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1. Name of conveying party(ies):  1. Karl-Heinz Schuster 2. David R. Shafer 3. Wilhelm Ulrich 4. Helmut Beierl 5. Wolfgang Singer  Additional name(s) of conveying party(ies) attached?  3. Nature of conveyance:  Assignment  Security Agreement  Other  Execution Date:  1. 11 Nov 02  4. 16	2. Name and Name:  Address:	address of receiving party(ies): Carl-Zeiss-Stiftung Heidenheim/Brenz  Carl Zeiss 73446 Oberkochen Federal Republic of Germany
3. 18 Oct 02	Additional hame(s)	d dudiess(es) dilached:
<ul> <li>4. Application number(s) or patent number(s):         If this document is being filed together with a new         A. Patent Application No.         10/177,580     </li> </ul>	application, the execution B. Patent No.	n date of the application is:
	numbers attached?   Yes	
<ol> <li>Name and address of party to whom correspondence concerning document should be mailed Name: Walter Ottesen Patent Attorney</li> <li>Address: P.O. Box 4026</li> <li>Gaithersburg, Maryland 2088</li> </ol>	ed:  7. Total fee (3	red to be charged to deposit account
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Walter Ottesen //	the Ville	November 15, 2002
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PATENT REEL: 013502 FRAME: 0042

## ASSIGNMENT

Whereas, We, KARL-HEINZ SCHUSTER of Rechbergstrasse 24, 89551 Königsbronn, Federal Republic of Germany, DAVID R. SHAFER of 56 Drake Lane, Fairfield, Connecticut 06430, United States of America, WILHELM ULRICH of Lederackerring 44, 73434 Aalen, Federal Republic of Germany, HELMUT BEIERL of Robert-Koch-Strasse 53, 89522 Heidenheim, Federal Republic of Germany, and WOLFGANG SINGER of Egerlandstrasse 45, 73431 Aalen, Federal Republic of Germany, have invented certain new and useful improvements in <a href="Projection Objective having Adjacently Mounted Aspheric Lens Surfaces">Projection Objective having Adjacently Mounted Aspheric Lens Surfaces</a> for which application for United States Letters Patent has been executed on even date herewith, (said application having Attorney Docket No. 00120); and,

Whereas, CARL ZEISS SEMICONDUCTOR MANUFACTURING TECHNOLOGIES AG, organized and existing under the laws of the Federal Republic of Germany, having its principal office at Carl-Zeiss-Strasse 22, 73447 Oberkochen, Federal Republic of Germany (hereinafter referred to as ZEISS), is desirous of obtaining Letters Patent for said invention in the United States;

Now, therefore, we hereby confirm that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have transferred unto said ZEISS, its successors, assigns, nominees or other legal representatives, the full and exclusive right to said invention in the United States and have agreed to assign and transfer and do hereby assign and transfer unto said ZEISS, its successors, assigns, nominees or other legal representatives, the full and exclusive right, title and interest in and to said application including all priority rights under the International Convention for the Protection of Industrial Property associated therewith and the full and exclusive right to any and all Letters Patent which may be granted in the United States on said application.

We agree for ourselves and for our heirs, executors and administrators to communicate to said ZEISS, its successors, assigns,

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nominees or other legal representatives, all facts known to us respecting said improvements, whenever requested, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and do all lawful acts requisite for the application, for such divisional, continuing or reissue applications or the procuring thereof, and we further covenant and agree that we will, at any time upon request, do everything legally possible to aid said ZEISS, its successors, assigns, nominees or other legal representatives, either in its or their own name, to maintain and enforce any patent for said improvements without further consideration but at the expense of said ZEISS, its successors, assigns, nominees or other legal representatives.

We hereby authorize and request the United States Commissioner of Patents and Trademarks to issue any and all Letters Patent which may be granted upon any of said applications, to said ZEISS as the Assignee of the entire right, title and interest in and to the same, for its sole use and behoof; and for the use and behoof of its successors, assigns, nominees, or other legal representatives, to the full end of the term for which said Letters Patent may be granted.

Witness:	
	Karl-Heinz Schuster
	Date:
Witness:	
Kemakish	David R. Shafer
•	Date: Otolog 21, 2002

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Witness:	
	Wilhelm Ulrich
	Date:
Witness:	
	Helmut Beierl
	Date:
Nitness:	
	Wolfgang Singer

## ASSIGNMENT

Whereas, We, KARL-HEINZ SCHUSTER of Rechbergstrasse 24, 89551 Königsbronn, Federal Republic of Germany, DAVID R. SHAFER of 56 Drake Lane, Fairfield, Connecticut 06430, United States of America, WILHELM ULRICH of Lederackerring 44, 73434 Aalen, Federal Republic of Germany, HELMUT BEIERL of Robert-Koch-Strasse 53, 89522 Heidenheim, Federal Republic of Germany, and WOLFGANG SINGER of Egerlandstrasse 45, 73431 Aalen, Federal Republic of Germany, have invented certain new and useful improvements in Projection Objective having Adjacently Mounted Aspheric Lens Surfaces for which application for United States Letters Patent has been executed on even date herewith, (said application having Attorney Docket No. 00120); and,

Whereas, CARL ZEISS SEMICONDUCTOR MANUFACTURING TECHNOLOGIES AG, organized and existing under the laws of the Federal Republic of Germany, having its principal office at Carl-Zeiss-Strasse 22, 73447 Oberkochen, Federal Republic of Germany (hereinafter referred to as ZEISS), is desirous of obtaining Letters Patent for said invention in the United States;

Now, therefore, we hereby confirm that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have transferred unto said ZEISS, its successors, assigns, nominees or other legal representatives, the full and exclusive right to said invention in the United States and have agreed to assign and transfer and do hereby assign and transfer unto said ZEISS, its successors, assigns, nominees or other legal representatives, the full and exclusive right, title and interest in and to said application including all priority rights under the International Convention for the Protection of Industrial Property associated therewith and the full and exclusive right to any and all Letters Patent which may be granted in the United States on said application.

We agree for ourselves and for our heirs, executors and administrators to communicate to said ZEISS, its successors, assigns,

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nominees or other legal representatives, all facts known to us respecting said improvements, whenever requested, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and do all lawful acts requisite for the application, for such divisional, continuing or reissue applications or the procuring thereof, and we further covenant and agree that we will, at any time upon request, do everything legally possible to aid said ZEISS, its successors, assigns, nominees or other legal representatives, either in its or their own name, to maintain and enforce any patent for said improvements without further consideration but at the expense of said ZEISS, its successors, assigns, nominees or other legal representatives.

We hereby authorize and request the United States Commissioner of Patents and Trademarks to issue any and all Letters Patent which may be granted upon any of said applications, to said ZEISS as the Assignee of the entire right, title and interest in and to the same, for its sole use and behoof; and for the use and behoof of its successors, assigns, nominees, or other legal representatives, to the full end of the term for which said Letters Patent may be granted.

Witness:	Karl-Fleinz Schuster
	Karl-Heinz Schuster  Date: 11 Nov 2002
Witness:	
	David R. Shafer
	Date:

Witness:	While
	Wilhelm Ulrich
	Date: 18. Oct. 2002
Witness:	
Elfrude Angren leerge	Helmud Bill Helmut Beierl
	Date: 16 Oct. 2002
Witness:	Wolfgang Singer
	Wolfgang Singer
	Date: 15 Oct. 2002

**RECORDED: 11/15/2002**