MMT Tutorial, Part 2: Application Development with MMT

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Bringing your notebook is recommended but not required.
Attending Part 1 is helpful but not required to follow Part 2.

Users vs. Developers

MMT blurs distinction between users and developers

- Intended users: developers of math applications
- MMT is not an application itself
- It is an
  - API for the MMT language — close relative of OMDoc
  - suite of reusable components for math applications — e.g., MKM services
  - set of few example applications — e.g., the IDE used in Part 1

Extension Interfaces

MMT is highly extensible through systematically exposed extension interfaces essentially everything can be replaced or customized

- Interfaces for lexer, parser, checker, simplifier, prover, presenter
  - extensible by adding new rules
  - independently replacable with custom implementations
- Adding new language features
- Import/export interfaces for integrating other formats and build targets
- Exposing functionality to outside
  - adding new command line syntax
  - web framework for adding new HTTP interfaces
- Change listening infrastructure for content events

Overview

1. Brief introduction to MMT-based Applications
2. 3 mini-demos of prototypical MMT-based applications
   easy for attendants to understand, reprocude, modify
   - 2.1 Changing equality by adding arbitrary rewrite or computation rules
   - 2.2 Using the MMT query interfaces to build a browser-based editor
   - 2.3 Using MMT's export infrastructure to build an OpenMath Content Dictionary editor