505721343 10/14/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
EDWARD J. BIRRANE, III	09/20/2017
DAVID J. COPELAND	10/14/2019
BRIAN K. HABERMAN	09/13/2019
PHILIP F. CHIMENTO, JR.	09/23/2019

RECEIVING PARTY DATA

Name:	THE JOHNS HOPKINS UNIVERSITY
Street Address:	34TH AND CHARLES STREET
City:	BALTIMORE
State/Country:	MARYLAND
Postal Code:	21218

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16556818

CORRESPONDENCE DATA

Fax Number: (240)228-5254

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.

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Email: Kelly.Poulton@jhuapl.edu
Correspondent Name: TODD R. FARNSWORTH

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Address Line 2: M/S 7-127

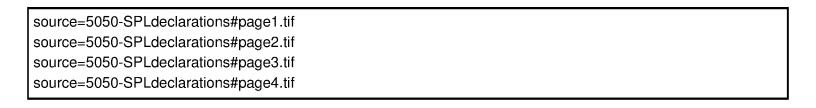
Address Line 4: LAUREL, MARYLAND 20723-6099

ATTORNEY DOCKET NUMBER:	5050-SPL
NAME OF SUBMITTER:	TODD R. FARNSWORTH
SIGNATURE:	/TODD R. FARNSWORTH/
DATE SIGNED:	10/14/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).
	•

Total Attachments: 4

PATENT REEL: 050704 FRAME: 0778

505721343



PATENT REEL: 050704 FRAME: 0779

Title of Invention	Space-Based Long Term Evolution (LTE) Communications Architecture
As the below name	ed inventor, I hereby declare that:
This declaration is directed to:	The attached application, or United States application or PCT international application number filed on August 30, 2019
The above-identifi	ed 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.
	dge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 ment of not more than five (5) years, or both.
Maryland and having ASSIGNEE, desired	ohns Hopkins University, a corporation organized and existing under the laws of the State of ing its principal place of business at Baltimore, Maryland, hereinafter referred to as the es to acquire the entire right, title and interest in and to said invention and to any Letters Patent ited therefore in the United States and its territories and in any and all foreign countries.
to the ASSIGNEE and in all foreign of granted for said in	RE, in consideration of my employment by the ASSIGNEE, I do hereby sell, assign and transfer the entire right, title and interest in and to said invention in the United States and its territories countries and the entire right, title and interest in and to any and all Letters Patent which may be vention in the United States and its territories and in any and all foreign countries and in and to ans, reissues, continuations, substitutions and renewals thereof.
foreign countries to entire right, title an	and request the Patent Office Officials in the United States and its territories and any and all o issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my ad interest in and to the same, for the sole use and behoof of said ASSIGNEE, its successors and end of the term for which said Letters Patent may be granted.
I hereby further agree to make, execute and deliver to the ASSIGNEE, its successors, assigns and legal representatives, upon request but at the expense of the ASSIGNEE, any and all papers, documents, affidavits, statements or other instruments that may be necessary in the prosecution of the aforesaid application, and of any United States or foreign applications, and of any divisions, reissues, continuations, substitutions and renewals of said application, or applications for reissues of said Letters Patents, and to aid the ASSIGNEE, its successors, assigns and legal representatives in every way in protecting said invention as may be requested, provided, however that I shall not have to pay any expenses arising from extending such assistance.	
LEGAL NAME O	FINVENTOR
Inventor: Edward	d J. Birrane, III
Signature:	Date: 9/10/2017
	HILI/A DI Donket No. 5050-SPL

PATENT REEL: 050704 FRAME: 0780

Title of Invention	Space-Based Long Term Evolution (LTE) Communications Architecture
As the below nam	ed inventor, I hereby declare that:
This declaration is directed to:	The attached application, or United States application or PCT international application number
The above-identif	fied application was made or authorized to be made by me.
I believe that I an	n the oxiginal inventor or an original joint inventor of a claimed invention in the application.
I hereby acknowl by fine or impriso	edge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 onment of not more than five (5) years, or both.
Maryland and ha	Johns Hopkins University, a corporation organized and existing under the laws of the State of ving its principal place of business at Baltimore, Maryland, hereinafter referred to as the ires to acquire the entire right, title and interest in and to said invention and to any Letters Patent rated therefore in the United States and its territories and in any and all foreign countries.
to the ASSIGNE and in all foreign granted for said i	ORE, in consideration of my employment by the ASSIGNEE, I do hereby sell, assign and transfer E the entire right, title and interest in and to said invention in the United States and its territories countries and the entire right, title and interest in and to any and all Letters Patent which may be invention in the United States and its territories and in any and all foreign countries and in and to ions, reissues, continuations, substitutions and renewals thereof.
foreign countries	te and request the Patent Office Officials in the United States and its territories and any and all to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its successors and ll end of the term for which said Letters Patent may be granted.
I hereby further agree to make, execute and deliver to the ASSIGNEE, its successors, assigns and legal representatives, upon request but at the expense of the ASSIGNEE, any and all papers, documents, affidavits, statements or other instruments that may be necessary in the prosecution of the aforesaid application, and of any United States or foreign applications, and of any divisions, reissues, continuations, substitutions and renewals of said application, or applications for reissues of said Letters Patents, and to aid the ASSIGNEE, its successors, assigns and legal representatives in every way in protecting said invention as may be requested, provided, however that I shall not have to pay any expenses arising from extending such assistance.	
LEGAL NAME	OF INVENTOR
Inventor: Davi	id J. Copeland
Signature:	Date: 10/14/2019
L	JHU/APL Docket No.: 5050-SPL

PATENT REEL: 050704 FRAME: 0781

Title of Invention	Space-Based Long Term Evolution (LTE) Communications Architecture
As the below nam	ed inventor, I hereby declare that:
This declaration is directed to:	The attached application, or United States application or PCT international application number filed on August 30, 2019
The above-identif	ied 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.
	edge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 nment of not more than five (5) years, or both.
WHEREAS, The Johns Hopkins University, a corporation organized and existing under the laws of the State of Maryland and having its principal place of business at Baltimore, Maryland, hereinafter referred to as the ASSIGNEE, desires to acquire the entire right, title and interest in and to said invention and to any Letters Patent that may be generated therefore in the United States and its territories and in any and all foreign countries.	
to the ASSIGNEE and in all foreign of granted for said in	RE, in consideration of my employment by the ASSIGNEE, I do hereby sell, assign and transfer the entire right, title and interest in and to said invention in the United States and its territories countries and the entire right, title and interest in and to any and all Letters Patent which may be vention in the United States and its territories and in any and all foreign countries and in and to ns, reissues, continuations, substitutions and renewals thereof.
foreign countries t entire right, title at	and request the Patent Office Officials in the United States and its territories and any and all o issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its successors and end of the term for which said Letters Patent may be granted.
I hereby further agree to make, execute and deliver to the ASSIGNEE, its successors, assigns and legal representatives, upon request but at the expense of the ASSIGNEE, any and all papers, documents, affidavits, statements or other instruments that may be necessary in the prosecution of the aforesaid application, and of any United States or foreign applications, and of any divisions, reissues, continuations, substitutions and renewals of said application, or applications for reissues of said Letters Patents, and to aid the ASSIGNEE, its successors, assigns and legal representatives in every way in protecting said invention as may be requested, provided, however that I shall not have to pay any expenses arising from extending such assistance.	
LEGAL NAME O	F INVENTOR
Inventor: Brian	K. Haberman
Signature: S-	-MAD Date: 9/13/19

JHU/APL Docket No.: 5050-SPL

Title of Invention	Space-Based Long Term Evolution (LTE) Communications Architecture
As the below nam	ed inventor, I hereby declare that:
This declaration is directed to:	The attached application, or United States application or PCT international application number filed on August 30, 2019
The above-identifi	ed 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.
I hereby acknowle by fine or imprisor	dge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 ment of not more than five (5) years, or both.
Maryland and havi ASSIGNEE, desire	ohns Hopkins University, a corporation organized and existing under the laws of the State of angles principal place of business at Baltimore, Maryland, hereinafter referred to as the as to acquire the entire right, title and interest in and to said invention and to any Letters Patent ated therefore in the United States and its territories and in any and all foreign countries.
to the ASSIGNEE and in all foreign c granted for said in	RE, in consideration of my employment by the ASSIGNEE, I do hereby sell, assign and transfer the entire right, title and interest in and to said invention in the United States and its territories ountries and the entire right, title and interest in and to any and all Letters Patent which may be vention in the United States and its territories and in any and all foreign countries and in and to us, reissues, continuations, substitutions and renewals thereof.
foreign countries to entire right, title ar	and request the Patent Office Officials in the United States and its territories and any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my d interest in and to the same, for the sole use and behoof of said ASSIGNEE, its successors and end of the term for which said Letters Patent may be granted.
I hereby further agree to make, execute and deliver to the ASSIGNEE, its successors, assigns and legal representatives, upon request but at the expense of the ASSIGNEE, any and all papers, documents, affidavits, statements or other instruments that may be necessary in the prosecution of the aforesaid application, and of any United States or foreign applications, and of any divisions, reissues, continuations, substitutions and renewals of said application, or applications for reissues of said Letters Patents, and to aid the ASSIGNEE, its successors, assigns and legal representatives in every way in protecting said invention as may be requested, provided, however that I shall not have to pay any expenses arising from extending such assistance.	
LEGAL NAME OF	FINVENTOR
Inventor: Philip	F. Chimento, Jr.
Signature	Date: 09/23/2019
	HH (/ADI Drocket No. 5050-SPL

PATENT REEL: 050704 FRAME: 0783

RECORDED: 10/14/2019