505167112 10/30/2018 PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT			
CONVEYING PARTY DA	ATA					
		Name	Execution Da			
OFINNO TECHNOLOGIE	ES, LLC		05/01/2015			
RECEIVING PARTY DA	ГА					
Name:	COMCAS	ST CABLE COMMUNICATIONS, L	LLC			
Street Address:	1701 JFK	BOULEVARD				
City:	PHILADE	ELPHIA				
State/Country:	PENNSY	LVANIA				
Postal Code:	19103					
PROPERTY NUMBERS	Total: 1					
Property Type		Number				
Application Number:	15	5864759				
CORRESPONDENCE DA		02)824-3001				
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Address Line 2: STE 1200						
Address Line 4:	W	ASHINGTON, D.C. 20005				
TTORNEY DOCKET NU	MBER:	007412.03863				
IAME OF SUBMITTER:		STEVE S. CHANG	STEVE S. CHANG			
IGNATURE:		/Steve Chang/	/Steve Chang/			
ATE SIGNED:		10/30/2018				
otal Attachments: 4 ource=Assignment Ofinne	o to Comc	ast - from parent#page1.tif				

EXECUTION COPY

Assignment of Patent Rights

This patent assignment (this "Assignment") is entered into as of the Effective Date set forth below by and between Ofinno Technologies, LLC ("Assignor") and Comcast Cable Communications, LLC ("Assignee").

WHEREAS, Assignor holds the entire right, title and interest in the patents and patent applications identified and set forth on <u>Appendix A</u> attached hereto (the "<u>Patents</u>");

WHEREAS, Assignee is desirous of securing the entire right, title and interest in and to the Patents in all countries throughout the world; and

WHEREAS, Assignor and Assignee entered into a Patent Purchase Agreement, dated May 1, 2015 pursuant to which Assignor agreed to sell to Assignee certain patents and patent applications including the Patents (the "Patent Purchase Agreement").

For good and valuable consideration, the receipt of which is hereby acknowledged, Assignor does hereby irrevocably as of the Effective Date sell, assign, transfer and convey unto Assignee, or Assignee's designee(s), all of Assignor's right, title and interest throughout the world in and to all of the following:

(a) the Patents;

(b) all patent applications patents and/or other similar governmental grants or issuances worldwide (i) from which any of the Patents directly or indirectly claims priority and/or (ii) for which any of the Patents directly or indirectly forms a basis for priority;

(c) any reissues, reexaminations, extensions, continuations, continuations in part, continuing prosecution applications, requests for continuing examinations, divisions and registrations of and rights to claim priority to any item in any of the foregoing categories (a) and (b);

(d) foreign patents, patent applications and counterparts relating to any item in any of the foregoing categories (a) through (c), including, without limitation, certificates of invention, utility models, industrial design protection, design patent protection and/or other governmental grants or issuances;

(e) any items in any of the foregoing categories (a) through (d) whether or not expressly listed as Patents and whether or not claims in any of the foregoing have been rejected, withdrawn or cancelled; and

(f) all rights to sue and recover damages for past and future infringement of any items in any of the foregoing categories (a) through (e) and all rights to collect royalties or other payments under or on account of any item in any of the foregoing categories (a) through (e) (excluding royalties or payments that have been already collected by Assignor and royalties or payments owed to Assignor under an existing agreement even if not already paid to Assignor, its affiliates or any predecessor of Assignor or Assignor's affiliates, either now or in the future).

Assignor hereby authorizes the Commissioner of Patents and Trademarks in the United States Patent and Trademark Office, and the corresponding entities or agencies in any applicable foreign countries or multinational authorities, to record Assignee as the assignee and owner of the Patents owned by such Assignor and to deliver to Assignee, and to Assignee's attorneys, agents, successors or assigns, all official documents and communications as may be warranted by this Assignment.

The above-granted rights, titles and interests are to be held and enjoyed by Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives and assigns, as fully and entirely as the same would have been held and enjoyed by Assignor had this sale and assignment not been made.

This Assignment shall be interpreted, construed and enforced in all respects in accordance with the laws of the State of Delaware, without reference to its choice of law principles to the contrary. This Assignment may

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be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which together shall constitute one and the same instrument. Delivery of an executed counterpart of a signature page to this Assignment by facsimile or electronic mail shall be as effective as delivery of a manually executed counterpart of this Assignment. This Assignment may not be supplemented, altered or modified in any manner except by a writing signed by all parties hereto. The failure of any party to enforce any terms or provisions of this Assignment shall not waive any of its rights under such terms or provisions. The terms and conditions of this Assignment will inure to the benefit of Assignee, its successors, assigns and other legal representatives and will be binding upon Assignor, its successors, assigns and other legal representatives.

IN WITNESS WHEREOF, intending to be legally bound, the below identified parties have executed this Assignment as of the 1st day of May, 2015 (the "Effective Date").

ASSIGNOR

ASSIGNEE

By: Email I man

Name: Esmael H. Dinan

Title: <u>CEO</u>

Date: 1/1 ay 1, 2, 1015

BY: MM

Name: Arthur R. Jloch Title: Executive Vice President Date: May 1, 2015

Application No.	Country	Filing Date	Status	Patent No.	Issue Date
61/503,625	US	01-Jul-11	Expired		
61/504,257	US	04-Jul-11	Expired		
61/523,124	US	12-Aug-11	Expired		
61/523,132	US	12-Aug-11	Expired		
61/523,135	US	12-Aug-11	Expired		
13/537,415	US	29-Jun-12	Granted	8,582,527	12-Nov- 13
13/947,147	US	22-Jul-13	Granted	8,576,794	05-Nov- 13
14/070,623	US	04-Nov-13	Granted	8,989,130	24-Mar- 15
14/194,708	US	01-Mar-14	Granted	8,953,550	10-Feb- 15
14/016,921	US	03-Sep-13	Granted	8,804,772	12-Aug- 14
13/539,586	US	02-Jul-12	Granted	8,437,303	07-May- 13
13/857,637	US	05-Apr-13	Pending		
14/139,287	US	23-Dec-13	Pending		
13/535,530	US	28-Jun-12	Granted	8,369,280	05-Feb- 13
13/727,190	US	26-Dec-12	Granted	8,422,455	16-Apr- 13
					-lul-90
13/784,862	US	05-Mar-13	Granted	8,483,172	13
					03-Sep-
13/899,602	US	22-May-13	Granted	8,526,393	13
					15-Apr-
13/960,716	US	06-Aug-13	Granted	8,699,449	14
14/194,704	US	01-Mar-14	Granted	8,811,333	19-Aug- 14
14/337,273	US	22-Jul-14	Granted	8,908,633	09-Dec- 14
14/558,095	US	02-Dec-14	Pending		}
61/566,670	US	04-Dec-11	Expired		
61/566,671	US	04-Dec-11	Expired]
PCT/US12/67499	US PCT	01-Dec-12	Expired		T
13/691,720	US	30-Nov-12	Granted	8,427,976	23-Apr- 13
13/791,535	US	08-Mar-13	Granted	8,526,459	03-Sep- 13

Appendix A to Assignment of Patent Rights

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13/938,306	US	10-Jul-13	Granted	8.571,056	29-Oct- 13
14/042.840	US	01-Oct-13	Pending		
13/691,714	US	30-Nov-12	Granted	8,842,637	23-Sep- 14
14/485,753	US	14-Sep-14	Pending		
13/691,722	US	30-Nov-12	Granted	8,446,844	21-May- 13
13/852,634	US	28-Mar-13	Granted	8,531,990	10-Sep- 13
13/956,640	US	01-Aug-13	Granted	8,711,731	29-Apr- 14
14/194,754	US	02-Mar-14	Pending, Notice of Allowance		
61/615,347	US	25-Mar-12	Expired		
61/642,472	US	04-May-12	Expired		
13/850,228	US	25-Mar-13	Pending		
13/887,408	US	06-May-13	Pending		
14/659,665	US	17-Mar-15	Pending		
12741415.9	EP	03-Jul-12	Grant Intended	2564612	
12738291.9	EP	28-Jun-12	Granted	2564611	18-Feb- 15
14200113	EP	03-Jul-12	Pending	2858396	
12805848.4	EP	01-Dec-12	Pending	2786615	
PCT/US2012/045342	WO	03-Jul-12	Expired	WO2013006593	
PCT/US2012/044665	WO	28-Jun-12	Expired	WO2013006379	

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RECORDED: 10/30/2018