Please r		FORM PTO-1595 1-31-92		08-02-2002			EET		U.S. Department of Commerce Patent and Trademark Office Attorney Docket No. 8350.2204 Attorney Customer Number: 22,852			
		Commissi attached		10	2176580		АТ	TN. E	BOX A	SSIGNMENTS	5	
	Name of c			OTTE	10	2.	Name	and	addres	ss of receiving	party(ies):	
	Evan Earl	Jacobson	/ <u>0</u>	JUL 262	m 2 7-26-0	Name:	Ca	aterpil	lar, Ind	2.		
Additiona	al name(s)	of conveyi	ng part	* >	ed? Ø Yes ⊠ No	Internal	l Addres	ss:			·	
3. Nature of conveyance:			e:	HADEMA		Street A	Street Address:		100 N.E. Adams Street			
	Assignm	ent		Merger		City:	Peoria	а				
	Security Agreeme			Change of	Name	State:	IL			Zip Code:	61629-649	0
	Other:					Addition	nal nam	ie(s) 8	& Addr	ess(es) attach	ed?	
Execution Dates: 7/18/02						☐ Yes ☐ No						
	Application the applica		s) or par	tent number	(s): If this document is	being filed t	togethei	r with	a new	application, th	ne execution o	date of
A. Patent Application Number(s):					В.	B. Patent Number:						
	10/14	45,131		-								
				Additional	numbers attached?	☐ Yes		\boxtimes	No	n de Maria de de desenvolución de seu se		
	Name and address of party to whom correspondence concerning document should be mailed:			6.	6. Total number of applications and registrations involved: One (1)							
Name:	e: Leonard Smith, Jr.					7.	Total	fee (3	37 CFF	R 3.41): \$40		
						Enclosed (Please charge deficiency to deposit account)						
								Autho	rized t	o be charged	to deposit acc	count
internal /	Address:	FINNEGA & DUNNI			FARABOW, GARRET							
Street A	ddress:	1300 St					, .					
City:	W	ashington,	D.C.		1800 00 00 80 40 40 00 00 00 00 00 00 00 00 00 00 00							
State:			Zip:		20005-3315	8.	Depo	sit Ac	count	No.: <u>06-0916</u>		
9.	Statement	and signa	ature.									
To the be		nowledge	and bel	lief, the fore	going information is true	e and corre	ct and a	any at	tached	d copy is a true	e copy of the o	original
	l eonard S	imith .lr			///	The				July 2	6, 2002	
Leonard Smith, Jr. Reg. 45,118			-	Signa			·				ate	
		То	tal num	ber of page:	 s including cover sheet	, attachmen	nts and	docur	nents:	2		.1
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PATENT REEL: 013134 FRAME: 0135

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 08350.2204 Client Ref. No. 02-204

ASSIGNMENT

WHEREAS I, the below named inventor, hereinafter referred to as Assignor, have made an invention entitled:

ENGINE CONTROL SYSTEM USING A CASCADED NEURAL NETWORK

for which I executed an application for United States Letters Patent concurrently herewith or filed an application for United States Letters Patent on May 15, 2002 (Serial No. 10/145,131); and

WHEREAS, CATERPILLAR, INC., a corporation of Delaware, whose post office address is 100 N.E. Adams Street, Peoria, IL 61629-6490 (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) in hand paid and
other good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I, as Assignor, have
sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful
successors and assigns, my/our entire right, title, and interest in and to this invention, provisional application Serial No.
, filed (if any), and this application, and all divisions, and continuations thereof, and all Letters Patent of the
United States which may be granted thereon, and all reissues thereof, and all rights to claim priority on the basis of the
above provisional application (if any), as well as all rights to claim priority on the basis of this application, and all
applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent
which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and I
hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any
foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this
invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, I have hereunto set our hands.

FULL NAME OF SOLE OR FIRST ASSIGNOR Evan Earl JACOBSON	ASSIGNOR'S SIGNATURE	DATE 18 JUL 02
ADDRESS 1124 West Orchard Lane, Peoria, IL 61615	ent you	CITIZENSHIP U.S.A.

Listing of Inventors Continued on Page 2 hereof ☐ Yes XX No

Page 1 of 2

PATENT REEL: 013134 FRAME: 0136

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 08350.2204 Client Ref. No. 02-204

The state of the s		
1. WITNESS NAME JEFFERY L. PREWETT ADDRESS	WITNESS SYNATURE PREWAY	DATE /B JULOZ
ADDRESS 519 WEDGEWOOD TERRACE	CITIZENSHIP USA	
METAMORA, IL 615	548-9063	
2. WITNESS NAME JEFFREY A Brand	WITNESS SIGNATURE	DATE BJulo2
Jeffrey A Brand ADDRESS 5/3 School Street		CITIZENSHIP USA
Lacon, IL 61540		
2. FULL NAME OF SECOND ASSIGNOR, IF ANY	ASSIGNOR'S SIGNATURE	DATE
ADDRESS		CITIZENSHIP
1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

Page 2 of 2

PATENT REEL: 013134 FRAME: 0137