A special ontology – case Agriforest

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Viikki Science Library

Subject fields of the Viikki Science Library

- Biosciences and biotechnology
- Ecology, systematics and environmental sciences
- Food sciences
- Veterinary medicine
- Pharmacy
- Home economics and consumer research
- Agriculture
- Forestry
- Economics and social sciences

Agriforest thesaurus

- About 7000 terms in Finnish
- About 5000 terms with English translations
- About 3000 terms with Agrovoc terms
- Scientific names of plants and animals

Management:
- Background working thesaurus – about 8000 terms
- TRIP database software

Thesaurus ‡ ontology

- Agriforest terms were processed by FinnONTO project to find equivalences with Finnish General Upper Ontology terms (YSO)
- This raw material is checked by hand to place all subject specific Agriforest terms onto YSO
Example of Agriforest Ontology

- variable (yso)
- processes (yso)
- action (yso)
- changing (yso)
- transformation (yso)
- cultivation (yso)
- tillage (yso, afo)
- ploughing (yso, afo)
- spring ploughing (afo)
- deep ploughing (afo)
- autumn ploughing (afo)

Challenges

- Understanding the concept of the term
- Lingonberry – parts of plants or plant species
- To find real equivalences with YSO
- Vectors – YSO = abstract concept
- Agriforest = disease vectors
- Systematics of organisms, e.g. insects, fungi
- Terms and concepts are changing
- Protégé – open source ontology editor
- Slow, 50-100 terms per day
Tools and resources

- Knowledge of the subject areas
- Dictionaries, encyclopedias
- Wikipedia
- Google
- Specialists of the subject areas

Expectations

- Search support for eVikki database using mash-up services with ONKI ontology server
- Indexing support for cataloguing
- Term management tool for thesaurus maintenance