



UiO : Universitetsbiblioteket

Tesaurus-mapping prosjektmøte 12. aug 2014
Are Gulbrandsen

En diskusjon av SKOS og mapping i henhold til ISO 25964-2

(Information and documentation — Thesauri and interoperability
with other vocabularies)



SKOS

- Simple
- Knowledge
- Organization
- System

En enkel meta-modell

- Laget for å kunne ***modellere*** vanlige, men relativt enkle og semi-formelle kunnskapsorganisasjonssystemer
 - Tesaurus, taksonomier, klassifikasjonssystemer, folksonomier, kontrollerte vokabularer mm.
- Har relasjoner for ***mapping***
- «SKOS occupies a position between the exploitation and analysis of unstructured information, the informal and socially-mediated organization of information on a large scale, and the formal representation of knowledge.»

SKOS W3C Recommendation, 1.1. Background and Motivation

SKOS, Lenkede data og RDF?

- SKOS er et RDF-vokabular
- Semantikken er ikke formelt definert i SKOS
 - For å være generell definerer SKOS med vilje ikke i detalj hva disse relasjonene *betyr*
 - *"Emphasis on minimal ontological commitment"*
- SKOS er ment å være et bindeledd mellom mer uformelle informasjonsstrukturer og ontologier som gjerne er basert på logikk og aksiomer.

SKOS-modellen

- Entiteter
 - Concept: skos:Concept
 - Label
 - Preferred Label: skos:prefLabel
 - Alternative Label: skos:altLabel
 - Hiddel Label: skos:hiddenLabel
- Relasjoner
 - Broader/Narrower skos:broader
 - Assosiativ relasjon skos:narrower
- Dokumentasjon, dvs ulike typer noter
 - skos:scopeNote, skos:definition,
skos:example, skos:historyNote,
skos:editorialNote, skos:changeNote

Hva betyr egentlig mapping?

- When relationships are established across vocabularies, they are usually known as ***mappings***
- In principle, ***any type of relationship*** may be defined and applied as a mapping.
- Between thesauri, the **three main types** of mapping to consider are **equivalence**, **hierarchical** and **associative** (exactly analogous to the relationships used internally within any thesaurus).
- Of these, **equivalence is the type most commonly needed.**

ISO 25964-2 kap 7, "Types of mapping", s 20
(Uthevinger er lagt til)

SKOS mapping properties

- skos:closeMatch (symmetric)
- skos:exactMatch (symmetric, transitive)
- skos:broadMatch (inverse of narrowmatch)
- skos:narrowMatch (inverse of broadmatch)
- skos:relatedMatch (symmetric)

ISO25964-2 kap 8.2: **EQ** (*Simple Equivalence*)

- The target vocabulary contains a concept identical in scope to the concept in the source vocabulary.
 - Relasjon mellom begreper, - ikke termer
 - Symmetrisk relasjon:
mobiltelefon **EQ** mobile phones =>
mobile phones **EQ** mobiltelefon
 - «Where identical terms are found in different vocabularies, an equivalence mapping should be established **only** if the underlying concepts are judged equivalent.»
ISO 25964-2 kap 8.2, s 21.
- Tilsvarer dette skos : exactMatch?

ISO-std kap 11.2: =EQ (*Exact equivalence*)

- «A marker to an equivalence mapping, indicating the degree to which the mapping is **universally applicable**.»
 - «When the concepts can be used interchangeably across all the applications that can be envisaged for the mapping.»
 - «If the mappings are to be made more widely available, this judgement should be made across a wide range of information retrieval applications.»
 - Exact equivalence mappings are by definition reversible; in other words, they may be applied as two-way mappings. Provided they have been established with care, they can also be applied sequentially without risk
 - ISO 25964-2 kap 11.2, s 26
 - Dette tilsvarer skos:exactMatch

skos:exactMatch

- The property skos:exactMatch is used to link two concepts, indicating a high degree of confidence that the concepts can be used interchangeably across a wide range of information retrieval applications.
- skos:exactMatch is a transitive property, and is a sub-property of skos:closeMatch.

ISO-std kap 11.3: ~EQ (*Inexact equivalence*)

- The concepts may be equivalent in some contexts but not others
- The concepts may have overlapping scopes or small differences of connotation
- When mapping between a classification scheme and a thesaurus, it is common to find a class with a caption that matches a preferred term, but checking shows that the two are not exactly equivalent.
Reasons for this are discussed in more detail in Clause 13 and 17.2.
- Tilsvarer skos:closeMatch

skos:closeMatch

- The property skos:closeMatch is used to link two concepts that are sufficiently similar that they can be used interchangeably in **some** information retrieval applications.
- In order to avoid the possibility of "compound errors" when combining mappings across more than two concept schemes, skos:closeMatch is **not** declared to be a transitive property.

Compound Equivalence (ikke i SKOS)

- A complex concept that is included in one vocabulary with just one preferred term may be represented in another vocabulary by a combination of two or more concepts/terms.
 - Relasjon mellom konsepter, - ikke termer
 - Asymmetrisk relasjon?:
"The mapping generally applies in one direction only"
ISO 25964-2 kap 8.3, s 22
 - Intersecting compound equivalence (**EQ +**)
 - Cumulative compound equivalence (**EQ |**)
 - In cases of compound equivalence, exact/inexact markers would convey no extra information because all such mappings are to some extent inexact.
- Vi regner med å klare oss godt uten dette

Mapping between a thesaurus and a scheme with context-dependent captions (ISO 25964-2, kap 13.2)

- Mappings to or from a class or category ... should treat the class/category as a pre-coordinated concept
 - whose meaning can be established by inspecting all its superordinate and subordinate classes as well as any scope notes associated with it.
Inspection of the caption alone is inadequate.
- Any of the mapping types — equivalence, hierarchical and associative may be used. If a single concept in the thesaurus and a class in the scheme match each other according to one of these types, a one-to-one mapping may be established.
- Se teksten i std.

Slutt

- Semantikken for Broader/Narrower er ikke formelt definert i SKOS
 - SKOS definerer ikke hva disse relasjonene *betyr*
 - Broader og narrower er heller IKKE definert som transitiv:
 - "A skos:broader B" og "B skos:broader C"
 - Kan ikke utlede av dette at "A skos:broader C"
 - Må evnt. bruke relasjonen skos:broaderTransitive