Change Log for MODAF v1.2.003 to 1.2.004

Effective 01 April 2010

Background

Since the publication of MODAF v1.2 in April 2008 (last updated to 1.2.003 in September 2008), MOD has constrained the changes to MODAF in order to provide MODAF users and architecture software tool vendors with a stable framework to develop against. MOD has, however, continued to receive change proposals from interested parties including:

- MOD's Systems Engineering and Integration Group (SEIG);

- Swedish Armed Forces (SwAF);

- Unified Profile for DoDAF and MODAF (UPDM) Group;

- NATO Architecture Framework (NAF) Management Syndicate (NMS).

A total of 59 change proposals were received, catalogued, rationalised into 16 composite proposals ("Change Proposal A" through to "Change Proposal P"), assessed for impact, and prioritised.

In January 2010 the MOD Sponsor of MODAF decided that the time was right to implement the priority changes that provided minimum impact on the structure of the framework, including the MODAF Meta Model (M3), but provided the stakeholders with most benefit.

The overall impact of selected change proposals was considered minimal so not to merit a major version change to MODAF, hence the change is from v1.2.003 to 1.2.004. The log below describes the changes made against the composite Change Proposal.

In addition, the opportunity was taken to review the MODAF documentation and make cosmetic changes to the text to make it clearer, particularly for those of a non-technical background. These textual changes to the documentation are minor and have not been logged.

View and Documentation Changes

Change Proposal A - Ports on SV-1

Documentation for SV-1 amended appropriately. No new examples provided as ports are optional.

Change affects SV-2 (also note fix to way protocol stacks are managed in M3).

Change Proposal B – Numerous Fixes to Examples

Examples brought in line with M3 and disambiguated wherever an issue was raised against a specific example. Some other examples were also updated to reflect changes to M3 resulting from other issues.

Change Proposal C - Minor fixes and additions to M3

Simplified M3 excerpts updated in documentation. Examples modified to reflect M3 changes where necessary.

Change Proposal D – Numerous Clarifications and Fixes to Documentation

Mostly driven by specific issues, many small changes made to documentation. Documentation was also given a cursory review and any glaring errors or contradictions that became apparent were corrected.

StV-6 documentation and example were updated to reflect true purpose of the view.

Change Proposal G – New View for Service Composition

Given that composition of services indicates a method of implementation, it was deemed appropriate (in consultation with SwAF) to use an SV for this purpose. SV-12b was added, along with a new resource type - <<ServiceImplementation>>

Change Proposal K – Add Service Aspects to MODAF

Based on recommendations from CBM-J6 and SEIG, some rudimentary security modelling features have been added to OV-2. New examples added to documentation also.

Change Proposal M – Add materiel, energy and people flows to OV-3, SV-1, OV-5, SV-4, SV-6, OV-6c, SV-10c

This change has impacted the documentation for several views, but is mostly an M3 change. No new examples have been prepared for this, as it is not a core aspect of any of the views.

Meta-Model Changes

The changes to MODAF 1.2.004 were mostly in the Meta-Model. These changes are listed below:

Change Proposal A - Ports on SV-1

- PortType (SV-2) removed.
- ResourcePort added (SV-1, SV-2).
- SoftwarePort added (SV-2).
- InteractionEnd(ABSTRACT) added to allow ResourceInteractions to also go between ResourcePorts (SV-1).
- SystemPortConnector renamed to ResourcePortConnector and now connects resource ports (SV-2).
- SystemPortConnectorEnd renamed to ResourcePortConnectorEnd.

Change Proposal C - Minor fixes and additions to M3

- OperationalStateDescription now only applicable to Nodes (OV-6).
- NodeContextUsage on OperationStateDescription now displayed as taggedValue relationship instead of attribute (no semantic change) (OV-6).
- NodeContextUsage removed for OperationalNodeLifeline (lifelines can only refer to properties anyway) (OV-6).

- v1.2 was supposed to change StV-4 so that aggregation relationships were used for composition instead of composite class. This never ended up in M3 though.
    - Addition of PartEnd and WholeEnd (properties).
    - CapabilityComposition extends UML::Association.
    - Also affects StV-3.
- tasks relationship is now a redefined ownedBehaviour (was tagged value) in StV-1.
- LogicalFlowItem (ABSTRACT) added to enable info flows to/from KnownResources (OV-2).
- Process added as ABSTRACT supertype of EnduringTask and OperationalActivity.
- EnterpriseStructure and EnterpriseTemporalPart were missing from StV-1 diagram – fixed.
- ProcessOwner (already there in OV-4) added to StV-1.
- Link from ActualOrganisation to EnterprisePhase added (StV-1).
- Added isProject and isOrganisation tagged values in StV-2 to allow architects to show that their enterprise is either a Project or an ActualOrganisation.
- ResourceStateMachine owner removed - state machines only applicable to resources, not functions.
- SystemStructureModel removed (it was not connected to anything).
- subGoals tagged value added to EnterpriseGoal in StV-1 - used to provide a goal structure (parent-child).
- Tagged value between ConfigurationDeployed and CapabilityConfiguration renamed to "configuration" from "fromTime" (StV-5).
- ProjectTypeSpecialisation (extends UML::Generalization) added (AcV-1).
- LastEdited and Architect taggedvalues added to ArchitecturalProduct in AV-1 in anticipation of MODAF/SOSA style guides.
- ArchitectureRealisation (extends UML::Realization) added to trace between LogicalArchitecture and PhysicalArchitecture (AV-1 Architecture Product).
- ElementOfEnvironment (abstract) added to clean up environment model in AV.
- SupportingActivities tagged value added to EnduringTask (StV-6).
- SupportingCapabilities tagged values added to Enduring Task (StV-1/6).
- ResourceInterface added to support SEIG requirement for interface-based connections (SV-1).
- Adding missing <<extends>> between servicesupportsactivity and UML::Dependency (OV-5).
- ProtocolImplementation and ImplementsProtocol removed.
- ImplementedProtocol, ProtocolLayer and ImplementedOn added to show how protocols can be implemented for a particular purpose.
- ProtocolStack removed.
- RunsOn added to show which protocols *can run* on other protocols (cf ImplementedOn).
- Definitions cleaned up in SOV elements.

Change Proposal G - Add Service Composition View

- New View added SV-12b (old SV-12 renamed to SV-12a).

- USedService renamed to RequiredService.

- ProvidesService renamed to ProvidedService, and taggedvalue added so that it matches UsedService.

Change Proposal K - Add Security Aspects to MODAF

- SecurityDomain (subtype of Node) added to OV-2.

- SecurityPolicy (subtype of OperationalConstraint) added to OV-6 and OV-2.

- OperationalConstraint added to OV-2 (this was allowed in MODAF anyway).

- Trustline (extends UML::Dependency) added to OV-2.

Change Proposal M - Add materiel and people flows to OV-3, SV-1, OV-5, SV-4, SV-6, OV-6c, SV-10c

- MaterielFlow, EnergyFlow and MovementOfPeople added to OV-3.

- ResourceCommunicaiton added to SV-1 and OV-4 Typical.

- FunctionCommunication added to SV-4.

- MaterielFunctionFlow added to SV-4.

- PeopleFunctionFlow added to SV-4.

- EnergyFunctionFlow added to SV-4.

- exchangeProperties tagged value now on LogicalFlow - was on InformationExchange) (OV-3).

- MaterielFlow, EnergyFlow and MovementOfPeople added to OV-6c.

- InformationExchangeMessage renamed NodeInteraction (OV-6c).

- carriedInfoElement tagged value renamed to carried (OV-5).

- OperationaActivityMaterielFlow added (OV-5).

- OperationaActivityPeopleFlow added (OV-5) - any jokes about their being only one type of activity that produces people should be addressed to the Swedish Armed Forces, who requested this addition.

- OperationaActivityEnergyFlow added (OV-5).

- Energy (extends Class) added to OV-2,3,5 to provide compatibility with NAF 3.1.

- ResourceMessage (extends UML::Message) added to SV-10c - allows clearer link back to materiel, human, etc. flows.

20100426-MODAF 1_2_004 Change Log.doc