A Model and Simulation of a DOD Communication Network Based on the Stochastic Process in Real Time

The Oak Ridge National Laboratory (ORNL) is working on a communication model that will provide information and data among large spatially displaced elements in the battle field. This is associated with latency, and how it applies in the Combat I.D. System. The project was designed to develop the next generations Speed of Service Communication Model relevant to the Combat I.D. The main task was to develop a Markov Chain and its associated probability that will be a function of the elements, latency, data, integrity, and commander's confidence information. My responsibility was to generate a function that would calculate the total probability for a Markov Model. During the Markov process, the amount of latency from one state to another state will be computed. The result of this research will be integrated into a Combat I.D. Systems of Systems Application and will be used to access information flow and integrity verifying network simulation.

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