To the Honorable Commissioner of Patents and T	October 29, 1999
Please record the attached original documents 101	199027 Attorney Dkt: RAL9-99-0115
Name of conveying party(ies): Gordon Taylor Davis Malcolm Scott Ware	2. Name and address of receiving party(ies): International Business Machines Corporation Old Orchard Road Armonk, New York 10504
Additional name(s) of conveying party(ies) attached? Yes X No	Additional name(s) & address(es) attached? Yes X No
3. Nature of conveyance: X Assignment Merger Security Agreement Change of Name Other Execution Date: October 27, 1999	09/430693
4. Application Serial No Patent No	0//400093
If this document is being filed together with a new application, is:October 29, 1999 Additional numbers attached?Yes _X No 5. Name and address of party to whom correspondence concerning document should be mailed: John D. Flynn IBM Corp., IP Law Department 972/Building 656 Post Office Box 12195 Research Triangle Park, NC 27709	6. Total number of applications and patents involved:1
709/1999 JSHABAZZ 00000146 090464 09430693 FC:581	7. Total fee (37 CFR 3.41) \$ 40.00 EnclosedX_ Authorized to be charged to deposit account
	8. Deposit account number: 09-0464
	(Attach duplicate copy of this page if paying by deposit account)
DO NOT USE	THIS SPACE
Signature	on is true and correct and any attached copy is a true copy Other 29, 1999 Date Tof pages including cover sheet, attachments and document: 4

ASSIGNMENT

THIS ASSIGNMENT, made by us, Malcolm Scott Ware, a citizen of the United States of America, residing at 4605 Gamelyn Walk, Raleigh, North Carolina and Gordon Taylor Davis, a citizen of the United States of America, residing at 97603 Franklin Ridge, Chapel Hill, North Carolina;

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in SEVERE ERROR DETECTORS, METHODS, AND COMPUTER PROGRAM PRODUCTS THAT USE CONSTELLATION SPECIFIC ERROR EVENT THRESHOLDS TO DETECT SEVERE ERROR EVENTS DURING DEMODULATION OF A SIGNAL COMPRISING SYMBOLS FROM A PLURALITY OF SYMBOL CONSTELLATIONS for which an application for United States Letters Patent has been executed by us concurrently herewith, and

WHEREAS, International Business Machines Corporation (hereinafter referred to as "IBM"), a New York corporation having a principal place of business at Old Orchard Road, Armonk, New York 10504, hereinafter referred to as assignee, is desirous of acquiring the entire right, title, and interest in and to said invention as described in said application, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

NOW, THEREFORE, To Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold and by these presents do hereby sell, assign, transfer, and convey unto the said assignee, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any and all provisionals, continuations, continuations-in-part, or divisions thereof, and in and to any and all Letters Patent of the United States of America and all foreign countries or reissues thereof which may be granted therefor or thereon, for the full end of the term for which said Letters Patent may be granted, together with the right to claim the priority of said application in all foreign countries in accordance with the International Convention, the same to be held and enjoyed by said assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by me if this assignment and sale had not been made.

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PATENT REEL: 010369 FRAME: 0022 We hereby request that said Letters Patent be issued in accordance with this assignment.

We further covenant and agree that, at the time of the execution and delivery of these presents, we possess full title to the invention and application above-mentioned, and that we have the unencumbered right and authority to make this assignment.

We further covenant and agree to bind our heirs, legal representatives, and assigns promptly to communicate to said assignee or its representatives any facts known to us relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional papers which may be requested to confirm the right of the assignee, its representatives, successors, or assigns to secure patent or similar protection for the said invention in all countries and to vest in the assignee complete title to the said invention and Letters Patent, without further compensation, but at the expense of said assignee, its successors, assigns, and other legal representatives.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this 2746 day of 000 , 1999.

Malcolm Scott Ware (SEAL)

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IN WITNESS WHEREOF, we have hereunto set our hands and seals on this 27 day of 0 follows, 1999.

Gordon Taylor Davis

(SEAL)

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PATENT REEL: 010369 FRAME: 0024