



## OFFICE OF THE DEPUTY ASSISTANT SECRETARY OF DEFENSE SYSTEMS ENGINEERING

### System of Systems Engineering Collaborators Information Exchange (SoSECIE)

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#### Joint Interoperability Test Command (JITC): Providing Agile Test and Evaluation in Support of Converged Networked Services

Mr Richard Delgado, Jr., Joint Interoperability Test Command

##### Abstract

Today's warfighters require network services that are robust, scalable, and secure in order to prosecute modern combat actions in a fully integrated and interoperable networked environment. These services must support numerous combat, logistics, intelligence, and information systems delivered over various transport mediums to support strategic, operational, and tactical operations. The Department of Defense (DoD) efforts to deliver converged Internet Protocol (IP) services will provide these capabilities. Unified Capabilities (UC) and the ability to deliver voice, video, and data services over a common IP-based network architecture will allow the military and government to capitalize on the latest commercial technologies. By implementing Agile and streamlined test, evaluation, and certification methodologies, the JITC has been able to integrate test and evaluation into the overall UC system engineering plan to deliver these capabilities faster and more efficiently.

While current DoD acquisition policies are being modified to support rapid IT acquisition, the process is still too lengthy. Traditional strategies can't keep pace with rapidly changing commercial technology and changing requirements. While typical system acquisition timelines are measured in months and years, warfighter requirements evolve in terms of weeks and months. The DoD Chief Information Office (DoD CIO), the Defense Information Systems Agency (DISA), and the Military Departments have established a comprehensive systems engineering framework of governance, requirements, network engineering, and integrated test and evaluation to ensure that robust, secure, and interoperable UC services are delivered to the warfighter in a more timely manner.

The DoD CIO has provided a solid foundation of governance and policy on which UC implementation strategies have been built. The recently published DoD Instruction (DoDI) 8100.04, the updated Unified Capabilities Requirement (UCR) 2008 – Change 3, and other policy documents provide the governance for the implementation of UC services. Various requirements documents, strategic plans, implementation guides, and network cutover plans ensure top down and bottom-up synchronization for successful implementation from the DISN Core to the tactical edge. JITC, in coordination with the UC community, has developed an integrated testing strategy to support the developmental testing of commercial products to provide assured delivery of voice, video, and data services. This includes a method to conduct proof of concept evaluations to determine technology maturity and refine requirements to align with operational need. This strategy brings in the vendor community, the test community, and the user community to properly evaluate developmental technologies and make an early determination of applicability, interoperability, and sustainability. This shortens the delivery cycle and allows the DoD to deliver commercially available technologies faster, while maintaining rigor in the systems engineering process. JITC is also championing the test and evaluation of individual UC products that are destined for the UC Approved Product List (APL). The UC APL is the mechanism to provide the DoD acquisition community, the Services, and Components, a list of products that have been certified against the common



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set of Interoperability (IO) and Information Assurance (IA) requirements called out in the UCR 2008 Change 3. To support the certification of numerous UC products, the UC community has established a distributed testing concept to engage all available testing resources. Using the idea of “test once, for many” the UC testing concept is focused on providing DoD Components with interoperable and secure voice, video, and data products faster, while maintaining interoperability and information assurance standards in the process. Together, the UC community has developed a comprehensive strategy of governance, engineering, acquisition, and testing to deliver voice, video, and data services over a common IP-based network architecture. This is proving to be a viable strategy to deliver critical and effective communications capabilities faster to our nation’s warfighters.

### **Biography**

Richard Delgado is a Senior Engineer for Battlespace Communications Portfolio (JTE) in the Joint Interoperability Test Command under Defense Information Systems Agency. He is the JITC lead for overseeing and integrating the testing processes, policies, and infrastructures for the certification testing of Unified Capabilities (UC).