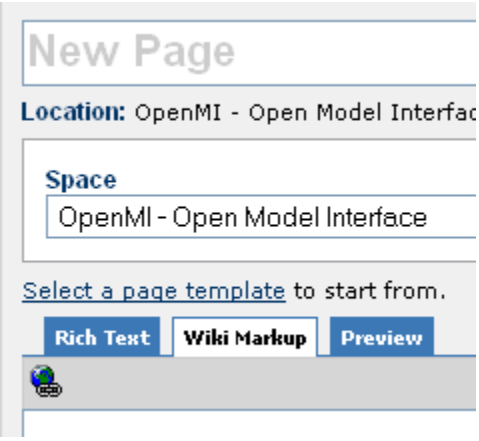
OpenMI Use Cases



Info

List use cases here which we were implementing in the past and where we met difficult areas when configuring and using it.

To add a new use case click **Add Page** link and then select Select a page template.

Most important use cases

It was decided at the OATC WEB meeting on Wednesday January 24th 2008, that we each participant should select on use case that is considered especially important and elaborate this use case into more details.

So please edit the list below:

- Jan will work on: 1. Change input data via an OpenMI-editor and show model results
- Peter S. will work on: ??
- Stef will work on: ??
- Adrian will work on: ??
- Jon will work on: ??

Use Cases

- 1. Change input data via an OpenMI-editor and show model results
- 2. Query flow time series from a database and use it in the river model as a boundary condition
- 3. Qualitative Data Support
- 4. Pre-initialize with Arguments
- 5. Extend types of information exchanged via OpenMI from time-dependent to more general
- 6. Gridded Data Transfer
- 7. Exchange structured data
- 8. Backtracking for model results
- 9. Calibration of two linked models
- 10. Apply OpenMI in real time operation systems
- 11. Connect large sewer model with large river model
- 12. Extract cross-section points elevation grid defined in GIS to River model on-the-fly
- 13. Connect AD-WQ-process libary to water movement model
- 14. Provide uncertainty information to end users
- OpenMI LIFE use cases

Typical types of Use Cases to be elaborated

Model to model

- Steady-to-steady model
- Transient-to-transient model
  - persistant state
  - numerical stabilization of first timestep
  - save state, move to another computer and restore state
  - clone state and use elsewhere

Run scenarios for one model

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    - OpenMI 1.2: Make a trigger, make a link, addLink, Get value....
    - OpenMI 2.0 MyModel.Run;

Generic OpenMI-tools and services

- services
    - data transformation
- tools
    - visualization
    - data editor

Retrieve data from data stores

- relational data bases
- GIS
- files

Distributed computing

- web services
- parallelization and distribution

User applications utilizing OpenMI-components

- DSS, Frameworks
- GUI
- presentation app.
- Scenarios ..
- Real-time systems (incl. data acquisition, model runs)

Multi-simulation applications

- Calibration
- optimization
- iteration
- data assimilation