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To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.					
Name of conveying party(ies)	2. Name and address of receiving party(ies)				
500 US 500 00	Name: CATALYTIC SOLUTIONS, INC.				
ECS HOLDINGS, INC.	Internal Address:SUITE 100				
Additional name(s) of conveying party(ies) attached? Yes X No					
3. Nature of conveyance/Execution Date(s):	Street Address: 4567 TELEPHONE ROAD				
Execution Date(s) FEBRUARY 20, 2014					
★ Assignment					
Security Agreement Change of Name	City: VENTURA				
Joint Research Agreement	State:CA				
Government Interest Assignment	Country: US Zip 93003				
Executive Order 9424, Confirmatory License					
Other	Additional name(s) & address(es) attached? Yes No				
4. Application or patent number(s): A. Patent Application No.(s)	document is being filed together with a new application.				
A. Facilit Application (No.(S)	B. Patent No.(s) 8580216 5977017 8318629 8496896				
11731570	5939354 6352955 7527776 7514055 7014825 7785551				
	\$531425 7641875 7767175 \$372686 7514055 7 943097				
Additional numbers att	·				
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents				
Name: THADDIUS J. CARVIS	involved: 17				
Internal Address: LAW OFFICES OF THADDIUS J. CARVIS	7. Total fee (37 CFR 1.21(h) & 3.41) \$680.00				
THE STATE OF THE S	N Authorization to the state of				
Street Address: 102 NORTH KING STREET	Authorized to be charged to deposit account Enclosed				
ON OUT MAN COST.	None required (government interest not affecting title)				
City: LEESBURG	8. Payment Information				
State: VA Zip: 20176					
Phone Number: (703) 737-7817					
Docket Number: CDT A1000	Deposit Account Number _502735				
Email Address: admin@tjcarvis.com	Authorized User Name THADDIUS J. CARVIS				
9. Signature: Many A. Du	the standard once				
Signature	MARCH 18, 2014 Date				
NANCY S. GUTH	Total number of pages including cover				
Name of Person Signing sheet, attachments, and documents: Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or malled to:					
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450					

PATENT

REEL: 032515 FRAME: 0462

Assignment: ECS to CSI

<u>ASSIGNMENT</u>

For good and valuable consideration, ECS HOLDINGS, INC., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and having an office and place of business at 4567 Telephone Road, Suite 100, Ventura, CA 93003 (ECS) being joint owner of Patents listed in Schedule A attached to this Assignment, being free from all prior assignments and having their right to convey their entire interest, both legal and equitable herein assigned, do hereby sell, assign, transfer and set over unto CATALYTIC SOLUTIONS, INC., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and having an office and place of business at 4567 Telephone Road, Suite 100, Ventura, CA 93003, (CSI) it's successors and assigns, their entire right, title and interest in and to said Patents together with all patents either United States or foreign, which may be granted therefor, or on any other application claiming common priority thereto and all divisions, reissues, renewals, continuations, continuations-in-part, substitutes and extensions thereof.

And, ECS, hereby covenants and agrees that they will communicate to CSI, its successors and assigns, all facts known to them respecting said Patents, and will, upon its request at any time, testify in any legal proceedings, sign all lawful papers, execute all original, divisional, continuation, continuation-in-part, substitute and reissue applications and any other U.S. or international application claiming common priority to said Patents, execute all assignments, make all rightful oaths and generally do everything reasonable and proper to aid CSI, its successors, assigns and nominees, to obtain and enforce proper protection for said Patents in all countries.

IN WITNESS WHEREOF, I, NIKHIL A. MEHTA have hereunto set my hand and affixed my seal this 20 day of FEBRUARY, 2014.

Nikhil A. Mehta, President ECS HOLDNGS, INC.

PATENT REEL: 032515 FRAME: 0463

Assignment ECS to CSI Page 2 of 2					
State of California VIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	<u>(</u>				,
on_ 02/20/14	before me	M.Go	WEON,	Notani	Publi
		(Insert na	me and title	of the officer	·.)
on the basis of satisfactory evid	TILML A	HUL N Derson whos	MAG Se name is su	, who pro	ved to me
instrument and acknowledged t that by his signature on the in person acted, executed the insti	to me that he executions $100 \mathrm{me}$	ecuted the sa	ame in his at	uthorized can	acity and
l certify under PENALTY OF PUR paragraph is true and correct.	JURY under the la	aws of the St	tate of Califo	ornia that the	foregoing
WITNESS my hand and official se	eal.				
Signature	m h	(Seal)	A CONTRACTOR OF THE PARTY OF TH	M. GARZON COMM, #189 Notary Public - Ca Ventura Coun Comm. Expires Auc	9340 R

ASSIGNMENT ECS HOLDINGS, INC. TO CATALYTIC SOLUTIONS, INC. SCHEDULE A

COUNTRY	PATENT NO.	PATENT APPLICATION NO.	ATTORNEY DOCKET NO.
US	8580216		CDT PC\$06-40221-US
US	5939354		CDT PC\$06-40222-US
US	7 514055		CDT PCS06-40222-USC
US	6531425		CDT PCS06-40222-USD
US	6372686		CDT PC\$06-40222-USD1
Ų\$.	5977017		CDT PCS06-40222-USP
บร	6352955		CDT PCS06-40222-USP1
US	7014825		CDT PCS06-40222-USP2
U\$.	7641875		CDT PCS06-40223-USPC
US	7514055		CDT PCS06-40224-USC
US	8318629		CDT PCS06-40225-US
US	75277 7 6		CDT PCS07-40010-US
US	7785551	•	CDT PCS07-40010-USC
US	7767175	•	CDT PCS07-40010-USCP
US		11731570	CDT PCS07-40010-USP
US	7943097		CDT PCS07-40010-USP1
US	8496896		CDT PCS08-40119-USP

PATENT REEL: 032515 FRAME: 0465

RECORDED: 03/18/2014