504884066 04/24/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT		
CONVEYING PARTY	ΔΑΤΑ				
		Execution Date			
SHOICHI SUZUKI			10/31/2017		
TATSUSHI AIBA			04/04/2018		
KAZUNARI YOKOMAKURA			10/31/2017		
WATARU OUCHI			10/31/2017		
TAKASHI HAYASHI			11/25/2017		
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State/Country:	JAPAN	I			
Property Type	-	15770723			
Application Number:	, 	15770723			
CORRESPONDENCE	DATA				
Fax Number:		(213)426-1788			
Fax Number: Correspondence will	be sent to	o the e-mail address first; if that is			
Fax Number: <i>Correspondence will</i>	be sent to f provideo				
Fax Number: Correspondence will using a fax number, in	be sent to f provideo	<i>b the e-mail address first; if that is</i> <i>d; if that is unsuccessful, it will be</i> 2134261771			
Fax Number: <i>Correspondence will using a fax number, in</i> Phone:	be sent to f provideo	<i>b the e-mail address first; if that is</i> <i>d; if that is unsuccessful, it will be</i> 2134261771	sent via US Mail.		
Fax Number: <i>Correspondence will using a fax number, in</i> Phone: Email: Correspondent Name Address Line 1:	be sent to f provideo :	<i>b the e-mail address first; if that is</i> <i>d; if that is unsuccessful, it will be</i> 2134261771 eoa-proce@scienbizip.com,eoa-cbd KELVIN LIU 550 S. HOPE STREET, SUITE 2825	<i>sent via US Mail.</i> @scienbizip.com,eoa-procc@sbp-us.com		
Fax Number: <i>Correspondence will using a fax number, in</i> Phone: Email: Correspondent Name	be sent to f provideo :	<i>b the e-mail address first; if that is</i> <i>d; if that is unsuccessful, it will be</i> 2134261771 eoa-proce@scienbizip.com,eoa-cbd KELVIN LIU	<i>sent via US Mail.</i> @scienbizip.com,eoa-procc@sbp-us.com		
Fax Number: Correspondence will using a fax number, in Phone: Email: Correspondent Name Address Line 1: Address Line 4:	be sent to f provideo :	b the e-mail address first; if that is d; if that is unsuccessful, it will be 2134261771 eoa-proce@scienbizip.com,eoa-cbd KELVIN LIU 550 S. HOPE STREET, SUITE 2825 LOS ANGELES, CALIFORNIA 9007	<i>sent via US Mail.</i> @scienbizip.com,eoa-procc@sbp-us.com		
Fax Number: Correspondence will using a fax number, in Phone: Email: Correspondent Name Address Line 1: Address Line 4:	be sent to f provided : IUMBER:	b the e-mail address first; if that is d; if that is unsuccessful, it will be 2134261771 eoa-proce@scienbizip.com,eoa-cbd KELVIN LIU 550 S. HOPE STREET, SUITE 2825 LOS ANGELES, CALIFORNIA 9007	<i>sent via US Mail.</i> @scienbizip.com,eoa-procc@sbp-us.com		
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Fax Number: Correspondence will using a fax number, in Phone: Email: Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER	be sent to f provided : IUMBER:	b the e-mail address first; if that is d; if that is unsuccessful, it will be 2134261771 eoa-proce@scienbizip.com,eoa-cbd KELVIN LIU 550 S. HOPE STREET, SUITE 2825 LOS ANGELES, CALIFORNIA 9007 US73576 KELVIN LIU	<i>sent via US Mail.</i> @scienbizip.com,eoa-procc@sbp-us.com		
Fax Number: Correspondence will using a fax number, in Phone: Email: Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER SIGNATURE:	be sent to f provided : IUMBER:	b the e-mail address first; if that is d; if that is unsuccessful, it will be 2134261771 eoa-proce@scienbizip.com,eoa-cbd KELVIN LIU 550 S. HOPE STREET, SUITE 2825 LOS ANGELES, CALIFORNIA 9007 US73576 KELVIN LIU /Kelvin Liu/	<i>sent via US Mail.</i> @scienbizip.com,eoa-procc@sbp-us.com		
Fax Number: <i>Correspondence will using a fax number, in</i> Phone: Email: Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER SIGNATURE: DATE SIGNED:	be sent to f provided : : IUMBER: :	b the e-mail address first; if that is d; if that is unsuccessful, it will be 2134261771 eoa-proce@scienbizip.com,eoa-cbd KELVIN LIU 550 S. HOPE STREET, SUITE 2825 LOS ANGELES, CALIFORNIA 9007 US73576 KELVIN LIU /Kelvin Liu/ 04/24/2018	<i>sent via US Mail.</i> @scienbizip.com,eoa-procc@sbp-us.com		
Fax Number: <i>Correspondence will</i> <i>using a fax number, in</i> Phone: Email: Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER SIGNATURE: DATE SIGNED: Total Attachments: 6	be sent to f provided : : IUMBER: : 4ASM#pag	b the e-mail address first; if that is d; if that is unsuccessful, it will be 2134261771 eoa-proce@scienbizip.com,eoa-cbd KELVIN LIU 550 S. HOPE STREET, SUITE 2825 LOS ANGELES, CALIFORNIA 9007 US73576 KELVIN LIU /Kelvin Liu/ 04/24/2018	<i>sent via US Mail.</i> @scienbizip.com,eoa-procc@sbp-us.com		

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Attorney Docket No.:

COMBINED PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

特許出願宣言付き譲渡書(37 CFR 1.63)

私は下記に記載の発明者/譲渡人として:

As a below named INVENTOR/ASSIGNOR of the patent application entitled: TERMINAL DEVICE, BASE STATION DEVICE,

COMMUNICATION METHOD, AND INTEGRATED CIRCUIT And which is:

本宣言付き譲渡書は以下に関します。

The attached application, or

 \checkmark United States Application or PCT International Application Number PCT/JP2016/073822_filed on August 15, 2016,

I declare that:

The above identified application was made or was 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 have reviewed and understand the contents of the application for which this assignment with declaration is being submitted.

I am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR 1.56.

Whereas, the undersigned inventor(s) hereinafter called ASSIGNOR(S), have invented certain inventions described in the application identified above; and

Whereas, Sharp Kabushiki Kaisha of 1, Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan, (ASSIGNEE(S)), desires to acquire the entire right, title, and interest in the application and invention, and any Letters Patent that may be granted therefore in the United States and in any and all foreign countries;

In consideration of the payment by ASSIGNEE(S) to ASSIGNOR(S) of the sum of One Dollar (\$1.00) and for other valuable consideration, receipt thereof is hereby acknowledged,

 \Box 添付の出願、または

 $\overline{\mathbf{N}}$

2016 年 8 月 15 日に出願された米国出願ある いは PCT 国際出願番号 PCT/JP2016/073822

上記に明示された出願は私が作成した、または作成を許可し たものである事をここに宣言します。

私は、私が本出願内で請求されている発明の最初の発明者、 または最初の共同発明者であると信じます。

私は本宣言付き譲渡書の提出に関わる出願の内容を検討し、 理解しています。

私は37 CFR 1.56 に定義される特許性に肝要な私の知るすべ ての情報について当局に開示する義務があることを認識して います。

本書以降で譲渡人と呼ばれる上記に署名した発明者は、上記 で特定される本出願に記載する特定の発明をしているため、 また、

1, Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan D Sharp Kabushiki Kaisha (譲受人) は本出願および本発明に対 する全ての権利、権原、および利益、ならびに当該出願およ び発明に対して得られる米国内、およびすべての外国で交付 される特許証の取得を希望しているため、

譲受人から譲渡人への1ドル(\$1.00)の支払いおよびその他 の有価約因に基づき、その受領をここに確認したうえで

Page 1 of 3

譲渡人は、譲受人、その後継者および継承人に対して、すべ ての分割出願および継続出願を含めて、アメリカ合衆国の本 出願およびそこに開示された発明に対する全ての権利、権原 および利益(その後の改正を含む協定の下、又はその他の関 係する国際条約および国際協定の下でのすべての権利を含 む)、ならびに同出願および発明に対して交付された米国特 許証およびその全ての再発行を売却、譲渡および移転しま す。

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私は本宣言付き譲渡書において故意になされた一切の虚偽の 陳述が18 USC 1001 に基づき罰金あるいは5年以下の拘禁ま たは両方による処罰にあたることに同意します。

本宣言付き譲渡書は、対応する英文の譲渡書及び宣言書の正確な翻訳文です。

ASSIGNOR(S) sell, assign, and transfer to ASSIGNEE(S), its successors and assigns, the entire right, title, and interest in the application and the invention disclosed therein for the United States of America, including all divisions, and continuations thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues thereof, including all rights under the Paris Convention as amended, or other relevant International Treaties and Arrangements.

ASSIGNOR(S) covenant(s) that no assignment, sale, agreement, or encumbrance has been or will be made or entered into which, would conflict with this assignment and sale.

ASSIGNOR(S) agree(s), when called upon to do so by the ASSIGNEE(S), to provide ASSIGNEE(S) with all pertinent facts and documents relating to the application, the invention, and the Letters Patent as may be known and accessible to ASSIGNOR(S); to sign without further consideration all papers deemed necessary by the ASSIGNEE(S); and to testify as to the same in any interference or litigation related thereto.

I acknowledge that any willful false statement made in this combined declaration/assignment is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

The combined declaration/assignment is an accurate translation of the corresponding English language assignment and declaration.

LEGAL NAME OF FIRST INVENTOR/ASSIGNOR 第1の発明者/譲渡人の正式氏名	
Inventor:	Date: 目付: Oct. 31、2017
Signature: 署名: Shorefui Suzuki	
~	
LEGAL NAME OF SECOND INVENTOR/ASSIGNOR	
第2の発明者/譲渡人の正式氏名 Inventor:	Date:
一 発明者: Tatsushi AlBA	日付:
Signature:	
署名:	
LEGAL NAME OF THIRD INVENTOR/ASSIGNOR 第3の発明者/譲渡人の正式氏名 Inventor: 発明者: Kazunari YOKOMAKURA Signature: 署名: Haymmun	Date: Oct, 31, 2017 日付: Oct, 31, 2017
LEGAL NAME OF FOURTH INVENTOR/ASSIGNOR 第4の発明者/譲渡人の正式氏名	
Inventor:	Date: 日付: 0cet 31, 2017
発明者: Wataru OUCHI Signature: ローイート A A A A A A A A A A A A A A A A A A A	$HT: \underline{VCeUOT}$
Bignetic: 署名: Watawul Uwhe	
Page 2 of 3	
r age 2 or 5	

第5の発明者/譲カ Inventor: 発明者: Signature: 署名:	HAYASHI Takashi	Date: 2017 / 11 /25 日付:	
	Fifalie Hynshi	(

Attorney Docket No.:

COMBINED PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

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The attached application, or

 United States Application or PCT International Application Number PCT/JP2016/073822_ filed on <u>August 15, 2016</u>,

| declare that:

And which is:

The above identified application was made or was 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.

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LEGAL NAME OF	FIRST INVENTOR/ASSIGNOR		
第1の発明者/講	裏渡人の正式氏名		
Inventor:		Date:	
発明者:	Shoichi SUZUKI	日付:	
Signature:			
署名:	·		
LEGAL NAME OF	SECOND INVENTOR/ASSIGNOR		
第2の発明者/	裏渡人の正式氏名		
Inventor:		Date:	
発明者:	Tatsushi AIBA	日付: April 4, 2018	
Signature:	The second se	- ,	
署名:	Carstell abe		
	• • ·		
LEGAL NAME OF	THIRD INVENTOR/ASSIGNOR		
第3の発明者/靄	譲渡人の正式氏名		
Inventor:		Date:	
発明者:	Kazunari YOKOMAKURA	日付:	
Signature:			
署名:	· · · · · · · · · · · · · · · · · · ·		
LEGAL NAME OF	FOURTH INVENTOR/ASSIGNOR		
第4の発明者/詞	譲渡人の正式氏名		
Inventor: .		Date:	
発明者:	Wataru OUCHI	日付:	
Signature:			
署名:			

Page 2 of 3

LEGAL NAME OF FIFTH INVENTOR/ASSIGNOR 第5の発明者/譲渡人の正式氏名 Inventor: Date: 発明者: HAYASHI Takashi Ddt: Signature: 署名:

Page 3 of 3

PATENT REEL: 045627 FRAME: 0296

RECORDED: 04/24/2018