

**PATENT ASSIGNMENT**

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT										
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT										
<b>CONVEYING PARTY DATA</b>											
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>John C. Peterson</td> <td>04/26/2008</td> </tr> <tr> <td>Edward T. Chow</td> <td>04/27/2008</td> </tr> <tr> <td>Michael S. Waterman</td> <td>04/24/2008</td> </tr> <tr> <td>Timothy J. Hunkapillar</td> <td>05/01/2008</td> </tr> </tbody> </table>		Name	Execution Date	John C. Peterson	04/26/2008	Edward T. Chow	04/27/2008	Michael S. Waterman	04/24/2008	Timothy J. Hunkapillar	05/01/2008
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Timothy J. Hunkapillar	05/01/2008										
<b>RECEIVING PARTY DATA</b>											
<b>Name:</b>	California Institute of Technology										
<b>Street Address:</b>	1200 East California Boulevard										
<b>City:</b>	Pasadena										
<b>State/Country:</b>	CALIFORNIA										
<b>Postal Code:</b>	91125										
<b>PROPERTY NUMBERS Total: 1</b>											
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>08831798</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	08831798						
Property Type	Number										
Application Number:	08831798										
<b>CORRESPONDENCE DATA</b>											
<b>Fax Number:</b>	(877)769-7945										
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
<b>Phone:</b>	(858) 678-5070										
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<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55440-1022										
<b>ATTORNEY DOCKET NUMBER:</b>	06816-092002										
<b>NAME OF SUBMITTER:</b>	Michelle Sympson										
Total Attachments: 3											

**CH \$40.00 08831798**

**500594373**

**PATENT  
 REEL: 021247 FRAME: 0302**

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source=06816-092002 Executed Assignment#page3.tif

(JPL Case No. 18044)  
(CIT Case No. 2030)  
Atty. Docket JPL-12

COPY

ASSIGNMENT

WHEREAS, We, John C. Peterson; Edward T. Chow; Michael S. Waterman; and Timothy J. Hunkapiller, have invented a new and useful "SEQUENCE INFORMATION SIGNAL PROCESSOR" for which we have executed application papers for United States Letters Patent thereon on the same dates as we have executed this Assignment; the Serial Number and filing date of which we hereby authorize our attorney to insert herebelow when known: Serial Number 07/518,562 filed May 2, 1990 ;

WHEREAS, California Institute of Technology, a corporation organized and existing under and by virtue of the laws of the State of California, and having its principal place of business at 1201 East California Boulevard, Pasadena, California 91125, is desirous of acquiring the exclusive right, title and interest in and to said invention, and in and to the Letters Patent to be granted and issued therefor;

NOW, THEREFORE, for a valuable consideration, the receipt of which is hereby acknowledged, we the said John C. Peterson; Edward T. Chow; Timonthy J. Hunkapillar; do hereby sell, assign, transfer, and set over unto the said California Institute of Technology, its successors and assigns, the full and exclusive right, title and interest in and to the said invention, and in and to any and all Letters Patent to be granted and issued therefor, not only for, to, and in the United States of America, but for, to, and in all other countries; and we hereby authorize and request the Commissioner of Patents to issue said Letters Patent to said California Institute of Technology, its successors and assigns, in accordance with this Assignment.

WITNESS our hand at Pasadena, California this 26 day of April, 1990.

x John C. Peterson  
John C. Peterson

State of California )  
x County of Los Angeles ) ss.

x On this 26 day of April, 1990, before me, **PATENT** Public in and for the State and County aforesaid, personally appeared John C. Peterson who proved to me on the basis of satisfactory

REC-5437 PART 31

REEL: 021247 FRAME: 0304

X Edward T. Chow  
Edward T. Chow

State of California )  
X County of Los Angeles ) ss.

X On this 27 day of April, 1990, before me, a Notary Public in and for the State and County aforesaid, personally appeared Edward T. Chow who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument, and acknowledged that he executed it and the same to be his free act and deed.

X Elizabeth A. Snider  
Notary Public



(Seal)

RECORDED  
PATENT AND TRADEMARK  
OFFICE

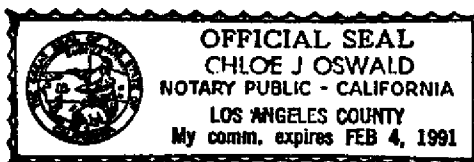
SEP 14 1990

X Timothy J. Hunkapillar  
X Timothy J. Hunkapillar

State of California )  
X County of Los Angeles ) ss.

X On this 1st day of May, 1990, before me, a Notary Public in and for the State and County aforesaid, personally appeared Timothy J. Hunkapillar who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument, and acknowledged that he executed it and the same to be his free act and deed.

X Chloe J. Oswald  
Notary Public



(Seal)

PATENT  
REEL: 021247 FRAME: 0305

REEL 5437 FRAME 32

A S S I G N M E N T

WHEREAS, we, Michael S. Waterman, residing at 4336 Mentone Avenue, Culver City, County of Los Angeles, State of California; the ASSIGNOR herein, and E. T. Chow; J. C. Peterson, and T. Hunkapillar, have invented improvements in a new and useful SEQUENCE INFORMATION SIGNAL PROCESSOR, (Docket 74-181), for which we are about to file application for Letters Patent of the United States, which application has been executed by us and of which inventions and improvements we are the joint inventors; and

WHEREAS, The University of Southern California, having a place of business at University of California, University Park, Los Angeles, California 90089, the ASSIGNEE herein, desires to acquire the entire right, title and interest of Michael S. Waterman, in and to said inventions, applications and Letters Patent to be granted and issued thereon;

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) by the ASSIGNEE to me paid, and other valuable consideration, the receipt and legal sufficiency of all of which is hereby acknowledged, I, the said ASSIGNOR, have sold and do hereby sell, assign, transfer and set over unto said ASSIGNEE, its successors and assigns, my entire right, title and interest in and to said inventions and all improvements thereon, in and to said application for Letters Patent thereon, in and to applications pertaining to or based upon said inventions and applications, including divisional and continuing applications and continuations-in-part, and in and to any and all Letters Patent which may be granted and issued on said inventions and applications, or any of them, not only for, to and in the United States of America, its territories and possessions, but for, to and in all countries foreign thereto, together with and including all priority rights based upon any and all applications in the United States of America covered by this Assignment.

And for the above-named considerations, I do hereby agree that I will, at the request of said ASSIGNEE, execute any and all applications for Letters Patent for said inventions and any and all other papers and documents and do all other and further lawful acts that said ASSIGNEE may deem necessary or desirable to obtain Letters Patent on said inventions, to secure the grant of such Letters Patent and to perfect and vest in the ASSIGNEE the entire right, title and interest in the inventions, applications and Letters Patent.

And for the above-named considerations, I do hereby authorize and empower the ASSIGNEE, its successors and assigns, to apply for and obtain, in its or their own names, Letters Patent for the said inventions before competent International Authorities and in any and all countries foreign to the United States in which applications for Letters Patent can be so made or Letters Patent so obtained.

DATED at Los Angeles, California, this 24-th day of April, 1990.

Michael S. Waterman  
Michael S. Waterman

STATE OF CALIFORNIA     )  
  ) ss.  
COUNTY OF LOS ANGELES     )