



Systems Engineering Collaborators Information Exchange (SECIE)

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QUASAR (QUality Assessment of software-intensive System Architectures and their Requirements)

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Abstract

QUASAR (QUality Assessment of software-intensive System Architectures and their Requirements) is a method for independently assessing the quality of a system's architecture and the architecturally-significant requirements that both drive the architecture and against which it should be assessed. QUASAR was developed on the F-35 Lightning II Joint Strike Fighter Program as a way of verifying contract compliance with major architecturally-significant requirements. QUASAR is based on the concept of a quality case, which is an organized way for requirements engineers and architects to demonstrate to the assessment team that their requirements and architectures have sufficient quality. QUASAR requirements and architecture quality cases consist of the developer's claims that their requirements and architecture have sufficient quality, their clear and compelling arguments for why the contracting agency should believe these claims, and the contractor's evidence supporting their arguments.

Biography

A senior member of the technical staff at the SEI, Donald Firesmith works in the Acquisition Support Program (ASP) where he helps the US Department of Defense acquire large complex software-intensive systems. With 30 years of industry experience, he has published 6 software and system engineering books in the areas of process, object-oriented development, and system architecture engineering. He is currently writing a book on engineering safety- and security-related requirements. He has also published dozens of technical articles, spoken at numerous international conferences, and has been the program chair or on the program committee of several conferences. He has taught several hundred courses in industry and numerous tutorials at conferences. He is also the founding chair of the OPEN Process Framework (OPF) Repository organization www.opfro.org, which provides the world's largest free open-source website documenting over 1,100 reusable method components.