Form PTO-1595 (Rev. 10/02) OMB No. 0651-0027 (exp. 6/30/2005

103328690

U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office

1033280	Attorney Docket No. 1076.46498X00						
To the Honorable Commissioner of Patents and Trademarks:	Please record the attached original documents or copy thereof.						
1. Name of conveying party(ies): Jorg WUNDERLICH David WILLIAMS Tomas JUNGWIRTH Bryan GALLAGHER 1. Name of conveying party(ies): OCT 23 2006	Name and address of receiving party(ies) Name: Hitachi Limited						
Additional name(s) of conveying party(ies) attached? Yes No	Street Address: Marunouchi Center Building 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo, Japan						
3. Nature of conveyance/ Execution Date: September 18, 2006 September 18, 2006; September 19, 2006; September 14, 2006; September 19, 2006.							
☑ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name							
☐ Joint Research Agreement							
Government Interest Assignment							
Executive Order 9424, Confirmatory License							
Other.	Additional name(s) & address(es) attached? ☐ Yes ☒ No						
4. Application number(s) or patent number(s):	☐ This document is being filed together with a new application.						
A. Patent Application No.(s)	В. Patent Registration No.(s)						
11/500,992							
A 4.1951	 						
Additional number(s) a 5. Name and address of party to whom correspondence	ttached Yes No						
concerning document should be mailed:	6. Total number of applications and patents involved 1						
Name: ANTONELLI, TERRY, STOUT & KRAUS, LLP	7. Total fee (37 CFR 3.41) \$40.00						
	☑ Authorized to be charged by credit card						
Internal Address:	Authorized to be charged to deposit account						
	☐ None required (government interest not affecting title)						
1300 NORTH 17 TH STREET – SUITE 1800							
	8. Payment Information:						
City: ARLINGTON State: VA Zip 22209	0 170 1 1 1 1 1 1 1 1 1 1 1 1 1						
Disara Marsham (700) 040 0000	a. Credit Card Last 4 numbers: 1156 Expiration date: 06/09						
Phone Number: (703) 312-6600 Facsimile Number: (703) 312-6666	·						
Email Address: email@antonelli.com	b. Deposit account number: 01-2135						
	Authorized User Name: Alfred A. Stadnicki						
DO NOT USE							
9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.							
Runel A. T. Short							
Denald E. Stout, Reg#26,422 78,57) World John 10/23/06							
Name of Person Signing Signat	ure Date						

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, VA 22313-1450

ASSIGNMENT						ATTY. DOCKET NO: 1076.46498X0				
-	*									
WHEREAS the below named inventor (if only one inventor is named below) or inventors (if plural inventors are named below) hereinafter referred to as the ASSIGNOR invented a certain improvement relating to										
Single-Charge Tunnelling Device										
	for which an application for Letters Patent to be filed in the United States Patent and Trademark Office was executed on even date.									
	for which U.S. Application S	11/500,992 for Letters Patent was filed in the U.S. Patent August 9, 2006			nd Trademark Office on					
	for which an International A	pplication v	vas filed on		l	as		, designating the United States.		
	AND WHEREAS	Hitachi		<u> </u>						
	Marunouchi Center Building 6-6, Marunouchi 1-chome, Chiyoda-ku Tokyo Japan									
		NEE, is de	sirous of acq					nvention and application, including		
all renewals, reissues, reexaminations and extensions thereof, and in and to any and all priority and/or convention rights or benefits accruing or to accrue with respect to the filing or securing of patents in the United States and/or any countries foreign thereto, SAID ASSIGNEE, its assigns and legar representatives to have, hold, exercise, and enjoy said invention and application, including any and all divisions and continuations thereof, and any and all letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, with all the rights owners, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and enjoyed the arme, if the assignment had not been made. AND ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States and foreign countries or said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to execute any other papers that may be needed in connection with filing said applications and securing Letters Patents thereon. AND ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on said application, and on all divisions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith. The undersigned hereby grant(s) the law firm of Antonelli, Terry, Stout, Kraus, LLP the power to insert on this assignment any further dentification 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.										
IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR.										
01	FULL NAME OF SOLE OR FIRST NAM	ED INVENTO	R		INVE	TOPS	SRINATURE	DATE		
	Jorg WUNDERLICH				10	Z	2	18/9/2006		
)2	FULL NAME OF SECOND JOINT INVE	NTOR			inver	TOR'S	SIGNATURE	DATE		
	David WILLIAMS		·		Jane	<u> 4</u>	ly	18.9.06.		
3	FULL NAME OF THIRD JOINT INVEN	ror			INVEN	TQR'S	SGNATURE	DATE		
	Tomas JUNGWIRTH			9	Vay			19.9.06		
						0				
1	FULL NAME OF FOURTH JOINT INVE	NTOR			INVEN	TOR'S	SIGNATURE	DATE		
_	Andrew IRVINE				anden	n		14/9/2006		
,	FULL NAME OF FIFTH JOINT INVENT	OR			BO / Pa	TOP'S S	IGNATURE C	DATE		
- 1	Bryan GALLAGHER				Brass	2	Man	19/09/06		
-1					7					

PATENT

DATE

RECORDED: 10/23/2006 REEL: 018455 FRAME: 0191

INVENTOR'S SIGNATURE

FULL NAME OF SIXTH JOINT INVENTOR