

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4670759

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
BINGQIAN LU	11/01/2017
HAMAD ALSAWAHA	11/01/2017
PETER HOU	11/01/2017
THOMAS JACKSON	11/01/2017
YILIN MAO	10/31/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	HUGHES NETWORK SYSTEMS, LLC
<b>Street Address:</b>	11717 EXPLORATION LANE
<b>City:</b>	GERMANTOWN
<b>State/Country:</b>	MARYLAND
<b>Postal Code:</b>	20876
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15801051
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>	asuazo@nathlaw.com
<b>Correspondent Name:</b>	NATH, GOLDBERG & MEYER
<b>Address Line 1:</b>	112 S. WEST ST.
<b>Address Line 2:</b>	35469U_P2017-09-07
<b>Address Line 4:</b>	ALEXANDRIA, VIRGINIA 22314
<b>ATTORNEY DOCKET NUMBER:</b>	35469U
<b>NAME OF SUBMITTER:</b>	LEONID D. THENOR
<b>SIGNATURE:</b>	/Leonid D. Thenor/
<b>DATE SIGNED:</b>	11/02/2017
This document serves as an Oath/Declaration (37 CFR 1.63).	
<b>Total Attachments: 5</b>	

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**DECLARATION UNDER 37 CFR §1.63 AND ASSIGNMENT**

docket no. 35469U

As the undersigned inventor, I hereby declare that this Declaration under 37 CFR §1.63 is directed to the following invention:

Title: **90 DEGREE HYBRID WITH VARACTOR DIODES FOR LOW LOSS, SIMPLE BIAS, AND ZERO POWER CONSUMPTION PHASE SHIFTER**

U.S. application serial number or PCT international application number

Filed on

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

WHEREAS, **Hughes Network Systems, LLC**  
whose business address is

**11717 Exploration Lane, Germantown, MD 20876**

hereinafter referred to as the ASSIGNEE, desires to acquire the entire right, title and interest for the United States and elsewhere throughout the world in and to said invention and application, including any and all divisions and continuations thereof, all rights of priority under the terms of the International Convention for the Protection of Industrial Property, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues and prolongations thereof.

NOW, THEREFORE, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt, adequacy and sufficiency of which are hereby acknowledged, the undersigned hereby assigns, sells and transfers to said ASSIGNEE, its assigns and legal representatives, the entire right, title and interest for the United States and elsewhere throughout the world, in and to said invention and application, including any and all divisions and continuations thereof, all rights of priority under the terms of the International Convention for the Protection of Industrial Property, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges, and advantages in any way arising from or pertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said ASSIGNEE and its assigns and legal representatives, in as ample and as beneficial a manner for all intents and purposes as the undersigned might or could have held and enjoyed the same had this assignment not been made.

The undersigned hereby agrees to execute all papers necessary to file said applications in the United States and elsewhere throughout the world, and to assign the same to said ASSIGNEE, or any assignee acquiring title to said invention, and to execute any other papers that may be needed in connection with filing said application and securing any and all Letters Patent thereon. The undersigned authorizes and requests the Commissioner of Patents to issue a Letters Patent on said application, and on any and all divisions and continuations thereof, to said ASSIGNEE, its assigns and legal representatives, in accordance herewith.

I hereby acknowledge that any willful false statement made in this Declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five (5) years, or both.

LEGAL NAME OF INVENTOR: **Bingqian LU**

INVENTOR SIGNATURE: Bingqian Lu

DATE: 1/01/2017

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LEGAL NAME OF INVENTOR: **Hamad ALSAWAHA**

INVENTOR SIGNATURE: Hamad Alawaha

DATE: Nov. 1, 2017

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LEGAL NAME OF INVENTOR: **Peter HOU**

INVENTOR SIGNATURE: *Peter Hou*

DATE: 1 Nov 2017

**DECLARATION UNDER 37 CFR §1.63 AND ASSIGNMENT**

docket no. 354690

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U.S. application serial number or PCT international application number

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whose business address is

**11717 Exploration Lane, Germantown, MD 20876**

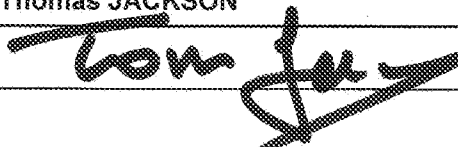
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LEGAL NAME OF INVENTOR: **Thomas JACKSON**

INVENTOR SIGNATURE: 

DATE: **11/1/17**

DECLARATION UNDER 37 CFR §1.63 AND ASSIGNMENT

sheet no. 354690

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LEGAL NAME OF INVENTOR: Yilin MAO

INVENTOR SIGNATURE: Yilin Mao

DATE: 10/31/2017

PATENT