libSedML Updates and SED-ML Web Tools

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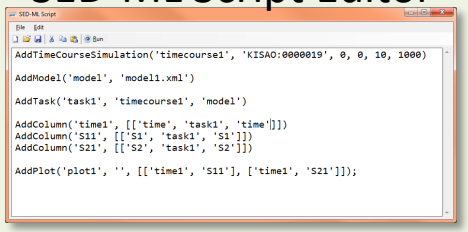
LIBSEDML UPDATE

LibSedML

SED-ML Script Editor



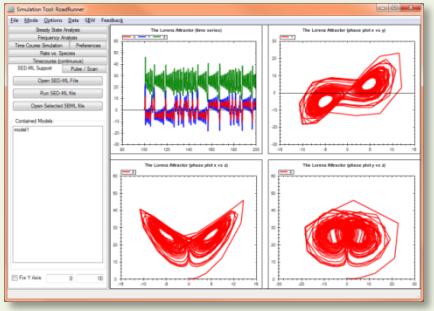
libSedMLScript

libSedML

libSedMLRunner

Other SBW enabled Simulators

RoadRunner



Simulation Tool

What is new - LibSedML

- Clear separation of model specific code
  - Introduction of `IModelingLanguage` interface for
    - Resolving the native identifier for a SED-ML Variable
    - Constructing the XPath expression for SED-ML Variables
    - Ensuring that SED-ML Variables point to the right things
  - Implementation of SBML and CellML Language
  - Introduction of a Language Store concept, where all supported languages will be registered.
- Adding of Validation Routines

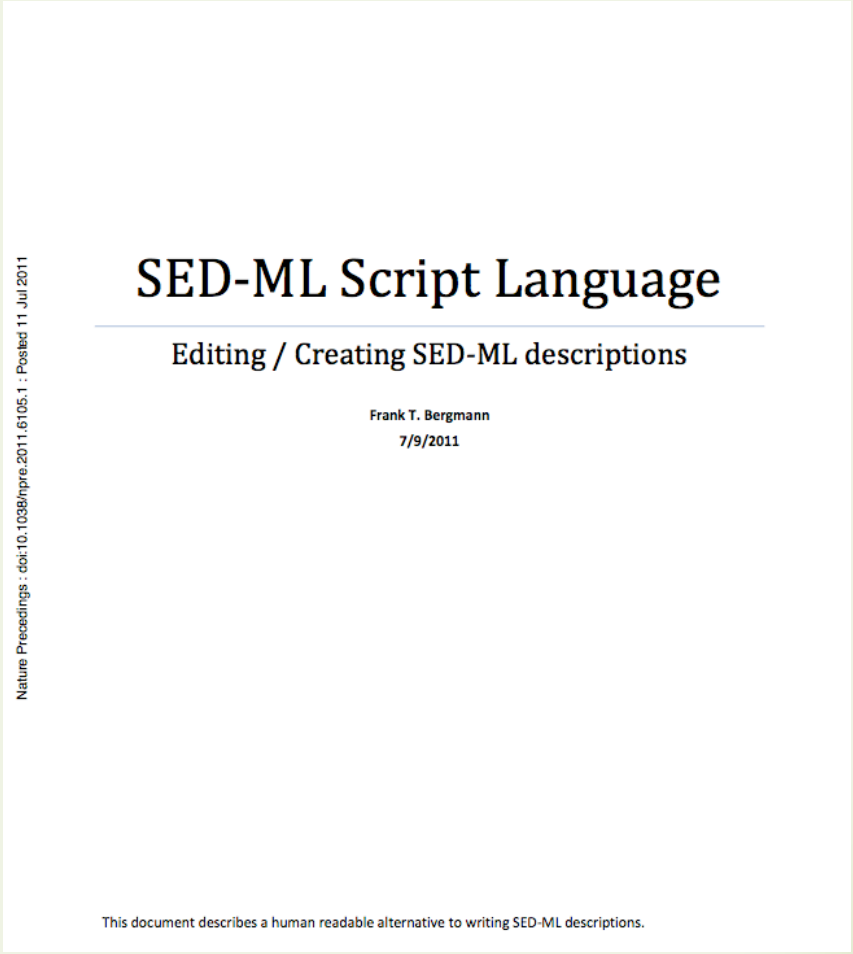
What is new - LibSedML

- Adding AutoCorrect options:
  - Fix time symbol
  - Add missing Ids
  - Check for duplicated Variables
  - Fix the language element
  - Fix the KISAO id

What is new - LibSedMLScript

- Follows the separation from LibSedML and now also supports the modification of CellML experiments
- Finally documented the supported language elements are:

http://dx.doi.org/10.1038/npre.2011.6105.1



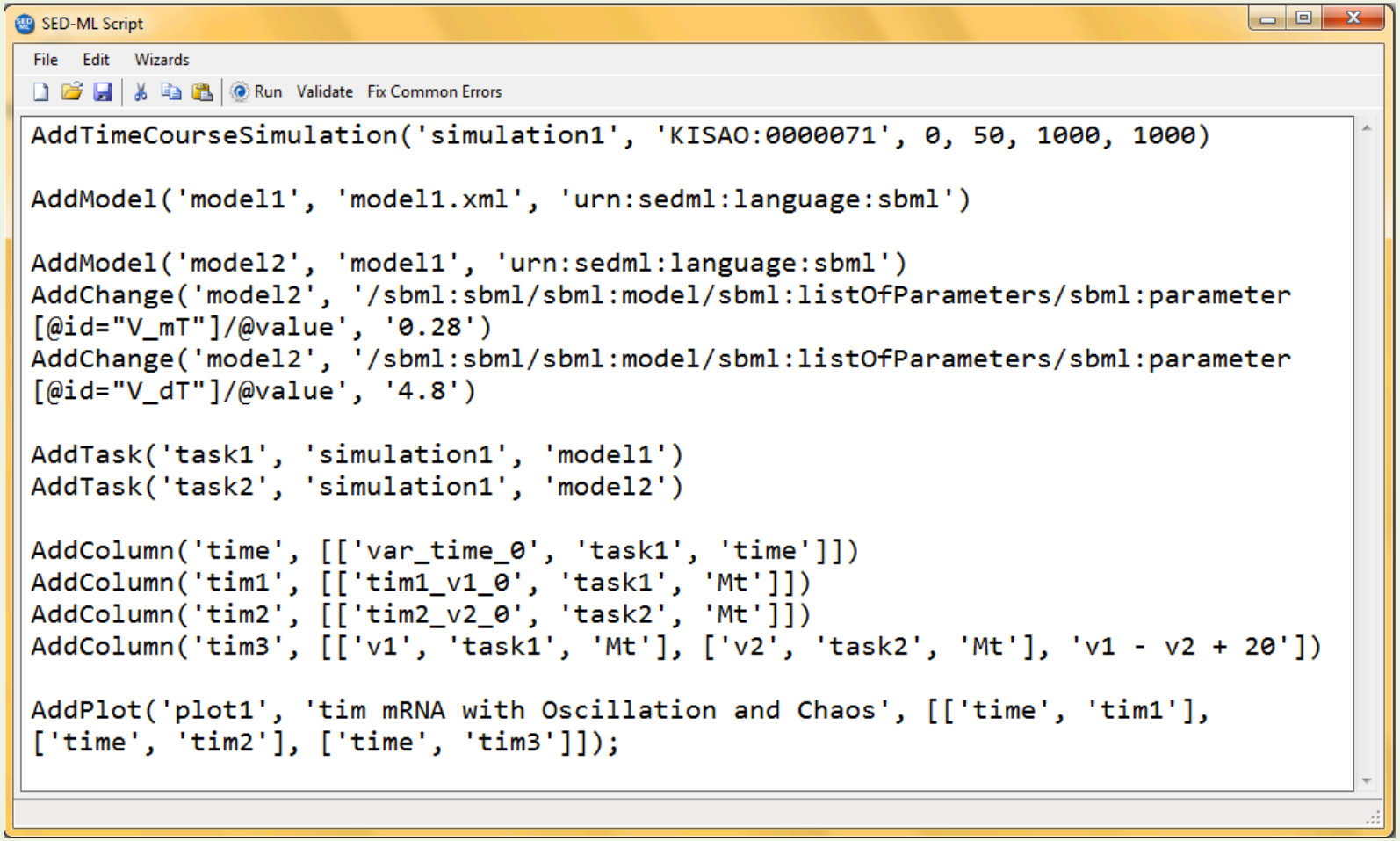
What is new - LibSedMLRunner

- Similar to LibSedML clear abstraction of supported simulators
- Based on binaries from David Nickerson:
  - Simulation Support for CellML models

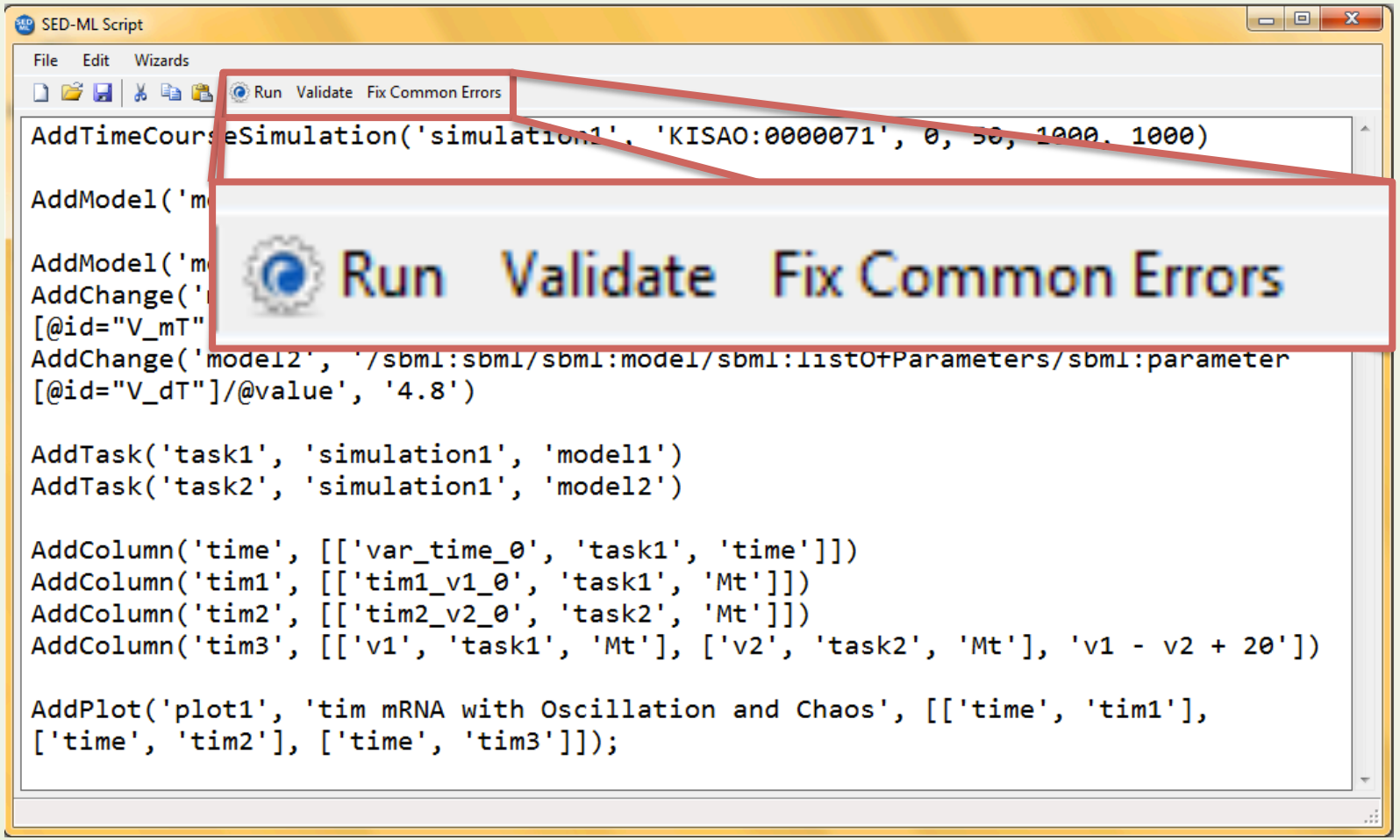
http://sf.net/projects/libsedml/files

SED-ML SCRIPT EDITOR 1.6

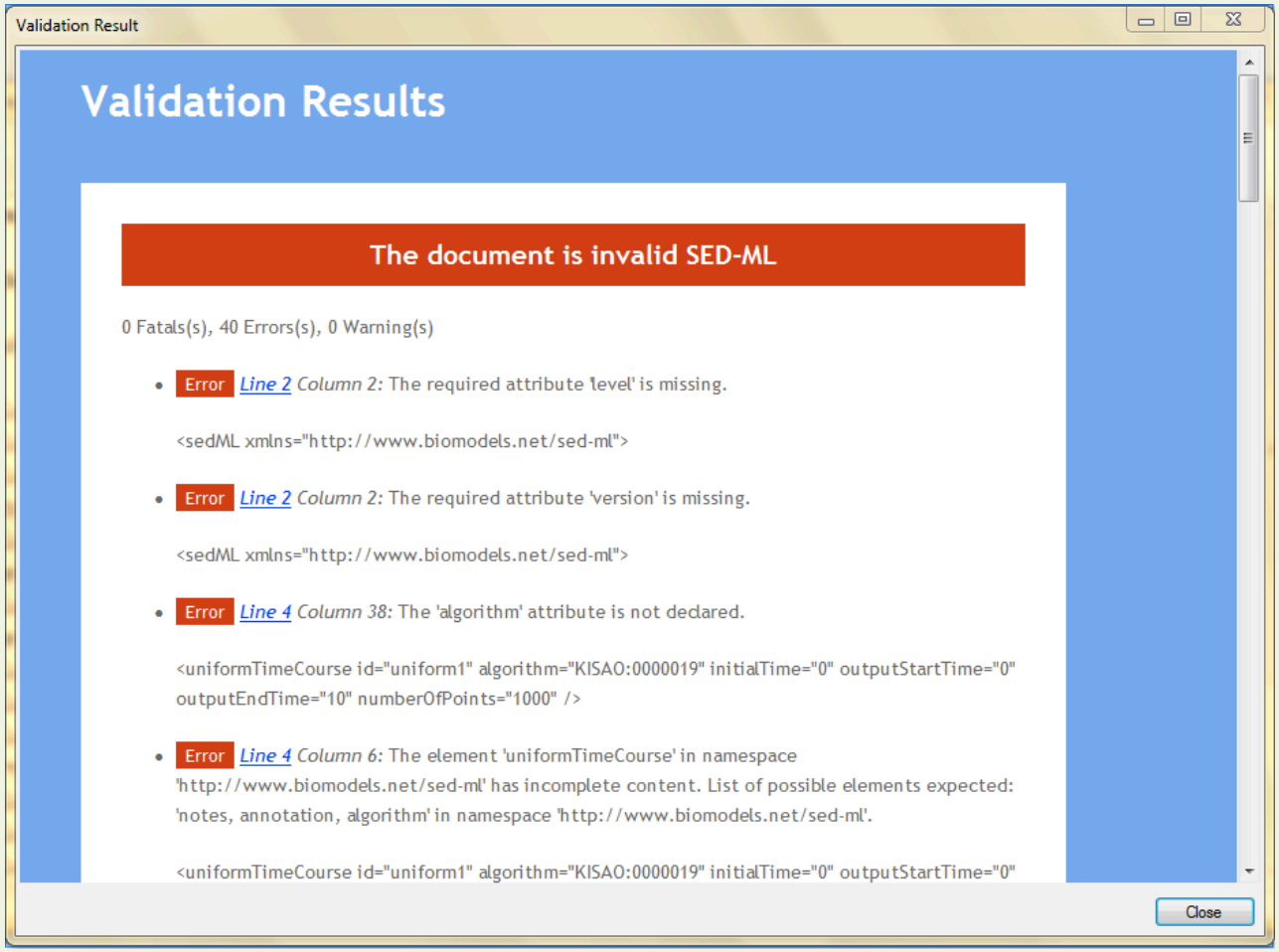
SED-ML Script Editor



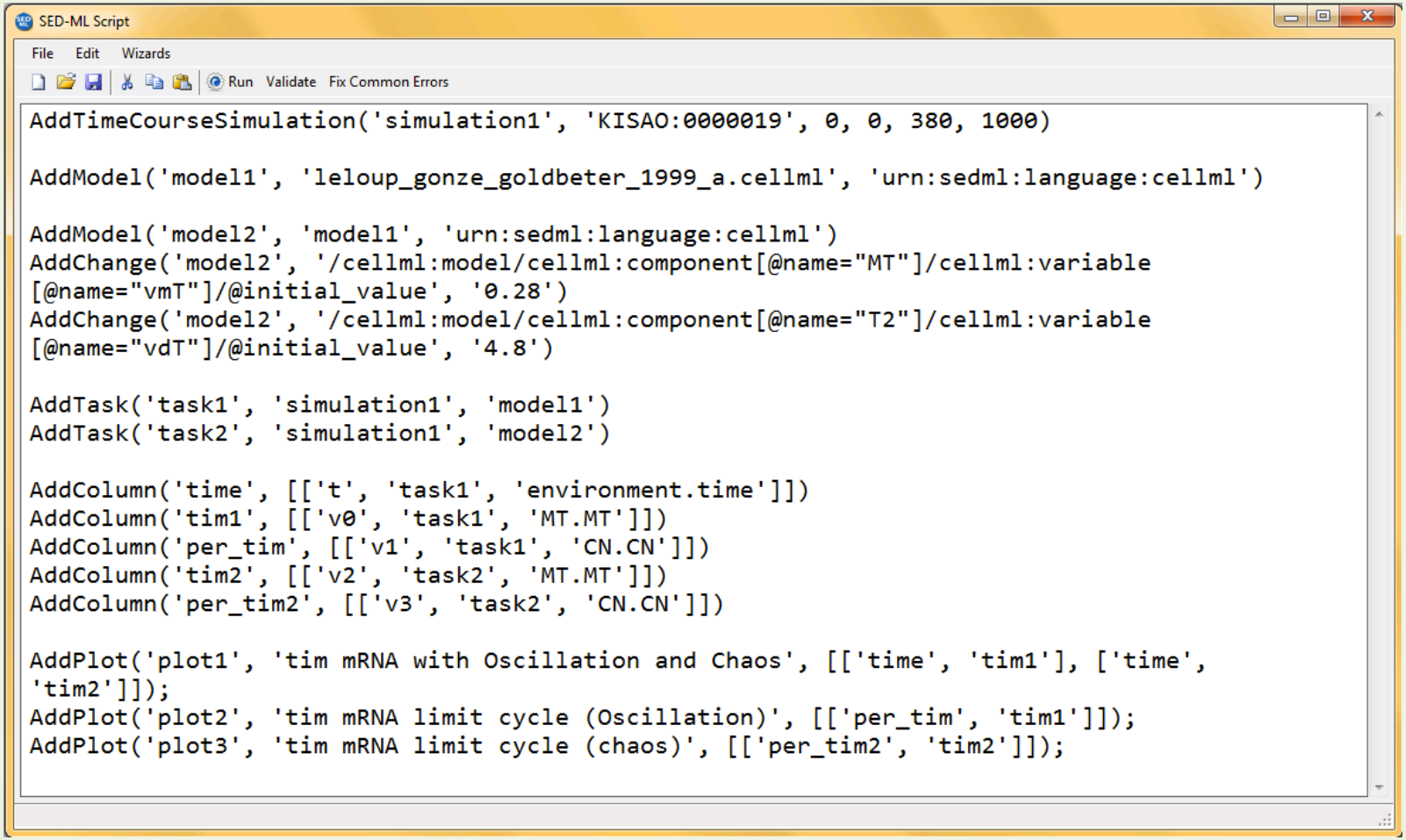
SED-ML Script Editor



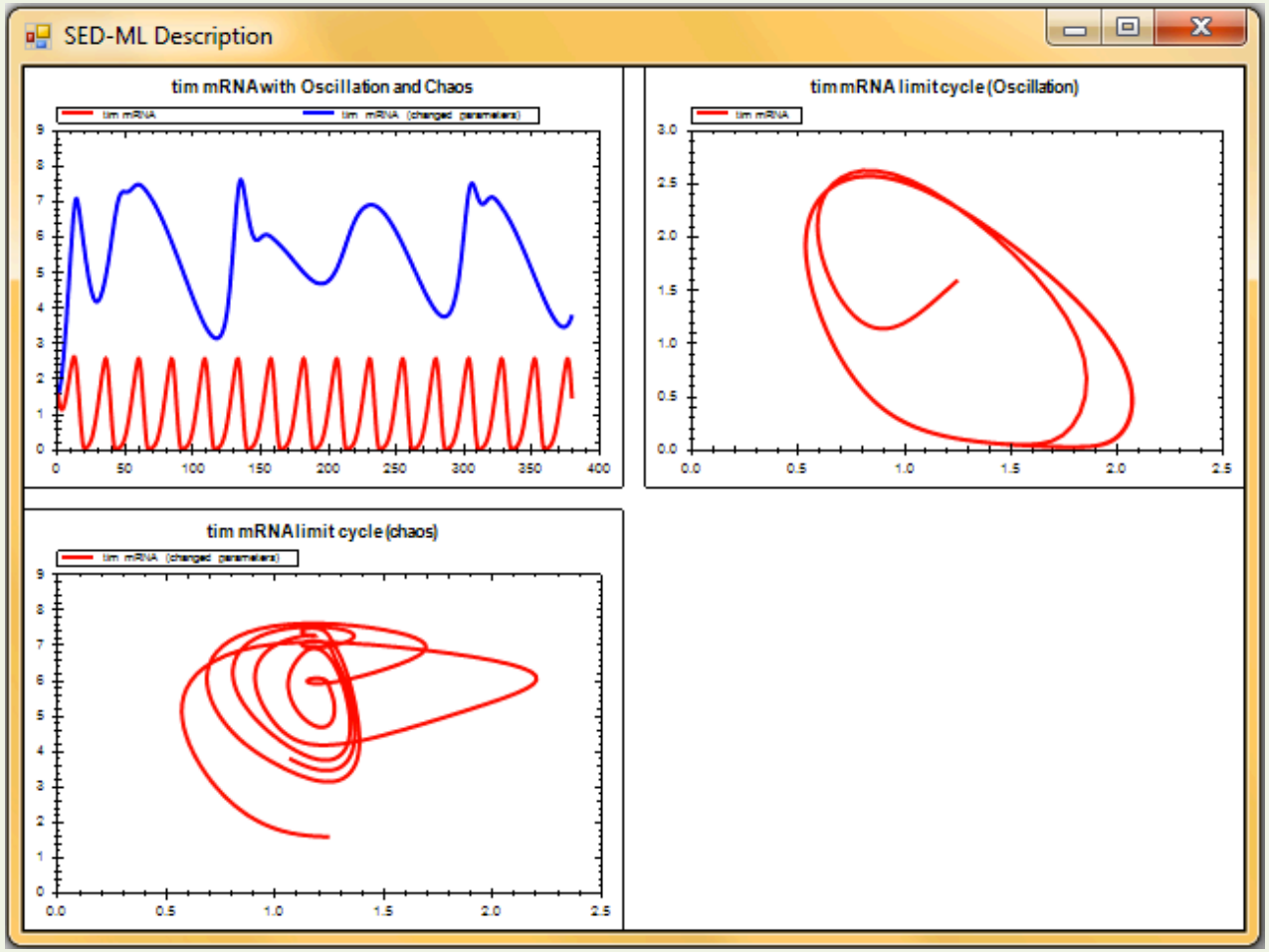
SED-ML Script Editor - Validation



SED-ML Script Editor - CellML

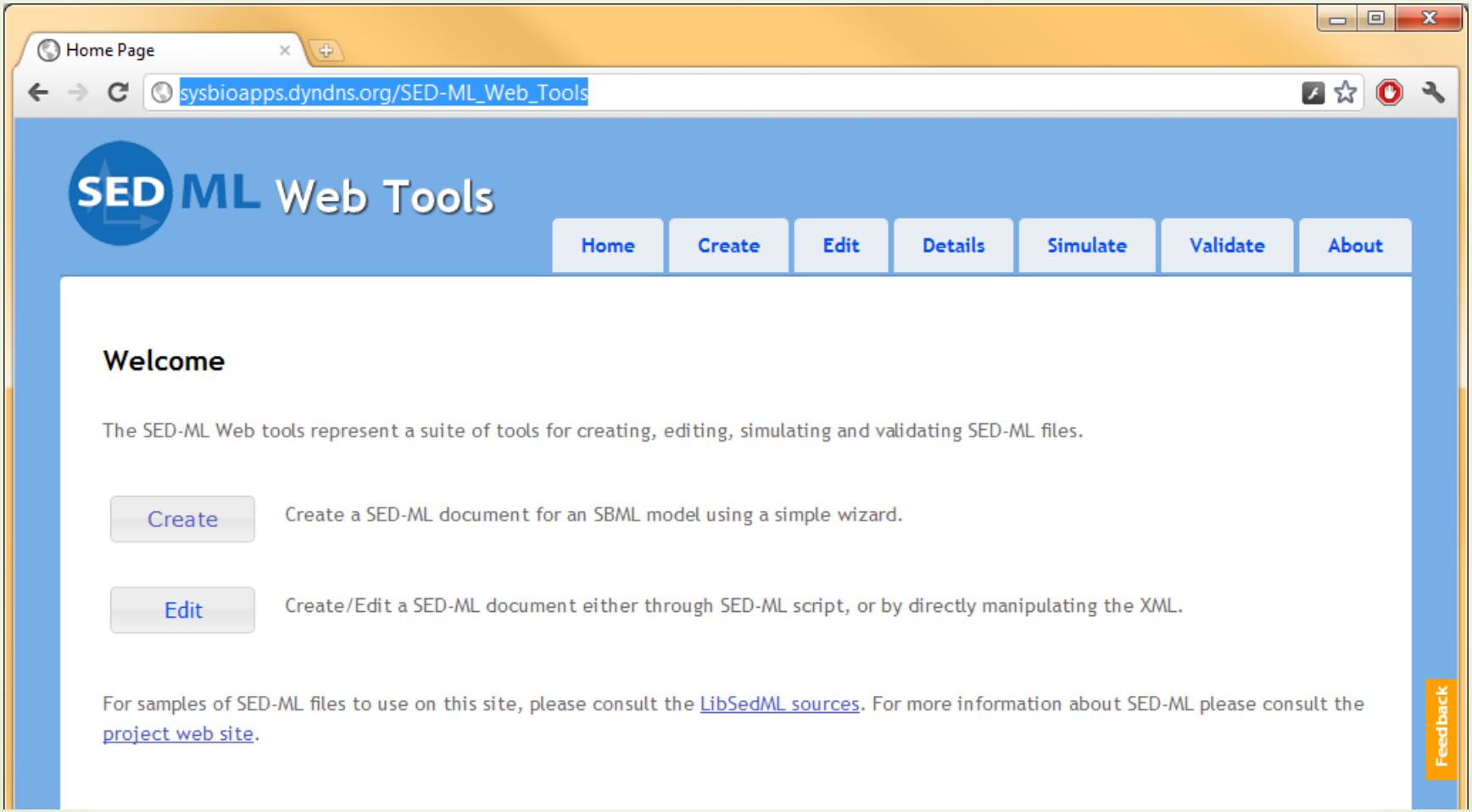


SED-ML Script Editor - CellML



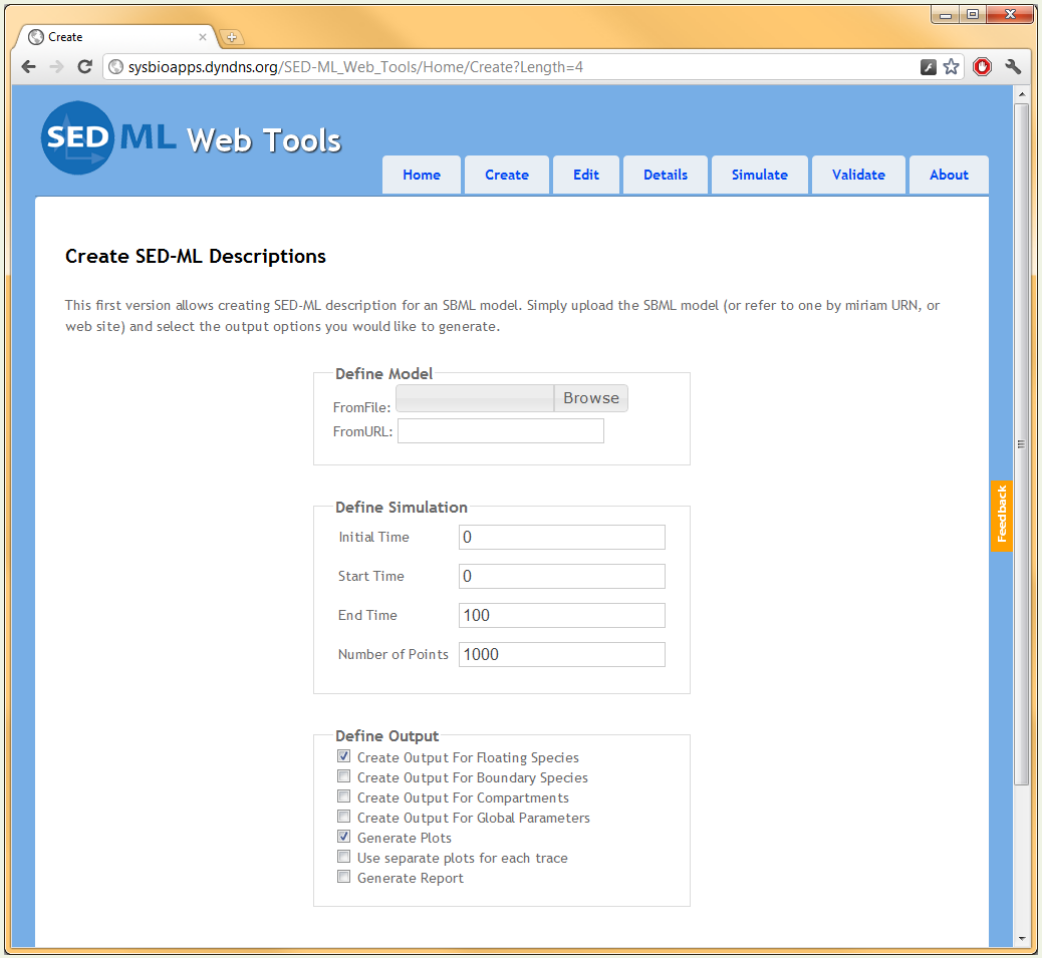
SED-ML WEB TOOLS

SED-ML Web Tools



http://sysbioapps.dyndns.org/SED-ML_Web_Tools

SED-ML Web Tools - Create



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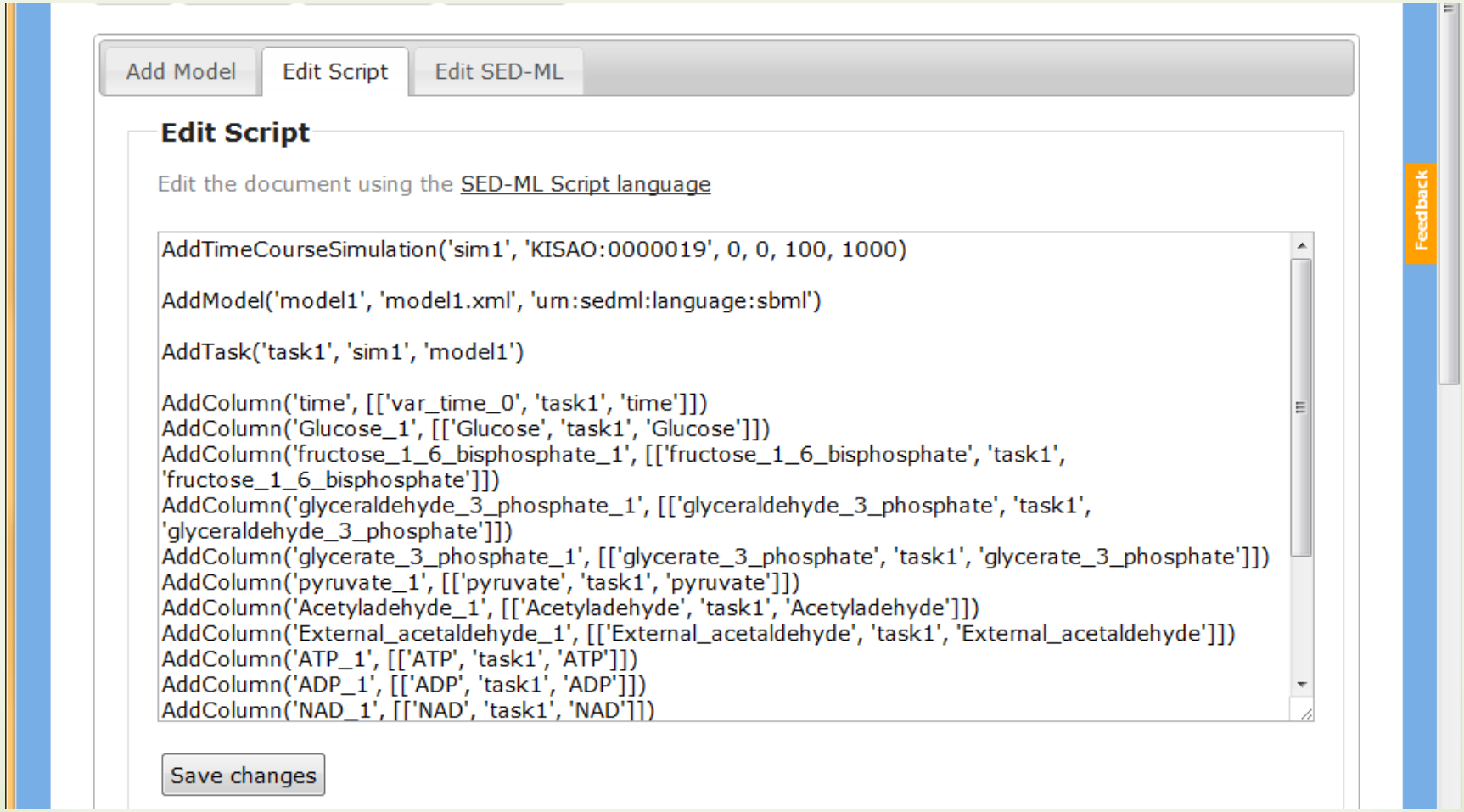
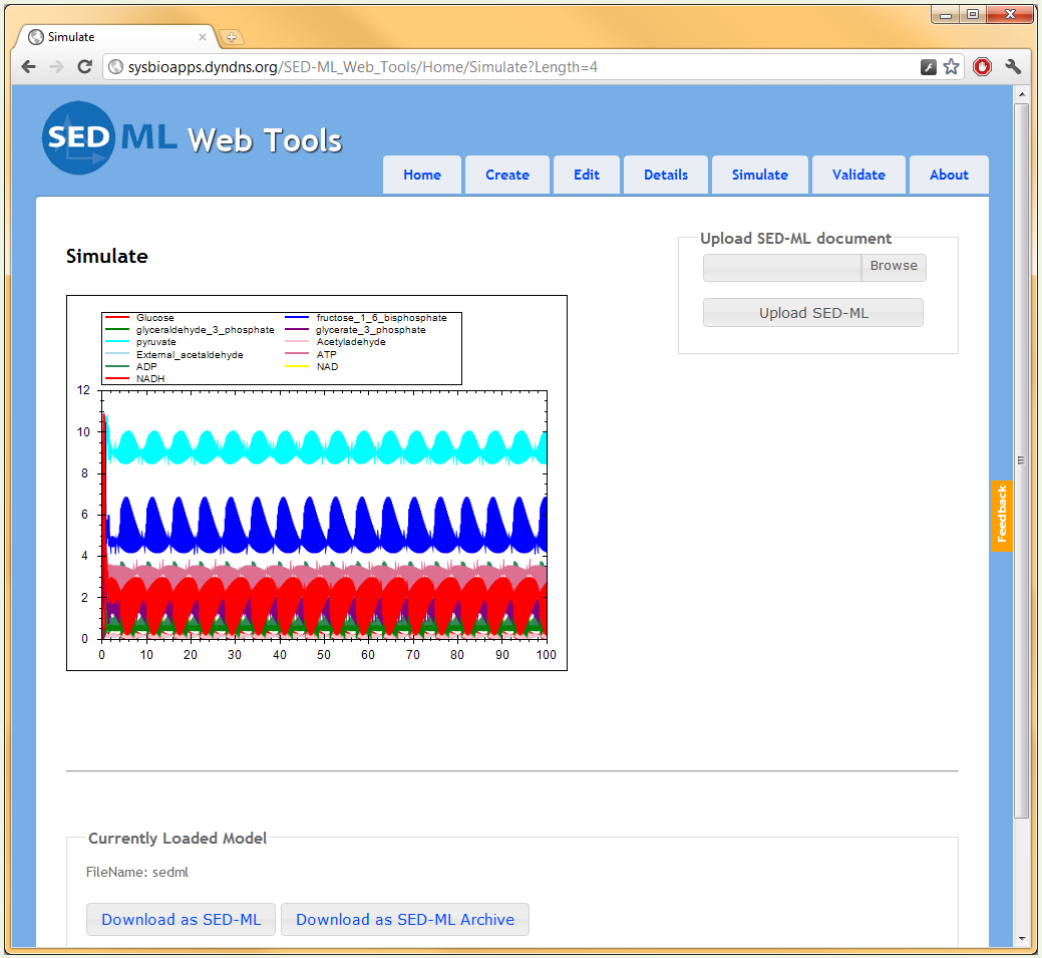
SED-ML Web Tools - Edit



http://sysbioapps.dyndns.org/SED-ML_Web_Tools

SED-ML Web Tools - Simulate



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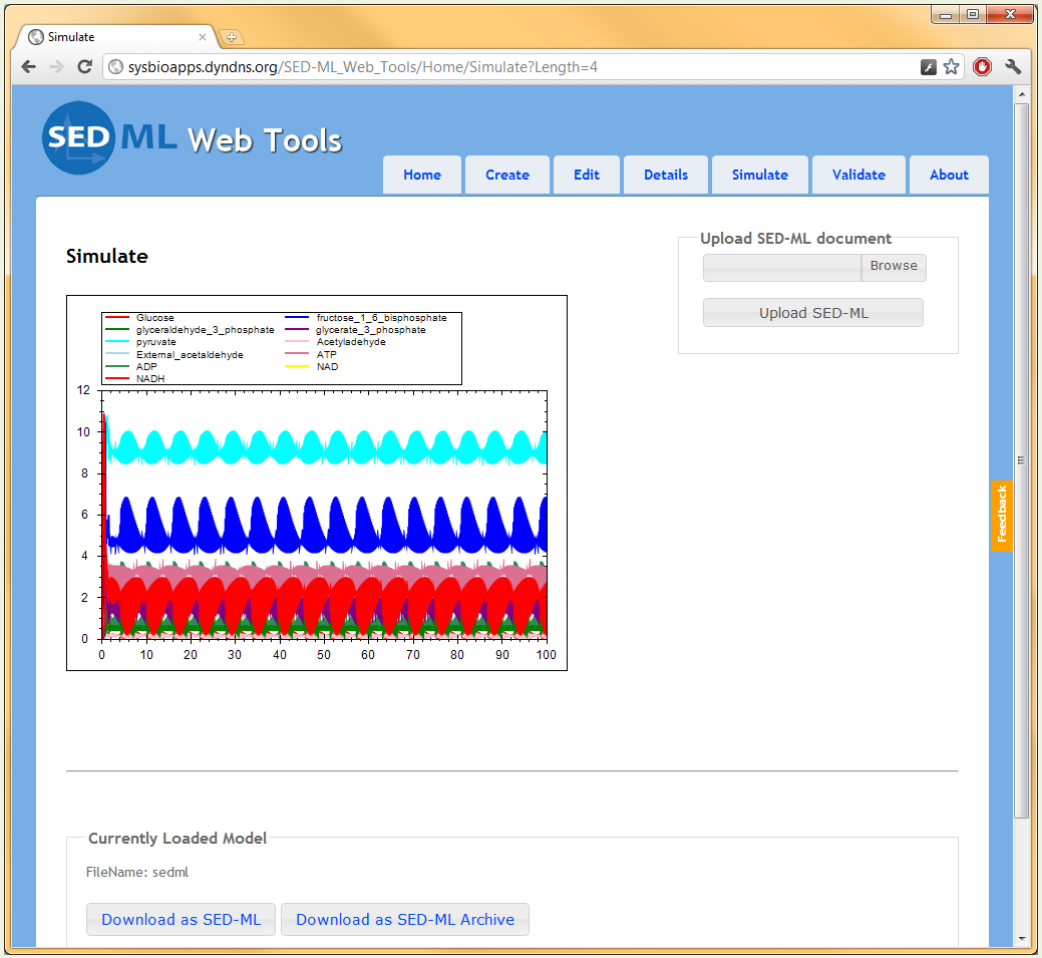
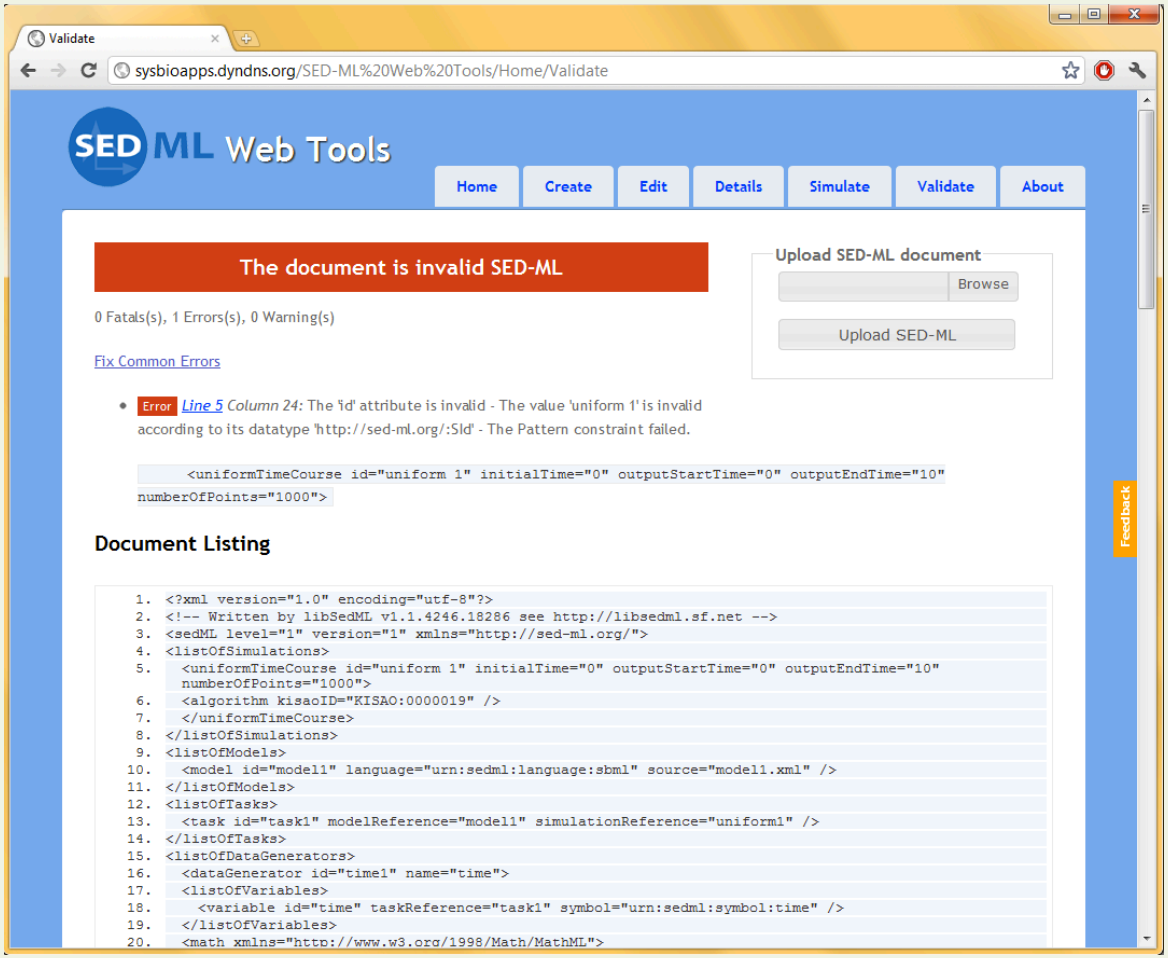
SED-ML Web Tools - Simulate



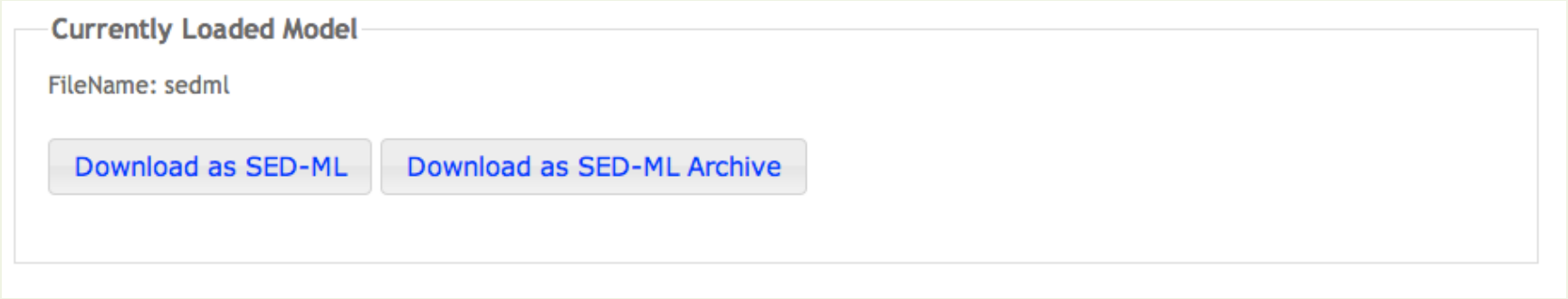
http://sysbioapps.dyndns.org/SED-ML_Web_Tools

SED-ML Web Tools - Validate



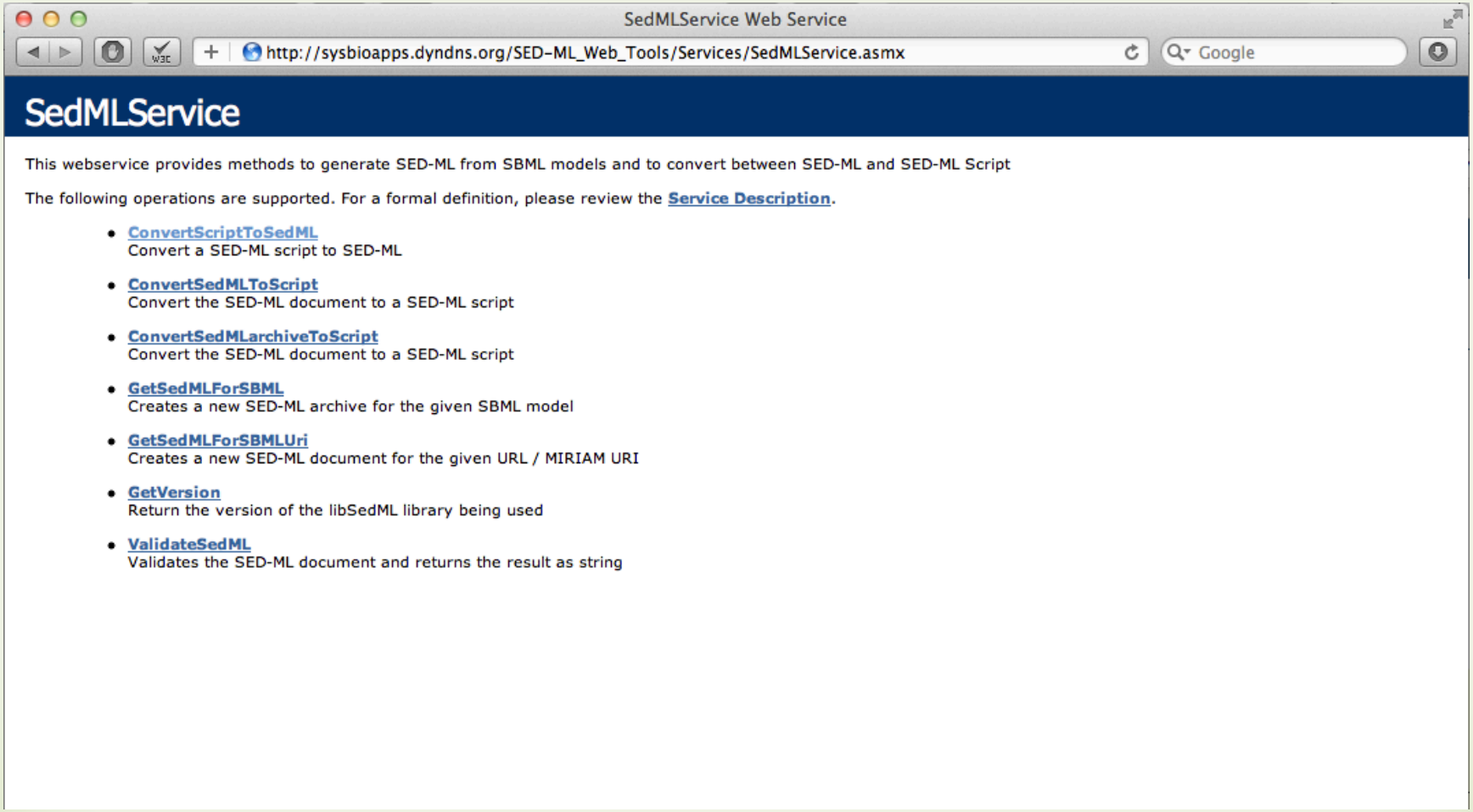
http://sysbioapps.dyndns.org/SED-ML_Web_Tools

SED-ML Web Tools - Download



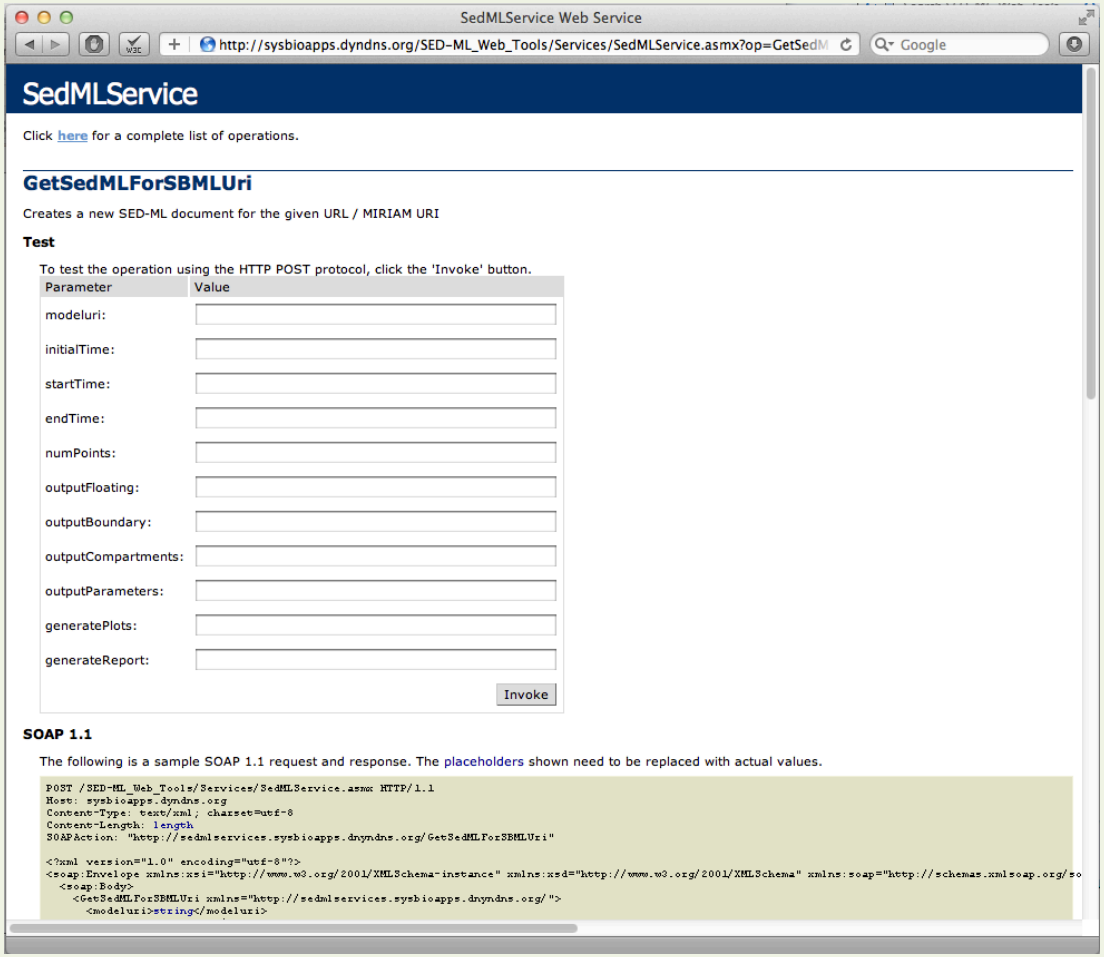
http://sysbioapps.dyndns.org/SED-ML_Web_Tools

Web Service (!)



http://sysbioapps.dyndns.org/SED-ML_Web_Tools/Services/SedMLService.asmx

Web Service – Create From SBML



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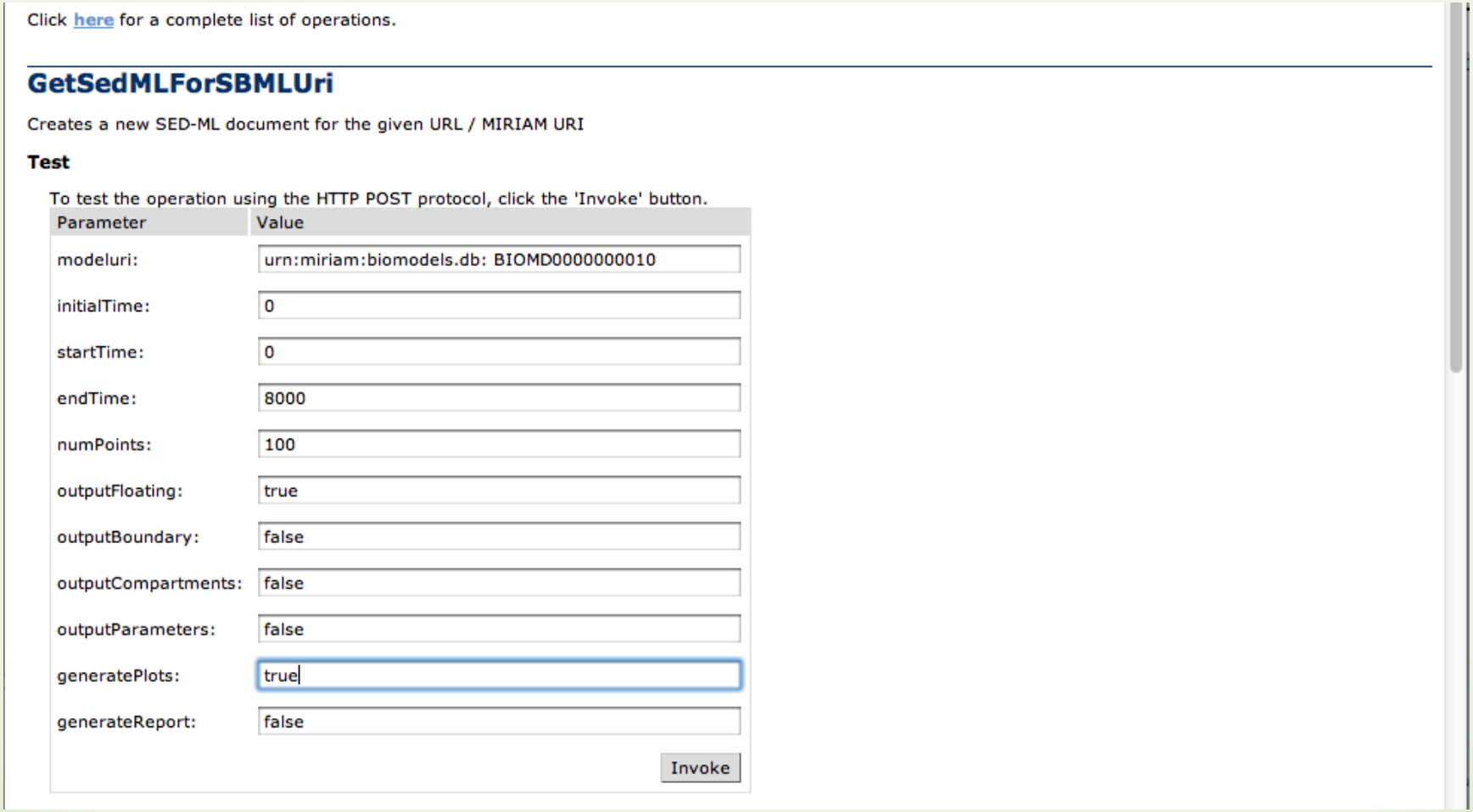
Web Service – Create From SBML



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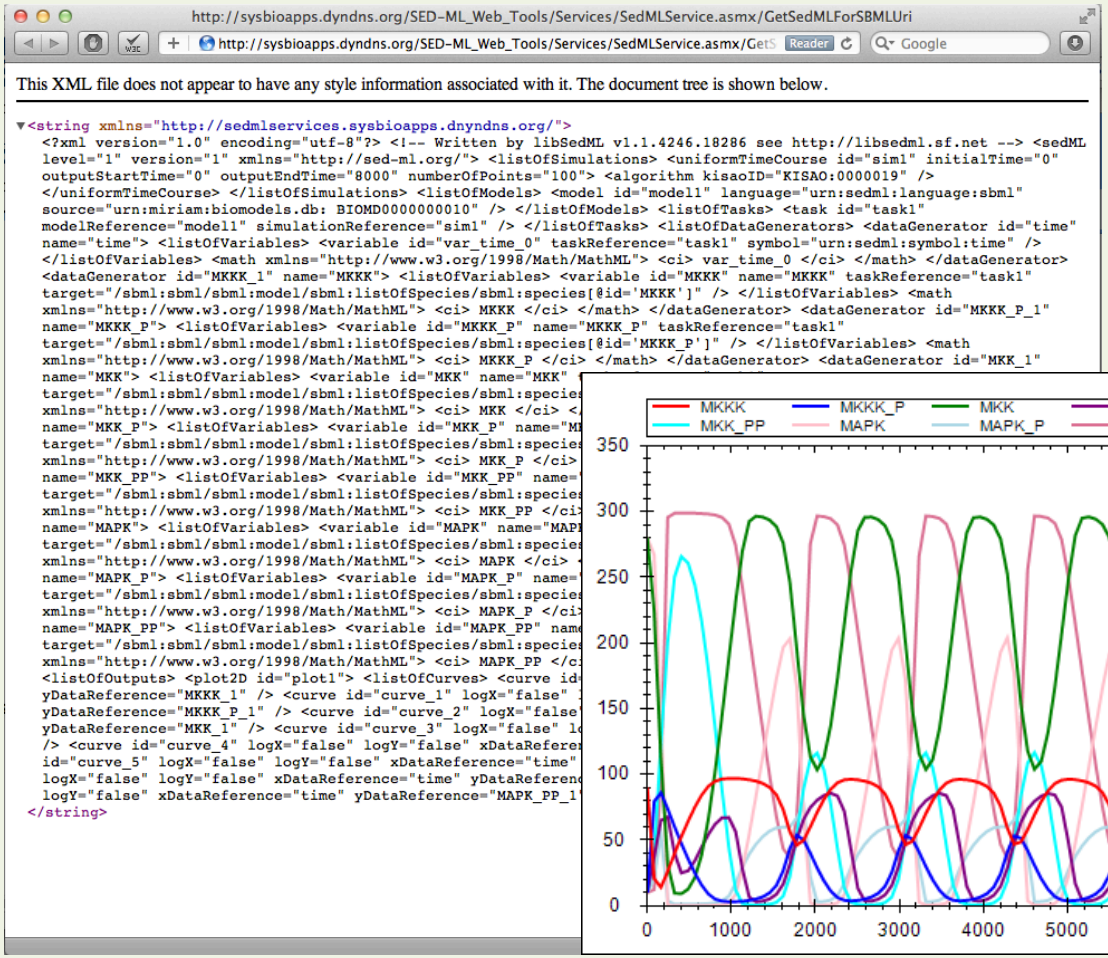
Web Service – Create From SBML



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Future Directions

- More simulation types (Nested Simulation Task)
- Referencing data (See the SBRML Interop talk after the break!)

- Support for YOUR model format
  - If you supply the simulator, I'll support it ☺

Acknowledgements

- David Nickerson
- Herbert M. Sauro

Thank You!

- Blog: http://frank-fbergmann.blogspot.com

- Web:
  - http://sysbioapps.dyndns.org/SED-ML_Web_Tools
  - http://sysbioapps.dyndns.org