Department of Defense
Office of the Assistant Secretary of Defense (OASD) for
Network Infrastructure and Integration (NII)

Version Description Document

for

The DoD Architecture Framework (DoDAF) and DoDAF Meta Model (DM2) Version 2.02

FINAL

30 September 2010

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List of Figures and Tables

1. Purpose

The purpose of this document is to describe changes made to DoDAF - DM2 2.01 to create DoDAF - DM2 2.02.

2. Scope

The DoDAF 2.02, with its accompanying meta model, the DoDAF Meta Model (DM2), was baselined in August 2010. Improvements and corrections have been collected from the DoD EA community.   These were logged and tracked by the DoDAF - DM2 Work Group (WG) secretariats following the processes and procedures documented in DoDAF - DM2 Configuration Management Plan.   These were prioritized and adjudicated by the DoDAF - DM2 WG in a consensual manner though weekly DoDAF - DM2 WG meetings. WG actionees implemented the changes as per WG adjudication and reported back to the WG for WG review of the implementation. Upon technical cutoff for DoDAF - DM2 version 2.02, the status of DoDAF - DM2 change requests was:

Action Item / Change Request Status	Meaning	Quantity
In Ver 2.01	These were action items and change requests taken by the DoDAF - DM2 WG since baseline and release of DoDAF - DM2 2.0 in May 2009 and selected for implementation by the DoDAF - DM2 WG for 2.01 and successfully implemented and included in the 2.01 baseline.	68
In Ver 2.02	These were action items and change requests taken by the DoDAF - DM2 WG since baseline and release of DoDAF - DM2 2.01 in August 2010 and selected for implementation by the DoDAF - DM2 WG for 2.02 and successfully implemented and included in the 2.02 baseline.	26
Consult IDEAS Group	Theses are action items and change requests that affect the DM2 formal ontology foundation, IDEAS, and thus must be referred to the IDEAS configuration management body for resolution.	17
Defer	Action items and change requests that are pending prioritization by the DoDAF - DM2 WG. If prioritized for the next baseline, the WG will determine course of action and assign researchers and implementers.	93
Unassigned	New action items and change requests that have not been presented to the WG yet.	103
In Progress for Ver 2.03	Action items and change requests that have been selected by the WG for possible 2.03 inclusion.	31

TOTAL   338

3. Summary of Improvements Made in 2.02

There were 29 DoDAF-DM2 Action Items / Change Requests resolved by version 2.02. These are shown in detail in the table on the following pages. The changes fall into the following categories:

a. A Reification data group and associated diagram was created because of the key role reification plays in architectural and service descriptions and in associated system engineering.

b. The adoption of the IDEAS Measure model was completed. This had been started in 2.01 but was allowed to be completed by the addition of Properties of types and individuals.

c. Triples and tuples of tuples, though syntactically allowed, were not semantically defined and so they were restructured into couples that could be specialized from semantically defined IDEAS couples.

d. Began work on fine structure for Rules, Guidance, and Agreement including supertyping how rules constrain activities and role of parties to an agreement.

e. Redefined PersonType to be a PersonRoleType.

f. Continued work with OASIS, NCOIC, and OMG SoAML to refine the Services model including removal of service channel and handling of service layers via reification. This work is still on-going.

g. Improved the structure of the relationship between measuring rules and units of measure. There is still work to be done here.

h. There were some cases of possible redundancy in the tuples such as ActivityPerformedByPerformer and activityPerformableUnderCondition. These were restructured.

i. The MODAF concept of Enterprise Phase was determined to be most equivalent to DoDAF's Capability phase, which is a state of a Capability.

j. Some cleanup of Vision and Desired Effect structure that was a major change in 2.01.

k. Minor changes, e.g., for model formality, DoDAF documentation, XSD documentation.

The definitions of the column headers are as follows:

Log Field	Description
#	Sequential number for DoDAF - DM2 action items and change requests assigned by the DoDAF - DM2 WG secretariat
Title	Short title of action item or change request for convenient reference by WG
Description	Action item or change request as submitted by submitter
Date Submitted	Date submitted

Source	Submitter individual, group, venue, etc. and organization
CI	The Configuration Item to which this AI/CR applies, i.e., DoDAF, DM2.
Data Group / Model / other	The specific part of the CI to which the AI/CR pertains.
Status	In Ver 2.02, In Progress for 2.02, In Progress for 2.03, Unassigned (new), Consult IDEAS Group, Defer, Rejected,No Action Required
Action	During resolution, this is the action(s) the WG determines need to be taken. Upon satisfactory completion, this is the record of what was changed.
Actionee	The individual(s) assigned to research solutions and ultimately implement the solution the WG selects.

#	Title	Description	Date Submitted	Source	Source Org	CI	Data Group / Model / other	Status	Action	Actionee
109	Service layers	Are Service layers handled?		McDaniel	NII	DM2	Srvc	In Ver 2.02	The Reification diagram was created to depict how this is done.	
326	Example XML docs	Core Process / model XML doc examples	3-Apr-09	Damachek	Army G6	DM2	XSD	In Ver 2.02	Posted on DoDAF Journal	McDaniel
332	Changing a resource versus producing it	Problem with activityChangesResource (a beforeAfter) and activityResourceOverlap (an overlap)	17-Apr-09	Snyder	Army G6	DM2	RF	In Ver 2.02	Due to the need to express the before after and the overlap part in resource flow and that these classes were redundant, they were replaced by activityConsumesResource and activityProducesResource, both OverlapTypes and beforeAfterTypes.	McDaniel
365	Information and Data:	The element ServiceDescription is understood as the key to any form of description of a service in a non-implementation specific manner. Is this correctly understood and is this then enough to convey all of the MODAF related non-implementation specific information as regards services?	4-Jul-09	Kihlstrom	UPDM	DM2	I&D	In Ver 2.02	Service Description does both MODAF's Service Interface Definition and Service Interaction Specification. Modified service description to connect to servicePortDescribedBy, a subtype of describedBy and added places to ServicePort. Verified the describedBy is specific to service descriptions.	Schaefer / Ellis
384	XSD documentation	Document XML tags. Need to explain what the difference is between the "model" attribute under IdeasData and the one under IdeasModel	23-Jul-09	Schaefer	NII	DM2	XSD	In Ver 2.02	These tags were renamed to "ontology" and "framework".	Schaefer
404	Information or DomainInformation for SV1, SV10b	Currently, only Information is allowed. Should that be DomainInformation?	29-Apr-10	Schaefer	NII	DM2	SV-1 SV-10b	In Ver 2.02	Left as Information. DomainInformation on AV-2 only.	Schaefer
454	Condition/ActivityPerformableUnderCondition optional for SV1	Both needed for activityPerformedByPerformer	29-Apr-10	Schaefer	NII	DM2	SV-1	In Ver 2.02	Additional classes were made optional but also the triple activityPerformedByPerformer was deconstructed.	McDaniel
457	Agreements, Guidance, Rules have parties		20-Oct-09	SoAML Meeting	OMG SoAML	DM2	Rule	In Ver 2.02	Made a better Rules diagram that shows all the parts. Added Aliases. Math model of willingness, transitive trust, … New OverlapType classes created, partiesToAgreement, relating Agreement and Performers	serveral
467	Measures and tuples	Several relationships exist between measures and tuple, you cannot have a measure of a tuple. These seem to be due to shortcuts to reduce the wholepart overlap that is actually being measured.	30-Oct-09	UPDM 2	UPDM	DM2	Meas	In Ver 2.02	All relationships between measures and tuples have been removed.	McDaniel / Schaefer
470	Person WPT	Person has whole part type (not based in the real world).	30-Oct-09	UPDM 2	UPDM	DM2	Prfmr	In Ver 2.02	Changed the definition and name for PersonType to PersonRoleType. Definition says category of personroles. IndividualPersonRole created as well. Added PersonType for OV2,4	McDaniel Schaefer

#	Title	Description	Date Submitted	Source	Source Org	CI	Data Group / Model / other	Status	Action	Actionee
473	UPDM 16	Definition of ServiceChannel mentions "requisitions", there is no such concept in DM2 ! Please explain	30-Oct-09	UPDM 2	UPDM	DM2	Srvc	In Ver 2.02	Removed	Schaefer
484	Project and Project Type have a TI and a PTI		8-Dec-09	UPDM	UPDM	DM2	Prjt	In Ver 2.02	Removed the PTI	
486	ARO as two couples	The triple is problematic and is somewhat redundant with activityChangesResource except that ARO is overlap and ACR is before-after. Maybe the two couples are both? Rec 2.02	21-Dec-09	SoAML Meeting	OMG SoAML	DM2	RF	In Ver 2.02	Due to the need to express the before after and the overlap part in resource flow, activityConsumesResource and activityProducesResource, both OverlapTypes and beforeAfterTypes, were created. Redundant classes removed.	McDaniel / Schaefer
487	Agreement constrains activityPerformedBy Performer	Restitch APBP to Agreement instead of Rule since the def of Agreement refers to the parties. Related to clarify distinction between Guidance, Rule, Agreement, and Service Contract	21-Dec-09	SoAML Meeting	OMG SoAML	DM2	Rule	In Ver 2.02	New relationship created called partiesToAnAgreement that relate Performers and Agreements	Schaefer McDaniel Ellis Brookw
489	APBP redundancy with APUC	activityPerformedByPerformer is a triple that points to, 1) an Activity, 2) a Performer, and 3) a couple -- activityPerformableUnderCondition which, in turn, points to Activity and Condition. This allows for inconsistent data, i.e., different Activities pointed to in the triple and the couple. Same situation with activityPartOfCapability.	14-Jan-10	White, C	NII	DM2	Prfmr	In Ver 2.02	All triples were simplified to couples. Now activityPerformedByPerformer relates an Activity and a Performer.	Schaefer
501	Capability Phase <> Enterprise Phase	Are they different or the same?	1-Feb-10	Bailey	IDEAS	DM2	Cap	In Ver 2.02	After much deliberation and examples work, it was determined that Enterprise Phase is an alias for Capability Phase and was so noted in the data dictionary.	Bleakly, Kirlstrom
509	How to indicate methodology-dependent subclasses	For example, UML Actions as subtypes of Activity.	16-Mar-10	Dryer	JFCOM	DM2	Acty	In Ver 2.02	Added ActivityType which is a second order type.	Benfield
526	UPDM Markup the enterprise phases should be Project phases		21-May-10	Bleakley	UPDM	DM2	Cap	In Ver 2.02	After much deliberation and examples work, it was determined that Enterprise Phase is an alias for Capability Phase and was so noted in the data dictionary.	McDaniel / Schaefer
547	Units	Units are types of rules	7-Jul-10	Dryer	JFCOM	DM2	Meas	In Ver 2.02	Done using MeasureTypeUnitsOfMeasure, a subtype of MeasureType and rulePartOfMeasureType	McDaniel
551	Placeable types	The super of Tuple Type, part of IDEAS, but not in Baseline	14-Jul-10	McDaniel	SBSI/DCIO	DM2	IDEAS	In Ver 2.02	Removed as supertype of TupleType	McDaniel

#	Title	Description	Date Submitted	Source	Source Org	CI	Data Group / Model / other	Status	Action	Actionee
552	TI between Couple Type and PT	Why do I have to TI Couple Type to PowerType if I already have a TI from Tuple Type to PowerType?	14-Jul-10	McDaniel	SBSI/DCIO	DM2	IDEAS	In Ver 2.02	Removed typeInstane from CoupleType to Powertype	McDaniel
553	Overlap	Because of some last minute changes to IDEAS, the overlap does not work for DM2 so it is currently just a tuple -- not good. Until IDEAS Group CM begins, we should at least use the last good IDEAS model of overlap as two whole-parts.	14-Jul-10	McDaniel	SBSI/DCIO	DM2	IDEAS	In Ver 2.02	Did as per older version of IDEAS so there is a connection to mereology.	McDaniel
558	visionIsRealizedByDesiredEffect	the desiredEffect in this relationship should be the resource state and not the tuple	14-Jul-10	Schaefer	SBSI/DCIO	DM2	goal	In Ver 2.02	Restitched relationships as specified.	Schaefer
559	Keep number of diagrams manageable	Activity, Training / Skill / Education, and Goals don't illustrate anything other than what is in other diagrams. But need new diagrams for Reification and Temporal Behavior.	22-Jul-10	McDAniel	SBSI/DCIO	DM2	goal	In Ver 2.02	Activity, Training / Skill / Education, and Goal diagrams removed. Pedigree, Organizational Structure and Reification diagrams added.	
562	Rule constraint s/b SST not overlap	Activities that comply with a Rule are members	23-Jul-10	McDaniel	SBSI/DCIO	DM2	Rule	In Ver 2.02	Discovered making reificaiton diagram. This is done using rulePartOfMeasureType and measureTypeApplicableToActivity	McDaniel
563	Better name for activityTypeSSTMeasureType	Although IDEAS naming convention is nice, it would be more understandable to say MeasureTypeIsApplicableToActivity. The supertype covers the math, which BTW s/b TI, not SST since Activity is a Type and MeasureType is a TypeType.	23-Jul-10	McDaniel	SBSI/DCIO	DM2	Rule	In Ver 2.02	Discovered making reificaiton diagram and changed the name.	McDaniel
574	desiredEffectDirectActivity / desiredEffectIsRealizedByProjectType	desiredEffectDirectActivity and desiredEffectIsRealizedByProjectType should be both a BeforeAfter and Overlap relationship	3-Aug-10	Schaefer	SBSI/DCIO	DM2	other	In Ver 2.02	Restitched relationships as specified.	Schaefer
577	Methods and redundant tables	The data group documentation has much redundancy amongst the "methods" tables and the core process usage. Also, the data dictionary listings for each data group have much redundancy.	10-Aug-10	Murphy	SBSI/DCIO	DoDAF	other	In Ver 2.02	Removed data group tables and pointed users to master data dictionary. Consolidated methods tables and usage text.	Murphy
584	Services hyperbole	"Over time, the Department's emphasis on Service Oriented Environment and Cloud Computing may result in the elimination of the Systems Viewpoint." A tank can be thought of as a collection of sub-systems that contains IT related sub-systems. However, not all sub-systems of a tank are IT related sub-systems. It is unclear if SvcV's would be beneficial at all in describing the mechanical sub-systems of a tank. In fact, an SvcV based description of a mechanical sub-system seems to be an over kill since the service provided by such a sub-system is intended for its operator only. It would probably be best to reference IT systems/sub-systems in the above statement and not risk mechanical sub-systems being architecturally described as services. However, this can be generalized to include all complex systems which include physical subsystems. For the ever-present UAV example, I imagine one could describe the service the airframe provides as the Flying Service, or more generally, the Transport Service. However, I don't find that description particularly relevant to any architectural questions. A	9-Feb-10	sidney.antommarchi and ben.lagueux via DKO		DoDAF	other	In Ver 2.02	The phrase "Over time, the Department's emphasis on Service Oriented Environment and Cloud Computing may result in the elimination of the Systems Viewpoint." was removed.	