503276051 04/23/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3322669

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------|----------------|
| JAE WOO SEO | 01/16/2015 |
| JUNG HEE CHEON | 01/12/2015 |
| YONG HO HWANG | 01/16/2015 |
| JINSU KIM | 01/12/2015 |

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PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14693256 |

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NAME OF SUBMITTER: RANDAL K. WHITEHEAD

PATENT REEL: 035475 FRAME: 0870

| SIGNATURE: | / Randal K. Whitehead / |
|--|-------------------------|
| DATE SIGNED: | 04/23/2015 |
| Total Attachments: 1 source=Assignment#page1.tif | |

PATENT REEL: 035475 FRAME: 0871

U.S. ASSIGNMENT

S&H 1/14

IN CONSIDERATION of the sum of One Dollar (\$1.00), and of other good and valuable consideration paid to the undersigned inventor(s) (hereinafter, "ASSIGNOR") by

(Insert Name(s) & Address(es) of ASSIGNEE(S))

SAMSUNG ELECTRONICS CO., LTD. 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742 Republic of Korea

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(hereinafter, "ASSIGNEE"), the receipt of which is hereby acknowledged, the undersigned ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to the invention entitled (Title of Invention)

ENCRYPTION APPARATUS, METHOD FOR ENCRYPTION AND COMPUTER-READABLE RECORDING MEDIUM

| relating to International Patent Application PC was executed on even date herewith or, if not | |
|---|---|
| (a) executed on ; | (Insert date of execution of application, if not concurrent) |
| (b) filed on , To be assigned | Any registered attorney or patent agent of STAAS & HALSEY LLP, |
| Serial No. To be assigned; | 1201 New York Avenue, N.W., Suite 700 Washington, D.C. 20005 (202/434-1500) Is hereby authorized to insert in (b) the specified data, when known. |

and to said application and all Letters Patent(s) of the United States granted on said application and any continuation, division, renewal, substitute, reissue, reviews (including inter partes review, post grant review and covered business method review) or reexamination application based thereon, for the full term or terms for which the said Letters Patent(s) may be granted and including any extensions thereof (collectively, hereinafter, "said application(s) and Letters Patent(s)").

The ASSIGNOR agree(s), when requested by said ASSIGNEE and without charge to but at the expense of said ASSIGNEE, to do all acts which the ASSIGNEE may deem necessary, desirable or expedient, for securing, maintaining and enforcing protection for said invention, including in the preparation and prosecution of said application(s) and the issuance of said Letters Patent(s), in any interference, reissue, reexamination, or public use proceeding, and in any litigation or other legal proceeding which may arise or be declared in relation to same, such acts to include but not be limited to executing all papers, including separate assignments and declarations, taking all rightful oaths, providing sworn testimony, and obtaining and producing evidence.

| | WITNESS WHEREOF, the undersigned inv yped Name & Signature of Inventor(s)) | rentor(s) has (have) affixed his/h (Date) | ner/their signature(s). (Typed Name & Signature of Witness(es)) |
|----|---|--|--|
| I) | Jae, Uc., Sec | -017/01/16 | |
| 2) | Jung Hee Cheon | 20/5/01/12 | |
| 3) | Yong Ho Hwang | 2015/1/16 | |
| I) | Hirly line | 2015/01/12 | |

PATENT REEL: 035475 FRAME: 0872

RECORDED: 04/23/2015