

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5823449

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	PATENT SECURITY AGREEMENT	
SEQUENCE:	1	
CONVEYING PARTY DATA		
	Name	Execution Date
	ATC TECHNOLOGIES, LLC	11/14/2019
RECEIVING PARTY DATA		
Name:	CREDIT SUISSE AG, CAYMAN ISLANDS BRANCH, AS COLLATERAL AGENT	
Street Address:	11 MADISON AVENUE	
City:	NEW YORK	
State/Country:	NEW YORK	
Postal Code:	10010	
PROPERTY NUMBERS Total: 11		
Property Type	Number	
Patent Number:	9380465	
Patent Number:	10397797	
Patent Number:	10340997	
Application Number:	16263994	
Application Number:	16264004	
Application Number:	16405369	
Application Number:	15265087	
Application Number:	15875601	
Application Number:	15997603	
Application Number:	15995788	
Application Number:	16516937	
CORRESPONDENCE DATA		
Fax Number:		
<i>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.</i>		
Phone:	800-494-5225	
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Address Line 1:	1025 VERMONT AVE NW, STE 1130	

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Address Line 2:	COGENCY GLOBAL INC.
Address Line 4:	WASHINGTON, D.C. 20005

ATTORNEY DOCKET NUMBER:	1153469 PAT 1L
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NAME OF SUBMITTER:	MACKENZIE KORF
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SIGNATURE:	/Mackenzie Korf/
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DATE SIGNED:	11/15/2019
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Total Attachments: 5

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source=US Patent Security Agreement (1L) [Executed 11.14.19]#page3.tif
source=US Patent Security Agreement (1L) [Executed 11.14.19]#page4.tif
source=US Patent Security Agreement (1L) [Executed 11.14.19]#page5.tif
source=US Patent Security Agreement (1L) [Executed 11.14.19]#page6.tif

PATENT SECURITY AGREEMENT

Patent Security Agreement, dated as of November 14, 2019, by ATC TECHNOLOGIES, LLC (the “Pledgor”), in favor of CREDIT SUISSE AG, CAYMAN ISLANDS BRANCH, in its capacity as Collateral Agent under the Security Agreement referred to below (in such capacity, the “Collateral Agent”).

WITNESSETH:

WHEREAS, the Pledgor is a party to a U.S. Security Agreement dated as of December 7, 2015 (as amended, amended and restated, supplemented or otherwise modified from time to time, the “Security Agreement”) in favor of the Collateral Agent pursuant to which the Pledgor is required to execute and deliver this Patent Security Agreement;

NOW, THEREFORE, in consideration of the premises and as consideration for the Loans previously made, the Pledgor hereby agrees with the Collateral Agent as follows:

SECTION 1. Defined Terms. Unless otherwise defined herein, terms defined in the Security Agreement and used herein have the meaning given to them in the Security Agreement or the Credit Agreement referred to in the Security Agreement.

SECTION 2. Grant of Security Interest in Patent Collateral. The Pledgor hereby pledges and grants to the Collateral Agent for the benefit of the Secured Parties a lien on and security interest in and to all of its right, title and interest in, to and under all the following Pledged Collateral of the Pledgor:

- (a) Patents of the Pledgor listed on Schedule I attached hereto; and
- (b) all Proceeds of any and all of the foregoing (other than Excluded Property).

SECTION 3. Security Agreement. The security interest granted pursuant to this Patent Security Agreement is granted in conjunction with the security interest granted to the Collateral Agent pursuant to the Security Agreement and the Pledgor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the security interest in the Patents made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. In the event that any provision of this Patent Security Agreement is deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall control unless the Collateral Agent shall otherwise determine.

SECTION 4. Termination. Upon the payment in full of the Secured Obligations and termination of the Security Agreement, the Collateral Agent shall execute, acknowledge, and deliver to the Pledgor an instrument in writing in recordable form releasing the collateral pledge, grant, assignment, lien and security interest in the Patents under this Patent Security Agreement.

SECTION 5. Counterparts. This Patent Security Agreement may be executed in any number of counterparts, all of which shall constitute one and the same instrument, and any party hereto may execute this Patent Security Agreement by signing and delivering one or more counterparts.

[Signature page follows]

IN WITNESS WHEREOF, the Pledgor has caused this Patent Security Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

Very truly yours,

ATC TECHNOLOGIES, LLC,
as the Pledgor

By: _____

Name: Elizabeth Greary

Title: VP & Assistant Secretary

Accepted and Agreed:

CREDIT SUISSE AG, CAYMAN ISLANDS BRANCH,
as Collateral Agent

By: _____

Name:

Title:

IN WITNESS WHEREOF, the Pledgor has caused this Patent Security Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

Very truly yours,

ATC TECHNOLOGIES, LLC,
as the Pledgor

By: _____
Name: Elizabeth Creary
Title: VP & Assistant Secretary

Accepted and Agreed:

CREDIT SUISSE AG, CAYMAN ISLANDS BRANCH,
as Collateral Agent

By: _____
Name: Bryan J. Matthews
Title: Authorized Signatory

Didier Siffer
Authorized Signatory

SCHEDULE I
to
PATENT SECURITY AGREEMENT
PATENT REGISTRATIONS AND PATENT APPLICATIONS

UNITED STATES PATENTS:

Title	Owner¹	Patent No.	Issue Date
Network Design in Wireless Communications	ATC Technologies, LLC	9,380,465	6/28/2016
Devices, systems and methods for resource allocation of share spectrum	ATC Technologies, LLC	10,397,797	08/27/2019
Same channel repeater for satellite and terrestrial links	ATC Technologies, LLC	10,340,997	07/02/2019

UNITED STATES PATENT APPLICATIONS:

Title	Owner	Application No.	Filing Date
Network Device Data Exchange Coordination	ATC Technologies, LLC	62/625,422 16/263,994 (non-provisional)	2/2/2018 01/31/2019
Application Service Virtual Circuit	ATC Technologies, LLC	62/625,416 16/264,004 (non-provisional)	2/2/2018 01/31/2019
Devices, Systems, and Methods for Uplink Synchronization in Time Division Multiple Access (TDMA) Satellite Network	ATC Technologies, LLC	62/667,940 16/405,369 (non-provisional)	05/07/2018 05/07/2019
Systems and Methods for Frequency Drift Compensation for Radio Receivers	ATC Technologies, LLC	62/220,394 15/265,087 (non-provisional)	09/18/2015 9/14/2016
Systems and Methods for Weather Satellite Content Delivery	ATC Technologies, LLC	62/598,790 15/875,601 (non-provisional)	12/14/2017 1/19/2018
Wireless Communication System with Dynamic Spectrum Sharing	ATC Technologies, LLC	62/514,518 15/997,603(non-provisional)	6/2/2017 06/04/2018
Methods and Systems for Channel Access in Dynamic Spectrum Sharing	ATC Technologies, LLC	62/514,512 62/623,722 15/995,788(non-provisional)	06/2/2017 01/30/2018 06/01/2018
Devices, Systems, and Methods for Autonomously landing Unmanned Aerial Vehicles with Collaborative Information Sharing	ATC Technologies, LLC	62/701,242 16/516,937(non-provisional)	0/7/20/2018 07/19/2019

¹ Note: All patents registered in the name of, and all patent applications initiated by, Ligado Networks LLC have been assigned to ATC Technologies, LLC, a wholly owned subsidiary of Ligado Networks LLC.,