



The DASISH Questionnaire Design Documentation Tool: Updates on the development of the tool

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Outline

- The DASISH Questionnaire Design Documentation Tool (QDDT) and the Question Variable Database (QVDB), update
- The Questionnaire Design Documentation Tool (QDDT)
 - New conceptual model (extract of conceptual model for the QVDB)
 - New technical approach

The QDDT and QVDB

- Tools for surveys under development by NSD.
- Work on the tools started under the Data Service Infrastructure for the Social Sciences and Humanities (DASISH) project. It now continues under Synergies for Europe's Research Infrastructure in the Social Sciences (SERISS).
- Our work on the tools was presented at EDDI 2013 and 2014
- Material developed under DASISH is available on GitHub

QDDT and QVDB – recap of aims

- Assist large-scale survey projects in processes related to questionnaire development, data and metadata production, archiving and dissemination
- Internal users:
 - QDDT: Document the questionnaire design process and develop questionnaires
 - QVDB: Develop variables, standards and data products
- External users:
 - QDDT: Understand how each item and concept was developed (QDDT)
 - QVDB: Find and reuse questions and variables (QVDB)
- Reusable model and code
- Interoperability with DASISH Translation Management Tool (TMT) and other tools, using DDI



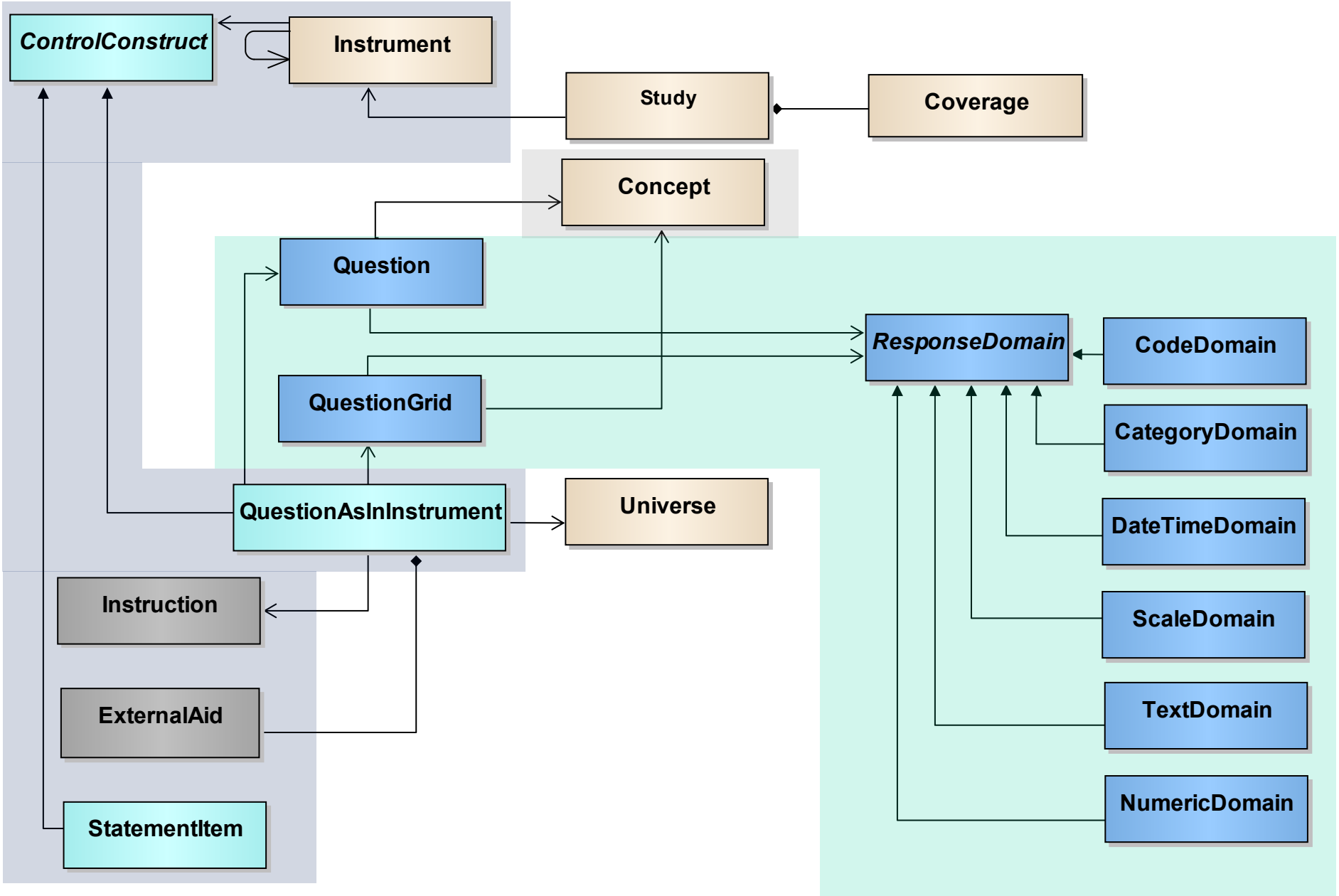
QDDT and QVDB – What was achieved while DASISH?

- A common metadata model from the three DASISH tools, QDDT, QVDB and the TMT
- Specifications for the QDDT and the QVDB
- High level conceptual model for the QVDB
- A prototype of the QDDT

Further developments: What will be kept and what is new?

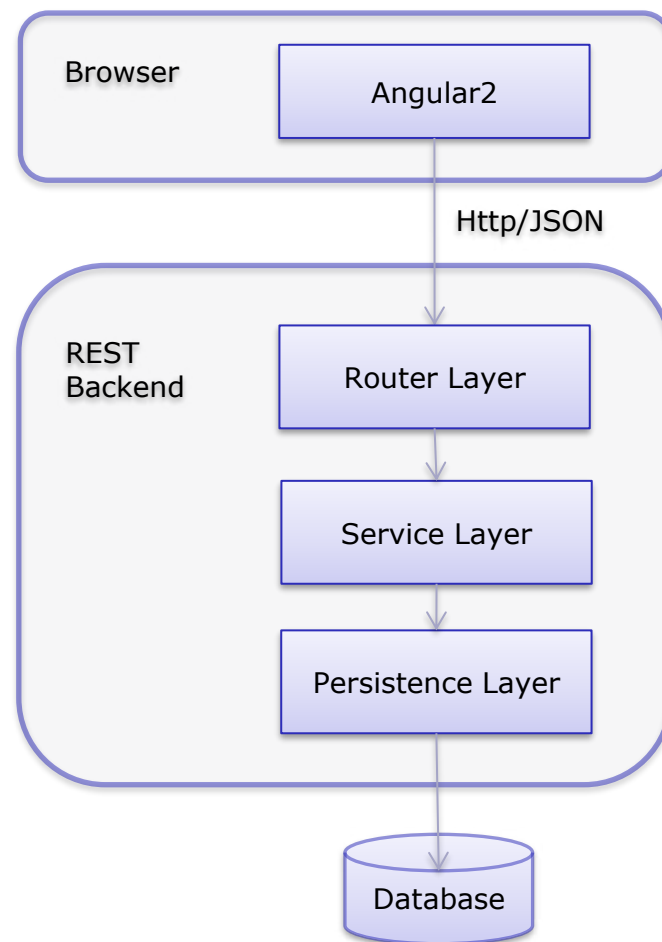
- The common metadata model and the specifications for the QDDT and the QVDB will be kept
- Conceptual model for the QVDB has been detailed. An extract of this works as a model for the QDDT.
- A new prototype of the QDDT based using new technologies is currently under development
- The development of the QVDB builds on the QDDT. One or two tools remains to be decided.

Conceptual model QDDT (extract of model for QVDB)



QDDT Architecture

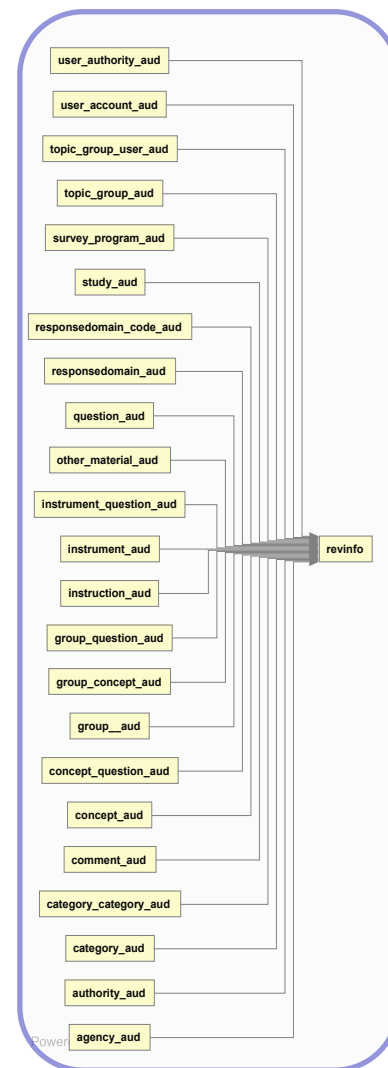
- Angular 2 + Typescript
 - No Javascript in dev tools, only in browser
 - Typescript can transpile to ES3
 - Supports «evergreen» browsers (Chrome, FireFox, Opera, Safari, and IE10/11)
- Spring MVC API
 - RESTful API
 - JSON for free
 - no need for a SOAP service stack
- Spring security (OAuth2)
 - Tokenbased
 - No state for requests
- Persistence Layer implemented with [Hibernate](#) + [Envers](#)
 - Revisions
 - Database agnostic
 - Since qddt is open source, we chose Postgres



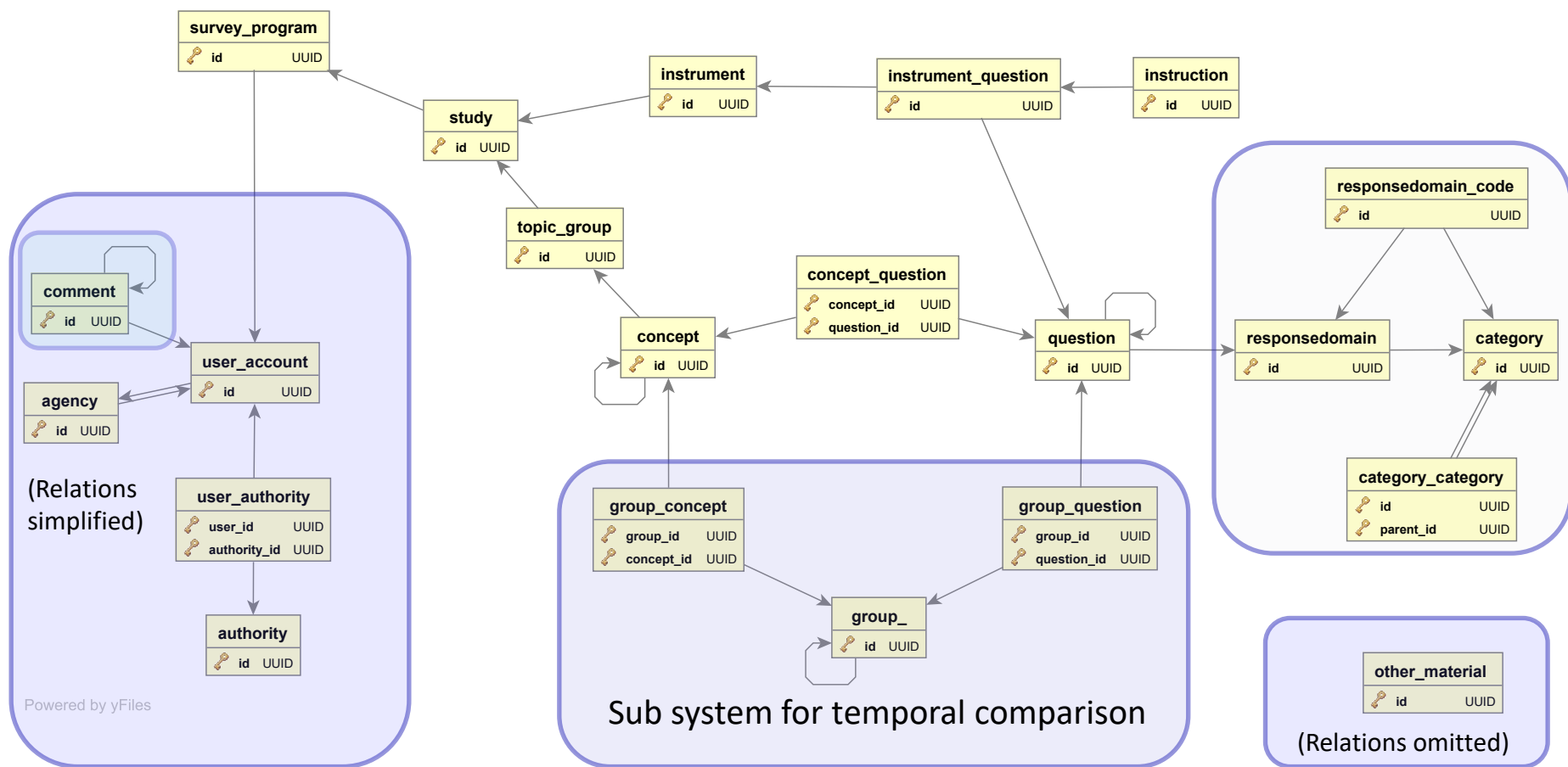
Versioning

- Provide historical versioning of entity data
- Each transaction relates to one global revision number
- Can be used to identify groups of changes (much like a changeset in source control)
- Any changeset can be labeled (business version)
- Find revision by date or label name
- Controlled vocabulary controls business versioning
- Envers
 - Implemented by annotations in domain classes and inclusion of `hibernate-envers-jar` in classpath

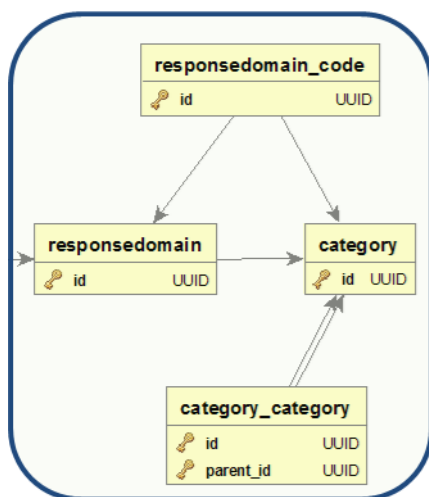
```
32 *  
33 * @author Stig Norland  
34 * @author Dag Østgulen Heradstveit  
35  
36 @Audited  
37 @Entity  
38 @Table(name = "CATEGORY")  
39 public class Category extends AbstractEntityAudit {
```



Data model



Category group structure



Category Group
«managed scale
representation»

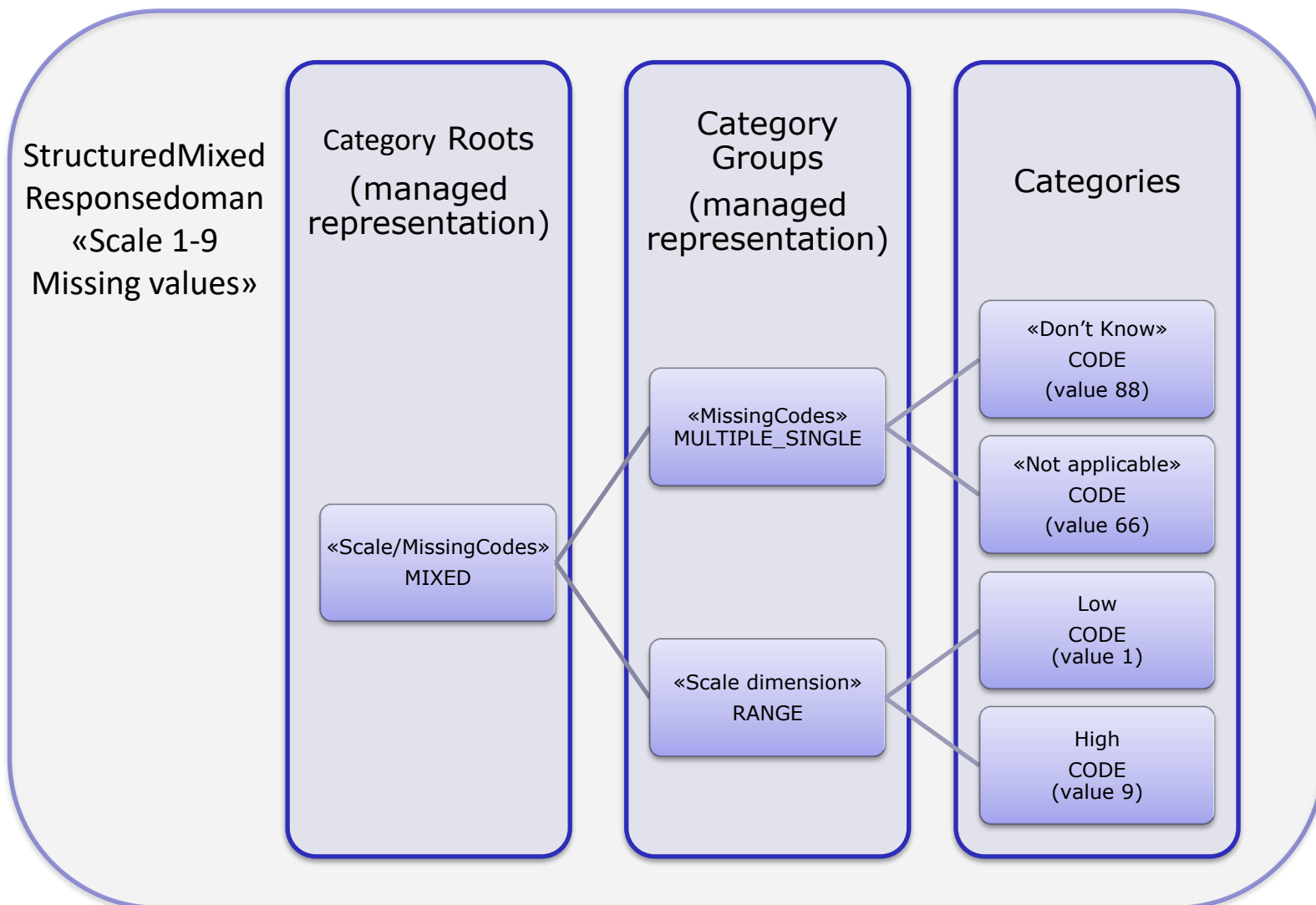
«Scale dimension»
RANGE

Category

Low
CODE

High
CODE

Responsdomain root category structure



Design of a domain class

Study	•Description •Authors •addComment(String) •Comments •Instruments •SurveyProgram •TopicGroups	String Set<User> Set<Comment> Set<Instrument> SurveyProgram Set<TopicGroups>
AbstractEntityAudit	•Name •Agency •BasedOnObject •ChangeComment •ChangeKind •Version	String Agency UUID String enum:ChangeKind SemVer
AbstractEntity	•Id •Created •CreatedBy •Updated	UUID DateTime User DateTime



Login screen

The screenshot shows a web browser window with the address bar displaying '129.177.92.196:5555'. The browser's toolbar includes a search bar and various navigation icons. The login interface has a red header bar with a 'Settings' link. On the left, there is a login form with fields for 'Username' (containing 'admin@example.org') and 'Password' (containing 'password'), followed by a green 'LOGIN' button with a lock icon. The main content area is divided into two dark grey panels. The left panel, titled 'Welcome QDDT', contains a welcome message, a starburst icon with an exclamation mark, and a link to report bugs. The right panel, titled 'Whats new in QDDT', lists three updates: 'Login is active', 'Material design on all components', and 'Adding a survey is possible', each preceded by a red vertical bar. A speech bubble icon with an exclamation mark is also present in this panel.

129.177.92.196:5555

Search

Settings

Username
admin@example.org

Password
password

LOGIN

Welcome QDDT

Welcome to the prototype client for QDDT. This client will change a lot, and some features are likely to be broken from time to time. Expect features to change, appear and disappear quickly and without notice.

Please report any bugs, tips or ideas to us on qddt@nsd.no

Whats new in QDDT

The latest changes

- Login is active
- Material design on all components
- Adding a survey is possible



Survey screen



admin
admin@example.org

LOGOUT 

 Home

Survey 

Start here for survey program related work-flows. You can choose to either create anew survey program or get a list of all available survey programs you can choose from to work on.

 Test 1
F2015,11,19,11,17,16,124000000
admin



 Test 2
F2015,11,19,11,17,19,337000000
admin



 234
F2015,11,19,11,17,43,26000000
admin



 2345252
F2015,11,19,11,17,45,257000000
admin



NEW SURVEY PROGRAM

Name

SUBMIT

 Settings

My Agency 
Agency is — data about agency
EDIT MORE INFO

Latest comments 
A comment in [data] [link]
A comment in [data] [link]
A comment in [data] [link]

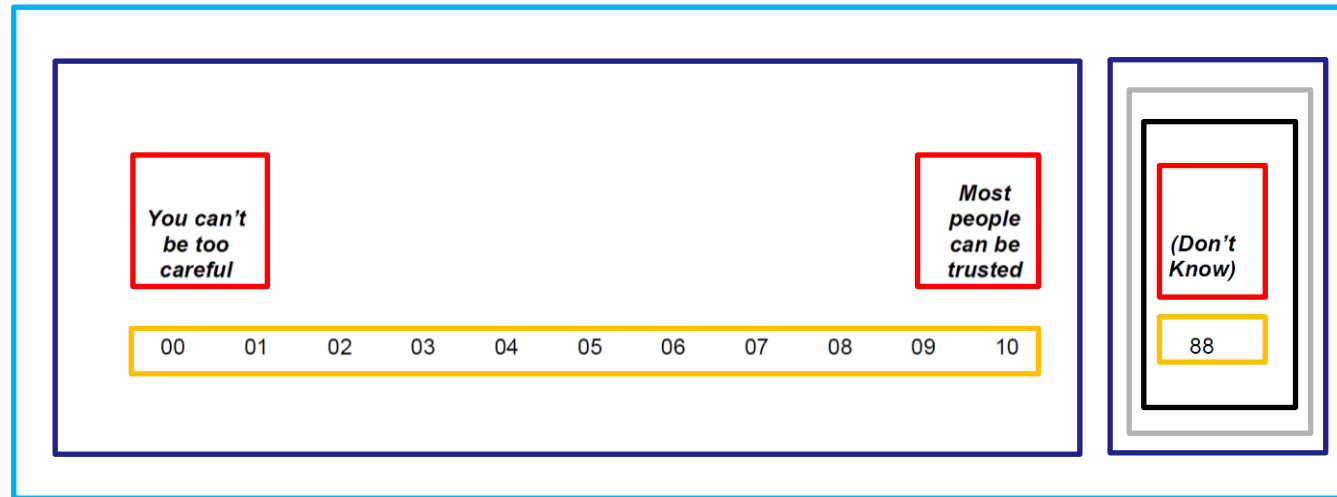
Acknowledgements

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Dag Østgulen Heradstveit (NSD) and
Knut Kalgraff Skjåk (NSD)*

Thank you for your attention!

surveytools@nsd.no

DDI StructuredMixedResponseDomain, example



Not versionable

Versionable

		Categories, Anchor
		Values; NumberRange for scale (high, low, min, max)
		Code
		CodeList
		ManagedRepresentation (Scale, MissingValues)
		StructuredMixedResponseDomain