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| Yong-sik KWON | SAMSUNG ELECTRONICS CO., LTD. 416 Maetan-dong, Paldal-gu, Suwon-city, Gyunggi-do, Korea | | | |
| Jin-hee JEONG | 416 Maetan-dong, Paldal-gu, | | | |
| Jung-jin KIM 07/17/03 | Suwon-city, Gyunggi-do, | | | |
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| ' | | | | |
| Additional name(s) of conveying party(ies) attached? ☐ Yes ☑ No | | | | |
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| ☑ Assignment ☐ Merger | | | | |
| ☐ Security Agreement ☐ Change of Name | | | | |
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| Execution Date: July 2, 2003 | Additional name(s) & address(es) attached? ☐ Yes ☑ No | | | |
| 4. Application number(s) or patent number(s): | | | | |
| If this document is being filed together with a new application, the execution date of the application is: July 2, 2003 | | | | |
| A. Patent Application No.(s) | B. Patent No.(s) | | | |
| Not Yet Assigned | Not Yet Assigned | | | |
| Additional numbers a | ı attached? □ Yes ☑ No | | | |
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| SUGHRUE MION, PLLC | 7. Total fee (37 CFR 3.41): \$40.00 | | | |
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Assignment

Whereas, I/We, Yong-sik KWON, of 670-71, Seongsu-1ga-2dong, Seongdong-gu, Seoul, Korea, Jin-hee JEONG, of 24-3, 87-70, Imun-1-dong, Dongdaemun-gu, Seoul, Korea, Jung-jin KIM, of 1-502, Pyeonggwang Apartment, Beomer-4-dong, Suseong-gu, Daegu-city, Korea, respectively, hereinafter called assignors, have invented certain improvements in EQUALIZING METHOD AND APPARATUS FOR SINGLE CARRIER SYSTEM HAVING AN IMPROVED EQUALIZATION PERFORMANCE and executed an application for Letters Patent of the United States of America therefor on _______; and

Whereas, SAMSUNG ELECTRONICS CO., LTD., 416, Maetan-dong, Paldal-gu, Suwon-city, Gyunggi-do, Korea (assignee), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor;

Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

I/We, the above named assignors, hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America, including the right to claim priority under 35 U.S.C. §119, and I/we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I/we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States application when called upon to do so by the assignee.

| | • | • | meys SUGHRUE MIO | • |
|--------------------------------------------------------------------------|--------------------|----------------|--------------------------|-------------|
| Pennsylvania A | Avenue, NW, Washir | igton, DC 2003 | 7-3213 to insert here in | parentheses |
| (Application number | | and Confirm | and Confirmation number | |
|) the application number and filing date of said application when known. | | | | |
| Date: | 1470 - | | y 2, 2003 | |
| Date: | s/Yong-sik KW | | ly 2, 2003 | |
| Date: | s/Jin-hee KON | | July 2, 2003 | |
| | s/Jung-jin KIM | | | |

(Legalization not required for recording but is prima facie evidence of execution under 35 U.S.C. §261)

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PATENT REEL: 014311 FRAME: 0051