

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4914612

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the RECEIVING PARTIES TO TERUMO KABUSHIKI KAISHA AND NEC CORPORATION previously recorded on Reel 039058 Frame 0640. Assignor(s) hereby confirms the ASSIGNMENT.
RESUBMIT DOCUMENT ID:	504715522

CONVEYING PARTY DATA

Name	Execution Date
MIYUKI KOYAMA	11/02/2017
TADASHI SAMESHIMA	11/01/2017
TOSHIHIDE TANAKA	12/06/2017
MAYUMI ITOU	11/22/2017
KAZUYOSHI WARITA	11/22/2017
MASAKAZU ISHIDA	11/10/2017

RECEIVING PARTY DATA

Name:	TERUMO KABUSHIKI KAISHA
Street Address:	44-1, HATAGAYA 2-CHOME
City:	SHIBUYA-KU, TOKYO
State/Country:	JAPAN
Name:	NEC CORPORATION
Street Address:	7-1, SHIBA 5-CHOME
City:	MINATO-KU, TOKYO
State/Country:	JAPAN

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14732263

CORRESPONDENCE DATA

Fax Number: (703)836-2021

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: 703-836-6620

Email: gerianne.harrell@bipc.com

Correspondent Name: BUCHANAN INGERSOLL & ROONEY P.C.

Address Line 1: P.O. BOX 1404

Address Line 4: ALEXANDRIA, VIRGINIA 22313-1404

PATENT

ATTORNEY DOCKET NUMBER:	1027550-001451
NAME OF SUBMITTER:	GERIANNE E. HARRELL
SIGNATURE:	/Gerianne E. Harrell/
DATE SIGNED:	04/13/2018
Total Attachments: 9 source=1451Assignment#page1.tif source=1451Assignment#page2.tif source=1451Assignment#page3.tif source=1451Assignment#page4.tif source=1451Assignment#page5.tif source=1451Assignment#page6.tif source=1451Assignment#page7.tif source=1451Assignment#page8.tif source=1451Assignment#page9.tif	

503897653 06/30/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3944304

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
MIYUKI KOYAMA	12/11/2015
TADASHI SAMESHIMA	12/09/2015
TOSHIHIDE TANAKA	12/08/2015
MAYUMI ITO	12/08/2015
KAZUYOSHI WARITA	12/08/2015
MASAKAZU ISHIDA	12/08/2015
RECEIVING PARTY DATA	
Name:	TERUMO KABUSHIKI KAISHA
Street Address:	44-1, HATAGAYA 2-CHOME
City:	SHIBUYA-KU, TOKYO
State/Country:	JAPAN
Name:	NEC CORPORATION
Street Address:	7-1, SHIBA 5-CHOME
City:	MINATO-KU, TOKYO
State/Country:	JAPAN
Name:	NEC SYSTEM TECHNOLOGIES, LTD.
Street Address:	4-24, SHIROMI 1-CHOME
City:	CHUO-KU, OSAKA-SHI, OSAKA
State/Country:	JAPAN
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	14732263
CORRESPONDENCE DATA	
Fax Number:	(703)836-2021
<i>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.</i>	
Phone:	7038366620
Email:	gerianne.harrell@bipc.com
Correspondent Name:	BUCHANAN INGERSOLL & ROONEY PC
Address Line 1:	1737 KING STREET

CORRECTIVE ASSIGNMENT (JOINT)

THIS ASSIGNMENT, by the undersigned inventors (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in Information Processing Apparatus and Information Processing Method set forth in the application for Letters Patent of the United States identified above;

- (1) ☐ provisional application
 - (a) ☒ bearing Application No. _____, and filed on _____;
 - (b) ☐ to be filed herewith; or
 - (2) ☒ non-provisional application
 - (a) ☒ bearing Application No. 14/732,263, and filed on June 5, 2015;
 - (b) ☐ having an oath or declaration executed on even date herewith prior to filing of application;
- ☐ having an oath or declaration executed on a different date than this Assignment; and

WHEREAS, the Assignors have invented certain new and useful improvements set forth in the application for Letters Patent of the United States identified above;

WHEREAS, TERUMO KABUSHIKI KAISHA, a corporation duly organized under and pursuant to the laws of JAPAN and having a principal place of business at 44-1, Hatagaya 2-chome, Shibuya-ku, Tokyo, JAPAN, and NEC CORPORATION, a corporation duly organized under and pursuant to the laws of JAPAN, and having a principal place of business at 7-1, Shiba 5-chome, Minato-ku, Tokyo, JAPAN, respectively (hereinafter referred to as "the Assignees"), are desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignees, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignees, for its own use and behoof and the use and behoof of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignees, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection

with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignees, its successors, legal representatives, and assigns, but at the cost and expense of the Assignees, its successors, legal representatives, and assigns;

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignees as the Assignees of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignees, its successors, legal representatives, and assigns.

<u>Nov. 2, 2017</u>	<u>Miyuki KOYAMA</u>	<u>M. Koyama</u>
Date	Name	Signature
<u> </u>	<u>Tadashi SAMESHIMA</u>	<u> </u>
Date	Name	Signature
<u> </u>	<u>Toshihide TANAKA</u>	<u> </u>
Date	Name	Signature
<u> </u>	<u>Mayumi ITOU</u>	<u> </u>
Date	Name	Signature
<u> </u>	<u>Kazuyoshi WARITA</u>	<u> </u>
Date	Name	Signature
<u> </u>	<u>Masakazu ISHIDA</u>	<u> </u>
Date	Name	Signature

CORRECTIVE ASSIGNMENT (JOINT)

THIS ASSIGNMENT, by the undersigned inventors (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in Information Processing Apparatus and Information Processing Method set forth in the application for Letters Patent of the United States identified above;

- (1) ☐ provisional application
- (a) ☒ bearing Application No. _____, and filed on _____;
- (b) ☐ to be filed herewith; or
- (2) ☒ non-provisional application
- (a) ☒ bearing Application No. 14/732,263, and filed on June 5, 2015;
- (b) ☐ having an oath or declaration executed on even date herewith prior to filing of application;
- ☐ having an oath or declaration executed on a different date than this Assignment; and

WHEREAS, the Assignors have invented certain new and useful improvements set forth in the application for Letters Patent of the United States identified above;

WHEREAS, TERUMO KABUSHIKI KAISHA, a corporation duly organized under and pursuant to the laws of JAPAN and having a principal place of business at 44-1, Hatagaya 2-chome, Shibuya-ku, Tokyo, JAPAN, and NEC CORPORATION, a corporation duly organized under and pursuant to the laws of JAPAN, and having a principal place of business at 7-1, Shiba 5-chome, Minato-ku, Tokyo, JAPAN, respectively (hereinafter referred to as "the Assignees"), are desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignees, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignees, for its own use and behoof and the use and behoof of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignees, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection

with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignees, its successors, legal representatives, and assigns, but at the cost and expense of the Assignees, its successors, legal representatives, and assigns;

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignees as the Assignees of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignees, its successors, legal representatives, and assigns.

_____ Date	Miyuki KOYAMA _____ Name	_____ Signature
Nov. 1 2017 _____ Date	Tadashi SAMESHIMA _____ Name	<i>T. Sameshima</i> _____ Signature
_____ Date	Toshihide TANAKA _____ Name	_____ Signature
_____ Date	Mayumi ITOU _____ Name	_____ Signature
_____ Date	Kazuyoshi WARITA _____ Name	_____ Signature
_____ Date	Masakazu ISHIDA _____ Name	_____ Signature

CORRECTIVE ASSIGNMENT (JOINT)

THIS ASSIGNMENT, by the undersigned inventors (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in Information Processing Apparatus and Information Processing Method set forth in the application for Letters Patent of the United States identified above;

- (1) ☐ provisional application
 - (a) ☒ bearing Application No. _____, and filed on _____;
 - (b) ☐ to be filed herewith; or
 - (2) ☒ non-provisional application
 - (a) ☒ bearing Application No. 14/732,263, and filed on June 5, 2015;
 - (b) ☐ having an oath or declaration executed on even date herewith prior to filing of application;
- ☐ having an oath or declaration executed on a different date than this Assignment; and

WHEREAS, the Assignors have invented certain new and useful improvements set forth in the application for Letters Patent of the United States identified above;

WHEREAS, TERUMO KABUSHIKI KAISHA, a corporation duly organized under and pursuant to the laws of JAPAN and having a principal place of business at 44-1, Hatagaya 2-chome, Shibuya-ku, Tokyo, JAPAN, and NEC CORPORATION, a corporation duly organized under and pursuant to the laws of JAPAN, and having a principal place of business at 7-1, Shiba 5-chome, Minato-ku, Tokyo, JAPAN, respectively (hereinafter referred to as "the Assignees"), are desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignees, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignees, for its own use and behoof and the use and behoof of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignees, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection

with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignees, its successors, legal representatives, and assigns, but at the cost and expense of the Assignees, its successors, legal representatives, and assigns;

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignees as the Assignees of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignees, its successors, legal representatives, and assigns.

_____	Miyuki KOYAMA	_____
Date	Name	Signature
_____	Tadashi SAMESHIMA	_____
Date	Name	Signature
<u>December 6th, 2017</u>	Toshihide TANAKA	<u>Toshihide Tanaka</u>
Date	Name	Signature
_____	Mayumi ITOU	_____
Date	Name	Signature
_____	Kazuyoshi WARITA	_____
Date	Name	Signature
_____	Masakazu ISHIDA	_____
Date	Name	Signature

CORRECTIVE ASSIGNMENT (JOINT)

THIS ASSIGNMENT, by the undersigned inventors (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in Information Processing Apparatus and Information Processing Method set forth in the application for Letters Patent of the United States identified above;

- (1) ☐ provisional application
- (a) ☒ bearing Application No. _____, and filed on _____;
- (b) ☐ to be filed herewith; or
- (2) ☒ non-provisional application
- (a) ☒ bearing Application No. 14/732,263, and filed on June 5, 2015;
- (b) ☐ having an oath or declaration executed on even date herewith prior to filing of application;
- ☐ having an oath or declaration executed on a different date than this Assignment; and

WHEREAS, the Assignors have invented certain new and useful improvements set forth in the application for Letters Patent of the United States identified above;

WHEREAS, TERUMO KABUSHIKI KAISHA, a corporation duly organized under and pursuant to the laws of JAPAN and having a principal place of business at 44-1, Hatagaya 2-chome, Shibuya-ku, Tokyo, JAPAN, and NEC CORPORATION, a corporation duly organized under and pursuant to the laws of JAPAN, and having a principal place of business at 7-1, Shiba 5-chome, Minato-ku, Tokyo, JAPAN, respectively (hereinafter referred to as "the Assignees"), are desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignees, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignees, for its own use and behoof and the use and behoof of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignees, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection

with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignees, its successors, legal representatives, and assigns, but at the cost and expense of the Assignees, its successors, legal representatives, and assigns;

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignees as the Assignees of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignees, its successors, legal representatives, and assigns.

_____	Miyuki KOYAMA	_____
Date	Name	Signature

_____	Tadashi SAMESHIMA	_____
Date	Name	Signature

_____	Toshihide TANAKA	_____
Date	Name	Signature

<u>Nov. 22, 2017</u>	Mayumi ITOU	<u>Mayumi Ito</u>
Date	Name	Signature

<u>Nov. 22, 2017</u>	Kazuyoshi WARITA	<u>Kazuyoshi Warita</u>
Date	Name	Signature

<u>Nov. 10, 2017</u>	Masakazu ISHIDA	<u>Masakazu Ishida</u>
Date	Name	Signature