

FAQs

How does MODAF relate to UML?

The M3 defines a Unified Modelling Language (UML) profile by extending the UML 2.0 meta model, which in turn specifies the structure and content of XML Metadata Interchange (XMI) files used for exchanging information between MODAF tools. The appropriate elements of the MODAF Meta Model (M3), that are needed to exchange the information for a MODAF View, are described within the definition for each View within this web site. It should be noted that the elements shown for one View may also be used in several other Views.

The classes defined in the M3 specify the allowable UML stereotypes that may be exchanged in an XMI file. As it is a Meta Model, all relationships that feature in a View are also modelled as classes. Rather than define a class for every conceivable item that could appear in a View, the meta model defines generic classes and allows references to the MODAF Ontology. For example, the MOD would be represented in XMI as an Organisation stereotype, with a tagged value referring to the element in the Ontology which says "Ministry of Defence".

In addition to the M3 being underpinned by UML, many of the Views are capable of being expressed in the form of UML diagrams. Such cases are made clear within the individual View descriptions, but in summary they are:

- Use of UML class and/or assembly diagrams for StV-4, OV-2, OV-4, OV-7, SV-1, SV-2c, SV-11 and AcV-1
- Use of UML activity diagrams for OV-5,
- Use of UML class and/or activity diagrams for SV-4
- Use of UML ports notation for SV-2a and SV-2b
- Use of UML constraints notation for OV-6a and SV-10a
- Use of UML state charts for OV-6b and SV-10b
- Use of UML interaction (sequence) diagrams for OV-6c and SV-10c

M3 itself is a UML profile. The specific way in which the Meta-Model has been specified in terms of the UML meta-model is described in the [M3 introduction \(link tbd\)](#). In particular, this explains the role of Composite Structure Diagrams in MODAF.

SysML is also relevant here, since Architecture Modelling can be regarded as being a branch of Systems Engineering, and SysML represents a Systems Engineering extension to UML. As time goes on, it is likely that SysML will become more applicable than UML.