504137740 12/20/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4194027

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KAZUYUKI SHIMEZAWA	09/11/2016
TOSHIZO NOGAMI	09/07/2016
WATARU OUCHI	09/01/2016
NAOKI KUSASHIMA	09/09/2016
ALVARO RUIZ DELGADO	09/11/2016

RECEIVING PARTY DATA

Name:	SHARP KABUSHIKI KAISHA
Street Address:	1, TAKUMI-CHO, SAKAI-KU
City:	SAKAI CITY, OSAKA
State/Country:	JAPAN
Postal Code:	590-8522

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	15319713	

CORRESPONDENCE DATA

Fax Number: (703)205-8050

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.

Phone: (703) 205-8000

Email: mailroom@bskb.com, anh-vu.dao@bskb.com
Correspondent Name: BIRCH, STEWART, KOLASCH & BIRCH, LLP

Address Line 1: P.O. BOX 747

Address Line 4: FALLS CHURCH, VIRGINIA 22040-0747

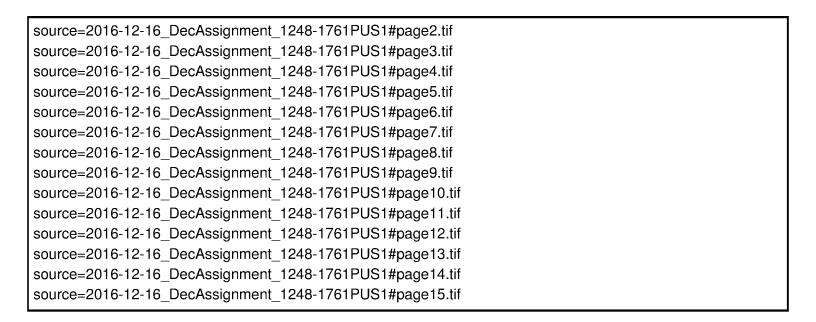
ATTORNEY DOCKET NUMBER:	1248-1761PUS1
NAME OF SUBMITTER:	ANH-VU DAO
SIGNATURE:	/anh-vu dao/
DATE SIGNED:	12/20/2016

Total Attachments: 15

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PATENT REEL: 040694 FRAME: 0415

504137740



Attorney Docket No. 1248-1761PUS1

BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. Box 747 • Falls Church, Virginia 22040-0747

Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

Title of Invention ⇒

TERMINAL DEVICE, BASE STATION APPARATUS, AND COMMUNICATION METHOD

As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:

Application not

This declaration is directed to the application attached hereto. If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:

Enter Appln. No. ⇒ United States Application Number or PCT International Appln. No. PCT/JP2015/067607

Enter Filing Date ⇒ filed on June 18, 2015

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.

I have reviewed and understand the contents of the above-identified application, including the claims.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.

WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.

Insert Name of Assignee

⇒ WHEREAS, SHARP KABUSHIKI KAISHA

Insert Address of Assignee

🗢 of 1, Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan,

its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and

Check Box if Appropriate

in any foreign countries.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for which the same may be granted.

Page 1

Application No. 15/319,713 filed on December 16, 2016

1248-1761PUS1

Attorney Docket No.

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The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

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In witness whereof, executed by the undersigned on the date opposite the undersigned name.

		LEGAL NA	AME OF INVENTOR		
Inventor's Name =	⇒	Inventor:	SHIMEZAWA, Kazuyuki	_ Date:	DePt.11, 2018
Inventor's Signature =	⇒ !	Signature:	Km Ihm		

An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.

Additional inventors are being named on the 1 supplemental sheet(s) attached hereto.

SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

	LEGAL N	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒ Inventor:	NOGAMI, Toshizo	Date:
Inventor's Signature	⇒ Signature:		
	LEGAL N.	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒ Inventor:	OUCHI, Wataru	Date:
Inventor's Signature	⇒ Signature:		
	LEGAL N	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒Inventor:	KUSASHIMA, Naoki	Date:
Inventor's Signature	⇒Signature:		
	LEGAL N	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒Inventor:	RUIZ DELGADO, Alvaro	Date:
Inventor's Signature	⇒Signature:		

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Title of Invention → TERMINAL DEVICE, BASE STATION APPARATUS, AND COMMUNICATION METHOD

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Insert Name of Assignee

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Insert Address of Assigned

of 1, Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan,

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Check Box if Appropriate

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In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL NAME OF INVENTOR

		1311432 113 143	The of Marketon	
Inventor's Name	φ	Inventor:	SHIMEZAWA, Kazuyuki	Date:
Inventor's Signatus	g 🖙	Signature:		
An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.				
\square Additional inventors are being named on the $\underline{1}$ supplemental sheet(s) attached hereto,				

Page 2

BSKB-DECASSIGN-SINGLE (99-12)

SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name =	Inventor:	NOGAMI, Toshizo	Date: _	Sep. 7, 2066
Inventor's Signature =	Signature:	Tooks homi		,
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY		
Inventor's Name =	Inventor:	OUCHI, Wataru	Date: _	
Inventor's Signature	Signature:			
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY		
Inventor's Name	[⇔] Inventor:	KUSASHIMA, Naoki	Date: _	
Inventor's Signature	⇒Signature:		*	
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY		
Inventor's Name	⇒Inventor:	RUIZ DELGADO, Alvaro	Date: _	
Inventor's Signature	⇔Signature:			

BSKB-DECASSIGN\(09-12)

Attorney Docket No. 1248-1761PUS1

BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. Box 747 • Falls Church, Virginia 22040-0747

Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

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🕆 of 1, Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan,

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Application No. 15/319,713 filed on December 16, 2016

1248-1761PUS1

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In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL NAME OF INVENTOR

Inventor's Name	⇒ Inventor:	SHIMEZAWA, Kazuyuki	Date:	
Inventor's Signatur	re ⇒ Signature:			
An application	n data sheet (PT e form for each i	O/SB/14 or equivalent), including naming nventor; or check the box below and compl	the entire inventive entity, must acco lete the attached page(s) to list additio	mpany this form. onal inventors.
Additiona	al inventors are l	peing named on the 1 supplemental sheet(s)) attached hereto.	

Page 2

BSKB-DECASSIGN-SINGLE (09-12)

1248-1761PUS1

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ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

	LEGAL N	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒ Inventor:	NOGAMI, Toshizo	Date:
Inventor's Signature	⇒ Signature:		
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒ Inventor:	OUCHI, Wataru	Date: Sep. , 20/6
Inventor's Signature	⇒ Signature:	Wataru Uuchi	
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔Inventor:	KUSASHIMA, Naoki	Date:
Inventor's Signature	⇔Signature:	· · · · · · · · · · · · · · · · · · ·	
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒Inventor:	RUIZ DELGADO, Alvaro	Date:
Inventor's Signature	⇒Signature:		

BSKB-DECASSIGN\(09-12)

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Title of Invention ⇒ TERMINAL DEVICE, BASE STATION APPARATUS, AND COMMUNICATION METHOD

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		LEGAL IV	AIME OF HAVEIATOR	
Inventor's Name	⇔	Inventor:	SHIMEZAWA, Kazuyuki	Date:
Inventor's Signature	: ⇒	Signature:		
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TECAL NAME OF INTERITOR

Page 2

BSKB-DECASSIGN-SINGLE (09-12)

Application No. 15/319,713 filed on December 16, 2016 1248-1761PUS1

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ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

	LEGAL NAME OF JOINT INVENTOR, IF ANY					
Inventor's Name	⇒ Inventor:	NOGAMI, Toshizo	Date:			
Inventor's Signature	⇒ Signature:					
	LEGAL N	AME OF JOINT INVENTOR, IF ANY				
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Inventor's Signature	⇒ Signature:					
	LEGAL N	AME OF JOINT INVENTOR, IF ANY				
Inventor's Name	⇒Inventor:	KUSASHIMA, Naoki	Date:	Sept. 9, 2016		
Inventor's Signature	⇒Signature:	Novai Xiotalfina				
	LEGAL N	AME OF JOINT INVENTOR, IF ANY				
Inventor's Name	⇒Inventor:	RUIZ DELGADO, Alvaro	Date:			
Inventor's Signature	⇔Signature:					

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The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America patent(s) or a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The undersigned hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

The undersigned hereby acknowledges 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.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL NAME OF INVENTOR

Inventor's Name	⇒ Inventor:	SHIMEZAWA, Kazuyuki	Date:				
Inventor's Signatur	e⇒ Signature:						
An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.							
Additiona	l inventors are	being named on the 1 cumplemental shee	t(a) attached haveta				

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Attorney Docket No.

SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

	LEGAL N	AME OF JOINT INVENTOR, IF ANY	,
Inventor's Name	⇒ Inventor:	NOGAMI, Toshizo	Date:
Inventor's Signature	⇒ Signature:		
	LEGAL N	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒ Inventor:	OUCHI, Wataru	Date:
Inventor's Signature	⇒ Signature:		
	LEGAL N	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒Inventor:	KUSASHIMA, Naoki	Date:
Inventor's Signature	⇒Signature:	-	
	LEGAL N	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔Inventor:	RUIZ DELGADO, Alvaro	Date: September 11, 2016
Inventor's Signature	⇒Signature:	Alone Ruia Delgado	

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PATENT REEL: 040694 FRAME: 0431

RECORDED: 12/20/2016