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| **Author(s) Name:** | Christin Nabonita Halder Jui1 , Kazi Firoz Ahmed2 | | |
| **Contact Email(s):** | k.firoz@aiub.edu | | |
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| **Abstract:** |  |
| GSM (Global System for Mobile Communications) is a standard developed by the European Telecommunications Standards Institute (ETSI) to describe protocols for second generation (2G) digital cellular networks used by mobile phones. A channel is used to convey the information signals. SUI channel model are an extension of the previously work by AT&T Wireless and Ercegetal. The main objective of this paper is to get better performance of GSM system using SUI channel model. Considering this goal, the simulation has been done. The performance is analyzed, which shows satisfactory BER for higher SNR. This result is compared with the performance of GSM system using AWGN channel. BER is affected by a number of factors. By modifying the variables that can be controlled, it is possible to optimize a system to provide the performance levels that are required. This article shows the better performance of GSM system using SUI channel than AWGN channel. | |