Decision Model and Notation

TECHNOLOGY COMPATIBILITY KIT

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Disclaimer

- This presentation is delivered on behalf of Keith Swenson, that is leading the DMN TCK initiative, and was not able to attend.
- Most of the content in this presentation is taken from his original presentation at bpmNEXT 2017.
  - http://bpmnext.com/2017-conference-program/2017-videos-presentations/
The promise of DMN

Bridge the gap between technical and business users
• Common high-level language accessible to business users
• Standard execution semantics: the model is executable

Lower Costs
• Leverage training across tools
• Reuse models across organization

Preserve Investment
• Decision Models not locked-in on tools
• Availability of professionals, resources and support
**Conformance Levels**

- **Conformance Level 1:**
  - Requires the ability to draw DRG/DRD, define Decision Logic and Decision Tables
  - No need to be executable, any language can be used, including natural language

- **Conformance Level 2:**
  - Same as conformance level 1, but must use S-FFEE to define decision logic
  - Fully executable

- **Conformance Level 3:**
  - Everything in Conformance Level 2, plus support to FEEL and boxed expressions
Question: can Microsoft claim Conformance Level 1 for its Microsoft Paint software, from Windows 3.0, released in 1990?
DMN Support Claims

- DMCommunity website lists 17 vendors claiming some level of DMN compatibility (and more claims not listed)
- How many actually comply to some level of the standard?
What is the point of a standard if everyone is implementing it differently?
Many vendors claiming compliance, few go beyond level 1

Most implementations driven by internal and/or external requirements:
- Mix of compliant and non-compliant features
- Mix of features from different levels of compliance
  - Not fully level 2, but some features from level 3
  - Features not completely implemented (e.g., partial support for decision tables)

Only a few vendors targeting conformance level 3

OMG does not publish a TCK or a reference implementation
- No means to assess or verify compliance
Classification by **Conformance Level** is not **enough** to represent an accurate picture of the state of the market, standard support and players!
Solution: a community driven TCK

- Started from discussions at bpmNEXT 2016
- Led by Keith Swenson (Fujitsu)
- Supported by a growing group of vendors and users
Goals of the TCK

- Define a set of test cases
- Carefully assure conformance to the spec
- Provide tools to run the tests
- Recognize vendor successes
TCK will NOT

- Extend or enhance the DMN Spec
  - RTF is responsible for that

- Focus on esoteric features
  - Only features that exist in one or more implementations

- Favor um implementation over another
  - Remain technology and vendor neutral
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- DMN Model defined in DMN-standard interchange format (XML)
- Completely compliant with the specification
  - No extensions
- Validated by the TCK tools
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- Name/value pairs according to the defined model inputs and decision outputs
- Multiple input sets allowing test of multiple scenarios for the same model
- Multiple corresponding sets of expected results, one for each set of inputs
- Defined in XML files
  - Schema published as part of the TCK
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- Vendor’s DMN Tool is tested as a black box
- No requirement or limitation on runtime environment
- Vendor is responsible for executing their own tests and providing results
  - Results provided as set of CSV and property files for simplicity
**Technology Compatibility Kit**

- TCK provides a java runner, free and open source
  - Reads the model files, invokes the DMN tool, retrieves and compare results
  - Provides the infrastructure for running tests
  - Requires vendor to implement the vendor-specific component for invocation (SPI)
- Optional component: vendors do NOT have to use this runner
  - Provided only to facilitate automated test execution for java-based tools
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- Results are automatically published on the TCK website
- Website is work in progress, but already publishes some results
- Offers multiple views for the tests and vendor results
- Allows filtering by “labels”
  - Labels denote features or areas of interest being tested
  - Offers a more detailed picture than the standard “Conformance Levels”
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Website “demo”
Recap: the DMN TCK is...

- ... a way to help vendors to become compliant with the standard
  - clarify and solve specification ambiguities
  - promote compatibility

- ... a way for vendors to demonstrate compliance with the standard

- ... a way for users to assess vendor compliance
Q & A

Important links:

- TCK Website: http://dmn-tck.github.io/tck
- TCK Tests, Code and Docs: https://github.com/dmn-tck/tck
- Keith’s presentation at bpmNext 2017:
  http://bpmnext.com/2017-conference-program/2017-videos-presentations/