



## Proposal for Terminology Binding Syntax

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### Audience

Individuals, groups, and organisations defining how SNOMED CT is to be used in documents, information models, messages, and information systems, and those who have to work with the resulting specifications.

### Objectives

To highlight the various methods and levels of complexity of SNOMED CT usage in different implementation and specification projects. Also to propose a syntax for terminology binding that is both human and machine readable, and to demonstrate some of the benefits resulting from consistent use of the proposed syntax.

### Abstract

The presentation will run through a set of examples of how terminology bindings using SNOMED CT has been achieved in projects across a number of IHTSDO member countries. These examples will be used to illustrate:

- requirements that exist for terminology binding ,
- different types of terminology bindings,
- identification of reusable, repeatable clinical patterns,
- syntax specification and approaches that can be used to specify such bindings,
- issues that can be encountered when developing and using terminology bindings, and
- benefits of adopting a formal specification for terminology binding to bring about consistency and uniformity in the implementation approach.

The presentation will then briefly review existing IHTSDO work in this area. In particular, the authors will focus on the IHTSDO SNOMED CT Query Language draft specification, and the Compositional Grammar Syntax specification together with functional overlaps with Set and Logical operators. During the review of the Query Language specification document it was observed that there was not only an overlap with the functionality provided through the existing Compositional Grammar Syntax but also that the scope of the Query Language ranged from creation, and querying, to searching on reference sets as well as concepts. However the coverage of methods was not extensive enough to include all possible use cases within the vast scope. Therefore, the authors have focused on the inclusion of those methods that are directly relevant to the terminology binding requirements and have proposed a logical syntax for specifying terminology bindings using an extension of the current Compositional Grammar syntax. The logical syntax is available in both human-readable and machine-readable form. In addition, the authors will demonstrate how the logical syntax may be implemented using some implementation syntaxes such as XML and SQL to achieve terminology binding in existing projects with minimum disruption. The syntax will also help new projects to more easily specify how to bind their information to the SNOMED CT terminology irrespective of the source of the information such as documents, messages, information models, service definitions, data entry forms, and/or information systems. Finally the presentation will also highlight the need to address different levels of complexity in terminology binding and to propose different levels of adoption of the terminology binding specification based on individual use case requirements, capabilities, and need for achieving conformance with terminology standards.