To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):
   Nobuya Matsumura
   Naoyuki Kagami
   Akira Tokizono

2. Name and address of receiving party(ies):
   Name: International Business Machines Corporation
   Street Address: New Orchard Road
   City: Armonk State: NY ZIP: 10504

Additional name(s) of conveying party(ies) attached _Yes XX No
Additional name(s) & address(es) attached? _Yes XX No

3. Nature of conveyance:
   XX Assignment
   Execution Date: 8/25/99, 8/30/99, 8/25/99

4. Application number(s) or patent number(s):
   If this document is being filed together with a new application, the execution date of the application is: 8/25/99, 8/30/99, 8/25/99
   A. Patent Application No.(s)
   B. Patent No.(s)

5. Name and address of party to whom correspondence concerning document should be mailed:
   Name: IBM Corporation
   Internal Address: Intellectual Property Law
   Street Address: 5600 Cottle Road (L2PA/0142)
   San Jose, CA 95193

6. Total Number of applications and patents involved
   Only

7. Total fee (37 CFR 3.41).........$ 40.00
   Enclosed
   XX Authorized to be charged to deposit account

8. Deposit Account Number: 09-0466

   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.

   Randall J. Bluestone
   Total number of pages including cover sheet, attachments, and document: 2
Whereas, we

(1) Nobuya Matsubara
County of Kanagawa-ken
and (2) Naoyuki Kagami
County of Kanagawa-ken
and (3) Akira Tokizono
County of Kanagawa-ken

of Fujisawa-shi,
and State of Japan,
of Fujisawa-shi,
and State of Japan,
of Fujisawa-shi,
and State of Japan,

have invented certain improvements in

METHOD AND APPARATUS FOR CONTROLLING DATA WRITE OPERATIONS

and executed, respectively, a United States patent application therefor on


Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York,
having a place of business at Armonk, New York 10504, (hereinafter called IBM),
desires to acquire the entire right, title and interest in the said application
and invention, and to any United States and foreign patents to be obtained therefor;

Now therefore, for a valuable consideration, receipt whereof is hereby
acknowledged, we, the above named, hereby sell, assign, and transfer to IBM, its
successors and assigns, the entire right, title and interest in the said application
and invention therein disclosed for the United States and foreign countries, and all
rights of priority resulting from the filing of said United States application, and we
request the Commissioner of Patents to issue any Letters Patent granted upon
the inventions set forth in said application to IBM, its successors and assigns; and we
hereby agree that IBM may apply for foreign Letters Patent on said invention and we
will execute all papers necessary in connection with the United States and foreign
applications when called upon to do so by IBM.

Signed and sealed

(1) at Fujisawa
on Aug. 25, 1999,

Nobuya Matsubara
SIGNATURE
INVENTOR

Naoyuki Kagami
SIGNATURE
INVENTOR

Akira Tokizono
SIGNATURE
INVENTOR

(2) at Fujisawa
on Aug. 30, 1999,

(3) at Fujisawa
on Aug. 25, 1999,