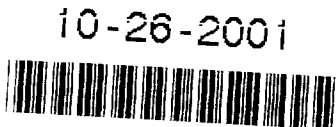


U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

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101887039

PATENT  
Attorney Docket No. 201079

TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

1. Submission Type

- New
- Resubmission (Non-Recordation Document #
- Correction of PTO Error  
Reel                      Frame
- Corrective Document  
Reel                      Frame

2. Nature of Conveyance:

- Assignment                       Security Agreement
- License                               Change of Name
- Merger                                 Other:

Jc906 U.S. PTO  
09/17/2001  
10/17/01

3. Conveying Party(ies):

Mark if additional names of conveying parties attached.

Name Lou King  
Name Michael Ficco  
Name John May  
Name Jorge Guzman

Execution Date: 9/4/2001 (m/d/yyyy)  
Execution Date: 9/4/2001 (m/d/yyyy)  
Execution Date: 10/9/2001 (m/d/yyyy)  
Execution Date: 9/4/2001 (m/d/yyyy)

4. Receiving Party:

Name: Hughes Electronics Corporation  
Address: 200 North Sepulveda Blvd.  
El Segundo, CA 90245-0956

5. Correspondent Name and Address:

Name: Hughes Electronics Corporation  
Address: Patent Docketing Administration  
P.O. Box 956  
Bldg. 1, Mail Stop A109  
El Segundo, CA 90245-0956

Please associate this document and the attached documents with customer no. 020991.

6. Application Number(s) or Patent Number(s):

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Either enter the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

If this document is being filed together with a new Patent Application, enter the date that the patent application was executed by the first named inventor.

9/4/2001 (m/d/yyyy)

7. Patent Cooperation Treaty (PCT) Numbers:

Enter PCT application number(s) only if a U.S. Application Number has not been assigned.	PCT	PCT	PCT
	PCT	PCT	PCT

8. Number of Properties:

Enter the total number of properties involved: 1.

9. Fee Transmittal:

Fee amount for listed properties (37 CFR 3.41): \$ 40.00

Method of Payment:  Enclosed       Deposit Account      Deposit Account No. 50-0383  
Authorization to charge additional fees:  Yes       No

10. 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. Charges to deposit account are authorized as indicated herein.

John T. Whelan, Reg. No. 32,448

10/17/2001

Name of Person Signing

Signature

Date

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PATENT  
REEL: 012277 FRAME: 0198

Additional Name(s) of Conveying Parties:

<u>Name:</u>	<u>Execution Date</u>
Yong Gao	September 4, 2001

**ASSIGNMENT**Page 1 of 3  
Attorney Docket No: PD-201079

WHEREAS, I, as below named sole inventor (if only one name is listed below) or joint inventor (if plural names are listed below) of the city and state as stated below next to my name, have invented a **METHOD, SYSTEM AND COMPUTER PROGRAM PRODUCT FOR EFFICIENT STORAGE OF DATA:**

- for which application for Letters Patent of the United States has been executed by me on this day; or  
 which is embodied in U.S. Patent Application Serial No. \_\_\_\_\_ filed on \_\_\_\_\_.

WHEREAS, **HUGHES ELECTRONICS CORPORATION**, (hereinafter referred to as **HUGHES**), a Delaware Corporation, having its principal place of business in El Segundo, California, is desirous of acquiring the entire and exclusive right, title and interest in, to and under said invention, said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world;

NOW, THEREFORE, in consideration of the obligations voluntarily assumed by me and set forth in an invention agreement between me and my employer, effective the date as stated below next to my name, and other good and valuable consideration, receipt of which is hereby acknowledged, I do hereby sell, assign and transfer to HUGHES, its successors, assigns or other legal representatives, the entire and exclusive right, title and interest in and to said invention invented by me, to said application and any and all applications which are continuations, continuations-in-part, divisions or substitutes of said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world on any of said applications and to any and all reexaminations, reissues, renewals or extensions of said Letters Patent in the United States and throughout the world for the full term or terms for which said Letters patent may be granted in the United States and throughout the world; authorize and request The Commissioner of Patents and Trademarks of the United States and all foreign countries to issue all such Letters Patent to said HUGHES, its successors, assigns or other legal representatives; covenant that no assignment, sale, agreement, transfer or encumbrance has been, or will be, made or entered into which would conflict with this assignment, sale and transfer; and agree to communicate to HUGHES, its successors, assigns or other legal representatives, upon request and at no cost or expense to me, any facts known by me respecting said invention, do all lawful acts, including the execution and delivery of all papers and proper oaths and giving of testimony that is deemed necessary or desirable by HUGHES, its successors, assigns or other legal representatives with regard to said invention for protecting, obtaining, maintaining and enforcing any and all of said Letters Patent in the United States and throughout the world for said invention and for perfecting, affirming, recording and maintaining the title of HUGHES, its successors, assigns or other legal representatives, and generally cooperate to the fullest extent in all matters pertaining to said invention, and any and all of said Letters Patent and the title thereto in HUGHES, its successors, assigns or other legal representatives.

IN WITNESS WHEREOF, I have executed this instrument:

Full Name of Sole or Joint Inventor: LOU KING	Inventor's Signature: <i>[Signature]</i>	Date: 9/4/01
Residence (City and State) Ijamsville, Maryland		INVENTION AGREEMENT DATE
Full Name of Joint Inventor: Michael Ficco	Inventor's Signature: <i>[Signature]</i>	Date: 9/4/01
Residence (City and State) Silver Spring, Maryland		INVENTION AGREEMENT DATE
Full Name of Joint Inventor: JOHN MAY	Inventor's Signature: <i>[Signature]</i>	Date: 10/9/01
Residence (City and State) Ijamsville, Maryland		INVENTION AGREEMENT DATE
Full Name of Joint Inventor: JORGE GUZMAN	Inventor's Signature: <i>[Signature]</i>	Date: 9/4/01
Residence (City and State) Damascus, Maryland		INVENTION AGREEMENT DATE
Full Name of Joint Inventor: YONG GAO	Inventor's Signature: <i>[Signature]</i>	Date: 09/04/01
Residence (City and State) Germantown, Maryland		INVENTION AGREEMENT DATE

STATE OF Maryland

COUNTY OF Frederick

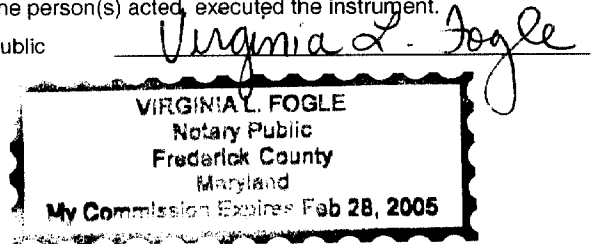
SS:

On Sept. 4, 2001 before me, Virginia L. Foyle

a Notary Public in and for said State, personally appeared Lou King,  
 personally known to me or  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public



STATE OF Maryland

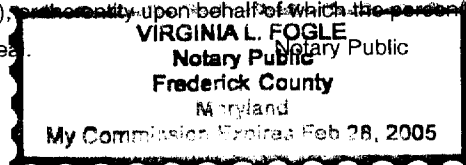
COUNTY OF Frederick

SS:

On Sept. 4, 2001 before me, Virginia L. Foyle

a Notary Public in and for said State, personally appeared Michael Ficco,  
 personally known to me or  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Virginia L. Foyle

**PATENT**  
**REEL: 012277 FRAME: 0201**

STATE OF Maryland

COUNTY OF Frederick

SS:

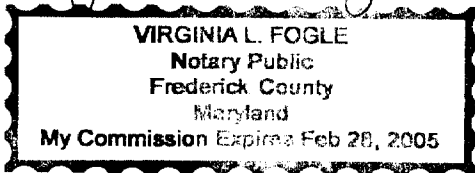
On October 9, 2001 before me, Virginia L. Fogle

a Notary Public in and for said State, personally appeared John May  
 personally known to me or  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

Virginia L. Fogle



STATE OF Maryland

COUNTY OF Frederick

SS:

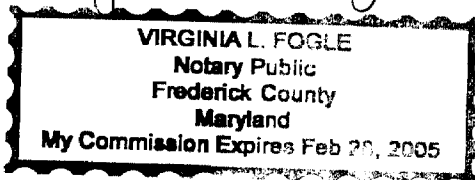
On Sept. 4, 2001 before me, Virginia L. Fogle

a Notary Public in and for said State, personally appeared George Subman  
 personally known to me or  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

Virginia L. Fogle



STATE OF Maryland

COUNTY OF Frederick

SS:

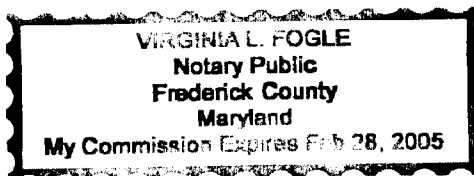
On Sept. 4, 2001 before me, Virginia L. Fogle

a Notary Public in and for said State, personally appeared Yong Dao  
 personally known to me or  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

Virginia L. Fogle



PATENT