



US Marine Corps Uses JCSS (formerly NETWARS) to Predict C4I System Performance on the Battlefield

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The US Marine Corps Systems Command is responsible for providing deployed Marines with advanced equipment and systems to ensure mission success. C4I, one of these advanced technologies, leverages information systems for command, control, situational awareness, and intelligence-gathering on the battlefield. Successfully deploying C4I systems requires accurately predicting their performance in the inherently unpredictable network conditions of the battlefield.

Joint Communication Simulation System (JCSS) is a simulation-based tactical network planning software used by multiple branches of the military. The Marine Corps uses JCSS to predict the performance of new C4I systems before deployment. JCSS incorporates hundreds of tactical equipment models, which the Marine Corps customized to meet their unique requirements. To test the new C4I systems, they created a complete, virtual Marine Expeditionary Force (MEF) in JCSS, including prototype devices and hundreds of deployed forces. Various "what if" scenarios were configured to analyze different battlefield conditions. JCSS quickly identified bottlenecks in the C4I systems that could result in failure on the battlefield. Using the software's collaborative environment, the Marine Corps worked with the equipment providers to diagnose problems and evaluate potential fixes.

"JCSS (formerly NETWARS) readily identified failure points that could have jeopardized operations. Its collaborative environment minimized iterations between the Marine Corps and our equipment provider, accelerating problem diagnosis and resolution."

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