FORM PTO-16194 Expires 06/30/99 OMB 0651-0027

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Conveying Party(ies)  Mark if additional names of conveying parties attached Execution Date Month Day Year				
Name (line 1) Avesta Technologies	s, Inc.	5 2 01		
Name (line 2)		Execution Date		
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Name (line 2)				
Receiving Party  Mark if additional names of receiving parties attached				
Name (line 1) Visual Networks Tec	hnologies, Inc.	If document to be recorded is an assignment and the		
Name (line 2)	receiving party is not domiciled in the United States, an appointment			
Address (line 1) 2092 Gaither Road	2092 Gaither Road of a domestic representative is attached. (Designation must be a			
Address (line 2) Suite 200		separate document from Assignment.)		
Address (line 3) Rockville	Maryland	20850		
Domestic Representative Name and Address  Enter for the first Receiving Party only.				
Name				
Address (line 1)				
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rubic burden reporting for this collection of information is estimated to average approximately so minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Office, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

U.S. Department of Commerce Patent and Trademark Office PATENT

<b>FORM</b>	PTO-1619B
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## Page 2

U.S. Department of Commerce Patent and Trademark Office PATENT

Corresponde	ent Name and Address	Area Code and Telephone Number 301-424-3640	
Name [	J. Warren Lytle, Jr.		
Address (line 1)	EPSTEIN, EDELL, SHAPIRO, F	FINNAN & LYTLE, LLC	
Address (line 2)	1901 Research Boulevard		
Address (line 3)	Suite 400		
Address (line 4)	Rockville, Maryland 20850		
Pages	Enter the total number of pag including any attachments.	es of the attached conveyance document # 1	
Application I	Number(s) or Patent Num	ber(s) Mark if additional numbers attached	
		etent Number (DO NOT ENTER BOTH numbers for the same property).	
09048025	ent Application Number(s)	Patent Number(s)	
03040023			
	being filed together with a <u>new</u> Paten t named executing inventor.	t Application, enter the date the patent application was Month Day Year	
Patent Cooperation Treaty (PCT)			
Enter PCT application number			
only if a U.S. Application Number PCT PCT PCT PCT PCT			
Number of P	roperties Enter the total	al number of properties involved. # 1	
Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00			
Method of Payment: Enclosed 🗹 Deposit Account 🔲 Deposit Account			
(Enter for payment by deposit account or if additional fees can be charged to the account.)  Deposit Account Number: # 05-0460			
	Aı	uthorization to charge additional fees: Yes 🚺 No 🗌	
Statement and Signature			
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. Charges to deposit account are authorized, as indicated herein.  J. Warren Lytle, Jr.  May 4, 2001			
	of Person Signing	Signature May 4, 2001 Date	

RECORDED: 05/04/2001

## ASSIGNMENT

WHEREAS, Avesta Technologies, Inc., a corporation organized under the laws of the State of Delaware, and located at 2 Rector Street, New York, New York 10006, possesses the entire right, title and interest in and to the invention entitled "Dynamic Modeling of Complex Networks and Prediction of Impacts of Faults Therein", and in and to any Letters Patent that may be granted therefor in the United States and in any and all foreign countries, and for which a patent application for United States Letters Patent was filed on March 26, 1998 (U.S. Patent Application Serial No. 09/048,025).

WHEREAS, Visual Networks Technologies, Inc., a corporation of the State of California, having a place of business at 2092 Gaither Road, Rockville, Maryland 20850, is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, for valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Avesta Technologies, Inc. has sold, assigned and transferred, and by these presents does sell, assign and transfer unto Visual Networks Technologies, Inc. the full and exclusive right to said invention in the United States and its territorial possessions and in all foreign countries and the entire right, title and interest in and to any and all Letters Patent which may be granted thereon in the United States and its territorial possessions and in any and all foreign countries, and in and to any and all non-provisionals, divisions, reissues, continuations and extensions thereof pertaining to said invention.

Avesta Technologies, Inc. hereby authorizes and request the Patent and Trademark Office officials in the United States and in any and all foreign countries to issue any and all of said Letters Patent, when granted, to said Visual Networks Technologies, Inc. as the assignce of the entire interest in and to the same, for the sole use and behalf of Visual Networks Technologies, Inc., its successors and assigns.

FURTHER, Avesta Technologies, Inc. agrees to execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to Visual Networks Technologies, Inc., make all rightful oaths and generally do everything possible to aid Visual Networks Technologies, Inc., its successors and assigns, to obtain and enforce proper protection for said invention in the United States and in any and all foreign countries.

IN TESTIMONY WHEREOF, Avesta Technologies, Inc. hereby caused the Assignment to be duly executed and set its hand on the date set forth below.

AVESTA TECHNOLOGIES, INC.

Name Vefferson D. Norton

Title: Associate General Counsel

PATENT REEL: 011771 FRAME: 0003