503302357 05/12/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

tylesheet Version v1.2

EPAS ID: PAT3348975

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
OLLE EKWALL	05/08/2015
ERIK DORÉ	05/08/2015
FRANC DUGAL	04/29/2015
RAFFAEL SCHNELL	04/14/2015

RECEIVING PARTY DATA

Name:	ABB TECHNOLOGY LTD
Street Address:	AFFOLTERNSTRASSE 44
City:	ZÜRICH
State/Country:	SWITZERLAND
Postal Code:	8050

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14442049

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: tu.t.tan@bskb.com, mailroom@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:	6046-0238PUS1
NAME OF SUBMITTER:	TAN TU
SIGNATURE:	/Tu T. Tan/
DATE SIGNED:	05/11/2015

Total Attachments: 9

source=2015-05-11_DEC_6046-0238PUS1#page1.tif source=2015-05-11_DEC_6046-0238PUS1#page2.tif source=2015-05-11_DEC_6046-0238PUS1#page3.tif

PATENT 503302357 REEL: 035616 FRAME: 0215

PATENT REEL: 035616 FRAME: 0216 Application No.: 14/442,049

Attorney Docket No. 6046-0238PUSI

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 Richts

itle of invention	÷	SEMICONDUCTOR ASSEMBLY
		As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:
		This declaration is directed to the application attached hereto.
pplication set ttaches	÷	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:
ñier Applis, No	ಭ	United States Application Number or PCT International Applin. No. PCT/EP2012/074722
nter Filing Date	ø	filed on December 7, 2012
		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.
nsert Name	23	WHEREAS, ABB TECHNOLOGY LTD

Insert Address of Assignee

of Affolterstrasse 44, 8050 ZÜRICH, Switzerland,

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 # 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.

85KB-DECA5SEG50(09-12)

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:	Olle EKWALL	Date: 2015-05-08
toventor's Signature > Signature	Olle 2 kwall	
Use a separate form for each	TO/SB/14 or equivalent), including naming the entire inventive inventor; or check the box below and complete the attached pay being named on the 1 supplemental sheet attached hereto.	

Page 2

BSKB-DECASSION-SIMOLE (09-12)

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: Erik DORÉ	Date: 20/5 ~ 05 - 08
Inventor's Signature	Signature: End Desc	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	* Inventor: Pranc DUGAL	Date:
Inventor's Signature	Signature:	······································
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	*Inventor: Raffael SCHNELL	Date:
Inventor's Signature	*Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	*Inventor:	Date:
Inventor's Signatuse	*Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	Sinventor:	Date:
Inventor's Signature	*Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	**Inventor:	Date:
inventor's Signature	"Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	*Inventor:	Date:
Inventor's Signature	Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	*Inventor:	Date:
inventor's Signature	*Signature:	

BSKB-DECASSIGN\(09-12)

PATENT REEL: 035616 FRAME: 0219

Application No.: 14/442,049

Attorney Docket No. 6046-0238PUS1

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 Richts

Title of Invention SEMICONDUCTOR ASSEMBLY As a below named inventor (hereinafter designated as the undersigned), I hereby declare that: 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 Applic No. 🗢 United States Application Number or PCT International Applic. No. PCT/EP2012/074722 Enter Filling Date 🔗 filled on December 7, 2012 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. WHEREAS, ABB TECHNOLOGY LTD

Insert Name of Assignee

Insert Address of Assignee

of Affolterstrasse 44, 8050 ZÜRICH, Switzerland,

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 # 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.

88KB-DECA58IG8(09-12)

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	Olle EKWALL	Date: 2015-05-08
tovenion's Signature:	Olle 2 kwall	
	3/SB/14 or equivalent), including naming the entire inventive twentor; or check the box below and complete the attached pag	
\boxtimes Additional inventors are being named on the $\underline{1}$ supplemental sheet attached hereto.		

Page 2

BSKB-DECASSION-SINGLE (09-12)

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:	Erik DORÉ	Date:
Inventor's Signature	⇒ Signature:		
	LEGAL N	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔ Inventor:	Franc DUGAL	Date: 29,09, 20/5
Inventor's Signature	⇒ Signature:	7. J 	
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔Inventor:	Raffael SCHNELL	Date:
Inventor's Signature	⇔Signature:	,	
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔Inventor;		Date:
Inventor's Signature	⇒Signature:		
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔Inventor:		Date:
Inventor's Signature	⇒Signature:		
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
Irwentor's Name	*Inventor:		Date:
inventor's Signature	⇒Signature:		
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔Inventor:		Date:
Inventor's Signature	⇒Signature:	<u>C </u>	4
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔Inventor:		Date;
Inventor's Signature	⇒Signature:		

BSKB-DECASSIGN\(09-12)

PATENT REEL: 035616 FRAME: 0222

Application No.: 14/442,049

Attorney Docket No. 6046-0238PUSI

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 Richts

itie of invention	* SEMICONDUCTOR ASSEMBLY
	As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:
	This declaration is directed to the application attached hereto.
pplication not ttached	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:
nier Appin, No	¹⁰ United States Application Number or PCT International Appln. No. PCT/EP2012/074722
nter Filing Date	™ filed on December 7, 2012
	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

Ţ.

X

⇒ WHEREAS, ABB TECHNOLOGY LTD

Insert Address of Assignee

of Affolterstrasse 44, 8050 ZÜRICH, Switzerland,

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 # 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.

85KB-DECA5SEG50(09-12)

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 🤝 🛐	ventor:	Olle EKWALL	Date:	2015-05-08		
toventor's Signature 🧇 🖇	ignature:	Olle 2 kwall				
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 attached hereto.						

Page 2

BSKB-DECASSION-SIMOLE (09-12)

SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

LEGAL NAME OF JOINT INVENTOR, IF ANY

liventor's Name	⇒ Inventor:	Erik DORÉ	Date:
Inventor's Signature	⇒ Signature:		
	LEGAL N.	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒ Inventor:	Franc DUGAL	Date:
Inventor's Signature	♦ Signature:	····	
	LEGAL N	AME OF JOINT INVENTOR, IF ANY	
inventor's Name	[⇔] Inventor:	Raffael SCHNELL	Date: 101/14 203
loventor's Signature	⇔Signature:	G. Gradi	· · · · · · · · · · · · · · · · · · ·
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
inventor's Name	⇒Inventor:		Date:
nventor's Signature	⇔Signature:		
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
nverdor's Name	⇒Inventor:		Date:
nventor's Signature	[⇔] Signature:		
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
nventor's Name	Slaventor:		Date:
nventor's Signature	[⇔] Signature:		
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
oventor's Name	⇒Inventor:		Date:
aventor's Signature	⇔Signature:		
	LEGAL NA	ME OF JOINT INVENTOR, IF ANY	
wentor's Name	⇔Inventor:		Date:
ventor's Signature	⇒Signature:		

BSKB-DECASSIGN\(09-12)

PATENT REEL: 035616 FRAME: 0225

RECORDED: 05/12/2015