Revision-controlled collaborative terminology authoring

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Goals of Snow Owl

- **Real-time collaborative authoring support**
  - Not an afterthought, the repository IS the store
- **Workflow support**
  - Externalized therefore replaceable
- **Cover the entire domain of healthcare terminology development**
  - All terminologies and all terminology components
    - Including local terminologies, value domains and mapping sets
  - Information models and terminology bindings
- **Modular and extensible**
  - Capabilities are readily available for extensions
- **Multiple deployment modes**
  - Stand-alone, thick client-server, thin client-server via REST
Collaborative authoring

• Multiple authors can work simultaneously on their tasks in their dedicated and isolated ‘sandboxes’
• Completed work can be promoted to main repository
• Sandboxes can be synchronized to reflect relevant changes in the main repository
• Potential conflicts are handled
• Authors receive notification about relevant changes immediately
Workflow support

- External, managed by an issue tracking system
  - Loosely integrated with ‘hooks’
  - Currently Bugzilla, can be replaced with most widely used systems (JIRA for example)
- Terminology authoring is only a part of the overall enterprise workflow
Snow Owl – revision control features

• Terminology **repository**
  – Just like a source code repository for terminology artifacts
  – Each terminology has a dedicated repository
  – Each commit becomes a revision
    • Revision history is maintained
    • Changes between two revisions can be compared
    • Commits can be reverted
  – Supports branching (patch), merging, versioning
Revisions on a branch

Each commit is stored as a revision

The last commit point on the branch is referred to as head
Tasks

Work associated with a task is always committed to a dedicated branch.
Terminologists working on Task 1 (head) can see changes introduced by commits: B2, B1, B and A but cannot see C.

Terminologists working on the MAIN (head) can see changes by: A, B and C but cannot see B1 and B2.
If deemed worthy, content of the task branch can be promoted to MAIN.
Synchronizing tasks with MAIN

Commit C can be relevant to the work on Task 1, the content on Task 1 should be synchronized with MAIN.

After synchronization commit C is visible on Task 1 and the content on Task 1 can be promoted to MAIN.
Typical scenario
Tasks are created for 2A&2R DBA scenario

Authoring completed Tasks are set to Resolved

Changes rejected Task is set to Reopened

Reviews completed

Final review completed Tasks are set to Reopened

Changes rejected Task is set to Reopened

Content promoted to MAIN repository Task is set to Closed

Final review completed Task is set to Verified

Dual author and dual reviewers Dual independent authoring

Content authoring

Admin

Author

Reviewer

Adjudicator
Demo scenario 1

• Create Task (Single author, single reviewer authoring)
• Create new child concept under Tetralogy of Fallot
  – Change to MAIN to show that concept is not there
  – Change to Task to show that concept is there
• Review concept
• Promote concept
  – Show history view
  – Show commit info
Demo scenario cont.

• Version content
  – version: IHTSDO_Showcase_Version

• Compare with last SNOMED CT version to see changes
Questions?
Revision control

<table>
<thead>
<tr>
<th>Component</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNOMED CT Description</td>
<td>Attribute ‘case significance’ changed to ‘Case significance’ on Faletti 2007 terminology.</td>
</tr>
<tr>
<td>SNOMED CT Description</td>
<td>Attribute ‘effective time’ changed to ‘Jul 31, 2007’ in Fakih’s terminology.</td>
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<tr>
<th>Date</th>
<th>User ID</th>
<th>Commit comment</th>
<th>Terminology</th>
<th>Branch</th>
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<tr>
<td>2014-02-04</td>
<td><a href="mailto:liungch@2international.com">liungch@2international.com</a></td>
<td>Create new code</td>
<td>Local Code System</td>
<td>MAIN/3.57</td>
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Workflow
Versioning and Compare