

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | CHANGE OF NAME |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| Mitsubishi Electric Research Laboratories, Inc. | 04/24/1996 |
| RECEIVING PARTY DATA | |
| Name: | Mitsubishi Electric Information Technology Center America, Inc. |
| Street Address: | 201 Broadway |
| City: | Cambridge |
| State/Country: | MASSACHUSETTS |
| Postal Code: | 02139 |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 08333728 |
| CORRESPONDENCE DATA | |
| Fax Number: | (215)564-3439 |
| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> | |
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| Correspondent Name: | Woodcock Washburn LLP |
| Address Line 1: | 2929 Arch Street |
| Address Line 2: | Cira Centre, 12th Floor |
| Address Line 4: | Philadelphia, PENNSYLVANIA 19104 |
| ATTORNEY DOCKET NUMBER: | **BN-0033 |
| NAME OF SUBMITTER: | Gina Massimino |

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State of Delaware
Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"MITSUBISHI ELECTRIC RESEARCH LABORATORIES, INC.", A DELAWARE CORPORATION,

WITH AND INTO "MITSUBISHI ELECTRIC INFORMATION TECHNOLOGY CENTER AMERICA, INC." UNDER THE NAME OF "MITSUBISHI ELECTRIC INFORMATION TECHNOLOGY CENTER AMERICA, INC.", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE THE TWENTY-NINTH DAY OF MARCH, A.D. 1996, AT 1 O'CLOCK P.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS FOR RECORDING.



Edward J. Freel
Edward J. Freel, Secretary of State

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AUTHENTICATION: 7888991
DATE: 03-29-96

PATENT
REEL: 8186 FRAME: 0582

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CERTIFICATE OF MERGER
OF
MITSUBISHI ELECTRIC RESEARCH LABORATORIES, INC.
INTO
MITSUBISHI ELECTRIC INFORMATION TECHNOLOGY CENTER AMERICA, INC.

The undersigned corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

FIRST: That the name and state of incorporation of each of the constituent corporations of the merger are as follows:

| <u>NAME</u> | <u>STATE OF INCORPORATION</u> |
|---|-------------------------------|
| Mitsubishi Electric Research Laboratories, Inc. | Delaware |
| Mitsubishi Electric Information Technology Center America, Inc. | Delaware |

SECOND: That an Agreement of Merger between the parties to the merger has been approved, adopted, certified, executed and acknowledged by each of the constituent corporations in accordance with the requirement of Section 251 of the General Corporation Law of the State of Delaware.

THIRD: That the name of the surviving corporation of the merger is Mitsubishi Electric Information Technology Center America, Inc.

FOURTH: That the amendment or change in the Certificate of Incorporation of Mitsubishi Electric Information Technology Center America, Inc., the surviving corporation, which is to be effected by the merger is as follows:

"4. The total number of shares of stock which the corporation shall have authority to issue is fifty thousand (50,000) shares of common stock, and the par value of each such share is one dollar (\$1.00)."

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SEP 13 '96 03:25PM MITSUBISHI ELECTRIC RESEARCH LABORATORIES
REEL: 8186 FRAME: 0583

FIFTH: That the executed Agreement of Merger is on file at the principal place of business of the surviving corporation. The address of the principal place of business of the surviving corporation is 1432 Main Street, Waltham, MA 02154.

SIXTH: That a copy of the Agreement of Merger will be furnished by the surviving corporation, on request and without cost, to any stockholder of any constituent corporation.

SEVENTH: That this Certificate of Merger shall be effective at the close of business on March 31, 1996.

Dated: March 25, 1996

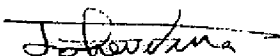
**MITSUBISHI ELECTRIC INFORMATION
TECHNOLOGY CENTER AMERICA, INC.**

By: 

ASSIGNMENT

In consideration of One Dollar and other good and valuable consideration, the receipt of which is hereby acknowledged MITSUBISHI ELECTRIC RESEARCH LABORATORIES, INC., having a principal place of business at 201 Broadway, Cambridge, Massachusetts 02319, hereby sell and assign to MITSUBISHI ELECTRIC INFORMATION TECHNOLOGY CENTER AMERICA, INC., a Delaware Corporation, having a principal place of business at 201 Broadway, Cambridge, Massachusetts 02139, its successors and assigns, the entire right, title and interest, including the right to claim priority under the International Convention, throughout the United States, its territories and all foreign countries in and to the inventions listed in Appendix A attached hereto, and such patents as may issue thereon, and all divisions, reissues and continuations thereof.

MITSUBISHI ELECTRIC RESEARCH LABORATORIES, INC. hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States to issue all Letters Patent on said inventions not previously issued to MITSUBISHI ELECTRIC INFORMATION TECHNOLOGY CENTER AMERICA, INC., its successors and assigns.



Dr. Tohei Nitta, President
MITSUBISHI ELECTRIC RESEARCH
LABORATORIES, INC.

Date 04/24/96

Subscribed and sworn to before me by the above-named Tohei Nitta this 24th day of April, 1996.



Linda D. Minich
Notary Public, State of Massachusetts

My Commission Expires August 1, 2001

RECORDED: 09/23/1996

PATENT
REEL: 8186 FRAME: 0595

PATENT
REEL: 021812 FRAME: 0322

APPENDIX A

Filed Patents

| <u>Serial #</u> | <u>Filing Date</u> | <u>Title</u> | <u>Inventors</u> | <u>MERL Docket #</u> |
|-----------------|--------------------|--|------------------|----------------------|
| 858,694 | 3/27/92 | Method for Generating Test Access Procedures | Bershteyn | MERL1000 |
| 08/078,553 | 6/16/93 | Active Modules for Large Screen Displays | Lauer Shen | MERL1001 |
| 08/270,111 | 7/1/94 | Active Modules for Large Screen Displays | Lauer Shen | MERL1001 |
| 08/169,163 | 12/17/93 | Animated Electronic Meeting Place | Nitta | MERL1005 |
| 08/061,674 | 5/14/93 | Method and Apparatus for Reconciling Different Versions of a File | Howard | MERL1006 |
| | 4/5/95 | Method and Apparatus for Reconciling Different Versions of a File | Howard | MERL1006 |
| 08/315,286 | 9/29/94 | Computer Version Management System with Reduced Storage Space and Enabling Multiple Program Versions to Have the Same Name | Ohkami | MERL1007 |

PATENT
REEL: 8186 FRAME: 0571

PATENT
REEL: 021812 FRAME: 0323

Filed Patents

| <u>Serial #</u> | <u>Filing Date</u> | <u>Title</u> | <u>Inventors</u> | <u>MERL Docket #</u> |
|-----------------|--------------------|--|-------------------|----------------------|
| 08/561,554 | 11/21/95 | Computer Version Management System with Reduced Storage Space and Enabling Multiple Program Versions to Have the Same Name | Ohkami | MERL1007 |
| 08/109,666 | 8/20/93 | Integer String Rule Detection System | Banzhaf | MERL1009 |
| 08/107,240 | 8/16/93 | Weighting System for Testing of Circuits Utilizing Determination of Undetected Faults | Bershteyn | MERL1011 |
| 08/099,944 | 7/30/93 | Dynamic and Static Hand Gesture Recognition Through Low-Level Image Analysis | Freeman | MERL1014 |
| 08/079,633 | 6/18/93 | System for Decreasing the Time Required to Parse a Sentence | Schabes Waters | MERL1015 |
| 08/138,135 | 10/15/93 | System for Testing of Digital Integrated Circuits | Bershteyn | MERL1017 |
| 08/099,918 | 7/30/93 | System for Synchronous Bandwidth Allocation in Token Ring Networks | Zheng | MERL1018 |

PATENT
REEL: 8186 FRAME: 0572

PATENT
REEL: 021812 FRAME: 0324

Filed Patents

| <u>Serial #</u> | <u>Filing Date</u> | <u>Title</u> | <u>Inventors</u> | <u>MERL Docket #</u> |
|-----------------|--------------------|--|-----------------------------|----------------------|
| 08/123,340 | 9/17/93 | Sign Language Control of Computer Operations | Nitta | MERL1019 |
| 08/153,805 | 11/16/93 | Low Latency Network Interface | Osborne | MERL1020 |
| 08/225,664 | 4/11/94 | Audio Interactive Tutor (Lip Movement Recognition Assisted Speech Recognition) | Waters | MERL1023 |
| 08/265,496 | 7/15/94 | System for Unencumbered Measurement and Reporting of Body Posture | Barrus | MERL1024 |
| 08/252,237 | 6/1/94 | System for Detecting Improper Useage of Indefinite Articles | Golding Schabes Roche | MERL1029 |
| 08/252,333 | 6/6/94 | System for Underlying Spelling Recovery | Golding Schabes Roche | MERL1030 |
| 08/251,978 | 6/6/94 | System for Correcting Improper Determiners | Golding Schabes Roche | MERL1031 |

PATENT
REEL: 8186 FRAME: 0573

PATENT
REEL: 021812 FRAME: 0325

Filed Patents

| <u>Serial #</u> | <u>Filing Date</u> | <u>Title</u> | <u>Inventors</u> | <u>MERL Docket #</u> |
|-----------------|--------------------|--|-----------------------------|----------------------|
| 08/251,897 | 6/1/94 | Word Inflection Correction System | Roche Schabes Golding | MERL1032 |
| 08/252,181 | 6/6/94 | System for Correcting Auxiliary Verb Sequences | Roche Golding Schabes | MERL1033 |
| 08/226,541 | 4/12/94 | Computer Network Interface and Network Protocol with Direct Deposit Messaging | Osborne | MERL1037 |
| 08/596,708 | 2/5/96 | Computer Network Interface and Network Protocol with Direct Deposit Messaging | Osborne | MERL1037 |
| 08/243,385 | 4/28/94 | Tag-Based Scheduling System for Digital Communication Switch | Lauer Ghosh Shen | MERL1038 |
| 08/224,671 | 4/7/94 | Data Transmission System and Scheduling Protocol for Connection-Oriented Packet or Cell Switching Networks | Zheng | MERL1039 |
| 08/291,667 | 8/17/94 | Locator Device for Control of Graphical Objects (2-D Rotation/Translation Mouse) | Gibson | MERL1041 |

PATENT
REEL: 8186 FRAME: 0574

PATENT
REEL: 021812 FRAME: 0326

Filed Patents

| <u>Serial #</u> | <u>Filing Date</u> | <u>Title</u> | <u>Inventors</u> | <u>MERL Docket #</u> |
|-----------------|--------------------|---|---|----------------------|
| 08/252,106 | 6/1/94 | System for Correcting Grammar Based Parts on Speech Probability | Schabes Roche Golding | MERL1043 |
| 08/252,180 | 6/1/94 | Context-Based System for Accessing Dictionary Entries | Schabes Golding Roche | MERL1044 |
| 08/252,572 | 6/1/94 | Grammar Checking System | Schabes Roche Golding | MERL1045 |
| 08/558,053 | 11/13/95 | Grammar Checking System | Schabes Roche Golding | MERL1045 |
| 08/264,981 | 6/24/94 | Contextual Tagger Utilizing Deterministic Finite State Transducer | Schabes Roche | MERL1047 |
| 08/433,618 | 5/3/95 | Hand-Held Computer Control Device | Nitta Jewell Walker | MERL1051 |
| 08/271,418 | 7/6/94 | Credit/Rate-Based System for Controlling Traffic in a Digital Communication Network | Zheng Lauer Howard | MERL1056 |
| 08/328,429 | 10/25/94 | HARDWARE-SOFTWARE DEBUGGER | Bershteyn Casley Chien, Ghosh Jain, Lipsie Tarrodaychik Yamamoto | MERL1057 |

PATENT
REEL: 8186 FRAME: 0575

PATENT
REEL: 021812 FRAME: 0327

Filed Patents

| <u>Serial #</u> | <u>Filing Date</u> | <u>Title</u> | <u>Inventors</u> | <u>MERL Docket #</u> |
|-----------------|--------------------|--|-------------------------|----------------------|
| 08/350,656 | 12/7/94 | Apparatus for Determining the Structure of a Hypermedia Document using Graph Partitioning | Marks Shieber Hwa | MERL1060 |
| 08/391,955 | 2/21/95 | Hand Gesture Machine Control System | Freeman Weissman | MERL1061 |
| 08/333,728 | 11/3/94 | Graph Partitioning System | Marks | MERL1065 |
| 08/381,108 | 1/31/95 | Collision Avoidance System for Voxel-based Object Representation | Gibson | MERL1066 |
| 08/297,270 | 8/26/94 | Credit Enhanced Proportional Rate Control System | Zheng | MERL1067 |
| 08/422,344 | 4/14/95 | Network Interface Having Per-Channel International and External Free Buffer Lists with Self-cleaning Mechanism | Osborne | MERL1069 |
| 08/315,239 | 9/29/94 | Grammar Checker Interface | Anderson | MERL1071 |

PATENT
REEL: 8186 FRAME: 0576

PATENT
REEL: 021812 FRAME: 0328

Filed Patents

| <u>Serial #</u> | <u>Filing Date</u> | <u>Title</u> | <u>Inventors</u> | <u>MERL Docket #</u> |
|-----------------|--------------------|---|------------------|----------------------|
| 08/381,168 | 1/31/95 | Automatic Collision Detector | Gibson | MERL1072 |
| | | Note: combined with MERL1066 | | |
| 08/579,547 | 12/27/95 | System for Embedding Hidden Source Information in Three-Dimensional Computer Model Data | Barrus | MERL1073 |
| 08/479,003 | 12/27/95 | Automobile Navigation System with Dynamic Traffic Data | Golding | MERL1074 |
| 08/352,927 | 12/9/94 | Scaleable Very Long Instruction Word Processor with Parallelism Matching | Ohkami | MERL1075 |
| 08/369,374 | 1/6/95 | Data Formatting System for Processing Multiple Independent Input Data Streams for High Resolution Screen Displays | Ohkami | MERL1077 |
| | 5/1/96 | Data Formatting System for Processing Multiple Independent Input Data Streams for High Resolution Screen Displays | Ohkami | MERL1077 |
| 08/381,107 | 1/31/95 | End-to-End Credit-Based Flow Control System in a Digital Communication Network | Lauer | MERL1082 |

PATENT
REEL: 8186 FRAME: 0577

PATENT
REEL: 021812 FRAME: 0329

Filed Patents

| <u>Serial #</u> | <u>Filing Date</u> | <u>Title</u> | <u>Inventors</u> | <u>MERL Docket #</u> |
|-----------------|--------------------|--|------------------|----------------------|
| 08/414,282 | 3/31/95 | Multiple User/Agent Window Control | Rich | MERL1083 |
| 29/036,492 | 3/22/95 | Computer Control Device | Nitta | MERL1084 |
| | 12/27/95 | Continuously Variable Control of Animated On-Screen Characters | Walker | MERL1085 |
| 08/438,352 | 5/10/95 | Traffic Shaping System Using Two-Dimensional Timing Chains | Zheng | MERL1086 |
| 08/444,409 | 5/19/95 | Baysian Hybrid Method for Spelling Correction | Golding | MERL1087 |
| 08/579,548 | 12/27/95 | Differential Object Modeling Using Automatically Generated Constructive Solid Geometry (CSG) | Gibson Marks | MERL1089 |
| 08/520,099 | 8/28/95 | System for Designing A Virtual Environment Utilizing Locales | Barrus Waters | MERL1091 |

PATENT
REEL: 8186 FRAME: 0578

PATENT
REEL: 021812 FRAME: 0330

Filed Patents

| <u>Serial #</u> | <u>Filing Date</u> | <u>Title</u> | <u>Inventors</u> | <u>MERL Docket #</u> |
|-----------------|--------------------|--|---------------------------|----------------------|
| 08/549,940 | 10/30/95 | Efficient Description Format for ATM NIC | Osborne | MERL1092 |
| 08/556,227 | 11/9/95 | Beacons for Locales | Waters | MERL1093 |
| 08/627,691 | 4/2/96 | System for Decreasing the Bandwidth, Storage and Computation Time Required to Synchronize Data Communicated Over an Asynchronous Network | Waters | MERL1094 |
| 08/556,226 | 11/9/95 | Virtual Reality Park | Barrus Nitta Waters | MERL1097 |
| 08/591,141 | 1/25/96 | Traffic Shaping and ABR Flow Control | Zheng | MERL1099 |
| 08/614,833 | 3/8/96 | Network Interface Having Support for Message Processing Using an Interface to a Message Co-processor | Osborne | MERL1100 |
| 08/579,546 | 12/27/95 | Simultaneous Constructive Solid Geometry (CSG) Modeling for Multiple Objects | Gibson Marks | MERL1102 |

PATENT
REEL: 8186 FRAME: 0579

PATENT
REEL: 021812 FRAME: 0331

Filed Patents

| <u>Serial #</u> | <u>Filing Date</u> | <u>Title</u> | <u>Inventors</u> | <u>MERL Docket #</u> |
|-----------------|--------------------|--|------------------|----------------------|
| 08/614,834 | 3/8/96 | Network Interface Having Support for Allowing Remote Operations with Reply that Bypass Host Computer Interaction | Osborne | MERL1114 |

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PATENT
REEL: 8186 FRAME: 0580