**PATENT ASSIGNMENT**

Electronic Version v1.1  
Stylesheet Version v1.1

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<tr>
<th>SUBMISSION TYPE:</th>
<th>NEW ASSIGNMENT</th>
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<td>NATURE OF CONVEYANCE:</td>
<td>ASSIGNMENT</td>
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### CONVEYING PARTY DATA

<table>
<thead>
<tr>
<th>Name</th>
<th>Execution Date</th>
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<tbody>
<tr>
<td>Nir Tal</td>
<td>05/09/2006</td>
</tr>
<tr>
<td>Robert B. Staszewski</td>
<td>05/10/2006</td>
</tr>
<tr>
<td>Ofer Friedman</td>
<td>05/09/2006</td>
</tr>
</tbody>
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### RECEIVING PARTY DATA

<table>
<thead>
<tr>
<th>Name</th>
<th>Texas Instruments Incorporated</th>
</tr>
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<tbody>
<tr>
<td>Street Address</td>
<td>7839 Churchill Way</td>
</tr>
<tr>
<td>Internal Address</td>
<td>M/S 3999</td>
</tr>
<tr>
<td>City</td>
<td>Dallas</td>
</tr>
<tr>
<td>State/Country</td>
<td>TEXAS</td>
</tr>
<tr>
<td>Postal Code</td>
<td>75251</td>
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### PROPERTY NUMBERS Total: 1

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<tr>
<td>Patent Number</td>
<td>7292618</td>
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### CORRESPONDENCE DATA

Fax Number: (972)917-4418  
*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*  
Phone: 9729175137  
Email: g-sansom@ti.com  
Correspondent Name: Steven A Shaw  
Address Line 1: 7839 Churchill Way  
Address Line 2: M/S 3999  
Address Line 4: Dallas, TEXAS 75251

### ATTORNEY DOCKET NUMBER:

| TI-60218 |

### NAME OF SUBMITTER:

| Steven A. Shaw |

Total Attachments: 4  

501077223  
REEL: 023854 FRAME: 0548
ASSIGNMENT

WHEREAS, WE,

Inventor Name       Address                     Nationality
Nir Tal             13 Vardia St., Haifa 34657, Israel    Israel
Robert B. Staszewski 413 West Murfield Rd, Garland TX 75044, United States
Ofer Friedman       1 Hahoresh St., Yehud 56470, Israel    Israel

hereinafter called ‘Assignors’, have made certain inventions in

FAST HOPPING FREQUENCY SYNTHESIZER USING AN ALL DIGITAL PHASED LOCKED LOOP (ADPLL)

described in an application for Letters Patent filed herewith by us, and

WHEREAS,

Texas Instruments Incorporated
PO Box 655474
Mail Station 3999
Dallas TX 75265-5474

a Delaware corporation, hereinafter called ‘Assignee’, is desirous of securing an undivided One Hundred Percent (100%) of the entire right, title and interest in and to the said inventions, applications and Letters Patent, when granted, and in and to any divisions, continuations, continuations-in-part, improvements, reissues or extensions that may be granted on any of them;

NOW, THEREFORE, BE IT KNOWN that for and in consideration of the sum of One Dollar ($1.00) to us in hand paid by the said Assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the Assignors, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over unto the said Assignee, its successors and assigns, an undivided One Hundred Percent (100%) of the entire right, title and interest throughout the world in and to the said inventions, applications, Letters Patent, when granted, and in and to any divisions, continuations, continuations-in-part, improvements, reissues or extensions that may be made or granted on any of them;

TO HAVE AND TO HOLD the same to the full end of the term or terms for which said Letters Patent may be granted, as fully and completely as the same might be held by us had this sale and assignment not been made.

For the consideration aforesaid, we hereby covenant and agree to and with the said Assignee, its successors and assigns what whenever its counsel or representative, or the counsel or
representative of its successors or assigns, shall advise of, or any other proceeding or action in connection with said application or inventions, including interference proceedings, is lawful and desirable, or that a reissue or continuation, continuation-in-part or extension of said Letters Patent is lawful and desirable, we will sign all lawful papers and drawings, execute all divisional, continuation, reissue and substitute applications, take all rightful oaths and affidavits, testify in any legal proceedings, and do all acts necessary or required to be done for the reissue of continuation, continuation-in-part or extension of same, and will do all acts necessary or required to secure to the said Assignee, its successors and assigns, the title to and full benefit of all rights hereby assigned, without charge to said Assignee or its successors or assigns, but at its or their expense.

AND the Commissioner of Patents and Trademarks is requested to issue the said Letters Patent, when granted, in accordance with this sale and assignment.

For the consideration aforesaid, we have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto the said Assignee, its successors and assigns, or the nominees of any of them, an undivided One Hundred Percent (100%) of the entire right, title and interest in and to any and all Letters Patent for said inventions which may be granted in countries foreign to the United States, and in and to any applications for Letters Patent which may be filed for said inventions in countries foreign to the United States, and in and to the inventions described in said applications; and we hereby authorize and empower said Assignee and its successors, assigns or nominees, to apply for Letters Patent or other form of protection on said inventions in its own name or in the name of its successors, assigns or nominees, in any or all countries where it may desire to file such applications, and where said applications may be filed by other than the inventor; and we hereby covenant and agree to sign all papers and drawings, take all rightful oaths, execute all rightful affidavits, and do all acts necessary or required to be done for the procurement and maintenance of Letters Patent or other form of protection for said inventions in countries foreign to the United States, and for further investing or confirming the right and title thereto in the Assignee, its successor, assigns or nominees, but at its or their expense.

Nir Tal
Witnessed By: ___________________________ Date: 5/9/2006

Witnessed By: ___________________________ Date: 5/9/2006

Robert B. Staszewski
Witnessed By: ___________________________ Date: 

Witnessed By: ___________________________ Date: 

2
Ofer Friedman

Witnessed By: [Signature] Date: 5/9/2006

Witnessed By: [Signature] Date: 5/9/2006
representative of its successors or assigns, shall advise of, or any other proceeding or action in connection with said application or inventions, including interference proceedings, is lawful and desirable, or that a reissue or continuation, continuation-in-part or extension of said Letters Patent is lawful and desirable, we will sign all lawful papers and drawings, execute all divisional, continuation, reissue and substitute applications, take all rightful oaths and affidavits, testify in any legal proceedings, and do all acts necessary or required to be done for the reissue of continuation, continuation-in-part or extension of same, and will do all acts necessary or required to secure to the said Assignee, its successors and assigns, the title to and full benefit of all rights hereby assigned, without charge to said Assignee or its successors or assigns, but at its or their expense.

AND the Commissioner of Patents and Trademarks is requested to issue the said Letters Patent, when granted, in accordance with this sale and assignment.

For the consideration aforesaid, we have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto the said Assignee, its successors and assigns, or the nominees of any of them, an undivided One Hundred Percent (100%) of the entire right, title and interest in and to any and all Letters Patent for said inventions which may be granted in countries foreign to the United States, and in and to any applications for Letters Patent which may be filed for said inventions in countries foreign to the United States, and in and to the inventions described in said applications; and we hereby authorize and empower said Assignee and its successors, assigns or nominees, to apply for Letters Patent or other form of protection on said inventions in its own name or in the name of its successors, assigns or nominees, in any or all countries where it may desire to file such applications, and where said applications may be filed by other than the inventor; and we hereby covenant and agree to sign all papers and drawings, take all rightful oaths, execute all rightful affidavits, and do all acts necessary or required to be done for the procurement and maintenance of Letters Patent or other form of protection for said inventions in countries foreign to the United States, and for further investing or confirming the right and title thereto in the Assignee, its successor, assigns or nominees, but at its or their expense.

Nir Tal
Witnessed By: ___________________________ Date: ___________________________

Witnessed By: ___________________________ Date: ___________________________

Robert B. Staszewski
Witnessed By: ___________________________ Date: 5/10/06
Witnessed By: ___________________________ Date: 5/10/06