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Ian S. Robinson Frank Winter	Name:Northrop Grumman Corporation
	Internal Address:
	72. ====================================
Additional name(s) of conveying party(ies) attached? [ ] Yes [ X ] No	009/0
3. Nature of conveyance:	Street Address: 1840 Century Park East
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[ ] Security Agreement [ ] Change of Name	City:
[ ] Other	State/Country: California ZIP: 90067-2199
Execution Date: 6/23/03	Additional name(s) & address(es) attached? [ ] Yes [X] No
A. Patent Application No.(s) 0/2001 : FANAETA   0000 203 - 10606721 20021   40.00   3P	lication, the execution date of the application is: 6/23/03  B. Patent No.(s)  B. Patent No.(s)  B. Patent No.(s)
5. Name and address of party to whom correspondence concerning document should be mailed:	Total number of applications and patents involved: [ 1 ]
Name: Christopher P. Harris	7. Total fee (37 CFR 3.41)\$\$
Internal Address:	[ ] Enclosed
526 Superior Avenue	[ X ] Authorized to be charged to deposit account
Street Address: 1111 Leader Building	[ X ] Admonzed to be charged to deposit account
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City:Cleveland	20-0090
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<ol> <li>Statement and signature.</li> <li>To the best of my knowledge and belief, the foregoing of the original document.</li> </ol>	information is true and correct and any attached copy is a true copy
Christopher P. Harris	hustpl P. Han June 26, 2003
Name of Person Signing  Reg. No. 43,660 Total number of pages including or	Signature Date

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Washington, D.C. 20231

## ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, NORTHROP GRUMMAN CORPORATION, a corporation organized and existing under the laws of the State of Delaware, with a place of business at 1840 Century Park East, Los Angeles, California, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said NORTHROP GRUMMAN CORPORATION, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefore, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said NORTHROP GRUMMAN CORPORATION, as assignee of my entire right, title and interest.

I also hereby sell and assign to NORTHROP GRUMMAN CORPORATION, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including but not limited to, the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said NORTHROP GRUMMAN CORPORATION, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said NORTHROP GRUMMAN CORPORATION, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set hand and seal this day and year;

TITLE OF INVENTION	COMMUNICATION SYSTEM AND METHODS FOR IMPROVING EFFICIENCY AND LINEARITY
SIGNATURE OF INVENTOR AND NAME	In Robinson
DATE	June 23, 2003
RESIDENCE (CITY AND STATE)	Venice, CA
DATE APPLICATION EXECUTED	June 23,2003

Page 1 of 2

TITLE OF INVENTION	COMMUNICATION SYSTEM AND METHODS FOR IMPROVING EFFICIENCY AND LINEARITY
SIGNATURE OF INVENTOR AND NAME	Frank Winter
DATE	423/03
RESIDENCE (CITY AND STATE)	San Diego, CA 92130
DATE APPLICATION EXECUTED	6/23/03