

# OV-1 : High-Level Operational Concept Graphic

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

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*This document defines the mapping between the DODAF OV-1 High-Level Operational Concept Graphic and the ISO 10303 AP233 Systems Engineering information model. This mapping is defined for the purpose of enabling data exchange between computer applications supporting the ISO AP233 standard and those supporting the US DoDAF CADM format, specifically CADM 1.02.*

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## 1. Introduction

The OV-1 High- Level Operational Concept Graphic in the DoDAF Volume II: Product Descriptions document defines OV-1 as follows.

The High-Level Operational Concept Graphic describes a mission and highlights main operational nodes (see OV-2 definition) and interesting or unique aspects of operations. It provides a description of the interactions between the subject architecture and its environment, and between the architecture and external systems. A textual description accompanying the graphic is crucial. Graphics alone are not sufficient for capturing the necessary architecture data.

The purpose of OV-1 is to provide a quick, high-level description of what the architecture is supposed to do, and how it is supposed to do it. This product can be used to orient and focus detailed discussions. Its main utility is as a facilitator of human communication, and it is intended for presentation to high- level decision makers.

## 2. OV-1 Concepts

The following concepts are represented in a High-Level Operational Concept Graphic.

- business processes or missions
- high-level operations
- organizations
- geographical distribution of assets.

## 3. OV-1 AP233 Mapping Issues

**Warning:**

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

This section describes the issues in mapping between OV-1 High-Level Operational Concept Graphic 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. Diagrams and layout are out-of-scope for AP233 Edition 1.

## 4. Mapping OV-1 CADM XML to AP233 XML

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This section defines the mapping from the CADM XML representation of OV-1 High-Level Operational Concept Graphic into an ISO AP233 XML representation of that same data. 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.

### 4.1. OV-1 Mapping

This section describes the mapping for the CADM OV-1 High-Level Operational Concept Graphic itself.

This section specifies the mapping of the CADM Concept Graphic concept.

The following table specifies the CADM XML CONCEPT\_GRAPHIC mapping.

See Example CONCEPT\_GRAPHIC for example CADM XML OV-1 data.

CADM XML Element(s)	AP233 XML Element(s) or Attributes(s)
CONCEPT_GRAPHIC	An AP233 <code>Document</code> with related version and definition as specified in AP233 approach to documents (also see the CADM Document Mapping and Example DOC for example CADM XML Document data.). The <code>Document</code> and related version and definition are classified to specify their type (at least as a <b>CONCEPT GRAPHIC</b> ). Although <code>Digital_document_definition</code> is specified see <code>DOC_TY_CD</code> below as other kinds of document definitions are supported in AP233 and may be utilized.
CONCEPT_GRAPHIC / DOC_ID	The identifier of the AP233 <code>Document</code> representing the CADM Concept Graphic.
CONCEPT_GRAPHIC / CONCGR_PHYS_TY_CD	The classification of the AP233 <code>Digital_document_definition</code> representing the CADM Concept Graphic depending on the value as follows: <ul style="list-style-type: none"><li>• 01 = COMPRESSED BIT GRAPHIC as <b>CompressedBitGraphic</b></li><li>• 02 = VUGRAPH as <b>Vugraph</b></li><li>• 03 = PHOTOGRAPHIC IMAGE as <b>ProtographicImage</b></li><li>• 04 = ENCAPSULATED as <b>Encapsulated</b></li><li>• 05 = POSTSCRIPT as <b>Postscript</b></li><li>• 08 = NOT SPECIFIED as</li></ul>

	<p><b>GraphicTypeNotSpecified</b></p> <ul style="list-style-type: none"> <li>09 = NOT KNOWN as <b>GraphicTypeNotKnown</b></li> </ul>
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**Table 1: Within the CONCEPT\_GRAPHIC\_TBL CADM XML Element**

#### 4.2. OV-1 Document Association Mapping

This section specifies the mapping of the CADM Document Association concept.

See Example DOC\_ASSOC for example CADM XML OV-1 data.

The following table specifies the CADM DOC\_ASSOC mapping.

CADM XML Element(s)	AP233 XML Element(s) or Attributes(s)
DOC_ASSOC	An AP233 Document_definition_relationship, as described in the AP233 approach to documents.
DOC_ASSOC / DOCASSOCBGNCALDTTM	Following the AP233 approach to dates and times, an AP233 Date_or_date_time_assignment element where the child Items element refers to the Document_definition_relationship representing CADM DOCUMENT-ASSOCIATION and the Date_or_date_time_assignment is classified as an <b>Date_actual_start</b> .
DOC_ASSOC / DOCASSOCENDCALDTTM	Following the AP233 approach to dates and times, an AP233 Date_or_date_time_assignment element where the child Items element refers to the Document_definition_relationship representing CADM DOCUMENT-ASSOCIATION and the Date_or_date_time_assignment is classified as an <b>Date_actual_end</b> .
DOC_ASSOC / DOCA_ID	The AP233 identifier of the Document_definition_relationship.
DOC_ASSOC / DOC_ASSOC_RSN_CD	The classification of the Document_definition_relationship as follows depending on the value. <ul style="list-style-type: none"> <li>01 = DOCUMENT CANCELS OTHER DOCUMENT</li> <li>02 = DOCUMENT INCLUDES OTHER</li> </ul>

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	<p>DOCUMENT</p> <ul style="list-style-type: none"> <li>• 03 = DOCUMENT REFERENCES OTHER DOCUMENT</li> <li>• 04 = DOCUMENT REPLACES OTHER DOCUMENT</li> <li>• 05 = DOCUMENT IS FUNCTIONALLY REQUIRED BY OTHER DOCUMENT</li> <li>• 06 = DOCUMENT IS ATTACHEMENT TO OTHER DOCUMENT</li> <li>• 07 = DOCUMENT IS AN ENCLOSURE OF OTHER DOCUMENT</li> <li>• 08 = DOCUMENT SUPERSEDES OTHER DOCUMENT</li> <li>• 09 = DOCUMENT PROVIDES AUTHORITY FOR OTHER DOCUMENT</li> <li>• 10 = DOCUMENT SUPPLEMENTS OTHER DOCUMENT</li> <li>• 11 = DOCUMENT GRAPHICALLY DEPICTS INFORMATION CONTAINED IN OTHER DOCUMENT</li> <li>• 12 = DOCUMENT IS INCLUDED BY REFERENCE TO OTHER DOCUMENT</li> <li>• 13 = DOCUMENT IS ESSENTIALLY THE SAME AS OTHER DOCUMENT</li> <li>• 14 = DOCUMENT IS OTHERWISE RELATED TO OTHER DOCUMENT</li> <li>• 15 = DOCUMENT PREVIOUSLY SUBMITTED AS OTHER DOCUMENT</li> </ul>
DOC_ASSOC / ORD_DOC_ID	<p>A reference to the AP233 Document_definition instance representing the CADM Ordinate Document, in the Relating_document_definition child element of the Document_definition_relationship.</p>
DOC_ASSOC / SUB_DOC_ID	<p>A reference to the AP233 Document_definition instance representing the CADM Subordinate Document, in the Relating_document_definition child element of the Document_definition_relationship.</p>

**Table 1: Within the DOC\_ASSOC\_TBL CADM XML Element**

### 4.3. OV-1 Graphic Mapping

This section specifies the mapping of the CADM Graphic concept.

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See Example GRAPHIC for example CADM XML OV-1 data.

The following table specifies the CADM GRAPHIC mapping.

CADM XML Element(s)	AP233 XML Element(s) or Attributes(s)
GRAPHIC	An AP233 Document, Document_version and Document_definition or Digital_document_definition as described in the AP233 approach to documents. See the SV-1 Document mapping for more details.
GRAPHIC / GRAPHIC_CAT_CD	A classification of the Document_definition as follows based on the value. <ul style="list-style-type: none"> <li>• when 01 = ICON, classified as <b>GRAPHIC_CATETORY_ICON</b></li> <li>• when 02 = CONNECTOR, classified as <b>GRAPHIC_CATETORY_CONNECTOR</b></li> <li>• when 03 = GEOMETRIC FIGURE, classified as <b>GRAPHIC_CATETORY_GEOMETRIC_FIGURE</b></li> <li>• when 08 = NOT SPECIFIED, classified as <b>GRAPHIC_CATETORY_NOT_SPECIFIED</b></li> <li>• when 09 = NOT KNOWN, classified as <b>GRAPHIC_CATETORY_NOT_KNOWN</b></li> </ul>
GRAPHIC / GRAPHIC_DATA_TY_CD	A classification of the Document_definition as follows based on the value. <ul style="list-style-type: none"> <li>• when 01 = OLE Object, classified as <b>GRAPHIC_DATATYPE_OLE</b></li> <li>• when 98 = NOT SPECIFIED, classified as <b>GRAPHIC_DATATYPE_NOT_SPECIFIED</b></li> <li>• when 99 = NOT KNOWN, classified as <b>GRAPHIC_DATATYPE_NOT_KNOWN</b></li> </ul>
GRAPHIC / GRAPHIC_DOC_ID	The identifier of the AP233 Document representing the CADM Graphic.
GRAPHIC / GRAPHIC_LABEL_TX	An AP233 Description_text and related assignment as specified in with the assignment classified as a <b>GraphicLabel</b> .

**Table 1: Within the GRAPHIC\_TBL CADM XML Element**

## 5. Example OV-1 CADM XML Data

This section contains example OV-1 CADM XML data.

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### 5.1. Example CONCEPT\_GRAPHIC

```
<CONCEPT_GRAPHIC>
  <DOC_ID>333</DOC_ID>
  <CONCGR_PHYS_TY_CD>02</CONCGR_PHYS_TY_CD>
</CONCEPT_GRAPHIC>

<DOC>
  <DOC_ID>333</DOC_ID>
  <DOC_NM>DoD Electronic Commerce Concept of Operations (OV-1)</DOC_NM>
  <SC_CD>14</SC_CD>
  <CSC_ID>20000001</CSC_ID>
  <TIME_FRAME_PRD_ID>20102341</TIME_FRAME_PRD_ID>
  <DOC_APP_CALDT>20031126</DOC_APP_CALDT>
  <DOC_ABBRV_NM>EComm ConOp</DOC_ABBRV_NM>
  <DOC_ARCHPROD_TY_CD>6</DOC_ARCHPROD_TY_CD>
  <DOC_ORIGINATOR_NM>AIP PHASE II TEAM</DOC_ORIGINATOR_NM>
  <DOC_CRTN_CALDT>20031203</DOC_CRTN_CALDT>
  <DOC_DESC_TX>illustrates the concept of electronic commerce in the DoD,
including the
      relevant business areas and support to the warfighter.
  </DOC_DESC_TX>
  <DOC_NOTATION_TX>TEXT</DOC_NOTATION_TX>
  <DOC_CAT_CD>J</DOC_CAT_CD>
  <DOC_PROMULG_CD>998</DOC_PROMULG_CD>
  <DOC_RMK_TX>VALIDATED FOR AIPP PHASE II UNDER OASD(NII)
GUIDANCE</DOC_RMK_TX>
  <DOC_TMPRL_SCP_CD>3</DOC_TMPRL_SCP_CD>
  <DOC_VER_ID>VERSION 1.0</DOC_VER_ID>
  <DCMNT_RNG_CD>B</DCMNT_RNG_CD>
  <DOC_URL_TX>NONE PROVIDED</DOC_URL_TX>
  <DOC_TY_CD>98</DOC_TY_CD>
  <DOC_PUB_DT>20031203</DOC_PUB_DT>
</DOC>
```

## 6. Example OV-1 AP233 XML Data

This section contains example OV-1 AP233 XML data.

### 6.1. Example Document

```
<ap233:External_class id="id-Document_identification_code">
  <Id>http://www.cadm.org#Document_identification_code</Id>
  <Name>Document Identification Code</Name>
  <External_source>
    <ap233:External_class_library xsi:nil="true" ref="id-cadmlib" />
  </External_source>
</ap233:External_class>

<ap233:Document id="id-doc12771" />

<ap233:Identification_assignment id="id-doc12771-idassign">
```

```

<Identifier>20003227</Identifier>
<Items>
  <ap233:Document ref="id-doc12771" xsi:nil="true" />
</Items>
</ap233:Identification_assignment>

<ap233:Classification_assignment
id="id-doc12771-idassign-classification_assignment">
  <Items>
    <ap233:Identification_assignment ref="id-doc12771-idassign"
xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class ref="id-Document_identification_code"
xsi:nil="true" />
  </Assigned_class>
</ap233:Classification_assignment>

```

## 6.2. Example Document\_version and Document\_definition

```

<ap233:Document_version id="id-docver12804">
  <Of_product>
    <ap233:Document ref="id-doc12804" xsi:nil="true" />
  </Of_product>
</ap233:Document_version>

<ap233:Document_definition id="id-docdef12804">
  <Defined_version>
    <ap233:Document_version ref="id-docver12804" xsi:nil="true" />
  </Defined_version>
  <Initial_context>
    <ap233:View_definition_context ref="id-ov1" xsi:nil="true" />
  </Initial_context>
</ap233:Document_definition>

<ap233:Classification_assignment
id="id-docver12804-classification_assignment">
  <Items>
    <ap233:Document_version ref="id-docver12804" xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class ref="id-Concept_graphic" xsi:nil="true" />
  </Assigned_class>
</ap233:Classification_assignment>

<ap233:Classification_assignment
id="id-docdef12804-classification_assignment">
  <Items>
    <ap233:Document_definition ref="id-docdef12804" xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class ref="id-Concept_graphic" xsi:nil="true" />
  </Assigned_class>
</ap233:Classification_assignment>

```

### 6.3. Example Document\_definition for CADM Graphic

```
<ap233:Digital_document_definition id="id-digdocdef12804">
  <Defined_version>
    <ap233:Document_version ref="id-docver9999" xsi:nil="true" />
  </Defined_version>
  <Initial_context>
    <ap233:View_definition_context ref="id-ov1" xsi:nil="true" />
  </Initial_context>
</ap233:Document_definition>

<ap233:Classification_assignment
id="id-digdocdef12804-classification_assignment-Graphic">
  <Items>
    <ap233:Digital_document_definition ref="id-digdocdef12804"
xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class ref="id-Graphic" xsi:nil="true" />
  </Assigned_class>
</ap233:Classification_assignment>

<ap233:Classification_assignment
id="id-digdocdef12804-classification_assignment-Datatype">
  <Items>
    <ap233:Digital_document_definition ref="id-digdocdef12804"
xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class ref="id-GRAPHIC_DATATYPE_OLE" xsi:nil="true" />
  </Assigned_class>
</ap233:Classification_assignment>

<ap233:Classification_assignment
id="id-digdocdef12804-classification_assignment-Category">
  <Items>
    <ap233:Digital_document_definition ref="id-digdocdef12804"
xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class ref="id-GRAPHIC_CATETORY_GEOMETRIC_FIGURE"
xsi:nil="true" />
  </Assigned_class>
</ap233:Classification_assignment>

<ap233:File_location_identification>
  <Item>
    <ap233:Digital_document_definition ref="id-digdocdef12804"
xsi:nil="true" />
  </Item>
</ap233:File_location_identification>

<ap233:Identification_assignment id="id-file12771-idassign">
```

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```
<Identifier>http://www.example.com/userx/folderx/geol.jpg</Identifier>
<Items>
  <ap233:Digital_document_definition ref="id-digdocdef12804"
xsi:nil="true" />
</Items>
</ap233:Identification_assignment>

<ap233:Classification_assignment
id="id-file12771-idassign-classification_assignment">
  <Items>
    <ap233:Identification_assignment ref="id-file12771-idassign"
xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class ref="id-Uniform_resource_locator" xsi:nil="true"
/>
  </Assigned_class>
</ap233:Classification_assignment>
```