502056443 09/11/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| Sudhakar K. RAO | 09/15/2011 |
| Jim WANG | 11/03/2003 |
| Chih-Chien HSU | 11/13/2011 |

RECEIVING PARTY DATA

| Name: | LOCKHEED MARTIN CORPORATION |
|-----------------|-----------------------------|
| Street Address: | 6801 Rockledge Drive |
| City: | Bethesda |
| State/Country: | MARYLAND |
| Postal Code: | 20817-1877 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12823841 |

CORRESPONDENCE DATA

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 Phone:
 949-851-0633

Email: smanriquez@mwe.com, MWEIPDocket@mwe.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US

Mail.

Correspondent Name: McDermott Will & Emery LLP

Address Line 1: 4 Park Plaza, Suite 1700

Address Line 4: Irvine, CALIFORNIA 92614-2559

| ATTORNEY DOCKET NUMBER: | 083874-0310 |
|-------------------------|--|
| NAME OF SUBMITTER: | Soyeon (Karen) Pak Laub, Reg. No. 39,266 |

Total Attachments: 4

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> PATENT REEL: 028938 FRAME: 0408

H \$40.00 12823

Docket No.: 083874-0310

<u>ASSIGNMENT</u>

WHEREAS WE, Sudhakar K. RAO of 6832 Faircove Drive, Rancho Palos Verdes, California 90275; Jim WANG of 121 Edwards Drive, Churchville, Pennsylvania 18966; and Chih-Chien HSU of 48 Cohasset Lane, Cherry Hill, New Jersey 08003, have made a certain new and useful invention as set forth in an application for United States Letters Patent, entitled COMMON APERTURE ANTENNA FOR MULTIPLE CONTOURED BEAMS AND MULTIPLE SPOT BEAMS, which was filed on June 25, 2010, and identified by United States Application No. 12/823,841;

AND WHEREAS, LOCKHEED MARTIN CORPORATION, a corporation of the State of Maryland and having an address of 6801 Rockledge Drive, Bethesda, MD 20817-1877, is desirous of acquiring the entire right, title and interest in and to said invention and in and to any and all Letters Patent of the United States and foreign countries which may be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt for and sufficiency of which is hereby acknowledged, WE do hereby sell, assign, transfer and set over unto LOCKHEED MARTIN CORPORATION, its legal representatives, successors, and assigns, the entire right, title and interest in and to said invention as set forth in the above-mentioned application, including the right of priority and including any continuations, continuations-in-part, divisions, reissues, re-examinations or extensions thereof, and in and to any and all patents of the United States and foreign countries which may be issued for said invention;

UPON SAID CONSIDERATIONS, WE hereby agree with the said assignee that we will not execute any writing or do any act whatsoever conflicting with these presents, and that we will, at any time upon request, without further or additional consideration but at the expense of said assignee, execute such additional assignments and other writings and do such additional acts as said assignee may deem necessary or desirable to perfect the assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, continuations, continuations-in-part, reexamined, reissued, or extended Letters Patent of the United States or of any and all foreign countries on said invention, and in enforcing any rights or choses in action accruing as a result of such applications or patents, by giving testimony in any proceedings or transactions involving such applications or patents, and by executing preliminary statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of the assigns and legal representatives of assignor and assignee;

AND WE request the Commissioner for Patents and Trademarks to issue any Letters Patent of the United States which may be issued for said invention to said LOCKHEED MARTIN CORPORATION, its legal representatives, successors or assigns, as the sole owner of the entire right, title and interest in and to said patent and the invention covered thereby.

| 09/15/2011 | KSudhan Rua |
|------------|-----------------|
| Date | Sudhakar K. RAO |
| | |
| Date | Jim WANG |
| | |
| Date | Chih-Chien HSU |

Docket No.: 083874-0310

ASSIGNMENT

WHEREAS WE, Sudhakar K. RAO of 6832 Faircove Drive, Rancho Palos Verdes, California 90275; Jim WANG of 121 Edwards Drive, Churchville, Pennsylvania 18966; and Chih-Chien HSU of 48 Cohasset Lane, Cherry Hill, New Jersey 08003, have made a certain new and useful invention as set forth in an application for United States Letters Patent, entitled COMMON APERTURE ANTENNA FOR MULTIPLE CONTOURED BEAMS AND MULTIPLE SPOT BEAMS, which was filed on June 25, 2010, and identified by United States Application No. 12/823,841;

AND WHEREAS, LOCKHEED MARTIN CORPORATION, a corporation of the State of Maryland and having an address of 6801 Rockledge Drive, Bethesda, MD 20817-1877, is desirous of acquiring the entire right, title and interest in and to said invention and in and to any and all Letters Patent of the United States and foreign countries which may be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt for and sufficiency of which is hereby acknowledged, WE do hereby sell, assign, transfer and set over unto LOCKHEED MARTIN CORPORATION, its legal representatives, successors, and assigns, the entire right, title and interest in and to said invention as set forth in the above-mentioned application, including the right of priority and including any continuations, continuations-in-part, divisions, reissues, re-examinations or extensions thereof, and in and to any and all patents of the United States and foreign countries which may be issued for said invention;

UPON SAID CONSIDERATIONS, WE hereby agree with the said assignee that we will not execute any writing or do any act whatsoever conflicting with these presents, and that we will, at any time upon request, without further or additional consideration but at the expense of said assignee, execute such additional assignments and other writings and do such additional acts as said assignee may deem necessary or desirable to perfect the assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, continuations, continuations-in-part, reexamined, reissued, or extended Letters Patent of the United States or of any and all foreign countries on said invention, and in enforcing any rights or choses in action accruing as a result of such applications or patents, by giving testimony in any proceedings or transactions involving such applications or patents, and by executing preliminary statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of the assigns and legal representatives of assignor and assignee;

AND WE request the Commissioner for Patents and Trademarks to issue any Letters Patent of the United States which may be issued for said invention to said LOCKHEED MARTIN CORPORATION, its legal representatives, successors or assigns, as the sole owner of the entire right, title and interest in and to said patent and the invention covered thereby.

| Date | Sudhakar K. RAO |
|------|-----------------|
| Date | Jim WANG |
| Date | Chih-Chien HSU |

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Employee Proprietary Information and Innovation Agreement

Corporate Policy Statement CPS-006, Intellectual Property | Form No. C-006-1 | February 1999 | Page 1 of 2

THIS AGREEMENT made between _________, the undersigned employee, and Lockheed Martin Corporation, a Maryland corporation, hereinafter referred to as "LMC" or "the Corporation," WITNESSETH:

LMC has developed and uses technical and non-technical information vital to the success of the Corporation's business. Generally, LMC employees become acquainted with this information and, depending on job assignments and responsibilities, may contribute to it either through inventions, discoveries, improvements, computer programs, mask works, works of authorship (collectively called "Innovations"), or through studies, analyses, proposals, business plans (collectively called "Works for Hire") or otherwise. Therefore, it is necessary for the Corporation to protect certain of this technical and non-technical information generated by its employees by holding it as proprietary and confidential, or by obtaining statutory protection (patents, trademarks, mask works, copyrights) or common law protection (trade secrets) or both.

In consideration of and as part of the terms of my continued employment or regular employment by LMC and the salary or wages paid me during such employment, it is hereby agreed:

1. PROPRIETARY INFORMATION

I shall not, except as authorized by the Corporation, at any time during or after my employment directly or indirectly disclose to any other person or entity any proprietary or sensitive information of the Corporation or of others (collectively called "Proprietary Information"), which has come into the Corporation's or my possession, custody or knowledge in the course of my employment with the Corporation; nor shall I use any such Proprietary Information for my personal use or advantage or make it available to others. Neither shall I disclose or use, directly or indirectly, any Proprietary Information, or make such Information available to others for use in competition with the Corporation for work being performed or opportunities being pursued by the Corporation. Proprietary Information includes existing and contemplated technical information such as, for example, compositions, formulas, products, processes, methods, systems, designs, specifications, mask works, testing or evaluation procedures, machines, manufacturing procedures, production techniques, research and development activities, inventions, discoveries and improvements and also existing and contemplated business, marketing and financial information such as, for example, business plans and methods, marketing information, cost estimates, forecasts, financial data, bid and proposal information, customer identification, and sources of supply.

All information, both technical and non-technical, pertaining to the Corporation's businesses in whatever form, including but not limited to text, drawings, mask works or computer software programs, is presumed to be proprietary and confidential until it becomes readily available to the general public lawfully and without breach of confidential obligation.

2. INNOVATIONS

I agree to disclose promptly and fully to the Corporation all Innovations and/or Works for Hire, whether or not patentable, copyrightable or registrable, including but not limited to products, processes, methods, systems, designs, techniques, mask works, computer programs, facilities, equipment, and devices that have been or may be conceived, made or authored by me solely or jointly with others during the period of my employment with the Corporation: (a) which are along the lines of or relate to the business, work, or investigations of the Corporation or of any company with which it is affiliated; (b) which result from or arise out of any work that I may do for or on behalf of the Corporation; (c) which result from or arise out of any Proprietary Information that may have been disclosed or otherwise made available to me as a result of duties assigned me by the Corporation; or (d) that are otherwise made through use of the Corporation's time, facilities or materials. All such Innovations and Works for Hire shall be the sole and exclusive property of Lockheed Martin, and I agree to assign and hereby assign to the Corporation all of my right, title and interest therein.

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3. EXECUTION OF DOCUMENTS

I also agree during and after my employment to execute all documents and perform all reasonable acts requested by the Corporation relating to the perfection and exercise of the Corporation's rights in all Innovations described in Paragraph 2 above, including but not limited to the assignment and exploitation of, and application for, issuance, and maintenance of U.S. and foreign statutory protection for such innovations.

4. RECORDS AND DOCUMENTS; PRIOR INVENTIONS

All records, documents, and other writings including text, drawings, computer software programs, mask works or works of authorship relating to or containing Proprietary Information as defined above, which are prepared or created by me or which may come into my possession during my employment, are deemed to be the property of the Corporation. Upon termination of my employment, I agree to leave all such records, documents, and writings and all copies thereof with the Corporation. Listed and briefly described on the reverse side are all inventions not previously assigned to my former employers and which I conceived and made prior to my employment with the Corporation. Such listed inventions are not included under this Agreement. I agree to notify the Corporation promptly in writing if their actual or projected use comes to my attention. I also agree that I will not disclose to or use on behalf of the Corporation any proprietary or confidential information of any third party without authorization therefrom.

5. MISCELLANEOUS

No provision in this Agreement is intended to require assignment to the Corporation of any of my rights in an invention for which no equipment, supplies, facilities, or trade secret information of the Corporation was used, and which was developed entirely on my own time, unless such invention (1) relates to the business of the Corporation or to the actual or demonstrably anticipated research or development of the Corporation; or (2) results from any work performed by me for the Corporation. This Agreement shall be binding upon me, my heirs, administrators, assigns, executors, or other legal representatives and shall be binding upon and inure to the benefit of the Corporation, its assigns, nominees or successors; however, neither this Agreement nor any provision thereof shall be construed to be an employment agreement. I agree that either during or after my employment the Corporation may advise others of the existence of this Agreement and the provisions of all or any part thereof.

| Signature of Employee: | |
|--|-----------------------|
| Employee's Printed Name: | Date:/3/e 3 |
| LOCKHEED MARTIN CORPORATION By: Signature: Robert Sum | |
| Printed Name: ROBIANT SAUGE | |
| Title: HRBP | Date: 11 (3 (03 |
| Element:UMCSS | Location: MONTOWN, PA |

Note: The term "Confidential" as used herein does not refer to official security classification of the United States Government.

PATENT REEL: 028938 FRAME: 0412

RECORDED: 09/11/2012