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Defence Standard 00-56 Issue 4

Safety Management Requirements for Defence Systems

Def Stan 00-56 has recently been updated to Issue 4 and is now available through the DStan website or in hard copy from the DStan Helpdesk. Issue 4 is a clarification of Interim Defence Standard 00-56 Issue 3. It removes the “Interim” status, but does not introduce significant new requirements or policies. The revised standard was prepared by the MoD Safety Standards Review Committee (SSRC) on the basis of feedback and comments on the previous issue. These were received both from MoD stakeholders and users in industry, such as the Society of British Aerospace Companies.

Def Stan 00-56 is intended to be used contractually, to set out the MoD’s requirements for safety management in the delivery of a system or service. Primarily it defines the safety interface between the MoD and its suppliers, but it can also be used by prime contractors to flow their requirements down to subcontractors. As such, safety managers, commercial officers and other project staff should all be familiar with its contents.

Goal-Based



With Issue 3, Def Stan 00-56 adopted a goal-based philosophy. Experience had shown that the prescriptive requirements of earlier issues were unnecessarily onerous for contractors. They were not allowed the flexibility to achieve safety using the best approach for their particular project. Additionally, examples illustrating techniques in the Standard were all too often copied directly, without being tailored to suit the application. Now, the goal-based approach means that the Def Stan 00-56 sets out general requirements, but does not define the method in which they are to be met. It is the responsibility of the contractor to propose and justify their method of compliance. The aim is to be “as civil as possible, as military as necessary”. This can allow contractors to use compliance with other relevant standards as part of their argument for compliance with 00-56. By using this approach, the Defence Standard can be usefully applied to a much wider range of acquisition strategies, project stages and technology domains.



Key among the requirements of Def Stan 00-56 is reduction of safety risks to a level that is as low as reasonably practicable, and also sufficiently low to be considered tolerable or broadly acceptable. A safety case is also required, presenting a structured argument that the system is adequately safe for a given application in a given operating environment. The safety case brings together evidence from all the activities that have been carried out to ensure and demonstrate the safety of the system throughout its life. As well as showing how risks have been controlled, it will also demonstrate that the system meets its project-specific safety requirements. These requirements are not given by the Standard, but must be included in the System Requirements Document, or other contractual specification. They might include requirements for allowable accident or failure rates, operation in specific environments, particular standards which must be complied with, certification that must be obtained, or other constraints for the project. Some safety requirements will also be derived during the design process, in order to mitigate or remove risks posed by the system.

For further advice on Def Stan 00-56, contact your functional safety office, or the Acquisition Safety and Environmental Group on +44 (0)117 913 5387.

Supporting Guidance

Publication of Def Stan 00-56 Issue 3 made several other Defence Standards obsolete (00-54, 00-55 and 00-58). It was no longer necessary to provide the guidance these standards gave in a purely military context. However, there is a strong desire in the Defence community for direction on how safety-critical software (and complex electronic systems in general), should comply with the new Def Stan 00-56, now that Def Stan 00-55 is obsolescent. This guidance is planned for publication in August 2007. It will be aimed to give project desk officers advice on the applicable principles and techniques, and the evidence that can be derived from their use. It will also be useful to contractors, to give an idea of what should be expected of them.