

Form PTO-1595 (Rev. 09/04)  
OMB No. 0651-0027 (exp. 6/30/2005)

U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

## RECORDATION FORM COVER SHEET PATENTS ONLY

To the Director of the U.S.P. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

### 1. Name of conveying party(ies)/Execution Date(s):

Voyan Technology

Execution Date(s) July 1, 2003

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

### 3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☒ Other Record Parent Assignment to 10/638,244

### 2. Name and address of receiving party(ies)

Name: Tokyo Electron Limited

Internal Address: \_\_\_\_\_

Street Address: TBS Broadcast Center

3-6 Akasaka 5-Chome, Minato-Ku

City: Tokyo

State: \_\_\_\_\_

Country: Japan

Zip: \_\_\_\_\_

Additional name(s) & address(es) attached? ☐ Yes ☒ No

### 4. Application or patent number(s):

☐ This document is being filed together with a new application.

A. Patent Application No.(s)

10/638,244

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

### 5. Name and address to whom correspondence concerning document should be mailed:

Name: Wood, Herron & Evans, L.L.P.

Internal Address: ATTN: Joseph R. Jordan

Street Address: 441 Vine St., Suite 2700

City: Cincinnati

State: Ohio Zip: 45202

Phone Number: 513-241-2324

Fax Number: 513-241-6234

Email Address: info@whepatent.com

### 6. Total number of applications and patents involved:

1

### 7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40

- ☐ Authorized to be charged by credit card  
☒ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

### 8. Payment Information

a. Credit Card Last 4 Numbers \_\_\_\_\_

Expiration Date \_\_\_\_\_

b. Deposit Account Number 23-3000

Authorized User Name \_\_\_\_\_

### 9. Signature:

Signature

JANUARY 26, 2005

Date

Joseph R. Jordan, Esq., Reg. No. 25,000

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

16

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:  
 Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

700148720

**PATENT**  
**REEL: 015623 FRAME: 0042**

CH \$40.00 233000 10638244

700076752

<b>FORM PTO-1595</b> (Rev. 10/02) OMD NO. 0851-0011 exp. 6/30/2005		<b>Recordation Form Cover Sheet</b> <b>PATENTS ONLY</b>		<b>U.S. DEPARTMENT OF COMMERCE</b> Patent and Trademark Office			
To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.							
<b>1. Name of conveying party(ies):</b> <b>Voyan Technology</b>  Additional name(s) of conveying party(ies) attached? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes			<b>2. Name and address of receiving party(ies):</b> Name: <u>Tokyo Electron Limited</u>  Internal Address: _____  Street Address: <u>TBS Broadcast Center, 3-6 Akasaka</u> <u>5-chome, Minato-ku</u> City: <u>Tokyo</u> State/Province: _____ Zip: _____ Country: <u>JAPAN</u> Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
<b>3. Nature of Conveyance</b> <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other: _____ Execution Date(s): <u>7/1/2003</u>			<b>4. Application Number(s) or patent number(s):</b> If this document is being filed together with a new application, the execution date of the application is: _____  <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px; vertical-align: top;"> <b>A. Patent Application No.(s)</b>  <div style="display: flex; justify-content: space-between;"> <div>09/527,497</div> <div>09/710,718</div> <div>60/403,874</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/737,892</div> <div>09/710,610</div> <div>60/387,303</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/517,948</div> <div>08/711,684</div> <div>60/387,088</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/595,455</div> <div>09/710,703</div> <div>60/398,860</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/823,065</div> <div>09/710,487</div> <div>60/412,160</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/710,410</div> <div>09/710,579</div> <div></div> </div> </td> <td style="width: 50%; padding: 5px; vertical-align: top;"> <b>B. Patent No.(s)</b>  <div style="display: flex; justify-content: space-between;"> <div>5,991,525</div> <div>8,289,508</div> <div>6,498,594</div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,285,971</div> <div>6,195,594</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,041,172</div> <div>6,278,998</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>5,850,959</div> <div>6,230,062</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,289,265</div> <div>6,404,581</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,167,360</div> <div>6,487,696</div> <div></div> </div> </td> </tr> </table> Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<b>A. Patent Application No.(s)</b> <div style="display: flex; justify-content: space-between;"> <div>09/527,497</div> <div>09/710,718</div> <div>60/403,874</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/737,892</div> <div>09/710,610</div> <div>60/387,303</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/517,948</div> <div>08/711,684</div> <div>60/387,088</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/595,455</div> <div>09/710,703</div> <div>60/398,860</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/823,065</div> <div>09/710,487</div> <div>60/412,160</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/710,410</div> <div>09/710,579</div> <div></div> </div>	<b>B. Patent No.(s)</b> <div style="display: flex; justify-content: space-between;"> <div>5,991,525</div> <div>8,289,508</div> <div>6,498,594</div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,285,971</div> <div>6,195,594</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,041,172</div> <div>6,278,998</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>5,850,959</div> <div>6,230,062</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,289,265</div> <div>6,404,581</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,167,360</div> <div>6,487,696</div> <div></div> </div>
<b>A. Patent Application No.(s)</b> <div style="display: flex; justify-content: space-between;"> <div>09/527,497</div> <div>09/710,718</div> <div>60/403,874</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/737,892</div> <div>09/710,610</div> <div>60/387,303</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/517,948</div> <div>08/711,684</div> <div>60/387,088</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/595,455</div> <div>09/710,703</div> <div>60/398,860</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/823,065</div> <div>09/710,487</div> <div>60/412,160</div> </div> <div style="display: flex; justify-content: space-between;"> <div>09/710,410</div> <div>09/710,579</div> <div></div> </div>	<b>B. Patent No.(s)</b> <div style="display: flex; justify-content: space-between;"> <div>5,991,525</div> <div>8,289,508</div> <div>6,498,594</div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,285,971</div> <div>6,195,594</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,041,172</div> <div>6,278,998</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>5,850,959</div> <div>6,230,062</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,289,265</div> <div>6,404,581</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>6,167,360</div> <div>6,487,696</div> <div></div> </div>						
<b>5. Name and address of party to whom correspondence concerning document should be mailed:</b>  Name: <u>Biskely, Sokoloff, Taylor &amp; Zafman LLP</u> Internal Address: _____ Street Address: <u>12400 Wilshire Boulevard, 7<sup>th</sup> Floor</u> City: <u>Los Angeles</u> State: <u>California</u> Zip: <u>90025</u>			<b>6. Total number of applications and patents involved:</b> <u>39</u>  <b>7. Total Fee (37 CFR 3.41)...</b> <u>\$1,200.00</u> <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account  <b>8. Deposit Account Number:</b> <u>02-2666</u> (Attach duplicate copy of this page if paying by deposit account)				
<b>DO NOT USE THIS SPACE</b>							
<b>9. Statement and signature.</b> <i>To the best of my knowledge and believe, the foregoing is true and correct and any attached copy is a true copy of the original document</i> <u>Sanjeet K. Duttia</u> <u>Res. # 46.145</u>							
Name of Person Signing		Signature <u>Sanjeet Duttia</u>		Date <u>4/6/04</u>			
Total number of pages including cover sheet, attachments, and document: <u>1</u>							

Mail documents to be recorded with required cover sheet information to:  
 Mail Stop Assignment Recordation Services, Director of the US Patent and Trademark Office, P.O. Box 1450  
 Alexandria, VA 22313-1450

Docket No. 651SP012

## U.S. PATENT APPLICATION ASSIGNMENT

This Patent Application Assignment (this "Assignment") is made as of July 1, 2003 by Voyan Technology, Inc., a Delaware corporation ("Assignor"), to Tokyo Electron Limited, a Japanese corporation ("Assignee").

### RECITALS

A. Assignor and Assignee have entered into an agreement dated as of July 1, 2003 (the "Agreement"). All capitalized terms used herein but not otherwise defined shall have the meanings set forth in the Agreement.

B. Assignor has filed with the United States Patent and Trademark Office the patent applications set forth on Exhibit A hereto (the "Patent Applications").

C. Pursuant to the Agreement, Assignor desires to assign to Assignee all of Assignor's right, title and interest in and to the Patent Applications.

### AGREEMENT

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants and agreements contained in the Agreement and the covenants and agreements in this Assignment and to induce Assignee to consummate the transactions contemplated by the Agreement, Assignor agrees as follows:

1. Assignor does hereby sell, transfer, convey, assign and deliver to Assignee all of Assignor's right, title and interest in and to the Patent Applications and any patents that may issue therefrom, including any foreign counterparts, divisions, continuations, or reissues of such patents, the same to be held by Assignee for Assignee's own use and enjoyment, and for the use and enjoyment of Assignee's successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor if this Assignment and sale had not been made; together with all claims for Damages by reason of past infringements of the Patent Applications, along with the right to sue for and collect such Damages for the use and benefit of Assignee and its successors, assigns and other legal representatives.

2. Assignor hereby authorizes and requests the Assistant Commissioner of Patents of the United States, and, in the case of any patent applications filed with any office of any country or countries foreign to the United States, any officer of such country whose duty it is to issue patents or other evidence or forms of intellectual property protection or applications as aforesaid, to issue the same to Assignee and its successors, assigns and other legal representatives in accordance with the terms of this instrument.

IN WITNESS WHEREOF, Assignor has executed this Assignment on the date first above written.

Voyan Technology, Inc.

By: [Signature]

Name: Richard J. Elkus, Jr.

Title: Co-Chairman of the Board, President & CEO

[SIGNATURE PAGE TO U.S. PATENT APPLICATION ASSIGNMENT]

Voyan-TEL (Patent App Assignment2)

PATENT  
REEL: 015623 FRAME: 0045

**EXHIBIT A**  
**TO U.S. PATENT APPLICATION ASSIGNMENT**

<b>Description</b>	<b>Serial Number</b>	<b>Filing Date</b>
Method for Utilizing Waveform Relaxation in Computer-Based Simulation Models	09/527,497	3/16/2000
Adaptation to Unmeasured Variables	09/737,992	12/14/2000
Efficient Adaptive Feedforward Periodic Disturbance Compensation	09/517,948	3/3/2000
Joint Spindle Speed and Head Position Control in Rotating Media Storage Systems	09/595,455	6/15/2000
Method for Automated System Identification of Linear Systems	09/523,065	3/10/2000
Fixed-Point Controller Implementation	09/710,410	11/10/2000
Method and Apparatus for Characterization of Disturbances in Communication Systems	09/710,718	11/10/2000
Method and Apparatus for Mitigation of Disturbances in Communication Systems	09/710,610	11/10/2000
Design and Architecture of an Impairment Diagnosis System for Use in Communications Systems	09/711,684	11/10/2000
Method and Apparatus for Impairment Diagnosis in Communications Systems	09/710,703	11/10/2000
Method and Apparatus for the Prediction and Optimization in Impaired Communication Systems	09/710,487	11/10/2000

Method and Apparatus for  
Cooperative Diagnosis of Impairments  
and Mitigation of Disturbers in  
Communication Systems

09/710,579

11/10/2000

Vectoring Techniques for Multi-Line  
Communication Systems  
\*Provision Patent Application

60/403,874

8/16/2002

A Method and System for Multiline  
Transmission in a Communications  
System

\*Provision Patent Application

60/387,303

6/7/2002

An Analog Front End (AFE) Circuit  
That Improves Echo Rejection in  
Communications Systems

\*Provision Patent Application

60/387,098

6/7/2002

A Method and System for Multiline  
Transmission in a Communications  
System

\*Provision Patent Application

60/398,860

7/25/2002

Split-Pair Signals in Communication  
Systems

\*Provision Patent Application

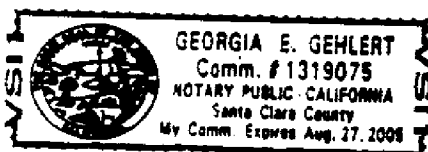
60/412,160

9/19/2002

**Acknowledgment by Notary Public**State of CaliforniaCounty of Santa Clara

On this 8th day of July, 2003, before me, the undersigned Notary Public, personally appeared Richard J. Elkus, Jr., 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 or she executed the same.

Seal

Signature: Georgia E. GehlertName: Georgia E. Gehlert, Notary Public

Acknowledgment by Notary Public

State of California

County of Santa Clara

On this 8th day of July, 2003, before me, the undersigned Notary Public, personally appeared Richard J. Elks Jr., 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 or she executed the same.

Seal

Signature: *Georgia E. Gehlert*

Name: Georgia E. Gehlert, Notary Public

