Performance Analysis of License Assisted Access LTE with Asymmetric Hidden Terminals
ABSTRACT

• This paper considers an LAA-LTE eNB coexisting with asymmetric hidden Wi-Fi APs where the eNB can detect the APs while the APs cannot, which is caused by the asymmetric CCA thresholds.

• The behavior of such a network is modeled by a joint Markov chain, using which steady state probabilities, throughput, and channel access delay are derived analytically.

• An extensive evaluation confirms that the proposed analysis correctly models the dynamics of LAA-WLAN coexistence, and identifies important design guidelines for fair coexistence as follows.
License Assisted Access LTE is a new type of LTE that aggregates the licensed LTE bands with the unlicensed bands via carrier aggregation. To operate in unlicensed bands, LAA-LTE adopts the listen-before-talk policy and designs its channel access mechanism similar to WLAN’s DCF.
PROPOSED SYSTEM

• First, LAA-LTE should enable channel access priority class 4 to exploit its large contention window.
• Second, LAA-LTE should re-design its CW doubling policy to restore the balance between LAA-LTE and WLAN in throughput and channel access delay.
• In this work, we captured the asymmetric hidden terminal problem in an LAA network by modeling the network with a joint MC, and derived its stationary probabilities along with the key performance metrics
HARDWARE REQUIREMENTS

• Processor                 -              Intel core i3
• RAM       -  2B
• Hard Disk       -  20 GB
SOFTWARE REQUIREMENTS

• Operating System : LINUX
• Tool : Network Simulator-2
• Front End : OTCL (Object Oriented Tool Command Language)
REFERENCE


