Connecting Mathematics

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Pattern Matching - 2
Pattern Matching 3
Pattern Matching 4
Pattern Matching 5
My first ontology

Counting → Number

1 → 2 → 3

4 → 5
My second ontology

- Counting
- Whole Number
- Number
- Fraction

1
2
3
4
5
1/2
1/3
The major languages

• Danish
• English
• Finnish
• Hungarian
• Lithuanian
• Polish
• Slovak
Architecture

Editor

MySQL database

Web Publication in XHTML & MathML

LaTeX copy in:
- Danish
- English
- Finnish
- Hungarian
- Lithuanian
- Polish
- Slovak
Why Protégé?

• I needed to edit an ontology.
• Fluid schema – allowed experimentation.
• Easily customised.
• Unicode essential to encompass Eastern European languages.
• Access to visualisation tools – especially TGVizTab.
Solutions

• MMKB slicer developed to import ‘slices’ of the data for editing.

• TGVizTab customised to MMKB viewer
Some further ideas

• Thesaurus based indexer using Porter stemming algorithm?
• Child-friendly editing
• Child-friendly storage
• Synonyms rendered in mathematical notation. e.g. \[ \int \sin \theta d\theta \]
Problems

• TGVizTab excellent, but needed some customisation – restricted to showing only concepts and relations of interest.
• I need a bigger laptop. 192 Mb RAM isn’t enough!
• Synonyms v. Canonical Names