

04-17-2000

PATENTS ONLY

PATENTS ONLY



TO THE HONORABLE

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TRADEMARKS

Please record the attached original document or copy thereof.

1. Name of Party(ies) conveying an interest:

Shannon M. Nelson
Stuart J. Collar
Mark D. Hischke

2. Name and Address of Party(ies) receiving an interest:

Northrop Grumman Corporation
1840 Century Park East
Los Angeles, CA 90067-2199

A Delaware Corporation



3. Description of the instrument of conveyance: ASSIGNMENT

4. This document is being filed together with a new application, the execution date of the application is:

09/534880

March 20, 2000

Date

The title is: SHOCK-RESISTANT BACKPLANE UTILIZING INFRARED COMMUNICATION SCHEME
WITH ELECTRICAL INTERFACE FOR EMBEDDED SYSTEMS

5. Name and address of party to whom correspondence concerning document should be mailed:

Northrop Grumman Corporation
1840 Century Park East
Los Angeles, CA 90067-2199

6. Number of applications/patents involved:

1

7. Amount of fee enclosed or authorized to be charged:

\$40.00

8. Deposit account number (Attach duplicate copy of this form if paying by deposit account:

14-1325

04/17/2000 JSHADAZZ 00000077 141325 09534880

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DO NOT USE THIS SPACE

9. Date of execution of attached document: March 20, 2000

10. To the best of my knowledge and belief, the information contained on this coversheet is true and correct and any copy submitted is a true copy of the original document.

March 24, 2000

Date

Bruce B. Brunda

WHEREAS, I, Shannon M. Nelson, hereinafter referred to as Assignor
together with Stuart J. Collar and Mark D. Hischke

have jointly invented certain new and useful improvements in SHOCK-RESISTANT BACKPLANE UTILIZING
INFRARED COMMUNICATION SCHEME WITH ELECTRICAL INTERFACE FOR EMBEDDED SYSTEMS

described in an application for United States Letters Patent, executed by me on the date as stated below;

WHEREAS, Northrop Grumman Corporation, a Delaware corporation, having its principal place of business at 1840 Century Park East, Los Angeles, California 90067, hereinafter referred to as Assignee, is desirous of acquiring the entire right, title and interest in, to and under said improvements and said application:

NOW, THEREFORE, in consideration of Assignor's obligations to Northrop Grumman, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in, to and under said improvements, and said application and all divisions, renewals, continuations, and continuations-in-part thereof, and all United States Letters Patent which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, including the full right to claim for any such application the priority benefits of the International Convention for the Protection of Industrial Property and other priority-conferring treaties, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, divisions, continuations, continuations-in-part, renewals and reissues thereof; and Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to said Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument;

Assignor hereby acknowledges that at the time of making the improvements herein identified, Assignor was under an obligation to assign to Assignee, Assignor's entire right, title and interest in, to and under said improvements;

Assignor hereby covenants that Assignor has full right to convey the interest herein assigned, and that Assignor has not executed, and will not execute, any agreement in conflict herewith and that Assignee, Northrop Corporation, its successors, assigns and other legal representatives shall have the right to hold and enjoy for its and their own use and benefit, to the end of the term or terms for which such Letters Patent shall or may be granted, reissued or extended as fully and completely as the same might or could have been held and enjoyed by Assignor had this assignment not been made.

Assignor hereby further covenants and agrees to communicate to Assignee, its successors, legal representatives and assigns, any and all facts known to Assignor respecting said improvements; to promptly provide Assignor with all documents relating to said improvements, said invention, and said Letters Patent as may be known or accessible to Assignor; to testify as to the same in any interference or litigation or other legal proceedings related thereto; to sign all lawful papers, execute all extensions, continuations, continuations-in-part, divisional and reissue applications; and to make all rightful oaths or declarations and generally do everything possible to aid Assignee, its successors, legal representatives and assigns in obtaining and enforcing all the rights herein conveyed for said improvements in all countries without further compensation, but at the expense of Assignee, its successors, legal representatives and assigns.

IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this
20th day of March, 192000, and has executed the referenced patent
application on the 20th day of March, 192000.

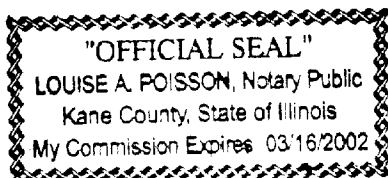
Shanna M. Nelson

(Assignor) Shannon M. Nelson

STATE OF ILLINOIS)
COUNTY OF COOK) ss

On March 20, 2000 before me,
LOUISE A. POISSON, personally
appeared SHANNON M. NELSON, personally known to me
or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to this instrument and acknowledged to me that he/she/they
executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s)
on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed
the instrument.

WITNESS my hand and official seal



Signature Louise A Poisson (Seal)

WHEREAS, I, Stuart J. Collar, hereinafter referred to as Assignor
together with Mark D. Hischke and Shannon M. Nelson
have jointly invented certain new and useful improvements in SHOCK-RESISTANT BACKPLANE UTILIZING
INFRARED COMMUNICATION SCHEME WITH ELECTRICAL INTERFACE FOR EMBEDDED SYSTEMS

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WHEREAS, Northrop Grumman Corporation, a Delaware corporation, having its principal place of business at 1840 Century Park East, Los Angeles, California 90067, hereinafter referred to as Assignee, is desirous of acquiring the entire right, title and interest in, to and under said improvements and said application:

NOW, THEREFORE, in consideration of Assignor's obligations to Northrop Grumman, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in, to and under said improvements, and said application and all divisions, renewals, continuations, and continuations-in-part thereof, and all United States Letters Patent which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, including the full right to claim for any such application the priority benefits of the International Convention for the Protection of Industrial Property and other priority-conferring treaties, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, divisions, continuations, continuations-in-part, renewals and reissues thereof; and Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to said Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument;

Assignor hereby acknowledges that at the time of making the improvements herein identified, Assignor was under an obligation to assign to Assignee, Assignor's entire right, title and interest in, to and under said improvements;

Assignor hereby covenants that Assignor has full right to convey the interest herein assigned, and that Assignor has not executed, and will not execute, any agreement in conflict herewith and that Assignee, Northrop Corporation, its successors, assigns and other legal representatives shall have the right to hold and enjoy for its and their own use and benefit, to the end of the term or terms for which such Letters Patent shall or may be granted, reissued or extended as fully and completely as the same might or could have been held and enjoyed by Assignor had this assignment not been made.

Assignor hereby further covenants and agrees to communicate to Assignee, its successors, legal representatives and assigns, any and all facts known to Assignor respecting said improvements; to promptly provide Assignor with all documents relating to said improvements, said invention, and said Letters Patent as may be known or accessible to Assignor; to testify as to the same in any interference or litigation or other legal proceedings related thereto; to sign all lawful papers, execute all extensions, continuations, continuations-in-part, divisional and reissue applications; and to make all rightful oaths or declarations and generally do everything possible to aid Assignee, its successors, legal representatives and assigns in obtaining and enforcing all the rights herein conveyed for said improvements in all countries without further compensation, but at the expense of Assignee, its successors, legal representatives and assigns.

IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this 22nd day of MARCH, ²⁰⁰⁰19, and has executed the referenced patent application on the 20th day of MARCH, ²⁰⁰⁰19.

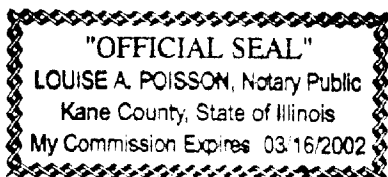
Stuart J. Collar

(Assignor) Stuart J. Collar

STATE OF ILLINOIS)
COUNTY OF COOK) ss

On March 20, 2000 before me,
LOUISE A. POISSON, personally
appeared ~~STUART J. COLLAR~~ STUART J. COLLAR, personally known to me
or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to this instrument and acknowledged to me that he/she/they
executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s)
on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed
the instrument.

WITNESS my hand and official seal



Signature Louise A Poisson (Seal)

WHEREAS, I, Mark D. Hischke, hereinafter referred to as Assignor
together with Shannon M. Nelson and Stuart J. Collar
have jointly invented certain new and useful improvements in SHOCK-RESISTANT BACKPLANE UTILIZING
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Assignor hereby acknowledges that at the time of making the improvements herein identified, Assignor was under an obligation to assign to Assignee, Assignor's entire right, title and interest in, to and under said improvements;

Assignor hereby covenants that Assignor has full right to convey the interest herein assigned, and that Assignor has not executed, and will not execute, any agreement in conflict herewith and that Assignee, Northrop Corporation, its successors, assigns and other legal representatives shall have the right to hold and enjoy for its and their own use and benefit, to the end of the term or terms for which such Letters Patent shall or may be granted, reissued or extended as fully and completely as the same might or could have been held and enjoyed by Assignor had this assignment not been made.

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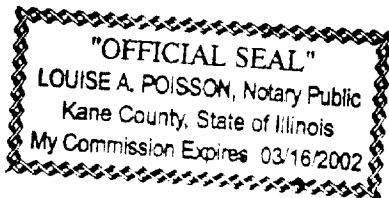
IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this
_____, 20 day of MARCH, 19²⁰⁰⁰, and has executed the referenced patent
application on the 20 day of MARCH, 19.2000.

Mark D. Hischke
(Assignor) Mark D. Hischke

STATE OF Illinois)
COUNTY OF Cook) ss

On March 20, 2000 before me,
LOUISE A. POISSON ~~Mark D. Hischke~~, personally
appeared Mark D. Hischke, personally known to me
or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to this instrument and acknowledged to me that he/she/they
executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s)
on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed
the instrument.

WITNESS my hand and official seal



Signature Louise A. Poisson (Seal)