

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT3635272

|   |  |
|---|--|
| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT   |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT   |
| <b>CONVEYING PARTY DATA</b>   |  |
|   |  |
| <b>Name</b>   | <b>Execution Date</b>  |
| VLADAMIR SOTNIKOV   | 11/24/2015   |
| TONY KIM  | 11/24/2015   |
| <b>RECEIVING PARTY DATA</b>   |  |
| <b>Name:</b>  | Government of the United States as Represented by the Secretary of the Air Force |
| <b>Street Address:</b>  | 2240 B. Street   |
| <b>Internal Address:</b>  | Building 11, Area B  |
| <b>City:</b>  | Wright-Patterson AFB   |
| <b>State/Country:</b>   | OHIO   |
| <b>Postal Code:</b>   | 45433-7109   |
| <b>PROPERTY NUMBERS Total: 1</b>  |  |
|   |  |
| <b>Property Type</b>  | <b>Number</b>  |
| <b>Application Number:</b>  | 14954031   |
| <b>CORRESPONDENCE DATA</b>  |  |
| <b>Fax Number:</b>  | (937)255-3733  |
| <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>   | pamela.kuns@us.af.mil  |
| <b>Correspondent Name:</b>  | PAMELA KUNS  |
| <b>Address Line 1:</b>  | 2240 B. STREET   |
| <b>Address Line 2:</b>  | BUILDING 11, AREA B  |
| <b>Address Line 4:</b>  | WRIGHT-PATTERSON AFB, OHIO 45433-7109  |
| <b>ATTORNEY DOCKET NUMBER:</b>  | AFD-1376   |
| <b>NAME OF SUBMITTER:</b>   | JASON SOPKO  |
| <b>SIGNATURE:</b>   | /Jason Sopko/  |
| <b>DATE SIGNED:</b>   | 11/30/2015   |
|   | This document serves as an Oath/Declaration (37 CFR 1.63).                       |
| <b>Total Attachments: 2</b>   |  |
| source=Sotnikov_Dec_Assign_Signed#page1.tif   |  |
| source=Kim_Dec_Assign_Signed#page1.tif  |  |

DECLARATION / ASSIGNMENT  
(Inventor with Co-Inventors)

WHEREAS, I, Vladimir Sotnikov, while employed by the Government of the United States, jointly made an invention with Tony Kim described in invention disclosure AFD 1376 entitled "Dual Loop ELF and VLF Antenna", to be filed as an application for Letters Patent of the United States (Application Serial Number 14954031, filed 30 Nov 15), and I hereby authorize and request AFMCLO/JAZ to insert here in the above parentheses (Application Serial Number, filed) the filing date and application number of said application when known;

WHEREAS, The above-identified application for Letters Patent was made or authorized to be made by me;

WHEREAS, I believe that I am an original joint inventor of a claimed invention in the application;

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

WHEREAS, the conditions under which said invention was made are such as to entitle the Government of the United States as represented by the Secretary of the Air Force, under Paragraph 1(a) of Executive Order 10096, to the entire right, title and interest therein, including foreign rights;

NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the premises and other valuable considerations, I, Vladimir Sotnikov:

HEREBY HAVE SOLD, ASSIGNED, AND TRANSFERRED, and by these presents do sell, assign, and transfer unto the Government of the United States as represented by the Secretary of the Air Force, my entire right, title, and interest, in any jurisdiction throughout the world, in and to the aforesaid invention described in the aforesaid application for Letters Patent of the United States, made jointly with Tony Kim, all Letters Patent issuing thereon, and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all priority resulting from the filing of the aforesaid application for patent in the United States;

HEREBY AUTHORIZE AND REQUEST any official whose duty it is to issue patents, to issue any patent thereon to the Government of the United States, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made;

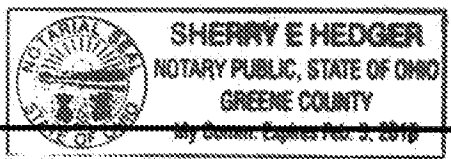
HEREBY ALSO GRANT to the Government of the United States, as represented by the Secretary of the Air Force, the option to take the entire right, title and interest in the invention or all applications for Letters Patent thereon in all countries or jurisdictions foreign to the United States in which the Government of the United States may file, or cause to be filed, applications for Letters Patent, without payment to me of any further consideration; provided, however, that this grant of an option to take foreign rights in the invention must be exercised by written notice to me within eight months of the first filing date of any application for United States Letters Patent covering the invention or within eight months from the declassification of the invention, whichever is later, and that all foreign rights not exercised under the option are left to me, subject to a nonexclusive, irrevocable, royalty-free license to the Government of the United States in any patent which may issue on said invention in any country or jurisdiction foreign to the United States, including the power to issue sublicenses for use on behalf of the Government of the United States and/or in furtherance of the foreign policies of the United States of America; and

HEREBY AGREE to execute any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that I shall not be subject to any out-of-pocket expense relative to such action.

*Vladimir Sotnikov*  
Vladimir Sotnikov

SUBSCRIBED AND ACKNOWLEDGED before me by Vladimir Sotnikov this 24<sup>th</sup> day of November 2015, at the city of Fairborn in the County of GREENE and State of OHIO

*[Signature]*  
Notary Public



DECLARATION / ASSIGNMENT  
(Inventor with Co-Inventors)

WHEREAS, I, Tony Kim, while employed by the Government of the United States, jointly made an invention with Vladimir Sotnikov described in invention disclosure AFD 1376 entitled "Dual Loop ELF and VLF Antenna", to be filed as an application for Letters Patent of the United States (Application Serial Number 14954031, filed 30 Nov 15), and I hereby authorize and request AFMCLO/JAZ to insert here in the above parentheses (Application Serial Number, filed) the filing date and application number of said application when known;

WHEREAS, The above-identified application for Letters Patent was made or authorized to be made by me;

WHEREAS, I believe that I am an original joint inventor of a claimed invention in the application;

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

WHEREAS, the conditions under which said invention was made are such as to entitle the Government of the United States as represented by the Secretary of the Air Force, under Paragraph 1(a) of Executive Order 10096, to the entire right, title and interest therein, including foreign rights;

NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the premises and other valuable considerations, I, Tony Kim:

HEREBY HAVE SOLD, ASSIGNED, AND TRANSFERRED, and by these presents do sell, assign, and transfer unto the Government of the United States as represented by the Secretary of the Air Force, my entire right, title, and interest, in any jurisdiction throughout the world, in and to the aforesaid invention described in the aforesaid application for Letters Patent of the United States, made jointly with Vladimir Sotnikov, all Letters Patent issuing thereon, and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all priority resulting from the filing of the aforesaid application for patent in the United States;

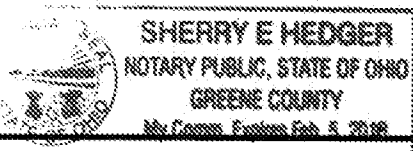
HEREBY AUTHORIZE AND REQUEST any official whose duty it is to issue patents, to issue any patent thereon to the Government of the United States, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made;


HEREBY ALSO GRANT to the Government of the United States, as represented by the Secretary of the Air Force, the option to take the entire right, title and interest in the invention or all applications for Letters Patent thereon in all countries or jurisdictions foreign to the United States in which the Government of the United States may file, or cause to be filed, applications for Letters Patent, without payment to me of any further consideration; provided, however, that this grant of an option to take foreign rights in the invention must be exercised by written notice to me within eight months of the first filing date of any application for United States Letters Patent covering the invention or within eight months from the declassification of the invention, whichever is later, and that all foreign rights not exercised under the option are left to me, subject to a nonexclusive, irrevocable, royalty-free license to the Government of the United States in any patent which may issue on said invention in any country or jurisdiction foreign to the United States, including the power to issue sublicenses for use on behalf of the Government of the United States and/or in furtherance of the foreign policies of the United States of America; and

HEREBY AGREE to execute any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that I shall not be subject to any out-of-pocket expense relative to such action.

  
\_\_\_\_\_  
Tony Kim

SUBSCRIBED AND ACKNOWLEDGED before me by Tony Kim this 24<sup>th</sup> day of November 2015, at the city of Fairborn in the County of GREENE and State of OHIO



  
\_\_\_\_\_  
Notary Public

PATENT

RECORDED: 11/30/2015

REEL: 037167 FRAME: 0601