### 2018-01-17 - SLPG Meeting

**Date & Time**
20:00 UTC Wednesday 17th January 2018

**Teleconference Details**
To join the meeting please go to [https://snomed.zoom.us/j/471420169](https://snomed.zoom.us/j/471420169).

Further information can be found at [SLPG meeting information](#)

**Goals**
- Review proposed Query language examples

### Attendees
- **Chair:** Linda Bird
- **Project Group:** Ed Cheetham, Rob Hausam, Harold Solbrig

### Apologies

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| Welcome and apologies| Linda Bird | Michael: "How can I write an ECL expression to match attribute names - for example, list all the attribute names that are used by « 404684003 |Clinical finding|.

**Daniel:** "Query language and collation"

When specifying the lexical search type for term matching there is a need to specify the collation used, and to specify the default collation for the language in which the terms are to be matched are represented.

Examples based on mysql collation behavior:

"AAO" matches "ÅÄÖ" in utf8_generic_ci and utf8_unicode_ci (and utf8_german2_ci) but not in utf8_swedish_ci collation.

"Aåa" matches "aåa" in utf8_generic_ci and utf8_swedish_ci but not in utf8_bin collation (i.e. case insensitive vs. sensitive, sometimes you need case sensitivity when searching...).

Similar behavior can be implemented e.g. by java.text.Collator in java or by the collection.find() or cursor. collation() method in MongoDB.

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| Recent comments      | Linda Bird | Michael: "How can I write an ECL expression to match attribute names - for example, list all the attribute names that are used by « 404684003 |Clinical finding|.

**Daniel:** "Query language and collation"

When specifying the lexical search type for term matching there is a need to specify the collation used, and to specify the default collation for the language in which the terms are to be matched are represented.

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| Query Language       | Linda Bird | • Review proposed Query Language examples
- Consider issues and potential resolutions. Questions needing resolution include:
  - Do we need inferred relationship filters?
  - Answer: Tentative Yes
  - If yes, then what are some good use cases?
  - Answer: QA - Find me all the source concepts of a relationship added in an extension module
  - Answer: QA - Find me all the source concepts of a relationship added at a particular effective time
  - **ACTION** (Daniel) - To investigate QA example use cases based on RVF
  - How should no brackets be interpreted?
  1. What does this mean? « 404684003 |Clinical finding| ([C.definitionStatusId = 900000000000074008 |Primitive|])
     - **1a)** « 404684003 |Clinical finding| ([C.definitionStatusId = 900000000000074008 |Primitive|])
     - **1b)** « 404684003 |Clinical finding| ([C.definitionStatusId = 900000000000074008 |Primitive|])
     - Answer: 1a - **AGREED**
  2. What does this mean? « 404684003 |Clinical finding| :363698007 |Finding site| = « « 80891009 |Heart structure| ([C.definitionStatusId = 900000000000074008 |Primitive|])
     - **2a)** « 404684003 |Clinical finding| :363698007 |Finding site| = « 80891009 |Heart structure| ([C.definitionStatusId = 900000000000074008 |Primitive|])
     - **2b)** « 404684003 |Clinical finding| :363698007 |Finding site| = « « 80891009 |Heart structure| ([C.definitionStatusId = 900000000000074008 |Primitive|])
     - **2c)** « 404684003 |Clinical finding| :363698007 |Finding site| = « « 80891009 |Heart structure| ([C.definitionStatusId = 900000000000074008 |Primitive|])
     - Answer: 2a - **AGREED**
  - If we do support relationship filters, then where should they go and how should they be bracketed?
  1. Directly after the attribute - for example:
1. After the concept being constrained - for example:

   a) 404684003 (Clinical finding) : 363698007 (Finding site) ({{ R.moduleId = 32506021000036107 [AU extension] }}) << 80891009 (Heart structure)
   or
   b) 404684003 (Clinical finding) : (363698007 (Finding site) ({{ R.moduleId = 32506021000036107 [AU extension] }})) << 80891009 (Heart structure)

2. Directly after the refinement (with brackets) - for example:

   a) 404684003 (Clinical finding) : (363698007 (Finding site) ({{ R.moduleId = 32506021000036107 [AU extension] }})) << 80891009 (Heart structure)
   or
   b) 404684003 (Clinical finding) : 363698007 (Finding site) ({{ R.moduleId = 32506021000036107 [AU extension] }})

3. Directly after the /=, for example:

   a) 404684003 (Clinical finding) : 363698007 (Finding site) ({{ R.moduleId = 32506021000036107 [AU extension] }}) << 80891009 (Heart structure)

4. Directly after the constraint operator (interpretation - there exists a relationship in the chain) - for example:

   a) ({{ R.moduleId = 32506021000036107 [AU extension] }}) 404684003 (Clinical finding)

5. After the concept being constrained - for example:

   a) 404684003 (Clinical finding) ({{ R.moduleId = 32506021000036107 [AU extension] }}) << 80891009 (Heart structure)
   or
   b) (404684003 (Clinical finding)) ({{ R.moduleId = 32506021000036107 [AU extension] }})

Answer(s): ? 2b and 4a (Note: 1b is more consistent with dotted notation)

What exactly do relationship filters mean?

- < 404684003 (Clinical finding) ({{ R.moduleId = 32506021000036107 [AU extension] }})
- There exists at least one (is a) relationship, that connects the given descendant to (Clinical finding), meets the given filter criteria
- All (is a) relationships, that connect the given descendant to (Clinical finding), meet the given filter criteria

How do we indicate the execution order for relationship filters?

- Dotted notation - For example "ANY : << 246090004 (Associated finding) . 363698007 (Finding site)"

  1. Only returns those concepts that result from using a (Finding site) relationship in the AU core (Note: return the destinationConcept of these relationships)
     - 1a) ANY : << 246090004 (Associated finding) . 363698007 (Finding site) ({{ R.moduleId != 'AU Core' }})
     - or
     - 1b) ANY : << 246090004 (Associated finding) . 363698007 (Finding site) ({{ R.moduleId != 'AU Core' }})

     Answer: ? 1b

  2. Only returns those concepts that result from using an (Associated finding) relationship (or type of (associated finding) relationship) in the AU core (Note: return the destinationConcept of these relationships)
     - 2a) ANY : << 246090004 (Associated finding) ({{ R.moduleId != 'AU Core' }}) . 363698007 (Finding site)
     - or
     - 2b) ANY : (<< 246090004 (Associated finding)) ({{ R.moduleId != 'AU Core' }}) . 363698007 (Finding site)
     - or
     - 2c) ANY : (< 246090004 (Associated finding)) ({{ R.moduleId != 'AU Core' }}) . 363698007 (Finding site)

     Answer: ? 2c

Cardinality

1. Exactly one matching relationship in the AU core (but may be other matching relationships in other modules)
   - 1a) < 404684003 (Clinical finding) : [1..1] (63698007 (Finding site) = << 80891009 (Heart structure)) ({{ R.moduleId = 32506021000036107 [AU extension] }})
   - or
   - 1b) < 404684003 (Clinical finding) : [1..1] (63698007 (Finding site) = << 80891009 (Heart structure)) ({{ R.moduleId = 32506021000036107 [AU extension] }})

   Answer: ? 1a

2. Exactly one matching relationship, and this relationship is in the AU core
   - 2a) < 404684003 (Clinical finding) : (1..1) 63698007 (Finding site) = << 80891009 (Heart structure) ({{ R.moduleId = 32506021000036107 [AU extension] }})
   - or
   - 2b) < 404684003 (Clinical finding) : (1..1) 63698007 (Finding site) = << 80891009 (Heart structure) ({{ R.moduleId = 32506021000036107 [AU extension] }})

   Answer: ? 2a

Which keyword filters must be qualified with a component/refset type? (e.g. "C", "D", "R", "M")

- For example, do we qualify "substrate"? "languageRefSetId", "preferredTerm", "fullySpecifiedName", "acceptableTerm"?

What options do we provide for constraining terms, preferred terms, fully specified names, acceptable terms and/or selecting language refsets?

- See slide deck
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<th>Linda Bird</th>
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<td>Next meeting to be held at 20:00 UTC on <strong>Wednesday 31st January 2018</strong></td>
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