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PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Mike Huang	03/08/2013

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

Property Type	Number
Application Number:	13791035

CORRESPONDENCE DATA

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NAME OF SUBMITTER:	Christopher G. Darrow

Total Attachments: 2

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PATENT REEL: 030027 FRAME: 0792 .H \$40.00 13/91035

ASSIGNMENT AND AGREEMENT

WHEREAS, **Mike Huang** of Ann Arbor, MI; (hereinafter referred to as "ASSIGNOR"), has jointly invented a certain invention entitled RATE-BASED CONTRACTIVE MODEL PREDICTIVE CONTROL METHOD FOR INTERNAL COMBUSTION ENGINE AIR PATH CONTROL as set forth in this United States Patent Application,

executed of	oncurrently here	with	
executed c	n		
Serial No.	13/791,035	Filed	03/08/2013

WHEREAS, Toyota Motor Engineering & Manufacturing North America, Inc., a corporation organized under the laws of the State of Kentucky having its principal place of business at 25 Atlantic Avenue, Erlanger, Kentucky 41018, ("ASSIGNEE"), desires to acquire the entire right, title, and interest in and to said invention held by inventor Mike Huang;

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto ASSIGNEE, its successors and assigns, the full and exclusive right, title, and interest in and to (a) the above-identified invention or inventions and all improvements and modifications thereof, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for the above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representatives or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and

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modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of Young Basile Hanlon & MacFarlane, P.C. the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Young Basile Hanlon & MacFarlane, P.C. do not personally represent ASSIGNOR or ASSIGNOR's legal interests, or ASSIGNEE or ASSIGNEE'S legal interests, but instead represent the interests of Toyota Motor Engineering North America, Inc; since said attorneys and agents cannot provide legal advice to ASSIGNOR or ASSIGNEE with respect to this Assignment, ASSIGNOR or ASSIGNEE acknowledges its right to seek its own independent legal counsel.

NAME(S) AND SIGNATURE OF ASSIGNOR			
Name:	Signature:	Date:	
Mike Huang	11sh D	3/8/2013	