



ISO 25964: a standard in support of interoperability

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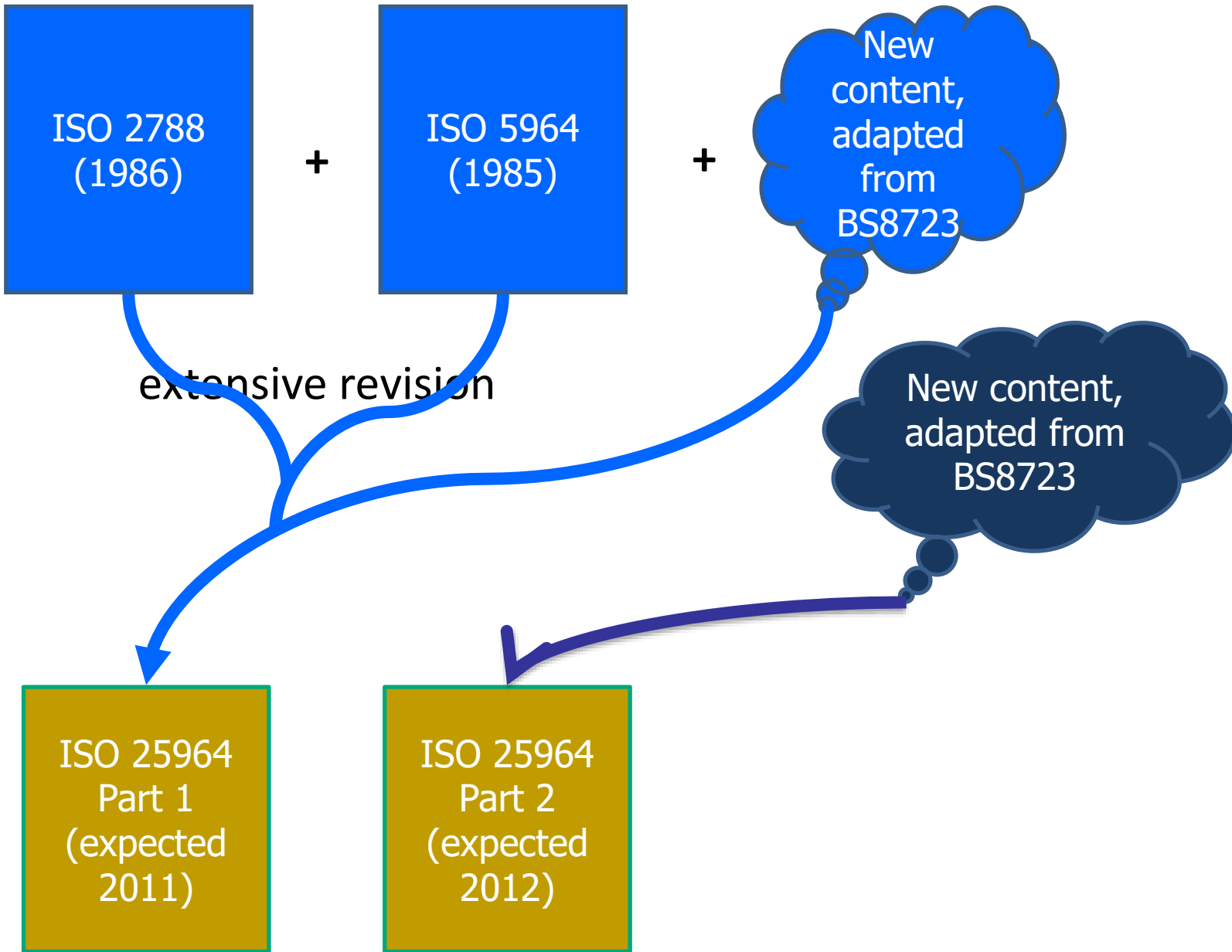
Overview

- What is ISO 25964?
- How does it support interoperability
- Recommended types of mapping
- The need for compound equivalence mappings
- Brief comparison with SKOS

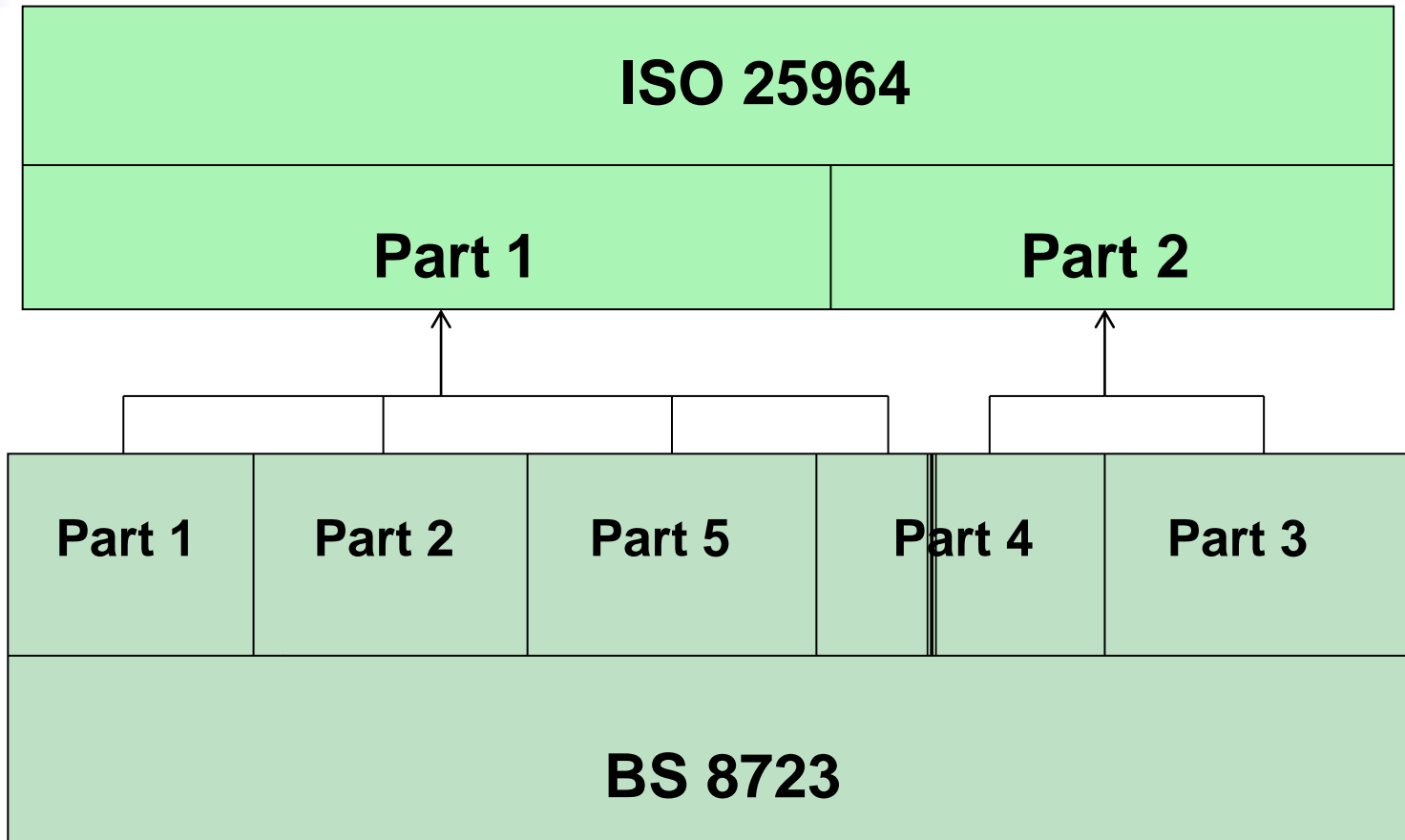


What is ISO 25964?

- ISO 25964: Thesauri and interoperability with other vocabularies
 - Part 1: Thesauri for information retrieval
 - Part 2: Interoperability with other vocabularies
- It updates ISO 2788 and ISO 5964
- Part 1, to be published in 2011, covers monolingual and multilingual thesauri
- Part 2, to be published in 2012, covers mapping between thesauri and other types of vocabulary
- information retrieval seen as main application; mapping applies to index terms or to search terms



How ISO 25964 evolved from BS 8723, with much reworking

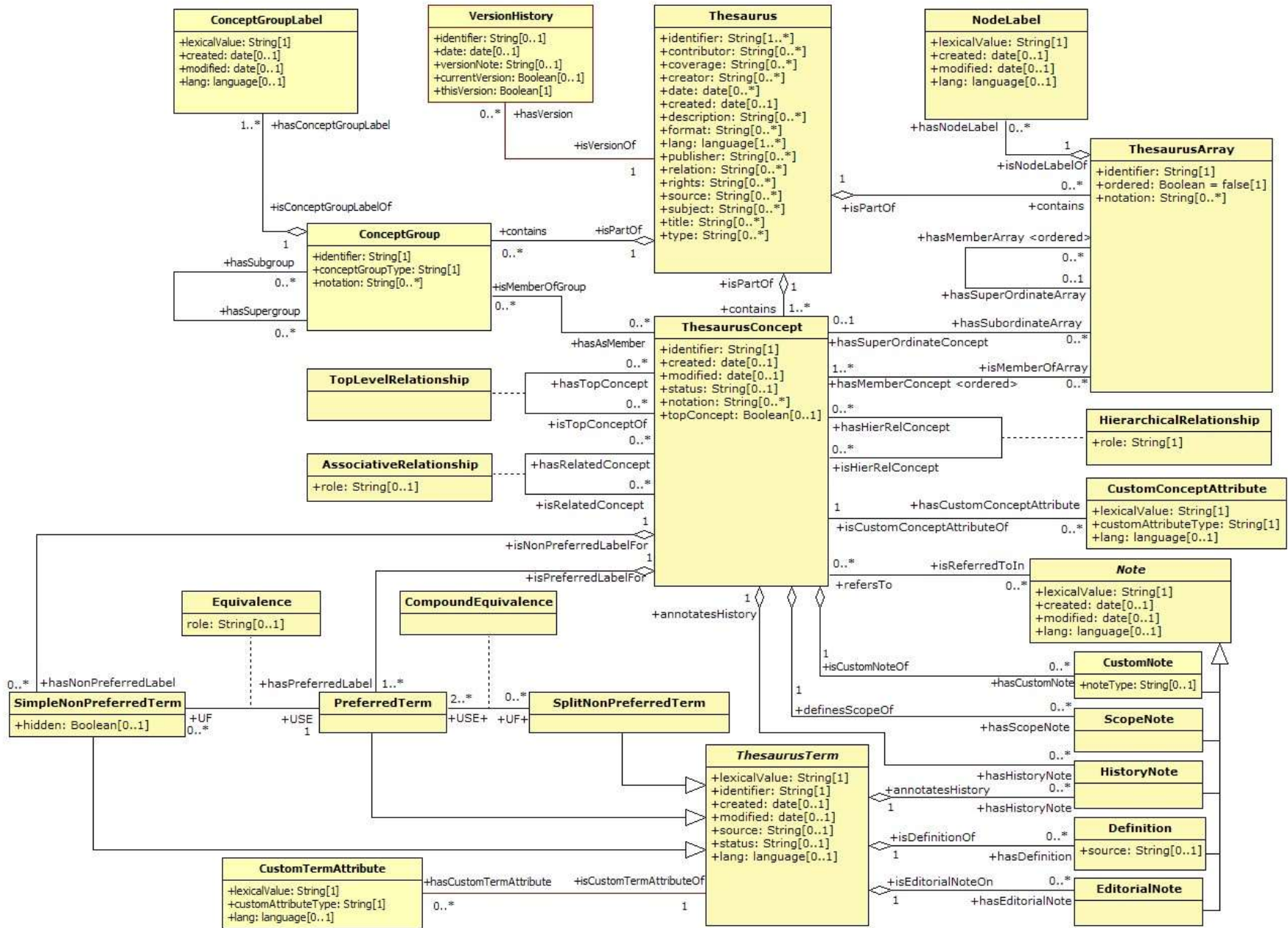




What's in Part 1?

All that was in ISO 2788 and ISO 5964, revised and extended to include:

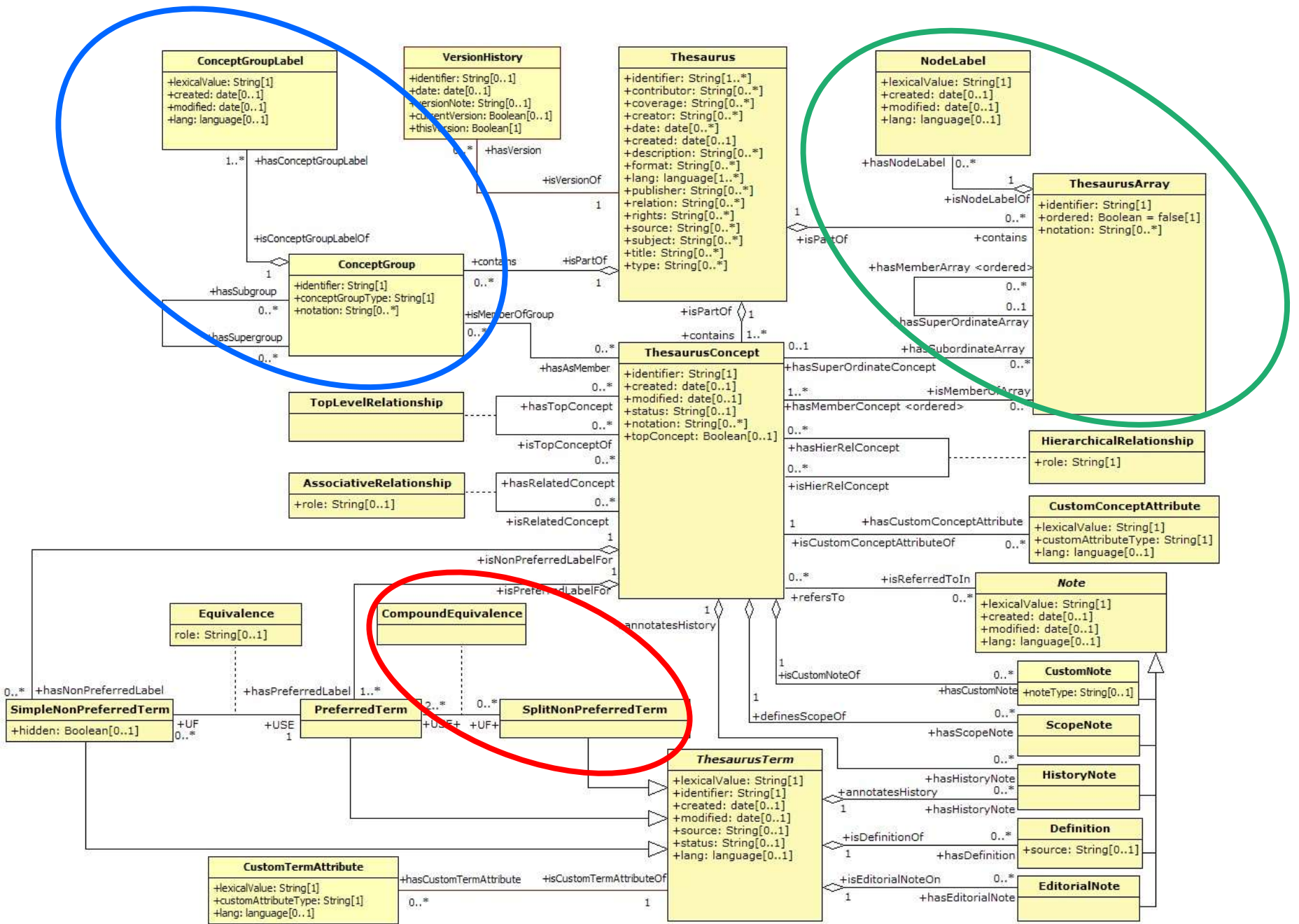
- thesaurus content and construction, mono- or multi-lingual.
- guidance on applying facet analysis to thesauri
- guidance on managing thesaurus development and maintenance
- functional requirements for software to manage thesauri
- a data model and derived XML schema





How does Part 1 support interoperability?

- Standardization of syntactics and semantics, especially in the relationships between concepts, promotes interoperability between thesauri
- Implementation of the multilingual features promotes interoperability across languages
- The ISO 25964 data model is broadly compatible with SKOS, which enables publication on the Semantic Web. Greater compatibility awaits SKOS extension to allow for compound equivalence, arrays, node labels and concept groups.

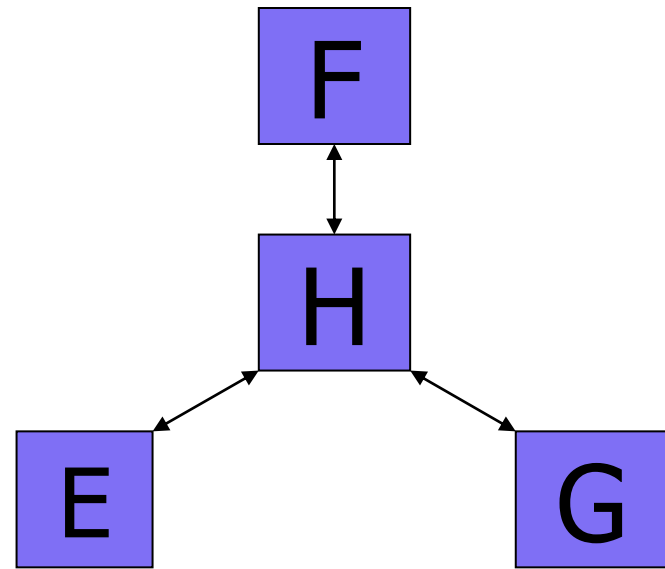
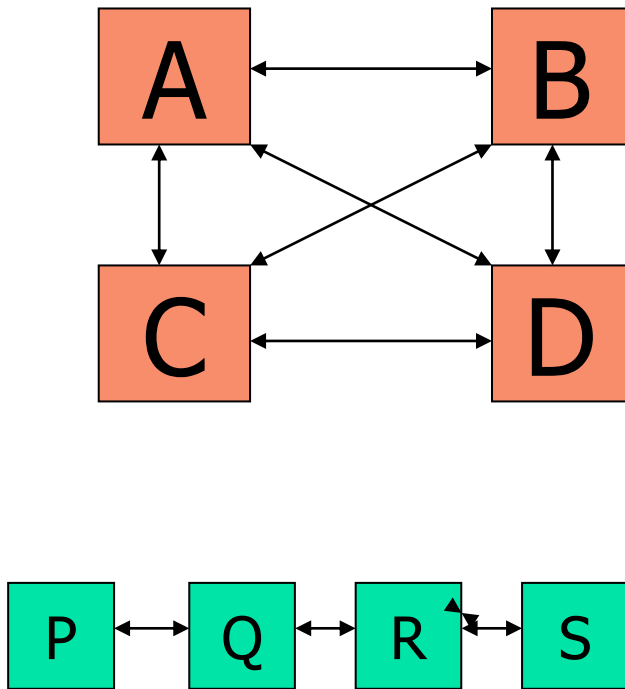




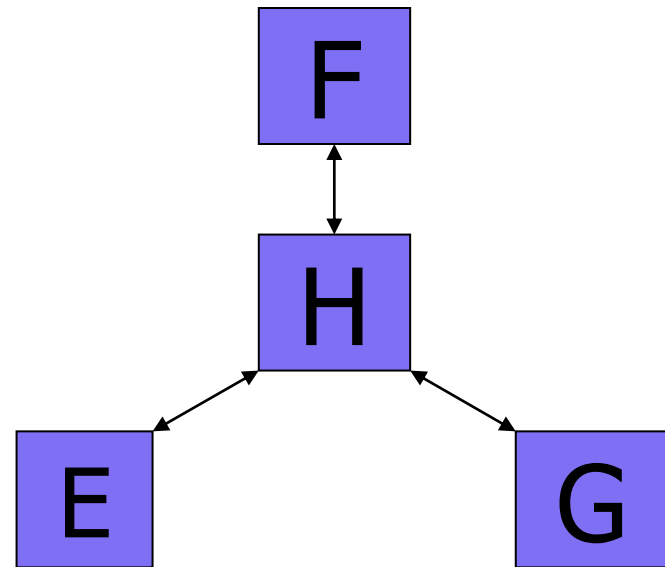
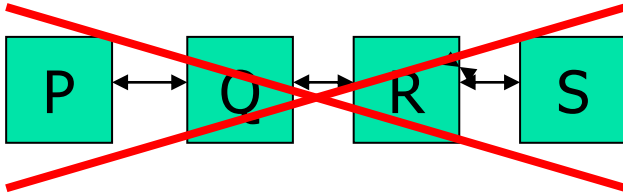
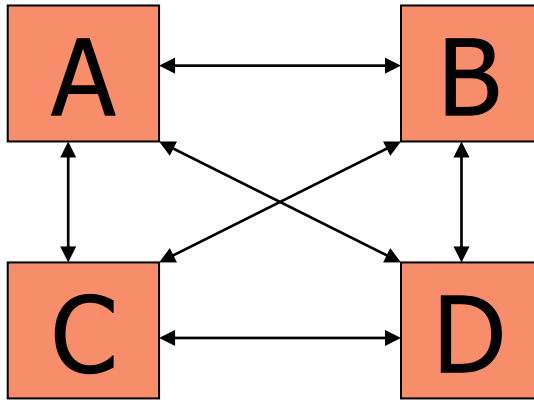
What's in Part 2?

- Models for mapping
- Guidelines for mapping
 - Recommendations on mapping types
 - How to handle pre-coordination
 - Mapping to vocabularies other than thesauri: classification schemes, file plans, taxonomies, subject heading schemes, ontologies, synonym rings, terminologies and name authority lists
- Brief guidance on handling mappings data

What do we mean by “Models for mapping”?



And what do we recommend?





How does Part 2 support interoperability?

- The focus is on mapping, defined as the “process of establishing relationships between the concepts of one vocabulary and those of another”
- Recommended types of mapping are based on the standard internal relationship types, basically: equivalence, hierarchical and associative
- Greater differentiation of mapping types is allowed, but is optional, to avoid complexity in simple applications



ISO 25964-2 mapping types with examples

- Basic mapping types:

Equivalence Laptop computers EQ Notebook computers

Hierarchical Roads NM Streets; Streets BM Roads

Associative e-Learning RM Distance education

- “Exact” or “Inexact” equivalence

Aubergines =EQ Egg-plants

Horticulture ~EQ Gardening

Subdivisions of ISO 25964-2 mapping types



- Basic mapping types:
 - Equivalence
 - Simple
 - Compound
 - Intersecting compound equivalence
 - Cumulative compound equivalence
 - Hierarchical
 - Broader
 - Narrower
 - Associative
- “Exact” or “Inexact” applies to simple but not compound equivalence

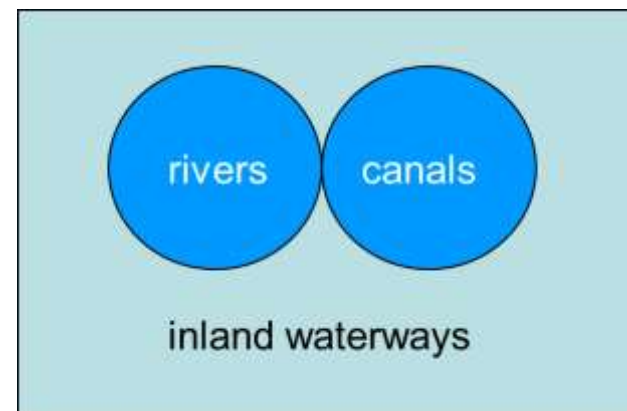
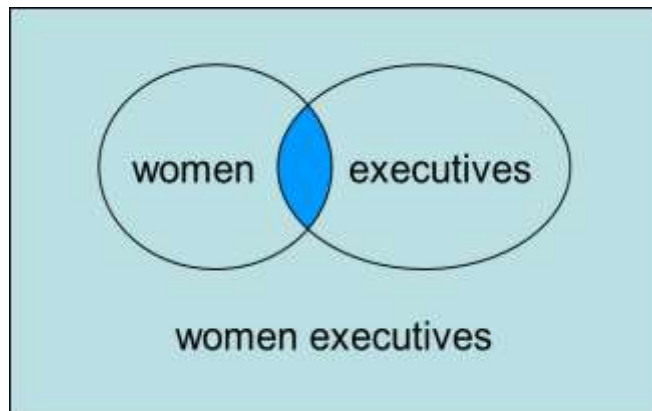


Equivalence subdivisions with examples

- **Simple** Laptop computers EQ Notebook computers
- **Compound**
 - **Intersecting compound equivalence**
Women executives EQ Women + Executives
 - **Cumulative compound equivalence**
Inland waterways EQ rivers | canals

Intersecting versus cumulative equivalence

Women executives EQ Women + Executives
Inland waterways EQ rivers | canals





Do we really need compound equivalence? Try a practical example

Thesaurus A

Animal products

Edible fats and oils

Fats

Oils

Vegetable products

Thesaurus B

Fats and oils

Animal fats

Butter

Margarine

Suet

Vegetable fats

Vegetable oils

Linseed oil

Olive oil

Sunflower oil

Mappings from A to B

Animal products NM Animal fats

Edible fats and oils NM Butter
Margarine
Olive oil
Suet
Sunflower oil

Fats EQ Animal fats | Vegetable fats

Oils NM Vegetable oils

Vegetable products EQ Vegetable fats | Vegetable oils

Mappings from B to A

Fats and oils EQ Fats | Oils

Animal fats EQ Fats + Animal products

Butter BM Animal products

Edible fats and oils

Fats

Margarine BM Animal products

Edible fats and oils

Fats

Suet BM Animal products

Edible fats and oils

Fats

Vegetable fats EQ Fats + Vegetable products

Vegetable oils EQ Oils + Vegetable products

Linseed oil BM Oils

Vegetable products

Olive oil BM Edible fats and oils

Oils

Vegetable products

Sunflower oil BM Edible fats and oils

Oils

Vegetable products



cf. SKOS (Simple Knowledge Organization System) data model

Basic mapping “properties”

- skos:closeMatch
 - skos:exactMatch
- skos:relatedMatch
- skos:broadMatch
- skos:narrowMatch



Comparison of mapping types

SKOS

- `skos:closeMatch`
 - `skos:exactMatch`
- `skos:relatedMatch`
- `skos:broadMatch`
- `skos:narrowMatch`

- No provision

ISO 25964-2

Equivalence

Exact equivalence

Associative

Hierarchical (broader)

Hierarchical (narrower)

Compound equivalence



Want a copy of ISO 25964-1 ?

- Publication is expected very soon.
- Order it from your national standards body (e.g. BSI, DIN, NISO)
- We don't know what price ISO will put on it, but it is unlikely to be cheap.
- However, the **XML schema** for exchange of thesaurus data is in an Annex which will be available online **without charge or password control**. Go to <http://www.niso.org/schemas/iso25964/>



Want a copy of ISO 25964-2 ?

- A draft will be issued later in 2011, “ISO DIS 25964-2”, with the hope of attracting comments from potential users
- The official way to get it is through your national standards body (e.g. BSI, DIN)
- Distribution policies vary from one country to another; but for a couple of months the draft should be available online free of charge and free of passwords, on the BSI site.
- Send me an email and I’ll alert you when the DIS is released. stella@lukehouse.org