502225379 02/08/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| Yukiyasu TATSUZAWA | 01/24/2013 |
| Kazuhiro HIWADA | 01/24/2013 |
| Tatsuji ASHITANI | 01/24/2013 |
| Jun DEGUCHI | 01/24/2013 |
| Hideaki MAJIMA | 01/25/2013 |
| Motohiro MORISAKI | 01/24/2013 |

RECEIVING PARTY DATA

| Name: | KABUSHIKI KAISHA TOSHIBA |
|-----------------|----------------------------------|
| Street Address: | 1-1, Shibaura 1-chome, Minato-Ku |
| City: | Tokyo |
| State/Country: | JAPAN |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13762740 |

CORRESPONDENCE DATA

Fax Number: 7034132220

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: (703) 413-3000
Email: AAdams@oblon.com
Correspondent Name: Oblon, Spivak, et al.
Address Line 1: 1940 Duke Street

Address Line 4: Alexandria, VIRGINIA 22314

| ATTORNEY DOCKET NUMBER: | 411798US2 |
|-------------------------|--|
| NAME OF SUBMITTER: | Arielle Adams |
| | This document serves as an Oath/Declaration (37 CER 1.63). |

502225379 REEL: 029783 FRAME: 0056

Total Attachments: 6 source=411798USASN#page1.tif source=411798USASN#page2.tif source=411798USASN#page3.tif source=411798USASN#page4.tif source=411798USASN#page5.tif source=411798USASN#page6.tif

| Invention LIGHT RECEIVER, LIGHT RECEPTION METHOD AND TRANSMISSION SYSTEM | |
|---|--|
| As the below named inventor, I hereby declare that: | |
| This declaration In The attached application, or is directed to: United States application or PCT international application number | |
| 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, <u>KABUSHIKI</u> <u>KAISHA TOSHIBA</u> (hereinafter referred to as "ASSIGNEE") having a place of business at: 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries; | |
| NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I, by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries (including the right to claim priority under the terms of the International Convention and other relevant International Treaties and Arrangements from the aforesaid application) and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof. | |
| I hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignce of my entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me had this Assignment and sale not been made. | |
| Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries. | |
| 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 | |
| Inventor: Yukiyasu TATSUZAWA Date: Jan. 24, 2013 Signature: Yukiyasu Zatmyara | |

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P.
ATTORNEYS AT LAW
1940 DUKE STREET
ALEXANDRIA, VIRGINIA 22314

| Title of Invention | LIGHT RECEIVER, LIGHT RECEPTION METHOD AND TRANSMISSION SYSTEM |
|---|--|
| | THORIDOTON STOTELL |
| As the below named in | nventor, I hereby declare that: |
| This declaration ⊠ The attached application, or is directed to: □United States application or PCT international application number | |
| The above-identified a | 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, KABUSHIKI KAISHA TOSHIBA (hereinafter referred to as "ASSIGNEE") having a place of business at: 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries; | |
| NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I, by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries (including the right to claim priority under the terms of the International Convention and other relevant International Treaties and Arrangements from the aforesaid application) and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof. | |
| any and all foreign cassignee of my entire (his) successors and a | and request the Patent Office Officials in the United States and its territorial possessions and countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its assigns, to the full end of the term for which said Letters Patent may be granted, as fully and would have been held by me had this Assignment and sale not been made. |
| Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries. | |
| 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 I | NVENTOR |
| Inventor: Kazuhiro HIWADA Date: Jan. 24, 2013 | |
| Signature: | zzahin Handa |

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P.
ATTORNEYS AT LAW
1940 DUKE STREET
ALEXANDRIA, VIRGINIA 22314

| Title of Invention | TRANSMISSION SYSTEM |
|--|--|
| As the below named in | nventor, I hereby declare that: |
| This declaration The attached application, or is directed to: United States application or PCT international application number filed on | |
| The above-identified a | 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, KABUSHIKI KAISHA TOSHIBA (hereinafter referred to as "ASSIGNEE") having a place of business at: 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries; | |
| NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I, by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries (including the right to claim priority under the terms of the International Convention and other relevant International Treaties and Arrangements from the aforesaid application) and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in any and all divisions, reissues, continuations, substitutions and renewals thereof. | |
| I hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me had this Assignment and sale not been made. | |
| Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries. | |
| 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 I | NVENTOR |
| Inventor: Tatsuji ASHITANI Date: 24/Jan / 2013 | |
| Signature: Tatanji Ashitani | |

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P.
ATTORNEYS AT LAW
1940 DUKE STREET
ALEXANDRIA, VIRGINIA 22314

| Title of Invention | TRANSMISSION SYSTEM |
|--|--|
| As the below named in | nventor, I hereby declare that: |
| This declaration ☑ The attached application, or is directed to: ☐United States application or PCT international application number | |
| The above-identified a | 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, KABUSHIKI KAISHA TOSHIBA (hereinafter referred to as "ASSIGNEE") having a place of business at: 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries; | |
| acknowledged, and fo said ASSIGNEE, the and in all foreign cour other relevant Internal interest in and to any | RE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby or other good and valuable consideration, I, by these presents do sell, assign and transfer unto full and exclusive right to the said invention in the United States and its territorial possessions at tries (including the right to claim priority under the terms of the International Convention and tional Treaties and Arrangements from the aforesaid application) and the entire right, title and and all Letters Patent which may be granted therefor in the United States and its territorial my and all foreign countries and in and to any and all divisions, reissues, continuations, wals thereof. |
| any and all foreign coassignee of my entire (his) successors and a | and request the Patent Office Officials in the United States and its territorial possessions and countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its assigns, to the full end of the term for which said Letters Patent may be granted, as fully and would have been held by me had this Assignment and sale not been made. |
| Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries. | |
| I hereby acknowled 1001 by fine or impris | edge that any willful false statement made in this declaration is punishable under 18 U.S.C. sonment of not more than five (5) years, or both. |
| LEGAL NAME OF I | NVENTOR |
| Inventor: Jun DEGUCHI Date: Jan. 24, 20/3 | |
| Signature: Jun | Deguchi |

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P.
ATTORNEYS AT LAW
1940 DUKE STREET
ALEXANDRIA, VIRGINIA 22314

| Invention | TRANSMISSION SYSTEM |
|---|---|
| As the below named in | nventor, I hereby declare that: |
| This declaration ⊠ The attached application, or is directed to: □United States application or PCT international application number filed on | |
| The above-identified a | 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, KABUSHIKI KAISHA TOSHIBA (hereinafter referred to as "ASSIGNEE") having a place of business at: 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries; | |
| NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I, by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries (including the right to claim priority under the terms of the International Convention and other relevant International Treaties and Arrangements from the aforesaid application) and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof. | |
| any and all foreign co assignee of my entire (his) successors and a | and request the Patent Office Officials in the United States and its territorial possessions and puntries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its ssigns, to the full end of the term for which said Letters Patent may be granted, as fully and ould have been held by me had this Assignment and sale not been made. |
| Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries. | |
| 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 I | NVENTOR |
| Inventor: Hideaki M Signature: | |
| | |

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P.
ATTORNEYS AT LAW
1940 DUKE STREET
ALEXANDRIA, VIRGINIA 22314

| Invention | TRANSMISSION SYSTEM |
|--|---|
| • | |
| As the below named in | nventor, I hereby declare that: |
| is directed to: Un | he attached application, or ited States application numberled on |
| The above-identified a | pplication 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, <u>KABUSHIKI</u> <u>KAISHA TOSHIBA</u> (hereinafter referred to as "ASSIGNEE") having a place of business at: <u>1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan</u> is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries; | |
| acknowledged, and for said ASSIGNEE, the f and in all foreign coun other relevant Internat interest in and to any | RE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby in other good and valuable consideration, I, by these presents do sell, assign and transfer unto full and exclusive right to the said invention in the United States and its territorial possessions stries (including the right to claim priority under the terms of the International Convention and ional Treaties and Arrangements from the aforesaid application) and the entire right, title and and all Letters Patent which may be granted therefor in the United States and its territorial my and all foreign countries and in and to any and all divisions, reissues, continuations, wals thereof. |
| any and all foreign co assignee of my entire to (his) successors and as | and request the Patent Office Officials in the United States and its territorial possessions and numbers to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its ssigns, to the full end of the term for which said Letters Patent may be granted, as fully and ould have been held by me had this Assignment and sale not been made. |
| Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries. | |
| | dge that any willful false statement made in this declaration is punishable under 18 U.S.C. comment of not more than five (5) years, or both. |
| LEGAL NAME OF IN | IVENTOR |
| Inventor: Motohiro MORISAKI Signature: Motohiro Morisaki Date: Jan, 24, 2013 | |

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P.
ATTORNEYS AT LAW
1940 DUKE STREET
ALEXANDRIA, VIRGINIA 22314

PATENT REEL: 029783 FRAME: 0063

RECORDED: 02/08/2013