2016-08-17 - SLPG Meeting

Date & Time
20:00 UTC Wednesday 17 August 2016

GoToMeeting Details
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Goals
- Discuss potential URI pattern for computable languages
- Discuss publication of ECL v1.1 with decomposition syntax
- Discuss proposed scope and syntax for v1.0 Template Syntax

Attendees
- Chair: Linda Bird
- Project Group:
  - Harold Solbrig, Daniel Karlsson, Michael Lawley, Rob Hausam
- Apologies
  - Brian Carlisen, Ed Cheetham, Alejandro Lopez Osornio

Agenda and Meeting Notes

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<thead>
<tr>
<th>Description</th>
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<td>Welcome, introductions and apologies</td>
<td>Linda Bird</td>
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<tr>
<td>Agenda review</td>
<td>Linda Bird</td>
<td>Review agenda for today’s meeting</td>
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| URI Pattern for Languages               | Harold Solbrig | • Discuss potential URI patterns for computable languages
  |                                         | • http://snomed.info/id                                            |
|                                         |             | • http://snomed.info/ecl                                            |
|                                         |             | • http://snomed.info/scg                                            |
|                                         |             | • http://snomed.info/qry                                            |
|                                         |             | • http://snomed.info/ect                                            |
|                                         |             | • http://snomed.org/ect                                              |
|                                         |             | • Bring this to the Modelling Advisory Group                        |
| Expression Constraint Language v1.1    | Linda Bird  | • Discuss publication of ECL v1.1 to Confluence
  |                                         |             | • Consider adding decomposition syntax in this version
  |                                         |             | • 57617002 [Urine specimen collection (procedure)], 363701004 [Direct substance], 1234 [Other attribute]
  |                                         |             | • The above is meant to refer to the direct substance of this procedure (i.e. 78014005 [Urine]) - that is the 'targetConcept' of the [Direct substance] relationship, where the sourceConcept is [Urine specimen collection]. This can also be represented as:
  |                                         |             | • c*: [ R 363701004 [Direct substance] = 57617002 [Urine specimen collection (procedure)] ]
  |                                         |             | • Add example where direct substance is one thing and action is another. |
| Template Syntax v1.0                    | Linda Bird  | • Discuss proposed scope and syntax for v1.0 Template Syntax        |
|                                         |             | Proposed use cases for v1.0                                         |
|                                         |             | • Urgent:                                                           |
|                                         |             | • MRCM general domain templates                                     |
|                                         |             | • International SNOMED CT concept authoring tooling                 |
|                                         |             | • Priority:                                                         |
|                                         |             | • Mapping from HL7 FHIR resource to a SNOMED CT expression           |
|                                         |             | Proposal is to keep the scope of v1.0 as tight as possible (to deliver this year), and look at possible extended functionality in future versions |
OPTION 1

- All template information is contained inside a slot (i.e. in square brackets - '[[...]]')
- Slots to be removed are indicated using a '~' as the first non-space character in the slot
- Slots to be replaced are indicated using a '+cpt', '+exp', '+ecl' (depending on whether it may be replaced by a concept, expression or constraint), followed by an expression constraint in round brackets. Default is 'exp' (least restrictive) - e.g. '+< 1234 [concept]'

```
- [@expressionName]
  [+cpt(<< 413350009 Finding with explicit context ) @findingWithExplicitContext $fwecRef 1..1]]
  - [@groupA 1..2][-[@associatedFindingAVP 0..1]] 246090004 [Associated finding] =
    [[+cpt(404684003 Clinical finding ) @associatedFindingValue $afRef 1..1]]
  - [@groupB 0..1]]
    - [@severityAVP 0..1] 246112005 [Severity] = [+cpt(< 272141005 [Severities] ) @severityValue $sevRef]
    - [@findingSiteAVP 0..1] 363698007 [Finding site] = [+cpt(< 91723000 [Anatomical structure] ) @findingSiteValue $fsRef]]
    - [@subjectRelationshipAVP 0..1] 408732007 [Subject relationship context] = [+cpt(< 444148008 [Person in family of subject] ) @subjectRelValue $srRef]]
    - [@temporalContextAVP 1..1] 408731000 [Temporal context] = [+cpt(< 401540008 [Temporal context value] ) @temporalContextValue $tcRef]]
    - [@findingContextAVP 1..1] 408729009 [Finding context] = [+cpt(< 410514004 [Finding context value] ) @findingContextValue $fcRef]]
```

OPTION 2

- The '[[...]]' slot syntax is only used where a 'slot' exists (in the 'traditional' sense of being a placeholder for a value that needs to be filled in later)
- Slots are removed and replaced with a concept, expression or expression constraint during processing (+cpt, +exp, +ecl)
- Cardinalities preceded by '~' are removed from the template during processing
- Names preceded by '@' are removed from the template during processing

```
@expressionName [+cpt(<< 413350009 Finding with explicit context ) @findingWithExplicitContext $fwecRef 1..1]]:
  - [1..2] @groupA [-[0..1] @associatedFindingAVP 246090004 [Associated finding] =
    [[+cpt(404684003 [Clinical finding] ) @associatedFindingValue $afRef 1..1]]:
  - [0..1] @groupB -[0..1] @severityAVP 246112005 [Severity] = [+cpt(< 272141005 [Severities] ) @severityValue $sevRef]]
  - [0..1] @findingSiteAVP 363698007 [Finding site] = [+cpt(< 91723000 [Anatomical structure] ) @findingSiteValue $fsRef]]
  - [1..1] @subjectRelationshipAVP 408732007 [Subject relationship context] = [+cpt(< 444148008 [Person in family of subject] ) @subjectRelValue $srRef]]
  - [1..1] @temporalContextAVP 408731000 [Temporal context] = [+cpt(< 401540008 [Temporal context value] ) @temporalContextValue $tcRef]]
  - [1..1] @findingContextAVP 408729009 [Finding context] = [+cpt(< 410514004 [Finding context value] ) @findingContextValue $fcRef]]
```
**OTHER POSSIBLE SYNTAX RULES**

- Constraints and names appearing before a brace apply to the whole relationship group
- Constraints and names appearing before an attribute apply to the whole Attribute Value pair
- A cardinality constraint:
  - Preceding a brace indicates the number of times the following relationship group is allowed in the final expression (default separator between repetitions is ",")
  - Preceding an attribute within a relationship group indicates the number of times the following attribute may appear with a distinct (non-redundant) value in each instance of the given relationship group (default separator between repetitions is ",")
  - Preceding an attribute that is not in a relationship group indicates the number of times the following attribute may appear with a distinct (non-redundant) value in the relevant expression (or subexpression) (default separator between repetitions is ",")
  - Within a slot that is a focus concept of an expression (or subexpression) indicates the number of times the slot can be filled in the focus (default separator between repetitions is "+")
  - Within a slot that is the attribute in an Attribute-Value pair indicates the number of distinct attribute concepts that can be used in this position in the expression (default separator between repetitions is ",")
  - Within a slot that is the value of an Attribute-Value pair (but which is NOT the focus concept of a subexpression) is not allowed ???
- Question 1 - How do we represent the cardinality of how many non-redundant values may appear in a given Attribute-Value pair across any relationship group. While this is currently always [0..*] in the MRCM, this may be more relevant in specialized authoring templates.
- Question 2 - Do we need to provide support to vary the default connector between repetitions. Note, I think this is probably more important for Expression Constraint Templates, as there are more options (e.g. ANDs and ORs)
- Question 3 - Do we introduce the ability for expression constraints in a slot to be replaced by a variable name (assigned using a SET-IN construct)? For example:
  - `SET (severity_range = < [Severities] IN [[@finding]]); [Severity] = [+]ecl ([[$severity_range]])]]`

<table>
<thead>
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<th>Confirm next meeting date /time</th>
<th>Linda Bird</th>
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<tr>
<td></td>
<td>Next meeting to be held at 20:00 UTC on <strong>Wednesday 12 October</strong> (due to travel commitments and vacation)</td>
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**Meeting Files**

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<tr>
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<td>2016-Sep-24 by Jean Marie Rodrigues</td>
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