Abstract

This paper introduces design and simulation of random access procedure taking place in Medium Access Control (MAC) sub-layer of Long Term Evaluation (LTE) User Equipment (UE) terminal. The random access procedure is required for completing connection establishment procedure occurring in the Radio Resource Control (RRC) layer to change from RRC_IDLE state to RRC_CONNECTED state. The design is based on 3GPP release 9 standards and implemented using Specification and Description Language (SDL). As an output from DL, the Message Sequence Chart (MSC) simulator trace shows that the built contention and non contention connection establishment, based on random access processes, prove their correct functionality and feasibility.

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Index Terms

Computer Science

Networks
Keywords
LTE; the random access procedure; MAC Sub-layer; contention; non-contention; SDL