

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5232876

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
VONAGE BUSINESS INC.	11/06/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	JPMORGAN CHASE BANK, N.A., AS ADMINISTRATIVE AGENT
<b>Street Address:</b>	IL1-1145/54/63, P.O. BOX 6026
<b>City:</b>	CHICAGO
<b>State/Country:</b>	ILLINOIS
<b>Postal Code:</b>	60680-6026
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Patent Number:</b>	9491597
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(312)993-9767
<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>	
<b>Phone:</b>	3129932647
<b>Email:</b>	zeynep.gieseke@lw.com
<b>Correspondent Name:</b>	ZEYNEP GIESEKE
<b>Address Line 1:</b>	330 NORTH WABASH AVENUE, SUITE 2800
<b>Address Line 2:</b>	LATHAM & WATKINS LLP
<b>Address Line 4:</b>	CHICAGO, ILLINOIS 60611
<b>ATTORNEY DOCKET NUMBER:</b>	049067-0081
<b>NAME OF SUBMITTER:</b>	ZEYNEP GIESEKE
<b>SIGNATURE:</b>	/zg/
<b>DATE SIGNED:</b>	11/12/2018
<b>Total Attachments: 18</b>	
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## Patent Security Agreement

**Patent Security Agreement**, dated as of November 6, 2018, by NEXMO INC., VONAGE BUSINESS INC., VONAGE AMERICA INC. and TOKBOX, INC. (individually, a “Pledgor”, and, collectively, the “Pledgors”), in favor of JPMORGAN CHASE BANK, N.A., in its capacity as administrative agent pursuant to the Credit Agreement (in such capacity, the “Administrative Agent”).

### WITNESSETH:

WHEREAS, the Pledgors are party to a Second Amended and Restated Security Agreement of even date herewith (as amended, amended and restated, supplemented or otherwise modified from time to time, the “Security Agreement”) in favor of the Administrative Agent pursuant to which the Pledgors are required to execute and deliver this Patent Security Agreement;

NOW, THEREFORE, in consideration of the premises and to induce the Administrative Agent, for the benefit of the Secured Parties, to enter into the Credit Agreement, the Pledgors hereby agree with the Administrative 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.

SECTION 2. Grant of Security Interest in Patent Collateral. Each Pledgor hereby pledges and grants to the Administrative 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 Collateral of such Pledgor:

- (a) Patents of such Pledgor listed on Schedule I attached hereto;
- (b) all Proceeds of any and all of the foregoing (other than Excluded Property); and
- (c) all causes of action arising prior to or after the date hereof for infringement of such Patents or unfair competition regarding the same.

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 Administrative Agent pursuant to the Security Agreement and Pledgors hereby acknowledge and affirm that the rights and remedies of the Administrative 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 Administrative Agent shall otherwise determine.

SECTION 4. Termination. Upon the payment in full of the Secured Obligations and termination of the Security Agreement, the Administrative Agent shall execute, acknowledge, and deliver to the Pledgors 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.

SECTION 6. Governing Law. This Patent Security Agreement and the transactions contemplated hereby, and all disputes between the parties under or relating to this Patent Security Agreement or the facts or circumstances leading to its execution, whether in contract, tort or otherwise, shall be construed in accordance with and governed by the laws (including statutes of limitation) of the State of New York, without regard to conflicts of law principles that would require the application of the laws of another jurisdiction.

[signature page follows]

IN WITNESS WHEREOF, each 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,

VONAGE AMERICA INC.

By: 

Name: Randy Rutherford  
Title: Vice President & Secretary

VONAGE BUSINESS INC.


By: 

Name: Randy Rutherford

Title: Vice President & Secretary

NEXMO INC.


By:



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Name: Randy Rutherford  
Title: Vice President & Secretary

TOKBOX, INC.

By:   
Name: Randy Rutherford  
Title: Director



Accepted and Agreed:

JPMORGAN CHASE BANK, N.A.,  
as Administrative Agent

By: \_\_\_\_\_

Name: Min Park  
Title: Vice President

A handwritten signature in black ink, appearing to be 'Min Park', written over a horizontal line. The signature is stylized and extends to the right of the line.

[SIGNATURE PAGE TO PATENT SECURITY AGREEMENT]

**PATENT**  
**REEL: 047475 FRAME: 0667**

**SCHEDULE I**  
**to**  
**PATENT SECURITY AGREEMENT**  
**PATENT REGISTRATIONS AND PATENT APPLICATIONS**

**Patent Registrations:**

<b>OWNER</b>	<b>REGISTRATION NUMBER</b>	<b>TITLE</b>
Vonage America Inc.	4782485	Multiplexed Digital Packet Telephone System (EXPIRED)
Vonage America Inc.	5018136	Multiplexed Digital Packet Telephone System (EXPIRED)
Vonage America Inc.	5444707	Packet Switching Communication System (EXPIRED)
Vonage Business Inc.	5572349	Passive Optical Network (EXPIRED)
Vonage Business Inc.	6317234	Communications Network
Vonage Business Inc.	7386111	Method and Apparatus for Placing a Long Distance Call Based on a Virtual Phone Number
Vonage America Inc.	7417981	Method and Apparatus for Enhanced Internet Telephony
Vonage Business Inc.	7453990	Emergency Call Completion for VoIP Based on Location of Call Originator
Vonage Business Inc.	7680262	Method and Apparatus for Placing a Long Distance Call Based on a Virtual Phone Number
Vonage America Inc.	7693176	Method for Bi-Directional Data Transfer
Vonage America Inc.	7924822	Method and Apparatus for Enhanced Internet Telephony
Vonage Business Inc.	8064582	Method and Apparatus for Providing an Identifier for a Caller ID Function in a Telecommunications System
Vonage America Inc.	8073118	Providing Effective Advertising Via Synchronized Telephone and Data Streams
Vonage America Inc.	8073123	Method for Automated Management of a Telecommunication Service
Vonage America Inc.	8194843	Method and Apparatus for Overriding a Call Waiting Telephony Feature
Vonage Business Inc.	8213594	Method and Apparatus for Placing a Long Distance Call Based on a Virtual Phone Number
Vonage America Inc.	8223720	Systems and Methods for Handoff of Calls Between Internet Protocol Telephony Devices
Vonage America Inc.	8265083	Systems and Methods for Providing Telephony Services to Extension Telephones
Vonage America Inc.	8305933	Method and Apparatus for Device Discovery in a Local Area Network
Vonage Business Inc.	8306202	Method and System for Customized Caller Identification
Vonage Business Inc.	8320543	System for Effecting a Telephone Call Over a Computer Network Without Alphanumeric Keypad Operation
Vonage Business Inc.	8364700	Method and Apparatus for Rapid Data Access
Vonage Business Inc.	8374106	Method and Apparatus for Group Calling in an IP-based Communication System
Vonage America Inc.	8379571	Method and Apparatus for Provisioning Dual Mode Wireless Client Devices in a Telecommunications System
Vonage America Inc.	8379813	Apparatus and Method of Authorizing a Calling Card Telephone Call
Vonage America Inc.	8401528	Systems and Methods for Providing Telephony Services

<b>OWNER</b>	<b>REGISTRATION NUMBER</b>	<b>TITLE</b>
Vonage America Inc.	8433051	Method and Apparatus for Busy Override in an Internet Protocol-Based Telephone System
Vonage Business Inc.	8467354	Systems and Methods for Software-Implemented Telephony Devices in a Voice Over Internet Protocol (VoIP) System
Vonage Business Inc.	8472342	Systems and Methods of Routing IP Telephony Data Packet Communications
Vonage America Inc.	8478648	Apparatus and Method for Automated Inventory Tracking and Authentication
Vonage America Inc.	8483210	Method and Apparatus for Voice Traffic Management in a Data Network
Vonage Business Inc.	8553570	Systems and Methods of Routing IP Telephony Data Packet Communications
Vonage America Inc.	8571060	Systems and Methods for Connecting Calls to Mobile Telephony Devices
Vonage America Inc.	8571191	Method and Apparatus for New Subscriber Access to Telephony Features
Vonage America Inc.	8582740	Method for Automated Management of a Telecommunication Service
Vonage Business Inc.	8588387	Method and Apparatus for Providing an Identifier for a Caller ID Function in a Telecommunications System
Vonage Business Inc.	8588389	System for Effecting a Telephone Call Over a Computer Network Without Alphanumeric Keypad Operation
Vonage America Inc.	8600364	Systems and methods for connecting calls to mobile telephony devices
Vonage America Inc.	8605682	Systems and methods for Handoff of a Mobile Telephone Call in a VoIP Environment
Vonage America Inc.	8606246	Systems and Methods for Providing Telephony Services
Vonage America Inc.	8635454	Method and Apparatus for Enhanced Security of Web-Accessible Services
Vonage Business Inc.	8681959	Method and System for Customized Caller Identification
Vonage Business Inc.	8683044	Third Party Call Control Application Program Interface
Vonage America Inc.	8693994	Systems and methods for connecting calls to mobile telephony devices
Vonage America Inc.	8731162	Systems and Methods for Matching Call Detail Records for the Same Communication Generated by Different Elements of an IP Telephony System
Vonage America Inc.	8744422	Systems and methods for terminating telephony communications to mobile devices
Vonage America Inc.	8760489	Method and Apparatus for Dynamically Adjusting Aspect Ratio of Images During a Video Call
Vonage Business Inc.	8767716	Systems and Methods of Routing IP Telephony Data Packet Communications
Vonage America Inc.	8775308	System and Methods for Selecting a Billing Group in an Internet Protocol Environment
Vonage America Inc.	8792882	Method and Apparatus for Non-Native Short Message Service Communications
Vonage Business Inc.	8799993	Method and Apparatus for Configuring Communication Parameters on a Wireless Device
Vonage Business Inc.	8804558	CARRIER METRICS IMPROVEMENTS VIA INTRINSIC IMPAIRMENT INTEGRATION

OWNER	REGISTRATION NUMBER	TITLE
Vonage America Inc.	8817063	Methods and Systems for Voice and Video Messaging
Vonage Business Inc.	8817961	Method and Apparatus for Providing Trusted Caller ID Services
Vonage America Inc.	8825814	Method and Apparatus for Minimizing Application Delay by Pushing Application Notifications
Vonage America Inc.	8843601	Method and Apparatus for VoIP Communication Completion to a Mobile Device
Vonage America Inc.	8855612	Systems and Methods of Terminating Telephony Communications to Mobile Telephony Devices
Vonage America Inc.	8861336	Systems and methods for integrating rate and route information into call detail records
Vonage Business Inc.	8861373	SYSTEMS AND METHODS FOR COLLECTING INFORMATION RELATING TO INTERNET PROTOCOL TELEPHONE CALL QUALITY
Vonage America Inc.	8862109	Systems and methods for connecting calls to mobile telephony devices
Vonage Business Inc.	8879476	Method and Apparatus for Performing Network Registration
Vonage America Inc.	8885457	Systems and methods of improving the quality of VoIP communications
Vonage America Inc.	8892748	Systems and Methods for Rapid Setup of Telephony Communications
Vonage Business Inc.	8897177	Systems and Methods of Conducting Conference Calls
Vonage Business Inc.	8908678	Intelligent Call Routing
Vonage America Inc.	8913622	Systems and methods for integrating rate and route information into call detail records
Vonage Business Inc.	8914284	Methods and Apparatus for Conducting Internet Protocol Telephony Communications
Vonage America Inc.	8917629	Method and Apparatus for Device Discovery in a Local Area Network
Vonage America Inc.	8917717	Method and System for Multi-Modal Communications
Vonage America Inc.	8917839	Providing Effective Advertising Via Synchronized Telephone and Data Streams
Vonage America Inc.	8923498	Apparatus and Methods for Integrating Information from Voice Over Internet Calling Systems and Social Networking Systems
Vonage America Inc.	8934882	Systems and Methods for Connecting Calls to Mobile Telephony Devices
Vonage America Inc.	8958785	Systems and Methods for Terminating Telephony Communications to Mobile Telephony Devices
Vonage America Inc.	8965342	Method and Apparatus for Authenticating the Association of a Telephone Number and a Communication Device
Vonage Business Inc.	8989359	Methods and Systems for Dynamically Changing Contact Information
Vonage America Inc.	8989721	Systems and Methods for Terminating Telephony Communications to Mobile Telephony Devices
Vonage Business Inc.	8989759	Method and Apparatus for Proximity Based Call Termination
Vonage Business Inc.	8996069	Method and System for On-Net Communication Notification and Handling

OWNER	REGISTRATION NUMBER	TITLE
Vonage Business Inc.	9001699	Communication Session Set Up Method via Reconciliation of IP Addresses
Vonage America Inc.	9002335	Systems and methods for connecting calls to mobile telephony devices
Vonage America Inc.	9002336	Systems and methods for connecting calls to mobile telephony devices
Vonage America Inc.	9003498	Method and Apparatus for Routing Application Programming Interface (API) Calls
Vonage America Inc.	9007531	Method and Apparatus for Expanding a Field of View in a Video Communication Session
Vonage America Inc.	9015221	Method and Apparatus for Distributing Objects
Vonage America Inc.	9020477	Systems and Methods for Terminating Telephony Communications to Mobile Telephony Devices
Vonage America Inc.	9020478	Systems and Methods for Terminating Telephony Communications to Mobile Telephony Devices
Vonage America Inc.	9031215	Method and Apparatus for New Subscriber Access to Telephony Features
Vonage America Inc.	9070120	Identifying and Displaying a Set of High Priority Contacts on a Display Device
Vonage Business Inc.	9071459	Method and Systems for Establishing Electronic Communications in a Hosted VoIP PBX Using Two-Tiered Load Balancing
Vonage America Inc.	9100475	Routing Communications Based on History of Previous Communications
Vonage Business Inc.	9106673	Systems and Methods for Connecting Telephony Communications
Vonage Business Inc.	9112747	Dynamic Application Integration Associated with Telephonic Communications Through Hosted VoIP PBX Using Client-Side Integration Proxy
Vonage America Inc.	9116808	Method and System for Determining Device Configuration Settings
Vonage Business Inc.	9124693	A Method and System for On-Hold Messaging for Off Network Calls
Vonage Business Inc.	9137267	Secure Transmission of Media During a Communication Session
Vonage America Inc.	9148508	Systems and Methods of Intercepting Telephony Communications to Provide Information to Communicants
Vonage Business Inc.	9154317	Method and Apparatus for Providing Bridgeless Conferencing Services
Vonage Business Inc.	9158501	Method and Apparatus for Generating Random Numbers Based On Packetized Media Data
Vonage Business Inc.	9160549	Method and Apparatus for Providing Bridgeless Conferencing Services
Vonage America Inc.	9172907	Method and Apparatus for Dynamically Adjusting Aspect Ratio of Images During a Video Call
Vonage America Inc.	9179482	Systems and Methods for Rapid Setup of Telephony Communications
Vonage America Inc.	9198091	Systems and Methods for Rapid Setup of Telephony Communications

<b>OWNER</b>	<b>REGISTRATION NUMBER</b>	<b>TITLE</b>
Vonage America Inc.	9203593	Systems and Methods for Enabling Data Communications to a Telephony Device
Vonage America Inc.	9203906	Systems and Methods for Enabling Data Communications to a Telephony Device
Vonage America Inc.	9203969	Apparatus and Methods for Integrating Information from Voice Over Internet Calling Systems and Social Networking Systems
Vonage Business Inc.	9210198	Method and Apparatus for Transferring Active Communication Session Streams Between Devices
Vonage Business Inc.	9210225	Method and Apparatus for Dynamically Assigning a Server
Vonage America Inc.	9210574	Method and Apparatus for Verifying the Authenticity of Mobile Device Information
Vonage Business Inc.	9215263	Method and Apparatus for Rapid Setup of a Telephony Communication Using Multiple Communication Channels
Vonage America Inc.	9225836	Methods and Systems for Voice and Video Messaging
Vonage America Inc.	9299358	Method and Apparatus for Voice Modification During a Call
Vonage Business Inc.	9313238	Communication Session Set Up Method Via Reconciliation of IP Addresses
Vonage Business Inc.	9313631	Method and Apparatus for Intelligent Call Termination
Vonage America Inc.	9313676	Systems and Methods for Predictive Analysis of Technical Support Issues
Vonage Business Inc.	9319440	Third Party Call Control Application Program Interface
Vonage America Inc.	9325699	Method and Apparatus for Routing Application Programming Interface (API) Calls
Vonage Business Inc.	9325746	Systems and Methods for Routing Internet Protocol Telephony Communications
Vonage Business Inc.	9348858	Methods and Systems for Dynamically Changing Contact Information
Vonage America Inc.	9356953	System and Method to Prevent Spoofed Communication Through Out-Of-Band Verification
Vonage America Inc.	9363479	Methods and System for Voice and Video Messaging
Vonage Business Inc.	9369872	Method and Apparatus for Configuring Communication Parameters on a Wireless Device
Vonage America Inc.	9380159	Method and System for Informing a User That a Call is No Longer on Hold
Vonage America Inc.	9380434	Method and Apparatus for Location Based Ad Hoc Group Creation for Messaging
Vonage Business Inc.	9391810	Systems and Methods for Communicating a Stream of Data Packets Via Multiple Communications Channels
Vonage Business Inc.	9401997	Dynamic Application Integration Associated with Hosted VoIP PBX Using Client-Side Integration Proxy
Vonage Business Inc.	9402170	Method and System for Providing Informative Incoming Call Alerts
Vonage America Inc.	9407672	Systems and Methods for Reducing Signaling in an Internet Protocol Telephony System
Vonage Business Inc.	9419988	System and Method for Non-Disruptive Mitigation of Messaging Fraud
Vonage America Inc.	9420010	Voice Over IP Call Setup Progress Indicator

OWNER	REGISTRATION NUMBER	TITLE
Vonage America Inc.	9420117	Systems and Methods for Matching Call Detail Records for the Same Communication Generated by Different Elements of an IP Telephony System
Vonage Business Inc.	9426302	System and Method for Non-Disruptive Mitigation of VoIP Fraud
Vonage America Inc.	9438640	Method and Apparatus for Minimizing Application Delay by Pushing Application Notifications
Vonage Business Inc.	9444944	Systems and Methods for Connecting Telephony Communications
Vonage America Inc.	9451507	SYSTEMS AND METHODS FOR HANDOFF OF CALLS BETWEEN INTERNET PROTOCOL TELEPHONY DEVICES
Vonage Business Inc.	9461844	Method and Apparatus for Voice Traffic Management in a Data Network
Vonage America Inc.	9462136	Systems and Methods for VoIP-based Community Communications
Nexmo Inc.	9485169	Systems and Methods for Adaptive Routing
Vonage America Inc.	9485636	Method and System for Off-net Message Communications
Vonage Business Inc.	9491597	Systems and Methods for Communication Notification and Handling
Vonage America Inc.	9491600	Systems and Methods for Connecting Calls to Mobile Telephony Devices
Vonage America Inc.	9491610	Method and Apparatus for Intra-Network Roaming for IP Telephony Network
Vonage Business Inc.	9501813	Systems and Methods for Controlling a Display Screen of a Portable Computing Device
Vonage Business Inc.	9509744	Systems and Methods for Routing IP Telephony Data Packet Communications
Vonage Business Inc.	9516067	Method and Systems for an Outgoing Unidirectional Outage Bypass for Voice Over Internet Protocol Private Branch Exchange System
Vonage Business Inc.	9516153	Method and System for Telecommunication Session Output Integration
Vonage Business Inc.	9516162	System and Method for On-Demand Presence
Nexmo Inc.	9516480	Identity and Phone Number Verification
Vonage Business Inc.	9521029	Method and Systems for Bidirectional Outage Bypass for a Voice Over Internet Private Branch Exchange
Vonage Business Inc.	9521049	Method and Systems for an Incoming Unidirectional Outage Bypass for a Voice over Internet Protocol Private Branch Exchange System
Vonage America Inc.	9521112	Systems and Methods of Assigning and Using Virtual Telephone Numbers
Vonage Business Inc.	9538134	Method and System for Resource Load Balancing in a Conferencing Session
Vonage Business Inc.	9560085	Systems and Methods for Communicating a Stream of Data Packets Via Multiple Communications Channels
Vonage Business Inc.	9560180	Systems and Methods for Adjusting Carrier Quality Metrics for Intrinsic Impairments
Vonage America Inc.	9560197	Method and System for Informing a User That a Call is No Longer on Hold

OWNER	REGISTRATION NUMBER	TITLE
Vonage Business Inc.	9565220	Systems and Methods for Preventing Fraud in an Internet Protocol Telephony System
Vonage America Inc.	9591144	System and Methods of Forwarding Communication Requests Based on Handling Instructions in an Internet Protocol Environment
Vonage America Inc.	9603115	Method and Apparatus for Cellular Roaming Charge Bypass Call Completion
Vonage America Inc.	9628540	Systems and Methods for Handling Multiple Concurrent Session Initiation Protocol Transactions
Vonage Business Inc.	9641562	Systems and Methods for Monitoring Call Quality
Vonage Business Inc.	9647943	Method and Systems for Dynamic Allocation of Network Resources
Vonage America Inc.	9647956	Method and Systems for Establishing Electronic Communications in a Hosted VoIP PBX Using Two-Tiered Load Balancing
Vonage Business Inc.	9661035	Method and Apparatus for Providing Call Flow Information to Terminal Devices
Vonage America Inc.	9667802	Methods of Assigning, Recording and Using a Location Routing Number
Vonage Business Inc.	9674233	Method and Apparatus for Performing Network Registration
Vonage America Inc.	9686270	Authentication Systems and Methods Using a Packet Telephony Device
Vonage Business Inc.	9686416	Systems and Methods for Outgoing Call Redirection
Vonage America Inc.	9686668	Systems and Methods for Outgoing Call Redirection
Vonage America Inc.	9691077	System and Method for Making Awards Based on Telephony Activity
Vonage America Inc.	9712682	Method and Systems for Automatically Assigning Virtual Numbers
Vonage America Inc.	9722876	Identifying the Logical Location of a Network Device on a Customer's LAN
Vonage America Inc.	9728202	Method and Apparatus for Voice Modification During a Call
Vonage America Inc.	9729347	System and Method for Selection of a Conference Bridge Master Server
Vonage America Inc.	9729585	Communications Adaptor for Use with Internet Telephony System
Vonage America Inc.	9728202	Method and Apparatus for Voice Modification During a Call
Vonage Business Inc.	9742823	System and Method for Identifying Recipients During a Communication Session
Vonage America Inc.	9749421	Method and Apparatus for Enabling Delivery of Media Content
Vonage Business Inc.	9756190	Systems and Methods for Setting Up Internet Protocol Communications
Vonage Business Inc.	9762632	Systems and Methods for Providing Conference Call Functions
Vonage Business Inc.	9763079	System and Method for Communication History Reconciliation Amongst Linked Devices
Vonage America Inc.	9766778	Method and Apparatus for Rapid Access to a Contact in a Contact List



<b>OWNER</b>	<b>REGISTRATION NUMBER</b>	<b>TITLE</b>
Vonage Business Inc.	9767802	Methods and Apparatus for Conducting Internet Protocol Telephony Communications
Vonage America Inc.	9769237	Method and Apparatus for Testing in a Communication Network
Vonage America Inc.	9774744	Apparatus and Methods for Integrating Information from Voice Over Internet Calling Systems and Social Networking Systems
Vonage Business Inc.	9781260	Detection and Notification of End User Presence Via a Telecommunications Device
Vonage Business Inc.	9807237	System and Method for a Progressive Dialer for Outbound Calls
Vonage America Inc.	9813455	Systems and Methods for Handling Multiple Concurrent Session Initiation Protocol Transactions
Vonage America Inc.	9819601	Systems and Methods of Masking a Stream of Data Packets
Vonage Business Inc.	9826098	Systems and Methods of Conducting Conference Calls
Nexmo Inc.	9853884	Systems and Methods for Adaptive Routing
Vonage America Inc.	9854102	Systems and Methods for Providing Telephony Services to Extension Telephones
Vonage America Inc.	9875238	Systems and Methods for Establishing a Language Translation Setting for a Telephony Communication
Vonage Business Inc.	9900356	Method and Apparatus for Transferring Active Communication Session Streams Between Devices
Vonage America Inc.	9904262	Systems and Methods for Dynamic Operation of Electronic Devices Based on Detection of One or More Events
Vonage Business Inc.	9906567	Systems and Methods for Routing IP Telephony Data Packet Communications
Nexmo Inc.	9906955	Identity and Phone Number Verification
Nexmo Inc.	9912808	Systems and Methods for Providing a Multi-Channel Communication Service
Vonage Business Inc.	9923934	Method and Apparatus for VOIP Communication Completion on a Mobile Device
Vonage America Inc.	10009387	Systems and Methods of Assigning and Using Virtual Telephone Numbers
Vonage America Inc.	9603115	METHOD AND APPARATUS FOR CELLULAR ROAMING CHARGE BYPASS CALL COMPLETION
Vonage America Inc.	10009387	SYSTEMS AND METHODS OF ASSIGNING AND USING VIRTUAL TELEPHONE NUMBERS
Patent Cooperation Treaty	PCT/US2014/062673	Vonage Network LLC
Patent Cooperation Treaty	PCT/US2014/23151	Vonage Business Solutions, Inc.
Patent Cooperation Treaty	PCT/US2015/52646	Vonage Network LLC
Patent Cooperation Treaty	PCT/US2015/50475	Nexmo Inc.
Patent Cooperation Treaty	PCT/US2015/52655	Vonage Network LLC
Patent Cooperation Treaty	PCT/US2015/063455	Vonage Network LLC
Patent Cooperation Treaty	PCT/US2015/064753	Vonage Network LLC

OWNER	REGISTRATION NUMBER	TITLE
Patent Cooperation Treaty	PCT/US2016/018443	Vonage America Inc.
Patent Cooperation Treaty	PCT/US2016/16976	Vonage Business Inc.
Patent Cooperation Treaty	PCT/US2016/20667	Nexmo Inc.
Patent Cooperation Treaty	PCT/US2016/020576	Vonage Network, LLC
Patent Cooperation Treaty	PCT/US2016/24429	Vonage America Inc.
Patent Cooperation Treaty	PCT/US2016/35182	Vonage America Inc.
Patent Cooperation Treaty	PCT/US2017/026555	Nexmo Inc.

### Patent Applications:

OWNER	APPLICATION NUMBER	TITLE
Vonage America Inc.	12/071005	Method and Apparatus for Enhanced Internet Telephony
Vonage America Inc.	13/197571	Systems and methods for terminating communication between registered members of a communications services
Vonage America Inc.	13/241654	Apparatus and Methods for Integrating Information from Voice Over Internet Calling Systems and Social Networking Systems
Vonage America Inc.	13/244872	Systems and Methods for Extending Communications Services via Non-Native Devices
Vonage America Inc.	13/244890	System and Methods of Establishing User Groups in an Internet Protocol Environment
Vonage Business Inc.	13/628999	Systems and Methods for Routing IP Telephony Data Packet Communications
Vonage America Inc.	13/730325	Systems and methods of providing communications services to extension telephony devices
Vonage America Inc.	13/730348	Systems and methods of providing communications services to extension telephony devices
Vonage Business Inc.	13/765212	Method and Apparatus for Group Calling in an IP-based Communication System
Vonage Business Inc.	13/966846	Method and Apparatus for Call Handling Control
Vonage Business Inc.	14/090505	Method and System for Recalling and Replaying Content During a Communications Session
Vonage Business Inc.	14/163104	Systems and Methods for Routing Internet Protocol Telephony Communications

OWNER	APPLICATION NUMBER	TITLE
Vonage Business Inc.	14/322229	Method and Apparatus for Placing a Long Distance Call Based on a Virtual Phone Number
Vonage America Inc.	14/323609	System and Methods for Selecting a Billing Group in an Internet Protocol Environment
Vonage America Inc.	14/447342	Systems and Methods for Providing Telephony Services to Extension Telephones
Vonage America Inc.	14/580714	Method and System for Multi-Modal Communications
Vonage Business Inc.	14/581387	Method and System for Automating Conferencing in a Communication Session
Vonage Business Inc.	14/609654	System and Method for Playing Buffered Audio of a Dropped Telephone Call
Vonage Business Inc.	14/620736	Systems and Methods for Managing Access to Message Content
Vonage Business Inc.	14/641599	Method and System for Automating Conferencing in a Communication Session
Vonage Business Inc.	14/810687	Method and System for Processing Interactive Voice Response Input in a Call Setup Message
Nexmo Inc.	14/816892	Systems and Methods for Adaptive Routing
Vonage Business Inc.	14/827548	Dynamic Application Integration Associated with Telephonic Communications Through Hosted VoIP PBX Using Client-Side Integration Proxy
Vonage Business Inc.	14/855118	Systems and Methods for Providing Conference Call Functions
Vonage Business Inc.	14/926164	Method and System for Logging and Reporting Call Detail Information
Nexmo Inc.	15/006429	Multi-Channel Communication System
Vonage America Inc.	15/082146	Systems and Methods for Supplementing Real-Time Exchanges of Instant Messages With Automatically Updateable Content
Vonage America Inc.	15/168506	
Vonage Business Inc.	15/168583	Systems and Methods for Mitigating and/or Avoiding Feedback Loops During Communication Sessions
Vonage Business Inc.	15/169085	Systems and Methods for Accessing Conference Calls
Vonage Business Inc.	15/169212	Systems and Methods for Accessing Conference Calls
Vonage Business Inc.	15/190979	Systems and Methods for Managing Communication Sessions at Endpoints Accessible via More Than One Network
Vonage America Inc.	15/236842	Method and Apparatus for Transmitting Messages Associated with Internet Protocol Version 4 (IPV4) Addresses on an Internet Protocol Version (IPV6) Network
Vonage Business Inc.	15/245637	Systems and Methods for Providing Integrated Computerized Personal Assistant Services in Telephony Communications
Vonage Business Inc.	15/250092	Method, Apparatus and System for Establishing a Real-time Telecommunication Session
Vonage Business Inc.	15/250520	Systems and Methods for Deriving Contact Names
Vonage Business Inc.	15/352832	Virtual Identifier for Emergency Call Handling

OWNER	APPLICATION NUMBER	TITLE
Vonage Business Inc.	15/358844	Systems and Methods for Controlling a Display Screen of a Portable Computing Device
Nexmo Inc.	15/468805	Systems and Methods for Providing Call Verification
Nexmo Inc.	15/591258	Systems and Methods for Data Storage and Data Localization
TokBox, Inc.	15/604061	
Vonage Business Inc.	15/608213	Systems and Methods for Automating Post Communications Activity
Vonage Business Inc.	15/618858	Systems and Methods for Accessing Conference Calls
Vonage Business Inc.	15/651623	System and Method for Contextually Based Fulfillment of Communication Requests Via a Telephony Platform
TokBox, Inc.	15/787153	
Vonage Business Inc.	15/817422	Systems and Methods of Conducting Conference Calls
Nexmo Inc.	15/899981	Systems and Methods for Providing a Multi-Channel Communication Service
Nexmo Inc.	15/905772	Identity and Phone Number Verification
Vonage Business Inc.	15/925063	Method and Apparatus for VOIP Communication Completion on a Mobile Device