10/8/03	10-14-2003	orney Docket No. NGC-00083 (11-1178)		
Form PTO-1595 (Rev. 10/02) OMB No. 0651-0027 (exp. 6/30/. Tab settings ➡ ➡ ➡	102573900	HEET Y	U.S. DEPARTMENT OF C U.S. Patent and Trade	
	ioner of Patents and Trademarks: Ple	ease record the attached origi	inal documents or copy ther	eof.
1. Name of conveying party(is Kenneth A. Kaufman Garrett R. Wittkopp Kenneth W. Kawahara Additional name(s) of conveying part		Name and address of Name:Northrop Grun Internal Address:	mman Corporation	FINANCE SEC
3. Nature of conveyance: Assignment Security Agreement Other	☐ Merger ☐ Change of Name	Street Address: 1840	Century Park East	
8-6-03, 8-13-0 Execution Date:	3 and 8-7-03 respectively	• =====================================	State:_CA_Zip:_900	
A. Patent Application No.(s	10/663,924 Additional numbers attac			
5. Name and address of party concerning document shou Name: John A. Miller	ld be mailed·	6. Total number of applications and patents involved: 7. Total fee (37 CFR 3.41)		
Internal Address:		Enclosed Authorized to be charged to deposit account		
Street Address:_P.O. Box 7	70098	8. Deposit account numl	ber:	
City: Rochester Hills State				
9. Signature. John A. Miller		hn amill,	10-6-03	
Name of Person Si	gning tal number of pages including cover s			

Mail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments Washington, D.C. 20231

ASSIGNMENT

Atty. Docket No. NGC-00083 (11-1178)

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

INTEGRATED SYMMETRICAL REFLECTOR AND BOOM

WHEREAS, Northrop Grumman Corporation, a Delaware corporation, with its principal place of business located at 1840 Century Park East, Los Angeles, California 90067-2199, hereinafter referred to as Assignee, is desirous of acquiring an interest therein:

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy whereof is hereby acknowledged, Assignor by these presents does sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and all foreign countries, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the said invention as described in the aforesaid application, said application for patent and all Letters Patent therefor to be held and enjoyed by Assignee to the full end of the term for which said Letters Patent are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to recover for past infringements of, or liabilities for, any of the rights relating to any of said applications or patents resulting therefrom;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, reexamination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale or agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the Commissioner of Patents and Trademarks to issue said Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue said Letters Patent, Utility Model Registration or Inventor's Certificate to Assignee.

Assignor hereby authorizes and requests my attorney to insert here in parentheses (Application No. 10/663, 92 , filed 9-16-2003) the filing date and application number of said application when known.

Page 1 of 2

ASSIGNMENT

Kenneth A. Kaufman (First inventor)	Date: 8/1/03
Garrett R. Wittkopp (Second inventor)	Date: <u>8/13/03</u>
Kenneth W. Kawahara (Third inventor)	Date: 8/7/03
John E. Richer (Fourth inventor)	Date:

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RECORDED: 10/08/2003

PATENT REEL: 014572 FRAME: 0316