Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Kenneth Wayne BOYD	05/21/2008
Kenneth Fairclough DAY III	05/28/2008
Gerardo De Jesus FRIAS GARCIA	04/29/2008
John Earle LINDLEY	05/09/2008
Gregory Edward McBRIDE	05/14/2008
Ryusuke ITO	05/07/2008
Yasumitsu MIZOGUCHI	05/07/2008
Kenta NINOSE	05/07/2008
Akinobu SHIMADA	05/07/2008
Tsutomu SUKIGARA	05/07/2008

RECEIVING PARTY DATA

Name:	International Business Machines Corporation	
Street Address:	New Orchard Road	
City:	Armonk	
State/Country:	NEW YORK	
Postal Code:	10504	

Name:	Hitachi Ltd.
Street Address:	6, Kanda Surugadai, 4-chome, Chiyoda-ku
City:	Tokyo
State/Country:	JAPAN
Postal Code:	101-8010

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12131877

CORRESPONDENCE DATA

500606492

PATENT REEL: 021309 FRAME: 0615 12/3/87

U UV\$ H

Fax Number: (310)556-7984

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Phone: 3105567983

Email: patricia@ipmatters.com

Correspondent Name: David W. Victor

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ATTORNEY DOCKET NUMBER: TUC920070115US1 (18.239)

NAME OF SUBMITTER: Patricia McLaughlin

Total Attachments: 8

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PATENT REEL: 021309 FRAME: 0616

Firm No. 0018.0239

ASSIGNMENT

Whereas, we (1) Kenneth Wayne BOYD of Tucson, State of Arizona, and County of Pima (2) Kenneth Fairclough DAY III of Tucson, State of Arizona, and County of Pima (3) Gerardo De Jesus FRIAS GARCIA of Morgan Hill, State of California, and County of Santa Clara (4) John Earle LINDLEY of San Jose, State of California, and County of Santa Clara (5) Gregory Edward MCBRIDE of Vail, State of Arizona, and County of Pima of Kanagawa-ken, (6) Ryusuke ITO Japan of Kanagawa-ken, (7) Yasumitsu MIZOGUCHI Japan of Kanagawa-ken, (8) Kenta NINOSE Japan (9) Akinobu SHIMADA of Kanagawa-ken,

have invented certain improvements in:

(10) Tsutomu SUKIGARA

MANAGING CONSISTENCY GROUPS USING HETEROGENEOUS REPLICATION ENGINES

Japan

Japan

of Kanagawa-ken,

and executed, respectively, a United States patent application therefore on:

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM CORPORATION), and Hitachi Ltd., a corporation organized and existing under the laws of Japan and having a principal place of business at 6, Kanda Surugadai, 4-chome, Chiyoda-ku, Tokyo 101-8010, Japan (hereinafter called

Patent Docket: TUC920070115US1 Firm No. 0018.0239

Hitachi), desire 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 therefore;

Now therefore, for a valuable consideration, receipt whereof is hereby acknowledged, we, the above named, hereby sell, assign, and transfer to IBM CORPORATION, Hitachi, and their respective 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 in all 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 CORPORATION, Hitachi, and their respective successors and assigns; and we hereby agree that IBM CORPORATION and Hitachi 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 CORPORATION and/or Hitachi.

CITY DATE	-	Konneth Mayne BOYD	_ SIGNATURE INVENTOR
CITY DATE	(2) at <u>Tucson</u> on <u>28 may</u> , 2008	Kenneth Janchayl la 46 Kenneth Fairclough DAY III	SIGNATURE INVENTOR
CITY DATE	(3) at, 2008	Gerardo De Jesus FRIAS GARCIA	SIGNATURE INVENTOR
CITY DATE	(4) at, 2008	John Earle LINDLEY	_ SIGNATURE INVENTOR
CITY DATE	(5) at <u>10, so</u> on <u>14 May</u> , 2008	Gregory Edward MCBRIDE	_ SIGNATURE INVENTOR
CITY DATE	(6) at, 2008	Ryusuke ITO	_ SIGNATURE INVENTOR
CITY DATE	(7) at, 2008	Yasumitsu MIZOGUCHI	_ SIGNATURE INVENTOR
CITY DATE	(8) at, 2008	Kenta NINOSE	SIGNATURE INVENTOR
CITY DATE	(9) at, 2008	Akinobu SHIMADA	SIGNATURE INVENTOR
CITY DATE	(10) at, 2008	Tsutomu SUKIGARA	_ SIGNATURE INVENTOR

Firm No. 0018.0239

ASSIGNMENT

Whereas,	we		
(1) Keni	neth Wayne BOYD	of Tucson, State of Arizona, and County of Pima	
(2) Keni	neth Fairclough DAY III	of Tucson, State of Arizona, and County of Pima	
(3) Gera	rdo De Jesus FRIAS GARCIA	of Morgan Hill, State of California, and County of Santa Clara	
(4) John	Earle LINDLEY	of San Jose, State of California, and County of Santa Clara	
(5) Greg	ory Edward MCBRIDE	of Vail, State of Arizona, and County of Pima	
(6) Ryus	suke ITO	of Kanagawa-ken, Japan	
(7) Yası	ımitsu MIZOGUCHI	of Kanagawa-ken, Japan	
(8) Kent	a NINOSE	of Kanagawa-ken, Japan	
(9) Akir	obu SHIMADA	of Kanagawa-ken, Japan	
(10) Tsu	ntomu SUKIGARA	of Kanagawa-ken, Japan	
have inve	nted certain improvements in:		
MANAGI	NG CONSISTENCY GROUPS US	SING HETEROGENEOUS REPLICA	TION ENGINES
and execu	ted, respectively, a United States pa	atent application therefore on:	
(1)	, 2008, (2)	, 2008, (3) 04/19	, 2008,
(4)	, 2008, (5)	, 2008, (6)	, 2008,
(7)	, 2008, (8)	, 2008, (9)	, 2008 and
(10)	2008		

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM CORPORATION), and Hitachi Ltd., a corporation organized and existing under the laws of Japan and having a principal place of business at 6, Kanda Surugadai, 4-chome, Chiyoda-ku, Tokyo 101-8010, Japan (hereinafter called

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CITY DATE	(1) at, 2008	Kenneth Wayne BOYD	SIGNATURE INVENTOR
CITY DATE	(2) at, 2008	Kenneth Fairclough DAY III	SIGNATURE INVENTOR
CITY DATE	(3) at Mongan Hill CA on <u>04/29</u> , 2008	Gerardo De Jesus FRIAS CARCIA	SIGNATURE INVENTOR
CITY DATE	(4) at, 2008	John Earle LINDLEY	SIGNATURE INVENTOR
CITY DATE	(5) at, 2008	Gregory Edward MCBRIDE	SIGNATURE INVENTOR
CITY DATE	(6) at, 2008	Ryusuke ITO	SIGNATURE INVENTOR
CITY DATE	(7) at, 2008	Yasumitsu MIZOGUCHI	SIGNATURE INVENTOR
CITY DATE	(8) at, 2008	Kenta NINOSE	SIGNATURE INVENTOR
CITY DATE	(9) at, 2008	Akinobu SHIMADA	SIGNATURE INVENTOR
CITY DATE	(10) at, 2008	Tsutomu SUKIGARA	SIGNATURE INVENTOR

Firm No. 0018.0239

ASSIGNMENT

Whereas, we		
(1) Kenneth Wayne BOYD	of Tucson, State of Arizona, and County of Pima	
(2) Kenneth Fairclough DAY III	of Tucson, State of Arizona, and County of Pima	
(3) Gerardo De Jesus FRIAS GARCIA	of Morgan Hill, State of California, and County of Santa Clara	
(4) John Earle LINDLEY	of San Jose, State of California, and County of Santa Clara	
(5) Gregory Edward MCBRIDE	of Vail, State of Arizona, and County of Pima	
(6) Ryusuke ITO	of Kanagawa-ken, Japan	
(7) Yasumitsu MIZOGUCHI	of Kanagawa-ken, Japan	
(8) Kenta NINOSE	of Kanagawa-ken, Japan	
(9) Akinobu SHIMADA	of Kanagawa-ken, Japan	
(10) Tsutomu SUKIGARA	of Kanagawa-ken, Japan	
have invented certain improvements in:		
MANAGING CONSISTENCY GROUPS	USING HETEROGENEOUS REPL	ICATION ENGINES
and executed, respectively, a United State	s patent application therefore on:	
(1), 2008, (2)	, 2008, (3)	, 2008,
(4) May 9, 2008, (5)		
	2008 (0)	

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM CORPORATION), and Hitachi Ltd., a corporation organized and existing under the laws of Japan and having a principal place of business at 6, Kanda Surugadai, 4-chome, Chiyoda-ku, Tokyo 101-8010, Japan (hereinafter called

Page 1 of 2

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Now therefore, for a valuable consideration, receipt whereof is hereby acknowledged, we, the above named, hereby sell, assign, and transfer to IBM CORPORATION, Hitachi, and their respective 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 in all 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 CORPORATION, Hitachi, and their respective successors and assigns; and we hereby agree that IBM CORPORATION and Hitachi 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 CORPORATION and/or Hitachi.

CITY	(1) at		SIGNATURE
DATE	(1) at, 2008	Kenneth Wayne BOYD	INVENTOR
CITY	(2) at		SIGNATURE
DATE	on, 2008	Kenneth Fairclough DAY III	INVENTOR
CITY	(3) at		SIGNATURE
DATE	on, 2008	Gerardo De Jesus FRIAS GARCIA	INVENTOR
		John Earle Lindley	
CITY	(4) at <u>Jan Jose</u>	John Earle June 1	SIGNATURE
DATE	on $\sqrt{24}$, 2008	Sonn Earle LINDLE Y	INVENTOR
CITY	(5) at	·	SIGNATURE
DATE	on, 2008	Gregory Edward MCBRIDE	INVENTOR
CITY			SIGNATURE
DATE	(6) at, 2008	Ryusuke ITO	INVENTOR
CITY	(7) -4		CICNIATUDE
CITY DATE	(7) at, 2008	Yasumitsu MIZOGUCHI	SIGNATURE INVENTOR
CITY	(8) at, 2008	Vanta NINIOCE	SIGNATURE INVENTOR
DATE	on, 2008	Kenta MINOSE	INVENTOR
CITY	(9) at		SIGNATURE
DATE	(9) at, 2008	Akinobu SHIMADA	INVENTOR
CITY	(10) at		SIGNATURE
DATE	on	Tsutomu SUKIGARA	INVENTOR

Firm No. 0018.0239

ASSIGNMENT

Whereas, we of Tucson. (1) Kenneth Wayne BOYD State of Arizona, and County of Pima of Tucson, (2) Kenneth Fairclough DAY III State of Arizona, and County of Pima (3) Gerardo De Jesus FRIAS GARCIA of Morgan Hill, State of California, and County of Santa Clara (4) John Earle LINDLEY of San Jose, State of California, and County of Santa Clara (5) Gregory Edward MCBRIDE of Vail, State of Arizona, and County of Pima (6) Ryusuke ITO of Kanagawa-ken, Japan (7) Yasumitsu MIZOGUCHI of Kanagawa-ken, Japan (8) Kenta NINOSE of Kanagawa-ken, Japan (9) Akinobu SHIMADA of Kanagawa-ken, Japan (10) Tsutomu SUKIGARA of Kanagawa-ken, Japan have invented certain improvements in: MANAGING CONSISTENCY GROUPS USING HETEROGENEOUS REPLICATION ENGINES and executed, respectively, a United States patent application therefore on: (1) ______, 2008, (2) ______, 2008, (3) ____

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM CORPORATION), and Hitachi Ltd., a corporation organized and existing under the laws of Japan and having a principal place of business at 6, Kanda Surugadai, 4-chome, Chiyoda-ku, Tokyo 101-8010, Japan (hereinafter called 6-69 Marunouchi 1-chome, Chiyoda-ku, Tokyo 101-8280,

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Patent Docket: TUC920070115US1 Firm No. 0018.0239

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CITY DATE	(1) at, 2008	Kenneth Wayne BOYD	SIGNATURE INVENTOR
CITY DATE	(2) at, 2008	Kenneth Fairclough DAY III	SIGNATURE INVENTOR
CITY DATE		Gerardo De Jesus FRIAS GARCIA	SIGNATURE INVENTOR
CITY DATE	(4) at, 2008	John Earle LINDLEY	SIGNATURE INVENTOR
CITY DATE	(5) at, 2008	Gregory Edward MCBRIDE	SIGNATURE INVENTOR
CITY DATE	(6) at Kanagawa-ken Japan on May 7, 2008	Ryusuke ITO	SIGNATURE INVENTOR
CITY DATE		Yasumitsu Mizoguchi Yasumitsu MIZOGUCHI	SIGNATURE INVENTOR
CITY DATE	(8) at Kanagawa-Ken, Japan on May 7, 2008	Kenta Vinose Kenta NINOSE	SIGNATURE INVENTOR
CITY DATE	(9) at Kanagara ken, Japan on May 7, 2008	Akinobu Shimada Akinobu SHIMADA	SIGNATURE INVENTOR
CITY DATE	(10) at kanaga na-ken, Japan on May 77h, 2008	Tsutomu SUKIGORA	SIGNATURE INVENTOR