XMI as a Work Product

Maximizing the Utility of the DDI Model

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This document presents the business case for the publication of the DDI model in the form of XMI, so that the model itself can be leveraged in implementations using a variety of tools.

XMI is a critical part of the current DDI production process: the Drupal collaborative development platform exports a Platform Independent XMI version of the DDI model, which then goes through a series of transformations to programmatically create the primary work products, XML Schemas, and RDF Vocabularies. The existence of an XMI expression of the model is a significant asset to the DDI Alliance in this capacity.

With the model in hand, one major driver for increased efficiency is automation: replacing the hand-crafted nature of DDI in the past, it now becomes possible – even with the limited resources of the DDI Alliance – to increase the set of useful deliverables we offer our user community, so long as these work products are produced automatically from the DDI model.

While the current XMI is produced in a flavour designed for consumption by Enterprise Architect, the publication of the Platform Independent Model in an XMI version which is consumable by the majority of UML tools would have several benefits:

* There are a large number of mature tools which support XMI, including some popular open-source tools. These tools allow for system analysis and design functions which involve data and metadata, which might be based on the DDI model. They are also often able to perform implementation tasks such as generating database schemas or application programming structures (for Java, C#, etc.) automatically.
* It will appeal to types of users to whom DDI does not appeal today - system architects, system analysts, and software designers who work with the types of tools which support XMI. Thus, there is a potential to grow the DDI community with new types of users.
* It will provide a more transparent mechanism for review and user feedback for those users who are familiar with UML modelling; enabling them to utilise tools they are familiar with. It is hoped that there would be a larger set of people responding to reviews and reporting bugs, which is an important channel for improving the standard.

It is proposed that there will be a canonical form of the DDI Model XMI - the one used in our own production - from which any work product (externally published) versions of XMI to be published would be generated. This would use the same rules-driven process which we use for other work products such as the XSD or RDFS/OWL specifications. Because of the flavors/versions of XMI supported by different tools, we may choose to publish more than one flavor of XMI.

In order to realize the benefits of publishing an XMI version of the DDI model, we would need to do some exploration of the different tools and supported flavors of XMI. Once the target tools have been identified, transformation business rules and corresponding transformation scripts would need to be created. Additional documentation would not likely be needed.

The costs in terms of effort are likely to be on the order of a small number of person months, based on our current understanding.