Docket No.: NCRC-0038-US (9558) ORM PTO-1595 (Modified) 05-10-2001 U.S. DEPARTMENT OF COMMERCE (Rev. 6-93) Patent and Trademark Office OMB No. 0651-0011 (exp.4/94) Copyright 1996-97 LegalStar P08A/REV02 Tab settings → → → 101710431 To the Honorable Commissioner of Patenta .... tached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): **GANG LUO CURT J. ELLMANN** Name: NCR CORPORATION JEFFREY F. NAUGHTON Address: 1700 SOUTH PATTERSON BLVD. Yes X No Additional names(s) of conveying party(ies) 3. Nature of conveyance: 09842991 ■ Assignment ☐ Merger City: **DAYTON** State/Prov.: OH ☐ Security Agreement ☐ Change of Name Country: U.S.A. ZIP: 45479-0001 □ Other Execution Date: <u>4/24/2001</u>; 4/26/2001; 4/25/2001 ⊠ No ☐ Yes Additional name(s) & address(es) 4. Application number(s) or registration numbers(s): If this document is being filed together with a new application, the execution date of the application is: 4/24; 4/26; 4/25/2001 B. Patent No.(s) Patent Application No. Filing date 37/09/2001 LMUELLER 00000322 501673 09842991 01 FC:581 40.00 CH ☐ Yes 🛛 No Additional numbers 5. Name and address of party to whom cerrespondence 6. Total number of applications and patents involved: 01 concerning document should be mailed: Name: JOHN D. COWART 7. Total fee (37 CFR 3.41):....\$ 40.00 38,415 Registration No. ☐ Enclosed - Any excess or insufficiency should be credited or debited to deposit account Address: NCR CORPORATION Authorized to be charged to deposit account LAW DEPARTMENT, IP SECTION ECD-2, 101 W. SCHANTZ AVE. 8. Deposit account number: City: DAYTON State/Prov.: OH 50-1673 (9558) Country: U.S.A ZIP: 45479 DO NOT USE THIS SPACE 9. 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. an Cla **APRIL 26, 2001** DAN C. HU Date Name of Person Signing Signature Total number of pages including cover sheet, attachments, and

REEL: 011772 FRAME: 0068

## **ASSIGNMENT**

WHEREAS, the undersigned inventor(s), hereinafter called the "Assignor", has invented a new and useful invention entitled:

## METHOD AND APPARATUS FOR PERFORMING HASH JOIN

for which reference a full description is here made in an application for Letters Patent of the United States, which is executed of even date herewith.

WHEREAS, NCR CORPORATION, a Maryland Corporation, having a place of business in Dayton, Ohio, hereinafter called the "Assignee", is desirous of acquiring the entire right, title and interest in and to said invention, the application above identified, and in, to and under Letters Patent which may be obtained for said invention, as hereinafter more fully set forth;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, be it known that for valuable and legally sufficient consideration, the receipt of which by the Assignor from the Assignee is hereby acknowledged, the Assignor has sold, assigned and transferred, and by these presents does sell, assign and transfer unto the Assignee, its successors and assigns, the entire right, title and interest in and to the invention and the application herein above identified, and all Letters Patents that may issue for the said invention, and all divisions, reissues, substitutions, continuations, and extensions thereof, to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns to the full end of the term for which any and all of said Letters Patents for the said invention may issue.

**FURTHER**, be it known that the Assignor has sold, assigned and transferred, and by these presents does sell, assign and transfer unto the Assignee, its successors and assigns, the entire foreign rights to the invention disclosed in said application, in all countries of the world, and further agrees to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

And the Assignor does hereby covenant and agree, for himself and his legal representatives, that they will assist the Assignee in the prosecution of the application herein identified; in the making and prosecution of any other applications for Letters Patent that the Assignee may elect to make covering the invention herein identified, as herein before set forth, including any application for reissue, application for reexamination, application for foreign patent rights, or any proceeding in the United States Patent and Trademark Office affecting the invention, investing in the Assignee exclusive title in and to all such other applications and Letters Patent; and in the prosecution of any interference which may arise involving said invention, or any application or Letters Patents herein contemplated; that they will promptly execute and deliver to the Assignee any and all additional papers and make all lawful oaths which may be requested by the Assignee to fully carry out the terms of this assignment; and further that they will communicate to Assignee, or to its successors, assigns, and legal representatives, any facts known respecting said invention, and at the expense of the Assignee, testify in any legal proceedings, and generally do everything possible to aid the

PATENT REEL: 011772 FRAME: 0069 Assignee, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

And the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all Letters Patent to the Assignee in accordance with the terms of the assignment.

IN TESTIMONY WHEREOF, the Assignor has hereunto set his hands on the date

indicated below.

Dated

GANG LUO

Dated: 4/2

CURT L ELLMANN

Dated: 4/25/0/

RECORDED: 04/26/2001

JEFFHAN F. NAUGHTO