SPAWAR Systems Center PACIFIC

Drive Test

Drive Test Measurements in San Francisco, San Diego, & Talladega.

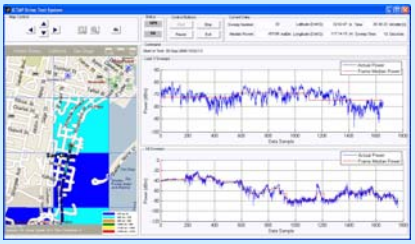
Background

Technical information on RF coverage was reviewed and analyzed, then a drive test route was planned for the signal measurements. The route was driven and signal strength measurements were taken. These were used to calibrate the propagation prediction tool for RF coverage. Discrepancies between the coverage model and the acceptance test were identified and passed to the local procuring agency.

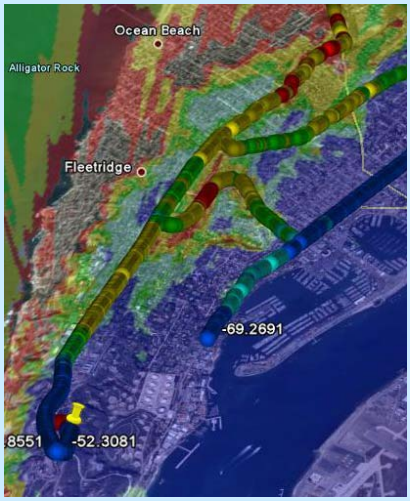
September 11, 2001, and large disasters such as hurricane Katrina, revealed several weaknesses in communications operability and interoperability among first responders in the United States. These events accelerated the development of the TIA-TR8 Project 25 Standards for Land Mobile Radio (LMR) communications. A critical element of this process is radio frequency coverage acceptance testing of the completed systems to verify the design and service area performance. By convention, the procedures for this testing are laid out in the TIA Bulletin TSB-88.

The Technology

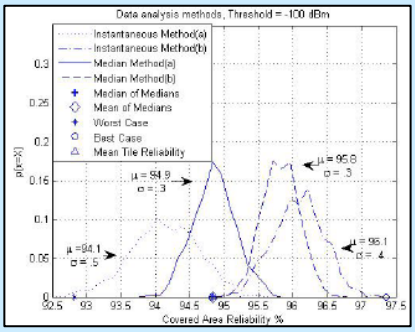
RF Coverage Drive Tests are implemented using a low cost drive testing system with high spatial resolution and real time derivation of performance metrics to measure signal coverage in LMR systems. More data is collected than is common. This augmented data can also be analyzed in more ways than specified in the standard.



Drive Test System User Interface



Signal Strength Measurements Plotted Against RF Propagation Prediction



Alternative Analysis Options from MILCOM 2008 Paper

Approved for public release; distribution is unlimited.

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