The Date-Time Vocabulary

Mark H. Linehan
mlinehan@us.ibm.com
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What is the Date-Time Vocabulary?

- An OMG "beta" specification
  - Lead by Mark Linehan
  - Team includes Donald Chapin, Mike Bennett, Elisa Kendall, ...
  - Target for final version is September, 2012
- A vocabulary for Date and Time concepts
- Contains:
  - SBVR vocabulary, with definitions, examples, and notes
  - UML model with OCL constraints
  - OWL model (partial)
    - Web Ontology Language
  - CLIF model (partial)
    - Common Logic Interchange Format
- Extensive Rationale and supporting Annexes
- Will be used by FIBO
Motivation

- Many business rules involve time
  - Directly or indirectly
- Date and time concepts are "foundational"
  - Cross-business and cross-industry
  - Already standardized (e.g. by ISO), but not as SBVR vocabularies
  - Existing standards are fragmented, ambiguous
- An SBVR-based Date-Time Vocabulary:
  - Improves business-level communication
  - Removes a "barrier to entry" for businesses who want to create SBVR rules and vocabularies
  - Encourages interoperability among tools
  - Fits the OMG goals
  - Provides "business language", built upon the existing standards

Examples

Each bid must be valid until 30 days after the date of the bid.

OMG meets according to the OMG Technical Meeting schedule.

Each employee service date precedes or overlaps the current day.

An order must be paid before the order is shipped.

Key

<table>
<thead>
<tr>
<th>uses of the Date-Time Vocabulary</th>
<th>nouns</th>
<th>relationships (verbs)</th>
<th>constants/individuals</th>
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Financial Example

Put
Definition: option to sell according to a Put Schedule

Maturity Date
Definition: date time when a Put expires

Put has Maturity Date
Necessity: Each Put has exactly one Maturity Date.

Put redeems at price
Definition: the owner of the Put sells the issue at the price

Put Schedule
Definition: schedule that is for 'put redeems at price'

Put has Put Schedule
Necessity: Each Put has exactly one Put Schedule.
Necessity: The time span of the Put Schedule of each Put precedes the Maturity Date of the Put.

This can be mapped directly to a UML diagram, an OWL ontology, an ER diagram, or relational database table definitions.
How a BNL Might Contribute to an Industry Model Architecture

- Industry models are used for different purposes by different roles using different tools; IBM experience (feedback from customers as well as product teams) suggests that an architectural approach to industry models has significant benefit.

- Semantics of industry content is as important as form; clear semantics requires clear definitions of type of content as well where/how that content is intended to be used.

- An industry model architecture must define the intrinsic concepts and terms that are common across all artifact type meta models; it must be method and tool agnostic as well as extensible.

- Standardization industry model architectures will aid content as well as tool integration and will enable improved collaboration across the enterprise.