M COVER SHEET SONLY
se record the attached documents or the new address(es) below.
2. Name and address of receiving party(ies)
Name: MATRIDIGM CORPERATION
Internal Address:
Street Address: 47211 Bayside Parkway
-
City: Fremont
State: <u>California</u>
Country: USA Zip: 94538
Zip. <u>94556</u>
Additional name(s) & address(es) attached? 🗌 Yes 🗹 N
5278987 ached? ☐Yes ✔No
6. Total number of applications and patents involved:
7. Total fee (37 CFR 1.21(h) & 3.41) \$_\$40
Authorized to be charged by credit card Authorized to be charged to deposit account
Enclosed None required (government interest not affecting title)
8. Payment Information
a. Credit Card Last 4 Numbers <u>2597</u> Expiration Date <u>02/06</u>
b. Deposit Account Number
Authorized User Name Lawrence J Thoman
September 9 2004
Date
Total number of pages including cover sheet, attachments, and documents;

Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

PATENT

REEL: 015116 FRAME: 0173

ASSIGNMENT OF TECHNOLOGY AND EQUIPMENT AGREEMENT

This Assignment of Technology and Equipment Agreement ("Assignment Agreement") is entered into this 1st day of October, 1995, by and among Franklin C. Chiang ("Chiang"), Lawrence J. Thoman ("Thoman") and MatriDigm Corporation, a California corporation (the "Company").

A. Chiang is a resident of Palo Alto, County of Santa Clara, California. Thoman is a resident of San Lorenzo, Alameda County, California.

B. Chiang and Thoman have invented certain inventions and intellectual property described in Appendix A hereto (the "Chiang Technology"), and Chiang has utilized certain equipment itemized in Appendix B hereto (the "Chiang Equipment") in connection with the development and practice of the Chiang Technology.

C. The Company wishes to acquire the entire right, title and interest in and to the Chiang Technology and all applications and embodiments thereof heretofore conceived, made or discovered jointly or severally by Chiang and Thoman (the "Inventors"), and in and to any and all patents, certificates of invention and other forms of protection thereon applied for or granted in the United States and/or other countries, and to acquire ownership and possession of the Chiang Equipment.

D. Pursuant to a Founders Agreement of even date herewith by and among the parties hereto and James T. Brady (the "Founders Agreement"), Chiang will receive 9,000,000 shares of Common Stock of the Company, and Thoman will receive 1,000,000 shares of Common Stock of the Company, in consideration of this Assignment Agreement and such other consideration as may be recited in the Founders Agreement.

E. In connection with its acquisition of the Chiang Technology pursuant to this Assignment Agreement, the Company will assume indebtedness of Chiang to third parties, as set forth on Appendix C to this Assignment Agreement, in the total amount of \$337,641.60, plus any additional amounts accrued on the obligations specified therein as additional interest or penalties, plus any additional consideration required in connection with the proposed amendment of that certain Option and License Agreement between Chiang and International Business Machines Corporation ("IBM") dated October 1, 1991 (the "IBM Agreement").

F. As set forth in Appendix D to this Assignment Agreement, Chiang Labs, Inc., a California corporation, disclaims all ownership interest in or claim to the Chiang Technology and the Chiang Equipment.

NOW, THEREFORE, in consideration of the premises set forth above and for other good and valuable consideration, the receipt of which from the Company the Inventors hereby acknowledge, the parties hereby agree as follows:

1. <u>Patent Assignment</u>. The Inventors do hereby sell, assign, transfer and convey to the Company the entire right, title and interest in and to: (a) the Chiang Technology; (b) all rights to apply in any or all countries of the world for patents, certificates of inventions or other governmental grants on the Chiang Technology, including the right to apply for patents pursuant to the International Convention for the Protection of Industrial Property, or pursuant to any other convention, treaty, agreement or understanding; (c) all applications filed and any and all patents, certificates of inventions

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or other governmental grants granted on the Chiang Technology in the United States or any other country, including each and every application filed and each and every patent granted on any application which is a division, substitution or continuation of any of said applications; (d) each and every reissue or extension of any of said patents; and (e) each and every patent claim resulting from a reexamination certificate for any and all of said patents.

2. <u>Know-How</u>. The Inventors hereby grant and assign to the Company the exclusive, perpetual, irrevocable, paid-up and worldwide right and license, including the right to sublicense any third party, to use, have used and disclose any ideas, concepts, know-how, techniques, trade secrets and other information in their possession pertaining to the Chiang Technology, including the use of such information in the development, manufacture, marketing and maintenance of any products or services, and in the practice of any process.

3. <u>Copyrights</u>. The Inventors hereby assign to the Company the exclusive, perpetual, irrevocable, paid-up and worldwide copyright and license under any copyright, including the right to sublicense any third party, to use, execute, reproduce, distribute, market, display, exhibit, perform and prepare derivative works based upon any documents, drawings, software, source code, object code, mask work or any other work of authorship embodying or expressing the Chiang Technology.

Cooperation. The Inventors hereby jointly and severally covenant and agree to 4. cooperate with the Company to enable the Company to enjoy to the fullest extent the right, title and interest in the Chiang Technology herein conveyed in the United States and other countries. Such cooperation by the Inventors shall include prompt production of pertinent facts and documents, giving of testimony, executing of petitions, oaths, specifications, declarations or other papers and other assistance, all to the extent deemed necessary or desirable by the Company for: (a) perfecting in the Company the right, title and interest herein conveyed; (b) complying with any duty of disclosure: (c) prosecuting any of said applications; (d) filing and prosecuting substitute, divisional, continuing or additional applications covering the Chiang Technology; (e) filing and prosecuting applications for reissue of any of said patents; (f) interference or other priority proceedings involving the Chiang Technology; (g) legal proceedings involving the Chiang Technology and any applications therefor and any patents granted thereon, including without limitation proceedings for opposition, cancellation, priority contests, public use, reexamination, compulsory licensing, infringement actions or court actions; provided, however, that the Company shall pay the expenses incurred by the Inventors in providing such cooperation.

5. <u>Assumption of Obligations by Company</u>. As partial consideration for the transfer and assignment of the Chiang Technology and the grant of rights set forth in this Assignment Agreement, the Company hereby assumes and agrees to bear liability for and to pay the obligations of Chiang to the parties and in the respective amounts listed and described in Appendix C to this Assignment Agreement, in the aggregate amount of approximately \$337,641.60. In addition, the Company agrees to assume and bear any additional amounts accrued or accruing on those obligations as additional interest or penalties until paid in full.

6. <u>Amendment of IBM Agreement; Waiver of Conflict</u>. The parties mutually acknowledge and understand that it is in the best interests of the Company to negotiate certain amendments or modifications to the IBM Agreement, in order to more precisely define and narrow

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the scope of the rights of IBM pursuant thereto, and that it may be necessary to pay consideration to IBM in connection with such amendment. Therefore, the Company agrees to pay any such additional consideration required, and any legal fees incurred by Chiang, in connection with the proposed amendment of the IBM Agreement, provided that the Company shall have the right to approve any such amendment thereto. In view of the mutual interest of the Company and Chiang in such amendment, each acknowledges that it has been advised of, and specifically waives, any potential conflict of interest in representation of Chiang by legal counsel for the Company in the negotiation of such amendment, and likewise in representation of the Company by legal counsel for Chiang in the organization of the Company.

7. <u>Representation as to Ownership of the Chiang Technology</u>. The Inventors represent and warrant to the Company as partial consideration hereunder that subject to the IBM Agreement, (a) they have full power and authority to transfer the Chiang Technology and all rights and licenses granted hereunder; (b) upon the transfer and assignment of the Chiang Technology hereunder the Company will own the Chiang Technology free and clear of all liens, claims, encumbrances and licenses in favor of any third party or parties except as itemized in Appendix C; and (c) they are not aware of any infringement by the Chiang Technology upon any rights of any third party.

8. <u>Sale and Delivery of Chiang Equipment</u>. As partial consideration hereunder, Chiang hereby grants, sells, conveys, transfers, assigns, releases and delivers to the Company all of that personal property listed on Appendix B hereto (the "Chiang Equipment"), and represents and warrants that the Chiang Equipment is free and clear of all liens, claims and encumbrances.

9. <u>Successors and Assigns</u>. The terms and covenants of this Assignment Agreement shall inure to the benefit of the Company, its successors, assigns and other legal representatives, and shall be binding upon the Inventors, their respective heirs, legal representatives and assigns.

10. <u>No Conflict</u>. The Inventors jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract or understanding in conflict with this Assignment Agreement.

IN WITNESS WHEREOF, the parties have executed and delivered this Assignment Agreement on the date first set forth above.

MATRIDIGM CORPORATION

INVENTORS

President

Franklin C. Chiang

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Lawrence J. Thoman

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APPENDIX A

DESCRIPTION OF THE CHIANG TECHNOLOGY

Subject to the rights of IBM pursuant to the IBM Agreement, the Chiang Technology consists of the following, described in further detail below, together with accompanying knowhow comprising the methodology for using each in an orderly fashion:

- 1. The Processor Architecture;
- 2. The API Set;
- 3. The Application Routines; and
- 4. The Sorting Algorithm.

1. The "Processor Architecture" is characterized by Very Long Instruction Word " ("VLIW"), Harvard Architecture, Large Register Set and hardware-managed program stack design.

- Each instruction word can code three or more operations (including Fetch/Load/Store, Arithmetic/Logical, and Branch/Call/Return functions), which run in parallel.
- Instructions are stored in a separate memory from the data (Harvard Architecture), allowing references to instruction and data memories to run in parallel, and independent caches for instructions and data to be built more simply than is possible in a single memory architecture.¹
- The conceptual design is for an unusually large register set, employing banks (e.g., data and address) and stacks of registers to allow permanent allocation of most registers to specific functions; reduction of Fetch/Load/Store operations; use of registers for data; coupling of registers for 32-bit addresses; and accessing of registers in banks.
- The Branch/Call function can branch and call conditionally and can be used to manipulate the program stack.

2. The "API Set" consists of approximately 500 primitive Application Programming Interfaces (APIs) which are combined to define, build and manipulate two-dimensional data structure matrices ("MatriDigm Format").

• The MatriDigm Format matrices are in the form of relational data bases, where rows comprise records (tuples) and columns comprise fields.

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¹Reference is made to an instruction format manual (17 pages), a copy of which has been delivered to the Company.

- A "Leader" augments each matrix. It uses a definition language to describe the matrix and its possible operations with the file/data base, including how each matrix field is computed and relates to other fields and matrices. It includes "Headers," which define and describe the attributes of the fields.
- The APIs form applications which can run on the Chiang Processor Architecture or as an independent program. Most of these deal with processing of the matrices and/or their headers, while some deal with input/output (I/O) and user interface, and others do pattern matching and consistency checks on the data or allow "fuzzy" matching on the field contents.
- When all of the field names of a file are stored within one bank of registers (data and/or address), and each register is linked to all of its attributes, the number of Fetch instructions can be reduced significantly, resulting in increased system operating speed.

3. The "Application Routines" consist of Data Laundry, Software Re-Engineering and AMD Prism applications.

- The "Data Laundry" application transforms files and data bases into the MatriDigm Format, in which the data is queried and updated using the Instruction Set APIs.
 - The "Software Re-Engineering" application includes tools which parse an existing program's source code (such as in COBOL or S/390 Assembler Language) into a special matrix to facilitate maintenance of the program, (called the "RUIe-Matrix" or "RU-Matrix" or "RU"), and builds matrices representing the data files, screens and reports associated with the program.

The RU-Matrix format permits special views of the program which facilitate maintenance and re-engineering. The RU can be modified using Chiang Instruction Set APIs, and then run with data matrices to determine if the modification produced the desired effect.

The RU modifications are performed using a character-based full screen User Interface (UI). However, a Graphical User Interface (GUI) is planned to replace the UI and to produce a RU-to-COBOL translator and (if demand warrants) a RU-to-Assembler Language translator.

After verifying the changes, the programmer can make the corresponding changes to the original program, insert the new program back into the original environment, system test it, and place it into production.

The translators and parsers are language-specific, while the RU is a normalized form of the program. This permits generation of parsers and translators which can be mixed and matched to migrate programs from one environment to another.

The "AMD Prism" application is a performance analysis tool for Advanced Micro Devices' marketing unit, used to optimize AMD's marketing.

The "Sorting Algorithm" consists of a transformational sort algorithm (pocket, bin, 4. radix) implemented with a virtual pocket mechanism, as described in U.S. Patent No. 5,278,987, dated January 11, 1994. The Sorting Algorithm is subject to the non-exclusive license option and other rights of IBM pursuant to the IBM Agreement. Using the Sorting Algorithm, the sort scales as:

$C_1 * n * m$,

where

n

- = the number of machine cycles per operation; C_1 = the number of records; and
- = the number of bytes in the sort key.² m

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²Compare against traditional comparison sorts in which the sort scales as $C_2 * n * \log (n)$, where C_2 = machine cycles per operation; and n = the number of records.