

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4135032

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	PUREWAVE NETWORKS, INC.	09/02/2014
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	REDLINE INNOVATIONS GROUP INC.	
<b>Street Address:</b>	302 TOWN CENTRE BLVD., 3RD FLOOR	
<b>City:</b>	MARKHAM	
<b>State/Country:</b>	CANADA	
<b>Postal Code:</b>	L3R 0E8	
<b>PROPERTY NUMBERS Total: 6</b>		
<b>Property Type</b>	<b>Number</b>	
<b>Application Number:</b>	14870633	
<b>Application Number:</b>	14929937	
<b>Application Number:</b>	15208094	
<b>Application Number:</b>	15287984	
<b>Application Number:</b>	14791755	
<b>Application Number:</b>	14854348	
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>	(312)977-4405	
<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>Email:</b>	smonreal@nixonpeabody.com	
<b>Correspondent Name:</b>	NIXON PEABODY LLP	
<b>Address Line 1:</b>	70 WEST MADISON STREET, SUITE 3500	
<b>Address Line 4:</b>	CHICAGO, ILLINOIS 60602	
<b>ATTORNEY DOCKET NUMBER:</b>	062536-1	
<b>NAME OF SUBMITTER:</b>	JUSTIN D. SWINDELLS	
<b>SIGNATURE:</b>	/Justin D. Swindells - Reg. No. 48,733/	
<b>DATE SIGNED:</b>	11/09/2016	
<b>Total Attachments: 7</b>		
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source=062536 - Assignment from Purewave to RIG#page7.tif

**PATENT RIGHTS ASSIGNMENT**

This Patent Rights Assignment (this "Assignment") is made effective this 2<sup>nd</sup> day of September, 2014, by and between PUREWAVE NETWORKS, INC., a Delaware corporation, having a usual place of business at 3951 Burton Drive, Santa Clara, CA 95054 ("Assignor") and REDLINE INNOVATIONS GROUP INC., a Delaware corporation, having a usual place of business at 302 Town Centre Blvd., Markham, Ontario L3R 0ES Canada ("Assignee"). Capitalized terms not defined herein have the meanings assigned to such terms in the Purchase Agreement (defined below).

**Recitals**

A. Assignor possesses certain rights in and to the patents and applications (and patents issuing on or claiming priority to such patents or applications) set forth on Exhibit A attached hereto and incorporated herein by reference (collectively, and as further defined in the Purchase Agreement (defined below), the "Patent Rights") and the inventions described and/or claimed in the Patent Rights (the "Inventions");

B. Assignor and Assignee are parties to that certain Asset Purchase Agreement, dated as of the date hereof (the "Purchase Agreement"), pursuant to which Assignor transferred, sold and conveyed to Assignee substantially all of the assets of Assignor relating to the Business, including the Patent Rights and Inventions;

C. Assignor desires to sell and assign to Assignee all of Assignor's Patent Rights and Inventions and Assignee desires to acquire the Patent Rights and Inventions from Assignor.

D. The execution and delivery of this Assignment is a condition to Closing under the Purchase Agreement

**Agreement**

In consideration of the premises set forth herein and in the Purchase Agreement, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

Assignor does hereby sell, assign, convey and transfer unto Assignee and its successors, assigns, and legal representatives, Assignor's entire right, title and interest in and throughout the world in and to Inventions, together with Assignor's entire right, title and interest in and to the Patent Rights and such other patents as may issue thereon or claim priority under United States law or international convention, including but not limited to non-provisionals, continuations, divisionals, reissues, reexaminations, extensions, and substitutions of patents and patent applications within the Patent Rights or such other patents, and any right, title and interest Assignor may have in applications to which the Patent Rights claim priority. Assignor shall hold and enjoy the Patent Rights and Inventions for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said patents may be granted as fully and entirely as the same would have been held by Assignor had this Assignment not been made. In addition, Assignor hereby conveys all of its rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of

industrial property by filing any such applications for patent, including but not limited to any cause(s) of action and damages accruing prior to this assignment. Assignor hereby acknowledges that this assignment, being of Assignor's entire right, title and interest in and to the Patent Rights and Inventions, carries with it the right in Assignee to apply for and obtain from competent authorities in all countries of the world any and all patents by attorneys and agents of Assignee's selection and the right to procure the grant of all patents to Assignee in its own name as assignee of Assignor's entire right, title and interest therein.

Assignor does hereby authorize the Director of the United States Patent & Trademark Office, and the empowered officials of all other governments whose duty it is to record patents, applications and title thereto, to record the Patent Rights and title thereto as the property of Assignee, its successors, assigns, or legal representatives in accordance with the terms of this instrument.

Assignor does hereby further authorize and request the Director of the United States Patent and Trademark Office and the empowered officials of all other governments to issue such Patent Rights or patents as shall be granted upon the Patent Rights, or applications based thereon, to Assignee, its successors, assigns, or legal representatives.

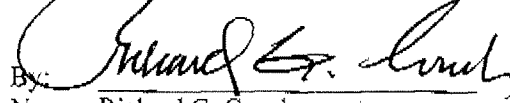
Assignee and Assignor also agree that multiple copies of this Assignment may be executed and exchanged by electronic means including by email as a pdf attachment, each of which shall be deemed an original, and each of which shall be valid and binding upon Assignee and Assignor.

*[Remainder of page intentionally left blank]*

Assignor and Assignee have caused this Assignment to be executed by their duly authorized representatives as of the date first written above.

**ASSIGNOR:**

PUREWAVE NETWORKS, INC.

By: 

Name: Richard G. Couch

Title: CEO

**ASSIGNEE:**

REDLINE INNOVATIONS GROUP INC.

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

Name: Robert Williams

Title: CEO

*[Signature Page to Patent Rights Assignment]*

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

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REDLINE INNOVATIONS GROUP INC.

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

Name: Robert Williams

Title: CEO

*(Signature Page to Patent Rights Assignment)*

**Exhibit A**

**PATENT RIGHTS**

**(See Attached)**

# PureWave Networks Patent Portfolio

Invention Name	Internal Category	Type	Patent num	Filing Date	Grant date	Application Serial Num	Internal Reference	Comments
<b>Granted</b>								
Wireless roaming with dedicated backhaul	Flexible BS (Multi-Band/Operator, etc)	US	8676193	6-Nov-11	18-Mar-14	13290099	FlexibleBS5	
Methods and systems for sharing resources between a radio access network and a backhaul network	Integrated Wireless Backhaul	US	8634339	28-Aug-11	21-Jan-14	13219690	SwitchPW1	
Multi-band wireless cellular system and method	Flexible BS (Multi-Band/Operator, etc)	US	8538420	17-Dec-11	17-Sep-13	13329257	HighLowFlexibleBS9	
Architecture, devices and methods for supporting multiple operators in a wireless base station	Flexible BS (Multi-Band/Operator, etc)	US	8494587	19-Sep-11	23-Jul-13	13235562	FlexibleBS1	
Multi-Connection, Non-Simultaneous Frequency Diversity in Radio Communication Systems	Algorithms & Architectures	US	7680470	20-Jul-07	16-Mar-10	11878055		
Multi-Connection, Non-Simultaneous Frequency Diversity in Radio Communication Systems	Algorithms & Architectures	US	7588862	27-Aug-07	8-Sep-09	11892743		
Beamforming Using Subset of the Antenna Array	Algorithms & Architectures	US	7509146	3-Aug-05	24-Mar-09	11196804		
Non-Simultaneous Frequency Diversity in Radio Communication Systems	Algorithms & Architectures	US	7460839	19-Jul-04	2-Dec-08	10893821	Expired due to Clerical Error	
Multi-Connection, Non-Simultaneous Frequency Diversity in Radio Communication Systems	Algorithms & Architectures	US	7263335	19-Jul-04	28-Aug-07	10893823		
<b>Allowed (Only awaiting allowance fees to be paid to transition to granted status)</b>								
Architecture, devices and methods for supporting multiple channels in a wireless system	Flexible BS (Multi-Band/Operator, etc)	NPA	20130070688	19-Sep-11	Will be Oct 2014	13235569	FlexibleBS2	Process allowance prior to Oct 15 to be issued as a patent (~\$800)
<b>Applications</b>								
Systems and Methods for Increasing the Effectiveness of Digital Pre-Distortion in Electronic Communications	Algorithms & Architectures	NPA		3-Apr-14		14244667		
Systems and Methods for Increasing the Effectiveness of Digital Pre-Distortion in Electronic Communications	Algorithms & Architectures	PPA		3-Apr-14		61974920		
Methods and systems for dual-using a reception channel	Algorithms & Architectures	NPA		2-Feb-14		14170622	PW_DSP1	
Systems and methods for reducing peak to average power ratio	Algorithms & Architectures	NPA		2-Feb-14		14170623	PW_DSP2	
Methods and systems for dual-using a reception channel	Algorithms & Architectures	PPA		2-Feb-14		61934779	PW_DSP_PPA1	
Mobile base station	Moving Base Station	NPA		5-Dec-13		14097475	PW_MobileBS	
Methods for supporting multiple operators in a wireless base station	Flexible BS (Multi-Band/Operator, etc)	NPA	20130244675	9-May-13		13890676	FlexibleBS10	
Systems and methods for enhancing spectral efficiency in a communication network	Algorithms & Architectures	NPA	20130328774	10-Jun-12		13492896	RateAdaptation	
Architecture, devices and methods for allocating radio resources in a wireless system	Flexible BS (Multi-Band/Operator, etc)	NPA	20130072204	19-Sep-11		13235576	FlexibleBS3	
Shared backhaul link for multiple wireless systems	Flexible BS (Multi-Band/Operator, etc)	NPA	20130070742	6-Nov-11		13290100	FlexibleBS6	
Sharing of radio resources between a backhaul link and a radio access network	Integrated Wireless Backhaul	NPA	20130070743	6-Nov-11		13290102	FlexibleBS7	
Methods and system for effectively removing heat from a wireless base station	Mechanical / Industrial Design	NPA	20130050939	28-Aug-11		13219692	ThermalPW1	Pending office action must be answered prior to Aug 10, to avoid being abandoned (~\$3,000)



**Exhibit A**

(Continued)

<b><u>Application/Patent Number</u></b>	<b><u>Filing/Issue Date</u></b>	<b><u>Country</u></b>
CN200580031524	18-Jul-2005	China
CN200580048365	14-Dec-2005	China
FR20035189	27-Apr-2004	France
IN2007DN683	25-Jan-2007	India
IN2007DN5120	3-Jul-2007	India
2007-7001677	23-Jan-2007	Korea
2007-7014762	28-Jun-2007	Korea