A Common Metadata Model for the Three DASISH Tools

The three tools of DASISH task 3.2
Three software tools are under development under the Data Service Infrastructure for the Social Sciences and Humanities (DASISH) project, Work Package 3.2 are:
- a) The Questionnaire Design and Development Tool (QDIT);
- b) the Translation-Management Tool (TMT); and
- c) the Questionnaire Variable Data Base (QVDB).

These tools are currently under development as individual tools that should be able to communicate with each other.

Which metadata elements are developed, maintained and stored in which tool (high level)?

<table>
<thead>
<tr>
<th>Development and maintenance</th>
<th>Storage of changes</th>
<th>Versioning policy:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept and content references</td>
<td>Questionnaire questionnaire elements</td>
<td>Metadata changes</td>
</tr>
<tr>
<td>Questionnaire questionnaires</td>
<td>Development of questionnaire elements</td>
<td>Metadata changes</td>
</tr>
<tr>
<td>Translation of questionnaire related metadata elements</td>
<td>Metadata changes</td>
<td>DASISH</td>
</tr>
<tr>
<td>Maintenance of questionnaire related metadata elements</td>
<td>Development</td>
<td>Development</td>
</tr>
<tr>
<td>Identification or coding schemes</td>
<td>Development</td>
<td>Development</td>
</tr>
</tbody>
</table>

Interoperability between the tools using DDI

- Interoperability between the three tools will allow reuse of metadata across surveys. Metadata processing processes
- Will facilitate transfer of metadata developed in the QDIT and the TMT to the QVDB for storage of copies, search and reuse by a broad public.
- A common metadata understanding of the three tools facilitates interoperability.

Possible metadata flow between the tools during milestones, generic example:

<table>
<thead>
<tr>
<th>Milestone 1</th>
<th>Milestone 2</th>
<th>Milestone 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire design</td>
<td>Questionnaire design</td>
<td>Questionnaire design</td>
</tr>
<tr>
<td>Translation</td>
<td>Translation</td>
<td>Translation</td>
</tr>
<tr>
<td>Metadata transfer</td>
<td>Metadata transfer</td>
<td>Metadata transfer</td>
</tr>
<tr>
<td>Metadata storage</td>
<td>Metadata storage</td>
<td>Metadata storage</td>
</tr>
</tbody>
</table>

Mapping to DDI – structuring of metadata elements (2)

- How we work:
  - Work out ideas and policies
  - Meetings
  - Discussions
  - Expert consultancy
  - DDI work, tasks below

Mapping to DDI – structuring of metadata elements (3)

- Reusability:
  - Aim to develop and maintain reusable variants of questions and variables

- Issue:
  - How to handle reusability in relation to complex question structures?

Mapping to DDI – structuring of metadata elements (4)

- Handling of translations of a source or master question:
  - A translation can change across waves even if the source question remains the same.
  - Therefore source or master questions need to be treated as separate objects.
  - Translations should have a BaseID reference to the source or master question if it is translated from.

Versioning system – business versioning

- DDI is used for the business versioning
- The system should allow the following levels
- The user should have a view on the appropriate level according to the versioning policies, according to some versioning rules described by the versioning policy

Versioning policy (1):

- All versionable DDI elements that are used should be versioned
- Business versioning should start when an object is available for distribution and publication
- Two versioning levels will be used: Major and Minor
- Minor changes in types or minor wording changes that do not change the meaning of statements are Major changes
- Batch versioning: Users can choose to base or newer DDI versions, if more than one type of change is made to the element at one go, to describe all changes

Versioning policy (2): Translations

- Translations are versionable in terms of country and language
- The user should be able to search under various rules between languages
- The user should be able to select to describe all the versioning of the languages

Evaluating DDI 2.2 Canonical URI will be used for identification:
- un:db identifiers (DID)
- The ID of the canonical URI will be a Universally Unique Identifier (UUID)
- Local identifiers can be stored as UserID in DDI

Versioning system – business versioning (2)

- Each business version which should be made available to partners or the general public should be tagged up to the DDI standard ‘travelling’
- Use/travelling of DDI should additionally be used to distinguish between elements that are not published, as well as between internal and external publications

Metadata exchange between the tools

- Full questionnaire modules as well as single questions will be exchanged between the tools
- Tools should allow a common table or web services to develop API for the communication between the tools
- Future possibility: Web services for the three tools and IQP

Proposed DDI domain names for the DASISH surveys:
- DASISH 2012 – Social indicators
- DASISH 2013 – Economic indicators
- DASISH 2014 – Health indicators
- DASISH 2015 – Education indicators