

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5848060

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	SHLOMO SELIM RAKIB	11/01/2013
RECEIVING PARTY DATA		
Name:	GAINSPED, INC.	
Street Address:	295 SANTA ANA COURT	
City:	SUNNYVALE	
State/Country:	CALIFORNIA	
Postal Code:	94085	
PROPERTY NUMBERS Total: 1		
	Property Type	Number
	Patent Number:	9692612
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>		
Email:	mary.poremba@nokia.com	
Correspondent Name:	MARY T. POREMBA	
Address Line 1:	600-700 MOUNTAIN AVENUE	
Address Line 2:	ROOM 6E-210	
Address Line 4:	MURRAY HILL, NEW JERSEY 07974-0636	
ATTORNEY DOCKET NUMBER:	870070-US-CNT[2] - (MTP)	
NAME OF SUBMITTER:	NIRAJ A. DESAI	
SIGNATURE:	/Niraj A. Desai/	
DATE SIGNED:	12/03/2019	
Total Attachments: 12		
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PATENT ASSIGNMENT

This patent assignment is made and entered into by and between the following parties:

Shlomo Selim Rakib, also known as Selim Shlomo Rakib, an individual citizen of the United States with the residence address of 21329 Diamond Oaks Court Saratoga, CA (the "ASSIGNOR")

and

Gainspeed, Inc., a United States state of Delaware corporation, having a place of business at 295 Santa Ana Court, Sunnyvale CA 94085 (the "ASSIGNEE")

Whereas ASSIGNOR has previously assigned and agreed to assign certain patent rights to ASSIGNEE's predecessor in interest; and

Whereas ASSIGNOR now desires to assign, and ASSIGNEE desires to accept, any and all of ASSIGNOR's remaining right, title and interest in and to the PATENT RIGHTS set forth below.

Now therefor for \$1.00 in hand and other good and valuable consideration (the receipt and sufficiency of which ASSIGNOR expressly acknowledges), ASSIGNOR hereby assigns to ASSIGNEE, for itself and its successors, transferees, and assigns, the entirety of ASSIGNOR's worldwide right, title and interest in and to:

- the following patent applications ("PATENT APPLICATIONS"):

Docket Number	Title	Application Number	Filed	Type
RAKIB-01500	HYBRID ALL DIGITAL FIBER TO CATV CABLE SYSTEM AND METHOD	13/674,936	November 12, 2012	United States Patent application
RAKIB-01010	HFC CABLE SYSTEM WITH WIDEBAND COMMUNICATIONS PATHWAY AND COAX DOMAIN NODES	PCT/US13/20716	January 9, 2013	PCT patent application with priority based on US patent application 13/346,709 filed January 9, 2012
RAKIB-01600	METHOD OF TRANSFORMING HFC CATV ANALOG FIBER TRANSMISSION TO DIGITAL FIBER TRANSMISSION	13/756,302	January 31, 2013	United States Patent Application
RAKIB-01110	METHODS OF ADAPTIVE CANCELLING AND SECONDARY COMMUNICATIONS CHANNELS FOR EXTENDED CAPABILITY HFC CABLE SYSTEMS	PCT/US13/26549	February 16, 2013	PCT patent application with priority based on US patent application 13/400,415 filed February 20, 2012
RAKIB-01320	EFFICIENT BANDWIDTH UTILIZATION METHODS FOR CATV DOCSIS CHANNELS AND OTHER APPLICATIONS	PCT/US13/26558	February 17, 2013	PCT patent application with priority based on US patent applications 13/400,415 filed February 20, 2012;

				61/622,132 filed April 10, 2012; and 13/478,461 filed May 23 2012
RAKIB-01410	DISTRIBUTED CABLE MODEM TERMINATION SYSTEM WITH SOFTWARE RECONFIGURABLE MAC AND PHY CAPABILITY	PCT/US13/26608	February 18, 2013	PCT patent application with priority based on US patent applications 13/400,415 filed February 20, 2012; 61/622,132 filed April 10, 2012; 13/478,461 filed May 23 2012, and 13/555,170 filed July 22, 2012
RAKIB-01510	HYBRID ALL DIGITAL FIBER TO CATV CABLE SYSTEM AND METHOD	PCT/US13/26750	February 19, 2013	PCT patent application with priority based on US patent applications 13/400,415 filed February 20, 2012; 61/622,132 filed April 10, 2012; 13/478,461 filed May 23, 2012; 13/555,170 filed July 22, 2012; and 13/674,936 filed November 12, 2012.
RAKIB-01610	METHOD OF TRANSFORMING HFC CATV ANALOG FIBER TRANSMISSION TO DIGITAL FIBER TRANSMISSION	PCT/US13/26885	February 20, 2013	PCT patent application based on US patent applications 13/400,415 filed February 20, 2012; 61/622,132 filed April 10, 2012; 13/478,461 filed May 23, 2012; 13/555,170 filed July 22, 2012; 13/674,936 filed November 12, 2012; and 13/756,302 filed January 31, 2013
RAKIB-01700	HFC CABLE SYSTEM WITH ALTERNATIVE WIDEBAND COMMUNICATIONS PATHWAYS AND COAX DOMAIN AMPLIFIER-REPEATERS	13/964,394	February 12, 2013	United States Patent Application
RAKIB-01800	VIRTUAL HFC CONVERGED CABLE ACCESS PLATFORM	61/870,226	August 26, 2013	United States Provisional Patent Application
RAKIB-00910EU	METHOD OF CATV CABLE SAME-FREQUENCY TIME DIVISION DUPLEX DATA TRANSMISSION	12749311.2	August 28, 2013 (Priority date February 27, 2011)	European Patent Application with priority based on PCT patent application PCT/US12/26686 filed February 27, 2012; and US patent application 13/035,993 filed February 27, 2011.
RAKIB-00910CN	METHOD OF CATV CABLE SAME-FREQUENCY TIME DIVISION DUPLEX DATA TRANSMISSION	Awaiting CN number	October 14, 2013 (Official CN filing date February 27, 2012)	Chinese Patent Application with priority based on PCT patent application PCT/US12/26686 filed February 27, 2012; and US patent application 13/035,993 filed February 27, 2011.
RAKIB-00210EU	DISTRIBUTED CABLE MODEM TERMINATION SYSTEM	11735370.6	August 17, 2012 (Priority date March 19, 2011)	European patent application with priority based on PCT patent application PCT/US11/29113 filed March 19, 2011

RAKIB-00210CN	DISTRIBUTED CABLE MODEM TERMINATION SYSTEM	201180015258.3	September 21, 2012 (Official CN filing date March 19, 2011)	European patent application with priority based on PCT patent application PCT/US11/29113 filed March 19, 2011
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Including,

2. (a) any corresponding right of priority; (b) any provisional, divisional, continuation, substitute, renewal and reissue which have been or may be filed in the United States or elsewhere in the world and which are directed to subject matter originally disclosed and claimed within the PATENT APPLICATIONS, including the right to file any of the foregoing; (c) any patents which may be granted pursuant to any of the PATENT APPLICATIONS, or the applications set forth in (a) and (b) above (the "PATENT RIGHTS"); and (d) the right to sue in its own name on, and to recover for past infringement of, any or all of any applications or patents issuing therefrom, together with all rights to recover damages for infringement of provisional rights.

3. ASSIGNOR agrees (at ASSIGNEE's cost) to do the following, when reasonably requested, and without further consideration, in order to carry out the intent of this Agreement: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or reasonably desirable to fully secure to ASSIGNEE the rights, title and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relevant to the prosecution of or title to the PATENT RIGHTS; and (3) generally do all lawful acts that ASSIGNEE shall consider reasonably desirable for securing, maintaining, and enforcing worldwide patent protection relating to the above-identified patent applications and Letters patents and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. ASSIGNOR further agrees to provide any successor, transferee, assignee, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

4. To the extent that this Agreement is not preempted by the laws of another country where these PATENT APPLICATIONS are or will be filed, this Agreement is governed by the laws of the United States, and more specifically by the laws of the United States State of California.

5. In the event that any of the provisions of this Agreement are found to be invalid or unenforceable, these invalid or unenforceable provisions shall not affect the remainder of this agreement, which shall remain otherwise in full force and effect. Further, each provision of this agreement will otherwise be valid and enforceable to the extent permitted by law, and any invalid provision shall be replaced with an alternative valid provision that best expresses the intention of the invalid provision.

The effective date of this assignment is November 1st, 2013.

ASSIGNOR

[Signature] Date of Signature 11/01/2013

Shlomo Selim Rakib (Selim Shlomo Rakib), Inventor and presently Chief Technical Officer, Gainspeed, Inc.

Duly Authorized Representative of ASSIGNEE

[Signature] Date of Signature 11/11/2013

Drew Daniel Perkins, Chief Executive Officer, Gainspeed, Inc.

Witnessed or Notarized by:

State of California }

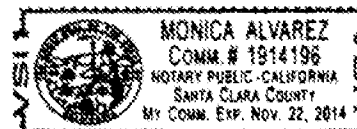
County of Santa Clara

On November 1st, 2013 before me, Monica Alvarez, Notary Public, personally appeared Shlomo Selim Rakib

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she~~/~~they~~ executed the same in his/~~her~~/~~their~~ authorized capacity(~~ies~~), and that by his/~~her~~/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Monica Alvarez
Notary Public Signature

Notary Public Seal

PATENT ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, **Shlomo Rakib**, an individual ("ASSIGNOR"), has sold, assigned, and transferred and does hereby sell, assign, and transfer to G. Ventures, Inc., a Delaware corporation having a place of business at 404 Saratoga Avenue, Santa Clara, CA 95050 ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following applications and Letters Patents ("PATENT RIGHTS"):

<u>Docket Number</u>	<u>Title</u>	<u>Application Number</u>	<u>Filed</u>	<u>Type</u>	<u>Status</u>
RAK1B-00200	Distributed Cable MODEM TERMINATION SYSTEM	12692582	22-Jan-10	US patent	Pending
RAK1B-00210	DISTRIBUTED CABLE MODEM TERMINATION SYSTEM	PCT/US11/29113	19-Mar-11	PCT patent	Pending
RAK1B-00700	IMPROVED HYBRID FIBER CABLE SYSTEM AND METHOD	61385125	21-Sep-10	US provisional	Expired
RAK1B-00710	IMPROVED HYBRID FIBER CABLE SYSTEM AND METHOD	61511395	25-Jul-11	US provisional	Pending
RAK1B-00800	HFC CABLE SYSTEM WITH SHADOW FIBER AND COAX FIBER TERMINALS	12907970	19-Oct-10	US patent	Pending
RAK1B-00810	HFC CABLE SYSTEM WITH SHADOW FIBER AND COAX FIBER TERMINALS	PCT in progress	18-Nov-11	PCT patent	In progress
RAK1B-00900	METHOD OF CATV CABLE SAME-FREQUENCY TIME DIVISION DUPLEX DATA TRANSMISSION	13035993	27-Feb-11	US patent	Pending
RAK1B-	METHOD OF CATV	PCT/US12/26686	27-Feb-	PCT patent	Pending

00910	CABLE SAME-FREQUENCY TIME DIVISION DUPLEX DATA TRANSMISSION		12		
RAK1B-01000	HFC CABLE SYSTEM WITH WIDEBAND COMMUNICATIONS PATHWAY AND COAX DOMAIN NODES	13/346,709	9-Jan-12	US patent	Pending
RAK1B-01100	METHODS OF ADAPTIVE CANCELLING AND SECONDARY COMMUNICATIONS CHANNELS FOR EXTENDED CAPABILITY HFC CABLE SYSTEMS	13/400,415	20-Feb-12	US patent	Pending
RAK1B-01300	EFFICIENT BANDWIDTH UTILIZATION METHODS FOR CATV DOCSIS CHANNELS AND OTHER APPLICATIONS	61/622,132	10-Apr-12	US provisional	Pending
RAK1B-01310	EFFICIENT BANDWIDTH UTILIZATION METHODS FOR CATV DOCSIS CHANNELS AND OTHER APPLICATIONS	13/478,461	23-May-12	US patent	Pending
RAK1B-01400	DISTRIBUTED CABLE MODEM TERMINATION SYSTEM WITH SOFTWARE RECONFIGURABLE MAC AND PHY CAPABILITY	13/555,170	22-Jul-12	US patent	Pending

and;

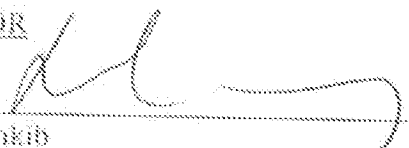
2. The entire worldwide right, title, and interest in and to:

(a) the PATENT RIGHTS, including any right of priority; (b) any provisional, divisional, continuation, substitute, renewal, reissue, and other related applications thereto which have been or may be filed in the United States or elsewhere in the world; (c) any patents which may be granted on the applications set forth in (a) and (b) above; and (d) the right to sue in its own name and to recover for past infringement of any or all of any applications or patents issuing therefrom together with all rights to recover damages for infringement of provisional rights.

ASSIGNOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER of the above-identified patent applications and Letters Patents; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER of the above-identified patent applications and Letters Patents and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. ASSIGNOR further agrees to provide any successor, transferee, assignee, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

ASSIGNOR represents that ASSIGNOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the ASSIGNOR has made or will make hereafter no assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

ASSIGNOR

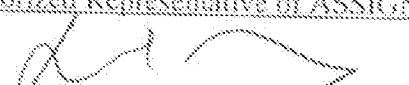


Shlomo Rakib

Date of Signature

9/13/2012

Duly Authorized Representative of ASSIGNEE



Name: Shlomo Rakib

Title: President

G. VENTURES, INC.

Date of Signature

9/13/2012

Delaware

PAGE 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"G. VENTURES, INC.", A DELAWARE CORPORATION,
WITH AND INTO "COHERE NETWORKS, INC." UNDER THE NAME OF
"COHERE NETWORKS, INC.", A CORPORATION ORGANIZED AND EXISTING
UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED
IN THIS OFFICE THE THIRTEENTH DAY OF SEPTEMBER, A.D. 2012, AT
3:10 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF
THE AFORESAID CERTIFICATE OF MERGER IS THE THIRTEENTH DAY OF
SEPTEMBER, A.D. 2012, AT 8 O'CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE
NEW CASTLE AND KENT COUNTY RECORDER OF DEEDS.

5121873 8100M

121028331




Jeffrey W. Bullock, Secretary of State
AUTHENTICATION: 9843785

DATE: 09-13-12

You may verify this certificate online
at corp.delaware.gov/authver.shtml

PATENT
REEL: 051566 FRAME: 0600

**CERTIFICATE OF MERGER OF
G. VENTURES, INC., a Delaware corporation
WITH AND INTO
COHERE NETWORKS, INC., a Delaware corporation**

Pursuant to Section 251 of the
General Corporation Law of the State of Delaware

Cohere Networks, Inc., a Delaware corporation ("*Cohere*"), does hereby certify to the following facts relating to the merger (the "*Merger*") of G. Ventures, Inc., a Delaware corporation ("*G. Ventures*"), with and into Cohere, with Cohere remaining as the surviving corporation of the Merger (the "*Surviving Corporation*");

- FIRST: Cohere is incorporated pursuant to the General Corporation Law of the State of Delaware ("*DGCL*"). G. Ventures is incorporated pursuant to the DGCL. Cohere and G. Ventures are the constituent corporations in the Merger.
- SECOND: An Agreement and Plan of Reorganization has been approved, adopted, certified, executed and acknowledged by Cohere and G. Ventures in accordance with the provisions of Section 251 of the DGCL.
- THIRD: The name of the Surviving Corporation shall be Cohere Networks, Inc.
- FOURTH: The certificate of incorporation of the Surviving Corporation shall be its certificate of incorporation.
- FIFTH: The executed Agreement and Plan of Merger is on file at the principal place of business of Cohere, the Surviving Corporation, 404 Saratoga Street, Suite 200, Santa Clara, CA 95050, United States of America.
- SIXTH: A copy of the executed Agreement and Plan of Merger will be furnished by Cohere, the Surviving Corporation, on request and without cost, to any stockholder of any constituent corporation of the Merger.
- SEVENTH: This Certificate of Merger shall become effective at 8:00 PM EDT (5:00 PM PDT) on September 13, 2012.

IN WITNESS WHEREOF, Cohere has caused this Certificate of Merger to be executed by its duly authorized officers as of September 13, 2012.

COHERE NETWORKS, INC.

By: /s/ Drew Perkins
Drew Perkins, Chief Executive Officer

By: /s/ Shlomo Rakib
Shlomo Rakib, Secretary

Delaware

PAGE 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "COHERE NETWORKS, INC.", CHANGING ITS NAME FROM "COHERE NETWORKS, INC." TO "GAINSPEED, INC.", FILED IN THIS OFFICE ON THE TWELFTH DAY OF APRIL, A.D. 2013, AT 2:22 O'CLOCK P.M.

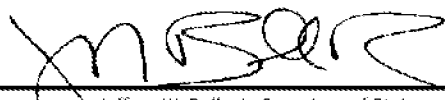
A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE KENT COUNTY RECORDER OF DEEDS.

5121873 8100

130431790

You may verify this certificate online
at corp.delaware.gov/authver.shtml




Jeffrey W. Bullock, Secretary of State
AUTHENTICATION: 0357685

DATE: 04-15-13

PATENT
REEL: 051566 FRAME: 0606

**CERTIFICATE OF AMENDMENT
OF
RESTATED CERTIFICATE OF INCORPORATION
OF
COHERE NETWORKS, INC.**

Cohere Networks, Inc., a Delaware corporation (the "*Corporation*"), does hereby certify that the following amendment to the Corporation's Restated Certificate of Incorporation (the "*Certificate of Incorporation*") has been duly adopted by the Board of Directors and stockholders of the Corporation in accordance with the provisions of Section 242 of the Delaware General Corporation Law, with the approval of such amendment by the Corporation's stockholders having been given by written consent without a meeting in accordance with Sections 228(d) and 242 of the Delaware General Corporation Law:

Article I. Article I of the Certificate of Incorporation is hereby amended to read in its entirety as follows:

"The name of the corporation is Gainspeed, Inc. (the "*Corporation*")."

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be signed by its duly authorized officer this 12 day of April, 2013 and the foregoing facts stated herein are true and correct.

COHERE NETWORKS, INC.

By: 

Drew Perkins
Chief Executive Officer