

SV-10b : Systems State Transition Description

This document defines the mapping between the DODAF SV-10b Systems State Transition Description and the ISO 10303 AP233 Systems Engineering information model. The SV-10b mapping is almost identical to the OV-6b Operational State Transition Description mapping. Only the differences for SV-10b are described below.

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1. Introduction

The SV-10b Systems State Transition Description Product Description in the DoDAF Volume II: Product Descriptions document defined SV-10b as follows.

The Systems State Transition Description is a graphical method of describing a system (or system function) response to various events by changing its state. The diagram basically represents the sets of events to which the systems in the architecture will respond (by taking an action to move to a new state) as a function of its current state. Each transition specifies an event and an action.

DoDAF Volume II also describes the use of various types of diagrams for representing SV-10b content.

2. SV-10b AP233 Mapping Issues

Warning:

At the time this document was written, AP233 was still undergoing development.

This section describes the issues in mapping between SV-10b Systems State Transition Description and ISO AP233 as of the date of publication of this document. These issues may be addressed in future work by the DoDAF Working Group, the ISO AP233 development team or others.

1. See OV-6b Issues

3. Mapping SV-10b CADM XML to AP233 XML

This section defines the mapping from the CADM XML representation of concepts unique to an SV-10b Systems State Transition Description into an ISO AP233 XML representation of that same data. The mapping is defined at the detailed level of the XML elements and attributes themselves as it is aimed at implementors. See AP233 for more information on the AP233 XML Schema and the AP233 EXPRESS schema.

Please review the rules for AP233 XML data production as they are applicable to all implementations.

The SV-10b System State Transition Description mapping is almost identical to the OV-6b Operational State Transition Description mapping. Only the differences for SV-10b are specified in the following tables.

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3.1. SV-10b Mapping

This section describes the mapping for the CADM SV-10b STATE-TRANSITION-DESCRIPTION itself. It is represented by the ST_TRANS_DESCR XML element.

CADM XML Concept(s)	AP233 XML Element(s) or Attributes(s)
ST_TRANS_DESCR / ST_TR_DSC_DOC_ID	A Document with related version and definition, as specified in CADM Documents, as in AP233 approach to documents. The Document, as specified and related version and definition are classified as STATE-TRANSITION-DESCRIPTION .
ST_TRANS_DESCR / ST_TRND_USE_TY_CD	The classification of the Document representing the System Systems State Transition Description when the following value. <ul style="list-style-type: none">• 02 = SYSTEMS STATE TRANSITION DESCRIPTION PRODUCT classified as State Machine Systems Otherwise, the State Machine is not a Systems Product.

Table 1: STATE-TRANSITION-DESCRIPTION (ST_TRANS_DESCR element) Mapping