5 DTO 4505	U9-10	1-2004		
Form PTO-1595 RE((Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002)				MENT OF COMMERCE t and Trademark Office
(5,4,5,5,6,6,6,6,6,6,6,6,6,6,6,6,6,6,6,6,		33761	ney's Docket No.	030681-691
To the Director of the United States Patent	1020	OOTOT	ed original documents or	copy thereof.
Name of conveying party(ies): Yuri Nikolaevich TOLMACHEV, Dong-joon Yakovlevich NAVALA, Dae-il KIM	1 09	Name and address of Name: Samsung E Internal Address:		7932076
Additional name(s) of conveying party(ies) attached? 3. Nature of conveyance: Assignment Merger Security Agreement Change of Name Other	Yes No	Street Address: 416, Maetan-dong, Y Suwon-si, Gyeonggi- Republic of Korea		10
Execution Date: August 26, 2004		City:	State:	Zip:
			& addresses attached?	☐ Yes ☑ No
Application number(s) or patent number(s): If this document is being filed together with a new A. Patent Application No.(s)	w application, the			
5. Name and address of party to whom correspond concerning document should be mailed: Name: Charles F. Wieland III Address: Burns, Doane, Swecker & Mathis, L.L. Customer Number 2 1 8 3 9 P.O. Box 1404 Alexandria, Virginia 22313-1404	P.	6. Total number of applic 7. Total fee (37 CFR 3.4 ☐ Enclosed ☐ Authorized to	1)\$ be charged to deposition PTO-2038 is attached	40.00 t account
[DO NOT USE	THIS SPACE		
Name of Person Signing R Total number of pages including cov Mail documents to be Director of the United States Patent a	33,096 leg. No. ver sheet, attachn e recorded with and Trademark O	Signature nents, and documents: required cover sheet information of the cover sheet informat	3 rmation to:	September 2, 2004 Date
03/2004 YPOLITE1 00000005 10932076 FC:8021 40.00 0P	ox 1450 / Alexa	andria, VA 22313-1450		

PATENT REEL: 015781 FRAME: 0319

ASSIGNMENT

(JOINT)

THIS ASSIGNMENT, by (1) Yurl Nikolaevich TOLMACHEV, (2) Dong-joon MA, (3) Sergiy Yakovlevich NAVALA and (4) Dae-il KIM, residing at (1) Gyeonggi-do, Republic of Korea, (2) Gyeonggi-do, Republic of Korea (4) Gyeonggi-do, Republic of Korea (hereinafter referred to as "the Assignors"), respectively, witnesseth:

PHY	WI SICAL	HEREAS	inthe	Assigi OSITI	nors have	e invented ARATUS !	certair USING	new HELI	and use	ful improve .F-RESON <i>E</i>	ments in	IONIZ set fo	ED orth
in	an	applicat				Patent		the				ÌS	а
	(1)	(a) (b)		bea	• • •		•	·	, and filed	i on		·	_;
	(2)	(a)	_	•	sional apparing App		·			, and filed	i on		_;
		(b)	\boxtimes		ring an oa g of sppl		aration	execu	ited on a	ven date he	rewith pric	or to	
		(c)			ving an oa signment		aration	execu	ited on a	different da	te than th	is	

WHEREAS. <u>Samsung Electronics Co.</u>, <u>Ltd.</u>, a corporation duly organized under and pursuant to the laws of <u>Republic of Korea</u> and having a principal place of business at <u>416</u>, <u>Maetan-dong</u>, <u>Yeongtong-qu</u>, <u>Suwon-si</u>, <u>Gyeongqi-do</u>, <u>Republic of Korea</u> (hereinafter referred to as "the Assignee"), is desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and behoof and the use and behoof of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the Inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth:

Page 1 of 2 (4/04)

PATENT REEL: 015781 FRAME: 0320

Application	ı No	
	Docket No.	030681-691

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful paths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignee, its successors, legal representatives. and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

AND the Assignors hereby authorize and request the attorneys of Burns, Doane, Swecker & Mathis, L.L.P. to insert in the spaces provided above the filing date, application number, and attorney's docket number of said application when known.

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignee, its successors, legal representatives. and assigns.

DATE August 26, 2004	talmober
	Yuri Nikolaevich TOLMACHEV
DATE August 26, 2004	ylon
	Dang-joon MA
DATE August 26, 2004	Davala
	Sergiy Yakovlevich NAVALA
DATE August 26, 2004	Jail In
	Dae-il KIM

Page 2 of 2

RECORDED: 09/02/2004

PATENT⁴) REEL: 015781 FRAME: 0321