

Atty. Docket No.: 4450-0447PUS1

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102758018	CER SHEET
	atent and Trademark Office:
1. Name of conveying party(ies): [FAMILY NAME (ALL CAPS), Given Name] ELLANTI, Manohar Naidu SINGH, Harinder LANGLOIS, Steve GANESAN, Ashok Additional name(s) of conveying party(ies) attached? ☐ YES ☐ NO 3. Nature of conveyance: ☐ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name	2. Name and address of receiving party(ies) Name: CIENA CORPORATION Internal Address: Street Address: 1201 Winterson Road City: Linthicum State: MD ZIP: 21099-2205 Country: USA Postal Code: Additional name(s) & address(es) attached? YES NO
Other: Execution Date: May 21, 2004; May 24, 2004; May 24, 2004; and May 21, 2004, respectively 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the May 21, 2004; May 24, 2004; May 24, 2004; and May 21, 200	
A. Patent Application No(s). NEW	B. Patent No.(s).
Additional numbers attac	hed? ☐ YES ☒ NO
5. Name and address of party to whom correspondence	6. Total No. of applications/patents involved: One (1)
concerning document should be mailed:	7. Total fee (37 C.F.R. § 3.41): \$40.00
Name: BIRCH, STEWART, KOLASCH & BIRCH, LLP	, ,
Street Address: P.O. BOX 747	⊠ Enclosed
	Authorized to be charged to deposit account,
City: FALLS CHURCH State: VA ZIP: 22040-0747	if no fee attached.
Country: USA	8. Deposit account number: <u>02-2448</u>
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DO NOT USE	THIS SPACE
9. Statement and signature.	
Mr (M	
Michael R. Cammarata, #39,491 Name of Person Signing/Reg. No.	May 26, 2004 Signature Date
ranie of Person Signing Reg. 140.	Signature Date
Total number of pages including sover sh	eet attachments and document. Four (4)

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(Rev. 02/12/2004)

BIRCH, STEWART, KOLASCH & BIRCH, LLP

UNITED STATES PATEN'T RIGHTS, OR
UNITED STATES PLUS ALL FOREIGN PATEN'T RIGHTS

ASSIGNMENT

	Application No	N	Filed May 26, 2004	
Insert Name(s) of Inventor(s)	***(Given Name FAMILY NAME (ALL CAPS))***			
	WHEREAS,	Manohar Naidu ELLANTI	Harinder SINGH	
	Stove LANGLOIS	Ashok GANESAN		
	(hereinafter designated as the	undersigned) has (have) invented certai	n new and useful improvements in	
Insert Title of Invention	Virtual Network Element Framework And Operating System For Managing Multi-Service Network Equipment for which an application for Letters Patent of the United States of America has been executed by the			
Insert Date of Signing of Application	undersigned (except in the ca	se of a provisional application).	ry 24, 2004; and May	21, 2004
Insert Name of Assignee	WHEREAS, CIE		, and	
Insert Address of Assignee	of 1201 Winterson Road. Lin	thicum, MD 21099-2205		
CHECK BOX	acquiring the entire right, titl	oresentatives and assigns (hereinafter des e and interest in and to said invention a e United States of America and		
	the receipt of which is hereb has (have) sold, assigned an Assignee the full and exclusi dependencies and possession which may be granted the	sideration of the sum of Ten Dollars (\$1 by acknowledged, and other good and well transferred, and by these presents do live right to the said invention in the Units and the entire right, title and interest refor in the United States of Americans designated, in any and all foreign	aluable consideration, the undersigned bes sell, assign and transfer unto said nited States of America, its territories, in and to any and all Letters Patent(s) ca, its territories, dependencies and	
	and to any and all divisions, terms for which the same may	reissues, continuations, conversions and	extensions thereof for the full term or	

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The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree (s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letter Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America patent(s) or a grant of a valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) and request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

The undersigned hereby covenant(s) that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date 5/21/04	Name of Inventor	Ereweld
	Name of Inventor	(signature) Manohar Naidu ELLANTI
Date,	rvanie of hivehor	(signature) Harinder SINGH
Date 5/24/04	Name of inventor	(fignature) Steve LANGLOIS
Date 5/21/04	Name of Inventor	Alle
		(signature) Ashok GANESAN
Date	Name of Inventor	(signature)
Date	Name of Inventor	· · · · · · · · · · · · · · · · · · ·
		(signature)

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February 2002

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date,	Name of Inventor	
Date 05/24/2004.	Name of Inventor	(signature) Manohar Naidu ELLANTI (signature) Harinder SINGH
Date,	Name of Inventor	(signature) Steve LANGLOIS
Date,	Name of Inventor	(signature) Ashok GANESAN
Date,		(signature)
Date,		(signature)

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PATENT

February 2002

RECORDED: 05/26/2004 REEL: 015385 FRAME: 0349