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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described herein, are being deposited in the United States Postal Service, as first class mail, with sufficient postage, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C.

20231 on _

Name

PATENT

REEL: 13233 FRAME: 0957



Form PTO 1595

IBM Ref. No.: SJO920010077US1 ALG Ref. No.: 501.398US01

U.S. Department of Commerce
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof Name of conveying party(ies) Name and address of receiving party(ies): Michael J. Azevedo International Business Machines Corporation Andrew D. Walls New Orchard Road Armonk, New York 10504 Additional names(s) of conveying party(ies) ☐ Yes ☒ No Additional name(s) & addresses attached?

Yes

No 3. Nature of conveyance: Merger Security Agreement Change of Name Other Execution Date: May 9, 2002 and May 10, 2002 Application number(s) or patent number(s) If this document is being filed together with a new application, the execution date of the application is: May 9, 2002 and May 10, 2002 A. Patent Application Number(s) Patent Number(s) Additional numbers attached? ☐ Yes ☒ No 6. Total number of applications and patents involved: One Name and address of party to whom correspondence 7. Total fee (37 C.F.R. §3.41) \$40.00 concerning document should be mailed: ⊠ Enclosed – Any excess or insufficiency should be credited or debited to deposit account David W. Lynch Name Authorized to charged to deposit account Altera Law Group Address: 6500 City West Parkway - Suite 100 8. Deposit Account number: 50-1038 Minneapolis, Minnesota 55344-7701 DO NOT USE THIS SPACE 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. 06/03/2002 DBYRNE 00000193 10154380 40.00 OP 01 FC:581 David W. Lynch Name of Person Signing Total number of pages including cover sheet, attachments, and document: 2

IBM Ref. No.: SJO920010077US1 ALG Ref. No.: 501.398US01

PATENT ASSIGNMENT TO CORPORATION WORLDWIDE

WHEREAS,

 Michael J. Azevedo residing at 1144 Sterling Gate Drive, San Jose, California 95120-4246 and a citizen of USA;

2. Andrew D. Walls residing at 7219 Via Bella, San Jose, California 95139 and a citizen of USA;

3. residing at and a citizen of

hereafter referred to as "THE UNDERSIGNED", have made an invention entitled: A METHOD AND APPARATUS FOR INCREASING PROCESSOR PERFORMANCE IN A COMPUTING SYSTEM

AND, WHEREAS, INTERNATIONAL BUSINESS MACHINES CORPORATION, hereafter referred to as ASSIGNEE, a corporation organized under the laws of the state of New York and whose place of business is New Orchard Road, Armonk, New York 10504, is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE in consideration of the sum of One Dollar, the receipt whereof is acknowledged, and other good and valuable consideration, THE UNDERSIGNED hereby sell, assign and transfer unto ASSIGNEE the full and exclusive right to the said invention in the United States and the entire right, title and interest in and to all divisionals, continuations, continuations in part, reissues, reexaminations or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extension of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said invention including an assignment of all rights under the provision of international conventions and all Letters Patent of foreign countries which may be granted therefrom; the UNDERSIGNED hereby authorize the Commissioner of Patents to issue any and all United States Letters Patent for the aforesaid invention to ASSIGNEE of the entire right, title and interest in and to the same, for the use of the ASSIGNEE, its successors and assigns.

THE UNDERSIGNED, hereby agree that THE UNDERSIGNED, their executors and legal representatives will make, execute and deliver (without charge but at the expense of the ASSIGNEE) any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said ASSIGNEE, its successors and representatives all facts Known to THE UNDERSIGNED relating to said invention and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable to vest the ASSIGNEE, its successors or assigns the entire right, title and interest in and to the said invention, applications, Letters Patent, rights, titles and benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

THE UNDERSIGNED represent and agree with said Assignee its successors and assignees, that no assignment grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by THE UNDERSIGNED, and that full right to convey the same as herein expressed is possessed by THE UNDERSIGNED.

IN TESTIMONY WHEREOF, THE UNDERSIGNED have hereunto set their hand on the dates indicated

below.

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Date

No Legalization Required

RECORDED: 08/27/2002

PATENT REEL: 13233 FRAME: 0959