

PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT6833028

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
LOON LLC	07/02/2021
RECEIVING PARTY DATA	
Name:	SOFTBANK CORP.
Street Address:	1-7-1, KAIGAN, MINATO-KU
City:	TOKYO
State/Country:	JAPAN
PROPERTY NUMBERS Total: 98	
Property Type	Number
Patent Number:	8718477
Patent Number:	9407362
Patent Number:	8634974
Patent Number:	9306668
Patent Number:	9917633
Patent Number:	8825847
Patent Number:	9281896
Patent Number:	9282431
Patent Number:	9749984
Patent Number:	9584214
Patent Number:	9900080
Patent Number:	10356742
Patent Number:	8996024
Patent Number:	8918047
Patent Number:	9285450
Patent Number:	10162044
Patent Number:	8971274
Patent Number:	9300481
Patent Number:	9848335
Patent Number:	10045223
Patent Number:	9203148

Property Type	Number
Patent Number:	9106336
Patent Number:	9525484
Patent Number:	9532174
Application Number:	15350209
Application Number:	17220955
Patent Number:	9520940
Patent Number:	10123255
Patent Number:	9635706
Patent Number:	9093754
Patent Number:	9484625
Patent Number:	D741843
Patent Number:	D790515
Patent Number:	D789915
Patent Number:	D901460
Patent Number:	9830835
Patent Number:	10629097
Application Number:	16819491
Patent Number:	9628395
Patent Number:	10305742
Patent Number:	10855544
Application Number:	17079638
Patent Number:	9829561
Patent Number:	10324161
Patent Number:	9318789
Patent Number:	10615873
Application Number:	16734920
Application Number:	16735010
Application Number:	17136815
Patent Number:	9847828
Patent Number:	10230453
Application Number:	16707010
Application Number:	16277014
Patent Number:	9300388
Patent Number:	9590721
Patent Number:	9148215
Patent Number:	9478869
Patent Number:	9622277
Patent Number:	9484634

Property Type	Number
Patent Number:	9848419
Patent Number:	10574341
Patent Number:	10897303
Application Number:	17121168
PCT Number:	US2020058888
Patent Number:	10305608
Patent Number:	10305564
Patent Number:	10305609
Patent Number:	10734721
Patent Number:	10910711
Application Number:	16950539
Application Number:	17146506
PCT Number:	US2021035182
Application Number:	16221920
PCT Number:	US2019065451
Patent Number:	10805807
Application Number:	17016552
PCT Number:	US2020063067
Application Number:	16223935
PCT Number:	US2019066573
Application Number:	16222550
Application Number:	16998102
PCT Number:	US2019065698
Patent Number:	10925114
Application Number:	17144182
PCT Number:	US2020059626
Application Number:	16728771
PCT Number:	US2020063800
Application Number:	16838077
PCT Number:	US2021022936
Patent Number:	11024957
Application Number:	17232213
PCT Number:	US2021023244
Patent Number:	11012874
Application Number:	17232230
PCT Number:	US2021070177
Application Number:	17029904
PCT Number:	US2021070176

Property Type	Number
Application Number:	17069582

CORRESPONDENCE DATA

Fax Number:
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: 19087381770
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ATTORNEY DOCKET NUMBER:	RYUKA.2
NAME OF SUBMITTER:	IDA ZAZZALI
SIGNATURE:	/IdaZazzali/
DATE SIGNED:	07/27/2021

Total Attachments: 16
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PATENT ASSIGNMENT

This PATENT ASSIGNMENT (this "**Assignment**") is made and entered into as of July 2, 2021 (the "**Effective Date**"), by and between Loon LLC, a Delaware Limited Liability Company ("**Assignor**"), and SoftBank Corp., a Japanese corporation ("**Assignee**").

WHEREAS, Assignee and Assignor have entered into that certain Patent Purchase Agreement, dated as of July 2, 2021 (the "**Patent Purchase Agreement**"), pursuant to which Assignor has agreed to sell, assign, and transfer to Assignee, and Assignee has agreed to buy, all of Assignor's right, title, and interest in and to the Assigned Patents;

NOW, THEREFORE, for good and valuable consideration paid by Assignee to Assignor, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee agree as follows:

"**Assigned Patents**" means (a) the patents and patent applications listed in **Schedule 1** ("**Listed Patents**"), and (b) all reissues, reexaminations, continuations (but not continuations-in-part), renewals, substitutions, divisions, extensions, and foreign counterparts to any of the Listed Patents filed by Assignor or its subsidiary prior to the Effective Date that claim priority to the Listed Patents.

Assignor does hereby sell, assign, and transfer unto Assignee all of Assignor's right, title, and interest in and to the Assigned Patents, including all of Assignor's rights to any and all causes of action and rights of recovery for past, present, and future infringement thereof and the right to claim priority from the Assigned Patents. Assignee acknowledges and agrees that the Assigned Patents remain subject to a certain non-exclusive license to Assignor and its affiliates and certain other rights and licenses that, prior to the date hereof, have been granted or are required to be granted under the Assigned Patents, which will remain in effect notwithstanding assignment of such Assigned Patents. This Assignment does not sell, assign or transfer any right, title or interest in or to any patents or patent applications other than those expressly listed in Schedule 1 to this Assignment.

This Assignment will be binding upon and will inure to the benefit of the parties and their respective successors and assigns. This Assignment will be governed by, and construed in accordance with, the laws of the United States in respect to patent issues and in all other respects by the laws of the State of California, without reference to its choice of law principles to the contrary.

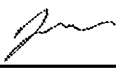
This Assignment may be executed in counterparts, each of which will be deemed an original, and all of which together constitute one and the same instrument.

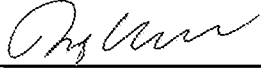
[Signatures to Follow]

IN WITNESS WHEREOF, Assignor and Assignee have caused this Assignment to be executed by their respective duly authorized representatives as of the date first set forth above.

Loon LLC (Assignor)

SoftBank Corp. (Assignee)

By: 

By: 

Name: Jeffery Scott Heilesen

Name: Ryuji Wakikawa

Title: Authorized Signatory

Title: Vice President, Advanced Technology Division

SCHEDULE 1
ASSIGNED PATENTS

Loon Ref.	Patent No.	App. No.	Country	Title	Status
L-13389-00-AU	2013208198	2013208198	Australia	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Issued
L-13389-00-AU-DIV	2016204664	2016204664	Australia	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Issued
L-13389-00-BR		BR1120140169411	Brazil	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Pending
L-13389-00-CA	2860728	2,860,728	Canada	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Issued
L-13389-00-CN	ZL1380013193.8	201380013193.8	China	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Issued
L-13389-00-DE	602013056012.9	13736223.2	Germany	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Issued
L-13389-00-FR	2803149	13736223.2	France	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Issued
L-13389-00-GB	2803149	13736223.2	United Kingdom	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Issued
L-13389-00-US	8718477	13/346,636	United States of America	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Issued
L-13389-00-US-CON	9407362	14/223,826	United States of America	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Issued
L-13393-00-AU	2013208217	2013208217	Australia	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-BR		BR112014016940-3	Brazil	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Pending

L-13393-00-CA	2859400	2,859,400	Canada	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-CN	ZL20138000 5073.3	2013800050 73.3	China	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-DE	6020130546 18.5	13735953.5	Germany	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-EP2	3584958	19169347.2	European Patent Office	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-EP2- DE	6020130737 25.8	19169347.2	Germany	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-EP2- FR	3584958	19169347.2	France	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-EP2- GB	3584958	19169347.2	United Kingdom	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-FR	2803148	13735953.5	France	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-GB	2803148	13735953.5	United Kingdom	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-IE	2803148	13735953.5	Ireland	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-US	8634974	13/346,654	United States of America	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-US- CON	9306668	14/108,542	United States of America	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued
L-13393-00-US- CON2	9917633	15/053,024	United States of America	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Issued

L-13394-00-AU	2013267536	2013267536	Australia	LOCATION-AWARE PROFILES IN A BALLOON NETWORK	Issued
L-13394-00-AU-DIV	2016201082	2016201082	Australia	LOCATION-AWARE PROFILES IN AN AERIAL NETWORK	Issued
L-13394-00-BR		1120140296 43-0	Brazil	LOCATION-AWARE "GHOST" PROFILES IN A BALLOON NETWORK	Pending
L-13394-00-CA	2874747	2,874,747	Canada	LOCATION-AWARE "GHOST" PROFILES IN A BALLOON NETWORK	Issued
L-13394-00-CN	ZL20138003 83572	2013800383 57	China	LOCATION-AWARE "GHOST" PROFILES IN A BALLOON NETWORK	Issued
L-13394-00-CN-DIV	ZL20171115 9973.X	2017111599 73.X	China	LOCATION-AWARE "GHOST" PROFILES IN A BALLOON NETWORK	Issued
L-13394-00-DE	6020130255 55.5	13797239.4	Germany	LOCATION-AWARE "GHOST" PROFILES IN A BALLOON NETWORK	Issued
L-13394-00-FR	2856664	13797239.4	France	LOCATION-AWARE "GHOST" PROFILES IN A BALLOON NETWORK	Issued
L-13394-00-GB	2856664	13797239.4	United Kingdom	LOCATION-AWARE "GHOST" PROFILES IN A BALLOON NETWORK	Issued
L-13394-00-KR	1015881600 000	10-2014- 7036394	Republic of Korea	LOCATION-AWARE "GHOST" PROFILES IN A BALLOON NETWORK	Issued
L-13394-00-US	8825847	13/366,100	United States of America	LOCATION-AWARE "GHOST" CACHING IN A BALLOON NETWORK	Issued
L-13394-00-US-CIP	9281896	13/485,514	United States of America	LOCATION-AWARE PROFILES IN A BALLOON NETWORK	Issued
L-13394-00-US-CON	9282431	14/444,100	United States of America	LOCATION-AWARE CACHING IN A BALLOON NETWORK	Issued
L-13394-00-US-CON2	9749984	15/008,274	United States of America	LOCATION-AWARE CACHING IN AN AERIAL NETWORK	Issued
L-13394-00-US-CON3	9584214	15/013,850	United States of America	LOCATION-AWARE PROFILES IN AN AERIAL NETWORK	Issued
L-13394-00-US-CON4	9900080	15/425,452	United States of America	LOCATION-AWARE PROFILES IN AN AERIAL NETWORK	Issued
L-13394-00-US-CON5	10356742	15/662,035	United States of America	LOCATION-AWARE CACHING IN AN AERIAL NETWORK	Issued
L-14700-00-US	8996024	13/555,299	United States of America	VIRTUAL POOLING OF LOCAL RESOURCES IN A BALLOON NETWORK	Issued

L-14711-00-US	8918047	13/532,884	United States of America	USE OF SATELLITE-BASED ROUTING PROCESSES WITH A BALLOON NETWORK	Issued
L-15605-00-BR		112015006932-0	Brazil	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Pending
L-15605-00-CN	ZL2013800596615	201380059661.5	China	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-15605-00-EP	2901173	13841825.6	European Patent Office	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-15605-00-US	9285450	13/628,990	United States of America	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-15605-00-US-CON	10162044	15/019,772	United States of America	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-16624-00-US	8971274	13/673,700	United States of America	VALUATION OF AND MARKETPLACE FOR INTER-NETWORK LINKS BETWEEN BALLOON NETWORK AND...	Issued
L-16624-00-US-CON	9300481	14/609,813	United States of America	VALUATION OF AND MARKETPLACE FOR INTER-NETWORK LINKS BETWEEN BALLOON NETWORK AND...	Issued
L-16624-00-US-CON2	9848335	15/050,071	United States of America	VALUATION OF AND MARKETPLACE FOR INTER-NETWORK LINKS BETWEEN A HIGH-ALTITUDE NET...	Issued
L-16624-00-US-CON3	10045223	15/679,145	United States of America	VALUATION OF AND MARKETPLACE FOR INTER-NETWORK LINKS BETWEEN A HIGH-ALTITUDE NET...	Issued
L-16626-00-US	9203148	13/729,219	United States of America	EXPANDABLE ANTENNA STRUCTURE	Issued
L-16628-00-US	9106336	13/618,365	United States of America	PHOTO-SENSOR ARRAY TO ADJUST ALIGNMENT OF OPTICAL RECEIVER	Issued
L-16628-00-US-CON	9525484	14/795,875	United States of America	PHOTO-SENSOR ARRAY TO ADJUST ALIGNMENT OF OPTICAL RECEIVER	Issued
L-16729-00-DE	602013027318.9	13860264.4	Germany	METHOD FOR ENSURING DATA LOCALIZATION ON AN AD HOC MOVING DATA NETWORK	Issued
L-16729-00-FR	2926581	13860264.4	France	METHOD FOR ENSURING DATA LOCALIZATION ON AN AD HOC MOVING DATA NETWORK	Issued

L-16729-00-GB	2926581	13860264.4	United Kingdom	METHOD FOR ENSURING DATA LOCALIZATION ON AN AD HOC MOVING DATA NETWORK	Issued
L-16729-00-US	9532174	13/692,957	United States of America	METHOD FOR ENSURING DATA LOCALIZATION ON AN AD HOC MOVING DATA NETWORK	Issued
L-16729-00-US-CON		15/350,209	United States of America	METHOD FOR ENSURING DATA LOCALIZATION ON AN AD HOC MOVING DATA NETWORK	Pending
L-16729-01-US	9520940	13/714,947	United States of America	METHOD FOR PREVENTING STORAGE OF PROHIBITED DATA ON AN AD HOC MOVING DATA NETWORK...	Issued
L-16729-01-US-CON	10123255	15/356,746	United States of America	METHOD FOR PREVENTING STORAGE OF PROHIBITED DATA ON AN AD HOC MOVING DATA NETWORK...	Issued
L-16883-02-US	9635706	13/732,546	United States of America	METHOD FOR DETERMINING FLEET CONTROL POLICIES TO SATISFY A SEQUENCE OF COVERAGE ...	Issued
L-17886-00-AU	2014263065	2014263065	Australia	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Issued
L-17886-00-BR		1120150283 20-9	Brazil	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Pending
L-17886-00-CA	2911509	2,911,509	Canada	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Issued
L-17886-00-CN	ZL14800395 95.X	2014800395 95.X	China	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Issued
L-17886-00-DE	6021403611 3.7	14795373.1	Germany	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Issued
L-17886-00-FR	2994958	14795373.1	France	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Issued
L-17886-00-GB	2994958	14795373.1	United Kingdom	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Issued
L-17886-00-US	9093754	13/892,161	United States of America	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Issued
L-17886-00-US-CON	9484625	14/749,477	United States of America	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Issued

L-18645-00-AU-DP	353835	201316208	Australia	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-AU-DP-DIV	354011	201410728	Australia	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-AU-DP-DIV2	354010	201410727	Australia	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-AU-DP-DIV3	354009	201410726	Australia	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-CA-DP	154183	154,183	Canada	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-CA-DP-DIV	157954	157,954	Canada	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-CA-DP-DIV3	157956	157,956	Canada	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-CA-DP-DIV2	157955	157,955	Canada	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-CN-DP	ZL201330594690.4	201330594690.4	China	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-DP	D741843	29/456,910	United States of America	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-DP-DIV	D790515	29/540,393	United States of America	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-DP-DIV2	D789915	29/540,400	United States of America	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-DP-DIV3	D901460	29/603,496	United States of America	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-00-EM-DP	001393573-0001	001393573-0001	European Union	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-01-CN-DP	ZL201330595803.2	201330595803.2	China	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-01-EM-DP	001393573-0002	001393573-0002	European Union	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued

L-18645-02-EM-DP	001393573-0003	001393573-0003	European Union	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18645-03-EM-DP	001393573-0004	001393573-0004	European Union	TERRESTRIAL UNIT FOR CONNECTIVITY TO A BALLOON NETWORK	Issued
L-18710-01-US	9830835	14/297,510	United States of America	DYNAMIC BALLOON NETWORK COVERAGE MAP	Issued
L-18710-01-US-CON	10629097	15/787,181	United States of America	DYNAMIC BALLOON NETWORK COVERAGE MAP	Issued
L-18710-01-US-CON2		16/819,491	United States of America	DYNAMIC BALLOON NETWORK COVERAGE MAP	Pending
L-18710-02-US	9628395	14/297,517	United States of America	INTERFACES FOR SERVICE REQUESTS IN A BALLOON NETWORK	Issued
L-18710-02-US-CON	10305742	15/450,299	United States of America	INTERFACES FOR SERVICE REQUESTS IN A BALLOON NETWORK	Issued
L-18710-02-US-CON2	10855544	16/376,474	United States of America	INTERFACES FOR SERVICE REQUESTS IN A BALLOON NETWORK	Issued
L-18710-02-US-CON3		17/079,638	United States of America	INTERFACES FOR SERVICE REQUESTS IN A BALLOON NETWORK	Pending
L-19480-00-AU	2014353535	2014353535	Australia	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-19480-00-BR		1120160046943	Brazil	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Pending
L-19480-00-DE	602014065533.5	14864205.1	Germany	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-19480-00-FR	3042217	14864205.1	France	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-19480-00-GB	3042217	14864205.1	United Kingdom	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-19480-00-US	9829561	14/018,153	United States of America	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-19480-00-US-CON	10324161	15/804,292	United States of America	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-19532-00-US	9318789	14/077,280	United States of America	SELF-LEVELING ANTENNA WITH ANTENNA SUSPENDED IN LIQUID	Issued

L-19609-00-US	10615873	14/132,300	United States of America	HYBRID RF/OPTICAL COMMUNICATIONS WITH RF SYSTEM THAT PROVIDES CONTINUOUS SERVICE...	Issued
L-19609-00-US-CON1		16/734,920	United States of America	COMMUNICATIONS SYSTEM THAT PROVIDES CONTINUOUS SERVICE	Pending
L-19609-00-US-CON2		16/735,010	United States of America	Communications System That Provides Continuous Service	Pending
L-19609-00-US-CON3		17/136,815	United States of America	Communications System That Provides Continuous Service	Pending
L-19633-00-AU	2014367088	2014367088	Australia	ADJUSTING BEAM WIDTH OF AIR TO GROUND COMMUNICATIONS BASED ON DISTANCE TO NEIGHB...	Issued
L-19633-00-BR		BR112016014330-2	Brazil	ADJUSTING BEAM WIDTH OF AIR-TO-GROUND COMMUNICATIONS BASED ON DISTANCE TO NEIGHB...	Pending
L-19633-00-CN	ZL201480073477.0	201480073477.0	China	ADJUSTING BEAM WIDTH OF AIR-TO-GROUND COMMUNICATIONS BASED ON DISTANCE TO NEIGHB...	Issued
L-19633-00-CN-DIV		201910202017.8	China	ADJUSTING BEAM WIDTH OF AIR-TO-GROUND COMMUNICATIONS BASED ON DISTANCE TO NEIGHB...	Pending
L-19633-00-IN		201647020245	India	ADJUSTING BEAM WIDTH OF AIR TO GROUND COMMUNICATIONS BASED ON DISTANCE TO NEIGHB...	Pending
L-19633-00-US	9847828	14/132,584	United States of America	ADJUSTING BEAM WIDTH OF AIR-TO-GROUND COMMUNICATIONS BASED ON DISTANCE TO NEIGHB...	Issued
L-19633-00-US-CON	10230453	15/810,539	United States of America	MAINTAINING CONTIGUOUS GROUND COVERAGE WITH HIGH ALTITUDE PLATFORMS	Issued
L-19633-00-US-CON2		16/277,014	United States of America	MAINTAINING CONTIGUOUS GROUND COVERAGE WITH HIGH ALTITUDE PLATFORMS	Pending
L-19633-00-US-CON2-DIV		16/707,010	United States of America	MAINTAINING CONTIGUOUS GROUND COVERAGE WITH HIGH ALTITUDE PLATFORMS	Pending
L-19634-00-US	9300388	14/133,216	United States of America	SYSTEMS AND METHODS FOR USING DIFFERENT BEAM WIDTHS FOR COMMUNICATIONS	Issued

				BETWEEN B...	
L-19634-00-US-CON	9590721	15/046,715	United States of America	SYSTEMS AND METHODS FOR USING DIFFERENT BEAM WIDTHS FOR COMMUNICATIONS BETWEEN B...	Issued
L-19790-00-US	9148215	14/097,621	United States of America	METHOD AND DEVICE FOR DETERMINING COMMUNICATION TIMING	Issued
L-22808-00-US	9478869	14/584,610	United States of America	ELECTRONIC DEVICES WITH HYBRID PATCH AND MONOPOLE ANTENNA FOR HIGH ALTITUDE PLAT...	Issued
L-23463-00-US	9622277	14/746,464	United States of America	COORDINATING BACKHAUL LINKS BETWEEN GROUND STATIONS AND AIRBORNE BACKHAUL NETWORK...	Issued
L-23463-00-US-CON	9848419	15/451,094	United States of America	COORDINATING BACKHAUL LINKS BETWEEN GROUND STATIONS AND AIRBORNE BACKHAUL NETWORK...	Issued
L-23472-00-US	9484634	14/727,582	United States of America	THREE DIMENSIONAL BOW TIE ANTENNA ARRAY WITH RADIATION PATTERN CONTROL FOR HIGH-...	Issued
L-24312-00-US	10574341	14/881,206	United States of America	CHANNEL RECONFIGURABLE MILLIMETER-WAVE RF SYSTEM	Issued
L-50476-00-US	10897303	16/674,662	United States of America	ANTENNA SYSTEM FOR PROVIDING COVERAGE FROM A HIGH-ALTITUDE PLATFORM	Issued
L-50476-00-US-CON		17/121,168	United States of America	ANTENNA SYSTEM FOR PROVIDING COVERAGE FROM A HIGH-ALTITUDE PLATFORM	Pending
L-50476-00-WO		PCT/US20/5888	PCT	ANTENNA SYSTEM FOR PROVIDING COVERAGE FROM A HIGH-ALTITUDE PLATFORM	Pending
L-50517-00-CA		3,087,814	Canada	BEAMFORMING CALIBRATION	Pending
L-50517-00-CN		201880073168.1	China	BEAMFORMING CALIBRATION	Pending
L-50517-00-EP		18877260.2	European Patent Office	BEAMFORMING CALIBRATION	Pending
L-50517-00-JP		2020-523441	Japan	BEAMFORMING CALIBRATION	Pending
L-50517-00-US	10305608	15/810,659	United States of	BEAMFORMING CALIBRATION	Issued

			America		
L-50517-01-US	10305564	15/810,753	United States of America	BEAMFORMING CALIBRATION	Issued
L-50517-02-US	10305609	15/810,841	United States of America	BEAMFORMING CALIBRATION	Issued
L-50517-03-US	10734721	15/810,909	United States of America	BEAMFORMING CALIBRATION	Issued
L-50517-03-US-CON	10910711	15/931,931	United States of America	BEAMFORMING CALIBRATION	Issued
L-50517-03-US-CON2		16/950,539	United States of America	BEAMFORMING CALIBRATION	Pending
L-50629-00-PR		63/043,948	United States of America	REDUCED FORWARDING RULES FOR AEROSPACE NETWORK NODES	Pending
L-50629-00-US		17/146,506	United States of America	REDUCED FORWARDING RULES FOR AEROSPACE NETWORK NODES	Pending
L-50770-00-US		16/221,920	United States of America	HIGH ALTITUDE PLATFORM BEAM ARRANGEMENT	Pending
L-50770-00-WO		PCT/US19/65451	PCT	HIGH ALTITUDE PLATFORM BEAM ARRANGEMENT	Pending
L-50822-00-US	10805807	16/704,022	United States of America	COORDINATION OF SPECTRUM ALLOCATION AND INTERFERENCE AVOIDANCE AMONG HIGH-ALTITU...	Issued
L-50822-00-US-CON		17/016,552	United States of America	COORDINATION OF SPECTRUM ALLOCATION AND INTERFERENCE AVOIDANCE AMONG HIGH-ALTITU...	Pending
L-50822-00-WO		PCT/US20/63067	PCT	COORDINATION OF SPECTRUM ALLOCATION AND INTERFERENCE AVOIDANCE AMONG HIGH-ALTITU...	Pending
L-50901-00-US		16/223,935	United States of America	MULTI-BAND TRANSMIT-RECEIVE USING CIRCULAR POLARIZATION	Pending
L-50901-00-WO		PCT/US19/66573	PCT	MULTI-BAND TRANSMIT-RECEIVE USING CIRCULAR POLARIZATION	Pending
L-50926-00-US	10785664	16/222,550	United States of America	PARAMETER SELECTION FOR NETWORK COMMUNICATION LINKS USING REINFORCEMENT	Issued

				LEARNING	
L-50926-00-US-CON		16/998,102	United States of America	PARAMETER SELECTION FOR NETWORK COMMUNICATION LINKS USING REINFORCEMENT LEARNING	Pending
L-50926-00-WO		PCT/US19/65698	PCT	PARAMETER SELECTION FOR NETWORK COMMUNICATION LINKS USING REINFORCEMENT LEARNING	Pending
L-52000-00-US	10925114	16/679,961	United States of America	REMOTE MONITORING OF GEOGRAPHICALLY DISTRIBUTED ASSETS USING MOBILE PLATFORMS	Issued
L-52000-00-US-CON		17/144,182	United States of America	REMOTE MONITORING OF GEOGRAPHICALLY DISTRIBUTED ASSETS USING MOBILE PLATFORMS	Pending
L-52000-00-WO		PCT/US20/59626	PCT	REMOTE MONITORING OF GEOGRAPHICALLY DISTRIBUTED ASSETS USING MOBILE PLATFORMS	Pending
L-52029-00-WO		PCT/US20/63800	PCT	DELIVERING CONNECTIVITY TO A SERVICE AREA BY AERIAL VEHICLES USING PROBABILISTIC...	Pending
L-52049-00-US		16/838,077	United States of America	CONTROLLING ANTENNA BEAM GENERATION TO COMPENSATE FOR MOTION OF A HIGH-ALTITUDE ...	Pending
L-52050-00-US	11024957	16/838,062	United States of America	Triggered Generation of Nulling Signals to Null an RF Beam Using a Detachable Nu...	Allowed
L-52060-00-US	11012874	16/837,646	United States of America	METHOD AND APPARATUS FOR DETECTING AND RESPONDING TO A DISRUPTION IN COMMUNICATI...	Issued
L-52060-00-US-CON		17/232,230	United States of America	METHOD AND APPARATUS FOR DETECTING AND RESPONDING TO A DISRUPTION IN COMMUNICATI...	Pending
L-52072-00-US		16/986,527	United States of America	ANTENNA SYSTEM INCLUDING SPHERICAL REFLECTOR WITH METAMATERIAL EDGES	Lapsed

L-52073-00-WO		PCT/US21/70176	PCT	Distribution of location Information to AID User Equipment Link with Moving Non-Terrestrial Network Nodes	Pending
L-52092-00-US		17/069,582	United States of America	Simulating a Dynamic Hybrid Network	Pending
L-13389-00-EP	2803149	13736223.2	European Patent Office	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Lapsed
L-13389-00-WO		PCT/US2013/020705	PCT	BALLOON NETWORK WITH FREE-SPACE OPTICAL COMMUNICATION BETWEEN SUPER-NODE BALLOON...	Lapsed
L-13393-00-EP	2803148	13735953.5	European Patent Office	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Lapsed
L-13393-00-WO		PCT/US2013/020538	PCT	USING PREDICTED MOVEMENT TO MAINTAIN OPTICAL-COMMUNICATION LOCK WITH NEARBY BALL...	Lapsed
L-13394-00-EP	2856664	13797239.4	European Patent Office	LOCATION-AWARE "GHOST" PROFILES IN A BALLOON NETWORK	Lapsed
L-13394-00-WO		PCT/US2013/043137	PCT	LOCATION-AWARE "GHOST" PROFILES IN A BALLOON NETWORK	Lapsed
L-15605-00-FR	2901173	13841825.6	France	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Issued
L-15605-00-WO		PCT/US2013/050493	PCT	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Lapsed
L-16729-00-EP	2926581	13860264.4	European Patent Office	METHOD FOR ENSURING DATA LOCALIZATION ON AN AD HOC MOVING DATA NETWORK	Lapsed
L-16729-00-US-CON2		17/220,955	United States of America	METHOD FOR ENSURING DATA LOCALIZATION ON AN AD HOC MOVING DATA NETWORK	Pending
L-16729-00-WO		PCT/US2013/069892	PCT	METHOD FOR ENSURING DATA LOCALIZATION ON AN AD HOC MOVING DATA NETWORK	Lapsed
L-16729-01-EP		13862768.2	European Patent Office	METHOD FOR PREVENTING STORAGE OF PROHIBITED DATA ON AN AD HOC MOVING DATA NETWORK...	Abandoned

L-16729-01-WO		PCT/US2013/069866	PCT	METHOD FOR PREVENTING STORAGE OF PROHIBITED DATA ON AN AD HOC MOVING DATA NETWORK...	Lapsed
L-17886-00-EP	2994958	14795373.1	European Patent Office	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Lapsed
L-17886-00-WO		PCT/US2014/035085	PCT	DYNAMICALLY ADJUSTING WIDTH OF BEAM BASED ON ALTITUDE	Lapsed
L-18710-01-PR		61/831,505	United States of America	INTERFACES FOR A BALLOON NETWORK	Lapsed
L-19480-00-CN		201480048722.2	China	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Abandoned
L-19480-00-EP	3042217	14864205.1	European Patent Office	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Lapsed
L-19480-00-WO		PCT/US2014/054064	PCT	BALLOON-BASED POSITIONING SYSTEM AND METHOD	Lapsed
L-19633-00-WO		PCT/US2014/065894	PCT	ADJUSTING BEAM WIDTH OF AIR-TO-GROUND COMMUNICATIONS BASED ON DISTANCE TO NEIGHB...	Lapsed
L-50517-00-WO		PCT/US2018/059185	PCT	BEAMFORMING CALIBRATION	Lapsed
L-50629-00-WO		PCT/US21/35182	PCT	REDUCED FORWARDING RULES FOR AEROSPACE NETWORK NODES	Pending
L-50770-00-EP		19900161.1	European Patent Office	HIGH ALTITUDE PLATFORM BEAM ARRANGEMENT	Pending
L-50926-00-EP		19899487.3	European Patent Office	PARAMETER SELECTION FOR NETWORK COMMUNICATION LINKS USING REINFORCEMENT LEARNING	Pending
L-52029-00-US		16/728,771	United States of America	DELIVERING CONNECTIVITY TO A SERVICE AREA BY AERIAL VEHICLES USING PROBABILISTIC...	Pending
L-52049-00-WO		PCT/US21/22936	PCT	CONTROLLING ANTENNA BEAM GENERATION TO COMPENSATE FOR MOTION OF A HIGH-ALTITUDE ...	Pending
L-52050-00-US-CON		17/232,213	United States of America	Triggered Generation of Nulling Signals to Null an RF Beam Using a Detachable Nu...	Pending
L-52050-00-WO		PCT/US21/23244	PCT	Triggered Generation of Nulling Signals to Null an RF Beam Using a Detachable Nu...	Pending

L-52060-00-WO		PCT/US21/70177	PCT	METHOD AND APPARATUS FOR DETECTING AND RESPONDING TO A DISRUPTION IN COMMUNICATI...	Pending
L-52072-00-US-CON		17/029,904	United States of America	ANTENNA SYSTEM INCLUDING SPHERICAL REFLECTOR WITH METAMATERIAL EDGES	Pending
L-52073-00-PR		62/979,498	United States of America	Distribution of location Information to AID User Equipment Link with Moving Non-Terrestiral Network Nodes	Pending
L-18710-00-PR		61/831,488	United States of America	INTERFACES FOR A BALLOON NETWORK	Lapsed