

# OV-2 : Operational Node Connectivity Description

*This document defines the mapping between the DODAF OV-2 Operational Node Connectivity Description 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-2 Operational Node Connectivity Description in the DoDAF Volume II: Product Descriptions document defined OV-2 as follows.

The Operational Node Connectivity Description graphically depicts the operational nodes (or organizations) with needlines between those nodes that indicate a need to exchange information. The graphic includes internal operational nodes (internal to the architecture) as well as external nodes.

OV-2 is intended to track the need to exchange information from specific operational nodes (that play a key role in the architecture) to others. OV-2 does not depict the connectivity between the nodes.

The main features of this product are the operational nodes and the needlines between them that indicate a need to exchange information. The product indicates the key players and the interactions necessary to conduct the corresponding operational activities of OV-5.

### 2. OV-2 AP233 Mapping Issues

**Warning:**

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

This section describes issues in mapping between OV-2 Operational Node Connectivity 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. From the available CADM documentation, it is not clear why an Operational Facility references an Operational Element (via OPFAC / OE\_ORGT\_ID). Should this map via an `Organization_type_relationship` or something else?
2. `OP_ROLE` (`Operational_Role`) is a collection of capabilities defined for performing/accomplishing a task. It specifies duties, skills required, class of persons applicable, as well as descriptive information like occupation type. The AP 233 entity `position` is not quite right because it is contextualized to an organization or person (i.e., meaningful with respect that that entity). In addition, it is possible to view the AP 233 entity `position_assignment` as the mechanism to associate the tasks/duties that the position is responsible for to the position, but the `position_item` in AP 233

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doesn't support this view; rather it seems like it assigns the object that fulfills the position to the position (and, thus, seems redundant with the AP 233 entity `Person_or_organization_or_person_in_organization_in_position`).

### Note:

The definition of the AP 233 entity `position_item` does not seem to be in agreement with the EXPRESS contents of the EXPRESS TYPE declaration for `position_item`.

3. `OP_ROLE / SKL_ID` is an instance identifier for a Skill; AP 233 has no concept equivalent to "skill".
4. The mapping for Caveated Security Classifications needs to be investigated.
5. `CADM CAPABILITY` is currently mapping to AP233 Requirement for OV-2 because of the statement in DODAF Volume II saying :

Quantifiable capability requirements of a `NODE-LINK` may be specified in `NODE-LINK-CAPABILITY`.

This may not be appropriate in other uses of `CADM CAPABILITY`.

### 3. Mapping OV-2 CADM XML to AP233 XML

This section defines the mapping from the CADM XML representation of OV-2 Operational Node Connectivity 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](#) ([../ap233/index.html](#)) for more information on the AP233 XML Schema and the AP233 EXPRESS schema.

Please review the [rules for AP233 XML data production](#) ([../ap233/index.html#ap233xmlrules](#)) as they are applicable to all implementations.

#### 3.1. OV-2 Operational Node Connectivity Description

This section describes the mapping for the CADM OV-2 `NODE-CONNECTIVITY-DESCRIPTION` itself. It is represented by the `NODE_CONN_DESCR` XML element.

See the [OV-1 Graphic mapping](#) ([../dodaf/ov1.html#ov1\\_graphic](#)) for the mapping of that concept.

| CADM XML Concept(s)          | AP233 XML Element(s) or Attributes(s)   |
|------------------------------|---|
| <code>NODE_CONN_DESCR</code> | An AP233 <a href="#">Document</a> ( <a href="#">../ap233/index.html#ap233_doc</a> ) , with related version and definition, assigned to the AP233 representation of the CADM Network that is |

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|                           |   |
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|                           | described. The Document and related version and definition are <a href="#">classified</a> ( <a href="#">../ap233/index.html#ap233_extclass</a> ) as <b>NODE-CONNECTIVITY-DESCRIPTION</b> . Also see the <a href="#">CADM Document mapping</a> ( <a href="#">../dodaf/sv1.html#sv1_document</a> ) for more details.  |
| NODE_CONN_DESCR / DOC_ID  | The <a href="#">identifier</a> ( <a href="#">../ap233/index.html#ap233_id</a> ) for the Document assigned by the owning organization.   |
| NODE_CONN_DESCR / NTWK_ID | An AP233 <a href="#">Document assignment</a> ( <a href="#">../ap233/index.html#ap233_doc</a> ) linking the Document to the AP233 representation of the CADM Network.<br><br>See <a href="#">SV-2 Network-related mappings</a> ( <a href="#">../dodaf/sv2.html#sv2_network</a> ) and <a href="#">SV-1 Node-related mappings</a> ( <a href="#">../dodaf/sv1.html#sv1_node</a> ) for the mapping of those CADM concepts. |

**Table 1: NODE-CONNECTIVITY-DESCRIPTION (NODE\_CONN\_DESCR element) Mapping**

### 3.2. OV-2 Node Link

This section describes the mapping for the CADM OV-2 NODE-LINK. It is represented by the NODE\_LINK XML element. See the [SV-1 Node Association mapping](#) ([../dodaf/sv1.html#sv1\\_node](#)) for more details about the mapping of the CADM NODE-ASSOCIATION concept.

| CADM XML Concept(s)        | AP233 XML Element(s) or Attributes(s)   |
|----------------------------|---|
| NODE_LINK                  | An AP233 <a href="#">Interface_connection</a> (see <a href="#">AP233 Interfaces</a> ( <a href="#">../ap233/index.html#ap233_interface</a> ) ) as mapped in <a href="#">SV-1 Node Association mapping</a> ( <a href="#">../dodaf/sv1.html#sv1_node</a> ) . |
| NODE_LINK / CSC_ID         | See <a href="#">OV-2 Issues</a> ( <a href="#">../dodaf/ov2.html#ov2_issues</a> ) .  |
| NODE_LINK / NODE_1_NODE_ID | As defined in the <a href="#">SV-1 Node Association mapping</a> ( <a href="#">../dodaf/sv1.html#sv1_node</a> ) .  |
| NODE_LINK / NODE_2_NODE_ID | As defined in the <a href="#">SV-1 Node Association mapping</a> ( <a href="#">../dodaf/sv1.html#sv1_node</a> ) .  |

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| NODE_LINK / NA_ID             | As defined in the <a href="#">SV-1 Node Association mapping</a> (../dodaf/sv1.html#sv1_node) .   |
| NODE_LINK / NL_CAT_CD         | A <a href="#">classification</a> (../ap233/index.html#ap233_extclass) of the AP233 element representing the Node Link depending on the following values. <ul style="list-style-type: none"> <li>• When 1 = COMMUNICATION LINK, classified as a <b>NODE LINK CATEGORY COMMUNICATION</b></li> <li>• 2 = INFORMATION LINK, classified as a <b>NODE LINK CATEGORY INFORMATION</b></li> <li>• 8 = NOT APPLICABLE, classified as a <b>NODE LINK CATEGORY NOT APPLICABLE</b></li> <li>• 9 = NOT KNOWN, classified as a <b>NODE LINK CATEGORY NOT KNOWN</b></li> </ul>         |
| NODE_LINK / NL_CMT_TX         | An AP233 <i>Description_text</i> and related assignment to the AP233 representation of the CADM Node Link as specified in (../ap233/index.html#ap233_descriptions) with the assignment classified as a <b>CommentText</b> .  |
| NODE_LINK / NDLNK_DESIG_ID    | The <a href="#">assigned identifier</a> (../ap233/index.html#ap233_id) of the AP233 concept representing the specific CADM Node Link in question classified as an <b>ALTERNATE DESIGNATION</b> .   |
| NODE_LINK / NL_INEX_SIZE_TX   | An AP233 <i>Description_text</i> and related assignment to the AP233 representation of the CADM Node Link as specified in (../ap233/index.html#ap233_descriptions) with the assignment classified as a <b>InformationExchangeSizeText</b> .  |
| NODE_LINK / NL_INTEROP_LVL_CD | A <a href="#">classification</a> (../ap233/index.html#ap233_extclass) of the AP233 element representing the Node Link depending on the following values. <ul style="list-style-type: none"> <li>• When 1 = 0: Level 0--Isolated Level (Manual), without sublevel distinction, classified as <b>Isolated Level</b></li> <li>• When 2 = 00: Level 0--Isolated Level (Manual), Sublevel o, classified as <b>Isolated Level Sublevel o</b></li> <li>• When 3 = 0a: Level 0--Isolated Level (Manual), Sublevel a, classified as <b>Isolated Level Sublevel a</b></li> </ul> |

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|  | <ul style="list-style-type: none"><li>• When 4 = 0b: Level 0--Isolated Level (Manual), Sublevel b, classified as <b>Isolated Level Sublevel b</b></li><li>• When 5 = 0c: Level 0--Isolated Level (Manual), Sublevel c, classified as <b>Isolated Level Sublevel c</b></li><li>• When 6 = 0d: Level 0--Isolated Level (Manual), Sublevel d, classified as <b>Isolated Level Sublevel d</b></li><li>• When 7 = 1: Level 1--Connected Level (Peer-to-Peer), without sublevel distinction, classified as <b>Connected Level</b></li><li>• When 8 = 1a: Level 1--Connected Level (Peer-to-Peer), Sublevel a, classified as <b>Connected Level Sublevel a</b></li><li>• When 9 = 1b: Level 1--Connected Level (Peer-to-Peer), Sublevel b, classified as <b>Connected Level Sublevel b</b></li><li>• When 10 = 1c: Level 1--Connected Level (Peer-to-Peer), Sublevel c, classified as <b>Connected Level Sublevel c</b></li><li>• When 11 = 1d: Level 1--Connected Level (Peer-to-Peer), Sublevel d, classified as <b>Connected Level Sublevel d</b></li><li>• When 12 = 2: Level 2--Functional Level (Distributed), without sublevel distinction, classified as <b>Functional Level</b></li><li>• When 13 = 2a: Level 2--Functional Level (Distributed), Sublevel a, classified as <b>Functional Level Sublevel a</b></li><li>• When 14 = 2b: Level 2--Functional Level (Distributed), Sublevel b, classified as <b>Functional Level Sublevel b</b></li><li>• When 15 = 2c: Level 2--Functional Level (Distributed), Sublevel c, classified as <b>Functional Level Sublevel c</b></li><li>• When 16 = 3: Level 3--Domain Level (Integrated), without sublevel distinction, classified as <b>Domain Level</b></li><li>• When 17 = 3a: Level 3--Domain Level (Integrated), Sublevel a, classified as <b>Domain Level Sublevel a</b></li><li>• When 18 = 3b: Level 3--Domain Level (Integrated), Sublevel b, classified as <b>Domain Level Sublevel b</b></li><li>• When 19 = 3c: Level 3--Domain Level (Integrated), Sublevel c, classified as <b>Domain Level Sublevel c</b></li><li>• When 20 = 4: Level 4--Enterprise Level</li></ul> |
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|                                      | <p>(Universal), without sublevel distinction, classified as <b>Enterprise Level</b></p> <ul style="list-style-type: none"> <li>• When 21 = 4a: Level 4--Enterprise Level (Universal), Sublevel a, classified as <b>Enterprise Level Sublevel a</b></li> <li>• When 22 = 4b: Level 4--Enterprise Level (Universal), Sublevel b, classified as <b>Enterprise Level Sublevel b</b></li> <li>• When 23 = 4c: Level 4--Enterprise Level (Universal), Sublevel c, classified as <b>Enterprise Level Sublevel c</b></li> <li>• When 98 = Not specified, classified as <b>INTEROPERABILITY not Specified</b></li> <li>• When 99 = Not known, classified as <b>INTEROPERABILITY not known</b></li> </ul>                         |
| <p>NODE_LINK / NL_PHYS_CN_IND_CD</p> | <p>A <a href="#">classification</a> (../ap233/index.html#ap233_extclass) of the AP233 element representing the Node Link depending on the following values.</p> <ul style="list-style-type: none"> <li>• When 1 = NOTIONAL, classified as <b>PHYSICAL_CONNECTION_NOTIONAL</b></li> <li>• 2 = REAL, classified as <b>PHYSICAL_CONNECTION_REAL</b></li> <li>• 8 = NOT SPECIFIED, classified as <b>PHYSICAL_CONNECTION_NOT_SPECIFIED</b></li> <li>• 9 = NOT KNOWN, classified as <b>PHYSICAL_CONNECTION_NOT_KNOWN</b></li> </ul>   |
| <p>NODE_LINK / SC_CD</p>             | <p>The <a href="#">assignment</a> (../ap233/index.html#ap233_assign) of a Security_classification to the AP233 concept representing the specific CADM Node Link in question with child element Security_level containing the text (not the number) as follows: 01 = CONFIDENTIAL, 02 = CONFIDENTIAL RESTRICTED, 03 = FOR OFFICIAL USE ONLY, 04 = NATO CONFIDENTIAL, 05 = NATO CONFIDENTIAL ATOMAL, 06 = NATO RESTRICTED, 07 = NATO SECRET, 08 = NATO SECRET ATOMAL, 09 = NATO TOP SECRET, 10 = NATO TOP SECRET ATOMAL, 11 = SECRET, 12 = SECRET RESTRICTED, 13 = TOP SECRET, 14 = UNCLASSIFIED, 15 = UNCLASSIFIED SENSITIVE, 16 = NATO UNCLASSIFIED, 17 = NO CLASSIFICATION, 18 = CONFIDENTIAL/NO FOREIGN, and 19 =</p> |

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|  | SECRET/NO FOREIGN |
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**Table 1: NODE-LINK Mapping**

**3.3. OV-2 Node Link Capability**

This section describes the mapping for the CADM OV-2 NODE-LINK-CAPABILITY. It is represented by the NODE\_LINK\_CAP XML element.

| CADM XML Concept(s)            | AP233 XML Element(s) or Attributes(s)   |
|--------------------------------|---|
| NODE_LINK_CAP                  | An AP233 <code>Requirement_assignment</code> referencing the AP233 representation of the CADM Node Link and the AP233 <code>Requirement</code> representing the CADM Capability. The <code>Assigned_requirement</code> child element refers to the <code>Requirement_definition</code> and the <code>Assigned_to</code> child element refers to the AP233 representation of the CADM Node Link. See <a href="#">AP233 Requirements Management</a> . ( <code>../ap233/index.html#ap233_requirements</code> ) |
| NODE_LINK_CAP / CAP_ID         | The AP233 <code>Assigned_requirement</code> child of the <code>Requirement_assignment</code> as described for NODE_LINK_CAP.  |
| NODE_LINK_CAP / NODE_1_NODE_ID | Not mapped as it is addressed by the mapping of the Node Link itself.   |
| NODE_LINK_CAP / NODE_2_NODE_ID | Not mapped as it is addressed by the mapping of the Node Link itself.   |
| NODE_LINK_CAP / NA_ID          | The AP233 <code>Assigned_to</code> child of the <code>Requirement_assignment</code> as described for NODE_LINK_CAP.   |
| NODE_LINK_CAP / NDLC_EFF_CALDT | See <a href="#">AP233 Dates</a> ( <code>../ap233/index.html#ap233_date</code> ) . The <code>Date_or_date_time_assignment</code> element child <code>Items</code> element refers to the <code>Requirement_assignment</code> representing the NODE_LINK_CAP and the <code>Date_or_date_time_assignment</code> is <a href="#">classified</a> ( <code>../ap233/index.html#ap233_extclass</code> ) as an <b>Date_actual_effective</b> .  |
| NODE_LINK_CAP / NDLC_ID        | The <a href="#">assigned identifier</a> ( <code>../ap233/index.html#ap233_id</code> ) of the AP233 concept representing the specific CADM Node  |

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|                         | Link Capability in question.   |
| NODE_LINK_CAP / NDLC_QY | An AP233 Numerical_item_with_unit child element Value_component as part of an AP233 Assigned_property (see <a href="#">AP233 Properties</a> (../ap233/index.html#ap233_property) ). See the mapping for CADM CAPABILITY / MSR_UNT_CD attribute below which explains how the unit is set. |

**Table 1: NODE-LINK-CAPABILITY (NODE\_LINK\_CAP) Mapping**

### 3.4. OV-2 Capability

This section describes the mapping for the CADM OV-2 CAPABILITY. It is represented by the CAPABILITY XML element.

| CADM XML Concept(s)       | AP233 XML Element(s) or Attributes(s)   |
|---------------------------|---|
| CAPABILITY                | An AP233 Requirement with related Requirement_version and Requirement_definition classified as being a <b>CAPABILITY</b> . See <a href="#">AP233 Requirements Management</a> (../ap233/index.html#ap233_requirements) See <a href="#">OV-2 Issues</a> (../dodaf/ov2.html#ov2_issues) as this mapping to AP233 Requirement may not be appropriate in cases other than for CADM NODE-LINK-CAPABILITY. |
| CAPABILITY / CAP_DESCR_TX | An AP233 Description_text as specified in <a href="#">AP233 Descriptions</a> (../ap233/index.html#ap233_descriptions) .   |
| CAPABILITY / CAP_ID       | The <a href="#">assigned identifier</a> (../ap233/index.html#ap233_id) of the AP233 concept representing the specific CADM Capability in question.  |
| CAPABILITY / CAP_NM       | The <a href="#">assigned identifier</a> (../ap233/index.html#ap233_id) of the AP233 concept representing the specific CADM Capability in question classified as the <b>Name</b> .   |
| CAPABILITY / CAP_TY_CD    | A <a href="#">classification</a> (../ap233/index.html#ap233_extclass) of the AP233 element representing the CADM Capability depending on the following values, using the words not the code.  |

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|  | <p>001 = AIRBORNE TARGET-SURVEILLANCE CAPABILITY; 002 = AIR TO AIR ROCKET/MISSILE FIRING CAPABILITY; 003 = AIR TO GROUND BOMBING CAPABILITY; 004 = AIRBORNE TRANSPORT CAPABILITY; 005 = AIRCRAFT LOADING CAPABILITY; 006 = BATTLEFIELD MEDICAL CAPABILITY; 007 = BIOLOGICAL/CHEMICAL WEAPONS CAPABILITY; 008 = COMMUNICATIONS LINK INSTALLATION CAPABILITY; 009 = COMMUNICATIONS LINK INTERCEPTION/EXPLOITATION CAPABILITY; 010 = COMMUNICATIONS LINK INTERRUPTION CAPABILITY; 011 = COMMUNICATIONS LINK TRANSMISSION CAPABILITY; 012 = EARTH MOVING CAPABILITY; 013 = GROUND TARGET-SURVEILLANCE CAPABILITY; 014 = GROUND TO AIR ROCKET/MISSILE FIRING CAPABILITY; 015 = GROUND TO GROUND ARTILLERY FIRING CAPABILITY; 016 = GROUND TRANSPORT CAPABILITY; 017 = HEAVY ENGINEERING CAPABILITY; 018 = IN-PATIENT MEDICAL CAPABILITY; 019 = LAND MOVEMENT CAPABILITY; 020 = LAND TO SEA ROCKET/MISSILE FIRING CAPABILITY; 021 = MANUFACTURING CAPABILITY; 022 = MINEFIELD CROSSING CAPABILITY; 023 = MINEFIELD EMPLACEMENT CAPABILITY; 024 = NUCLEAR WEAPONS CAPABILITY; 025 = OBSTACLE CROSSING CAPABILITY; 026 = OBSTACLE EMPLACEMENT CAPABILITY; 027 = ON-WATER TRANSPORT CAPABILITY; 028 = OUT-PATIENT MEDICAL CAPABILITY; 029 = PACKAGING CAPABILITY; 030 = SEA TO LAND ROCKET/MISSILE FIRING CAPABILITY; 031 = SMALL ARMS FIRE CAPABILITY; 032 = STORAGE CAPABILITY; 033 = TARGET MARKING CAPABILITY; 034 = TRAINING CAPABILITY; 035 = UNDER-WATER TRANSPORT CAPABILITY; 036 = VEHICLE MAINTENANCE CAPABILITY; 037 = WATER VESSEL LOADING CAPABILITY; 038 = CARRY PEOPLE; 039 = OVERHAUL EQUIPMENT; 040 = CLEAR MINES; 041 = REFUEL AIRCRAFT; 042 = OFFLOAD CARGO; 043 = ONLOAD CARGO; 044 = TRANSPORT CARGO; 045 = REPAIR</p> |
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|                                | <p>EQUIPMENT; 046 = LAUNCH WEAPONS; 998 = NOT SPECIFIED; 999 = NOT KNOWN;<br/>         101--Handle Messages Per Day; 103--Update Database Rate; 104--Maximum Latency Duration; 105--Mean time between failures, 106--Maintainability, 107--Availability, 108--System initialization time, 109--Data transfer rate, 110--Program restart time for platforms; 111--Data throughput/capacity; 112--Response time, 113--Effectiveness, 114--Mean time between software failures for application software.</p>   |
| <p>CAPABILITY / MSR_UNT_CD</p> | <p>Each of the following is represented as an AP233 Unit based on the name, not the code, as described in <a href="#">AP233 Properties</a> (<code>./ap233/index.html#ap233_property</code>) . In the case where the CADM Measure Unit Code is the same as an SI unit, the SI unit is used. The AP233 Unit is linked to the AP233 representation of other CADM concepts related to CAPABILITY by an AP233 Assigned_property, Property_representation, Property_value_representation, and Numerical_item_with_unit.</p> <ul style="list-style-type: none"> <li>• AC--ACRE - A UNIT OF AREA/SURFACE; EQUIVALENT TO 43560 SQUARE FEET. NIST CODE = NONE STATED;</li> <li>• AD--APOTHECARY DRAM - A UNIT OF APOTHECARY WEIGHT; EQUIVALENT TO 60 GRAINS. NIST CODE = DR AP;</li> <li>• AM--A SMALL GLASS OR PLASTIC TUBE SEALED BY FUSION AFTER FILLING. AMPOULE.;</li> <li>• AO--APOTHECARY OUNCE - A UNIT OF APOTHECARY WEIGHT; EQUIVALENT TO 480 GRAINS; NIST CODE = OZ AP;</li> <li>• AP--APOTHECARY POUND - A UNIT OF APOTHECARY WEIGHT; EQUIVALENT TO 5760 GRAINS; NIST CODE = LB AP;</li> <li>• AS--APOTHECARY SCRUPLE - A UNIT OF APOTHECARY WEIGHT; EQUIVALENT TO 20 GRAINS; NIST CODE = S AP;</li> <li>• AT--A COLLECTION OF A VARIETY OF ITEMS THAT FALL INTO A CATEGORY OR CLASS PACKAGED AS A SMALL UNIT CONSTITUTING A SINGLE ITEM OF SUPPLY. USE ONLY WHEN THE TERM</li> </ul> |

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|  | <p>"ASSORTMENT" IS A PART OF THE ITEM NAME. ASSORTMENT.;</p> <ul style="list-style-type: none"><li>• AY--A COLLECTION OF PARTS ASSEMBLED TO FORM A COMPLETE UNIT, CONSTITUTING A SINGLE ITEM OF SUPPLY, E.G., HOSE ASSEMBLY. USE ONLY WHEN THE TERM "ASSEMBLY" IS A PART OF THE ITEM NAME. ASSEMBLY.;</li><li>• B1--BARREL LIQUID - A UNIT OF CAPACITY; 31 TO 42 GALLONS; NOT CENTRALLY SPECIFIED; PETROLEUM PRODUCTS = 42 GALLONS. NIST CODE = BBL;</li><li>• B2--BARREL DRY - A UNIT OF VOLUME; EQUIVALENT TO 7056 CUBIC INCHES. NIST CODE = BBL;</li><li>• BA--A SPHERICAL-SHAPED MASS OF MATERIAL SUCH AS TWINE OR THREAD. BALL;</li><li>• BD--A QUANTITY OF THE SAME ITEM TIED TOGETHER WITHOUT COMPRESSION. BUNDLE;</li><li>• BE--A SHAPED UNIT OF COMPRESSIBLE MASS OF MATERIALS BOUND WITH CORD OR METAL TIES AND USUALLY WRAPPED, E.G., PAPER AND CLOTH RAGS. BALE;</li><li>• BF--A UNIT OF MEASURE FOR LUMBER EQUAL TO THE VOLUME OF A BOARD 12"X 12"X 1". BOARD FOOT.;</li><li>• BG--A FLEXIBLE CONTAINER OF VARIOUS SIZES AND SHAPES WHICH IS FABRICATED FROM SUCH MATERIALS AS PAPER, PLASTIC OR TEXTILES. INCLUDES "SACK" AND "POUCH". BAG;</li><li>• BK--A BOOK-LIKE PACKAGE, SUCH AS LABELS OR TICKETS, FASTENED TOGETHER ALONG ONE EDGE, USUALLY BETWEEN PROTECTIVE COVERS. BOOK;</li><li>• BL--A CYLINDRICAL CONTAINER, METAL OR WOOD, WITH SIDES THAT BULGE OUTWARD AND FLAT ENDS OR HEADS OF EQUAL DIAMETER. INCLUDES "KEG." BARREL.;</li><li>• BO--A FLAT FOLD OF FABRIC HAVING A STIFF PAPERBOARD CORE. BOLT; BR--A SOLID PIECE OR BLOCK OF VARIOUS MATERIALS, WITH ITS LENGTH GREATER THAN ITS OTHER DIMENSIONS, E.G.,</li></ul> |
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|  | <p>SOLDER. NOT APPLICABLE TO ITEMS SUCH AS SOAP, BEESWAX, BUFFING COMPOUND. BAR;</p> <ul style="list-style-type: none"><li>• BT--A GLASS, PLASTIC, OR EARTHENWARE CONTAINER OF VARIOUS SIZES, SHAPES AND FINISHES SUCH AS JUGS BUT EXCLUDING JARS, AMPOULES, VIALS, AND CARBOYS, WITH A CLOSURE FOR RETENTION OF CONTENTS. BOTTLE;</li><li>• BU--BUSHEL US (STRUCK MEASURE) - A UNIT OF VOLUME; EQUIVALENT TO 2150.42 CUBIC INCHES, 1.244 CUBIC FEET.;</li><li>• BX--A RIGID, THREE DIMENSIONAL CONTAINER OF VARIOUS SIZES AND MATERIAL. INCLUDES "CASE", "CARTON", "TRAY", AND "CRATE." BOX.;</li><li>• C2--SQUARE CENTIMETER - A UNIT OF AREA/SURFACE; EQUIVALENT TO 0.155 SQUARE INCH. NIST CODE = CM2;</li><li>• CA--USUALLY A TUBULAR RECEPTACLE CONTAINING LOOSE OR PLIABLE MATERIAL AND DESIGNED TO PERMIT READY INSERTION INTO AN APPARATUS FOR DISPENSING THE MATERIAL. USUALLY ASSOCIATED WITH ADHESIVES AND SEALING COMPOUNDS. CARTRIDGE;</li><li>• CB--A HEAVY DUTY, BOTTLE-TYPE CONTAINER USED FOR TRANSPORTATION AND STORAGE OF LIQUIDS. USUALLY DESIGNED TO BE ENCASED IN A RIGID PROTECTIVE OUTER CONTAINER FOR SHIPMENT. CARBOY;</li><li>• CC--CUBIC CENTIMETER;</li><li>• CD--A UNIT OF CAPACITY/VOLUME; CUBIC YARD. NIST CODE = CU YD; EQUIVALENT TO 27 CUBIC FEET, 0.765 CUBIC METER.;</li><li>• CE--A CONE-SHAPED MASS OF MATERIALS WOUND ON ITSELF SUCH AS TWINE OR THREAD, WOUND ON A CONICAL CORE. CONE.;</li><li>• CF--A UNIT OF CAPACITY/VOLUME; CUBIC FOOT. NIST CODE = CU FT; EQUIVALENT TO 1728 CUBIC INCHES, 28.316 CUBIC DECIMETERS.;</li><li>• CH--CHAIN - A UNIT OF LENGTH,</li></ul> |
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## OV-2 : Operational Node Connectivity Description

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|  | <p>GUNTHER'S OR SURVEYOR'S CHAIN; EQUIVALENT TO 66 FEET, 20.1168 METERS.;</p> <ul style="list-style-type: none"><li>• CI--CUBIC INCH - A UNIT OF CAPACITY/VOLUME; EQUIVALENT TO 16.387 CUBIC CENTIMETERS. NIST CODE = CU IN;</li><li>• CK--A BLOCK OF COMPACTED OR CONGEALED MATTER. APPLICABLE TO SUCH ITEMS AS SOAP, BUFFING COMPOUND. CAKE.;</li><li>• CL--AN ARRANGEMENT OF MATERIAL SUCH AS WIRE, ROPE, AND TUBING WOUND IN A CIRCULAR SHAPE. COIL.;</li><li>• CM--CENTIMETER - A UNIT OF LENGTH; EQUIVALENT TO 0.3937 INCH, 1/100 METER;</li><li>• CN--A RIGID RECEPTACLE MADE OF FIBRE, METAL, PLASTIC, OR A COMBINATION THEREOF. CANS MAY BE CYLINDRICAL OR ANY NUMBER OF IRREGULAR SHAPES. RESTRICTED TO ITEMS WHICH CANNOT BE ISSUED IN LESS THAN CONTAINER QUANTITY. INCLUDES "PAIL" AND "CANISTER." DO NOT USE WHEN THE PACKAGED QUANTITY EQUATES TO A UNIT OF MEASURE, I.E., PINT, QUART, GALLON, OUNCE, OR POUND. CAN.;</li><li>• CO--A GENERAL TERM FOR USE ONLY WHEN AN ITEM IS PERMITTED TO BE PACKAGED FOR ISSUE IN OPTIONAL CONTAINERS, E.G., BOTTLE OR TUBE FOR A SINGLE NATIONAL STOCK NUMBER. CONTAINER.;</li><li>• CR--CURIE - A UNIT OF RADIOACTIVITY, THE AMOUNT OF ANY NUCLIDE THAT UNDERGOES EXACTLY <math>3.7 \times 10^{10}</math> RADIOACTIVE DISINTEGRATIONS PER SECOND.;</li><li>• CU--CUP - A UNIT OF CAPACITY; EQUIVALENT TO 8 FLUID OUNCES. NIST CODE = NONE STATED.;</li><li>• CW--HUNDRED WEIGHT - A UNIT OF WEIGHT; EQUIVALENT TO 100 POUNDS. NIST CODE = CW T.;</li><li>• CY--A RIGID, CYLINDRICAL, METAL CONTAINER DESIGNED AS A PORTABLE CONTAINER FOR STORAGE AND TRANSPORTATION OF COMPRESSED</li></ul> |
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## OV-2 : Operational Node Connectivity Description

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|  | <p>GASSES, GENERALLY EQUIPPED WITH PROTECTED VALVE CLOSURE AND PRESSURE RELIEF SAFETY DEVICE. CYLINDER.;</p> <ul style="list-style-type: none"><li>• CZ--A UNIT OF CUBIC MEASURE EXPRESSED IN THE METRIC SYSTEM OF MEASUREMENT. LIMITED IN APPLICATION TO LOCALLY ASSIGNED STOCK NUMBERS USED IN THE LOCAL PROCUREMENT OF ITEMS SUCH AS READY-MIX CONCRETE AND ASPHALT IN OVERSEA AREAS WHERE THE METRIC SYSTEM PREVAILS. CUBIC METER. NIST CODE = M3 EQUIVALENT TO 1.308 CUBIC YARDS.;</li><li>• DA--DAY;</li><li>• DB--DECIBEL;</li><li>• DC--DEGREES CELCIUS;</li><li>• DF--DEGREES FAHRENHEIT;</li><li>• DK--DEGREES KELVIN;</li><li>• DM--FLUID DRAM - A UNIT OF APOTHECARY FLUID MEASURE; EQUIVALENT TO 1/8 FLUID OUNCE, 60 MINIMS. NIST CODE = FL DR;</li><li>• DP--DIOPTER;</li><li>• DR--A CYLINDRICAL CONTAINER DESIGNED AS AN EXTERIOR PACK FOR STORING AND SHIPPING BULK MATERIALS, E.G., FUELS, CHEMICALS, POWDERS, ETC. DRUMS MAY BE MADE OF METAL, RUBBER, POLYTHYLENE OR PLYWOOD, OR FIBRE WITH WOODEN, METAL, OR FIBRE ENDS. DRUM.;</li><li>• DZ--TWELVE (12) OF AN ITEM OF SUPPLY. DOZEN.; EA--A NUMERIC QUANTITY OF ONE ITEM OF SUPPLY. DO NOT USE IF A MORE SPECIFIC TERM APPLIES, SUCH AS KIT, SET, ASSORTMENT, ASSEMBLY, GROUP, SHEET, PLATE, STRIP, OR LENGTH. EACH.; EC--CHAIR ENGINEERS - A UNIT OF LENGTH; EQUIVALENT TO 100 FEET, 30.48 METERS. NIST CODE = NONE STATED.;</li><li>• FA--FATHOM - A UNIT OF LENGTH; EQUIVALENT TO 6 FEET, 1.8288 METERS. NIST CODE = NONE STATED.;</li><li>• FB--FEET OF BERTHING;</li><li>• FM--FAMILY UNIT; DODI 4165.3 CODE = FA; FT--UNIT OF LINEAR MEASUREMENT,</li></ul> |
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## OV-2 : Operational Node Connectivity Description

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|  | <p>SOMETIMES EXPRESSED AS "LINEAR FOOT." FOOT.;</p> <ul style="list-style-type: none"><li>• FU--FURLONG - A UNIT OF LENGTH; EQUIVALENT TO 660 FEET, 201.168 METERS; NIST CODE = FUR;</li><li>• FV--FIVE (5) OF AN ITEM. FIVE.;</li><li>• FY--FIFTY (50) OF AN ITEM. FIFTY.;</li><li>• GA--GALLONS, CAPACITY;</li><li>• GB--GALLONS PER MINUTE, CAPACITY; DODI 4165.3 CODE = GM;</li><li>• GI--GILL - A UNIT OF FLUID MEASURE; EQUIVALENT TO 4 FLUID OUNCES.;</li><li>• GL--UNIT OF LIQUID MEASUREMENT. U.S. GALLON. NIST CODE = GAL; EQUIVALENT TO 4 QUARTS, 128 U.S. FLUID OUNCES, 0.833 IMPERIAL GALLON, 3.785 LITERS.; GM--GRAM; GP--A COLLECTION OF RELATED ITEMS ISSUED AS A SINGLE ITEM OF SUPPLY, E.G., TEST SET GROUP. USE ONLY WHEN THE TERM "GROUP" IS A PART OF THE ITEM NAME. GROUP.;</li><li>• GR--ONE HUNDRED FORTY-FOUR (144) OF AN ITEM. GROSS.;</li><li>• GT--THOUSAND GALLONS PER DAY, CAPACITY; DODI 4165.3 CODE= KG;</li><li>• HB--HOSPITAL BEDS, NORMAL CAPACITY; DODI 4165.3 CODE = BD;</li><li>• HD--ONE HUNDRED (100) OF AN ITEM. HUNDRED.;</li><li>• HH--HOGSHEAD - A UNIT OF LIQUID MEASURE; EQUIVALENT TO 63 U.S. GALLONS, 238.474 LITERS. NIST CODE = HHD.;</li><li>• HK--A LOOP OF YARN OR ROPING, CONTAINING DEFINITE YARDAGE, E.G., COTTON, 840 YARDS; WORSTED, 560 YARDS. SEE "SKEIN" FOR COMPARISON. HANK.;</li><li>• HR--HOUR; IG--IMPERIAL GALLON - USED IN GREAT BRITAIN, CANADA; EQUIVALENT TO 1.201 U.S. GALLONS OR 4.546 LITERS. NIST CODE = GAL;</li><li>• IN--UNIT OF LINEAR MEASUREMENT, EQUIVALENT TO 1/12 OF A FOOT AND SOMETIMES EXPRESSED AS "LINEAR INCH." INCH.;</li><li>• IU--INTERNATIONAL UNIT;</li><li>• JR--A RIGID CONTAINER HAVING A WIDE MOUTH AND OFTEN NO NECK, TYPICALLY MADE OF EARTHENWARE OR</li></ul> |
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## OV-2 : Operational Node Connectivity Description

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|  | <p>GLASS. EXCLUDES "BOTTLE." JAR;</p> <ul style="list-style-type: none"><li>• K2--SQUARE KILOMETER - A UNIT OF AREA/SURFACE; EQUIVALENT TO 0.386 SQUARE MILE, 247.105 ACRES. NIST CODE = KM2;</li><li>• KC--KILOCALORIE;</li><li>• KG--KILOGRAM;</li><li>• KM--KILOMETER - A UNIT OF LENGTH; EQUIVALENT TO 0.621 MILE, 1000 METERS;</li><li>• KT--A COLLECTION OF RELATED ITEMS ISSUED AS A SINGLE ITEM OF SUPPLY, SUCH AS THE TOOLS, INSTRUMENTS, REPAIR PARTS, INSTRUCTION SHEETS AND OFTEN SUPPLIES TYPICALLY CARRIED IN A BOX OR BAG. ALSO INCLUDES SELECTED COLLECTIONS OF EQUIPMENT COMPONENTS, TOOLS, AND/OR MATERIALS FOR THE REPAIR, OVERHAUL OR MODIFICATION OF EQUIPMENT. USE ONLY WHEN THE TERM "KIT" IS A PART OF THE ITEM NAME.<br/>KIT.;</li><li>• KV--KILOVOLT-AMPERES, CAPACITY (KVA);</li><li>• LB--A UNIT OF AVOIRDUPOIS WEIGHT MEASURE EQUIVALENT TO 16 OUNCES. POUND.;</li><li>• LG--TERM APPLIES TO ITEMS ISSUED IN FIXED OR SPECIFIC LINEAR MEASUREMENT, WITHOUT DEVIATION. THIS TERM NO LONGER APPLIES TO RANDOM LENGTHS WHICH WILL BE EXPRESSED IN DEFINITIVE UNITS OF LINEAR MEASURE SUCH AS FOOT OR YARD. EXCLUDES "STRIP." LENGTH.;</li><li>• LH--LONG OR GROSS HUNDRED WEIGHT - A UNIT OF WEIGHT; EQUIVALENT TO 112 POUNDS. NIST CODE = NONE STATED;</li><li>• LI--A UNIT OF LIQUID MEASURE EXPRESSED IN THE METRIC SYSTEM OF MEASUREMENT. LITER.;</li><li>• LT--LONG OR GROSS TON - A UNIT OF WEIGHT; EQUIVALENT TO 2240 POUNDS. NIST CODE = NONE STATED.;</li><li>• M2--SQUARE METER - A UNIT OF AREA/SURFACE; EQUIVALENT TO 1.196 SQUARE YARDS.;</li><li>• M4--SQUARE MILLIMETER - A UNIT OF</li></ul> |
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## OV-2 : Operational Node Connectivity Description

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|  | <p>AREA/SURFACE; EQUIVALENT TO 0.002 SQUARE INCH . NIST CODE = MM2;</p> <ul style="list-style-type: none"><li>• M5--MICROGRAM;</li><li>• MB--BRITISH THERMAL UNITS PER HOUR, CAPACITY; MC--A UNIT OF CUBIC MEASURE EXPRESSED IN ONE THOUSAND (1,000) INCREMENTS. THOUSAND CUBIC FEET.;</li><li>• ME--THE MEASURE OF FOOD GENERALLY TAKEN BY AN INDIVIDUAL AT ONE TIME. MEAL.;</li><li>• MG--MILIGRAM;</li><li>• MI--MILE STATUTE OR LAND - A UNIT OF LENGTH; EQUIVALENT TO 5,280 FEET IN A MILE . 1.609 KILOMETERS;</li><li>• ML--MILILITER;</li><li>• MM--MILLIMETER - A UNIT OF LENGTH; EQUIVALENT TO 0.03937 INCH, 1/100 CENTIMETER.;</li><li>• MN--MINIM - A UNIT OF APOTHECARY FLUID MEASURE, EQUIVALENT TO 1/60 FLUID DRAM NIST CODE = MIN;</li><li>• MO--MONTH;</li><li>• MR--A UNIT OF LINEAR MEASURE EXPRESSED IN THE METRIC SYSTEM OF MEASUREMENT, EQUIVALENT TO 39.37 INCHES. METER. NIST CODE = M;</li><li>• MT--MINUTE;</li><li>• MU--MICROCURIE - A UNIT OF RADIOACTIVITY, THE AMOUNT OF ANY NUCLIDE THAT UNDERGOES EXACTLY <math>3.7 \times 10^4</math> RADIOACTIVE DISINTEGRATIONS PER SECOND.;</li><li>• MX--ONE THOUSAND (1,000) OF AN ITEM. THOUSAND.;</li><li>• NM--MILE NAUTICAL, INTERNATIONAL - A UNIT OF LENGTH; EQUIVALENT TO 1.852 KILOMETERS, 1.151 STATUTE MILES, 0.999 U.S. NAUTICAL MILE NIST CODE = MI;</li><li>• OL--OUTLETS, NUMBER OF;</li><li>• OT--A COLLECTION OF RELATED ITEMS ISSUED AS A SINGLE ITEM OF SUPPLY, SUCH AS THE TOOLS, INSTRUMENTS, MATERIALS, EQUIPMENT, AND/OR INSTRUCTION MANUAL(S) FOR THE PRACTICE OF A TRADE OR PROFESSION OR FOR THE CARRYING OUT OF A PARTICULAR PROJECT OR FUNCTION.</li></ul> |
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## OV-2 : Operational Node Connectivity Description

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|  | <p>USE ONLY WHEN THE TERM "OUTFIT" IS A PART OF THE ITEM NAME. OUTFIT.;</p> <ul style="list-style-type: none"><li>• OU--OPERATING UNITS;</li><li>• OZ--A UNIT OF LIQUID OR AVOIRDUPOIS WEIGHT. OUNCE. NIST CODE = FL OZ FOR FLUID OUNCE.;</li><li>• PD--MULTIPLE SHEETS OF PAPER THAT ARE STACKED TOGETHER AND FASTENED AT ONE END BY SEALING. PAD.;</li><li>• PG--A FORM OF PROTECTIVE WRAPPING FOR TWO OR MORE OF THE SAME ITEM OF SUPPLY. TO BE USED ONLY WHEN A UNIT OF MEASURE OR CONTAINER TYPE TERM IS NOT APPLICABLE. INCLUDES "ENVELOPE." PACKAGE.;</li><li>• PK--PECK - A UNIT OF VOLUME; EQUIVALENT TO 0.25 BUSHEL.;</li><li>• PM--A FLAT PIECE OF SQUARE OR RECTANGULAR-SHAPED METAL OF UNIFORM THICKNESS, USUALLY 1/4 INCH OR MORE. USE ONLY WHEN "PLATE" (FEDERAL SUPPLY CLASSES (FSC ) 9515 AND 9535) IS USED IN AN ITEM NAME TO DENOTE SHAPE. PLATE.;</li><li>• PN--PERSONS, DESIGNED CAPACITY;</li><li>• PR--TWO SIMILAR CORRESPONDING ITEMS, E.G., GLOVES, SHOES, BEARINGS; OR ITEMS IN TOTALLY FABRICATED OF TWO CORRESPONDING PARTS, E.G., TROUSER, SHEARS, GOGGLES. PAIR.;</li><li>• PT--A UNIT OF LIQUID OR DRY MEASURE. PINT.;</li><li>• PZ--A CONTAINER USED FOR SUBSISTENCE ITEMS. USE ONLY WHEN "FOOD PACKET" IS PART OF THE ITEM NAME (FEDERAL SUPPLY GROUP (FSG) 89). PACKET.;</li><li>• QT--A UNIT OF LIQUID OR DRY MEASURE. QUART.;</li><li>• RA--THE FOOD ALLOWANCE OF ONE PERSON FOR ONE DAY. USE ONLY WHEN "RATION" (FSC 8 970) IS A PART OF THE ITEM NAME. RATION.;</li><li>• RE--RETINAL UNIT;</li><li>• RF--ROUNDS FIRED;</li><li>• RL--A CYLINDRICAL CORE ON WHICH A FLEXIBLE MATERIAL, SUCH AS WIRE OR CABLE, IS WOUND. USUALLY HAS</li></ul> |
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## OV-2 : Operational Node Connectivity Description

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|  | <p>FLANGED ENDS. REEL.;</p> <ul style="list-style-type: none"><li>• RM--A QUANTITY OF PAPER VARYING FROM 480 TO 516 SHEETS,DEPENDING UPON GRADE. REAM.;</li><li>• RO--A CYLINDRICAL CONFIGURATION OF FLEXIBLE MATERIAL WHICH HAS BEEN ROLLED ON ITSELF SUCH AS TEXTILES, TAPE, ABRASIVE PAPER, PHOTSENSITIVE PAPER AND FILM , AND MAY UTILIZE A CORE WITH OR WITHOUT FLANGES. ROLL.;</li><li>• S2--SQUARE FEET;</li><li>• SC--SECOND;</li><li>• SD--A PALLET-LIKE PLATFORM CONSISTING OF A LOAD-BEARING AREA FASTENED TO AND RESTING ON RUNNER TYPE SUPPORTS. SKID.;</li><li>• SE--A COLLECTION OF MATCHED OR RELATED ITEMS ISSUED AS A SINGLE ITEM OF SUPPLY, I.E., TOOL SETS, INSTRUMENT SETS, AND MATCHED SETS. USE ONLY WHEN THE TERM "SET" IS A PART OF THE ITEM NAME. SET.;</li><li>• SF--A UNIT OF AREA/SURFACE; SQUARE FOOT. NIST CODE = SQ FT; EQUIVALENT TO 144 SQUARE INCHES, 6.4516 SQUARE CENTIMETERS.;</li><li>• SH--A FLAT PIECE OF RECTANGULAR-SHAPED MATERIAL OF UNIFORM THICKNESS THAT IS VERY THIN IN RELATION TO ITS LENGTH AND WIDTH, SUCH AS METAL, PLASTIC, PAPER, AND PLYWOOD. USE OF THIS TERM IS NOT LIMITED TO ANY GROUP OF ITEMS OR FSCS. HOWEVER, IT WILL ALWAYS BE APPLIED WHEN "SHEET" IS USED IN THE ITEM NAME TO DENOTE SHAPE, E.G., ALUMINUM ALLOY SHEET, EXCEPT ITEMS IN FSC 7210. SHEET.;</li><li>• SI--SQUARE INCH - A UNIT OF AREA/SURFACE; EQUIVALENT TO 6.4516 SQUARE CENTIMETERS. NIST CODE SQ IN;</li><li>• SK--A LOOP OF YARN 120 YARDS IN LENGTH, USUALLY WOUND ON A 54-INCH CIRCULAR CORE. SEE "HANK" FOR COMPARISON. SKEIN.;</li><li>• SL--A CYLINDRICAL FORM WITH AN EDGE OR RIM AT EACH END AND AN</li></ul> |
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## OV-2 : Operational Node Connectivity Description

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|  | <p>AXIAL HOLE FOR A PIN OR SPINDLE ON WHICH A FLEXIBLE MATERIAL SUCH AS THREAD OR WIRE IS WOUND . SPOOL.;</p> <p>SM--SQUARE MILE - A UNIT OF AREA/SURFACE; EQUIVALENT TO 258.999 HECTARES NIST CODE = SQ MI;</p> <ul style="list-style-type: none"><li>• SO--A UNIT OF LINEAR MEASUREMENT, USUALLY APPLIED TO ANCHOR CHAIN; EQUIVALENT T O 15 FATHOMS (90 FT.) SHOT.;</li><li>• SP--A RELATIVELY NARROW, FLAT LENGTH OF MATERIAL, UNIFORM IN WIDTH, SUCH AS PAP ER, WOOD, AND METAL. USE ONLY WHEN THE TERM "STRIP" IS A PART OF THE ITEM N AME. STRIP.; ST--SEATS; DODI 4165.3 CODE = SE;</li><li>• SX--MATERIAL IN A RELATIVELY LONG AND SLENDER, OFTEN CYLINDRICAL FORM FOR EASE OF APPLICATION OR USE, E.G., ABRASIVES. STICK.;</li><li>• SY--A UNIT OF AREA/SURFACE; SQUARE YARD. NIST CODE = SQ YD; EQUIVALENT TO 9 SQUARE FEET, 0.836 SQUARE METER.;</li><li>• T2--TEASPOON;</li><li>• TB--TABLESPOON;</li><li>• TD--TWENTY-FOUR (24) OF AN ITEM. TWENTY-FOUR.;</li><li>• TE--TEN (10) OF AN ITEM. TEN.;</li><li>• TF--TWENTY-FIVE (25) OF AN ITEM. TWENTY-FIVE.;</li><li>• TN--THE EQUIVALENT OF 2000 LBS. INCLUDES SHORT TON AND NET TON. TON;</li><li>• TO--A UNIT OF TROY WEIGHT, BASED ON 12 OUNCE TROY POUND, GENERALLY APPLIED T O WEIGHTS OF PRECIOUS METALS. NIST CODE = OZ T; EQUIVALENT TO 480 GRAINS.;</li><li>• TP--TROY POUND - A UNIT OF TROY WEIGHT GENERALLY APPLIED TO PRECIOUS METALS; EQUIVALENT TO 12 TROY OUNCES. 5760 GRAINS. NIST CODE = LB TL;</li><li>• TS--THIRTY-SIX (36) OF AN ITEM. THIRTY-SIX.;</li><li>• TU--NORMALLY A SQUEEZE-TYPE CONTAINER, MOST COMMONLY</li></ul> |
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OV-2 : Operational Node Connectivity Description

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|  | <p>MANUFACTURED FROM A FLEXIBLE TYPE MATERIAL AND USED IN PACKAGING TOOTHPASTE, SHAVING CREAM, AND PHARMACEUTICAL PRODUCTS. ALSO APPLICABLE AS FORM AROUND WHICH ITEMS ARE WOUND, SUCH AS THREAD. IT IS NOT APPLICABLE TO MAILING TUBE, PNEUMATIC TUBE, OR CYLINDRICAL CONTAINERS OF A SIMILAR TYPE. TUBE.;</p> <ul style="list-style-type: none"> <li>• VI--A SMALL CONTAINER WHICH IS CYLINDRICAL IN SHAPE AND FLAT BOTTOMED WITH A VARIETY OF NECK FINISHES TO ACCOMMODATE ANY TYPE OF CAP, CORK, OR STOPPER. VIAL.;</li> <li>• WK--WEEK;</li> <li>• YD--A UNIT OF LINEAR MEASURE, EQUIVALENT TO 3 FEET AND SOMETIMES EXPRESSED AS " LINEAR YARD." YARD.;</li> <li>• YR--YEAR;</li> <li>• RF--ROUNDS FIRED;</li> <li>• MU--MICROCURIE - A UNIT OF RADIOACTIVITY, THE AMOUNT OF ANY NUCLIDE THAT UNDERGOES EXACTLY 3.7 X10E4 RADIOACTIVE DISINTEGRATIONS PER SECOND;</li> <li>• CURIE - A UNIT OF RADIOACTIVITY, THE AMOUNT OF ANY NUCLIDE THAT UNDERGOES EXACTLY 3.7 X10E10 RADIOACTIVE DISINTEGRATIONS PER SECOND.</li> </ul> |
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**Table 1: CAPABILITY Mapping**

**3.5. OV-2 Organization-related mappings**

The mappings for the CADM ORGANIZATION, and ORGANIZATION-TYPE concepts are specified in [OV-4 Organization mappings](#) (../dodaf/ov4.html#ov4\_org) .

**3.6. OV-2 Operational Facility Mappings**

This section describes the mapping for the CADM OV-2 OPERATIONAL-FACILITY. It is represented by the OPFAC XML element.

| CADM XML Concept(s) | AP233 XML Element(s) or Attributes(s)      |
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| OPFAC               | An AP233 Organization_type as specified in |

## OV-2 : Operational Node Connectivity Description

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|                           | <a href="#">OV-4 Organization Type mapping</a><br>(../dodaf/ov4.html#ov4_org) <a href="#">classified</a><br>(../ap233/index.html#ap233_extclass) as an<br><b>OPERATIONAL-FACILITY</b> .  |
| OPFAC / OE_ORGT_ID        | See <a href="#">OV-2 Issues</a> (../dodaf/ov2.html#ov2_issues)   |
| OPFAC / OPFAC_ORGT_ID     | The <a href="#">identifier</a> (../ap233/index.html#ap233_id) for the AP233 Organization_type assigned by the owning organization.   |
| OPFAC / OPFAC_ALT_ID      | The <a href="#">assigned identifier</a> (../ap233/index.html#ap233_id) of the AP233 concept representing the specific CADM Operational Facility in question classified as an <b>ALTERNATE IDENTIFIER</b> .   |
| OPFAC / OPFAC_APPR_STA_CD | A = APPROVED GENERALLY, D = DISAPPROVED, M = APPROVED FOR MODELING & SIMULATION, N = NOTIONAL, R = APPROVAL REQUESTED, X = ARCHIVED.   |
| OPFAC / OPFAC_HST_JST_TX  | An AP233 Description_text and related assignment to the AP233 representation of the CADM Operational Facility as specified in <a href="#">AP233 descriptions</a> (../ap233/index.html#ap233_descriptions) with the assignment classified as a <b>HistoricalJustificationText</b> . |
| OPFAC / OPFAC_ITER_ID     | The <a href="#">assigned identifier</a> (../ap233/index.html#ap233_id) of the AP233 concept representing the specific CADM Operational Facility in question classified as an <b>OPERATIONAL-FACILITY ITERATION IDENTIFIER</b>  |
| OPFAC / OPFAC_JST_TX      | An AP233 Description_text and related assignment to the AP233 representation of the CADM Operational Facility as specified in <a href="#">AP233 descriptions</a> (../ap233/index.html#ap233_descriptions) with the assignment classified as a <b>JustificationText</b> .           |
| OPFAC / OPFAC_REM_TX      | An AP233 Description_text and related assignment to the AP233 representation of the CADM Operational Facility as specified in  |

OV-2 : Operational Node Connectivity Description

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|                        | <p><a href="#">AP233 descriptions</a><br/>         (../ap233/index.html#ap233_descriptions) with the assignment classified as a <b>RemarkText</b>.</p>   |
| OPFAC / OPFAC_RULE_NM  | <p>The <a href="#">assigned identifier</a><br/>         (../ap233/index.html#ap233_id) of the AP233 concept representing the specific CADM Operational Facility in question classified as an <b>NAME</b></p>   |
| OPFAC / OPFAC_TITLE_NM | <p>The <a href="#">assigned identifier</a><br/>         (../ap233/index.html#ap233_id) of the AP233 concept representing the specific CADM Operational Facility in question classified as an <b>TITLE</b></p>  |
| OPFAC / OF_ECH_CD      | <p>A <a href="#">classification</a><br/>         (../ap233/index.html#ap233_extclass) of the AP233 element representing the Operational Facility depending on the following values.</p> <ul style="list-style-type: none"> <li>• when 0 = MULT--MULTIPLE ECHELONS OF TOES, classified as <b>ECHELON-MULTIPLE ECHELONS OF TOES</b></li> <li>• when 1 = CONUS, classified as <b>ECHELON-CONUS</b></li> <li>• when 2 = THEATER/ARMY/EAC--THEATER/ARMY/ECHELON ABOVE CORPS, classified as <b>ECHELON-THEATER/ARMY/ECHELON ABOVE CORPS</b></li> <li>• when 3 = CORPS, classified as <b>ECHELON-CORPS</b></li> <li>• when 4 = DIV--DIVISION, classified as <b>ECHELON--DIVISION</b></li> <li>• when 5 = BDE/RGT--BRIGADE/REGIMENT, classified as <b>ECHELON-BRIGADE/REGIMENT</b></li> <li>• when 6 = GP/RGT--GROUP/REGIMENT, classified as <b>ECHELON-GROUP/REGIMENT</b></li> <li>• when 7 = TO BE DETERMINED (TBD), classified as <b>ECHELON-TO BE DETERMINED</b></li> <li>• when 8 = BN/SQDN--BATTALION/SQUADRON, classified as <b>ECHELON-BATTALION/SQUADRON</b></li> <li>• when 9 = HOSPITAL, classified as <b>ECHELON-HOSPITAL</b></li> </ul> |

OV-2 : Operational Node Connectivity Description

|                   |  |
|-------------------|--|
|                   | <ul style="list-style-type: none"> <li>• when A = HHB/HHC/HHD--HQ &amp; HQ UNITS (for Btry, Co, &amp; Det), classified as <b>ECHELON-</b></li> <li>• when B = CO/BTRY/TRP--COMPANY/BATTERY/TROOP (not a Hq &amp; Hq), classified as <b>ECHELON-COMPANY/BATTERY/TROOP</b></li> <li>• when E = DET--DETACHMENT (not a Hq &amp; Hq), classified as <b>ECHELON-DETACHMENT</b></li> <li>• when F = PLT--PLATOON, classified as <b>ECHELON-PLATOON</b></li> <li>• when G = SQD--SQUAD, classified as <b>ECHELON-SQUAD</b></li> <li>• when H = SEC/PARTY/BR--SECTION/PARTY/BRANCH, classified as <b>ECHELON-SECTION/PARTY/BRANCH</b></li> <li>• when I = TM/ELEM/CREW/CELL--TEAM/ELEMENT/CREW/CELL, classified as <b>ECHELON-TEAM/ELEMENT/CREW/CELL</b></li> <li>• when J = NODE, classified as <b>ECHELON-NODE</b></li> <li>• when L = CEN--CENTER, classified as <b>ECHELON-CENTER</b></li> <li>• when M = CMD--COMMAND, classified as <b>ECHELON-COMMAND</b></li> <li>• when N = DIVARTY--DIVISION ARTILLERY, classified as <b>ECHELON-DIVISION ARTILLERY</b></li> <li>• when P = CORPS ARTY--CORPS ARTILLERY, classified as <b>ECHELON-CORPS ARTILLERY</b></li> <li>• when Q = DISCOM--DIVISION SUPPORT COMMAND, classified as <b>ECHELON-DIVISION SUPPORT COMMAND</b></li> <li>• when R = COSCOM--CORPS SUPPORT COMMAND, classified as <b>ECHELON-CORPS SUPPORT COMMAND</b></li> <li>• when S = TAACOM/TSC--THEATER AR AREA CMD/THEATER SPT CMD, classified as <b>ECHELON-THEATER-COMMAND</b></li> <li>• when Y = EAC (NON ARMY), classified as <b>ECHELON-EAC-NON-ARMY</b></li> <li>• when Z = SUPPORTED UNIT (SPTD UNIT), classified as <b>ECHELON-SUPPORTED UNIT</b></li> </ul> |
| OPFAC / OF_PRP_CD | A <a href="#">classification</a> (../ap233/index.html#ap233_extclass) of the   |

## OV-2 : Operational Node Connectivity Description

|  |  |
|--|--|
|  | <p>AP233 element representing the Operational Facility depending on the following values.</p> <ul style="list-style-type: none"><li>• when 0--TRADOC, classified as <b>PROPONENT-TRADOC</b></li><li>• when 1--JOINT, classified as <b>PROPONENT-JOINT</b></li><li>• when 2--Navy, classified as <b>PROPONENT-Navy</b></li><li>• when 3--AIR FORCE, classified as <b>PROPONENT-AIR FORCE</b></li><li>• when 4--MARINES, classified as <b>PROPONENT-MARINES</b></li><li>• when 5--North Atlantic Treaty Org, classified as <b>PROPONENT-NATO</b></li><li>• when 6--OPFAC Council of Colonels, classified as <b>PROPONENT-OPFAC Council of Colonels</b></li><li>• when 7--Combined, classified as <b>PROPONENT-Combined</b></li><li>• when 8--Host Nation, classified as <b>PROPONENT-Host Nation</b></li><li>• when 9--CASCOM Integrator, classified as <b>PROPONENT-CASCOM Integrator</b></li><li>• when A--Armor, classified as <b>PROPONENT-Armor,</b></li><li>• when B--Air Defense Artillery, classified as <b>PROPONENT-Air Defense Artillery</b></li><li>• when C--Chemical, classified as <b>PROPONENT-Chemical</b></li><li>• when D--Medical, classified as <b>PROPONENT-Medical</b></li><li>• when E--Engineer, classified as <b>PROPONENT-Engineer</b></li><li>• when F--Field Artillery, classified as <b>PROPONENT-Field Artillery</b></li><li>• when G--Military Police, classified as <b>PROPONENT-Military Police</b></li><li>• when H--Combined Arms Support Cmd, classified as <b>PROPONENT-Combined Arms Support Cmd</b></li><li>• when I--Infantry, classified as <b>PROPONENT-Infantry</b></li><li>• when J--Military Intelligence, classified as <b>PROPONENT-Military Intelligence</b></li><li>• when K--Chaplain, classified as <b>PROPONENT-Chaplain</b></li><li>• when L--Legal, classified as <b>PROPONENT-Legal</b></li><li>• when M--Modeling and Simulation, classified as</li></ul> |
|--|--|

## OV-2 : Operational Node Connectivity Description

|  |   |
|--|---|
|  | <p><b>PROPONENT-Modeling and Simulation</b></p> <ul style="list-style-type: none"> <li>• when N--Special Operations Command, classified as <b>PROPONENT-Special Operations Command</b></li> <li>• when O--Ordnance, classified as <b>PROPONENT-Ordnance</b></li> <li>• when P--Public Affairs Office, classified as <b>PROPONENT-Public Affairs Office</b></li> <li>• when Q--Quartermaster, classified as <b>PROPONENT-Quartermaster</b></li> <li>• when R--C4RDP PM, classified as <b>PROPONENT-C4RDP PM</b></li> <li>• when S--Signal, classified as <b>PROPONENT-Signal</b></li> <li>• when T--Transportation, classified as <b>PROPONENT-Transportation</b></li> <li>• when U--Aviation/Aviation Log, classified as <b>PROPONENT-Aviation_OR_Aviation Log</b></li> <li>• when V--Missile Munitions, classified as <b>PROPONENT-Missile Munitions</b></li> <li>• when X--Adjutant General, classified as <b>PROPONENT-Adjutant General</b></li> <li>• when Y--Finance, classified as <b>PROPONENT-Finance</b></li> <li>• when Z--Combined Arms Command, classified as <b>PROPONENT-Combined Arms Command</b></li> </ul> |
|--|---|

**Table 1: OPERATIONAL-FACILITY (OPFAC) Mapping**

### 3.7. OV-2 Operational Element Mappings

This section describes the mapping for the CADM OV-2 OPERATIONAL-ELEMENT. It is represented by the OE XML element.

| CADM XML Concept(s) | AP233 XML Element(s) or Attributes(s)   |
|---------------------|---|
| OE                  | An AP233 <i>Organization_type</i> as specified in <a href="#">OV-4 Organization Type mapping</a> ( <a href="#">../dodaf/ov4.html#ov4_org</a> ) <a href="#">classified</a> ( <a href="#">../ap233/index.html#ap233_extclass</a> ) as an <b>OPERATIONAL-ELEMENT</b> . |
| OE / OE_ORGT_ID     | The <a href="#">identifier</a> ( <a href="#">../ap233/index.html#ap233_id</a> ) for the AP233 <i>Organization_type</i> assigned by the owning organization.   |
| OE / OE_APPR_STA_CD | The assignment of an AP233 <i>Approval</i> as specified in <a href="#">AP233 Approvals</a> ( <a href="#">../ap233/index.html#ap233_approvals</a> ) to the   |

OV-2 : Operational Node Connectivity Description

|                   |  |
|-------------------|--|
|                   | <p>AP233 representation of the CADM Operational Element. The Approval is classified based on the following values (the word, not the code):</p> <p>A = APPROVED GENERALLY, D = DISAPPROVED, M = APPROVED FOR MODELING &amp; SIMULATION, N = NOTIONAL, R = APPROVAL REQUESTED, X = ARCHIVED.</p>  |
| <p>OE / OE_CD</p> | <p>A <a href="#">classification</a> (<a href="#">../ap233/index.html#ap233_extclass</a>) of the AP233 element representing the Operational Facility depending on the following values, the word not the code:</p> <p>10 = RADIOLOGY; 12 = FSO/FSE/FSC/FSS; 16 = SPECIAL STAFF; 17 = SUPPORT CELL; 18 = S6/G6 COMM SECTION; 19 = FORENSICS; 1A = CRIME LAB; 1B = LOGISTICS SECURITY; 20 = CDR/LDR/SUPERVISOR; 21 = XO/DEPUTY CDR; 22 = S1/G1 OFFICER/AG; 23 = S2/G2 OFFICER; 24 = S3/G3 OFFICER; 25 = S4/G4 OFFICER; 26 = RETRANS/RELAY; 27 = SUPPORT OPS OFFICER; 28 = TOC; 29 = NBC/SMOKE/DECON; 2A = INTEL SPT; 2B = C-E STAFF; 2C = JIC/JTF; 2D = INTELLIGENCE; 2E = TECH INTEL; 2F = MCHNL RDO TML; 2G = MCHNL RDO RELAY; 2H = AIR DEFENSE; 2M = MAINT, GROUND; 2N = MAINT, UNIT; 2P = AUTOMATED SVCS SPT; 2T = CLASS I SPT; 30 = FWD/AERIAL OBSVR; 31 = ALOC/COMBAT TRAINS; 32 = TAC AIR CONTROL; 33 = FIRE DIRECTION CENTER; 35 = WRECKER/RECOVERY VEH; 36 = MAINT, MOTOR; 38 = RADIO ACCESS UNIT; 39 = CLASS V; 3A = MANPADS; 3C = MISSILE; 3D = ENGINEER; 3E = LIAISON; 3F = SATCOM/TACSAT; 3G = COMBAT CAMERA; 3H = COMBAT CAMERA SPT; 3I = OPS &amp; MAINT; 3K = LOS; 3M = LEN; 3N = TELEVISION; 3O = NODE MGMT FACILITY; 3P = HF RECORD TRAFFIC; 3Q = EOC; 3R = MOBILE GATEWAY VAN; 3S = LAB; 3T = MAIN &amp; ASSAULT; 3U = ISB; 3V = CCPS; 3W = CCES; 3X = INFO MGMT; 40 = PLRS/JTIDS; 41 = PROVOST MARSHALL; 43 = DIRECT SUPPORT; 44 = CONTACT; 46 = ESM; 47 = ECM; 48 = MAINT, ELECTRONICS; 49 = COUNTER INTELLIGENCE; 4R = CLASS III &amp; WATER; 4S = CLASS III/POL; 4T = CLASS II, IIIP, IV; 50 =</p> |

## OV-2 : Operational Node Connectivity Description

|  |  |
|--|--|
|  | <p>PRISONER OF WAR; 51 = GSR/RADAR; 52 = SIGINT PROC; 55 = TECHNICAL INSPECTION; 57 = INFO SYSTEMS; 59 = ABMOC; 5K = INTERROG/EXPLOIT; 5S = SUPPORT; 60 = WEATHER; 61 = LIAISON OFFICER; 64 = CHAPLAIN/MINISTRY; 65 = AIRCRAFT; 66 = PETROLEUM; 67 = EXT NODE; 68 = AID STATION; 69 = MAINT, AIRCRAFT; 6A = OPERATIONS; 6B = AIRBORNE CMD POST; 70 = FIRSTSERGEANT/SERGEANT; 71 = S3/G3 AIR; 72 = CSM (CMD SGT MAJ); 73 = MAINT, MISSILE/SYSTEM; 74 = AMMUNITION; 75 = MAINT/SYS TECH; 77 = REAR AREA OPNS CENTER; 78 = MULTIPLEXER RELAY; 79 = MOTOR OFF/SGT; 80 = S1/G1; 81 = S3/G3; 82 = S2/G2; 83 = S3/G3 TAC; 85 = FIST; 87 = S5/G5 OFFICER; 88 = S6/G6 SIGNAL OFFICER; 89 = S4/G4; 8B = S2/S3 (G2/G3) OFF; 8C = S2/S3 (G2/G3); 8F = S5/G5/CIVIL AFFAIRS; 90 = STAFF JUDGE ADVOCATE; 91 = PUBLIC AFFAIRS; 92 = SUPPLY; 93 = S2/G3 TAC; 94 = FLIGHT OPERATIONS; 95 = DTOC SUPPORT; 96 = SPECIAL SECURITY OFF; 97 = CRC; 98 = AIRSPACE MGMT; 99 = ASSISTANT ENGINEER; 9B = MAINT, ACFT COMPONENT; 9G = ADMIN; 9H = ADMIN SERVICES; 9J = AIDMAN; 9N = ANALYSIS; 9R = AUDIO/VISUAL; 9U = AUTOMOTIVE; 9Z = AVIATION; A1 = MOVEMENT CONTROL; A2 = AIR RECONNAISSANCE; A3 = DATA CENTER; A4 = ABMOC OFFICER; A5 = PLL; A6 = SUPPLY/TRANSPORTATION; A7 = TRANSPORTATION OFF; A8 = MATO; AF = BLOOD BANK; AG = ADJUTANT GENERAL; AI = MAINT, SIGNAL/C-E; AJ = CONSULTATION; AK = PREVENTION; AL = CABLE; AM = CBT-VEH; AR = CEWI; AW = CLASS I; AZ = CLASS III; B0 = CLASS III/V; B6 = AMBULANCE; B9 = ENGINEER SYS; BA = COMMAND POST (CP); BC = BTLFLD CIRCULATION CTRL; BD = CHIEF OF STAFF; BE = COLL MGT &amp; DIST; BF = COLL; BG = COMBAT SPT; BI = COMMAND HQ; BJ = COMPTROLLER; BK = COMSEC; BR = REAR BATTLE; BU = DATA TERM; BV = DECONTAMINATION; BX = DIRECTION FINDING; BZ = DIVER/DIVING; C0 = STINGER; C1 = CONSTRUCTION; C2 = CIVIL AFFAIRS; C5</p> |
|--|--|

## OV-2 : Operational Node Connectivity Description

|  |   |
|--|---|
|  | <p>= RADIO; C8 = DOCUMENT PLATOON; C9 = DPU CDR; CA = COMBAT ARMS; CB = COMBAT SVC SPT; CD = ELECTRONICS; CE = COMMO ENGINEERING; CI = CUSTOMS; CL = EVACUATION; CN = FORWARD TREATMENT; CO = EXT SWITCH; CR = FINANCE &amp; SUPPORT; CS = FITNESS; CT = FIRE CONTROL; CV = FIRING; CY = CASUALTY; D1 = FUEL SUPPLY; D4 = GCA; D6 = GENERAL; DF = DEFENSE; DL = HEADQUARTERS; DM = COMMANDANT; DN = DENTAL; DR = INSPECTOR GENERAL; DS = INSPECTION TEAM; DT = JUDGE ADVOCATE GEN; DV = LAUNCH; DZ = LOG AUTM SYS SPT; E0 = LOGISTICS; E1 = LOGGING; E2 = EW OFFICER; E4 = MTV SQUAD; E7 = MAINTENANCE; E8 = MORTAR; EA = MAINT/SUPPLY; EE = MATERIEL MGMT; EF = MATERIEL; EG = MATERIEL SUPPORT; EH = MEDICAL; EJ = MEDICAL SUPPORT; EM = MEDIA PRODUCTION; EO = MESS TEAM; EP = MACHINE GUN SQUAD; ES = MORALE; ET = ETUT; EU = MORTUARY AFFAIRS; EV = MOVEMENTS; EW = MILITARY POLICE; EX = MISSILE-MUNITIONS; F3 = OPERATIONS OFFICER; F6 = OPERATIONS SPT; F8 = OPTICAL/OPTOMETRY; FA = SURVEY; FB = PADS; FC = MET; FD = COLLECTION MGMT; FF = FARE/FARP; FG = RECONNAISSANCE; FH = LAUNCHER; FI = PERS EFF DEPOT; FJ = PERSONNEL OPERATIONS; FK = PERSONNEL SERVICES; FL = PETROLEUM DIST; FP = PHOTO; FS = FOOD SERVICE; FU = PREVENTIVE MED; FV = PRINT CENTER; FW = PRINTING; FX = PRISON CONTROL; FY = PROC; FZ = PRODUCTION CONTROL; G1 = PROG/SYS ANAL; G2 = PROPERTY BOOK/CLASS VII; G3 = PROPAGANDA DEV; G6 = NOT USED/ USE 88; G8 = QUAL SURV/SAFETY; GB = RADAR; GD = REAL ESTATE; GI = S1/S4; GO = SECURITY; GQ = SHOP; GW = COMMO/SIGNAL SPT; GX = SPECIAL OPS; GZ = SURGICAL; H0 = STOR &amp; SHIP; H1 = STORAGE/REPOSITORY; H2 = SUPPLY CONTROL; H3 = SUPPLY OPERATIONS OFC; H4 = SUPPLY/SERVICE; H8 = SURVEILLANCE; H9 = SERVICE(S); HA = SERVICE SUPPORT; HC = SYSTEM(S); HF =</p> |
|--|---|

OV-2 : Operational Node Connectivity Description

|                       |  |
|-----------------------|--|
|                       | <p>TAC SUPPORT; HG = TELCOMM CENTER; HI = TECHNICAL CONTROL; HK = TELEPHONE SWBD; HM = HUMINT/MDCI; HP = TARGETTING; HQ = DISCOM PLANS/INTELL BR; HX = TRC-170; I7 = WATER PRODUCTION; I8 = WATER SECTION/TEAM SUPV; I9 = WORLDWIDE WX PROD FAC; IB = TSQ-177; ID = JTAGS TML; IN = INVESTIGATION; IS = SYSCON; JS = JSTARS; LG = LEGAL/LEGAL SPT; LI = LINGUIST/TRANSLATOR; LS = LOG STATS; LT = LOG SPT; MA = MAINT, AVIATION; MM = MAINT, MEDICAL; NC = NETWORK CONTROL; NN = CLINIC; NR = NURSE; P1 = ANESTHESIA; P4 = EMERGENCY MED TECH; P5 = OPERATING ROOM/PRE-OP; P9 = NUTRITION; PG = PROPAGANDA; PH = DOCTOR/SURGEON/PA; PI = IMAGERY PROCESSING; PJ = TELEMEDICINE; PL = PLANS; PO = POSTAL; PP = PIPELINE; PS = SAFETY OFFICER; PY = PHARMACY; RB = ANALYSIS CONTROL; RC = COMMAND; RE = EQUIP READINESS; RG = RIGGER; RM = RESOURCE MGMT; RO = READINESS OPS; RP = REPORTING; RY = RECOVERY; SA = AUTOMATED SYS; SG = SGS; SP = SCTY, PLANS, OPS (SPO); SR = SENSOR; SW = SWITCH; TA = TAC; TN = TRANSPORTATION; TR = TREATMENT; VA = VULNERABILITY ASSESSMENT; VO = VOLCANO; WD = WARD; WN = WEAPONS.</p> |
| <p>OE / OE_USE_CD</p> | <p>A <a href="#">classification</a> (<a href="#">../ap233/index.html#ap233_extclass</a>) of the AP233 element representing the Operational Facility depending on the following values, the word not the code.</p> <p>A1--MOVEMENT CONTROL; A3--DATA CENTER; A4--ABMOC OFFICER; A5--PLL; A6--SUPPLY/TRANSPORTATION; A7--TRANSPORTATION OFF; A8--MATO; AF--BLOOD BANK; AI--MAINT, SIGNAL/C-E; AJ--CONSULTATION; AK--PREVENTION; AL--CABLE; AM--CBT-VEH; AR--CEWI; AW--CLASS I; AZ--CLASS III; B0--CLASS III/V; B6--AMBULANCE; B9--ENGINEER SYS; BA--COMMAND POST (CP); BC--BTLFLD CIRCULATION CTRL; BD--CHIEF OF STAFF;</p>  |

## OV-2 : Operational Node Connectivity Description

|  |  |
|--|--|
|  | BE--COLL MGT & DIST; BF--COLL;<br>BG--COMBAT SPT; BI--COMMAND HQ;<br>BJ--COMPROLLER; BK--COMSEC; BR--REAR<br>BATTLE; BU--DATA TERM; BX--DIRECTION<br>FINDING; BZ--DIVER/DIVING; C0--STINGER;<br>C1--CONSTRUCTION; C5--RADIO; C9--DPU<br>CDR; CA--COMBAT ARMS; CB--COMBAT SVC<br>SPT; CD--ELECTRONICS; CI--CUSTOMS;<br>CL--EVACUATION; CN--FORWARD<br>TREATMENT; CO--EXT SWITCH; CR--FINANCE<br>& SUPPORT; CS--FITNESS; CT--FIRE<br>CONTROL; CV--FIRING; CY--CASUALTY;<br>D1--FUEL SUPPLY; D4--GCA; D6--GENERAL;<br>DF--DEFENSE; DL--HEADQUARTERS;<br>DM--COMMANDANT; DN--DENTAL;<br>DR--INSPECTOR GENERAL; DT--JUDGE<br>ADVOCATE GEN; DV--LAUNCH; DZ--LOG<br>AUTM SYS SPT; E0--LOGISTICS; E1--LOGGING;<br>E7--MAINTENANCE; EA--MAINT/SUPPLY;<br>EE--MATERIEL MGMT; EF--MATERIEL;<br>EG--MATERIEL SUPPORT; EH--MEDICAL;<br>EJ--MEDICAL SUPPORT; EM--MEDIA<br>PRODUCTION; ES--MORALE; ET--ETUT;<br>EV--MOVEMENTS; EW--MILITARY POLICE;<br>EX--MISSILE-MUNITIONS; F3--OPERATIONS<br>OFFICER; F6--OPERATIONS SPT;<br>F8--OPTICAL/OPTOMETRY; FA--SURVEY;<br>FC--MET; FD--COLLECTION MGMT;<br>FG--RECONNAISSANCE; FH--LAUNCHER;<br>FI--PERS EFF DEPOT; FJ--PERSONNEL<br>OPERATIONS; FK--PERSONNEL SERVICES;<br>FL--PETROLEUM DIST; FP--PHOTO;<br>FU--PREVENTIVE MED; FV--PRINT CENTER;<br>FW--PRINTING; FX--PRISON CONTROL;<br>FY--PROC; FZ--PRODUCTION CONTROL;<br>G1--PROG/SYS ANAL; G2--PROPERTY<br>BOOK/CLASS VII; G3--PROPAGANDA DEV;<br>G6--S6/G6; G8--QUAL SURV/SAFETY;<br>GB--RADAR; GD--REAL ESTATE; GI--S1/S4;<br>GO--SECURITY; GW--COMMO/SIGNAL SPT;<br>GX--SPECIAL OPS; GZ--SURGICAL; H0--STOR<br>& SHIP; H1--STORAGE/REPOSITORY;<br>H2--SUPPLY CONTROL; H3--SUPPLY<br>OPERATIONS OFC; H4--SUPPLY/SERVICE;<br>H8--SURVEILLANCE; H9--SERVICE(S);<br>HA--SERVICE SUPPORT; HC--SYSTEM(S);<br>HF--TAC SUPPORT; HG--TELCOMM CENTER;<br>HI--TECHNICAL CONTROL; HK--TELEPHONE |
|--|--|

## OV-2 : Operational Node Connectivity Description

|  |  |
|--|--|
|  | SWBD; HP--TARGETTING; I5--VULCAN; I7--WATER PRODUCTION; I9--WORLDWIDE WX PROD FAC; ID--JTAGS TML; IS--SYSCON; LG--LEGAL/LEGAL SPT; LS--LOG STATS; LT--LOG SPT; MA--MAINT, AVIATION; MM--MAINT, MEDICAL; NC--NETWORK CONTROL; NN--CLINIC; NR--NURSE; etc. (289 domain values). Source: U.S. Army C4RDP. |
|--|--|

**Table 1: OPERATIONAL-ELEMENT (OE) Mapping**

### 3.8. Operational Role Mapping

This section describes the mapping for the CADM Operational Role concept and relationships.

| CADM XML Element(s)       | AP233 XML Element(s) or Attributes(s)   |
|---------------------------|---|
| OP_ROLE                   | OPERATIONAL-ROLE: Not mapped. See <a href="#">OV-2 Issues</a> (../dodaf/ov2.html#ov2_issues)                                  |
| OP_ROLE / SKL_ID          | SKILL IDENTIFIER: Not mapped, but likely AP233 <i>Skill1</i> . See <a href="#">OV-2 Issues</a> (../dodaf/ov2.html#ov2_issues) |
| OP_ROLE / PSTN_ID         | POSITION IDENTIFIER: Not mapped, but likely AP233 <i>Position</i> or <i>Position_type</i> .                                   |
| OP_ROLE / PRSN_TP_ID      | PERSON-TYPE IDENTIFIER: Not mapped, but likely AP233 <i>Type_of_person</i> .  |
| OP_ROLE / OPRL_RESPONS_TX | OPERATIONAL-ROLE RESPONSIBILITY TEXT: Not mapped.   |
| OP_ROLE / OPRL_NM         | OPERATIONAL-ROLE NAME: Not mapped.  |
| OP_ROLE / OPRL_ID         | OPERATIONAL-ROLE IDENTIFIER: Not mapped.  |
| OP_ROLE / OPRL_DESCR_TX   | OPERATIONAL-ROLE DESCRIPTION TEXT. Not mapped.  |
| OP_ROLE / OCCUP_ID        | OCCUPATION IDENTIFIER: Not mapped, but likely AP233 <i>Occupation</i> .   |
| OP_ROLE / DOSCR_ID        | DEFENSE-OCCUPATIONAL-SPECIALTY-CROSS-REFERENCE IDENTIFIER: Not mapped.  |

**Table 1: Within the OP\_ROLE CADM XML Element**

## OV-2 : Operational Node Connectivity Description

### 4. Example OV-2 CADM XML Data

This section contains example OV-2 CADM XML data.

#### 4.1. Example NODE\_CONN\_DESCR

```
<NODE_CONN_DESCR>
  <DOC_ID>33300000</DOC_ID>
  <NTWK_ID>33440001</NTWK_ID>
</NODE_CONN_DESCR>
<DOC>
  <DOC_ID>33300000</DOC_ID>
  <DOC_NM>SAMPLE NODE CONNECTIVITY DESCRIPTION {OV-2}</DOC_NM>
  <CSC_ID>20000001</CSC_ID>
  <TIME_FRAME_PRD_ID>20102341</TIME_FRAME_PRD_ID>
  <DOC_APP_CALDT>20031126</DOC_APP_CALDT>
  <DOC_ARCHPROD_TY_CD>24</DOC_ARCHPROD_TY_CD>
  <DOC_CRTN_CALDT>20031203</DOC_CRTN_CALDT>
  <DOC_CAT_CD>J</DOC_CAT_CD>
  <DOC_VER_ID>VERSION 1.0</DOC_VER_ID>
</DOC>
```

#### 4.2. Example Network and Network-Nodes

```
<NTWK>
  <NTWK_ID>33440001</NTWK_ID>
  <NTWK_NM>OV-2 Example Network</NTWK_NM>
</NTWK>
<NTWK_NODE>
  <NTWK_ID>33440001</NTWK_ID>
  <NODE_ID>59590001</NODE_ID>
  <NTWK_ND_ID>23440001</NTWK_ND_ID>
  <NTWK_ND_ROL_CD>5</NTWK_ND_ROL_CD>
</NTWK_NODE>
<NTWK_NODE>
  <NTWK_ID>33440001</NTWK_ID>
  <NODE_ID>59590002</NODE_ID>
  <NTWK_ND_ID>23440002</NTWK_ND_ID>
  <NTWK_ND_ROL_CD>5</NTWK_ND_ROL_CD>
</NTWK_NODE>
```

#### 4.3. Example Operational Facility (as a Node)

```
<NODE>
  <NODE_ID>59590001</NODE_ID>
  <NODE_CAT_CD>15</NODE_CAT_CD>
  <NODE_DESCR_TX>Army Op Fac description text goes here.</NODE_DESCR_TX>
  <NODE_NM>Army HQ Op Fac Example 1</NODE_NM>
  <NODE_PHY_IND_CD>1</NODE_PHY_IND_CD>

  </NODE>
<NODE_ORG_TYPE>
```

## OV-2 : Operational Node Connectivity Description

```
<NODE_ID>59590001</NODE_ID>
<NODE_ORGT_ID>36660001</NODE_ORGT_ID>
<NODE_ORGT_ROLE_CD>01</NODE_ORGT_ROLE_CD>
<ORGT_ID>99220010</ORGT_ID>
</NODE_ORG_TYPE>

<ORG_TY>
  <ORGT_DESCR_TX>An Org Type that is part of headquarters.</ORGT_DESCR_TX>
  <ORGT_FUNC_CD>001</ORGT_FUNC_CD>
  <ORGT_ID>99220010</ORGT_ID>
  <ORGT_NM>Division</ORGT_NM>
  <ORGT_SVC_CD>01</ORGT_SVC_CD>
</ORG_TY>

<OPFAC>
  <OPFAC_ORGT_ID>99220010</OPFAC_ORGT_ID>
  <OPFAC_APPR_STA_CD>A</OPFAC_APPR_STA_CD>
  <OF_ECH_CD>4</OF_ECH_CD>
</OPFAC>
```

### 4.4. Example Node Link

```
<NODE_ASSOC>
  <NODE_1_NODE_ID>59590001</NODE_1_NODE_ID>
  <NODE_2_NODE_ID>59590002</NODE_2_NODE_ID>
  <NA_TY_CD>01</NA_TY_CD>
  <NA_ID>25250001</NA_ID>
  <NA_CAT_CD>2</NA_CAT_CD>
  <NA_COLLOC_IND_CD>02</NA_COLLOC_IND_CD>
  <NA_DESCR_TX>The Information Exchange Need between an Army Division HQ
and an Army Division Alternative HQ.</NA_DESCR_TX>
  <NA_NM>Division HQ-Alternative Division HQ Link</NA_NM>
  <NA_USE_TY_CD>03</NA_USE_TY_CD>
</NODE_ASSOC>

<NODE_LINK>
  <NODE_1_NODE_ID>59590001</NODE_1_NODE_ID>
  <NODE_2_NODE_ID>59590002</NODE_2_NODE_ID>
  <NA_ID>25250001</NA_ID>
  <NL_CAT_CD>2</NL_CAT_CD>
  <NL_INEX_SIZE_TX>5 Gigabytes</NL_INEX_SIZE_TX>
  <NL_INTEROP_LVL_CD>20</NL_INTEROP_LVL_CD>
  <NL_PHYS_CN_IND_CD>1</NL_PHYS_CN_IND_CD>
  <SC_CD>11</SC_CD>
</NODE_LINK>
```

### 4.5. Example Node-Link-Capability and Capability

```
<CAPABILITY>
  <CAP_DESCR_TX>Seconds required to transmit 1 Gigabit of
information.</CAP_DESCR_TX>
  <CAP_ID>87870001</CAP_ID>
  <CAP_NM>1GB Transmission Time</CAP_NM>
  <CAP_TY_CD>011</CAP_TY_CD>
```

## OV-2 : Operational Node Connectivity Description

```
<MSR_UNT_CD>SC</MSR_UNT_CD>
</CAPABILITY>

<NODE_LINK_CAP>
  <CAP_ID>87870001</CAP_ID>
  <NODE_1_NODE_ID>59590001</NODE_1_NODE_ID>
  <NODE_2_NODE_ID>59590002</NODE_2_NODE_ID>
  <NA_ID>25250001</NA_ID>
  <NDLC_EFF_CALDT>20071126</NDLC_EFF_CALDT>
  <NDLC_ID>27272701</NDLC_ID>
  <NDLC_QY>0.25</NDLC_QY>
</NODE_LINK_CAP>
```

## 5. Example OV-5 AP233 XML Data

This section contains example OV-2 AP233 XML data.

### 5.1. Example Organization\_type

```
<ap233:Organization_type id="id-orgtype16650">
  <Name>Division</Name>
  <Description>An Org Type that is part of headquarters.</Description>
</ap233:Organization_type>

<ap233:Classification_assignment
id="id-orgtype16650-classification_assignment-1">
  <Items>
    <ap233:Organization_type ref="id-orgtype16650" xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class ref="id-OPERATIONAL-FACILITY" xsi:nil="true" />
  </Assigned_class>
</ap233:Classification_assignment>

<ap233:Identification_assignment
id="id-orgtype16650-idassign">
  <Identifier>99220010</Identifier>
  <Role>Identification_code</Role>
  <Items>
    <ap233:Organization_type ref="id-orgtype16650" xsi:nil="true" />
  </Items>
</ap233:Identification_assignment>

<ap233:Classification_assignment id="id-930393039393">
  <Items>
    <ap233:Identification_assignment ref="id-orgtype16650-idassign"
xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class ref="id-Identification_code" xsi:nil="true" />
  </Assigned_class>
</ap233:Classification_assignment>
```

## 5.2. Example Interface\_connection

```
<ap233:Interface_connection id="id-iconn16650">
  <Id>1007</Id>
  <Description>The Information Exchange Need between an Army Division HQ
and an Army Division Alternative HQ.</Description>
  <Connection_type>COMMUNICATIONS LINK TRANSMISSION
CAPABILITY</Connection_type>
  <Connecting>
    <ap233:System_element_definition ref="id-syseldef12699" xsi:nil="true"
/>
  </Connecting>
  <Connected>
    <ap233:System_element_definition ref="id-syseldef12783" xsi:nil="true"
/>
  </Connected>
</ap233:Interface_connection>

<ap233:Classification_assignment
id="id-iconn16650-classification_assignment">
  <Items>
    <ap233:Interface_connection ref="id-iconn16650" xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class
ref="id-COMMUNICATIONS-LINK-TRANSMISSION-CAPABILITY" xsi:nil="true" />
  </Assigned_class>
</ap233:Classification_assignment>
```

## 5.3. Example Requirement

```
<ap233:Requirement id="id-req12699">
  <Id>27272701</Id>
</ap233:Requirement>

<ap233:Requirement_version id="id-reqver12699" >
  <Id>1</Id>
  <Of_product>
    <ap233:Requirement ref="id-req12699" xsi:nil="true" />
  </Of_product>
</ap233:Requirement_version>

<ap233:Requirement_view_definition id="id-reqdef12699">
  <Id>27272701</Id>
  <Name>Gigabit transmission in .25 second</Name>
  <Defined_version>
    <ap233:Requirement_version ref="id-reqver12699" xsi:nil="true" />
  </Defined_version>
  <Initial_context>
    <ap233:View_definition_context ref="id-ov2" xsi:nil="true" />
  </Initial_context>
</ap233:Requirement_view_definition>
```

#### 5.4. Example Assigned\_property

```
<ap233:Numerical_item_with_unit id="id-niwul2758">
  <Value_component>.25</Value_component>
  <Unit>
    <ap233:Unit ref="id-second" xsi:nil="true" />
  </Unit>
</ap233:Numerical_item_with_unit>

<ap233:Property_value_representation id="id-pvrep12758">
  <Context_of_items>
    <ap233:Numerical_representation_context
      ref="id-Numerical_representation_context-time" xsi:nil="true" />
  </Context_of_items>
  <Items>
    <ap233:Numerical_item_with_unit ref="id-niwul2758" xsi:nil="true" />
  </Items>
</ap233:Property_value_representation>

<ap233:Property_representation id="id-pvrep12758">
  <Description>12758</Description>
  <Property>
    <ap233:Assigned_property
      ref="id-Assigned_property12758" xsi:nil="true" />
  </Property>
  <Rep>
    <ap233:Property_value_representation
      ref="id-pvrep12758" xsi:nil="true" />
  </Rep>
  <Role />
</ap233:Property_representation>

<ap233:Assigned_property id="id-Assigned_property12758">
  <Id>12758</Id>
  <Name />
  <Description />
  <Described_element>
    <ap233:Requirement_view_definition id="id-reqdef12699" xsi:nil="true"
  />
  </Described_element>
</ap233:Assigned_property>

<ap233:Classification_assignment id="id-127588393838">
  <Items>
    <ap233:Assigned_property
      ref="id-Assigned_property12758" xsi:nil="true" />
  </Items>
  <Assigned_class>
    <ap233:External_class ref="id-Gigabit_transmission_time" xsi:nil="true"
  />
  </Assigned_class>
</ap233:Classification_assignment>
```

## OV-2 : Operational Node Connectivity Description

```
<ap233:Unit id="id-second">
  <Name>Second</Name>
  <Si_unit>true</Si_unit>
</ap233:Unit>

<ap233:Unit id="id-minute">
  <Name>Minute</Name>
  <Si_unit>true</Si_unit>
</ap233:Unit>

<ap233:Numerical_representation_context
  id="id-Numerical_representation_context-time">
  <Id>Time</Id>
  <Kind>Valid Time Units</Kind>
  <Units>
    <ap233:Unit xsi:nil="true" ref="id-second" />
    <ap233:Unit xsi:nil="true" ref="id-minute" />
  </Units>
</ap233:Numerical_representation_context>
```