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| Provisional Application for Patent Cover Sheet | | | | | |
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| This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c) | | | | | |
| Inventor(s) | | | | | |
| Inventor 1 | | | | | <input type="button" value="Remove"/> |
| Given Name | Middle Name | Family Name | City | State | Country j |
| Anil | | AGIWAL | Suwon-si | | KR |
| Inventor 2 | | | | | <input type="button" value="Remove"/> |
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| Youngbin | | CHANG | Anyang-si | | KR |
| All Inventors Must Be Listed – Additional Inventor Information blocks may be generated within this form by selecting the Add button. | | | | | <input type="button" value="Add"/> |
| Title of Invention | SYSTEM AND METHOD OF SIGNALING SYSTEM INFORMATION | | | | |
| Attorney Docket Number (if applicable) | 0203-1831 | | | | |
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| The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government. | |
| <input checked="" type="radio"/> No. | |
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Entity Status

Applicant asserts small entity status under 37 CFR 1.27 or applicant certifies micro entity status under 37 CFR 1.29

- Applicant asserts small entity status under 37 CFR 1.27
- Applicant certifies micro entity status under 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.
- No

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Signature

Please see 37 CFR 1.4(d) for the form of the signature.

| | | | | | |
|------------|-----------------|-----------|------|--------------------------------------|------------|
| Signature | /Maeng-Ho SHIN/ | | | Date (YYYY-MM-DD) | 2016-02-29 |
| First Name | Maeng-Ho | Last Name | Shin | Registration Number (If appropriate) | 53859 |

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**SYSTEM AND METHOD OF SIGNALING SYSTEM
INFORMATION**

INVENTION TITLE: System & Method of Signaling System Information

DESCRIPTION OF THE INVENTION

1. Describe the disadvantages of the prior art without mentioning your invention (Including any related publicly available documentation, such as journal articles or patents).

In the recent years several broadband wireless technologies have been developed to meet the growing number of broadband subscribers and to provide more and better applications and services. The second generation wireless communication system has been developed to provide voice services while ensuring the mobility of users. Third generation wireless communication system supports not only the voice service but also data service. In recent years, the fourth wireless communication system has been developed to provide high-speed data service. However, currently, the fourth generation wireless communication system suffers from lack of resources to meet the growing demand for high speed data services. So fifth generation wireless communication system is being developed to meet the growing demand for high speed data services, support ultra-reliability and low latency applications and support massive machine type communication.

In the fourth generation wireless communication system, enhanced node B (eNB) or base station in cell broadcast system information. System information is structured into master information block (MIB) and a set of system information blocks (SIBs). MIB consists of System Frame Number (SFN), Downlink System bandwidth and Physical Hybrid ARQ Feedback Indicator Channel (PHICH) configuration. MIB is transmitted every 40ms. It is repeated every 10ms wherein the first transmission occurs in subframe #0 when SFN mod 4 equals zero. MIB is transmitted on physical broadcast channel. System Information Block Type 1 carries cell indemnity, tracking area code, cell barring information, value tag (common for all scheduling units), and scheduling information of other SIBs. SIB 1 is transmitted every 80ms in subframe #5 when SFN mod 8 equals zero. SIB 1 is repeated in subframe#5 when SFN mod 2 equals zero. SIB 1 is transmitted on Physical downlink shared channel. Other SIBs (SIB 2 to SIB 19) are transmitted in System Information (SI) message wherein scheduling info of these SIBs are indicated in SIB 1. SIBs having same periodicity can be transmitted in one SI message. SI message is broadcasted on Physical downlink shared channel. Various SIBs, their usage and typical size is indicated in Table 1 below.

Table 1 System Information in 4G System

| SIB Type | Content | SIB Size |
|----------|--|-----------------|
| SIB 1 | Cell ID, value tag & Scheduling info | ~500bits |
| SIB 2 | AC-Barring, RACH Info | 2216 bits (Max) |
| SIB 3 | Common Cell reselection info & intra frequency cell reselection parameters | ~100bits |
| SIB 4 | Intra frequency neighbor cell info | ~750bits |
| SIB 5 | Inter frequency cell reselection information | ~1000bits |
| SIB 6 | UTRA cell reselection information | ~1000bits |
| SIB 7 | GERAN cell reselection information | ~1000bits |
| SIB 8 | CDMA 2000 cell reselection information | 2216 bits (Max) |
| SIB 9 | Home eNB Info | ~56bits |

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