PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5464279

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YOSHIFUMI SEKIGUCHI	04/01/2019
NAOYA NAKAI	03/26/2019
KOICHI TANIGUCHI	03/26/2019
MAKOTO SUZUKI	03/26/2019

RECEIVING PARTY DATA

Name:	HITACHI HIGH-TECHNOLOGIES CORPORATION	
Street Address:	24-14, NISHI SHIMBASHI 1-CHOME, MINATO-KU,	
City:	TOKYO	
State/Country:	JAPAN	
Postal Code:	105-8717	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16378646

CORRESPONDENCE DATA

Fax Number: (703)684-1157

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: 703-684-1120

Email: svannarath@mmiplaw.com **Correspondent Name:** MATTINGLY & MALUR, PC Address Line 1: 1800 DIAGONAL ROAD

Address Line 2: SUITE 210

Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	H&A-12103
NAME OF SUBMITTER:	SHRINATH MALUR
SIGNATURE:	/Shrinath Malur/
DATE SIGNED:	04/09/2019

Total Attachments: 4

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> **PATENT** REEL: 048827 FRAME: 0195 505417489

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> PATENT REEL: 048827 FRAME: 0196

ASSIGNMENT (譲渡証)

As a below named inventor, I hereby declare that:

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me by HITACHI HIGH-TECHNOLOGIES CORPORATION, a corporation organized under the laws of Japan, located at 24-14, Nishi Shimbashi 1-chome, Minato-ku, Tokyo, Japan, receipt of which is hereby acknowledged I do hereby sell and assign to said HITACHI HIGH-TECHNOLOGIES CORPORATION, Its successors and assigns; all my right, title and interest, in and for the United States of America, in and to

HEIGHT DETECTION APPARATUS AND CHARGED PARTICLE BEAM APPARATUS

invented by me (if only one is named below) or us (if plural inventors are named below) and described in the application for United States Letters Patent therefor, executed on even date herewith, and all United States Letters Patent which may be granted therefor, and all divisions, continuations and extensions thereof, the said interest being the entire ownership of the said Letters Patent when granted,

to be held and enjoyed by said HITACHI HIGH-TECHNOLOGIES CORPORATION,

its successors, assigns or other legal representatives, to the full end of term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me or us if this assignment and sale had not been made;

And I hereby agree to sign and execute any further documents or instruments which may be necessary, lawful, and proper in the prosecution of the above-named application or in the preparation and prosecution of any continuing, continuation-in-part, substitute, divisional, renewal, reviewed or reissue applications or in any amendment, extension, or interference proceedings, or otherwise to secure the title thereto in said assignee;

And I do hereby authorize and request the Commissioner of Patents to issue said Letters Patent to said HITACHI HIGH-TECHNOLOGIES CORPORATION,

Signed on the date(s) indicated aside our signatures:

Date Signed (署名日)	INVENTOR(S) Date Signed (発明者フルネームサイン) (署名日)	
4/1/2019	y Seliguchi Yoshifumi BEKIGUCHI	1)
	() U Naoya NAKAI	2)_
	Koichi TANIGUCHI	3)
	Makoto SUZUKI	4)

PATENT REEL: 048827 FRAME: 0197

ASSIGNMENT (譲渡証)

As a below named inventor, I hereby declare that:

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Signed on the date(s) indicated aside our signatures:

INVENTOR(S)

(着名日)	(発明者 ノルネームサイン)		
 	Yoshifumi SEKIGUCHI		1)
3/26/2019	Naoya NAKAI	Naoya Nahai	2)
 	Kořchi TANIGUCHI		3>
	Makoto SUZUKI		4)

PATENT REEL: 048827 FRAME: 0198

Date Signed

ASSIGNMENT

(譲渡証)

As a below named inventor, I hereby declare that:

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Signed on the date(s) indicated aside our signatures:

INVENTOR(S)

	(発明者フルネームサイン)		(署名日)	
1)		Yoshifumi SEKIGUCHI		
2)_		Naoya NAKAI		
3)_	Horchi Tanogachi	Koichi TANIGUCHI	3/26/2019	
4)		Makoto SUZUKI	·	

PATENT REEL: 048827 FRAME: 0199

Date Signed

ASSIGNMENT (藤海証)

As a below named inventor, I hereby declare that:

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me by HITACHI HIGH-TECHNOLOGIES CORPORATION, a corporation organized under the laws of Japan,

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Signed on the date(s) indicated aside our signatures:

INIVENITORIOS

(署名日)	(発明者フルネームサイン)	
	Yoshifumi SEKIGUCHI	1)
	Naoya NAKAI	2)
	Koichi TANIGUCHI	3)
3/26/2019	flugilia de la companya de la compan	4)

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RECORDED: 04/09/2019