



NKOS workshop
ECDL Bath
2004-09-16



SKOS

Standards and Best Practises for USING Knowledge Organisation Systems ON THE Semantic Web

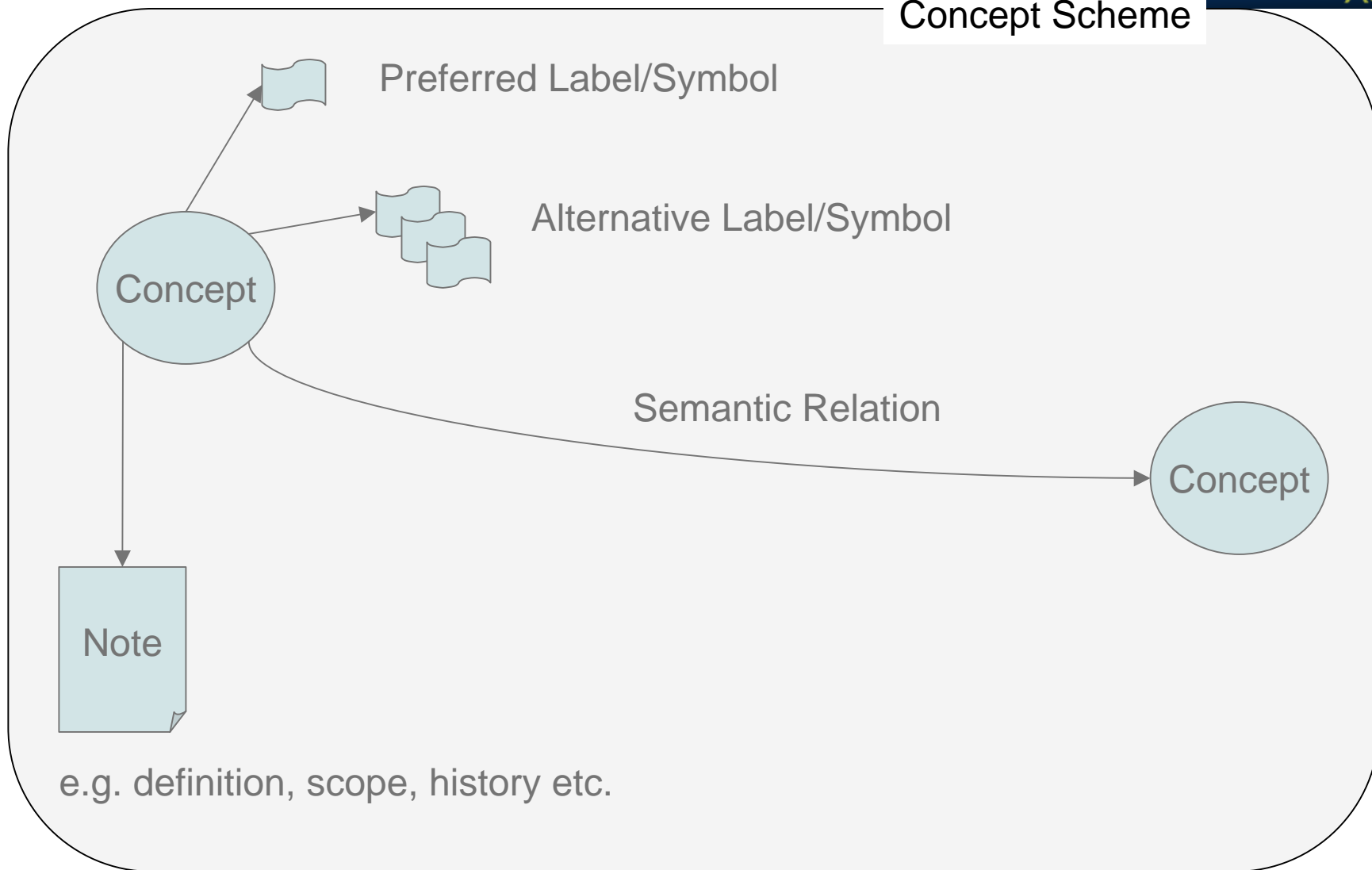
- Intro
- SKOS Core
- SKOS API
- SKOS Mapping

- Why Semantic Web?
 - Wouldn't it be nice if ... ?
 - Everybody published their KOS on the web in a machine readable form.
- Why RDF?
 - Flexible Standards
 - Extensible
 - Use in combination
 - Use in part or in whole
 - ⇒ Maximise Interoperability

- SKOS Core RDF Vocabulary
 - An ‘RDF Vocabulary’ is a set of RDF ‘terms’ for describing something in RDF ...
 - E.g. DC for simple meta-properties
 - E.g. VCard for contact details
 - E.g. FOAF for social networks
 - E.g. OWL for ontologies
- Scope of SKOS Core
 - ‘Language-oriented KOS’
 - Thesauri
 - Glossaries
 - Controlled Vocabularies
 - Terminologies
 - Classification Schemes?
 - Taxonomies?
 - Web directories ... Weblog category schemes ... ?

- OWL is a W3C Recommendation
 - Logic-oriented
 - ⇒ Powerful inference
 - ⇒ Precise semantics
- SKOS Core Complements OWL
 - Language-oriented
 - ⇒ Less powerful inference
 - ⇒ Flexible semantics

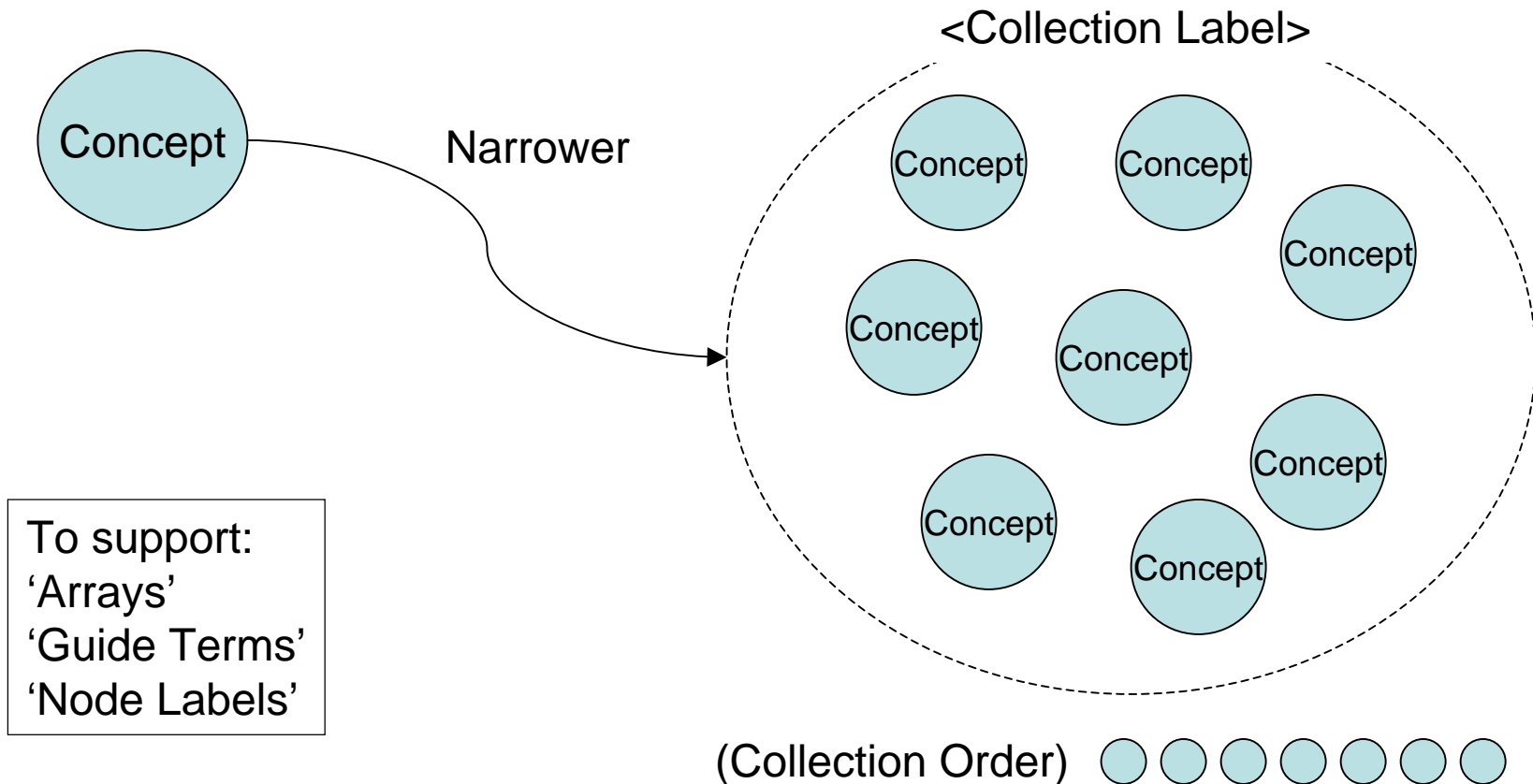
Concept Scheme



- **Extensibility ...**
 - Create more specific properties as sub-properties of existing SKOS Core properties
 - **Custom Labelling Properties**
 - E.g. Scientific/Household names ...
 - **Custom Semantic Relation Properties**
 - E.g. BroaderGeneric, BroaderInstantive ...
 - E.g. PartOf ...
- ⇒ Can write specialised applications & still interoperate with generic applications

- Concepts in multiple concept schemes
 - ⇒ ‘Virtual’ schemes (‘Views’)
 - ⇒ Scheme re-use
 - ⇒ Scheme linking & ‘super-schemes’

- 5 Current Proposals, including ...
- Collections



To support:
 'Arrays'
 'Guide Terms'
 'Node Labels'



- **SWBPD-WG**

- W3C Semantic Web Best Practises & Deployment Working Group
- Thesaurus Task Force
 - Co-ordinated by myself & Dan Brickley
 - ‘Document strategies for representing Thesaurus-like content using RDF/OWL’
- Publish SKOS Core Vocabulary Specification (Oct 2004)
- Publish SKOS Core Guide (Nov 2004)

- SKOS Core is and will remain an open development ...
 - Built by consensus
 - Anybody can participate
- SKOS Core is and will remain a living vocabulary ...
 - Vocab as a whole not set in stone but ...
 - Term lifecycle and stability
 - ‘unstable’ ...> ‘testing’ ...> ‘stable’
 - Once term is ‘stable’ can expect to remain unchanged
 - Expect stability of all basic features by Nov 2004

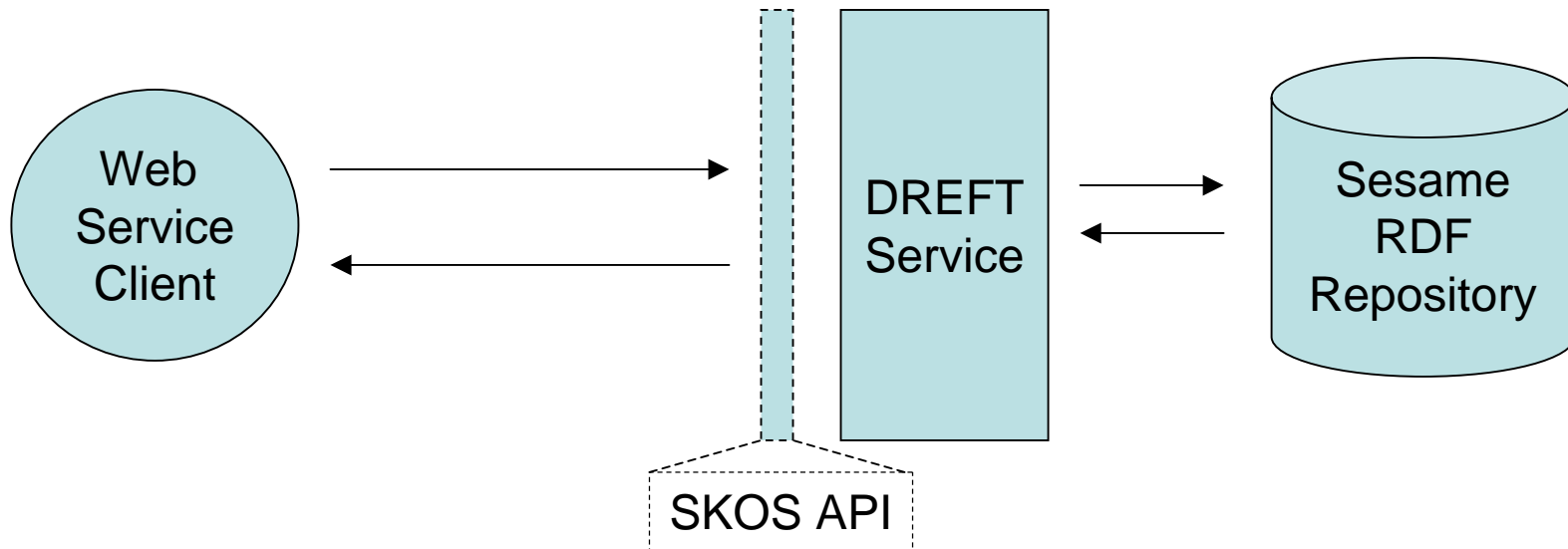
- Technical migration note
 - ‘Irregular’ thesauri
- Terminology Web Service API
- Mapping
- Thesaurus ...> Ontology
- SWBPD-WG ?

- Requirement ...
 - Standard terminology service interface
 - ⇒ ‘Out of the box’ components
 - ⇒ ‘Plug & play’

- Issues to resolve ...
 - Functionality
(what methods, and how to parameterise)
 - Encoding
(SOAP, doc-lit, ...)
 - Devil is in the details

- API for terminology web service
 - SWAD-E
 - First pass
- Key functionalities ...
 - Search
 - (... to support the ‘Google box’)
 - Browse
 - (... to support semantic navigation, expansion)

- **DREFT Service (SWAD-E)**
 - Reference Implementation of SKOS API
 - Implements SOAP encoding for data

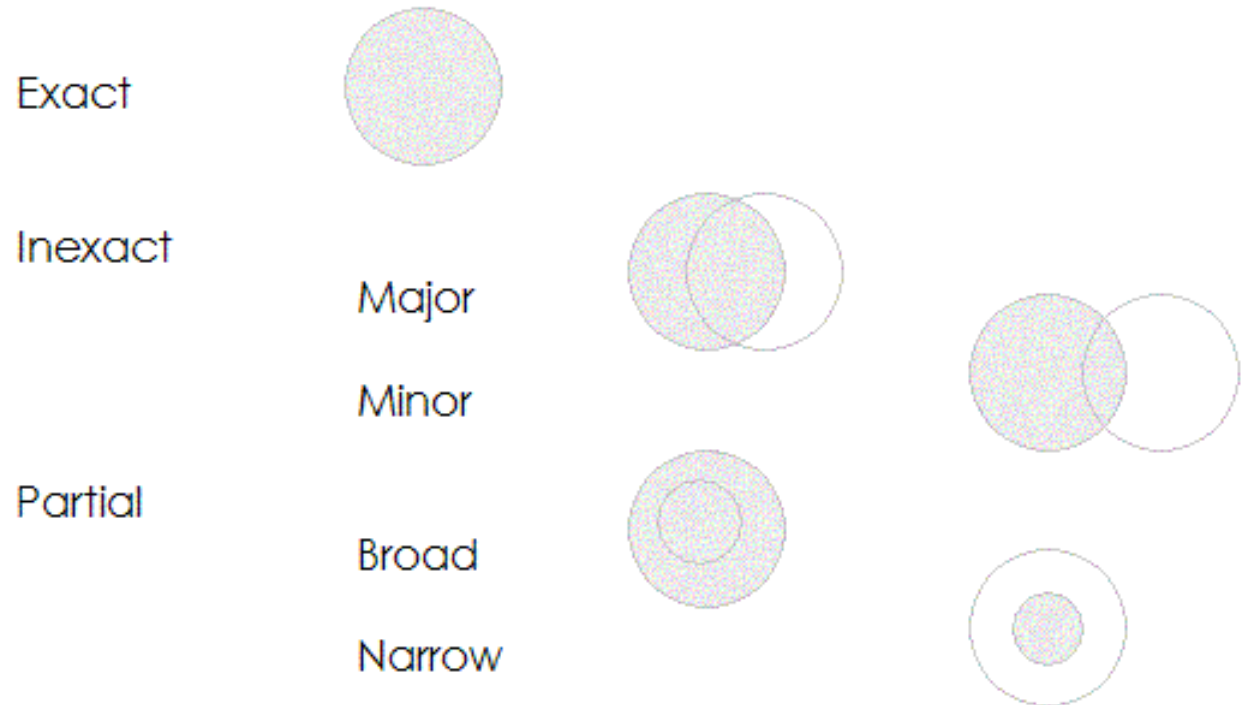


- **DREFT Client**
 - Python implementation
 - Proof of concept

- Iterate requirements gathering
- Iterate design
- Iterate testing
- ... Could have a firm spec in < 1 year ?

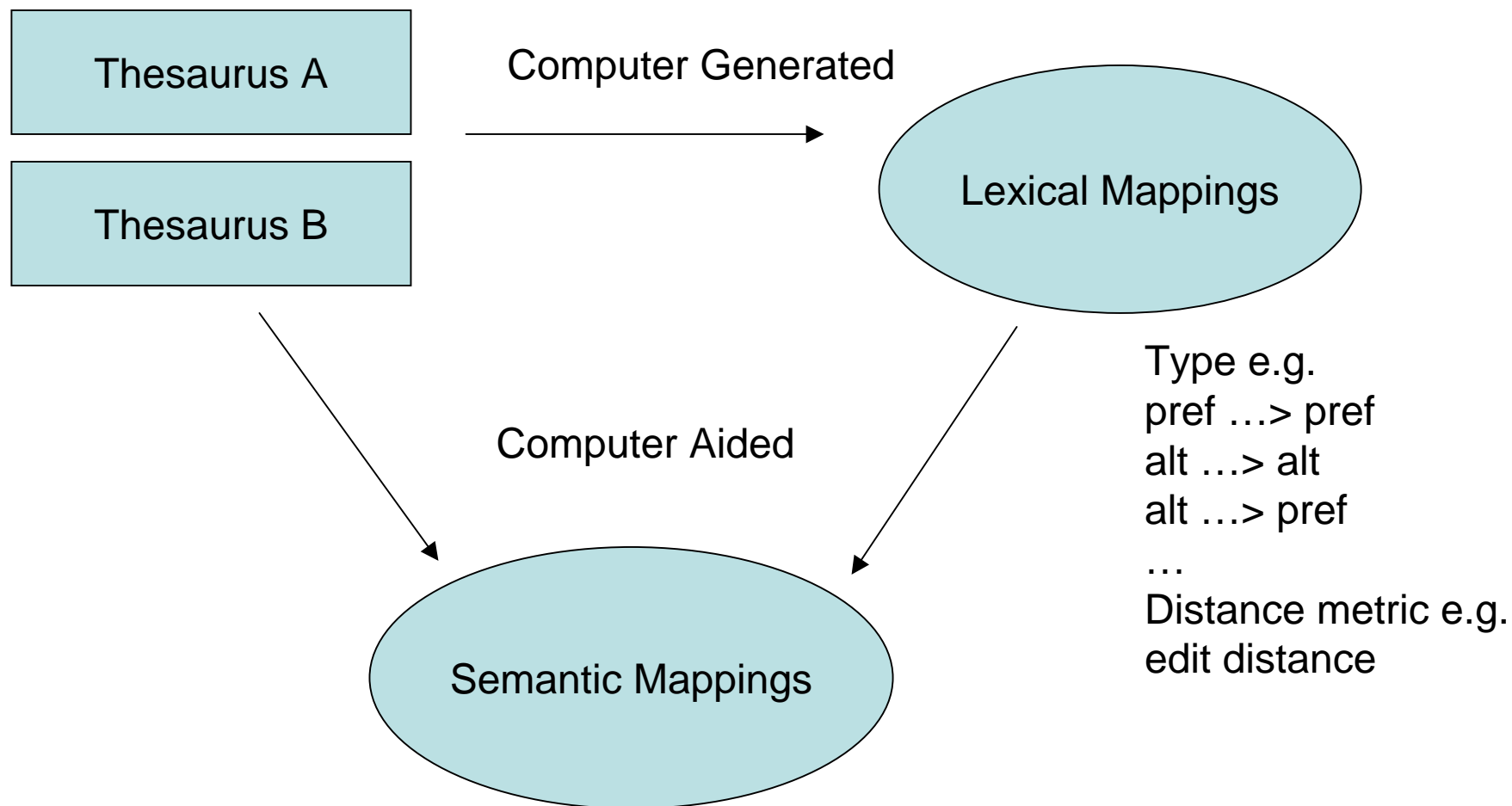
- An RDF vocabulary for KOS mapping
 - I.e. mapping between thesaurus A and thesaurus B
 - First draft from SWAD-E

SEMANTIC MAPPINGS



AND, OR, NOT combinations

- Add support for 'lexical mappings' ...



- Mapping is expensive ...
 - When does it pay to do a mapping?
 - ⇒ Collect use cases
 - ⇒ Study requirements
- (Requirements drive design)
- If strong requirement ...
- ⇒ Explore ways to reduce cost

- **SKOS Core**
 - RDF vocabulary for language-oriented KOS
 - Publish spec & guide W3C SWBPD-WG 1-2 months
 - Have we got it right?
- **SKOS API**
 - Interface to terminology web service
 - First draft published SWAD-E
 - Interest & opportunity for further development?
- **SKOS Mapping**
 - RDF vocabulary for KOS mapping
 - First draft published SWAD-E
 - Interest & opportunity for further development?

- Comments and active involvement in SKOS development most welcome ...
public-esw-thes@w3.org
- SKOS Homepage ...
<http://www.w3.org/2004/02/skos/>
- Watch NKOS mailing list for announcement of SKOS Core docs