

Presentation Abstract

Presentation Title	Test Design Validation
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Presentation Abstract	<p>It is important to view test design from the eyes of a test engineer. Understanding the test development process will improve the ability to provide useful IV&V for test artifacts. “Three questions” can greatly help in the test design validation. The presentation will focus on how the purpose of test is to help ensure that the software under test achieves the goals stated in the three questions. The presentation will include discussion relative to test complexity; test references; software integrity and risk levels; DO-test definitions; and the goals of different types of tests. Test design validation is performed by the IV&V team in order to ensure the test artifacts specify the correct execution sequence, real life test inputs, predicted results, and sets of execution conditions necessary to satisfy their intended test objectives (covering both nominal and off-nominal conditions). This presentation discusses how the three questions are used as drivers to evaluate the test design. Validation of test design for the off nominal behavior is a significant challenge. This presentation will share techniques that will greatly help the IV&V team in identifying the off nominal behaviors and then using these behaviors to validate the test design. The presentation describes the development of software test scenarios and prioritizing key test scenarios for test validation. The presentation shares with the audience lessons learned while validating test design for a large NASA system.</p>