#### 502522127 10/04/2013

#### PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

#### **CONVEYING PARTY DATA**

Name	Execution Date
MASAMI HAYASHI	07/16/2013
KENICHI MIYAMOTO	07/16/2013
NOBUAKI ISHIGA	07/16/2013
NAOKI TSUMURA	07/16/2013
KENSUKE NAGAYAMA	07/16/2013

#### **RECEIVING PARTY DATA**

Name:	MITSUBISHI ELECTRIC CORPORATION		
Street Address:	7-3, MARUNOUCHI 2-CHOME, CHIYODA-KU		
City:	ТОКУО		
State/Country:	JAPAN		
Postal Code:	100-8310		

### PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14046782

### **CORRESPONDENCE DATA**

Fax Number: (703)390-1277

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

Phone: 703 390 9051

Email: info@sbpatentlaw.com

Correspondent Name: STUDEBAKER & BRACKETT PC Address Line 1: 12700 SUNRISE VALLEY DRIVE

Address Line 2: SUITE 102

Address Line 4: RESTON, VIRGINIA 20191

ATTORNEY DOCKET NUMBER:	005700-ME0056
NAME OF SUBMITTER:	TIM L. BRACKETT, JR.
	PATENT

502522127 REEL: 031351 FRAME: 0880

OP \$40.00 14046782

Signature:	/Tim L. Brackett, Jr./	
Date:	10/04/2013	
Total Attachments: 10		
source=DEC_ASN#page1.tif		
source=DEC_ASN#page2.tif		
source=DEC_ASN#page3.tif		
source=DEC_ASN#page4.tif		
source=DEC_ASN#page5.tif		
source=DEC_ASN#page6.tif		
source=DEC_ASN#page7.tif		
source=DEC_ASN#page8.tif		
source=DEC_ASN#page9.tif		
source=DEC_ASN#page10.tif		

PATENT REEL: 031351 FRAME: 0881



Attorney	Docket	No.	
Audiney.	DOCKEL	IYU.	 

Title of Invention:	
DISPLAY	
私は、以下に記名された発明者として、ここに下記の通り 宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである:	This declaration is directed to:
□ 添付された出願、あるいは、 □ 米国出願番号またはPCT国際出願番号は、	☐ The attached application, or ☐ United States application or PCT international application number
上記出願書(明細書及び図面)は、私が作成したものか、あるいは私がその作成を許可したものである。	The above-identified application was made or authorized to be made by me.
私は、本米国出願の請求範囲で記載された発明に対する原発明者であるか、或いは、原共同発明者であると信じている。	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
私は、ここでの宣誓または陳述において故意に偽りを述べた場合、合衆国法典第18巻第1001条に基づき、罰金あるいは5年以下の懲役、または、両方の懲罰を受けることを認める。	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.  STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):
	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications
	Signature:



Attorney Docket No.	
---------------------	--

WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.
The inventor declaration for said application is combined herewith.
[X] said application to be filed in the United States Patent and Trademark Office;
[ ] said application having been filed in the United States Patent and Trademark Office on, authorization being hereby given to the practitioners associated with <u>STUDEBAKER &amp; BRACKETT PC's CUSTOMER NUMBER 78198</u> , to insert here in parentheses (Application Serial No) the application serial number of said application when known;
[ ] said application having been filed under the Patent Cooperation Treaty on, as Serial No, the United States of America being designated.
AND WHEREAS Mitsubishi Electric Corporation of 7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 1008310, Japan hereinafter referred to as the assignee, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby

NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.

AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.

AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.

The undersigned hereby grants the law firm of STUDEBAKER & BRACKETT PC the power to insert on the Assignment portion of this combined Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

This combined Declaration and Assignment has been executed by the undersigned on the date opposite the undersigned name.

発明者氏名/ Legal Name of Inventor Masami HAYASHI			·		***************************************
発明者の署名/ Signature	日付/ Date				*****************
Masami Hayashi		July	/{.	2013	



Attorney	Docket No	·

Title of Invention:	
DISPLAY	
私は、以下に記名された発明者として、ここに下記の通り 宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである:	This declaration is directed to:
<ul><li>□ 添付された出願、あるいは、</li><li>□ 米国出願番号またはPCT国際出願番号は、</li><li>であり、且つ</li><li>の日に出願された出願(該当する場合)</li></ul>	The attached application, or United States application or PCT international application number
上記出願書 (明細書及び図面)は、私が作成したものか、あるいは私がその作成を許可したものである。	The above-identified application was made or authorized to be made by me.
私は、本米国出願の請求範囲で記載された発明に対する原発明者であるか、或いは、原共同発明者であると信じている。	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
私は、ここでの宣誓または陳述において故意に偽りを述べた場合、合衆国法典第18巻第1001条に基づき、罰金あるいは5年以下の懲役、または、両方の懲罰を受けることを	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.
認める。	STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):
	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications
	Signature:



Attorney Docket	No.	

WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.
The inventor declaration for said application is combined herewith.
[X] said application to be filed in the United States Patent and Trademark Office;
[ ] said application having been filed in the United States Patent and Trademark Office on, authorization being hereby given to the practitioners associated with <u>STUDEBAKER &amp; BRACKETT PC's CUSTOMER NUMBER 78198</u> , to insert here in parentheses (Application Serial No) the application serial number of said application when known;
[ ] said application having been filed under the Patent Cooperation Treaty on, as Serial No, the United States of America being designated.
AND WHEREAS Mitsubishi Electric Corporation of 7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 1008310, Japan , hereinafter referred to as the assignee, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.
AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.
The undersigned hereby grants the law firm of STUDEBAKER & BRACKETT PC the power to insert on the Assignment portion of this combined Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.
This combined Declaration and Assignment has been executed by the undersigned on the date opposite the undersigned name.
発明者氏名/ Legal Name of Inventor Kenichi MIYAMOTO
発明者の署名/ Signature 日付/ Date
Kenichi Miyamoto July. 16.2013



Attorney	Docket No.	

Title of Invention:	
nae or myemon.	
DISPLAY	
私は、以下に記名された発明者として、ここに下記の通り 宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである:	This declaration is directed to:
<ul><li>□ 添付された出願、あるいは、</li><li>□ 米国出願番号またはPCT国際出願番号は、</li><li> であり、且つ</li><li>の日に出願された出願(該当する</li></ul>	☐ The attached application, or ☐ United States application or PCT international application number filed on
場合)	
上記出願書(明細書及び図面)は、私が作成したものか、あるいは私がその作成を許可したものである。	The above-identified application was made or authorized to be made by me.
私は、本米国出願の請求範囲で記載された発明に対する原発明者であるか、或いは、原共同発明者であると信じている。	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
私は、ここでの宣誓または陳述において故意に偽りを述べた場合、合衆国法典第18巻第1001条に基づき、罰金あるいは5年以下の懲役、または、両方の懲罰を受けることを	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.
認める。	STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):
	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications
	Signature:
	Date: <u>11/15/2012</u>



Attorney	Docket No.	

WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.
The inventor declaration for said application is combined herewith.
[X] said application to be filed in the United States Patent and Trademark Office;
[ ] said application having been filed in the United States Patent and Trademark Office on, authorization being hereby given to the practitioners associated with <u>STUDEBAKER &amp; BRACKETT PC's CUSTOMER NUMBER 78198</u> , to insert here in parentheses (Application Serial No) the application serial number of said application when known;
[ ] said application having been filed under the Patent Cooperation Treaty on, as Serial No, the United States of America being designated.
AND WHEREAS Mitsubishi Electric Corporation of 7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 1008310, Japan , hereinafter referred to as the assignee, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.
AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.
The undersigned hereby grants the law firm of STUDEBAKER & BRACKETT PC the power to insert on the Assignment portion of this combined Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.
This combined Declaration and Assignment has been executed by the undersigned on the date opposite the undersigned name.
発明者氏名/ Legal Name of Inventor Nobuaki ISHIGA
発明者の署名/ Signature 日付/ Date
nobiaki Ishiga July 16, 2013



Title of Invention:	
DISPLAY	
私は、以下に記名された発明者として、ここに下記の通り 宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである:	This declaration is directed to:
□ 添付された出願、あるいは、 □ 米国出願番号またはPCT国際出願番号は、 □ であり、且つ の日に出願された出願(該当する場合)	The attached application, or United States application or PCT international application number
上記出願書(明細書及び図面)は、私が作成したものか、あるいは私がその作成を許可したものである。	The above-identified application was made or authorized to be made by me.
私は、本米国出願の請求範囲で記載された発明に対する原発明者であるか、或いは、原共同発明者であると信じている。	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
私は、ここでの宣誓または陳述において故意に偽りを述べた場合、合衆国法典第18巻第1001条に基づき、罰金あるいは5年以下の懲役、または、両方の懲罰を受けることを	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.
認める。	STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):
	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications
	Signature:



Attorney	Docket No.	

WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.
The inventor declaration for said application is combined herewith.
[X] said application to be filed in the United States Patent and Trademark Office;
[ ] said application having been filed in the United States Patent and Trademark Office on, authorization being hereby given to the practitioners associated with <u>STUDEBAKER &amp; BRACKETT PC's CUSTOMER NUMBER 78198</u> , to insert here in parentheses (Application Serial No) the application serial number of said application when known;
[ ] said application having been filed under the Patent Cooperation Treaty on, as Serial No, the United States of America being designated.
AND WHEREAS Mitsubishi Electric Corporation of 7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 1008310, Japan , hereinafter referred to as the assignee, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.
AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.
The undersigned hereby grants the law firm of STUDEBAKER & BRACKETT PC the power to insert on the Assignment portion of this combined Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.
This combined Declaration and Assignment has been executed by the undersigned on the date opposite the undersigned name.
幾明者氏名/ Legal Name of Inventor Naoki TSUMURA
発明者の署名/ Signature 日付/ Date
raoki Jumura July 16, 2013

Page 2 of 2



Attorney Docket No.	
---------------------	--

**************************************	
Title of Invention:	
DISPLAY	
私は、以下に記名された発明者として、ここに下記の通り 宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである:	This declaration is directed to:
<ul><li>□ 添付された出願、あるいは、</li><li>□ 米国出願番号またはPCT国際出願番号は、</li><li>であり、且つの日に出願された出願(該当する)</li></ul>	The attached application, or United States application or PCT international application number filed on
場合)	
上記出願書 (明細書及び図面)は、私が作成したものか、あるいは私がその作成を許可したものである。	The above-identified application was made or authorized to be made by me.
私は、本米国出願の請求範囲で記載された発明に対す る原発明者であるか、或いは、原共同発明者であると信じ ている。	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
私は、ここでの宣誓または陳述において故意に偽りを述べた場合、合衆国法典第18巻第1001条に基づき、罰金あるいは5年以下の懲役、または、両方の懲罰を受けることを認める。	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.
	STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):
	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications
	Signature:



**RECORDED: 10/04/2013** 

Attorney	Docket No	,

WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.
The inventor declaration for said application is combined herewith.
[X] said application to be filed in the United States Patent and Trademark Office;
[ ] said application having been filed in the United States Patent and Trademark Office on, authorization being hereby given to the practitioners associated with <u>STUDEBAKER &amp; BRACKETT PC's CUSTOMER NUMBER 78198</u> , to insert here in parentheses (Application Serial No) the application serial number of said application when known;
[ ] said application having been filed under the Patent Cooperation Treaty on, as Serial No, the United States of America being designated.
AND WHEREAS Mitsubishi Electric Corporation of 7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 1008310, Japan hereinafter referred to as the assignee, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.
AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.
The undersigned hereby grants the law firm of STUDEBAKER & BRACKETT PC the power to insert on the Assignment portion of this combined Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.
This combined Declaration and Assignment has been executed by the undersigned on the date opposite the undersigned name.
発明者氏名/ Legal Name of Inventor Kensuke NAGAYAMA
発明者の署名/ Signature 日付/ Date
Kenzuko Magauana July 16 2013

Page 2 of 2