08-10-2001

ASSIGI



HEET

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To: Honorable Commissioner of Patents and Trademarks:

Please record the attached origin	al document(s) or copy thereof.
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- 1. Name of conveying party(ies)
  - Sam Heidari
  - b) Behrooz Rezvani
  - c) Raminder S. Bajwa
  - Jacky Chow d)
  - Avadhani Shridhar e)
  - D) Dale Smith
  - John Gevargiz g)
  - Saman Behtash
- 2. Name and address of receiving party(ies):
  - Name:

IKANOS Communication, Inc.

Address:

47709 Fremont Boulevard

Fremont, CA 94538

3.	Nature of conveyance  Assignment Merger  Security Agreement Change of Name  Other License Agreemen
	Execution Date: 07/26/01, 07/27/01, 07/30/01, 08/01/01, 08/02/01
4.	Application Number(s) or Patent Number(s): 09/837.914

Filed: April 18, 2001

The title of the (new) application is: METHOD & APPARATUS FOR A VARIABLE BANDWIDTH MULTI-PROTOCOL X-DSL TRANSCEIVER

5. Please send all correspondence concerning this (these) documents to:

> CARY & KELLY, LLP 1875 Charleston Road Mountain View, CA, 94043 Telephone (650) 316-4011

- 6. Total number of applications and patents involved: 1
- 7. Total fee (37 CFR 3,41): \$40.00

The Commissioner is hereby authorized to charge the above fees and any overpayments or credits to Deposit Account No. 50-1338 (Order No. VELCP010X1)

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Date: August 7, 2001

Charles C. Cary

Registration No. 36,764

Attorney Docket No. VELCP010X1

(Revised 01/96)

## ASSIGNMENT OF PATENT APPLICATION

(After Filing Application)

Whereas I/we the undersigned inventor(s) have invented certain new and useful improvements as set forth in the patent application entitled:

## METHOD AND APPARATUS FOR A VARIABLE BANDWIDTH MULTI-PROTOCOL X-DSL TRANSCEIVER

(Atty. Docket No.: VELCP010X1) for which I (we) have executed an application for a United States Letters Patent filed on April 18, 2001 and allocated USSN 09/837,914

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I/We the undersigned inventor(s) hereby:

- Sell(s), assign(s) and transfer(s) to IKANOS Communication, Inc., a California corporation having a place of business at 47709 Fremont Boulevard, Fremont, CA 94538, (hereinafter referred to as "ASSIGNEE"), the entire right title and interest in any and all improvements and inventions disclosed in, application(s) based upon, and Patent(s) (including foreign patents) granted upon the information which is disclosed in the above referenced application.
- 2) Authorize and request the Commissioner of Patents to issue any and all Letters Patents resulting from said application or any division(s), continuation(s), substitutes(s) or reissue(s) thereof to the ASSIGNEE.
- 3) Agree to execute all papers and documents and, entirely at the ASSIGNEE's expense, perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative and applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications.
- 4) Agree that the terms, covenants and conditions of this assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon the inventor(s), as well as the inventor's heirs, legal representatives and assigns.
- 5) Warrant and represent that I/we have not entered, and will not enter into any assignment, contract, or understanding that conflicts with this assignment.
- 6) Assignors hereby grant assignee or assignee's designee the right to insert the U.S. Patent Application number and filing date where space is provided above at any time subsequent to the date of the assignor's signature below.

Signed on the date(s) in	ndicated beside my (our) signs	ature(s).	
1. Inventor Signature:	1-10-1	Date:	8/1/2001
Sam	HEIDARI		7
State of California	)		
County of Algmeda	) ss.		
On this st day of	of August.	in the year 20	00 <b>//</b> before me,
You's Daliso Nothing	, personally appeared Sam I		
(or proved to me on the bas	is of satisfactory evidence)	to be the perso	n whose name is
Atty Docket No.: VELCEOLOX1	Page 1 of 4	•	

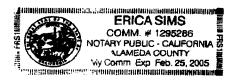
	subscribed to the within instrument, and acknowledged to me that he/she entity authorized capacity(ies), and that by his/her signature on the instrument.  WITNESS my hand and official seal.  Notary Signature  Date:  Behrooz REZVANI		LOUIS BELISO COMM. I 1307633 MOTARY PUBLIC. CALIFORNI Almara County Wy Comm. Expires June 16, 20
A	personally appeared Behrooz REZVANI personal per	rson whose name is executed the same in	ISO 7633 21FORNIA 117 117 117
	State of California  County of Alameda  On this 2nd day of Fully Angust, in the year personally appeared Raminder S. BAJWA, me (or proved to me on the basis of satisfactory evidence) to be the pesubscribed to the within instrument, and acknowledged to me that he she the entity upon behalf of which the person acted, executed the instrument.  WITNESS my hand and official seal.  Notary Signature  Jacky effow  Date:	personally known to its in whose name is executed the same in iment the person or its interest that the person of	IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
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Notary Signature wy CSEARS Feb. 25, 2	)06 <b>2</b> Hunum <b>a</b>
5. Inventor Signature Date: 8/01/01.	
Avadhani SHRIDHAR	
State of California	
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County of Alameda	
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Notary Signature Delis Batto (SEAL)	2 ±
Notary Signature (SEAL)	
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6. Inventor Signature: John John Date: 8/1/0)	
Dale SMI'IH	
State of California	
$M_{\bullet}$ ) ss.	
County of Alame da ss.	w\/C14
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proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed	BELISO 130763 County S June 16,
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Notary Signature Selino (SEAL)	<b>医公鸡</b>
(SEAE)	
	* 1-37 Km
7. Inventor Signature Date:  John GEVARGIZ	
John OLYANOIL	
State of California )	
) SS.	
County of)	
On this day of, in the year 200, before me,	
, personally appeared John GEVARGIZ, personally known to	
Atty Docket No.: VELCP010X1 Page 3 of 4	

me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Signature	(SEAL)
8. Inventor Signature: Saman BEHTASH	ens. M. Date: 7/26/01
State of California )	SS.
County of Alameda )	
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Notary Signature GIMA Sums	(SEAL)



## ASSIGNMENT OF PATENT APPLICATION

(After Filing Application)

Whereas I/we the undersigned inventor(s) have invented certain new and useful improvements as set forth in the patent application entitled:

## METHOD AND APPARATUS FOR A VARIABLE BANDWIDTH MULTI-PROTOCOL X-DSL TRANSCEIVER

(Atty. Docket No.: VELCP010X1) for which I (we) have executed an application for a United States Letters Patent filed on April 18, 2001 and allocated USSN 09/837,914

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I/We the undersigned inventor(s) hereby:

- 1) Sell(s), assign(s) and transfer(s) to IKANOS Communication, Inc., a California corporation having a place of business at 47709 Fremont Boulevard, Fremont, CA 94538, (hereinafter referred to as "ASSIGNEE"), the entire right title and interest in any and all improvements and inventions disclosed in, application(s) based upon, and Patent(s) (including foreign patents) granted upon the information which is disclosed in the above referenced application.
- 2) Authorize and request the Commissioner of Patents to issue any and all Letters Patents resulting from said application or any division(s), continuation(s), substitutes(s) or reissue(s) thereof to the ASSIGNEE.
- 3) Agree to execute all papers and documents and, entirely at the ASSIGNEE's expense, perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative and applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications.
- 4) Agree that the terms, covenants and conditions of this assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon the inventor(s), as well as the inventor's heirs, legal representatives and assigns.
- 5) Warrant and represent that I/we have not entered, and will not enter into any assignment, contract, or understanding that conflicts with this assignment.
- Assignors hereby grant assignee or assignee's designee the right to insert the U.S. Patent Application number and filing date where space is provided above at any time subsequent to the date of the assignor's signature below.

Signed on the date(s) indicated 1. Inventor Signature:	d beside my (our) signature(s).  Date:
Sam HEIDAI	RI
State of California	)
	) SS.
County of	
. pers	, in the year 200_, before me onally appeared <u>Sam HEIDARI</u> personally known to me
(or proved to me on the basis of s	satisfactory evidence) to be the person whose name is
Atty Docket No.: VELCP010X1	Page 1 of 4

subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Signature		(SEAL)
2. Inventor Signature:  Behrooz REZ	VAN <u>I</u>	Date:
State of California  County of	) ) ss )	S.
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Notary Signature		(SEAL)
3. Inventor Signature:  Raminder S. F.	BAJWA	Date:
State of California  County of	) ) ss	i.
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Notary Signature		(SEAL)
4. Inventor Signature:  Jacky CHOW		Date:
State of California  County of	) ) ss. )	
On this day of, person	nally appeared J	, in the year 200_, before me, lacky CHOW, personally known to me
Atty Docket No.: VELCP010X1	Page 2 of 4	•

(or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Signature				(SEAL)
5. Inventor Signature:  Avadhan	i SHRIDHAR	\2	Date:	
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6. Inventor Signature:  Dale SMI	TH		Date:	
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7. Inventor Signature: John GEV	ARGIZ	rg)	Date:	130/01
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Atty Docket No.: VELCP010X1 (Updated 061998)	ersonally appea Page 3		VARGIZ, person	naily known to

State of California  On this day of in the year 200, before me, personally appeared Saman BEHTASH, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.  WITNESS my hand and official seal.	me (or proved to me		-		be the person wi	hose name is
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Atty Docket No.: VELCP010X1 (Updated 0619/98)

Page 4 of 4