ADML

A result of cooperation and leverage!
The Open Group
W3C
OMG
MCC
CMU
Background

- There are many different classes of tools (1)
  - that serve many different purposes
  - that serve many different constituencies
  - such as


“The reality is that no single tool exists for both modeling the enterprise and documenting the applications that implement the business solution. A combination of tools from different vendors is necessary ...”

*XML Metadata Interchange (XMI)*  
*Version 1.1*

(1) This list of classes of tools is not intended to be exhaustive
A Need for Native Representation

These tools use, create, and maintain information
- some of the information is represented in an open format
- some of the information is stored in an internal closed format
- regardless we refer to this as a “model representation”

For example:
A business tool can help one describe and maintain information about “Business Scenarios.” The information about business scenarios is stored in a representation that the tool understands, such as a Business Scenario Markup Language, and/or .txt, and/or .mml...

As another example:
An architecture tool can help one describe and maintain information that depicts the highest level conception of a system. This architecture information can be stored in a representation that the tool understands, such as a Metis Modeling Language, or Building Block Markup Language, or a number of other non-standard encodings.

Yet another example:
Design and development tools assist those in the development stream to describe and maintain information about implementations. This information can be stored in a representation that the tools understand, such as the standard Unified Modeling Language.
Also a Need for Interoperation

- Typically tools in these classes don’t share information
  - not all information needs to be shared
  - however to improve the connection of “need” to “implementation” could share some information

“A combination of tools from different vendors is necessary but difficult to achieve because the tools often cannot easily interchange the information they use with each other. This leads to translation or manual re-entry of information, both of which are sources of loss and error.”

XML Metadata Interchange (XMI)
Version 1.1
Enter XMI

- XMI provides capabilities to interoperate
- XMI itself leverages XML and MOF

"XMI eases the problem of tool interoperability by providing a flexible and easily parsed information interchange format. In principle, a tool needs only to be able save and load the data it uses in XMI format in order to inter-operate with other XMI capable tools. There is no need to implement a separate export and import utility for every combination of tools that exchange data."

XML Metadata Interchange (XMI)
Version 1.1
Enter ADML

- Architects are involved throughout the process
- One needs a model and language to describe what is to be shared
  - ACME from CMU represents the model of what can be shared
  - ADML represents information that can be shared across the toolset and is founded on ACME
  - ADML does not cover all shared information, there is probably more

**Model Representations**

- .xyz
- .bbml
- .uml
- .uml
- .xml
- .xml

**An ADML XMI stream = [ADML definition/semantics]+[data]**

"The makeup of an XMI stream is important too. It contains both the definitions of the information being transferred as well as the information itself. Including the semantics of the information in the stream enables a tool reading the stream to better interpret the information content. A second advantage of including the definitions in the stream is that the scope of information that can be transferred is not fixed; it can be extended with new definitions as more tools are integrated to exchange information."

**XML Metadata Interchange (XMI)**

*Version 1.1*
Summary

- A standard language for architecture has resulted from cooperation and leverage!
  - TOG - provided a forum to standardize ADML
  - W3C - developed the specifications for XML and XSL
  - OMG - developed the specifications for XMI and MOF
  - MCC - developed the specification for ADML reliant on XML
  - CMU - developed the ACME model
- The benefactors of ADML include
  - users of the tools
  - and vendors of the tools