Commissioner for Patents & Trademarks	11-07-2	003 _	Al	exandria, VA 223	
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(Rev. 03/01)		M MM (MH orn con	U.S. PATENT AND TRADEMARK OFFICE		
To the honorable Commissioner of Patents ar	102596	310 <sub>sm</sub> al o	al document or copy thereof:		
1. Name of Conveying Party(ies):	2. Name and Address of Receiving Party(ies):				
PARK, SE HO YANG, HAE SIK	Name:	ELECTRONICS AND RESEARCH INSTIT	NICS AND TELECOMMUNICATIONS HINSTITUTE		
LEE, DAE SIK SHIN, YONG BEOM	Street Address:	161 Gajeong-dong,	Yuseong-Gu	. 5 5 =	
KIM, KYU WON YOON, TAE HWAN	Street Address:			729.F	
KIM, SUNG JIN	City:	Daejon-Shi		1088 U	
KIM, YUN TAE	State/Country:	Korea	Postal Code:	031	
Additional name(s) of conveying party(ies) attached?					
3. Nature of Conveyance:					
X Assignment	☐ Change of Name ☐ Other:				
☐ Security Agreement					
│	Execution Date:	07012003 & 070420	03		
4. Application Number(s) or Patent Number(s):  Assignment is being filed together with new app	olication and the first e	execution date of appli	cation is :	10312003	
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PATENT REEL: 014659 FRAME: 0572

	U	NITE	STATES O	F AMERICA - A	ASSIGNME	NT	
(1-9)	Insert Name(s) of Inventors	(1)	Se Ho PARK		(2)	Hae Sik YANG	
		(3)	Dae Sik LEE		(4)	Yong Beom SHIN	
		(5)	Kyu Won KIM		(6)	Tae Hwan YOON	
		(7)	paid to each of t	on of the sum of one	eceipt and suffi	Yun Tae KIM and other good and valuable ciency of which are hereby wer to	e considerations acknowledged,
(9)	Insert Name of Assignee	(9)				NS RESEARCH INSTITU	UTE
(10)	Insert Address of Assignee	(10)	Of 161 Gajec	ong-dong, Yuseong-C	Gu, Daejon-Shi	i, Republic of Korea	
(11)	Insert <u>Legal Entity</u> and <u>State or</u> <u>Country</u> (e.g., a corporation or citizen of Korea)	(11)		gnated as the Assigne pendencies and posse		Republic of Korea ght, title and interest for the	e United States,
(12)	Insert <u>Identification</u> of Invention, such as Title, Case Number or		METHOD FOI	R PERFORMING M	INTLIBLEX B	CR WITH	
	Foreign Application Number		CYCLIC CHA	NGES OF PCR PAR	RAMETERS		
(13)	Insert <u>Date</u> of signing of Application, or filing date and Serial No., if known	f (13)		dersigned has (have) having been executed w Application		polication for patent in the toper 31, 2003	United States of (and assigned
	The undersigned agree(s) o to execute separate assignment     The undersigned agree(s) to continuing or divisional application	s in conn execute	ite all papers ne ection with such all papers neces	ecessary in connection applications as the Assary in connection with	on with this ap signee may dee th any interferer	m necessary or expedient, nee which may be declared	concerning this
United interest, execute	sof the International Union for P  4) The undersigned agree(s) to 5) The undersigned hereby authorized the second of the undersigned hereby authorized and hereby covenants that he red, and will not execute any agreer 6) Assignor hereby further assume for, and collect damages for, and the undersigned hereby grants.	perform a norize(s) a tion or a nas (they ment in co- igns to A any and a t(s) the la	all affirmative acts and request(s) th ny continuing or have) full right conflict herewith. Assignee all clain all acts of past an aw firm of Jacobs	s which may be neces e Commissioner of Pa divisional applications to convey the entire in and causes of act diffuture infringement.	sary to obtain a atents and Trade is thereof to the interest herein a tion for infringer	emarks to issue any and all said Assignee, as Assigne assigned, and that he has ment of the patent rights a et, N.W., Washington, D.C.	Letters Patents ee of the entire (they have) not assigned herein,
United S	the power to insert on this assignr States Patent and Trademark Offic	e for rec	ordation of this do	cument.			the rules of the
Date !!	n witness whereof, executed by the July 4. 2003 Nar	e unaers ne of Inv		Se Ho PARK	rsigned name(s)	Dank	(SEAL)
				Typed name		Signature	(SEAL)
Date	<b>July 4. 2003</b> Nan	ne of Inve	entor	Hae Sik YANG		7 Joseph	Ma (SEAL)
Date	July 4. 2003 Nan	ne of Inve	entor	Typed name  Dae Sik LEE		Signature	(SEAL)
				Typed name		Signature	(GEAC)
Date	July 4. 2003 Nan	ne of Inve	entor	Yong Beom SHIN		Shin	(SEAL)
Date	July 4. 2003 Nan	ne of Inve	entor	Typed name Kyu Won KIM		Signature Kyuwen kim	, (SEAL)
Date	July 4. 2003 Nan	ne of Inve	entor	Typed name Tae Hwan YOON	TAE	Signature HWW TooN Year	(SEAL)
Date		ne of Inve		Typed name Sung Jin KIM	1	Signature	(SEAL)
Date		ne of Inve		typed name Yun Tae KIM		A Signature	
	July 11 2005   IVal			Typed name		Signature	(SEAL)
	This assignment should preferabl	y be sign	ed before a Unite	ed States Consul if sign	ned abroad, or a		illy signed. If
	n the execution by the inventor(s) s ditional inventor's names and sign	~	witnessed by at Witness	Hvong Ku YO		the Thomas	1
	a separate sheet.		Witness	Jung Hyuk SH	77	A SI.	
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		PI	<b>JACOB</b> ROFESSIONAL L THE JI 400 SEVI	W OFFICES OF SON HOLMA LIMITED LIABILITY CO ENIFER BUILDING ENTH STREET, N.W. IGTON, D.C. 20004	OMPANY		
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