TO THE HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS,

Alexandria, Virginia 22313-1450

Please record the attached original documents or copies thereof.

1. Name of conveying party(ies):
   MARTIN ANTONI, WOLFGANG SINGER, AND JOHANNES WANGLER

2. Name and address of receiving party(ies):
   CARL ZEISS SMT AG
   CARL-ZEISS-STRASSE 22,
   73447 OBERKochen, GERMANY

3. Nature of conveyance:
   XXXX Assignment
   ______ Security Agreement
   ______ Change of Name
   Other: ________________
   Execution Date: June 12, 2003, June 11, 2003, and June 10, 2003, respectively

4. Application number(s) or application date(s):
   If this document is being filed together with a new application, the execution date of
   the application is: ____________
   A. Application/Patent No. 10/381,945
   B. Application/Issue Date March 27, 2003

5. Name and address of party to whom correspondence concerning this document
   should be mailed:
   Charles N.J. Ruggiero, Esq.
   Ohlandt, Greeley, Ruggiero & Perle, L.L.P.
   One Landmark Square, 10th Floor
   Stamford, Connecticut 06901-2682 U.S.A.

6. Total No. of applications and patents involved: ___.

7. Total Fee (37 C.F.R. 3.41(h)) $40.00/assignment.
   XXXX Enclosed
   ______ Authorized to be charged to deposit account.

The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. 3.41 that may be required
with this communication or credit any overpayment, to Deposit Account No. 01-0467. A duplicate copy of this
Form is enclosed.

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.

Charles N.J. Ruggiero
Name of Person Signing

8/7/03
Signature
Date

Total number of pages including cover sheet, attachments and document: 3.
ASSIGNMENT

FOR valuable and legally sufficient considerations, receipt of which is hereby acknowledged, I, Martin Antoni, a citizen of Germany, and a resident of Schradenbergstraße 7, 73434 Aalen, Germany; Wolfgang Singer, a citizen of Germany, and a resident of Egerlandstraße 45, 73431 Aalen, Germany; and Johannes Wangler, a citizen of Germany, and a resident of An der Reute 15, 85551 Königsbronn, Germany; having co-invented certain new and useful improvements in

ILLUMINATION SYSTEM PARTICULARLY FOR MICROLITHOGRAPHY

hereby assign to Carl Zeiss SMT AG, a German corporation having its principal office at Carl-Zeiss-Strasse 22, 73447 Oberkochen, (hereinafter referred to as "Assignee"), the entire right, title and interest in and to such invention, together with the patent rights and rights of protection to the same throughout the world, including any patent rights which may result from the application for United States Letters Patent which was filed in the United States Patent and Trademark Office on March 27, 2003 and assigned U.S. Application Serial No. 10/381,945, and any continuation, divisions, continuation-in-part applications, inventor's certificates and extensions thereof, preparatory to obtaining Letters Patent of the United States therefor; said invention, application and Letters Patent to be held and enjoyed by said Assignee for its own use and behoof and for the use and behoof of its successors and assigns, to the full end of the term for which said Letters Patent or other rights of protection may be granted as entirely as the same would have been held and enjoyed by us had the assignment not been made.

AND WE COVENANT and AGREE and WARRANT that we have full and unencumbered title to the invention hereby assigned, and we further covenant and agree that we have the right to grant such rights to said invention and application and Letters Patent and that we will, at any time upon request without cost to us or further compensation, execute and deliver any and all papers or instruments that, in the opinion of said Assignee, may be necessary or desirable to secure in said Assignee the
full enjoyment of the rights and properties herein conveyed or intended to be conveyed by this instrument. IN WITNESS WHEREFORE, we have hereunto set our hands and seal:

Date: June 12, 2003
By: Martin Antoni

Witness

[Signature]

Date: 17. Juni, 2003
By: Wolfgang Singer

Witness

[Signature]

Date: 11. Juni, 2003
By: Johannes Wangler

Witness

[Signature]