101574107 Trademarks:

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Sih-Pin Subrina Chang, Shu-Chun Jeane Chen, Keeranoor G. Kumar, James S. Lipscomb, DEC 2 1 2000 Jai Menon, and Liang-Jie Zhang

Additional name(s) of conveying party(ies) attached? Yes X No 2. Name and address of receiving party(ies):

Name: International Business Machines Corporation

Address: New Orchard Road Armonk, NY 10504 Additional name(s) & addresses

attached? Yes X No

3. Nature of conveyance:

X Assignment

Execution Date(s): November 16, and 29, 1999

4. Patent Application number 09/447,585

Execution Date(s): November 16, and 29, 1999

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Joseph C. Redmond, Jr., Esq. Address: MORGAN & FINNEGAN, LLP

345 Park Avenue

New York, NY 10154-0053

7. Total fee (37 CFR 3.41): \$40.00

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6. Total number of applications involved: 1

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20057_1

PATENT REEL: 011389 FRAME: 0171

ASSIGNMENT

Whereas, we

(1) SIH-PIN SUBRINA CHANG County of BERGEN,

(2) SHU-CHUN JEANE CHEN County of WESTCHESTER,

(3) KEERANOOR G. KUMAR County of MORRIS ,

(4) JAMES S. LIPSCOMB
County of WESTCHESTER

(5) **JAI MENON**County of **WESTCHESTER**,

and (6) LIANG-JIE ZHANG
County of WESTCHESTER

City of OLD TAPPAN, and State of NEW JERSEY.

City of CHAPPAQUA, and State of NEW YORK,

City of RANDOLPH, and State of NEW JERSEY.

City of YORKTOWN HEIGHTS and State of NEW YORK

City of CROTON-ON-HUDSON, and State of NEW YORK,

City of WHITE PLAINS and State of NEW YORK

We have invented certain improvements in

A SYSTEM AND METHOD FOR ADAPTIVE DELIVERY OF RICH MEDIA CONTENT TO A USER IN A NETWORK BASED ON REAL TIME BANDWIDTH MEASUREMENT & PREDICTION ACCORDING TO AVAILABLE USER BANDWIDTH

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

(1) 11/2-9, 1999; (2) Nov 16, 1999; (3) Nov 16, 1999;

(4) Nov. 16 , 1999 (5) Nov. 16 , 1999; and (6) 100. 16 , 1999;

And 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 invention set forth in said application to IBM, its successors and issue any Letters Patent granted upon the invention 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

1

SIGNED AND SEALED

- (1) at Hawthorner on 11/29.1999
- (2) at Hawthorne on 11/16, 1999
- (3) at Hawthorne on 11/16/, 1999
- (4) at 1/m throne, My on 11/16, 1999
- (5) at Hawtherne, N1 on 11/16, 1999

and (6) at Hawthorne, NY on 11/16/99, 1999

SIH-PIN SUBRINA CHANG

SHU-CHUN JEANE CHEN

KEERANOOR G. KUMAR

James S. LIPSCOME

On Menon

JAI MENON

LIANG-ЛЕ ZHANG

RECORDED: 08/31/2000