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Title: Software Technology Readiness Assessment - Defense Acquisition Guidance

Abstract Text: A central theme of the defense acquisition process is that the technology employed in weapon system development should be “mature” before system development begins. A Technology Readiness Assessment (TRA) is a systematic, metrics-based process and an accompanying report that assesses the maturity of selected technologies, called Critical Technology Elements (CTEs,) used in weapon systems. The final TRA report, presented to the Milestone Decision Authority, describes how these CTEs were identified and provides an independent rating of their maturity. The DoD in its TRA Deskbook does offer quite substantial help on assessing hardware technologies, but with respect to software, the guidance is weak and ambiguous. Based on broad experiences stemming from the support provided to numerous space acquisition programs, the tutorial’s objective is to offer tangible guidance on identifying CTEs and establishing Technology Readiness Levels (TRLs) for software, and to provide further insights into several, related dimensions of technology risk mitigation.

Objectives:

• Gain familiarity with the TRA logistics context and the TRA stakeholders
• Learn how to identify software CTEs
• Learn how to deal with the hardware-software dependencies
• Learn How to rate the maturity of software CTEs
• Understand the difference between a TRA and customary risk management practices