

Architecting in the Fourth Dimension - Temporal Aspects of DoDAF

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Abstract. The capture of system structure, behavior, configuration, interaction, and compliance is common practice in architectures. These are largely static views showing a specific configuration or behavior. IEEE Std 610.12_1990 defines architecture as _the fundamental organization of a system embodied in its components, their relationships to each other, and to the environment, and the principles guiding its design and evolution._ (IEEE, 1990) Modeling this evolution or the temporal aspects in architecture frameworks such as the Department of Defense Architecture Framework (DoDAF) was previously problematic. With the release of DoDAF version 2.0, architectures can now take the fourth dimension (Time) into account. The challenge is to identify areas of architecture where time can be modeled and how to take best advantage of it. Also problematic is how to express these concepts without having to expose all the internal ontological relationships upon which DoDAF is built. The Unified Profile for DoDAF and MODAF (UPDM) delivers an implementation of DoDAF 2.0 that provides a clear and concise way of expressing these concepts without requiring the user to become an expert in the DoDAF 2.0 _internal wiring_ and detailed ontological concepts. This paper will examine the temporal concepts defined in DoDAF 2.0 and show how time can be effectively integrated into a model to express essential temporal concepts.