To The Honorable Commissioner of Pater 1. Name of conveying party(tes): ABR inc.	04-28-2003 T			
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ABB inc.	To The Honorable Commissioner of Pater do original documents or copy thereof.			
Street Address: Affolternstrasse 44 Second Assignor Date of Execution Third Assignor Date of Execution Third Assignor Date of Execution Date of Execution Additional name(s) & address attached? YES NO		,, 2003		
State Switzerland ZIP CH-8050	First Assignor Date of	Execution		
Additional name(s) & address attached?	Second Assignor Date of	Execution		
Additional name(s) & address attached? YES NO Nature of Conveyance (check only one): New Assignment	This Agricular Data of	Evention	State Switzerland ZIP CH-8050	
New Assignment	1 mr (Assignor Date of Execution		Additional name(s) & address attached? TYES NO	
Fifth Assignor Date of Execution	Fourth Assignor Date of Execution		3. Nature of Conveyance (check only one):	
Addit mal name(s) of conveying party(ies) attached? YES NO Addit mal name(s) of conveying party(ies) attached? YES NO 4. Reel No. Application to which assist mentage feets Application Nos.: 09/946,232 Patent Nos.: Date application to which assist mentage feets Application Nos.: O9/946,232 Patent Nos.: Date application was signed by the first named executing inventor 5. Name and address of party to whom correspondence concerning documents should be mailed: Amount of the first named executing inventor 5. Name and address of party to whom correspondence concerning documents should be mailed: Amount of the first named executing inventor 7. Total fee (37 CFR 3.41): \$40.00	Fifth Assignor Date of Execution		License Agreement Security Agreement Change of Name Other:	
Additional name(s) of conveying party(ies) attached? YES NO 4. Identification of Application number(s), patent number(s) OR date of execution of application to which assignment reference on the convergence of the first named executing inventor 5. Name and address of party to whom correspondence converning documents should be mailed: Name: Steven B. Samuels, Esq. WODDCOCK WASHBURN LLP One Liberty Place - 46th Floor Philadelphia, Pennsylvania 19103-7301 215 568-3100 6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41): \$40.00 Mathorized to be charged to Deposit Account Number 23-3050 8. Please charge any deficiency or credit any overpayment to Deposit Account Number 23-3050 8. Please charge any deficiency or credit any overpayment to Deposit Account Number 23-3050 DO NOT USE THIS SPACE 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Name of Person Signing/Reg. No. Signature Signature Signature Date	Sixth Assignor Date of	Execution	Application No. / , Z, recorded on	
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named executing inventor (Fill-in this date only if assignment is filed together with a new application) 5. Name and address of party to whom correspondence concerning documents should be mailed: Name: Steven B. Samuels, Esq. WODDCOCK WASHBURN LLP One Liberty Place - 46th Floor Philadelphia, Pennsylvania 19103-7301 215 568-3100 DO NOT USE THIS SPACE 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Name of Person Signing/Reg. No. Steven B. Samuels/Reg. No. 37, 711	4. leentification of Application number(s),	patent number(s) OR	R date of execution of application to which assignment refers	
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I of all number of pages including cover sheet, assignment document and additional pages attached thereto: 4	Steven B. Samuels/Reg. No. 37, 711	91	fignature / Date	
Mai documents to be recorded with required cover sheet information to: Commissioner of Patents and Trademarks				
Box Assignments 5/2003 6T0H11 00000163 09946232 Washington, D.C. 20231				
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PATENT REEL: 013991 FRAME: 0014

ASSIGNMENT

WHEREAS, ABB INC., hereinafter referred to as the ASSIGNOR, a Corporation of Delaware, having a place of business at Centennial Campus - NCSU, 1021 Main Campus Drive, Raleigh, North Carolina 27606 holds rights in certain inventions or improvements for which applications for Letters Patent have been made or for which Letters Patent have been issued, all of which are listed on Attachment A hereto (hereafter Patent Property); and

WHEREAS, ABB TECHNOLOGY AG hereinafter referred to as the ASSIGNEE, a corporation of Switzerland, having the address: Affolternstrasse 44, CH-8050 Zurich, Switzerland, is desirous of acquiring the *entire* right, title and interest of ABB INC. in and to the said Patent Property in any and all countries;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR has sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said ASSIGNEE, its entire right, title and interest in and to said Patent Property and any and all continuations, divisions and renewals of and substitutes for said Patent Property and to and under any and all additional Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and the full right to sue for and recover all profits and damages recoverable for past infringement of the same, and assign to and authorize said ASSIGNEE to file applications for Letters Patent in all countries, to be held and enjoyed by said ASSIGNEE, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this assignment, sale and transfer not been made.

It is hereby covenanted that ASSIGNOR has full right to convey its entire interest herein assigned, and that ASSIGNOR has not executed and will not execute any agreement in conflict herewith, and ASSIGNOR further covenants and agrees that it will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said Patent Property in said assignee, its successors, assigns, nominees, or legal representatives, and ASSIGNOR agrees to communicate to said ASSIGNEE or to its nominee all known facts respecting said Patent Property, to testify in any legal proceedings, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said ASSIGNEE, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries, all at the expense, however, of said ASSIGNEE, its successors, assigns, nominees or legal representatives.

AND ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said ASSIGNEE, as assignee of the entire right, title and interest, any and all Letters Patent for Patent property, including any and all Letters Patent of the United States which may be

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PATENT REEL: 013991 FRAME: 0015

ABDT-0441/B010170

issued and granted on or as a result of any applications included in said Patent Property, in accordance with the terms of this assignment.

IN WITNESS WHEREOF, the undersigned, being properly authorized to execute this Assignment, hereunto sets their hand and seal.

Date: 4-10-03

Its: Attorney-In-Fact

STATE OF: North (avo)na

SS

COUNTY OF: Wake

On this 10 day of April , year of 2003, before me, the undersigned, personally appeared Robert L. Hirt

who acknowledged

himself to be the Attorney-In-Fact of ABB Inc., a corporation, and that he as such Attorney-In-Fact, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Attorney-In-Fact .

Jane P. Warren Votary Public

MY COMMISSION EXPIRES MARCH 28, 2005.

PATENT REEL: 013991 FRAME: 0016

ATTACHMENT A

U.S. Patent Application:

Title: Loop Control For Distribution Systems

Inventors: James D. Stoupis; Marina V. Graham; Gregory J. Grote

Serial No.: 09/946,232

Filing Date: September 5, 2001

PATENT
RECORDED: 04/25/2003 REEL: 013991 FRAME: 0017