TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM317318

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
Cambridge Broadband Networks Limited		09/03/2014	Private Limited Company: UNITED KINGDOM

RECEIVING PARTY DATA

Name:	TriplePoint Venture Growth BDC Corp.
Street Address:	2755 Sand Hill Road
City:	Menlo Park
State/Country:	CALIFORNIA
Postal Code:	94025
Entity Type:	CORPORATION: MARYLAND

PROPERTY NUMBERS Total: 1

Property Type	Number	Word Mark
Serial Number:	77863869	VECTASTAR

CORRESPONDENCE DATA

Fax Number: 8586375130

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 858-677-1400
Email: susan.reynholds@dlapiper.com
Correspondent Name: DLA Piper LLP (US)
Address Line 1: 4365 Executive Drive, Suite 1100
Address Line 4: San Diego, CALIFORNIA 92121

CH $40.00 77863869

ATTORNEY DOCKET NUMBER:	361496-73
NAME OF SUBMITTER:	Troy Zander
SIGNATURE:	/s/ Troy Zander
DATE SIGNED:	09/17/2014

Total Attachments: 10
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PLAIN ENGLISH INTELLECTUAL PROPERTY SECURITY AGREEMENT

This is a **Plain English Intellectual Property Security Agreement** dated as of September 3, 2014by and between TRIPLEPOINT VENTURE GROWTH BDC CORP., a Maryland corporation and CAMBRIDGE BROADBAND NETWORKS LIMITED, a private limited company incorporated and registered under the laws of England and Wales with registered number 03879840.

The words "We", "Us", or "Our", refer to the grantee, which is TRIPLEPOINT VENTURE GROWTH BDC CORP. The words "You" or "Your" refers to the grantor, which is CAMBRIDGE BROADBAND NETWORKS LIMITED and not any individual. The words "the Parties" refers to both TRIPLEPOINT VENTURE GROWTH BDC CORP. and CAMBRIDGE BROADBAND NETWORKS LIMITED.

The Parties have entered into (i) a Plain English Growth Capital Loan and Security Agreement dated as of September 3, 2014 (together with amendments, supplements, extensions and exhibits, collectively the "Loan Agreement") and (ii) a Debenture dated as of September 3, 2014 (together with amendments, supplements, extensions and exhibits, collectively the "Debenture"). Pursuant to the Debenture, You have granted to Us a lien on and a security interest in all the present and future rights, title, and interest that You may now have or hereafter acquire in all Patents, Trademarks, Copyrights, and applications for Patents, Trademarks and Copyrights.

In consideration for the mutual covenants and agreements contained in the Loan Agreement, Debenture and this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties agree as follows:

1. GRANT OF SECURITY INTEREST

You grant to Us a lien upon and continuing security interest in all of Your right, title, and interest in, to and under all of the following (all of the following items of property collectively will be referred to as the "Intellectual Property Collateral"), whether now existing or hereafter arising or acquired:

⇒ all Patents, Patent Licenses, and Patent applications, including specifically those listed on the attached **Schedule A**, together with any reissues, divisions, continuations, renewals, extensions and continuations thereof;

⇒ all Trademarks, Trademark Licenses, and trademark applications, including specifically those listed on the attached **Schedule B** together with any renewals thereof;

⇒ all Copyrights, Copyright Licenses, and applications for Copyrights, including specifically those listed on the attached **Schedule C**;

⇒ the right to sue for past, present and future infringements of the foregoing and all rights corresponding thereto throughout the world and all re-issues, divisions continuations, renewals, extensions and continuations-in-part thereof; and

⇒ all Proceeds.

You represent and warrant to Us that Schedules A, B, and C attached hereto set forth any and all intellectual property rights in connection to which You have registered or filed an application with either the United States Patent and Trademark Office or the United States Copyright Office, as applicable.

2. DEBENTURE DEBENTURE LOAN AGREEMENT

This security interest is granted to secure the Secured Obligations, under the Loan Agreement. All the capitalized terms used but not otherwise defined are used in this Agreement with the same meaning as defined in the Loan Agreement and Debenture.

3. OUR RIGHT TO SUE

From and after an Event of Default, subject to the terms of the Loan Agreement, We shall have the right, but shall in no way be obligated, to bring suit in Our own name to enforce Your rights in the Intellectual Property Collateral. If We commence any such suit, You shall, at Our request, do all lawful acts and execute and deliver all proper documents or information that may be necessary or desirable to aid Us in such enforcement. You shall promptly, upon demand, reimburse and indemnify Us for all of Our costs and expenses, including reasonable attorney's fees, related to Our exercise of the above mentioned rights.

4. FURTHER ASSURANCES

You will from time to time execute, deliver and file, alone or with Us, any security agreements, or other documents to perfect and give priority to Our lien on the Intellectual Property Collateral. You will from time to time obtain any instruments or documents as We may request, and take all further action that may be reasonably necessary or desirable, or that We may reasonably request, to carry out more effectively the provisions and purposes of this Agreement or any other related agreements or to confirm, perfect, preserve and protect the liens granted to Us.

5. MODIFICATION

This Agreement can only be altered, amended or modified in a writing signed by the Parties. Notwithstanding the foregoing however, You hereby irrevocably appoint Us (and any of Our designated officers, agents or employees) as Your true and lawful attorney to modify, in Our sole discretion, this Agreement without first obtaining Your approval of or signature to such modification by amending Schedules A, B, and C to this Agreement, as appropriate, to include reference to any right, title or interest in any Intellectual Property Collateral acquired by You before or after the execution hereof or to delete any reference to any right, title or interest in any Intellectual Property Collateral in which You no longer have or claim to have any right, title or interest. The appointment of Us as Your attorney in fact, and each and every one of Our rights and powers, being coupled with an interest, is irrevocable until all of the Secured Obligations have been fully repaid and performed and Our obligation to provide credit extensions to You is terminated.

6. BINDING EFFECT; REMEDIES NOT EXCLUSIVE

This Agreement shall be binding upon You and Your respective successors and assigns, and shall inure to the benefit of Us, and Our nominees and assigns.

Our rights and remedies with respect to the security interest granted hereby are in addition to those set forth in the Loan Agreement, Debenture and the other Loan Documents, and those which are now or hereafter available to Us as a matter of law or equity. Each of Our rights, powers and remedies provided for herein or in the Loan Agreement, the Debenture or any of the Loan Documents, or now or hereafter existing at law or in equity shall be cumulative and concurrent and shall be in addition to every right, power or remedy provided for herein and the exercise by Us of any one or more of the rights, powers or remedies provided for in this Intellectual Property Security Agreement, the Loan Agreement, the Debenture or any of the other Loan Documents, or now or hereafter existing at law or in equity, shall not preclude the simultaneous or later exercise by any person, including Us, of any or all other rights, powers or remedies.

7. GOVERNING LAW; COUNTERPARTS

This Agreement shall be deemed made and accepted in and shall be governed by and construed in accordance with the laws of the State of California, and (where applicable) the laws of the United States of America.

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute the same instrument.

(Signature Page to Follow)

IN WITNESS WHEREOF, You have duly executed this Agreement as of the date first set forth above.

You: CAMBRIDGE BROADBAND NETWORKS LIMITED

Signature: _____

Print Name: LIONEL CHMILEWSKY

Title: CEO

[SIGNATURE PAGE TO PLAIN ENGLISH INTELLECTUAL PROPERTY SECURITY AGREEMENT]

SCHEDULE A

To Plain English Intellectual Property Security Agreement
Between CAMBRIDGE BROADBAND NETWORKS LIMITED, as You (Grantor)
and TriplePoint Capital LLC, as Us (Grantee)

PATENTS AND PATENT APPLICATIONS

PATENTS

Patent Name	Status and Date Issued	Patent Number
See attached		

PATENT APPLICATIONS

Name	Status & Date Filed	Application Number
See attached		

PATENTS SUMMARY September 3, 2014

#	Number/Case Reference	Title	Description	Country	Official Number
1. G	42557	Modem Architecture / Efficient power control initialisation / Wireless transmission system & method	A method of setting the transmit power of a Subscriber Unit (SU) in a point to multi-point wireless transmission system comprising an Access Point (AP) and a plurality of SUs, the method comprising the steps of: a) causing the AP to transmit sequential downstream data frames, at least some of which contain a power control identifier field, each power control identifier field containing a unique identifier and defining a time at which an associated upstream power control test field occurs; a) causing the SU, as a result of receiving and decoding the power control identifier field, to store the unique identifier and to generate and transmit an upstream test sequence in the power control test field; c) causing the AP to determine the received power of the test sequence; d) causing the AP to transmit a power field at a later time in the frame or in a subsequent frame, the power adjustment field containing the unique identifier from the power control identifier field and data representing a required transmit power adjustment; and e) causing the SU to adjust its output power when it detects a power adjustment field containing the stored unique identifier in accordance with the received power adjustment data.	UK	2376381
2.	42558	Modem equaliser architecture novel equaliser design allowing reduced guard-band between packets/ Wireless communication system	A packet based point to multipoint wireless transmission system comprising an access point (AP) communicating with a plurality of subscriber units (SUs) by means of a time division multiple access protocol, in which at the AP a non-linear decision feedback equaliser including a transversal feedback filter is provided to reduce inter symbol interference and at each SU each packet is linearly pre-distorted to remove pre-cursors, wherein the feedback filter in the decision feedback equaliser is arranged to hold symbol decisions made for all packets received during a given period prior to the packet being currently received in order to enable reduction of inter packet interference.	UK	2373421
3.	42559	Modem pre distortion techniques/ novel root- rotation method: precoding for contention detect Communications system & method	A method of transmitting a predetermined data sequence to a receiver over a transmission channel comprising the steps of: a) determining the impulse response of the channel; b) providing a pre-distortion arrangement at the transmitter having a response that approximates to the inverse of the channel response, the pre-distortion arrangement comprising a filter having a critical pole; c) causing a zero of the predetermined data sequence to coincide with the critical pole of the filter; and d) cancelling the coincident pole-zero pair.	UK	2373420
4. G	42881	Priority allocation – classes, maintaining service differentiation	A method for allocating bandwidth to users in a communications system when the total bandwidth available is less than the aggregate bandwidth sought by users, comprising the steps of: queuing (20) in an active pool all the users seeking bandwidth; allocating (22) to the user at the head of the queue bandwidth to transmit and/or receive a predetermined quantity of data; if, after sending and/or receiving the predetermined quality of data, the user is seeking further bandwidth, moving the user to the end of the queue in the active pool, and otherwise moving (26) the user to an inactive pool; and if a user in the inactive pool seeks or contends for bandwidth, moving (28) the user to the end of the queue in the active pool.	UK Germany France Greece Italy China	2375927 60238604.7 1391135 20110400319 1391135 ZL02810725.X
5. G	42882	Priority allocation – high/low CIR Scheme	A method for providing bandwidth to users in a multi-user communications system, in which each user has a predetermined committed data rate, and in which bandwidth is provided to users in successive service intervals, each comprising a predetermined quantity of bandwidth for user transmissions, comprising the following steps in each service interval: a) providing to each user in turn the bandwidth requested by that user according to a scheduling procedure in which bandwidth is provided to users in a high priority subclass before the users in a low priority subclass, the provision of bandwidth ceasing either when the bandwidth in the service interval is exhausted or when all of the requested bandwidth has been provided to users; b) measuring the average transmitted data rate achieved by each user over a sampling period, the sampling period being longer than the service interval; c) if the average data rate of a user in the high priority subclass exceeds their committed data rate, moving that user to the low priority subclass; d) if the average data range of a user in the low priority subclass is lower than their committed data rate, moving that user to the high priority subclass; and e) assigning users newly seeking bandwidth to the high-priority subclass.	Germany France UK Sweden China USA	60207077.5 1402689 1402689 1402689 ZL02812979.2 7430209

#	Number/Case Reference	Title	Description	Country	Official Number
6. G	42956	In-band signalling MAC frame structure	A communications system in which a downlink signal carries synchronisation bursts at predetermined times characterised in that data is contained in variable length frames interleaved between the synchronisation bursts, each synchronisation burst comprising an offset pointer to the start of the subsequent downlink frame.	UK	1410572
				Italy	1410572
				France	1410572
				Germany	6020706.2
				USA	7529274
7. H	42957	Access Protocol/ ATM used for data & control	A packet switched communications network comprising a controller and a plurality of controlled units arranged in a ring, wherein each of the controlled units comprises a switch at its input, characterised in that the switch includes control means responsive to control instructions contained in packets transmitted by the controller, the control means being arranged to configure the switch so that in a first configuration the switch passes control instructions and data into or out of the unit and in a second configuration the switch bypasses the unit and passes the control instructions and data to a further unit connected to the controller or back to the controller.	UK	1417804
				Italy	1417804
				France	1417804
				Germany	60219326.5
				USA	7317719
8. S	43066	Modem architecture Efficient precodes	A method of setting the characteristics of a precoder in a Subscriber Unit (SU) in a point to multipoint wireless transmission system comprising an Access Point (AP) and a plurality of SUs, the method comprising the steps of: a) causing the AP to transmit sequential downstream data frames, at least some of which contain a training identifier field, each training identifier field containing a unique identifier and defining a time at which an associated upstream training test field occurs; b) causing the SU, as a result of receiving and decoding the training identifier field, to store the unique identifier and to generate and transmit an upstream test sequence in the training test field; c) causing the AP to store samples of the received training test sequence; d) causing the AP to transmit a training response field at a later time in the frame or in a subsequent frame, the training response field containing the unique identifier from the training field data representing the impulse response of the upstream channel; and e) causing the SU to adjust its precoder characteristics when it detects a training response field containing the stored unique identifier in accordance with the upstream channel impulse response data.	UK	2376391
9. M	43199	Optimised pre-coding for data packets	A fixed wireless access (FWA) communications system comprising an access point and a plurality of a subscriber units each transmitting a predetermined data sequence; in which each subscriber unit comprises a precoder for pedistorting the predetermined data sequence to compensate for the characteristics of the upstream transmission channel between the subscriber unit and the access point where the system comprises means for optimising the precoder characteristics specifically for the predetermined data sequence.	GB	2378103
				China	ZL200380105720.4
				Europe	1415449
				USA	7787531
10. M	43653	Optimised precoding for contention detect	A fixed wireless access (FWA) communications system comprising an access point and a plurality of subscriber units each transmitting a predetermined data sequence; in which each subscriber unit comprises a precoder for predistorting the predetermined data sequence to compensate for the characteristics of the upstream transmission channel between the subscriber unit and the access point wherein the system comprises means for optimising the precoder characteristic specifically for the predetermined data sequence and the precoder comprises a memory in which a predistorted version of the predetermined data sequence is stored.	UK	2384666
11. M	43977	Optimised precoding – MPPI	A fixed wireless access (FWA) communications system comprising an access point and a plurality of subscriber units each transmitting a predetermined data sequence; comprising means for determining the impulse response of the upstream channel between the subscriber unit and the access point; means for generating a data sequence for transmission from a subscriber unit to the access point, the data comprising the predetermined data sequence pre-distorted to compensate for the channel impulse response of the upstream channel between the subscriber unit and the access point, means for storing the pre-distorted predetermined data sequence within the subscriber unit, and means for transmitting the stored sequence from the subscriber unit to the access point when it is desired to transmit the predetermined sequence to the access point; in which the means for determining the impulse response of the upstream channel comprises means for transmitting a training data sequence having good auto correlation properties from the subscriber unit to the access point, the training data sequence being known to the access point, and means for deriving the channel impulse response from the received data sequence.	UK	2396277
				China	ZL200380105720.4
				Europe	1573991
				USA	7519129
12. G	44217	Physical layer synchronisation	A packet switched communications system for transmitting synchronous data from a source module to a terminating module over a network, the network comprising plurality of modules interconnected via transmission links, characterised by each module in the	China	ZL03808174.1
				Europe	03720675.2

#	Number/Case Reference	Title	Description	Country	Official Number
			network having a data clock of nominal frequency that is independent of the data clocks of the other module(s) in the network and having a single input and one or more outputs where all the outputs of each module are phase locked to each other but are unsynchronised with respect to the input, means for determining an accumulated phase difference between an input data clock and an output data clock of each module, means for transmitting, the accumulated phase difference to the terminating module, and means for utilising the received accumulated phase difference at the terminating module to lock an output data clock at the terminating module to an input data clock at the source module.	UK	2387516
				USA	7602811
13. S	50657	Circuit emulation service	A communications system comprising a transmitter, a receiver, and a transmission medium between the transmitter and the receiver, the transmitter being arranged to transmit a synchronous transfer mode (ATM) cells in which synchronous transfer mode (STM) channels are assembled; wherein at least some of the ATM cells include a switch command, the switch command indicating a change in activation state of an STM channel.	UK	1946498
				Italy	1946498
				France	1946498
				Germany	602006012530.5
				USA	8009679
				China	CN101310485A
14. M	0921656-5	Base station architecture	A hub unit, for transmitting and receiving wireless user data to and from subscriber units (SU) over multiple channels, where in the hub unit comprises more than one air interface input and more than one air interface output and a sample bus, wherein the sample bus is shared across each air interface input and each air interface output.	UK	GB0921656.5
15. S	2463920	Improved data compression Ethernet protocol independent	Apparatus for processing data in telecommunications network, the apparatus comprising: an input, wherein the input receives data; storage, wherein the storage stores a set of templates, each template having a strength value; a processor, wherein the processor compares at least a portion of the received data to each template in the set of templates; and wherein if that at least a portion of the data matches one of the templates in the set of templates, the processor increases the strength value of the matched template.	UK	GB2463920
16. Applied for	Patent application PCT/GB2013/052122	Interference	Detecting co channel interference in a wireless communications network	Patent applied for in UK	

SCHEDULE B

To Plain English Intellectual Property Security Agreement
Between CAMBRIDGE BROADBAND NETWORKS LIMITED, as You (Grantor)
and TriplePoint Capital LLC, as Us (Grantee)

TRADEMARKS AND TRADEMARK APPLICATIONS

TRADEMARKS

Name	Date Filed or Issued	Serial Number	Status
VECTASTAR	11/3/09	77863869	Registered

TRADEMARK APPLICATIONS

Name	Date Filed	Serial Number	Status
None			

SCHEDULE C

To Plain English Intellectual Property Security Agreement
Between CAMBRIDGE BROADBAND NETWORKS LIMITED as You (Grantor)
And TriplePoint Capital LLC, as Us (Grantee)

COPYRIGHT REGISTRATIONS

Registration Number	Title	Registration Date	V&A No.
None			

APPLICATIONS FOR COPYRIGHT REGISTRATIONS

Title	Date Filed	V&A No.
None		