FORM PTO-1986 RE	11-20-1998	ET	U.S. DEPARTMENT OF COMMERCE	
11/14/98	100908594		Patent and Trademark Office	
To the Honorable Commission	oner of Patents and Trademarks: Ple	ase record the attached original of	locuments or copy thereof.	
1. Name of conveying party(ies):		2. Name and address	of receiving party(ies);	
CHOW, Henry HUNG, Anthony		Name: Newbridge	Networks Corporation	
JANOSKA, Mark RAMASWAMY, Srinivasan		Internal Address: _		
Additional names(s) of conveying party(ies)	attached? □ Yes ☑ No	Attention: Mr. Joh	n Granchelli	
3. Nature of conveyance:		Ctrast Address 60	O March Pand	
Assignment □ Merger		Street Address: 600 March Road		
Security Agreement			P.O. Box 13600	
☐ Other		1	e: Ontario ZIP: K2K 2E6	
Execution Date: November 3, 1998	8 & November 4, 1998	Additional name(s) & a	ddress(es) attached? □ Yes Φ∕No	
4. Application number(s) or patent	number(s):			
If this document is being filed to	gether with a new application	, the execution date of the	application is:	
A. Patent Application No.(s)	09/140,059	B. Patent No.(s)		
		1		
	Additional numbers attac	ched? 🗆 Yes 🖫 No	·	
Name and address of party to whom correspondence concerning document should be mailed:		6. Total number of ap involved:	pplications and patents	
Name: Blake, Cassels & Grayo	lon		v. 1	
Internal Address: Intellectual Property Department		7. Total fee (37 CFR	3.41): \$ 40.00	
Attention: Mr. Alex Porat		☐ Enclosed	9111) ¥ <u>40.00</u>	
		1	e charged to deposit account	
Street Address: 199 Bay Street, Suite 2800				
Box 25, Commerce Court Wes	t	8. Deposit account nu	imber:	
City: <u>Toronto</u> State: <u>Ontario</u>	ZIP: M5L 1A9	(Attached duplicate co account)	py of this page if paying by deposit	
	DO NOT USE T	HIS SPACE	E	
9. Statement of signature. To the best of my knowledge an original document. Alex Foral (Rg. Name of Person Signing	43,372) Wefer a	and correct and any attack	November 9, 1998	
CMB No. 0861-0011 (?? 4/94) 11/19/1998 DAGUYEN 00000160 09140059				
	Do not detach	•		
maii gosamonto to de recordeu (atents and Trademarks		
	Box Assignments Washington, D.C.			
			DATENT	

PATENT REEL: 9588 FRAME: 0494



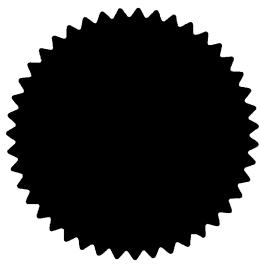
THE MANAGEMENT BOARD OF CABINET

I HEREBY CERTIFY AS FOLLOWS:

DOUGLAS MICHAEL GILL STEWART

of the Province of Ontario, whose name is subscribed to the attached Instrument, was, at the time of subscribing thereto, a NOTARY PUBLIC in and for the Province of Ontario, Canada, duly commissioned and duly authorized by the laws thereof to administer oaths, to take affidavits and to certify the proof of deeds and other instruments in writing to be recorded within the said Province;

I FURTHER CERTIFY THAT I have compared the signature of the said NOTARY PUBLIC subscribed to the attached Instrument with the specimen signature of the said NOTARY PUBLIC filed in this office and verily believe the said signature to be genuine; and THAT I have compared the impression of the Seal of the said NOTARY PUBLIC appearing on the attached Instrument with the specimen of the Seal filed in this office and verily believe the impression of the Seal to be genuine.



IN TESTIMONY WHEREOF I have hereunto set my Hand and affixed the Seal of the Management Board of Cabinet of the Province of Ontario at the City of Toronto in the said Province this tenth day of November, A.D. 1998.

Jane Tannay

for SECRETARY OF THE MANAGEMENT BOARD OF CABINET

ASSIGNMENT

In consideration of the sum of one dollar and other good and valuable consideration, the receipt and sufficiency of which is acknowledged, we, the undersigned, whose names and full post addresses are set out below:

Name of Inventors Addresses

CHOW, Henry 60 Beamish Crescent

Kanata, Ontario

K2K 2R7 Canada

HUNG, Anthony 30 McEwen Avenue

Apt. 1407

Ottawa, Ontario

K2B 5K8 Canada

JANOSKA, Mark 350 Bridge Street

Carleton Place, Ontario

K7C 3J1 Canada

RAMASWAMY, Srinivasan 30 McEwen Avenue

Apt. 1709

Ottawa, Ontario

K2B 5K8 Canada

do hereby sell, assign and transfer unto Newbridge Networks Corporation, hereinafter called the Assignee, whose full post office address is Newbridge Networks Corporation, 600 March Road, P.O. Box 13600, Kanata, Ontario, K2K 2E6, Canada, and to the Assignee's successors, assigns, nominees or other legal representatives, our entire right, title, interest, property and benefit for Canada, the United States of America and all other countries, in and to our invention relating to TWO-COMPONENT BANDWIDTH SCHEDULER HAVING APPLICATION IN MULTICLASS DIGITAL COMMUNICATIONS SYSTEMS as fully set forth and described in the application for Letters Patent in the United States, filed on August 24, 1998, and allotted serial

20534172.1

PATENT

REEL: 9588 FRAME: 0496

allotted serial no.2,245,367, together with our entire right, title, interest, property and benefit for Canada, the United States of America and all other countries, in and to the aforementioned application, any foreign applications corresponding thereto and any Letters Patent which may issue for the invention from such applications, including all divisions, continuations, continuations-in-part, re-examinations, reissues and extensions, and any rights of priority resulting from the filing of the above-identified application under international conventions, treaties or otherwise, the same to be held and enjoyed as fully and exclusively as they would have been by us had this sale, assignment and transfer not been made:

We hereby authorize any official whose duty it is to grant patents, to grant any Letters Patent for the invention to the Assignee, and to its successors, assigns, nominees or other legal representatives;

We hereby covenant and agree, for ourselves and for our heirs, executors and administrators, to do all such things and to execute and deliver without further consideration such further assurances, applications, instruments, assignments and other documents as may reasonably be required by the Assignee to obtain Letters Patent in Canada, the United States of America and all other countries, for the invention, and vest or secure the same in the Assignee;

20534172.1

PATENT REEL: 9588 FRAME: 0497

IN WITNESS HEREOF, we have hereunto signed our names on the day and year set forth
below.
Signed at handa, in the Province of Entaria, Canada, this 4th day of November, 1998. HENRY CHOW
Signed at hand , in the Province of Ontario , Canada, this 4th day of November , 1998. ANTHONY HUNG
Signed at <u>Kanata</u> , in the Province of <u>Ontario</u> , Canada, this <u>3rd</u> day of <u>Nevember</u> , 1998.
MARK JANOSKA
Signed at, in the Province of, Canada, this _3rd day of, 1998.
Rosinivanan
SRINIVASAN RAMASWAMY



Province of Ontario)
Canada)

On this day of day of network, 1998, personally appeared before me the above named HENRY CHOW, to me personally known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he executed same, as his free act and deed, and for the purposes set forth, on the day and year aforesaid.

A Notary Public in and for the Province of Ontario



ACKNOWLEDGEMENT

Province of Ontario)
Canada)

On this 44 day of November, 1998, personally appeared before me the above named ANTHONY HUNG, to me personally known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he executed same, as his free act and deed, and for the purposes set forth, on the day and year aforesaid.

A Notary Public in and for the Province of Ontario

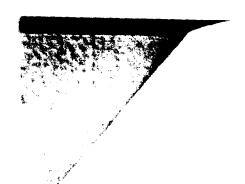
ACKNOWLEDGEMENT

Canao	a)	
	On this 30 day of November	
	on this Jest day of Novem Se	, 1998, personally appeared before me

the above named MARK JANOSKA, to me personally known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he executed same, as his free act and deed, and for the purposes set forth, on the day and year aforesaid.

A Notary Public in and for the Province of Ontario

Province of Ontario



ACKNOWLEDGEMENT

Province of Ontario)
Canada)

On this day of November, 1998, personally appeared before me the above named SRINIVASAN RAMASWAMY, to me personally known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he executed same, as his free act and deed, and for the purposes set forth, on the day and year aforesaid.

A Notary Public in and for the Province of Ontario

canada)
province of Ontario)
City of Toronto)
Consulate General of the)
United States of America)

SS: CERTIFICATE OF AUTHENTICATION (Other Official)

I, the undersigned,	Consul of the United States of America		
at Toronto, Canada, duly c	ommissioned and qualified, do hereby certify		
that	Anne Farraway		
whose (Sacsimbbie)(true) s	ignature and seal are, respectively,		
subscribed and affixed to	the annexed document was, at the time of		
(attaching)(subscribing) th Recording Officer For Seco Province of Ontario, Canad	ne same cetary of The Management Board of Cabinet, da		
to whose official acts fait	th and credit are due.		
For the contents of the ann	nexed document, I assume no responsibility.		
IN WITNESS WHEREOF I have h	nereunto set my hand and affixed the seal		
of the Consulate General of the United States of America at Toronto,			
Canada, this 10th day o	of November 1998.		
(SEAL)	David A. Tyler Consul of the United States of America		

PATENT REEL: 9588 FRAME: 0503

RECORDED: 11/14/1998