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		ATENT APPLICAT	NTION FORM COVER SHOWS & PATENTS ONLY		
TO THE COMMISSIONER (					
Please record the attac			eof as follows:		
1. NAME OF CONVEYING I a. Ralf ARNOLD	PARTIES [ASS	IGNOR(S)]:	b. Bernd DÖRBAND		· ·
c. Frank SCHILLKE d. Susanne BEDER					
ADDITIONAL NAME(S) OF	CONVEYING P	ARTY(IES) ATTACH	HED? □YES ⊠NO		
2. PARTIES [ASSIGNEE(S)	RECEIVING II	NTEREST:			
NAME: Carl Zeiss SMT AG					
ADDRESS: Rudolf-Eber-Str					
ADDITIONAL NAME(S) & AI	DDRESS(ES) A	TTACHED? YES	S ⊠NO		
3. NATURE OF CONVEYA					
☐ ASSIGNMENT OF☐ ORIGINAL	=	IOLE or [ CSIMILE/PHOTOCO	PART INTEREST		
CHANGE OF NAME		RIFIED TRANSLATI			
☐ SECURITY	☐ ME	RGER 🔀	OTHER: Corrected Co	over Sheet to correct	execution
Execution Date(s) on the Cor	nvevance/Docur	ment: February 7, 2	ate for Assignment record 007: February 9, 2007: Fi	ded at Reel/Frame 0	21534/0014 Lebruary 1, 2007
			557, ( 551daily 5, 2567, )		Trebluary 1, 2007
Execution Date(s) on the Dec	claration (if filed	herewith):			
4. APPLICATION AND/OR	PATENT NUME	ER/S)-	Λda	litional about attach	LONG THE STATE
a. Application Number(s)	Matter No.	First Inventor	b. Patent Number(s)	litional sheets attach Matter No.	
11/596,187	011816- 0060-999	ARNOLD			
5. NAME & ADDRESS OF F	PARTY TO WHO	OM	6. NUMBER OF PROPERTIES INVOLVED:		
CORRESPONDENCE CO	NCERNING DO	DCUMENT	Applns 1 + Pate		Total: 1
SHOULD BE MAILED:			7. AMOUNT OF FEE I		
Customer No. 20583			Above Total 1 x \$40 = \$ 40 (Fee Code 8021)		
Jones Day Intellectual Property Group			8. PLEASE CHARGE TO: DEPOSIT ACCOUNT NO. 503-013		
222 East 41st Street			Under Order No.		0060-999
New York, NY 10017-6702					er No.
9. To the best of my knowle	edge and belie	f, the foregoing info	ormation is true and co	rect and any attack	had convie a truo
copy of the original docu	iment.	,		noot and any attach	icu copy is a tiue
10. TOTAL NUMBER OF PA	GES (including	cover sheet, attach	ments and documents):	8	
Toufort	Pears				***
Name of Attorney: Douglas H. Pearson Date: December 5, 2008					
Registration No. 47,851			Date: December 5, 2 Telephone: (202) 879-3		)2) 626-1700

FILE WITH PTO RETURN RECEIPT (PAT-103A)

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## 09/16/2008 700384460

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	CORF	RECTED RECORD	ATION FORM COVER SH IONS & PATENTS ONLY	EET		Addion	INC) 410
TO THE COMMISSIONER OF THE U.S. PATENT & TRADEMARK OFFICE:							
Sir: Please record the attach	ned original doc	uments or copy the	reof as follows:				
1. NAME OF CONVEYING I a. Raif ARNOLD c. Frank SCHILLKE ADDITIONAL NAME(S) OF			b. Bernd DÖRBAND d. Susanne BEDER HED? ☐YES ☑NO				
2. PARTIES [ASSIGNEE(S)] RECEIVING INTEREST:  NAME: Carl Zeiss SMT AG  ADDRESS: Rudolf-Eber-Strasse 2, Oberkochen, Germany 73447  ADDITIONAL NAME(S) & ADDRESS(ES) ATTACHED? ☐YES ☒NO							
3. NATURE OF CONVEYANCE/DOCUMENT:  ASSIGNMENT OF WHOLE or PART INTEREST ORIGINAL FACSIMILE/PHOTOCOPY CHANGE OF NAME VERIFIED TRANSLATION SECURITY MERGER OTHER: Corrected Cover Sheet to correct Assignee address for Assignment originally recorded at Reel/Frame 019996/0516  Execution Date(s) on the Conveyance/Document: February 2, 2007; February 9, 2007; February 9, 2007; and February 1, 2007							
Execution Date(s) on the Det	-	•					
4. APPLICATION AND/OR I a. Application Number(s)	Matter No.	BER(S): First Inventor	Add b. Patent Number(s)	itional sheets at Matter No.		☐YES [ st Invento	
11/596,187	011816- 0060-999	ARNOLD	D. Fatans (Samporto)	IMPROVING	.   1111	31 1114 G1100	,,
5. NAME & ADDRESS OF PARTY TO WHOM CORRESPONDENCE CONCERNING DOCUMENT SHOULD BE MAILED:  Customer No. 20583 Jones Day Intellectual Property Group 222 East 41st Street New York, NY 10017-6702			6. NUMBER OF PROPERTIES INVOLVED: Applins 1 + Patents 0 = Total: 1				
			7. AMOUNT OF FEE DUE: Above Total _1 x \$40 = \$ 40				
9. 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.							
10. TOTAL NUMBER OF PAGES (including cover sheet, attachments and documents): 9							
Douglas H. Cearson							
Signature Name of Attorney: Douglas H. Pearson Registration No. 47,851			Date: September 16, 2008 Telephone: (202) 879-3939 / Facsimile: (202) 626-1700				

FILE WITH PTO RETURN RECEIPT (PAT-103A)

**REEL: 021935 FRAME: 0156** 

JONES DAY DOCKET NO. 861840-999060

JOINT

## ASSIGNMENT

WHEREAS, WE, RALF ARNOLD, BERND DÖRBAND, FRANK SCHILLKE and SUSANNE BEDER citizens of the Federal Republic of Germany, residing at Häntsfeldstrasse 9/1, 73432, Aalen, Federal Republic of Germany; Superbackstrasse 103, 73434, Aalen, Federal Republic of Germany; Scheurenfeldstrasse 6, 73434, Aalen, Federal Republic of Germany; and Brandenburger Strasse 59, 73431, Aalen, Federal Republic of Germany, are the inventors of the invention in METHOD OF MANUFACTURING AN OPTICAL ELEMENT for which we have executed an application for a Patent of the United States

□ which is executed on □ even date herewith or □
 □ which was filed on November 13, 2006, Application No. 11/596,187

and WHEREAS, CARL ZEISS SMT AG, ASSIGNEE is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said United States application and all divisions, renewals and continuations thereof, and all patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner for Patents and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF. We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date	07.02.2007	, 2007	my	Raiph Amold
Date	Feb. 09 2007	, 2007	Frank Suj Me	Bernd Dürband
Date	· eb 03, 1007	, 2007	_ bel Det &	Frank Schillke
Date		, 2007		Susanne Beder

	JONES DAY DOCKET NO. 861840-999060
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ı	ASSIGNMENT
84	WHEREAS, WE, RALF ARNOLD, BERND DÖRBAND, FRANK SCHILLKE and SUSANNE BEDER citizens of the Federal Republic of Germany, residing at Hartsfeldstrosse 9/1, 73432, Aalen, Federal Republic of Germany; Sauerbachstrosse 103, 73434, Aalen, Federal Republic of Germany; Scheurenfeldstrasse 6, 73434, Aalen, Federal Republic of Germany; and Brandenburger Strasse 59, 73431, Aalen, Federal Republic of Germany, are the inventors of the invention in METHOD OF MANUFACTURING AN OPTICAL ELEMENT for which we have executed an application for a Patent of the United States
	□ which is executed on □ even date herewith or □
	and WHEREAS, CARL ZEISS SMT AG, ASSIGNEE is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:
	NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIONORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIONORS, have sold, assigned, transferred and set over, and our entire right, title and interest in to and under the said invention and the said United States consideration and distinctions.

er the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may be reafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner for Patents and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

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IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date	, 2907		Relph Amoid
Date	, 2007		Bernd Dörban
Date	. 2007		Frank Schillke
Date	Feks. 1 , 2007	Summe Fooder	Susanne Beder

LAI-2840857v1

**RECORDED: 12/05/2008** 

PATENT REEL: 021935 FRAME: 0158