monitoring a wireless communication network	An application processor of a distributed architecture for monitoring mobile communication in a wireless communication network is claimed. Systems and methods enable receiving reporting data
8200163	Distributed architecture for monitoring mobile communication in	Systems and methods for receiving reporting data related to events that occur in a wireless

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	a wireless communication network	network. The system comprises a data management system capable of generating a data reporting profile and
8010081	Auditing system for wireless networks	Independently evaluating the performance of the billing systems of wireless carriers. Devices are provisioned with a collection profile that enables the devices to capture event data at the devices
7941148	Neighbor list generation in wireless networks	Generating neighbor lists. A set of devices are provisioned to report on neighbor lists and visibility of sectors. Each device in the set of devices generates event data that includes the neighbor
7865194	Systems and methods for characterizing the performance of a wireless network	Systems and methods for characterizing a performance of a wireless network. Data or metrics are collected from a device. The metrics include timing information associated with certain sectors. The
7826847	Neighbor list generation in wireless networks	Generating neighbor lists. A set of devices are provisioned to report on neighbor lists and visibility of sectors. Each device in the set of devices generates event data that includes the neighbor
7783303	Systems and methods for locating device activity in a wireless network	Systems and methods for locating wireless devices in a wireless network. A diagnostic client on a wireless device generates timing data based on clock data received from sectors of towers
7764959	Analysis of arbitrary wireless network data using matched filters	889 Analyzing an arbitrary data set to determine the presence or absence of a defined signature element, in order to understand an event or detect a root cause of an event in a wireless network
7609650	Collection of data at target wireless devices using data collection profiles	Systems and methods for defining and using a data collection profile in connection with a telecommunications network that includes multiple devices. Initially, a query is defined that concerns one
7551922	Rule based data collection and management in a wireless communications network	Systems and methods for defining and using a data collection profile in connection with a telecommunications network that includes multiple devices. Initially, a query is defined that concerns one

4945630 Japan	Analysis of arbitrary wireless network data using matched filters	
4663726 Japan	Rule based data collection and management in a wireless communications network	
2578602 Canada	Rule based data collection and management in a wireless communications network	
zl20058002779 China	Rule based data collection and management in a wireless communications network	
10-0926121 Korea	Rule based data collection and management in a wireless communications network	
Canada Pending		
2649166 Canada	Analysis of arbitrary wireless network data using matched filters	
EPO pending Applications:		
2382812A2 Europe	Distributed architecture for monitoring mobile communication in a wireless communication network	
2382811A2 Europe	Programmable agent for monitoring mobile communication in a wireless communication network	
2038759A2 Europe	Analysis of arbitrary wireless network data using matched filters	
1803230A2 Europe	Rule based data collection and management in a wireless communications network	889
US pending Appli	cations:	
14880350	CIP of Self-Care Method and System	
14860308	CIP of 13726580 Credibility Tokens for OTA Multi- programming	
Filed in 2014: 14/565-294		
277.102.273	Closed-loop Self-care Apparatus	

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	and Messaging System for Customer Care of Wireless Services	
14/552,380	Interactive Selection and Setting Display of Components in Quality of Service (QoS) Scores and QoS Ratings and Method of Operation	
14/511,442	Wireless Customer Experience Fault Analytics System and Method of Operation	
<u>14/277,999</u>	End-to-End Real-time Transport Protocol (RTP) Packet Transmission Delay Measurement Apparatus and Method	
14/221.545	Incremental Batch Method for Transforming Event-driven Metrics and Measures within a Map/Reduce Data Center	
Filed in 2013:		
61897435	Hybrid Agent	provisional
61897435 61770321	Hybrid Agent Process for Using Cell Phone Accelerometer Analytics To Enable A Human-Factors-Layered Analytical Model and Virtual Gyroscopic Gimbal	provisional
	Process for Using Cell Phone Accelerometer Analytics To Enable A Human-Factors-Layered Analytical Model and Virtual	
61770321	Process for Using Cell Phone Accelerometer Analytics To Enable A Human-Factors-Layered Analytical Model and Virtual Gyroscopic Gimbal Wireless Device Battery Optimization aka Detection of idle mode multiple re-selections (ping/pong) using data collection	
61770321 14142880	Process for Using Cell Phone Accelerometer Analytics To Enable A Human-Factors-Layered Analytical Model and Virtual Gyroscopic Gimbal Wireless Device Battery Optimization aka Detection of idle mode multiple re-selections (ping/pong) using data collection agent on wireless device Mobile Wireless Customer Micro-	
61770321 14142880 14142204	Process for Using Cell Phone Accelerometer Analytics To Enable A Human-Factors-Layered Analytical Model and Virtual Gyroscopic Gimbal Wireless Device Battery Optimization aka Detection of idle mode multiple re-selections (ping/pong) using data collection agent on wireless device Mobile Wireless Customer Micro- Care Apparatus and Method	
61770321 14142880 14142204 14140504	Process for Using Cell Phone Accelerometer Analytics To Enable A Human-Factors-Layered Analytical Model and Virtual Gyroscopic Gimbal Wireless Device Battery Optimization aka Detection of idle mode multiple re-selections (ping/pong) using data collection agent on wireless device Mobile Wireless Customer Micro- Care Apparatus and Method Data Collection Privacy Agent Resource Consumption Estimation with Out of Norm Determination	

13686821	Division of Data Collection Agent Configuration	
13680045	Division of 12/753736 Persistent flow	A persistent flow apparatus maintains a datamart store with up-to-date transformations of packages as the packages are received from wireless recording devices. Each flow apparatus generates
13653313	Tap-Once Care	
13572473	Mobile Battery Consumption Analysis	
13536983	Conversion of Inputs to Determine QoS along Selectable Dimensions	A multi-dimensional analysis method for operation of a data server to isolate Quality of Service issues to constituents within major or minor Key Performance Indicators.
13536952	Interactive Navigation System to Decompose Quality of Service Performance Score- and Ratings	An interactive method for operating a server to trace the origin of data which results in a display of unsatisfactory Quality of Service for a plurality of wireless communication devices.
Filed in 2011		
13267849	Authentication and authorization method for tasking in profile-based data collection	
13245860	Multi-party reporting in profile- based data collection	A multi-client data collection agent. Multiple parties provision ("task") and maintain profiles on a single device.
13050310	Configuration of a Data Collection Agent and Its Distribution System	
Filed 2010 and	<u>l earlier</u> :	
12887507	Quality of Service Performance Scoring and Rating Display and Navigation System	
12371190	Using mobile device to create activity record	A communication device and a data server record and collect events and event-related data to create an activity record.
11777949	Delta State Tracking	

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RECORDED: 01/25/2016