

03-23-2001

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

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101646820

PATENT  
Attorney Docket No. 200219JC978 U.S. PTO  
09/783849

02/15/01

TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

## 1. Submission Type

- ☒ New
- ☐ Resubmission (Non-Recordation)  
Document #
- ☐ Correction of PTO Error  
Reel Frame
- ☐ Corrective Document  
Reel Frame

2/15/01

## 2. Nature of Conveyance:

- ☐ Assignment ☐ Security Agreement
- ☐ License ☐ Change of Name
- ☐ Merger ☐ Other:

## 3. Conveying Party(ies):

☐ Mark if additional names of conveying parties attached.

Name Antony Heatwole

Execution Date: 2/14/2001 (m/d/yyyy)

Name Screenivas Ramaswamy

Execution Date: 1/26/2001 (m/d/yyyy)

Name William Walsh

Execution Date: 1/31/2001 (m/d/yyyy)

Name Mark Abinante

Execution Date: 2/5/2001 (m/d/yyyy)

## 4. Receiving Party:

Name: Hughes Electronics Corporation

Address: 200 North Sepulveda Blvd.  
El Segundo, CA 90245-0956

## 5. Correspondent Name and Address:

Name: Hughes Electronics Corporation

Address: Patent Docketing Administration  
P.O. Box 956  
Bldg. 1, Mail Stop A109  
El Segundo, CA 90245-0956

Please associate this document and the attached documents  
with customer no. 020991.

## 6. Application Number(s) or Patent Number(s):

☐ Mark if additional numbers attached.

Either enter the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

09 783849

If this document is being filed together with a new Patent Application, enter the date that the patent  
application was executed by the first named inventor.

2/14/2001 (m/d/yyyy)

## 7. Patent Cooperation Treaty (PCT) Numbers:

Enter PCT application number(s)

only if a U.S. Application Number  
has not been assigned.

PCT

PCT

PCT

PCT

PCT

PCT

09783849

## 8. Number of Properties:

Enter the total number of properties involved: 1.

## 9. Fee Transmittal:

Fee amount for listed properties (37 CFR 3.41): \$ 40.00

Method of Payment: ☐ Enclosed☒ Deposit Account Deposit Account No. 50-0383Authorization to charge additional fees: ☒ Yes

00000020 501383

40.00 CH

## 10. Statement and signature:

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is true copy of  
the original document. Charges to deposit account are authorized as indicated herein.

Craig L. Plastrik, Reg. No. 41,254

Name of Person Signing

Signature

Date

2/15/01

03/23/2001 DBYNE

01 FC:581

Total number of pages comprising cover sheet: 1

PATENT  
REEL: 011602 FRAME: 0873

**ASSIGNMENT**

Page 1 of 3  
Attorney Docket No: PD-200219

WHEREAS, I, as below named sole inventor (if only one name is listed below) or joint inventor (if plural names are listed below) of the city and state as stated below next to my name, have invented a **Apportioning Bandwidth Capacity In Communication Switching Systems**:

- ☒ for which application for Letters Patent of the United States has been executed by me on this day; or  
☐ which is embodied in U.S. Patent Application Serial No. \_\_\_\_\_ filed on \_\_\_\_\_.

WHEREAS, **HUGHES ELECTRONICS CORPORATION**, (hereinafter referred to as **HUGHES**), a Delaware Corporation, having its principal place of business in El Segundo, California, is desirous of acquiring the entire and exclusive right, title and interest in, to and under said invention, said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world;

NOW, THEREFORE, in consideration of the obligations voluntarily assumed by me and set forth in an invention agreement between me and my employer, effective the date as stated below next to my name, and other good and valuable consideration, receipt of which is hereby acknowledged, I do hereby sell, assign and transfer to **HUGHES**, its successors, assigns or other legal representatives, the entire and exclusive right, title and interest in and to said invention invented by me, to said application and any and all applications which are continuations, continuations-in-part, divisions or substitutes of said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world on any of said applications and to any and all reexaminations, reissues, renewals or extensions of said Letters Patent in the United States and throughout the world for the full term or terms for which said Letters patent may be granted in the United States and throughout the world; authorize and request The Commissioner of Patents and Trademarks of the United States and all foreign countries to issue all such Letters Patent to said **HUGHES**, its successors, assigns or other legal representatives; covenant that no assignment, sale, agreement, transfer or encumbrance has been, or will be, made or entered into which would conflict with this assignment, sale and transfer; and agree to communicate to **HUGHES**, its successors, assigns or other legal representatives, upon request and at no cost or expense to me, any facts known by me respecting said invention, do all lawful acts, including the execution and delivery of all papers and proper oaths and giving of testimony that is deemed necessary or desirable by **HUGHES**, its successors, assigns or other legal representatives with regard to said invention for protecting, obtaining, maintaining and enforcing any and all of said Letters Patent in the United States and throughout the world for said invention and for perfecting, affirming, recording and maintaining the title of **HUGHES**, its successors, assigns or other legal representatives, and generally cooperate to the fullest extent in all matters pertaining to said invention, and any and all of said Letters Patent and the title thereto in **HUGHES**, its successors, assigns or other legal representatives.

IN WITNESS WHEREOF, I have executed this instrument:

Full Name of Sole or Joint Inventor: <i>Anthony Heatwole</i> Anthony Heatwole	Inventor's Signature: <i>Anthony Heatwole</i>	Date: <i>2/14/01</i>
Residence (City and State) Damascus, Maryland		INVENTION AGREEMENT DATE
Full Name of Joint Inventor: Sreenivas Ramaswamy	Inventor's Signature: <i>Sreenivas Ramaswamy</i>	Date: <i>1/26/01</i>
Residence (City and State) Bethesda, Maryland		INVENTION AGREEMENT DATE
Full Name of Joint Inventor: William Walsh	Inventor's Signature:	Date:
Residence (City and State) Anaheim Hills, California		INVENTION AGREEMENT DATE
Full Name of Joint Inventor: Mark Abinante	Inventor's Signature:	Date:
Residence (City and State) Inglewood, California		INVENTION AGREEMENT DATE

STATE OF Maryland

COUNTY OF Montgomery

On Feb 14, 2001 before me,

Linda Harris  
Anthony Heatwole  
a Notary Public in and for said State, personally appeared Anthony Heatwole,  
☒ 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 the  
within 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.

Notary Public

LINDA D. HARRIS  
NOTARY PUBLIC STATE OF MARYLAND  
My Commission Expires August 1, 2001

STATE OF Maryland

COUNTY OF Montgomery

On Jan 26, 2001 before me,

Linda Harris  
Sreenivas Ramaswamy  
a Notary Public in and for said State, personally appeared Sreenivas Ramaswamy,  
☐ 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 the  
within 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.

Notary Public

LINDA D. HARRIS  
NOTARY PUBLIC STATE OF MARYLAND  
My Commission Expires August 1, 2001

STATE OF \_\_\_\_\_ )  
 ) SS:  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_ before me, \_\_\_\_\_,

a Notary Public in and for said State, personally appeared \_\_\_\_\_,

☐ 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 the within 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.

Notary Public \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
 ) SS:  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_ before me, \_\_\_\_\_,

a Notary Public in and for said State, personally appeared \_\_\_\_\_,

☐ 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 the within 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.

Notary Public \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
 ) SS:  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_ before me, \_\_\_\_\_,

a Notary Public in and for said State, personally appeared \_\_\_\_\_,

☐ 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 the within 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.

Notary Public \_\_\_\_\_

## ASSIGNMENT

Page 1 of 3  
Attorney Docket No: PD-200219

WHEREAS, I, as below named sole inventor (if only one name is listed below) or joint inventor (if plural names are listed below) of the city and state as stated below next to my name, have invented a **Apportioning Bandwidth Capacity In Communication Switching Systems**:

- ☒ for which application for Letters Patent of the United States has been executed by me on this day; or  
☐ which is embodied in U.S. Patent Application Serial No. \_\_\_\_\_ filed on \_\_\_\_\_.

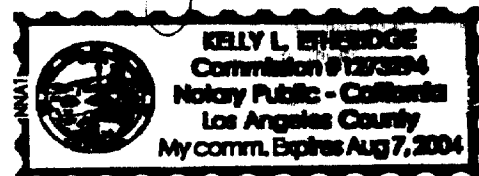
WHEREAS, **HUGHES ELECTRONICS CORPORATION**, (hereinafter referred to as **HUGHES**), a Delaware Corporation, having its principal place of business in El Segundo, California, is desirous of acquiring the entire and exclusive right, title and interest in, to and under said invention, said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world;

NOW, THEREFORE, in consideration of the obligations voluntarily assumed by me and set forth in an invention agreement between me and my employer, effective the date as stated below next to my name, and other good and valuable consideration, receipt of which is hereby acknowledged, I do hereby sell, assign and transfer to HUGHES, its successors, assigns or other legal representatives, the entire and exclusive right, title and interest in and to said invention invented by me, to said application and any and all applications which are continuations, continuations-in-part, divisions or substitutes of said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world on any of said applications and to any and all reexaminations, reissues, renewals or extensions of said Letters Patent in the United States and throughout the world for the full term or terms for which said Letters patent may be granted in the United States and throughout the world; authorize and request The Commissioner of Patents and Trademarks of the United States and all foreign countries to issue all such Letters Patent to said HUGHES, its successors, assigns or other legal representatives; covenant that no assignment, sale, agreement, transfer or encumbrance has been, or will be, made or entered into which would conflict with this assignment, sale and transfer; and agree to communicate to HUGHES, its successors, assigns or other legal representatives, upon request and at no cost or expense to me, any facts known by me respecting said invention, do all lawful acts, including the execution and delivery of all papers and proper oaths and giving of testimony that is deemed necessary or desirable by HUGHES, its successors, assigns or other legal representatives with regard to said invention for protecting, obtaining, maintaining and enforcing any and all of said Letters Patent in the United States and throughout the world for said invention and for perfecting, affirming, recording and maintaining the title of HUGHES, its successors, assigns or other legal representatives, and generally cooperate to the fullest extent in all matters pertaining to said invention, and any and all of said Letters Patent and the title thereto in HUGHES, its successors, assigns or other legal representatives.

IN WITNESS WHEREOF, I have executed this instrument:

Full Name of Sole or Joint Inventor: Anthony Heatwole	Inventor's Signature:	Date:
Residence (City and State) Damascus, Maryland	INVENTION AGREEMENT DATE	
Full Name of Joint Inventor: Sreenivas Ramaswamy	Inventor's Signature:	Date:
Residence (City and State) Bethesda, Maryland	INVENTION AGREEMENT DATE	
Full Name of Joint Inventor: William Walsh	Inventor's Signature: <i>William Walsh</i>	Date: 11/31/01
Residence (City and State) Anaheim Hills, California	INVENTION AGREEMENT DATE	
Full Name of Joint Inventor: Mark Abinante	Inventor's Signature:	Date:
Residence (City and State) Inglewood, California	INVENTION AGREEMENT DATE	

STATE OF California  
COUNTY OF Los Angeles  
On 11/31/01 before me, Kelly L. Etheridge  
a Notary Public in and for said State, personally appeared William B. Walsh  
☐ 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 the  
within 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. Notary Public Kelly L. Etheridge



STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_  
On \_\_\_\_\_ before me, \_\_\_\_\_  
a Notary Public in and for said State, personally appeared \_\_\_\_\_  
☐ 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 the  
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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. Notary Public \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) SS:

On \_\_\_\_\_ before me, \_\_\_\_\_,  
a Notary Public in and for said State, personally appeared \_\_\_\_\_,  
☐ 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 the  
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WITNESS my hand and official seal.

Notary Public \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) SS:

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WITNESS my hand and official seal.

Notary Public \_\_\_\_\_

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COUNTY OF \_\_\_\_\_ ) SS:

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WITNESS my hand and official seal.

Notary Public \_\_\_\_\_

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Page 1 of 3  
Attorney Docket No: PD-200219

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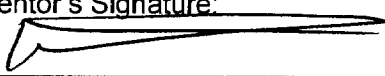
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NOW, THEREFORE, in consideration of the obligations voluntarily assumed by me and set forth in an invention agreement between me and my employer, effective the date as stated below next to my name, and other good and valuable consideration, receipt of which is hereby acknowledged, I do hereby sell, assign and transfer to HUGHES, its successors, assigns or other legal representatives, the entire and exclusive right, title and interest in and to said invention invented by me, to said application and any and all applications which are continuations, continuations-in-part, divisions or substitutes of said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world on any of said applications and to any and all reexaminations, reissues, renewals or extensions of said Letters Patent in the United States and throughout the world for the full term or terms for which said Letters patent may be granted in the United States and throughout the world; authorize and request The Commissioner of Patents and Trademarks of the United States and all foreign countries to issue all such Letters Patent to said HUGHES, its successors, assigns or other legal representatives; covenant that no assignment, sale, agreement, transfer or encumbrance has been, or will be, made or entered into which would conflict with this assignment, sale and transfer; and agree to communicate to HUGHES, its successors, assigns or other legal representatives, upon request and at no cost or expense to me, any facts known by me respecting said invention, do all lawful acts, including the execution and delivery of all papers and proper oaths and giving of testimony that is deemed necessary or desirable by HUGHES, its successors, assigns or other legal representatives with regard to said invention for protecting, obtaining, maintaining and enforcing any and all of said Letters Patent in the United States and throughout the world for said invention and for perfecting, affirming, recording and maintaining the title of HUGHES, its successors, assigns or other legal representatives, and generally cooperate to the fullest extent in all matters pertaining to said invention, and any and all of said Letters Patent and the title thereto in HUGHES, its successors, assigns or other legal representatives.



IN WITNESS WHEREOF, I have executed this instrument:

Full Name of Sole or Joint Inventor: Anthony Heatwole	Inventor's Signature:	Date:
Residence (City and State) Damascus, Maryland	INVENTION AGREEMENT DATE	
Full Name of Joint Inventor: Sreenivas Ramaswamy	Inventor's Signature:	Date:
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Full Name of Joint Inventor: William Walsh	Inventor's Signature:	Date:
Residence (City and State) Anaheim Hills, California	INVENTION AGREEMENT DATE	
Full Name of Joint Inventor: Mark Abinante	Inventor's Signature: 	Date: 2-5-01
Residence (City and State) Inglewood, California	INVENTION AGREEMENT DATE	

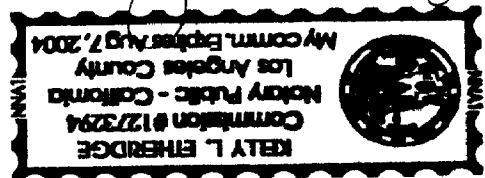
STATE OF California  
COUNTY OF Los Angeles

On 2/5/01 before me, Kelly L. Etheridge

a Notary Public in and for said State, personally appeared Mark S. Abinante  
☐ 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 the within 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.

Notary Public



STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_

a Notary Public in and for said State, personally appeared \_\_\_\_\_  
☐ 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 the within 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.

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Notary Public