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PATENT ASSIGNMENT	RECORDATIO	101202786	-
To: The Commissioner of Patents a	nd Trademarks:		
Please record the attached original d	ocument or copy thereof.		
Submission Type:		Conveyance Type:	
X New ☐ Resubmission (Non-Recordation)	n).	Assignment	
Document ID#	, , , , , , , , , , , , , , , , , , ,		
Correction of PTO Error: Reel	# Frame #	Other:	
Corrective Document: Reel #	Frame #		
Name of conveying party(ies)	Execution Date	Name and address of receiving	o nartv(ies).
Cooffron D. Marria	(Month/Day/Year)		
Geoffrey P. Morris lacgeline C. Rolfs	11/10/99 11/10/99	3M Innovative Properties Con	mpany
Leo A. Meyer	11/5/99	P.O. Box 33427	
Robert S. Moshrefzadeh	11/11/99	St. Paul, Minnesota 55133-34	427
Isin-Hsin Chou	11/8/99		
Billy J. Tompkins	11/8/99		
Thomas N. Davis	11/8/99		
Additional names of conveying par			
	No		
Application number or patent nu	mber:	·	
This document is being filed wi			
This document is to be recorded		atent application or patent: 09/311,	909
Patent Cooperation Treaty (PCT) Enter PCT application number <u>only</u>		umber has not been assigned:	
Name and address of party to wh			ilad.
	-	_	neu.
Name: William D. Miller, Pho		649	
 Office of Intellectual Property 0 3M Innovative Properties Comp 			
P.O. Box 33427	puny		
St. Paul, Minnesota 55133-342	7		
Number of Properties:			
	Enter the total	number of properties involved	1
Fee Amount:			37 0 40 00
	Fee Amount for 1	Properties Listed (37 CFR 3.41)	<u>X \$40.00</u>
Method of Payment:	Charge 1	to Deposit Account No. <u>13-3723</u>	= \$40.00
	horization to charge ad		\$10.00
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Statement and signature			
To the best of my knowledge and be			
true copy of the original document.	Charges to deposit acco	ount are authorized, as indicated he	rein.
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William D. Miller		<u>November 12, 199</u> Date	99
Printed Name of Attorney	Signature /	Date	
Pages: Total number of pages of t	the attached conveyance	document including any attachmen	nts 12
		uired cover sheet information to:	
Commissioner o		Assignments, Washington, D.C. 20231	
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PATENT REEL: 010384 FRAME: 0133

ASSIGNMENT

Whereas we, the below named inventors, with residences and citizenships as indicated below; have made an invention in

GLASS MICROSPHERES FOR USE IN REAR PROJECTION SCREEN DISPLAYS AND METHODS

and have executed an application for Letters Patent of the United States of America based thereon; which application is identified in the United States Patent and Trademark Office as U.S. Application Serial No. 09/311,909, filed May 14, 1999;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, we have individually and jointly agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly owned subsidiary of MINNESOTA MINING AND MANUFACTURING COMPANY, and a corporation of Delaware, having its principal office at Saint Paul. Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by us or any of us or made jointly with others (provided any such improvement is made during, or within one year after the termination of, the employment by Minnesota Mining and Manufacturing Company and any of its existing or future subsidiaries of whichever of us, solely or jointly with one or more others, has made the same), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by us or any of us had this assignment and transfer not been made,

We do further agree for ourselves and for our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as we lawfully may, that may be deemed necessary by the said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries;

And we do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to the said 3M Innovative Properties Company, as the assignce of the entire right, title, and interest therein.

Geoffrey P. Morris Residence

Citizenship: USA

STATE OF MINNESOTA)

) SS.

On this 10²⁴ day of 1000 mber 1999, before me personally appeared the above-named Geoffrey P. Morris, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

******* ATRICICL SAMES WASHINGTON COUNTY y Comm. Expires Jan. 31, 2000

Patricing Dames

Notary Public

! REEL: 010384 FRAME: 0134

Docket No. 54789USA1A

euro C. F. Jacqueline C. Rolfs Residence: River Falls, WI Citizenship: USA

STATE OF MINNESOTA)

) SS. COUNTY OF RAMSEY On this 10^{49}

On this 10^{19} day of NUCM bCr 19 1, before me personally appeared the above-named Jacqueline C. Rolfs, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

**************** SATERICIAL SAMES WASHINGTON COUNTY My Comm. Expires Jan. 31, 2000

Patricia Bomes

Notary Public

Leo Meyer

Residence: St. Paul, MN Citizenship: USA

STATE OF MINNESOTA)

) SS.

) SS.

COUNTY OF RAMSEY) On this

day of November before me personally

appeared the above-named Leo Meyer, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.



ind Damp

Notary Public

Robert S. Moshrefzadeh Residence: Oakdale, MN Citizenship: USA

STATE OF MINNESOTA)

COUNTY OF RAMSEY 19<u>1</u>, before me personally day of 1100Ember On this

appeared the above-named Robert S. Moshrefzadeh, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.



htricico Dauls

Notary Public

PATENT REEL: 010384 FRAME: 0135

Page 2

Hsin-Hsin Chou Residence: Woodbury, MN Citizenship: USA

STATE OF MINNESOTA)) ss.

COUNTY OF RAMSEY On this 8^{4})

On this $8^{\frac{74}{2}}$ day of 1927, before me personally appeared the above-named Hsin-Hsin Chou, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

TRICIA L. SAMES WASHINGTON COUNTY My Comm. Expires Jan.

Patricia Isames

Notary Public

Billy J. Tompkins Residence: Russelville, AL Citizenship: USA

STATE OF ALABAMA

)) ss.

)

COUNTY OF _

_____ 19___, before me personally On this day of ____ appeared the above-named Billy J. Tompkins, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

(Seal)

Notary Public

	Thomas N. I	Davis		
		Fayette, AL		
	Citizenship:	USA		
STATE OF ALABAMA)			
) ss.			
COUNTY OF	_)			
On this	day of		19,	before me personally
appeared the above-named	Thomas N. Davis, person	nally known by me, and	known	by me to be the person
described in and who exec	uted the foregoing instrun	ent, and who acknowle	dged th	at said person executed
the same as said person's f	ree act and deed, on the da	ay and year aforesaid.		

(Seal)

Notary Public

ASSIGNMENT

Whereas we, the below named inventors, with residences and citizenships as indicated below; have made an invention in

GLASS MICROSPHERES FOR USE IN REAR PROJECTION SCREEN DISPLAYS AND **METHODS**

and have executed an application for Letters Patent of the United States of America based thereon; which application is identified in the United States Patent and Trademark Office as U.S. Application Serial No. 09/311,909, filed May 14, 1999;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, we have individually and jointly agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly owned subsidiary of MINNESOTA MINING AND MANUFACTURING COMPANY, and a corporation of Delaware, having its principal office at Saint Paul. Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by us or any of us or made jointly with others (provided any such improvement is made during, or within one year after the termination of, the employment by Minnesota Mining and Manufacturing Company and any of its existing or future subsidiaries of whichever of us, solely or jointly with one or more others, has made the same), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by us or any of us had this assignment and transfer not been made,

We do further agree for ourselves and for our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as we lawfully may, that may be deemed necessary by the said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries;

And we do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to the said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

> Geoffrey P. Morris Residence: White Bear Lake, MN Citizenship: USA

> > ľ

STATE OF MINNESOTA)

) SS. COUNTY OF RAMSEY)

On this

_____ 19___, before me personally day of appeared the above-named Geoffrey P. Morris, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

(Seal)

11

Notary Public

PATENT^{m-j/061198} REEL: 010384 FRAME: 0138

Jacqueline C. Rolfs Residence: River Falls, WI Citizenship: USA STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this _____ day of _____ 19___, before me personally appeared the above-named Jacqueline C. Rolfs, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid. (Seal) Notary Public Leo Meyer Residence: St. Paul, MN Citizenship: USA STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this _____ day of _____ 19___, before me personally appeared the above-named Leo Meyer, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid. (Seal) Notary Public Robert S. Moshrefzadeh Residence: Oakdale, MN Citizenship: USA STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) day of ______ 19___, before me personally On this _____ appeared the above-named Robert S. Moshrefzadeh, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

(Seal)

Notary Public

PATENT REEL: 010384 FRAME: 0139

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Page 2

Hsin-Hsin Chou Residence: Woodbury, MN Citizenship: USA

STATE OF MINNESOTA)) ss.

)

) ss.

COUNTY OF RAMSEY

On this ______ day of ______ 19___, before me personally appeared the above-named Hsin-Hsin Chou, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

(Seal)

Notary Public

on

Billy J. Toppkins Residence: Russelville, AL Citizenship: USA

STATE OF ALABAMA)

COUNTY OF Marion)

On this $\underline{B^{+h}}$ day of <u>Neverber</u> 19<u>99</u>, before me personally appeared the above-named Billy J. Tompkins, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

(Seal)

Barbara Lelley Notary Public

ľ

	Thomas N. I	Davis		
	Residence:	Fayette, AL		
	Citizenship:	USA		
STATE OF ALABAMA)			
) ss.			
COUNTY OF	_)			
On this	day of		19	, before me personally
appeared the above-named	Thomas N. Davis, person	ally known by me, and	known	by me to be the person
described in and who exec	uted the foregoing instrun	nent, and who acknowled	dged th	nat said person executed
the same as said person's f				

(Seal)

Notary Public

<u>ASSIGNMENT</u>

Whereas we, the below named inventors, with residences and citizenships as indicated below; have made an invention in

GLASS MICROSPHERES FOR USE IN REAR PROJECTION SCREEN DISPLAYS AND METHODS

and have executed an application for Letters Patent of the United States of America based thereon; which application is identified in the United States Patent and Trademark Office as U.S. Application Serial No. 09/311,909, filed May 14, 1999;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, we have individually and jointly agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly owned subsidiary of MINNESOTA MINING AND MANUFACTURING COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by us or any of us or made jointly with others (provided any such improvement is made during, or within one year after the termination of, the employment by Minnesota Mining and Manufacturing Company and any of its existing or future subsidiaries of whichever of us, solely or jointly with one or more others, has made the same), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by us or any of us had this assignment and transfer not been made,

We do further agree for ourselves and for our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as we lawfully may, that may be deemed necessary by the said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries;

And we do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to the said 3M Innovative Properties Company, as the assignce of the entire right, title, and interest therein.

> Geoffrey P. Morris Residence: White Bear Lake, MN Citizenship: USA

> > 1

STATE OF MINNESOTA)) ss.

)

COUNTY OF RAMSEY

On this ______ day of ______ 19___, before me personally appeared the above-named Geoffrey P. Morris, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

(Seal)

Notary Public

3M Office of Intellectual Property Counsel, P.O. Box 33427, St. Paul, Minnesota 55133-3427 U.S.A.

m-j/061198

PATENT

REEL: 010384 FRAME: 0142

1.

	Jacqueline C. Rolfs Residence: River Falls, WI
	Citizenship: USA
STATE OF MINNESOTA)	
) ss. COUNTY OF RAMSEY)	
	of, before me personally
appeared the above-named Jacquelin person described in and who executed	e C. Rolfs, personally known by me, and known by me to be the d the foregoing instrument, and who acknowledged that said person e act and deed, on the day and year aforesaid.
(Seal)	Notary Public
	Leo Meyer
	Residence: St. Paul, MN Citizenship: USA
STATE OF MINNESOTA)	Stabling Cont
) ss.	
COUNTY OF RAMSEY)	of 19, before me personally
appeared the above-named Leo Mey	er, personally known by me, and known by me to be the person egoing instrument, and who acknowledged that said person executed
(Seal)	Notor: Dublic
	Notary Public
	Robert S. Moshrefzadeh
	Residence: Oakdale, MN Citizenship: USA
STATE OF MINNESOTA)	
) ss. COUNTY OF RAMSEY)	
· · · · · · · · · · · · · · · · · · ·	of 19 before me personally
person described in and who execute	of 19, before me personally Moshrefzadeh, personally known by me, and known by me to be the d the foregoing instrument, and who acknowledged that said person e act and deed, on the day and year aforesaid.
(Seal)	

Notary Public

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Page 2

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			Woodbury, MN		
		Citizenship:	USA		
STATE OF MINNESOTA					
COUNTY OF RAMSEY) ss.)				
On this appeared the above-named H described in and who execute the same as said person's free	Hsin-Hsin (ed the fore	Chou, person going instrun	ally known by me, a nent, and who ackno	nd known wledged tl	
(Seal)					Notary Public
		Billy J. Tom	Russelville, AL		
		Citizenship:	-		
STATE OF ALABAMA)) ss.	enzensnip.	05A		
COUNTY OF)				
On this appeared the above-named E described in and who execute the same as said person's free	Billy J. Ton ed the fore	pkins, person going instrum	hally known by me, a hent, and who acknow	nd knowr wledged tl	

(Seal)

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Notary Public

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I.

Thomas R. Davis

Thomas N. Davis Residence: Fayette, AL Citizenship: USA

STATE OF ALABAMA

) ss. COUNTY OF <u>Marion</u>)

)

On this 8^{+h} day of <u>November</u> 19.99, before me personally appeared the above-named Thomas N. Davis, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

(Seal)

Barbara Kelley Notary Public

3M Office of Intellectual Property Counsel, P.O. Box 33427, St. Paul, Minnesota 55133-3427 U.S.A.

PATENT

REEL: 010384 FRAME: 0145