?PresentSituation EquivalentTo
'Clinical finding present (situation)'
and (RoleGroup some
  (('Associated finding (attribute)' some ?Finding)
  and ('Finding context (attribute)' some 'Known present (qualifier value)')
  and ('Temporal context (attribute)' some 'Current or specified time (qualifier value)')
  and ('Subject relationship context (attribute)' some 'Subject of record (person)')))  

where:
?PresentSituation = ['Paralysis present (situation)', 'Dizziness present (situation)'
?Finding = ['Paralysis (finding)', 'Dizziness (finding)'

Figure 2: An example pattern for describing 'present' clinical findings (e.g. 'Paralysis present (situation)' and 'Dizziness present (situation)'). This pattern contains variables (?PresentSituation, ?Finding), which hold classes of similar axiom usage.

'On examination - joint effusion present (disorder) EquivalentTo
'On examination - specified examination finding (finding)'
    and 'Effusion of joint (disorder)'

Figure 3: The definition of a present disorder ('On examination - joint effusion present (disorder)'). Its definition deviates from the pattern of Figure 19.

This deviation is not necessarily a design defect, but having tools for highlighting them can reveal how the ontology was built and facilitate quality assurance. The manual detection of these deviations in a large and complex ontology like SNOMED-CT is not currently feasible.

To facilitate quality assurance, we propose the use of the Regularity Inspector for Ontologies (RIO) framework as a means of bootstrapping the quality assurance process for ontologies. We use the SNOMED-CT terminology as an example ontology to demonstrate the use of RIO:

1. To find regularities (like the one in Figure 19) in the use of axioms in entity description.

2. To find deviations from axiom patterns described in the SNOMED-CT documentation.

We argue that such a framework should facilitate the process of inspecting and reporting defects and potential defects to the domain experts for the ontology. We are interested in revealing the composition...