ESA Architecture Framework (ESA-AF) Upgrade

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One of the main objectives of the ESA Architecture Framework (ESA-AF) Upgrade activity was to provide extensions to the ESA-AF tooling in order to facilitate the adoption of the framework by end users without extensive knowledge of formal modelling languages. Particularly, the ESA-AF meta-model is based on the Object Management Group (OMG) Unified Profile for DoDAF and MODAF, where DoDAF stands for the US Department of Defense Architecture Framework (DoDAF) and MODAF for the UK Ministry of Defence Architecture Framework. These frameworks support enterprise architecture modelling, reconciling strategic, operational, procurement, programmatic, and technical concerns. Further, UPDM incorporates fully the OMG System Modeling Language (SysML) and partially the OMG Service Oriented Architecture Modeling Language (SoaML). All underlying meta-models are based on the OMG Unified Modeling Language (UML). The required extensive formal UML modelling knowledge has been a barrier for the broad adoption of ESA-AF in ESA projects. This issue has been addressed in the ESA-AF Upgrade activity by providing a form-based modelling environment, where users enter data into forms and the underlying UML model is created behind the scenes by the modelling tool. A further aspect addressed through the upgrade activity is the elaboration of high-level System of Systems (SoS) component libraries, which can be reused in ESA-AF architectures. The overall ESA-AF tooling has been upgraded to the latest versions of the underlying third-party software - MagicDraw and Eclipse. Finally, the ESA-AF documentation has been updated to reflect the form-based modelling environment and SoS component library extensions. Video tutorials for the modelling tool have been provided.