

# PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT							
NATURE OF CONVEYANCE:	ASSIGNMENT							
CONVEYING PARTY DATA								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Name</th> <th style="width: 30%;">Execution Date</th> </tr> </thead> <tbody> <tr> <td>Alexandros Margomenos</td> <td>02/16/2009</td> </tr> <tr> <td>Ruihua Ding</td> <td>02/16/2009</td> </tr> </tbody> </table>		Name	Execution Date	Alexandros Margomenos	02/16/2009	Ruihua Ding	02/16/2009	
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Alexandros Margomenos	02/16/2009							
Ruihua Ding	02/16/2009							
RECEIVING PARTY DATA								
Name:	Toyota Motor Engineering & Manufacturing North America, Inc.							
Street Address:	25 Atlantic Avenue							
City:	Erlanger							
State/Country:	KENTUCKY							
Postal Code:	41018							
PROPERTY NUMBERS Total: 1								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Property Type</th> <th style="width: 70%;">Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12396665</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12396665	<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> <b>CH \$40.00 12396665</b> </div>		
Property Type	Number							
Application Number:	12396665							
CORRESPONDENCE DATA								
<p>Fax Number: (734)913-6007</p> <p><i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 248-647-6000</p> <p>Email: docket@patlaw.com</p> <p>Correspondent Name: GIFFORD, KRASS, SPRINKLE, ANDERSON &amp; CIT</p> <p>Address Line 1: P.O. BOX 7021</p> <p>Address Line 4: TROY, MICHIGAN 48007-7021</p>								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">ATTORNEY DOCKET NUMBER:</td> <td>TTC-68802/08</td> </tr> <tr> <td>NAME OF SUBMITTER:</td> <td>Martin S. Bancroft</td> </tr> </table>		ATTORNEY DOCKET NUMBER:	TTC-68802/08	NAME OF SUBMITTER:	Martin S. Bancroft			
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NAME OF SUBMITTER:	Martin S. Bancroft							
<p>Total Attachments: 4</p> <p>source=SCAN_5035_4010_000#page1.tif</p> <p>source=SCAN_5035_4010_000#page2.tif</p> <p>source=SCAN_5035_4010_000#page3.tif</p>								

**500795820**

**PATENT**  
**REEL: 022336 FRAME: 0639**



## ASSIGNMENT BY INVENTORS

**THIS ASSIGNMENT**, made by Alexandros Margomenos and Ruihua Ding (hereinafter referred to as Assignors), residing at 1029 Barton Dr. #205, Ann Arbor, Michigan 48105; and 7239 Sand Point Way, NE, Apt. 205, Seattle, Washington 98115, respectively;

**WHEREAS**, Assignors have invented certain new and useful improvements in BUTLER MATRIX FOR 3D INTEGRATED RF FRONT-ENDS, set forth in a Patent application for Letters Patent of the United States, filed herewith; and

**WHEREAS**, Toyota Motor Engineering & Manufacturing North America, Inc., a Corporation organized under and pursuant to the laws of Kentucky having its principal place of business at 25 Atlantic Avenue, Erlanger, Kentucky 41018 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

**NOW, THEREFORE**, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefor and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

**AND** for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and

delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

**AND** for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

**AND** Assignors hereby request the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

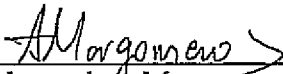
**AND** Assignors hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document:

GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C.

All practitioners at Customer Number 63796

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

Date: 2/16/09

Signature:   
Alexandros Margomenos

Date: \_\_\_\_\_

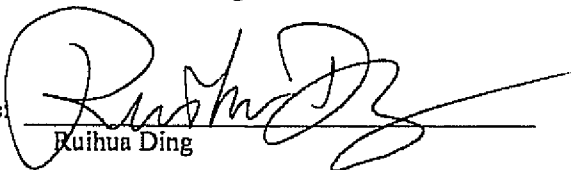
Signature: \_\_\_\_\_  
Ruihua Ding

AND Assignors acknowledge an obligation of assignment of this invention to  
Assignee at the time the invention was made.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_  
Alexandros Margomenos

Date: Feb. 16th, 2009

Signature:   
Ruihua Ding

This Assignment corresponds to  
U.S. patent application  
Serial No. 12/396,665, filed  
March 3, 2009

TTC-68802/08