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Quality and Safety, always a beginning! (1)

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IMPLEMENTATION OF THE SPACE PROJECT DOCUMENTATION STANDARD USING WEB-BASED APPLICATION SOFTWARE

Abstract

Project documentation plays an important role in a space program. The space mission life-cycle, covering from phase 0 to disposal, involves a big amount of data including mission, design, testing, production, and operation data. The design phase, in particular, involves iterations to arrive at the best possible solution which satisfies the constraints and requirements. The interconnection between the project elements added to the complexity in managing the data. Moreover, time constraint often becomes a challenge. This paper describes the implementation of a project documentation system that provides an efficient way to deal with the documents and other data. The documentation system refers to the requirements described in ECSS-M-ST-40C; configuration management (CM) and information/documentation management (IDM). The key component of the documentation system is the development of an application software tailored for a satellite program named SDDS (Satellite Development Documentation Software). The software is built using the PHP programming language with MySql database and Apache web server engine. The web-based software is created to allow the users to access it from anywhere. The feature of the software includes the capability to update the requirements and subsequently provide direct notification to the users (subsystems) to whom the requirements are assigned. In a more general context, the traceability of the design evolution as one of the configuration management objectives can be achieved by using the software.