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PATENTS ONLY

To the Assistant Commissioner for Patents: Please record the attached original documents or copy thereof.

	 Name of conveying party(ies): 	 Name and address of receiving party(ies):
	James M. Knittel	
	Jan C. Hardenbergh	Name: Mitsubishi Electric Information 👝
	Hanspeter Pfister	Technology Center America, In🕰 🔤
	Urs H. Kanus	
	Drew R. Martin	. <u>vo</u> = a
	Frederic H. Mokren	Street Address: 201 Broadway
	Additional name(s) of conveying <u>party(ies)</u> attached? [lYes [X]No	City: Cambridge State: MA Zip: 021
	3. Nature of Conveyance:	Additional name(s) and address(es)
	[X]Assignment []Merger	
	[]Security Agreement []Change of Name	
	Execution Dates: 5/2/99; 5/8/99; 5/12/99	
	4. Application number(s) or patent number(s) If this document is being filed togethes of the application is: May 20, 1999	: r with a new application, the execution date
	A. Patent Application No.(s)	B. Patent No.(s)
	kan 111	
	MACISIADI	
		 ttached? []Yes [X]No
	Additional numbers a	LLached? []ies [k]NO
	5. Name and address of party to whom correspondence concerning document	 Total number of applications and patents involved: [1]
	should be mailed:	7.Total fee (37CFR 3.41): \$40.00
	Name: Mitsubishi Electric Information	
	Technology Center America, Inc.	[] Enclosed
		[X] Authorized to be charged to
	Street Address: 201 Broadway	deposit account
	City: Cambridge State: MA Zip: 02139	8. Deposit account number: <u>50-0749</u>
06/01/	1999 MTHAII 00000212 500749 09315661 DO NOT USE	THIS SPACE
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	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 cop	of the original document
	Dirk Brinkman	$\lambda \lambda \sim (1 L) \lambda$
		Datter Datter
	Total number	of pages comprising cover sheet [1]

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ASSIGNMENT

WHEREAS, we, James M. Knittel, Jan C. Hardenbergh, Hanspeter Pfister, Urs H. Kanus, Drew R. Martin, and Frederic H. Mokren, have made certain inventions or discoveries (or both) set forth in an Application for Letters Patent of the United States of America entitled METHOD AND APPARATUS FOR ILLUMINATING VOLUME DATA IN A RENDERING PIPELINE, the specification of which:

X was executed by us on the date indicated below;

was filed on as Application Serial No. ;

was patented under U.S. Patent No. on ;

WHEREAS, Mitsubishi Electric Information Technology Center America, Inc., a corporation of the State of Delaware, whose address is 201 Broadway, Cambridge, Massachusetts 02139, and who, together with its successors and assigns is hereinafter called "Assignee", is desirous of acquiring the entire right, title, and interest together with the benefits and privileges hereinafter recited;

NOW, THEREFORE, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation;

1. Assign, transfer and convey to Assignee the entire right, title and interest together with the benefits and privileges in and to said inventions and discoveries, said Application for Letters Patent or similar forms of protection of the United States of America, and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation and convention applications based in whole or in part upon said inventions or discoveries, or upon said application, and any and all Letters Patent, reissues and extensions of Letters Patent or similar forms of protection granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent;

2. Authorize Assignee to file patent applications in any or all countries or groups of countries on any or all of said inventions and discoveries in our name or in the name of Assignee

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or otherwise as Assignee may deem advisable, under the International Convention or any other relevant convention or treaty or otherwise;

3. Authorize and request the Assistant Commissioner for Patents of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as Assignee of the entire right, title and interest therein or otherwise as Assignee may direct;

4. Warrant that we have not knowingly conveyed to others any rights in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that we have good right to assign the same to Assignee without encumbrance;

Bind our heirs, legal representatives and assigns, as 5. well as ourselves, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to us or them, all acts reasonable serving to assure that said inventions and discoveries, said patent applications and said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by us, our heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to us relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in our control or in the control of our heirs, legal representatives or assigns which may be useful for establishing any facts of our conceptions, disclosures, and reduction to practice of said inventions or discoveries.

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_SIGNED INVENTOR'S DECLARATION: DATE I mit wesk Date: 'M. Knittel James/ _aner Witnessed: Printed Name 5 /12/99 Date Signature POD Witnessed: Printed Name Signature Date

IN WITNESS WHEREOF:

DATE I SIGNED, INVENTOR'S DECLARATION: Date: 12. MAY.99 C. Hardenberg an aver Witnessed Name ed 5/12/99 Date Signature winedo Witnessed: Printed Nam Signatuke 3

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DATE I SIGNED INVENTOR'S DECLARATION:	51299
Hanspeter Pfister	Date: <u>\$/2/99</u>
Witnessed: <u>CAROL</u> <u>JOHNSON</u> Printed Name	
Signature	<u>5/12/99</u> Date
Witnessed: Houmver L. 20tte Printed Name	
final gelle Signature	

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DATE I SIGNED INVENTOR'S DECLARATION:	05/08/99
k/3	Date: 05/08/99
Urs H. Kanus /	
Witnessed: HERMANN KANUS	
Hermann Uang	05/08/99 Date

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Witnessed: DORCEN BLACH Printed Name

Doren Black

<u>05108/99</u> Date

Signature

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DATE I SIG	NED INVENTOR'S DECLARATION:		
Drew R. Mai	rtin	Date:	
Witnessed:	Printed Name		
Signature			Date
Witnessed:	Printed Name		
Signature			Date

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DATE I SIGNED INVENTOR'S DECLARATION:	
Frederic H. Mokren	Date: <u>5/2/99</u>
Witnessed: NGAI TING CHAN Printed Name	
Ngai Ty Chan Signature	<u>5/2/99</u> Date

Witnessed: <u>Anne Christine Budde</u> Printed Name

Anddoch Signature

May 2, 1999 Date

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