

## ABSTRACT

CDMA EVDO Rev. A is the development of CDMA 2000 1x wireless technology. CDMA EVDO Rev A technology offers maximum speed of downlink data rate up to 3,1 Mbps (*download*) and speed of uplink data rate up to 1,8 Mbps (*upload*). CDMA EVDO Rev. A was implemented and commercialized by the end of the year 2009. Coverage of this network already implemented in some cities such as Bandung, Jakarta, Denpasar and some other cities because big cities need more reliable coverage network and good performance service.

This thesis discuss data service transmission performance of CDMA EVDO Rev. A network SF's operator on dense urban, urban and sub urban which is categorized by BTS. Performance of data service in this network which has already analyzed is the comparison between the result from one RF planning software simulation system and from the result of field measurement by drive test. Key Performance Indicator analyzed are Ec/Io, C/I and Rx Power.

Simulation and measurement results gained correction factor for parameters Ec/Io, C/I and Rx Power but the parameters existing that can be applied in simulation are just Ec/Io and Rx Power. For the parameters Ec/Io obtained correction factor of 0.08 dB in dense urban areas, urban areas at 0.98 dB, and sub urban areas accounted for 1.95 dB. Correction factor can be obtained by adjusting the power allocated to pilot power of (31.5 to 32.92) dBm. As for parameters Rx Power obtained correction factor value in the dense urban areas of 15.04 dB, urban areas of 12.39 dB, and sub urban areas of 21.01 dB. Correction factor is obtained by reducing the BTS transmit power of 15.04 dBm in dense urban areas, 12.39 dBm in urban areas, and 21.01 dBm in sub urban areas.

Keywords: CDMA EVDO Rev. A, Drive Test, RF Planning Software, Correction Factor