Substitute for Form PTO-1595

Recordation Form Cover Sheet PATENTS ONLY

Attorney's Docket No. 1004501-001009

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

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2.	Name of conveying party(ies): Petra KORBA Rudolf WIESER Srinivas PONNALURI Mats LARRSON Alexandre OUDALOV Jose TABORDA Peter STEIMER Name and address of receiving party(ies): ABB RESEARCH LTD Affolternstrasse 44 Zürich, Switzerland CH-8050 Nature of Conveyance/Execution Date(s):					
	Execution Date(s): September 4, 2008					
	Assignment Security Agreement Joint Research Agreement Government Interest Agreement Other:		ј м	recutive C erger nange of N	order 9424 Confirmatory License	
4.	Application or patent number(s): A. Patent Application No.(s) 12/201,493		В.	Patent No	o.(s)	
	This document is being filed together with	h a ne	w appl	ication.		
5.	Name and address to whom correspondence Name: Patrick C. Keane Address: Buchanan Ingersoll & Rooney Customer Number 21839 P.O. Box 1404 Alexandria, VA 22313-1404		erning	documen	t should be mailed:	
6.	Total number of applications and patents in	volve	d: 1			
7.	Total fee (37 CFR 1.21(h) & 3.41) \$ 40		Authorattache Author Enclose None	ed. rized to be sed. required (g	charged by credit card. PTO Form 203 charged to deposit account 02-4800 ov't interest not affecting title)	38
	Signature:			2858	November 26, 2008 Date	
	V Signature Patrick C. Keane Name of Person Signing				ges including cover sheet, attachments, and	15

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, VA 22313-1450
PATENT

Attorney Docket No. <u>1004501-001009</u>

ASSIGNMENT

(TMIOL)

THIS ASSIGNMENT, by (1) Petr KORBA, (2) Rudolf WIESER, (3) Srinivas PONNALURI, (4) Mats LARSSON, (5) Alexandre OUDALOV, (6) Jose TABORDA and (7) Peter STEIMER, residing at (1) Turgi, Switzerland; (2) Baden-Dättwil, Switzerland; (3) Untersiggenthal, Switzerland; (4) Baden, Switzerland; (5) Fislisbach, Switzerland; (6) Kirchdorf, Switzerland and (7) Ehrendingen, Switzerland (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in <u>CONVERTER CONTROL UNIT</u> set forth in an application for Letters Patent of the United States, which is a

(1)		provisional application
	(a)	bearing Application No, and filed on,
	(b)	to be filed herewith; or
(2)	\boxtimes	non-provisional application
	(a)	bearing Application No. 12/201,493, and filed on August 29, 2008;
	(b)	having an oath or declaration executed on even date herewith prior to filing of application;
	(c)	having an oath or declaration executed on a different date than this Assignment; and

WHEREAS, ABB RESEARCH LTD, a corporation duly organized under and pursuant to the laws of Switzerland and having a principal place of business at Affolternstrasse 44, Zürich, Switzerland CH-8050 (hereinafter referred to as "the Assignee"), is 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 Assignor has sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, 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 Assignee, 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 Assignee, 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;

Buchanan Ingersoll & Rooney PC
Attorneys 6. Government Relations Professionals

Application No. Attorney Docket No. 1004501-001009

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

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	Petr Korba	
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	Rudolf Wleser	
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	Srinivas Ponnaluri	
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	Mats Larsson	
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	Alexandre Oudalov	
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Page 2 of g

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Application No. 1004501-00 1009

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AND the Assignors hereby authorize and request the attorneys of Buchanan Ingersoll PC (including attorneys from Burns, Doane, Swecker & Mathis) to insert in the spaces provided above the title of the invention, filing date, application number, and attorney's docket number of said application when known.

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

DATE	
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	Srinivas Ponnaluri
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	Mats Larsson
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	Alexandre Oudalov
DATE	
	Jose Taborda
DATE	
	Peter Steimer

Page 3 of 8

ASSIGNMENT

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Application No.	
Attorney Docket No	1004501-001009

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Application No Attorney Docket No 1004501-001009

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	(b)	having an oath or declaration executed on even date herewith pric filing of application;	or to	
	(c)	having an oath or declaration executed on a different date than thi Assignment; and	S	

WHEREAS, <u>ABB RESEARCH LTD</u>, a corporation duly organized under and pursuant to the laws of <u>Switzerland</u> and having a principal place of business at <u>Affolternstrasse 44</u>, <u>Zürich</u>, <u>Switzerland CH-8050</u> (hereinafter referred to as "the Assignee"), is 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 Assignor has sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, 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 Assignee, 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 Assignee, 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;

Buchanan Ingersoll & Rooney PC
Attorneys & Government Relations Professionals

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 Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, 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 Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

AND the Assignors hereby authorize and request the attorneys of Buchanan Ingersoll PC (including attorneys from Burns, Doane, Swecker & Mathis) to insert in the spaces provided above the title of the invention, filing date, application number, and attorney's docket number of said application when known

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

DATE		
		Petr Korba
DATE		
		Rudolf Wieser
DATE		
		Srinivas Ponnaluri
DATE		
		Mats Larsson
DATE		
		Alexandre Oudalov
DATE	04.09.2008	
		Jose Taborda
DATE		
		Peter Steimer

Attorney Docket No. <u>1004501-001009</u>

ASSIGNMENT

(JOINT)

THIS ASSIGNMENT, by (1) Petr KORBA. (2) Rudolf WIESER. (3) Srinivas PONNALURI. (4) Mats LARSSON. (5) Alexandre OUDALOV. (6) Jose TABORDA and (7) Peter STEIMER, residing at (1) Turgi, Switzerland; (2) Baden-Dättwil, Switzerland; (3) Untersiggenthal, Switzerland; (4) Baden. Switzerland; (5) Fislisbach, Switzerland; (6) Kirchdorf, Switzerland and (7) Ehrendingen, Switzerland (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in <u>CONVERTER CONTROL UNIT</u> set forth in an application for Letters Patent of the United States, which is a

(1)		provisional application	
	(a)	bearing Application No, and filed on;	
	(p)	to be filed herewith; or	
(2)	\boxtimes	non-provisional application	
	(a)	bearing Application No. 12/201,493, and filed on August 29, 2008;	
	(b)	having an oath or declaration executed on even date herewith prior to filing of application;	
	(c)	having an oath or declaration executed on a different date than this Assignment; and	

WHEREAS, <u>ABB RESEARCH LTD</u>, a corporation duly organized under and pursuant to the laws of <u>Switzerland</u> and having a principal place of business at <u>Affolternstrasse 44</u>, <u>Zürich</u>, <u>Switzerland CH-8050</u> (hereinafter referred to as "the Assignee"), is 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 Assignor has sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, 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 Assignee, 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 Assignee, 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;

Application No Attorney Docket No. 1004501-001009

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 Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, 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 Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

AND the Assignors hereby authorize and request the attorneys of Buchanan Ingersoll PC (including attorneys from Burns, Doane, Swecker & Mathis) to insert in the spaces provided above the title of the invention, filing date, application number, and attorney's docket number of said application when known

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

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