

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT6368952

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST
CONVEYING PARTY DATA	
Name	Execution Date
JEFFERIES FINANCE LLC	10/23/2020
RECEIVING PARTY DATA	
Name:	ATC TECHNOLOGIES, LLC
Street Address:	1400 OPUS PLACE
Internal Address:	SUITE 600
City:	DOWNERS GROVE
State/Country:	ILLINOIS
Postal Code:	60515
PROPERTY NUMBERS Total: 194	
Property Type	Number
Patent Number:	6684057
Patent Number:	6785543
Patent Number:	6856787
Patent Number:	6859652
Patent Number:	6879829
Patent Number:	6892068
Patent Number:	6937857
Patent Number:	6999720
Patent Number:	7006789
Patent Number:	7031702
Patent Number:	7039400
Patent Number:	7062267
Patent Number:	7092708
Patent Number:	7113743
Patent Number:	7113778
Patent Number:	7149526
Patent Number:	7155340
Patent Number:	7174127
Patent Number:	7181161

Property Type	Number
Patent Number:	7203490
Patent Number:	7218931
Patent Number:	7295807
Patent Number:	7340213
Patent Number:	7418236
Patent Number:	7418263
Patent Number:	7421342
Patent Number:	7437123
Patent Number:	7447501
Patent Number:	7453396
Patent Number:	7453920
Patent Number:	7454175
Patent Number:	7558568
Patent Number:	7574206
Patent Number:	7577400
Patent Number:	7587171
Patent Number:	7593691
Patent Number:	7593724
Patent Number:	7593725
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Patent Number:	7596111
Patent Number:	7599656
Patent Number:	7603081
Patent Number:	7603117
Patent Number:	7606590
Patent Number:	7609666
Patent Number:	7620394
Patent Number:	7623859
Patent Number:	7623867
Patent Number:	7627285
Patent Number:	7634229
Patent Number:	7634234
Patent Number:	7636546
Patent Number:	7636566
Patent Number:	7636567
Patent Number:	7639981
Patent Number:	7653348
Patent Number:	7664460

Property Type	Number
Patent Number:	7696924
Patent Number:	7706746
Patent Number:	7706748
Patent Number:	7706826
Patent Number:	7738837
Patent Number:	7747229
Patent Number:	7751823
Patent Number:	7756490
Patent Number:	7783287
Patent Number:	7792069
Patent Number:	7792488
Patent Number:	7796985
Patent Number:	7796986
Patent Number:	7801520
Patent Number:	7813700
Patent Number:	7817967
Patent Number:	7831201
Patent Number:	7831202
Patent Number:	7831251
Patent Number:	7835760
Patent Number:	7856211
Patent Number:	7890050
Patent Number:	7890097
Patent Number:	7890098
Patent Number:	7899002
Patent Number:	7907893
Patent Number:	7907944
Patent Number:	7917135
Patent Number:	7925209
Patent Number:	7933552
Patent Number:	7953373
Patent Number:	7957694
Patent Number:	7970345
Patent Number:	7970346
Patent Number:	7974176
Patent Number:	7974575
Patent Number:	7974619
Patent Number:	7978135

Property Type	Number
Patent Number:	7979024
Patent Number:	7999735
Patent Number:	8014815
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Patent Number:	8055257
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Patent Number:	8270898
Patent Number:	8274925
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Patent Number:	8339308
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Patent Number:	8369775
Patent Number:	8369776
Patent Number:	8385924
Patent Number:	8412126
Patent Number:	8433241

Property Type	Number
Patent Number:	8494457
Patent Number:	8520561
Patent Number:	8526941
Patent Number:	8576769
Patent Number:	8594704
Patent Number:	8655398
Patent Number:	8670705
Patent Number:	8705436
Patent Number:	8744360
Patent Number:	8831122
Patent Number:	8923850
Patent Number:	9014619
Patent Number:	9037078
Patent Number:	RE42261
Patent Number:	RE43137
Patent Number:	RE45107
Patent Number:	D597988
Patent Number:	8022890
Patent Number:	9461806
Patent Number:	9271296
Patent Number:	9161312
Patent Number:	9820276
Patent Number:	10110288
Patent Number:	9380465
Patent Number:	10397797
Patent Number:	10340997
Patent Number:	10615866
Patent Number:	10531505
Patent Number:	10666316
Patent Number:	10677930
Patent Number:	8380186
Patent Number:	7444170
Patent Number:	5923648
Patent Number:	5982761
Patent Number:	5982813
Patent Number:	6016423
Patent Number:	6035039
Patent Number:	6058307

Property Type	Number
Patent Number:	6112083
Patent Number:	6112085
Patent Number:	6122671
Patent Number:	6130887
Patent Number:	6301232
Patent Number:	6449461
Patent Number:	6477370
Patent Number:	6522865
Patent Number:	6587443
Patent Number:	RE40078
Application Number:	62564643
Application Number:	62585927
Application Number:	62667940
Application Number:	62676542
Application Number:	62701242
Application Number:	16263994
Application Number:	16264004
Application Number:	16405369
Application Number:	15997603
Application Number:	15995788
Application Number:	16516937
Application Number:	16146661
Application Number:	15875601

CORRESPONDENCE DATA

Fax Number: (414)277-0656

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.

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Correspondent Name: MICHAEL BEST & FRIEDRICH LLP

Address Line 1: 790 N. WATER STREET

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ATTORNEY DOCKET NUMBER:	210638-9000
NAME OF SUBMITTER:	JODI ANDERSON
SIGNATURE:	/jodi anderson/
DATE SIGNED:	10/26/2020

Total Attachments: 21

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RELEASE OF SECURITY INTERESTS IN PATENTS

This RELEASE OF SECURITY INTERESTS IN PATENTS (this “Release”) is made as of October 23, 2020, by **JEFFERIES FINANCE LLC**, in its capacity as administrative agent and collateral agent for the Lenders under the Credit Agreement referred to below (the “Collateral Agent”) for the benefit of **ATC TECHNOLOGIES, LLC**, a Delaware limited liability company (the “Pledgor”). Capitalized terms used but not otherwise defined herein shall have the respective meanings ascribed thereto in the Security Agreement, Canadian Security Agreement or the Credit Agreement (each, as defined below) as applicable.

W I T N E S S E T H:

WHEREAS, the Pledgor and the Collateral Agent are parties to that certain (i) Junior Lien Loan Agreement, dated as of December 7, 2015 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Credit Agreement”); (ii) Security Agreement, dated as of December 7, 2015 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Security Agreement”); (iii) Patent Security Agreement, dated as of December 7, 2015 (the “Patent Security Agreement”), pursuant to which the Pledgor has granted to the Collateral Agent for the benefit of the Secured Parties a lien on and security interest in all of the right, title and interest of the Pledgor in, to and under the Pledged Collateral identified therein; (iv) Canadian Security Agreement, dated as of December 7, 2015 (the “Canadian Security Agreement”); and (v) Patent Security Agreement, dated December 7, 2015 (the “Canadian Patent Security Agreement”), pursuant to which the Pledgor has granted to the Collateral Agent for the benefit of the Secured Parties a lien on and security interest in all of the right, title and interest of the Pledgor in, to and under the Pledged Collateral identified therein (together with the Pledged Collateral under the Patent Security Agreement, the “Pledged Patent Collateral”); and

WHEREAS, the Pledgor has requested that the Collateral Agent release, and the Collateral Agent is willing to release its lien on and security interest in and under the Pledged Patent Collateral, including, without limitation, such lien and security interest on the patents set forth on Schedule I hereto (the “Released Collateral”).

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Collateral Agent hereby agrees as follows:

1. The Collateral Agent does hereby irrevocably terminate, release and discharge the entirety of any and all liens or security interests that it may have in, and all claims, whether presently existing or hereafter acquired or created, pursuant to the Security Agreement, the Patent Security Agreement, Canadian Security Agreement or the Canadian Patent Security Agreement to the Released Collateral, including, without limitation, all such liens, security interests and claims in the patents and patent applications set forth on Schedule I hereto, and all proceeds thereof, and any right, title or interest of the Collateral Agent in such Released Collateral shall hereby terminate, cease and become void. The Collateral Agent hereby assigns, transfers and conveys any and all right, title or interest of the Collateral Agent in the Released Collateral to the Pledgor.

2. The Collateral Agent hereby (i) authorizes Pledgor or Pledgor's authorized representative to record this Release with the U.S. Patent and Trademark Office, the Canadian Intellectual Property Office, and any and all similar foreign agencies, as applicable, and (ii) authorizes and requests that the U.S. Patent and Trademark Office, the Canadian Intellectual Property Office, and any and all similar foreign agencies, as applicable, note and record the existence of this Release hereby given.

3. This Release may be executed in any number of counterparts (including electronic transmission and facsimile counterparts), each of which when so executed and delivered shall be deemed an original, but all such counterparts together shall constitute but one and the same instrument.

[Signature page follows]

IN WITNESS WHEREOF, the undersigned has caused this Release of Security Interests in Patents to be executed and delivered as of the date first written above.

**JEFFERIES FINANCE LLC, as Collateral
Agent**

By: Paul Chisholm
Name: Paul Chisholm
Title: Managing Director

[SIGNATURE PAGE TO RELEASE OF SECURITY INTERESTS IN PATENTS]

PATENT
REEL: 054297 FRAME: 0453

SCHEDULE I to the Release of Security Interests in Patents

UNITED STATES PATENTS:

Patent Registrations

Title	Owner	Patent No.	Issue Date	Reel/Frame
Systems and Methods for Terrestrial Reuse of Cellular Satellite Frequency Spectrum	ATC Technologies, LLC	6684057	1/27/2004	037573/0963
Filters for Combined Radiotelephone/GPS Terminals	ATC Technologies, LLC	6785543	8/31/2004	037573/0963
Wireless Communications Systems and Methods Using Satellite- Linked Remote Terminal Interface Subsystems	ATC Technologies, LLC	6856787	2/15/2005	037573/0963
System and Method of Terrestrial Frequency Reuse Using Signal Attenuation and Dynamic	ATC Technologies, LLC	6859652	2/22/2005	037573/0963
Systems and Methods for Handover Between Space Based and Terrestrial Radioterminal Communications, and for Monitoring Terrestrially Reused Satellite Frequencies at a Radioterminal to Reduce Potential Interference	ATC Technologies, LLC	6879829	4/12/2005	037573/0963
Coordinated Satellite-Terrestrial Frequency Reuse	ATC Technologies, LLC	6892068	5/10/2005	037573/0963
Systems and Methods for Reducing Satellite Feeder Link Bandwidth/Carriers in Cellular Satellite Systems	ATC Technologies, LLC	6937857	8/30/2005	037573/0963
Spatial Guardbands for Terrestrial Reuse of Satellite Frequencies	ATC Technologies, LLC	6999720	2/14/2006	037573/0963
Space-Based Network Architectures for Satellite Radiotelephone Systems	ATC Technologies, LLC	7006789	2/28/2006	037573/0963
Additional Systems and Methods for Monitoring Terrestrially Reused Satellite Frequencies to Reduce Potential Interference	ATC Technologies, LLC	7031702	4/18/2006	037573/0963
Systems and Methods for Monitoring Terrestrially Reused Satellite Frequencies to Reduce Potential Interference	ATC Technologies, LLC	7039400	5/2/2006	037573/0963

Title	Owner	Patent No.	Issue Date	Reel/Frame
Methods and Systems for Modifying Satellite Antenna Cell Patterns in Response to Terrestrial Reuse of Satellite Frequencies	ATC Technologies, LLC	7062267	6/13/2006	037573/0963
Systems and Methods for Increasing Capacity and/or Quality of Service of Terrestrial Cellular and Satellite Systems Using Terrestrial Reception of Satellite Band Frequencies	ATC Technologies, LLC	7092708	8/15/2006	037573/0963
Systems and Methods for Inter-System Sharing of Satellite Communications Frequencies within a Common Footprint	ATC Technologies, LLC	7113743	9/26/2006	037573/0963
Aggregate Radiated Power Control for Multi-Band/Multi-Mode Satellite Radiotelephone Communications Systems and Methods	ATC Technologies, LLC	7113778	9/26/2006	037573/0963
Coordinated Satellite-Terrestrial Frequency Reuse	ATC Technologies, LLC	7149526	12/12/2006	037573/0963
Network-Assisted Global Positioning Systems, Methods and Terminals Including Doppler Shift and Code Phase Estimates	ATC Technologies, LLC	7155340	12/26/2006	037573/0963
Data Communications Systems and Methods Using Different Wireless Links for Inbound and Outbound Data	ATC Technologies, LLC	7174127	2/6/2007	037573/0963
Multi-Band/Multi-Mode Satellite Radiotelephone Communications Systems and Methods	ATC Technologies, LLC	7181161	2/20/2007	037573/0963
Satellite Assisted Push-To-Send Radioterminal Systems and Methods	ATC Technologies, LLC	7203490	4/10/2007	037573/0963
Satellite Radiotelephone Systems Providing Staggered Sectorization for Terrestrial Reuse of Satellite Frequencies and Related Methods and Radiotelephone Systems	ATC Technologies, LLC	7218931	5/15/2007	037573/0963
Methods and Systems for Modifying Satellite Antenna Cell Patterns in Response to Terrestrial Use of Satellite Frequencies	ATC Technologies, LLC	7295807	11/13/2007	037573/0963
Intra-and/or Inter-System Interference Reducing Systems and Methods for Satellite Communications Systems	ATC Technologies, LLC	7340213	3/4/2008	037573/0963
Extraterrestrial Communications Systems and Methods Including Ancillary Extraterrestrial Components	ATC Technologies, LLC	7418236	8/26/2008	037573/0963
Systems And Methods for Handover Between Space Based And Terrestrial Radioterminal Communications	ATC Technologies, LLC	7418263	8/26/2008	037573/0963

Title	Owner	Patent No.	Issue Date	Reel/Frame
Network-Assisted Global Positioning Systems, Methods and Terminals Including Doppler Shift and Code Phase Estimates	ATC Technologies, LLC	7421342	9/2/2008	037573/0963
Space-Based Network Architectures for Satellite Radiotelephone Systems	ATC Technologies, LLC	7437123	10/14/2008	037573/0963
Systems and Methods for Monitoring Selected Terrestrially Reused Satellite Frequency Signals to Reduce Potential Interference	ATC Technologies, LLC	7447501	11/4/2008	037573/0963
Radioterminals and Associated Operating Methods that Alternate Transmission of Wireless Communications and Processing of Global Positioning System Signals	ATC Technologies, LLC	7453396	11/18/2008	037573/0963
Code Synchronization in CDMA Satellite Wireless Communications System Using Uplink Channel Detection	ATC Technologies, LLC	7453920	11/18/2008	037573/0963
Broadband Wireless Communications Systems and Methods Using Multiple Non-Contiguous Frequency Bands/Segments	ATC Technologies, LLC	7454175	11/18/2008	037573/0963
Systems and Methods for Modifying Antenna Radiation Patterns of Peripheral Base Stations of Terrestrial Network to Allow Reduced Interference	ATC Technologies, LLC	7558568	7/7/2009	037573/0963
Systems and Methods for Reducing Satellite Feeder Link Bandwidth/Carriers in Cellular Satellite Systems	ATC Technologies, LLC	7574206	8/11/2009	037573/0963
Integrated or Autonomous System and Method of Satellite- Terrestrial Frequency Reuse Using Signal Attenuation and/or Blockage, Dynamic Assignment of Frequencies and/or Hysteresis	ATC Technologies, LLC	7577400	8/18/2009	037573/0963
Reducing Interference in a Wireless Communications Signal in the Frequency Domain	ATC Technologies, LLC	7587171	9/8/2009	037573/0963
Systems And Methods For Controlling A Level Of Interference To A Wireless Receiver Responsive To A Power Level Associated With A Wireless Transmitter	ATC Technologies, LLC	7593691	9/22/2009	037573/0963
Systems and Methods for Terrestrial Reuse of Cellular Satellite Frequency Spectrum in a Time-Division Duplex Mode	ATC Technologies, LLC	7593724	9/22/2009	037573/0963
SYSTEMS AND METHODS FOR MONITORING SELECTED TERRESTRIALLY USED SATELLITE FREQUENCY SIGNALS TO REDUCE POTENTIAL INTERFERENCE	ATC Technologies, LLC	7593725	9/22/2009	037573/0963
Coordinated Satellite-Terrestrial Frequency Reuse	ATC Technologies, LLC	7593726	9/22/2009	037573/0963
Satellite/Terrestrial Wireless Communications Systems and Methods Using Disparate Channel Separation Codes	ATC Technologies, LLC	7596111	9/29/2009	037573/0963

Title	Owner	Patent No.	Issue Date	Reel/Frame
Spatial Guardbands for Terrestrial Reuse of Satellite Frequencies	ATC Technologies, LLC	7599656	10/6/2009	037573/0963
Radiotelephones and Operating Methods that Use a Single Radio Frequency Chain and a Single Baseband Processor for Space-based and terrestrial Communications	ATC Technologies, LLC	7603081	10/13/2009	037573/0963
Systems and Methods for Terrestrial Use of Cellular Satellite Frequency Spectrum	ATC Technologies, LLC	7603117	10/13/2009	037573/0963
Satellite/Hands-Free Interlock Systems and/or Companion Devices for Radioterminals and Related Methods	ATC Technologies, LLC	7606590	10/20/2009	037573/0963
Methods and Systems Providing Adaptive Feeder Links for Ground Based Beam Forming and Related Systems and Satellites	ATC Technologies, LLC	7609666	10/27/2009	037573/0963
Reusing Frequencies of a Fixed and/or Mobile Communications System	ATC Technologies, LLC	7620394	11/17/2009	037573/0963
Additional Aggregate Radiated Power Control for Multi-Band/Multi-Mode Satellite Radiotelephone Communications Systems and Methods	ATC Technologies, LLC	7623859	11/24/2009	037573/0963
Satellite Communications Apparatus and Methods Using Asymmetrical Forward and Return Link Frequency Reuse	ATC Technologies, LLC	7623867	11/24/2009	037573/0963
Satellite Communications Systems and Methods with Distributed and/or Centralized Architecture Including Ground-Based Beam Forming	ATC Technologies, LLC	7627285	12/1/2009	037573/0963
Intra-System and/or Inter-System Reuse of Feeder Link Frequencies Including Interference Suppression Systems and Methods	ATC Technologies, LLC	7634229	12/15/2009	037573/0963
Prediction of Uplink Interference Potential Generated by an Ancillary Terrestrial Network and/or Radioterminals	ATC Technologies, LLC	7634234	12/15/2009	037573/0963
Satellite Communications Systems and Methods Using Diverse Polarizations	ATC Technologies, LLC	7636546	12/22/2009	037573/0963
Systems and Methods with Different Utilization of Satellite Frequency Bands by a Spaced-Based Network and an Ancillary Terrestrial Network	ATC Technologies, LLC	7636566	12/22/2009	037573/0963
Coordinated Satellite-Terrestrial Frequency Reuse	ATC Technologies, LLC	7636567	12/22/2009	037573/0963
Apparatus and Methods for Power Control in Satellite Communications Systems with Satellite-Linked Terrestrial Stations	ATC Technologies, LLC	7639981	12/29/2009	037573/0963
Satellite Communications Systems, Components and Methods for Operating Shared Satellite Gateways	ATC Technologies, LLC	7653348	1/26/2010	037573/0963

Title	Owner	Patent No.	Issue Date	Reel/Frame
Systems and Methods for Terrestrial Reuse of Cellular Satellite Frequency Spectrum in a Time-Division Duplex and/or Frequency-Division Duplex Mode	ATC Technologies, LLC	7664460	2/16/2010	037573/0963
RADIOTERMINALS AND ASSOCIATED OPERATING METHODS THAT TRANSMIT POSITION INFORMATION RESPONSIVE TO CHANGE/RATE OF CHANGE OF POSITION	ATC Technologies, LLC	7696924	4/13/2010	037573/0963
Integrated or Autonomous System and Method of Satellite- Terrestrial Frequency Reuse Using Signal Attenuation and/or Blockage, Dynamic Assignment of Frequencies and/or Hysteresis	ATC Technologies, LLC	7706746	4/27/2010	037573/0963
Methods of Ground Based Beamforming and On-Board Frequency Translation and Related Systems	ATC Technologies, LLC	7706748	4/27/2010	037573/0963
Aggregate Radiated Power Control for Multi-Band/Multi-Mode Satellite Radiotelephone Communications Systems and Methods	ATC Technologies, LLC	7706826	4/27/2010	037573/0963
Satellites Using Inter-Satellite Links to Create Indirect Feeder Link Paths	ATC Technologies, LLC	7738837	6/15/2010	037573/0963
Electronic Antenna Beam Steering Using Ancillary Receivers and Related Methods	ATC Technologies, LLC	7747229	6/29/2010	037573/0963
Systems and Methods for Controlling a Level of Interference to a Wireless Receiver Responsive to an Activity Factor Associated with a Wireless Transmitter	ATC Technologies, LLC	7751823	7/6/2010	037573/0963
Methods, Radioterminals, and Ancillary Terrestrial Components for Communicating Using Spectrum Allocated to Another Satellite Operator	ATC Technologies, LLC	7756490	7/13/2010	037573/0963
SATELLITE RADIOTELEPHONE SYSTEMS, METHODS, COMPONENTS AND DEVICES INCLUDING GATED RADIOTELEPHONE TRANSMISSIONS TO ANCILLARY TERRESTRIAL COMPONENTS	ATC Technologies, LLC	7783287	8/24/2010	037573/0963
Systems and Methods for Terrestrial Reuse of Cellular Satellite Frequency Spectrum Using Different Channel Separation Technologies in Forward and Reverse Links	ATC Technologies, LLC	7792069	9/7/2010	037573/0963
SYSTEMS AND METHODS FOR TRANSMITTING ELECTROMAGNETIC ENERGY OVER A WIRELESS CHANNEL HAVING SUFFICIENTLY WEAK MEASURED SIGNAL STRENGTH	ATC Technologies, LLC	7792488	9/7/2010	037573/0963
SYSTEMS AND METHODS FOR PACKING/UNPACKING SATELLITE SERVICE LINKS TO/FROM SATELLITE FEEDER LINKS	ATC Technologies, LLC	7796985	9/14/2010	037573/0963
Modification of Transmission Values to Compensate for Interference in Satellite Down-Link Communications	ATC Technologies, LLC	7796986	9/14/2010	037573/0963

Title	Owner	Patent No.	Issue Date	Reel/Frame
Methods and Systems for Configuring Satellite Antenna Cell Patterns in Response to Terrestrial Use of Satellite Frequencies	ATC Technologies, LLC	7801520	9/21/2010	037573/0963
Adaptive Beam Forming with Multi-User Detection and Interference Reduction in Satellite Communications Systems and Methods	ATC Technologies, LLC	7813700	10/12/2010	037573/0963
Communications Systems Including Adaptive Antenna Systems and Methods for Inter-System and Intra-System Interference Reduction	ATC Technologies, LLC	7817967	10/19/2010	037573/0963
Co-Channel Wireless Communication Methods and Systems Using Relayed Wireless Communications	ATC Technologies, LLC	7831201	11/9/2010	037573/0963
Satellite Communications Systems and Methods Using Substantially Co-Located Feeder Link Antennas	ATC Technologies, LLC	7831202	11/9/2010	037573/0963
Integrated or Autonomous System and Method of Satellite- Terrestrial Frequency Reuse Using Signal Attenuation and/or Blockage, Dynamic Assignment of Frequencies and/or Hysteresis	ATC Technologies, LLC	7831251	11/9/2010	037573/0963
SYSTEMS AND METHODS FOR FACILITATING COMMUNICATIONS OVER A SHARED CHANNEL	ATC Technologies, LLC	7835760	11/16/2010	037573/0963
BROADBAND WIRELESS COMMUNICATIONS SYSTEMS AND METHODS USING MULTIPLE NON-CONTIGUOUS FREQUENCY BANDS/SEGMENTS	ATC Technologies, LLC	7856211	12/21/2010	037573/0963
Methods of Reducing Interference Including Determination of Feeder Link Signal Error and Related Systems	ATC Technologies, LLC	7890050	2/15/2011	037573/0963
SYSTEMS AND METHODS FOR MONITORING SELECTED TERRESTRIALLY USED SATELLITE FREQUENCY SIGNALS TO REDUCE POTENTIAL INTERFERENCE	ATC Technologies, LLC	7890097	2/15/2011	037573/0963
Staggered Sectorization for Terrestrial Reuse of Satellite Frequencies	ATC Technologies, LLC	7890098	2/15/2011	037573/0963
SATELLITE/TERRESTRIAL WIRELESS COMMUNICATIONS SYSTEMS AND METHODS USING DISPARATE CHANNEL SEPARATION CODES	ATC Technologies, LLC	7899002	3/1/2011	037573/0963
Integrated or Autonomous System and Method of Satellite- Terrestrial Frequency Reuse Using Signal Attenuation and/or Blockage, Dynamic Assignment of Frequencies and/or Hysteresis	ATC Technologies, LLC	7907893	3/15/2011	037573/0963
Methods, Apparatus and Computer Program Products for Joint Decoding of Access Probes in a CDMA Communications System	ATC Technologies, LLC	7907944	3/15/2011	037573/0963
SATELLITE COMMUNICATIONS APPARATUS AND METHODS USING ASYMMETRICAL FORWARD AND RETURN LINK FREQUENCY REUSE	ATC Technologies, LLC	7917135	3/29/2011	037573/0963

Title	Owner	Patent No.	Issue Date	Reel/Frame
Systems and Methods for Inter-System Sharing of Satellite Communications Frequencies Within a Common Footprint	ATC Technologies, LLC	7925209	4/12/2011	037573/0963
Multi-Band Satellite and/or Ancillary Terrestrial Component Radioterminal Communications Systems and Methods with Combining Operation	ATC Technologies, LLC	7933552	4/26/2011	037573/0963
PREDICTION OF UPLINK INTERFERENCE POTENTIAL GENERATED BY AN ANCILLARY TERRESTRIAL NETWORK AND/OR RADIOTERMINALS	ATC Technologies, LLC	7953373	5/31/2011	037573/0963
Satellite-Band Spectrum Utilization for Reduced or Minimum Interference	ATC Technologies, LLC	7957694	6/7/2011	037573/0963
Systems and Methods Of Waveform and/or Information Splitting For Wireless Transmission of Information To One Or More Radioterminals Over A Plurality Of Transmission Paths and/or System Elements	ATC Technologies, LLC	7970345	6/28/2011	037573/0963
Methods of Reducing Interference Including Calculation of Weights Based on Errors and Related Systems	ATC Technologies, LLC	7970346	6/28/2011	037573/0963
Systems, Methods and Transceivers for Wireless Communications Over Discontiguous Spectrum Segments	ATC Technologies, LLC	7974176	7/5/2011	037573/0963
Methods of Reducing Interference Including Applying Weights to Provide Corrections Signals and Related Systems	ATC Technologies, LLC	7974575	7/5/2011	037573/0963
SYSTEMS AND METHODS FOR MOBILITY MANAGEMENT IN OVERLAID MOBILE COMMUNICATIONS SYSTEMS	ATC Technologies, LLC	7974619	7/5/2011	037573/0963
ANTENNA BEAM FORMING SYSTEMS/METHODS USING UNCONSTRAINED PHASE RESPONSE	ATC Technologies, LLC	7978135	7/12/2011	037573/0963
Systems and Methods for Satellite Forward Link Transmit Diversity Using Orthogonal Space Coding	ATC Technologies, LLC	7979024	7/12/2011	037573/0963
RADIOTERMINALS AND ASSOCIATED OPERATING METHODS THAT TRANSMIT POSITION INFORMATION RESPONSIVE TO RATE OF CHANGE OF POSITION	ATC Technologies, LLC	7999735	8/16/2011	037573/0963
Radioterminals Including Satellite Interlocks and Related Methods	ATC Technologies, LLC	8014815	9/6/2011	037573/0963
REUSING FREQUENCIES OF A FIXED AND/OR MOBILE COMMUNICATIONS SYSTEM	ATC Technologies, LLC	8023939	9/20/2011	037573/0963
SYSTEMS AND METHODS FOR CONTROLLING A CELLULAR COMMUNICATIONS SYSTEM RESPONSIVE TO A POWER LEVEL ASSOCIATED WITH A WIRELESS TRANSMITTER	ATC Technologies, LLC	8023954	9/20/2011	037573/0963

Title	Owner	Patent No.	Issue Date	Reel/Frame
SYSTEMS, METHODS AND DEVICES FOR REUSING SPECTRUM OF ANOTHER OPERATOR	ATC Technologies, LLC	8031646	10/4/2011	037573/0963
SYSTEMS AND METHODS FOR INTER-SYSTEM SHARING OF SATELLITE COMMUNICATIONS FREQUENCIES WITHIN A COMMON FOOTPRINT	ATC Technologies, LLC	8045975	10/25/2011	037573/0963
Radioterminals Including Satellite/Hands-Free Interlocks and Related Methods	ATC Technologies, LLC	8050674	11/1/2011	037573/0963
SYSTEMS AND METHODS WITH DIFFERENT UTILIZATION OF SATELLITE FREQUENCY BANDS BY A SPACE-BASED NETWORK AND AN ANCILLARY TERRESTRIAL NETWORK	ATC Technologies, LLC	8055257	11/8/2011	037573/0963
LOCATION-BASED BROADCAST MESSAGING FOR RADIOTERMINAL USERS	ATC Technologies, LLC	8064378	11/22/2011	037573/0963
SYSTEMS AND METHODS FOR REDUCING POWER ROBBING IMPACT OF INTERFERENCE TO A SATELLITE	ATC Technologies, LLC	8064824	11/22/2011	037573/0963
SYSTEMS AND METHODS FOR TERRESTRIAL REUSE OF CELLULAR SATELLITE FREQUENCY SPECTRUM IN A TIME-DIVISION DUPLEX MODE	ATC Technologies, LLC	8068828	11/29/2011	037573/0963
PREDICTION OF UPLINK INTERFERENCE POTENTIAL GENERATED BY AN ANCILLARY TERRESTRIAL NETWORK AND/OR RADIOTERMINALS	ATC Technologies, LLC	8073394	12/6/2011	037573/0963
Systems and Methods for Terrestrial Reuse of Cellular Satellite Frequency Spectrum in a Time-Division Duplex And/Or Frequency-Division Duplex Mode	ATC Technologies, LLC	8078101	12/13/2011	037573/0963
Systems and Methods for Forward Link Closed Loop Beamforming	ATC Technologies, LLC	8090041	1/3/2012	037573/0963
Co-Channel Wireless Communication Methods and Systems Using Relayed Wireless Communications	ATC Technologies, LLC	8108004	1/31/2012	037573/0963
SYSTEMS AND METHODS FOR MOBILITY MANAGEMENT IN OVERLAID MOBILE COMMUNICATIONS SYSTEMS	ATC Technologies, LLC	8131293	3/6/2012	037573/0963
Satellite-Band Spectrum Utilization for Reduced or Minimum Interference	ATC Technologies, LLC	8145126	3/27/2012	037573/0963
Systems and Methods for Orthogonal Frequency Division Multiple Access (OFDMA) Communications Over Satellite Links	ATC Technologies, LLC	8169955	5/1/2012	037573/0963
Satellite Assisted Radioterminal Communications Systems and Methods	ATC Technologies, LLC	8170474	5/1/2012	037573/0963
Frequency-Dependent Filtering for Wireless Communications Transmitters	ATC Technologies, LLC	8190114	5/29/2012	037573/0963

Title	Owner	Patent No.	Issue Date	Reel/Frame
Iterative Antenna Beam Forming Systems/Methods	ATC Technologies, LLC	8193975	6/5/2012	037573/0963
SATELLITE COMMUNICATIONS SYSTEMS AND METHODS USING RADIOTELEPHONE LOCATION-BASED BEAMFORMING	ATC Technologies, LLC	8238818	8/7/2012	037573/0963
SYSTEMS AND METHODS FOR INTER-SYSTEM SHARING OF SATELLITE COMMUNICATIONS FREQUENCIES WITHIN A COMMON FOOTPRINT	ATC Technologies, LLC	8238819	8/7/2012	037573/0963
SYSTEMS, METHODS AND COMPUTER PROGRAM PRODUCTS FOR MOBILITY MANAGEMENT IN HYBRID SATELLITE/TERRESTRIAL WIRELESS COMMUNICATIONS SYSTEMS	ATC Technologies, LLC	8249585	8/21/2012	037573/0963
Satellite Communications Systems and Methods Using Radiotelephone	ATC Technologies, LLC	8265549	9/11/2012	037573/0963
Systems and Methods for Modifying Antenna Radiation Patterns of Peripheral Base Stations of a Terrestrial Network to Allow Reduced Interference	ATC Technologies, LLC	8265637	9/11/2012	037573/0963
Satellite-band Spectrum Utilization for Reduced or Minimum Interference	ATC Technologies, LLC	8270898	9/18/2012	037573/0963
RETAINING TRAFFIC CHANNEL ASSIGNMENTS FOR SATELLITE TERMINALS TO PROVIDE LOWER LATENCY COMMUNICATION SERVICES	ATC Technologies, LLC	8274925	9/25/2012	037573/0963
Broadband Wireless Communications Systems and Methods Using Multiple Non-Contiguous Frequency Bands/Segments	ATC Technologies, LLC	8285225	10/9/2012	037573/0963
SYSTEMS AND METHODS FOR TERRESTRIAL REUSE OF CELLULAR SATELLITE FREQUENCY SPECTRUM IN A TIME-DIVISION DUPLEX MODE	ATC Technologies, LLC	8285278	10/9/2012	037573/0963
Antenna Beam Forming Systems, Methods and Devices Using Phase Adjusted Least Squares Beam Forming	ATC Technologies, LLC	8339308	12/25/2012	037573/0963
RADIOTERMINALS AND OPERATING METHODS THAT RECEIVE MULTIPLE MEASURES OF INFORMATION FROM MULTIPLE SOURCES	ATC Technologies, LLC	8340592	12/25/2012	037573/0963
INTEGRATED OR AUTONOMOUS SYSTEM AND METHOD OF SATELLITE-TERRESTRIAL FREQUENCY REUSE USING SIGNAL ATTENUATION AND/OR BLOCKAGE, DYNAMIC ASSIGNMENT OF FREQUENCIES AND/OR HYSTERESIS	ATC Technologies, LLC	8369775	2/5/2013	037573/0963
APPARATUS AND METHODS FOR POWER CONTROL IN SATELLITE COMMUNICATIONS SYSTEMS WITH SATELLITE-LINKED TERRESTRIAL STATIONS	ATC Technologies, LLC	8369776	2/5/2013	037573/0963

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SYSTEMS AND METHODS FOR FACILITATING COMMUNICATIONS OVER A SHARED CHANNEL	ATC Technologies, LLC	8385924	2/26/2013	037573/0963
COMMUNICATIONS SYSTEMS INCLUDING ADAPTIVE ANTENNA SYSTEMS AND METHODS FOR INTER-SYSTEM AND INTRA-SYSTEM INTERFERENCE REDUCTION	ATC Technologies, LLC	8412126	4/2/2013	037573/0963
Systems, Methods and Devices For Overlaid Operations of Satellite and Terrestrial Wireless Communications Systems	ATC Technologies, LLC	8433241	4/30/2013	037573/0963
SYSTEMS, METHODS AND TRANSCEIVERS FOR WIRELESS COMMUNICATIONS OVER DISCONTIGUOUS SPECTRUM SEGMENTS	ATC Technologies, LLC	8494457	7/23/2013	037573/0963
Systems, Methods and Network Components That Provide Different Satellite Spot Beam Return Carrier Groupings and Reuse Patterns	ATC Technologies, LLC	8520561	8/27/2013	037573/0963
Apparatus and Methods for Mobility Management in Hybrid Terrestrial-Satellite Mobile Communications System	ATC Technologies, LLC	8526941	9/3/2013	037573/0963
SYSTEMS AND METHODS FOR ADAPTIVE INTERFERENCE CANCELLATION BEAMFORMING	ATC Technologies, LLC	8576769	11/5/2013	037573/0963
Location-Based Broadcast Messaging for Radioterminal Users	ATC Technologies, LLC	8594704	11/26/2013	037573/0963
Communications Systems and Methods Including Emission Detection	ATC Technologies, LLC	8655398	2/18/2014	037573/0963
Additional Intra-and/or Inter-System Interference Reducing Systems and Methods for Satellite Communications Systems	ATC Technologies, LLC	8670705	3/11/2014	037573/0963
Adaptive Spotbeam Broadcasting, Systems, Methods and Devices for High Bandwidth Content Distribution Over Satellite	ATC Technologies, LLC	8705436	4/22/2014	037573/0963
ADAPTIVE BEAM FORMING WITH MULTI-USER DETECTION AND INTERFERENCE REDUCTION IN SATELLITE COMMUNICATION SYSTEMS AND METHODS	ATC Technologies, LLC	8744360	6/3/2014	037573/0963
SYSTEMS, METHODS AND TRANSCEIVERS OR WIRELESS COMMUNICATIONS OVER DISCONTIGUOUS SPECTRUM SEGMENTS	ATC Technologies, LLC	8831122	9/9/2014	037573/0963
Systems and Methods for Controlling Base Station Sectors to Reduce Potential Interference with Low Elevation Satellites	ATC Technologies, LLC	8923850	12/30/2014	037573/0963
Methods and Systems for Satellite Communications Employing Ground-Based Beam Forming with Spatially Distributed Hybrid Matrix Amplifiers	ATC Technologies, LLC	9014619	4/21/2015	037573/0963

Title	Owner	Patent No.	Issue Date	Reel/Frame
APPARATUS AND METHODS FOR POWER CONTROL IN SATELLITE COMMUNICATIONS SYSTEMS WITH SATELLITE-LINKED TERRESTRIAL STATIONS	ATC Technologies, LLC	9037078	5/19/2015	037573/0963
Wireless Communications Systems and Methods Using Satellite- Linked Remote Terminal Interface Subsystems	ATC Technologies, LLC	RE42261	3/29/2011	037573/0963
Filters for Combined Radiotelephone/GPS Terminals	ATC Technologies, LLC	RE43137	1/24/2012	037573/0963
Filters for Combined Radiotelephone/GPS Terminals	ATC Technologies, LLC	RE45107	9/2/2014	037573/0963
Mobile handset	ATC Technologies, LLC	D597988	8/11/2009	037573/0963
Miniaturized quadrifilar helix antenna	ATC Technologies, LLC	8022890	9/20/2011	037573/0963
PROVIDING DIFFERENT TRANSMIT AND/OR RECEIVE MODES IN DIFFERENT SECTORS OF A WIRELESS BASE STATION	ATC Technologies, LLC	9461806	10/4/2016	047463/0974 050195/0862
METHODS AND DEVICES FOR ALLOCATING RESOURCE BLOCKS IN AN LTE NETWORK	ATC Technologies, LLC	9271296	2/23/2016	047463/0974 050195/0862
POWER MODE FOR A COMMUNICATION DEVICE	ATC Technologies, LLC	9161312	10/13/2015	047463/0974 050195/0862
Wireless Networks, Devices and Methods that Establish Asymmetric Frequency Division Duplex (FDD) Links Using a Downlink Frequency Carrier and Multiple Uplink Frequency Carriers	ATC Technologies, LLC	9820276	11/14/2017	047463/0974 050195/0862
Frequency Division Duplex (FDD) Return Link Transmit Diversity Systems, Methods and Devices Using Forward Link Side Information	ATC Technologies, LLC	10110288	10/23/2018	047463/0974 050195/0862
Network Design in Wireless Communications	ATC Technologies, LLC	9380465	06/28/2016 Assigned 09/03/2019	047463/0974 050195/0862
Devices, Systems, and Methods for Resource Allocation of Shared Spectrum	ATC Technologies, LLC	10397797	08/27/2019	051026/0561
Same Channel Repeater for Satellite and Terrestrial Links	ATC Technologies, LLC	10340997	07/02/2019	051026/0561 049931/0188
Localized Content Delivery Platform	ATC Technologies, LLC	10615866	04/07/2020	051026/0561 050195/0862
Communicating with Unmanned Aerial Vehicle and Air Traffic Control	ATC Technologies, LLC	10531505B 2	01/07/2020	049931/0188
Wireless Communication Systems with Code-division Multiple Access and Interference Avoidance	ATC Technologies, LLC	10666316	05/26/2020	049931/0188
Systems and Methods for Frequency Drift Compensation for Radio Receivers	ATC Technologies, LLC	10677930	06/09/2020	047463/0974 050195/0862
Satellite with Different Size Service Link Antennas and Radioterminal Communication Methods Using the Same	ATC Technologies, LLC	8380186	2/19/2013	

Title	Owner	Patent No.	Issue Date	Reel/Frame
Co-Channel Wireless Communication Methods and Systems Using Nonsymmetrical Alphabets	ATC Technologies, LLC	7444170	10/28/2008	037573/0963
Methods of Dynamically Switching Return Channel Transmissions of Time-Division Multiple-Access (TDMA) Communication Systems Between Signalling Burst Transmissions and Message Transmissions	ATC Technologies, LLC	5923648	7/13/1999	037573/0963
Methods of Communicating Over Time-Division Multiple-Access (TDMA) Communication Systems with Distinct Non-Time- Critical and Time-Critical Network Management Information Transmission Rates	ATC Technologies, LLC	5982761	11/9/1999	037573/0963
Demand-Based Power and Data Rate Adjustments to a Transmitter to Optimize Channel Capacity and Power Usage with Respect to Data Transmission Traffic Over a Fixed-Bandwidth Channel	ATC Technologies, LLC	5982813	11/9/1999	037573/0963
Mobile Communicator System	ATC Technologies, LLC	6016423	1/18/2000	037573/0963
Fraud Detection and User Validation System for Mobile Earth Terminal Communication Device	ATC Technologies, LLC	6035039	3/7/2000	037573/0963
Priority and Preemption Service System for Satellite Related Communication Using Central Controller	ATC Technologies, LLC	6058307	5/2/2000	037573/0963
Full Service Dispatcher for Satellite Trunked Radio Service System	ATC Technologies, LLC	6112083	8/29/2000	037573/0963
Virtual Network Configuration and Management System for Satellite Communication System	ATC Technologies, LLC	6112085	8/29/2000	037573/0963
Mobile Communications from Computer Aided Dispatch System Via a Customer Premises Gateway for Satellite Communication System	ATC Technologies, LLC	6122671	9/19/2000	037573/0963
Methods of Dynamically Switching Return Channel Transmissions of Time-Division Multiple-Access (TDMA) Communication Systems Between Signalling Burst Transmissions and Message Transmissions	ATC Technologies, LLC	6130887	10/10/2000	037573/0963
Methods of Dynamically Switching Return Channel Transmissions of Time-Division Multiple-Access (TDMA) Communication Systems Between Signalling Burst Transmissions and Message Transmissions	ATC Technologies, LLC	6301232	10/9/2001	037573/0963

Title	Owner	Patent No.	Issue Date	Reel/Frame
System for Mobile Communications in Coexistence with Communication Systems Having Priority	ATC Technologies, LLC	6449461	9/10/2002	037573/0963
Improved Satellite Trunked Radio Service System	ATC Technologies, LLC	6477370	11/5/2002	037573/0963
Hybrid Satellite Communications System	ATC Technologies, LLC	6522865	2/18/2003	037573/0963
Methods of Communicating Over Time-Division Multiple-Access (TDMA) Communication Systems with Distinct Non-Time- Critical and Time-Critical Network Management Information Transmission Rates	ATC Technologies, LLC	6587443	7/1/2003	037573/0963
Demand-Based Power and Data Rate Adjustments to a Transmitter to Optimize Channel Capacity and Power Usage with Respect to Data Transmission Traffic Over a Fixed-Bandwidth Channel	ATC Technologies, LLC	RE40078	2/19/2008	037573/0963
Multipath TCP over Dual Networks	ATC Technologies, LLC	15/998,431 10,735,989	8/16/2018 08/04/2020	049931/0188 050195/0862 047463/0974
Dynamic Speed Control	ATC Technologies, LLC	16/117901 10,775,802	8/30/2018 09/15/2020	049931/0188 050195/0862 047463/0974
Systems and Methods for Locating and Resolving Base Station Interference with a Third-party Communication Device	ATC Technologies, LLC	62/564,643	9/28/2017	047463/0974
Localized Content Delivery Platform	ATC Technologies, LLC	62/585,927	11/14/2017	047463/0974
Devices, Systems, and Methods for Uplink Synchronization in Time Division Multiple Access Satellite Network	ATC Technologies, LLC	62/667,940	05/07/2018	049931/0188 051026/0561
Methods and Systems of Self- Organizing Satellite-Terrestrial Networks	ATC Technologies, LLC	62/676,542	05/25/2018	049931/0188
Landing Unmanned Aerial Vehicles (UAVs) with Collaborative Information Sharing	ATC Technologies, LLC	62/701,242	07/20/2018	049931/0188 051026/0561

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Title	Owner	Application No.	Filing Date	Reel/Frame
Systems and Methods for Frequency Drift Compensation for GPS Receivers	ATC Technologies LLC	15/265,087	September 14, 2016	051026/0561
Devices, Systems, and Methods for Resource Allocation of Shared Spectrum	ATC Technologies LLC	15/982,980 (non-provisional)	5/17/2018	051026/0561
Network Device Data Exchange Coordination	ATC Technologies, LLC	16/263,994	01/31/2019	051026/0561
Application Service Virtual Circuit	ATC Technologies, LLC	16/264,004	01/31/2019	051026/0561
Unmanned Aerial Systems	ATC Technologies LLC	15/954,001	04/16/2018	049931/0188
Devices, Systems, and Methods for Uplink Synchronization in Time Division Multiple Access (TDMA) Satellite Network	ATC Technologies LLC	16/405,369 (non-provisional)	05/07/2019	051026/0561
Wireless Communication System with Dynamic Spectrum Sharing	ATC Technologies LLC	15/997,603	06/04/2018	047463/0974
Devices, Systems and Methods for Channel Access in Dynamic Spectrum Sharing	ATC Technologies LLC	15/995,788	06/01/2018	051025/0561
Devices, Systems, and Methods for Autonomously Landing Unmanned Aerial Vehicles with Collaborative Information Sharing	ATC Technologies, LLC	16/516,937 (non-provisional)	07/19/2019	051025/0561
Multipath TCP over Dual Networks	ATC Technologies, LLC	15/998,431	08/16/2018	049931/0188 050195/0862 047463/0974
Dynamic Speed Control	ATC Technologies, LLC	16/117,901	08/30/2018	049931/0188 050195/0862 047463/0974
Systems and Methods for Locating and Resolving Base Station Interference with a Third-Party Communication Device	ATC Technologies, LLC	16/146,661	09/28/2018	049931/0188
Systems and Methods for Weather Satellite Content Delivery	ATC Technologies, LLC	15/875,601	1/19/2018	051026/0561

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Title	Owner	Patent No.	Issue Date
Coordinated Satellite-Terrestrial Frequency Reuse	ATC Technologies, LLC	2328003	9/20/2011
Coordinated Satellite-Terrestrial Frequency Reuse	ATC Technologies, LLC	2334447	5/10/2011
Coordinated Satellite-Terrestrial Frequency Reuse	ATC Technologies, LLC	2381811	1/30/2007
System and Method of Terrestrial Frequency Reuse Using Signal Attenuation and Dynamic Channel Assignment	ATC Technologies, LLC	2428702	7/24/2007
Systems and Methods for Terrestrial Reuse of Cellular Satellite Frequency Spectrum	ATC Technologies, LLC	2459549	10/23/2012
Spatial Guardbands for Terrestrial Reuse of Satellite Frequencies	ATC Technologies, LLC	2460323	1/3/2012
Systems and Methods for Monitoring Terrestrially Reused Satellite Frequencies to Reduce Potential Interference	ATC Technologies, LLC	2460325	6/1/2010
Multi-Band/Multi-Mode Satellite Radiotelephone Communications Systems and Methods	ATC Technologies, LLC	2460361	6/22/2010
Additional Systems and Methods for Monitoring Terrestrially Reused Satellite Frequencies to Reduce Potential Interference	ATC Technologies, LLC	2460491	1/11/2011
Space-Based Network Architectures for Satellite Radiotelephone Systems	ATC Technologies, LLC	2460494	6/8/2010
Methods and Systems for Modifying Satellite Antenna Cell Patterns in Response to Terrestrial Reuse of Satellite Frequencies	ATC Technologies, LLC	2460495	11/6/2012
Wireless Communications Systems and Methods Using Satellite- Linked Remote Terminal Interface Subsystems	ATC Technologies, LLC	2476191	5/29/2012
Systems and Methods for Reducing Satellite Feeder Link Bandwidth/Carriers in Cellular Satellite Systems	ATC Technologies, LLC	2484232	4/30/2013
Staggered Sectorization for Terrestrial Reuse of Satellite Frequencies	ATC Technologies, LLC	2489387	3/13/2012
Filters for Combined Radiotelephone/GPS Terminals	ATC Technologies, LLC	2489395	7/10/2012
Satellite Assisted Push-To-Send Radioterminal Systems and Methods	ATC Technologies, LLC	2516760	7/23/2013
Co-Channel Wireless Communication Methods and Systems Using Nonsymmetrical Alphabets	ATC Technologies, LLC	2517067	11/18/2014
Intra- and/or Inter-System Interference Reducing Systems and Methods for Satellite Communications Systems	ATC Technologies, LLC	2534079	4/16/2013
Systems and Methods for Modifying Antenna Radiation Patterns of Peripheral Base Stations of a Terrestrial Network to Allow Reduced Interference	ATC Technologies, LLC	2534269	9/30/2014
Systems and Methods for Mobility Management in Overlaid Mobile Communications Systems	ATC Technologies, LLC	2542027	4/30/2013
Systems and Methods for Inter-System Sharing of Satellite Communications Frequencies within a Common Footprint	ATC Technologies, LLC	2544567	5/27/2014
Radio Communications System and Method with Diversity Operation in a Multi-Band Satellite System with or without an Ancillary Terrestrial Component	ATC Technologies, LLC	2554584	9/18/2012

Title	Owner	Patent No.	Issue Date
Satellite/Hands-Free Interlock Systems and/or Companion Devices for Radioterminals and Related Methods	ATC Technologies, LLC	2554857	12/18/2012
Satellite Communications Systems, Components and Methods For Operating Shared Satellite Gateways	ATC Technologies, LLC	2581601	3/19/2013
Location-Based Broadcast Messaging for Radioterminal Users	ATC Technologies, LLC	2586024	4/8/2014
Adaptive Beam Forming with Multi-User Detection and Interference Reduction in Satellite Communication Systems and Methods	ATC Technologies, LLC	2588192	6/23/2015
Methods, Radioterminals, and Ancillary Terrestrial Components for Communication Using Spectrum Allocated to Another Satellite Operator	ATC Technologies, LLC	2600652	8/12/2014
Satellite Communications Apparatus and Methods Using Asymmetrical Forward and Return Link Frequency Reuse	ATC Technologies, LLC	2607301	6/3/2014
Satellite Communications Systems and Methods Using Substantially Co-Located Feeder Link Antennas	ATC Technologies, LLC	2607302	10/7/2014
Systems and Methods for Terrestrial Use of Cellular Satellite Frequency Spectrum	ATC Technologies, LLC	2718607	5/17/2011
Satellite Radiotelephone Systems, Methods, Components And Devices Including Gated Radiotelephone Transmissions To Ancillary Terrestrial Components	ATC Technologies, LLC	2718820	11/1/2011
Systems, Methods and Network components that provide different satellite spot beam return carrier groupings and reuse patterns	ATC Technologies, LLC	2753882	10/20/2015
Systems and Methods for Terrestrial Reuse of Cellular Satellite Frequency Spectrum in a Time-Division Duplex and/or Frequency-Division Duplex Mode	ATC Technologies, LLC	2588191	6/7/2016
Satellites Using Inter-Satellite Links to Create Indirect Feeder Link Paths	ATC Technologies, LLC	2597720	6/7/2016
Iterative Antenna Beam Forming Systems/Methods	ATC Technologies, LLC	2743289	6/14/2016
Prediction of Uplink Interference Potential Generated by an Ancillary Terrestrial Network and/or Radio Terminals	ATC Technologies, LLC	2586590	9/6/2016
Satellite-Band Spectrum Utilization for Reduced or Minimum Interference	ATC Technologies, LLC	2576521	9/20/2016
Co-Channel Wireless Communication Methods and Systems Using Nonsymmetrical Alphabets	ATC Technologies, LLC	2863514	10/11/2016
Co-Channel Wireless Communication Methods and Systems Using Nonsymmetrical Alphabets	ATC Technologies, LLC	2863510	11/15/2016
Systems, Methods And Devices For Overlaid Operation Of Satellite And Terrestrial Wireless Communications Systems	ATC Technologies, LLC	2732621	1/3/2017
Systems And Methods For Adaptive Interference Cancellation Beamforming	ATC Technologies, LLC	2769828	4/4/2017
Antenna Beam Forming Systems, Methods And Devices Using Phase Adjusted Least Squares Beam Forming	ATC Technologies, LLC	2755248	6/27/2017
Retaining Traffic Channel Assignments For Satellite Terminals To Provide Lower Latency Communication Services	ATC Technologies, LLC	2786105	12/12/2017
Network-Assisted Global Positioning Systems, Methods and Terminals Including Doppler Shift and Code Phase Estimates	ATC Technologies, LLC	2512271	12/19/2017

Title	Owner	Patent No.	Issue Date
Aggregate Radiated Power Control for Multi-band/Multi-mode Satellite Radiotelephone Communications Systems and Methods	ATC Technologies, LLC	2515209	2/13/2018
Frequency division duplex (FDD) return link transmit diversity systems, methods and devices using forward link side information	ATC Technologies, LLC	2785797	03/20/2018

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Title	Owner	Application No.	Filing Date
Localized Content Delivery Platform	ATC Technologies, LLC	3,082,851	May 14, 2020
Multi-path TCP Over Dual Networks	ATC Technologies, LLC	3,073,010	February 13, 2020
Systems And Methods For Locating And Resolving Inadvertent Interference With A Third-Party Communication Device	ATC Technologies, LLC	3,077,360	March 27, 2020
Wireless Communication System With Code-Division Multiple Access And Interference Avoidance	ATC Technologies, LLC	3,083,987	May 29, 2020
Methods and Devices for Allocating Resource Blocks in an LTE Network	ATC Technologies, LLC	2,899,193	03/04/2014
Wireless Networks, Devices and Methods that Establish Asymmetric Frequency Division Duplex (FDD) Links Using a Downlink Frequency Carrier and Multiple Uplink Frequency Carriers	ATC Technologies, LLC	2,878,445	06/18/2013
Aggregate Radiated Power Control for Multi-band/Multi-mode Satellite Radiotelephone Communications Systems and Methods	ATC Technologies, LLC	2,989,660	4/14/2004
System and Methods for Weather Satellite Content Delivery	ATC Technologies, LLC	2,992,779	1/23/2018
Systems and Methods for frequency drift compensation for radio receivers	ATC Technologies, LLC	3,009,003	12/21/2016
A same channel repeater for satellite and terrestrial links	ATC Technologies, LLC	3,023,461	5/8/2017
Devices, Methods, and Systems with Dynamic Spectrum Sharing	ATC Technologies, LLC	3,064,276	6/4/2018
Devices, Systems, and Methods for Resource Allocation of Shared Spectrum	ATC Technologies, LLC	3,059,966	5/17/2018

Title	Owner	Application No.	Filing Date
Devices, Systems, and Methods for Channel Access in Dynamic Spectrum Sharing	ATC Technologies, LLC	3,064,272	6/1/2018
Systems, Devices, and Methods for Vehicle Speed Control	ATC Technologies, LLC	3,074,504	8/30/2018