

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4795814

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST
CONVEYING PARTY DATA	
Name	Execution Date
IGNITION DESIGN LABS (US) LLC	12/21/2017
NETWORK PERFORMANCE RESEARCH GROUP LLC	12/21/2017
PLANETARY NETWORK TECHNOLOGIES, INC.	12/21/2017
RECEIVING PARTY DATA	
Name:	SILICON VALLEY BANK
Street Address:	555 MISSION STREET
City:	SAN FRANCISCO
State/Country:	CALIFORNIA
Postal Code:	94105
PROPERTY NUMBERS Total: 40	
Property Type	Number
Patent Number:	D795853
Patent Number:	9832791
Patent Number:	9439197
Patent Number:	9699786
Patent Number:	9622089
Patent Number:	9807625
Patent Number:	9674187
Patent Number:	9807619
Patent Number:	9736845
Patent Number:	9839038
Application Number:	29611366
Application Number:	62200764
Application Number:	15729900
Application Number:	62203383
Application Number:	15225966
Application Number:	62215079
Application Number:	15613726
Application Number:	62259981

PATENT

Property Type	Number
Application Number:	15450940
Application Number:	62259988
Application Number:	15214431
Application Number:	62314042
Application Number:	15259359
Application Number:	62314047
Application Number:	15259386
Application Number:	15408042
Application Number:	15368462
Application Number:	15711649
Application Number:	15483406
Application Number:	15266235
Application Number:	15493890
Application Number:	15713099
Application Number:	15381781
Application Number:	15647915
Application Number:	62394575
Application Number:	62445107
Application Number:	15715239
Application Number:	62395669
Application Number:	15416568
Application Number:	15588474

CORRESPONDENCE DATA

Fax Number: (800)494-7512

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2023704750

Email: ipteam@cogencyglobal.com

Correspondent Name: DARLENA BARI STARK

Address Line 1: 1025 VERMONT AVE NW, SUITE 1130

Address Line 2: COGENCY GLOBAL INC.

Address Line 4: WASHINGTON, D.C. 20005

ATTORNEY DOCKET NUMBER:	F175094
NAME OF SUBMITTER:	JANET S. WAMSLEY
SIGNATURE:	/Janet S. Wamsley/
DATE SIGNED:	01/26/2018

Total Attachments: 13

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement (this “**Agreement**”) is entered into as of December 21, 2017, by and between (a) **SILICON VALLEY BANK**, a California corporation, (“**Bank**”) and (b) (i) **IGNITION DESIGN LABS (US) LLC**, a Delaware limited liability company (“**Ignition**”), (ii) **NETWORK PERFORMANCE RESEARCH GROUP LLC**, a Delaware limited liability company (“**NPRG**”), and (iii) **PLANETARY NETWORK TECHNOLOGIES, INC.**, a Delaware corporation (“**PNT**”; Ignition, NPRG, and PNT are referred to herein, each and together, jointly and severally, as “**Grantor**”).

RECITALS

A. Bank has agreed to make certain advances of money and to extend certain financial accommodations to Grantor (the “**Loans**”) in the amounts and manner set forth in that certain Loan and Security Agreement by and between Bank and Grantor dated as of February 15, 2017, as amended by that certain First Amendment to Loan and Security Agreement dated as of the date hereof (as the same may be further amended, modified or supplemented from time to time, the “**Loan Agreement**”; capitalized terms used herein are used as defined in the Loan Agreement). Bank is willing to make the Loans to Grantor, but only upon the condition, among others, that Grantor shall grant to Bank a security interest in its Copyrights, Trademarks, Patents, and Mask Works (as each term is described below) to secure the obligations of Grantor to Bank.

B. Pursuant to the terms of the Loan Agreement, Grantor has granted to Bank a security interest in all of Grantor’s right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of Grantor’s obligations to Bank, Grantor hereby represents, warrants, covenants and agrees as follows:

AGREEMENT

1. Grant of Security Interest. To secure Grantor’s obligations to Bank, Grantor grants and pledges to Bank a security interest in all of Grantor’s right, title and interest in, to and under its intellectual property (all of which shall collectively be called the “**Intellectual Property Collateral**”), including, without limitation, the following:

(a) Any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret,

now or hereafter existing, created, acquired or held, including without limitation those set forth on Exhibit A attached hereto (collectively, the "**Copyrights**");

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights that may be available to Grantor now or hereafter existing, created, acquired or held;

(d) All patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the "**Patents**");

(e) Any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the "**Trademarks**");

(f) All mask works or similar rights available for the protection of semiconductor chips, now owned or hereafter acquired, including, without limitation those set forth on Exhibit D attached hereto (collectively, the "**Mask Works**");

(g) Any and all claims for damages by way of past, present and future infringements of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(h) All licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(i) All amendments, extensions, renewals and extensions of any of the Copyrights, Trademarks, Patents, or Mask Works; and

(j) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

2. Recordation. Grantor authorizes the Commissioner for Patents, the Commissioner for Trademarks and the Register of Copyrights and any other government officials to record and register this Agreement upon request by Bank.

3. Loan Documents. This Agreement has been entered into pursuant to and in conjunction with the Loan Agreement, which is hereby incorporated by reference. The provisions of the Loan Agreement shall supersede and control over any conflicting or inconsistent provision herein. The rights and remedies of Bank with respect to the Intellectual

Property Collateral are as provided by the Loan Agreement and related documents, and nothing in this Agreement shall be deemed to limit such rights and remedies.

4. Execution in Counterparts. This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page to this Agreement by facsimile or in electronic (i.e., "pdf" or "tif" format) shall be effective as delivery of a manually executed counterpart of this Agreement.

5. Successors and Assigns. This Agreement will be binding on and shall inure to the benefit of the parties hereto and their respective successors and assigns.

6. Governing Law. This Agreement and any claim, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Agreement and the transactions contemplated hereby and thereby shall be governed by, and construed in accordance with, the laws of the United States and the State of [California], without giving effect to any choice or conflict of law provision or rule (whether of the State of [California] or any other jurisdiction).

[Signature page follows.]

IN WITNESS WHEREOF, each of the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.


BANK

SILICON VALLEY BANK


By: _____
Name: _____
Title: _____

BORROWER


IGNITION DESIGN LABS (US) LLC

By:  _____
Name: Terry Ngo
Title: President and Chief Executive Officer

PLANETARY NETWORK TECHNOLOGIES, INC.

By:  _____
Name: Terry Ngo
Title: President and Chief Executive Officer

**NETWORK PERFORMANCE RESEARCH GROUP
LLC**


By:  _____
Name: Terry Ngo
Title: President and Chief Executive Officer

SIGNATURE PAGE TO INTELLECTUAL PROPERTY SECURITY AGREEMENT

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

BANK

SILICON VALLEY BANK

By: 
Name: Justin Mauch
Title: Director

BORROWER

IGNITION DESIGN LABS (US) LLC

By: _____
Name: Terry Ngo
Title: President and Chief Executive Officer

**PLANETARY NETWORK TECHNOLOGIES,
INC.**

By: _____
Name: Terry Ngo
Title: President and Chief Executive Officer

**NETWORK PERFORMANCE RESEARCH
GROUP LLC**

By: _____
Name: Terry Ngo
Title: President and Chief Executive Officer

EXHIBIT A

Copyrights

Description	Registration/Application Number	Registration/Application Date

EXHIBIT B

Patents

Case Number	Application Status	Application Number	Patent Number	Filing Date	Title
PLNTD101US	Allowed	29/565,832	D795,853	24-May-2016	PORTAL BOX
PLNTD101USA	Pending	29/611,366		20-Jul-2017	ROUTER
PLNTP101USA	Published	16182722.5		04-Aug-2016	METHOD AND APPARATUS FOR USE OF SIMULTANEOUS MULTIPLE CHANNELS IN THE DYNAMIC FREQUENCY SELECTION BAND IN WIRELESS NETWORKS
PLNTP101JPA	Pending	2016-153596		04-Aug-2016	METHOD AND APPARATUS FOR USE OF SIMULTANEOUS MULTIPLE CHANNELS IN THE DYNAMIC FREQUENCY SELECTION BAND IN WIRELESS NETWORKS
PLNTP101US	Expired	62/200,764		04-Aug-2015	METHOD AND APPARATUS FOR USE OF SIMULTANEOUS MULTIPLE CHANNELS IN THE DYNAMIC FREQUENCY SELECTION BAND IN WIRELESS NETWORKS
PLNTP101USA	Allowed	14/920,568	9832791	22-Oct-2015	METHOD AND APPARATUS FOR USE OF SIMULTANEOUS MULTIPLE CHANNELS IN THE DYNAMIC FREQUENCY SELECTION BAND IN WIRELESS NETWORKS
PLNTP101USB	Pending	15/729,900		11-Oct-2017	METHOD AND APPARATUS FOR USE OF SIMULTANEOUS MULTIPLE CHANNELS IN THE DYNAMIC FREQUENCY SELECTION BAND IN WIRELESS NETWORKS
PLNTP102USA	Published	16182672.2		04-Aug-2016	METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP102JPA	Pending	2016-142261		20-Jul-2016	METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP102US	Expired	62/203,383		10-Aug-2015	METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS

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Case Number	Application Status	Application Number	Patent Number	Filing Date	Title
PLNTP102USA	Granted	15/085,573	9439197	30-Mar-2016	METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP102USB	Published	15/225,966		02-Aug-2016	METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP102USC	Unfiled				METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP103CNA	Published	201610808093.X		07-Sep-2016	METHOD AND APPARATUS FOR INTEGRATING RADIO AGENT DATA IN NETWORK ORGANIZATION OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP103EPA	Published	16187611.5		07-Sep-2016	METHOD AND APPARATUS FOR INTEGRATING RADIO AGENT DATA IN NETWORK ORGANIZATION OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP103INA	Pending	2.01644E+11		07-Sep-2016	METHOD AND APPARATUS FOR INTEGRATING RADIO AGENT DATA IN NETWORK ORGANIZATION OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP103US	Expired	62/215,079		07-Sep-2015	METHOD AND APPARATUS FOR INTEGRATING RADIO AGENT DATA IN NETWORK ORGANIZATION OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP103USA	Granted	15/171,911	9699786	02-Jun-2016	METHOD AND APPARATUS FOR INTEGRATING RADIO AGENT DATA IN NETWORK ORGANIZATION OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP103USB	Abandoned	15/613,726		05-Jun-2017	METHOD AND APPARATUS FOR INTEGRATING RADIO AGENT DATA IN NETWORK ORGANIZATION OF DYNAMIC CHANNEL SELECTION IN WIRELESS NETWORKS
PLNTP104CNA	Published	2.01611E+11		25-Nov-2016	CLOUD DFS SUPER MASTER SYSTEMS AND METHODS

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Case Number	Application Status	Application Number	Patent Number	Filing Date	Title
PLNTP104EPA	Published	16200660.5		25-Nov-2016	CLOUD DFS SUPER MASTER SYSTEMS AND METHODS
PLNTP104INA	Published	2.01614E+11		23-Nov-2016	CLOUD DFS SUPER MASTER SYSTEMS AND METHODS
PLNTP104US	Expired	62/259,981		25-Nov-2015	CLOUD DFS SUPER MASTER SYSTEMS AND METHODS
PLNTP104USA	Granted	15/214,437	9622089	19-Jul-2016	CLOUD DFS SUPER MASTER SYSTEMS AND METHODS
PLNTP104USB	Abandoned	15/450,940		06-Mar-2017	CLOUD DFS SUPER MASTER SYSTEMS AND METHODS
PLNTP105US	Expired	62/259,988		25-Nov-2015	NETWORK SECURITY SYSTEMS AND METHODS
PLNTP105USA	Published	15/214,431		19-Jul-2016	NETWORK SECURITY SYSTEMS AND METHODS
PLNTP106US	Expired	62/314,042		28-Mar-2016	METHOD AND APPARATUS FOR PROVIDING DYNAMIC FREQUENCY SELECTION SPECTRUM ACCESS IN PEER-TO-PEER WIRELESS NETWORKS
PLNTP106USA	Published	15/259,359		08-Sep-2016	METHOD AND APPARATUS FOR PROVIDING DYNAMIC FREQUENCY SELECTION SPECTRUM ACCESS IN PEER-TO-PEER WIRELESS NETWORKS
PLNTP107CNA	Published	2.0171E+11		28-Mar-2017	METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF ACCESS POINT-TO-CLIENT INTERACTION IN WIRELESS NETWORKS
PLNTP107EPA	Pending	171163289.6		28-Mar-2017	METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF ACCESS POINT-TO-CLIENT INTERACTION IN WIRELESS NETWORKS
PLNTP107INA	Pending	2.01714E+11		28-Mar-2017	METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF ACCESS POINT-TO-CLIENT INTERACTION IN WIRELESS NETWORKS
PLNTP107US	Expired	62/314,047		28-Mar-2016	METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF ACCESS POINT-TO-CLIENT INTERACTION IN WIRELESS NETWORKS
PLNTP107USA	Published	15/259,386		08-Sep-2016	METHOD AND APPARATUS FOR DIRECTED ADAPTIVE CONTROL OF ACCESS POINT-TO-CLIENT INTERACTION IN WIRELESS NETWORKS
PLNTP108US	Published	15/408,042		17-Jan-2017	METHODS AND APPARATUSES FOR USE OF SIMULTANEOUS MULTIPLE CHANNELS IN THE DYNAMIC FREQUENCY

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Case Number	Application Status	Application Number	Patent Number	Filing Date	Title
					SELECTION BAND IN WIRELESS NETWORKS
PLNTP109US	Published	15/368,462		02-Dec-2016	CLOUD DFS SUPER MASTER DETECTOR LOCATION SYSTEMS AND METHODS
PLNTP110US	Granted	15/454,805	9807625	09-Mar-2017	TIME-SHIFTED ANALYSIS BASES ON GATHERING NON-ENCRYPTED INFORMATION FROM PACKETS METHOD AND APPARATUS FOR USING TIME SHIFTED ANAL
PLNTP110USA	Pending	15/711,649		21-Sep-2017	METHOD AND APPARATUS FOR USING TIME SHIFTED ANALYSIS BASED ON GATHERING NON-ENCRYPTED INFORMATION FROM PACKETS
PLNTP111US	Allowed	15/483,406		10-Apr-2017	METHOD AND APPARATUS FOR DYNAMIC CHANNEL SELECTION DEVICE
PLNTP113US	Pending	15/266,235		15-Sep-2016	SYSTEMS, METHODS AND COMPUTER-READABLE STORAGE MEDIA FACILITATING ACCESS POINT MANAGEMENT VIA SECURE ASSOCIATION OF AN ACCESS P
PLNTP114US	Granted	15/278,098	9674187	28-Sep-2016	SYSTEMS, METHODS AND COMPUTER-READABLE STORAGE MEDIA FACILITATING MOBILE DEVICE GUEST NETWORK ACCESS
PLNTP114USA	Abandoned	15/493,890		21-Apr-2017	SYSTEMS, METHODS AND COMPUTER-READABLE STORAGE MEDIA FACILITATING MOBILE DEVICE GUEST NETWORK ACCESS
PLNTP115CN	Pending	2.01711E+11		13-Sep-2017	METHODS AND APPARATUSES FOR USE OF SIMULTANEOUS MULTIPLE CHANNELS IN THE DYNAMIC FREQUENCY SELECTION BAND IN WIRELESS NETWORKS
PLNTP115US	Granted	15/263,985	9807619	13-Sep-2016	METHODS AND APPARATUSES FOR USE OF SIMULTANEOUS MULTIPLE CHANNELS IN THE DYNAMIC FREQUENCY SELECTION BAND IN WIRELESS NETWORKS
PLNTP115USA	Pending	15/713,099		22-Sep-2017	METHODS AND APPARATUSES FOR USE OF SIMULTANEOUS MULTIPLE CHANNELS IN THE DYNAMIC FREQUENCY SELECTION BAND IN WIRELESS NETWORKS

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Case Number	Application Status	Application Number	Patent Number	Filing Date	Title
PLNTP116US	Pending	15/381,781		16-Dec-2016	METHOD AND APPARATUS FOR ANTENNA ADJUSTMENT IN WIRELESS COMMUNICATION DEVICES
PLNTP117US	Granted	15/397,206	9736845	03-Jan-2017	OVER THE AIR SIGNALING OF DYNAMIC FREQUENCY SELECTION (DFS) OPERATING PARAMETERS TO CLIENT DEVICES
PLNTP117USA	Pending	15/647,915		12-Jul-2017	OVER THE AIR SIGNALING OF DYNAMIC FREQUENCY SELECTION (DFS) OPERATING PARAMETERS TO CLIENT DEVICES
PLNTP118US	Closed	62/394,575		14-Sep-2016	Method to Anonymously or Without Establishing Account Associate a User's Mobile Device and a Wireless Access Point
PLNTP118USA	Closed				A METHOD TO ANONYMOUSLY OR WITHOUT ESTABLISHING ACCOUNT ASSOCIATE A USER'S MOBILE DEVICE AND A WIRELESS ACCESS POINT
PLNTP119US	Pending	62/445,107		11-Jan-2017	SYSTEM, METHOD, AND APPARATUS FOR SETTING A REGULATORY OPERATING MODE OF A DEVICE
PLNTP119USA	Allowed	15/428,658	9839038	09-Feb-2017	SYSTEM, METHOD, AND APPARATUS FOR SETTING A REGULATORY OPERATING MODE OF A DEVICE
PLNTP119USB	Abandoned	15/715,239		26-Sep-2017	SYSTEM, METHOD, AND APPARATUS FOR SETTING A REGULATORY OPERATING MODE OF A DEVICE
PLNTP120US	Pending	62/395,669		16-Sep-2016	METHOD OF SOFT HANDOFF FOR IN SERVICE MONITORING IN DYNAMIC FREQUENCY SELECTION
PLNTP120USA	Published	15/416,568		26-Jan-2017	METHOD OF SOFT HANDOFF FOR IN SERVICE MONITORING IN DYNAMIC FREQUENCY SELECTION
PLNTP120USB	Unfiled				MULTIPLE DETECTOR COORDINATION FOR MONITORING OF MULTIPLE CHANNELS IN THE DYNAMIC FREQUENCY SELECTION BAND
PLNTP121US	Allowed	15/588,474		05-May-2017	SYSTEM, METHOD, AND APPARATUS FOR SETTING DEVICE GEOLOCATION VIA LOCATION PROXIES

INTELLECTUAL PROPERTY SECURITY AGREEMENT

EXHIBIT C

Trademarks

Case Number	Trademark Status	Application Number	Registration Number	Filing Date	Trademark Name
PLNTT101US	Abandoned	86/709,200		30-Jul-2015	SPECTRUM ON-THE-GO
PLNTT102US	Abandoned	86/709,197		30-Jul-2015	AGILE
PLNTT103US	Abandoned	86/718,606		07-Aug-2015	WHISPER SWARMLINK
PLNTT104US	Pending	86/838,596		03-Dec-2015	PORTAL
PLNTT104EM	Registered	15426505	15426505	11-May-2016	PORTAL
PLNTT104JP	Pending	2016-051689		12-May-2016	PORTAL
PLNTT105US	Allowed	86/954,744		28-Mar-2016	SMARTLANES
PLNTT106US	Pending	86/954,758		28-Mar-2016	FASTLANES
PLNTT107US	Allowed	87/309,984		23-Jan-2017	WIFI AUTOPILOT

EXHIBIT D

Mask Works

Description	Registration/Application Number	Registration/Application Date

INTELLECTUAL PROPERTY SECURITY AGREEMENT

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