New Features in DMN 1.2

Where we are, and where we’re going

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Where we are
Status

• Version 1.2 submission postponed (again)
  – By 6 months
  – Submission deadline now December 2017
  – Assume v1.2 published early in 2018

• > 30 issues resolved in 8 ballots

• > 100 issues open

• v1.2, not 2.0:
  – “A Revision Task Force produces new, minor revisions to existing, formally published specifications.
  – “A RTF may make minor technical changes, but keep in mind that, in general, significant technical changes will require a new RFP.”
    • The OMG Hitchhiker's Guide, V7.8
Catch-up: DMN 1.1

• New features
  – Decision services: notation, metamodel & execution semantics [11-45, 11-176]
  – Artifacts: Text annotations & Associations [11-99]
  – Extension capability [11-155]
  – Imported values for LiteralExpressions [11-73]
  – Simple expression added to S-FEEL to allow comparisons in DT cells [11-21]
  – Numerics allowed to be negative [11-13]

• Removed features
  – Decision tables lose completeness and consistency markers [11-32, 11-44]
## New features

- Annotation columns in decision tables [12-124]

<table>
<thead>
<tr>
<th>Table name</th>
<th>Hit policy</th>
<th>Input expression 1</th>
<th>Input expression 2</th>
<th>Output name</th>
<th>Output 1</th>
<th>Output 2</th>
<th>Annotations</th>
<th>Annotation 1</th>
<th>Annotation 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rule id 1</td>
<td>Input values</td>
<td>Input values</td>
<td>Output values</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rule id 2</td>
<td>Input values</td>
<td>Input values</td>
<td>Output values</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Rule id 3</td>
<td>Input values</td>
<td>Input values</td>
<td>Output values</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Rule id 4</td>
<td>Input values</td>
<td>Input values</td>
<td>Output values</td>
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</tr>
<tr>
<td></td>
<td>Rule id 5</td>
<td>Input values</td>
<td>Input values</td>
<td>Output values</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Agreed for DMN 1.2

- **New features**
  - Annotation columns in decision tables [12-124]

- **Removed features**
  - Clarity on use of names:
    - Only element names are displayed, not (e.g.) labels [12-89]
    - Restrictions on use of names vs ids, namespaces, etc [12-94]

- **Changes**
  - Minor changes to semantics of arithmetic and list functions [12-24, 12-74, 12-78]
  - QNames specified; typeRefs are strings not Qnames [12-94]
  - Bug-fixes & tidy-ups [e.g. 12-55]
Where we’re going
Where we’re going

• Exciting things to come in v1.2:
  – Diagram interchange [12-20]
  – Context-free grammar [12-42]
  – Invocable decision services [12-10]
Diagram interchange, using OMG DI

(from Denis Gagné)

Std: Meta-model
underlying computer-interpretable representation

Notation
Notational symbols and graphical representation

Standard

Abstract Syntax

Concrete Syntax

Reference

instance

Your Work

Model

Diagram

Reference

instance

• Diagrams can be considered as pictures of the model.
• Many diagrams (or pictures) of the same model are possible, each showing or hiding various aspects of the model details.

Interchange Format

electronic file format that eases the safeguard and transfer of this data between different tools
Diagram interchange, using OMG DI

- OMG DI requires all semantic elements to have IDs
- Hence changes already agreed:
  - Ids for context entries [12-134]
  - InformationRequirement, KnowledgeRequirement and AuthorityRequirement inherit from DMNElement, therefore have ids [12-101]
Context-free grammar

• Under discussion; current proposal is:
  – FEEL grammar to require single quotes around names that contain spaces or operators
    • ‘Alan Fish’
    • ‘disposable income’
    • ‘Profit and loss’
  – Names without spaces or operators MAY still be written without single quotes
    • AlanFish
    • disposableIncome
    • ProfitAndLoss
  – Single quotes in names MUST be escaped with a second single quote
    • ‘Alan Fish’’s disposable income’
  – A compound name may not start or end with a space. It may contain spaces but not 2 consecutive spaces or other whitespace characters
Decision services, reuse & composability

- DMN 1.1:
  - decisions to be called from outside the model using decision services
Decision services, reuse & composability

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  - decisions to be called from outside the model using decision services
  - DS defined as overlay on DRD
  - Input data and input decisions become DS parameters
  - Output decisions become DS returned results
Decision services, reuse & composability

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  - DS & BKM become types of “invocable thing”
Decision services, reuse & composability

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    - output decisions become DS results
Decision services, reuse & composability

• DMN 1.2:
  – DS & BKM become types of “invocable thing”
  – DS defined as an overlay, as before
  – DS may be invoked by decision
    • parameter values provided by calling decision
    • e.g. from its required ID & decisions
Decision services, reuse & composability

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  - DS defined as an overlay, as before
  - DS may be invoked by decision
  - Reuse now possible within DRD
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  - DS & BKM become types of “invocable thing”
  - DS defined as an overlay, as before
  - DS may now be invoked by decision
  - Reuse now possible within DRD
  - Possible to draw invoked DS closed or open
    - e.g. opened “in place” to combine DS invocation and DS definition
    - but this raises interesting issues...
Decision services, reuse & composability

- Still under discussion:
  - Should there be constraints on connections between elements in DS definitions and other elements in DRG?
  - Should we distinguish between “opened” DS and DS “definitions”?
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  - What are the implications of composition?
  - Should we allow recursion?
How to get involved
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• Review existing open issues

• Report a new bug or issue

• Contribute to discussion tomorrow
  – “What you Like and What you Do Not Like in DMN”
Thank You

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