OpenCell

Status and plans

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VARIOUS VERSIONS OF OPENCELL

- Several versions of OpenCell (formerly known as PCEnv) over the past few years. Some key features include:
  - **PCEnv 0.4:** graphical rendering of mathematics, units, etc., and C code export;

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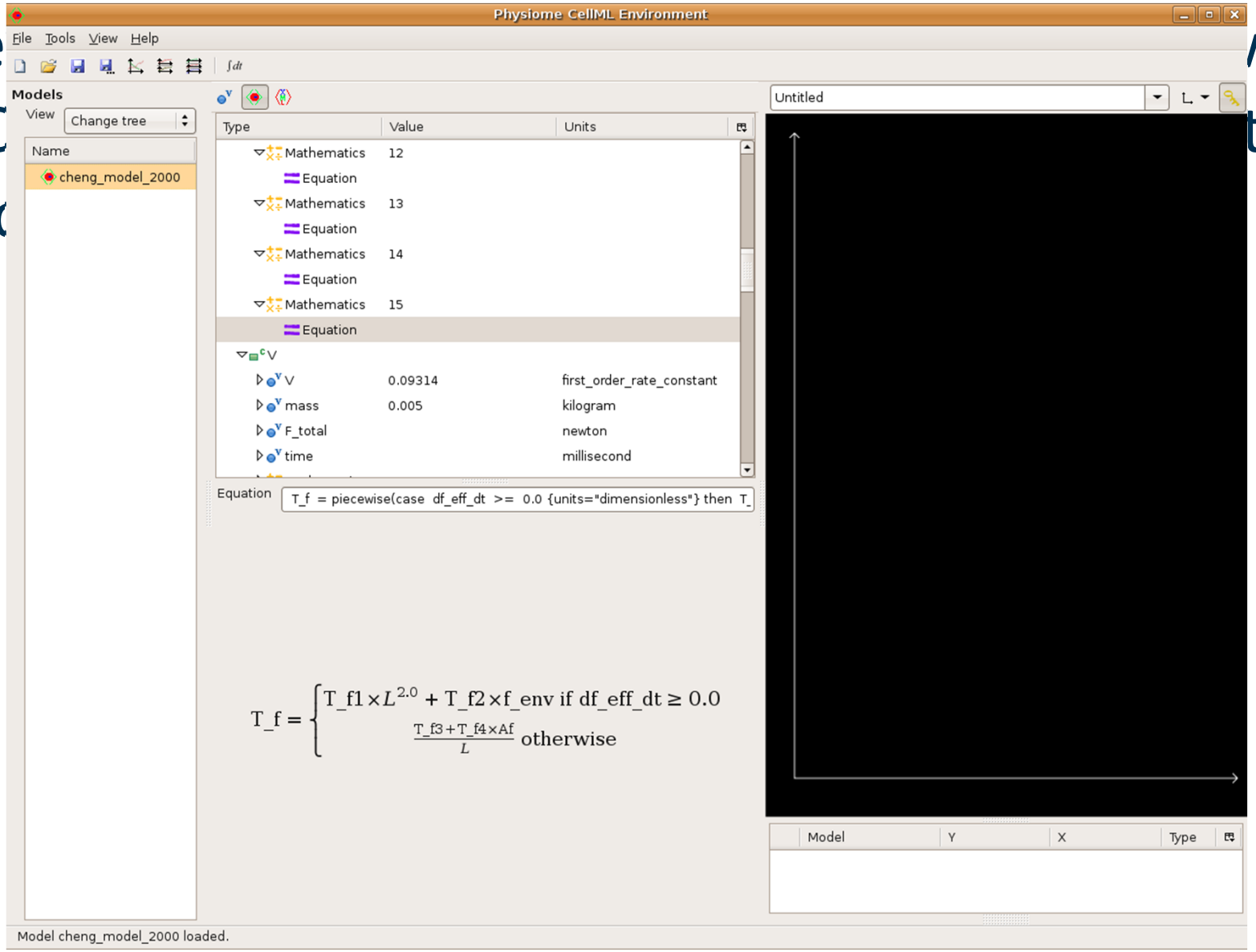

$$T\_f = \begin{cases} T\_f1 \times L^{2.0} + T\_f2 \times f\_env \text{ if } df\_eff\_dt \geq 0.0 \\ \frac{T\_f3 + T\_f4 \times Af}{L} \text{ otherwise} \end{cases}$$

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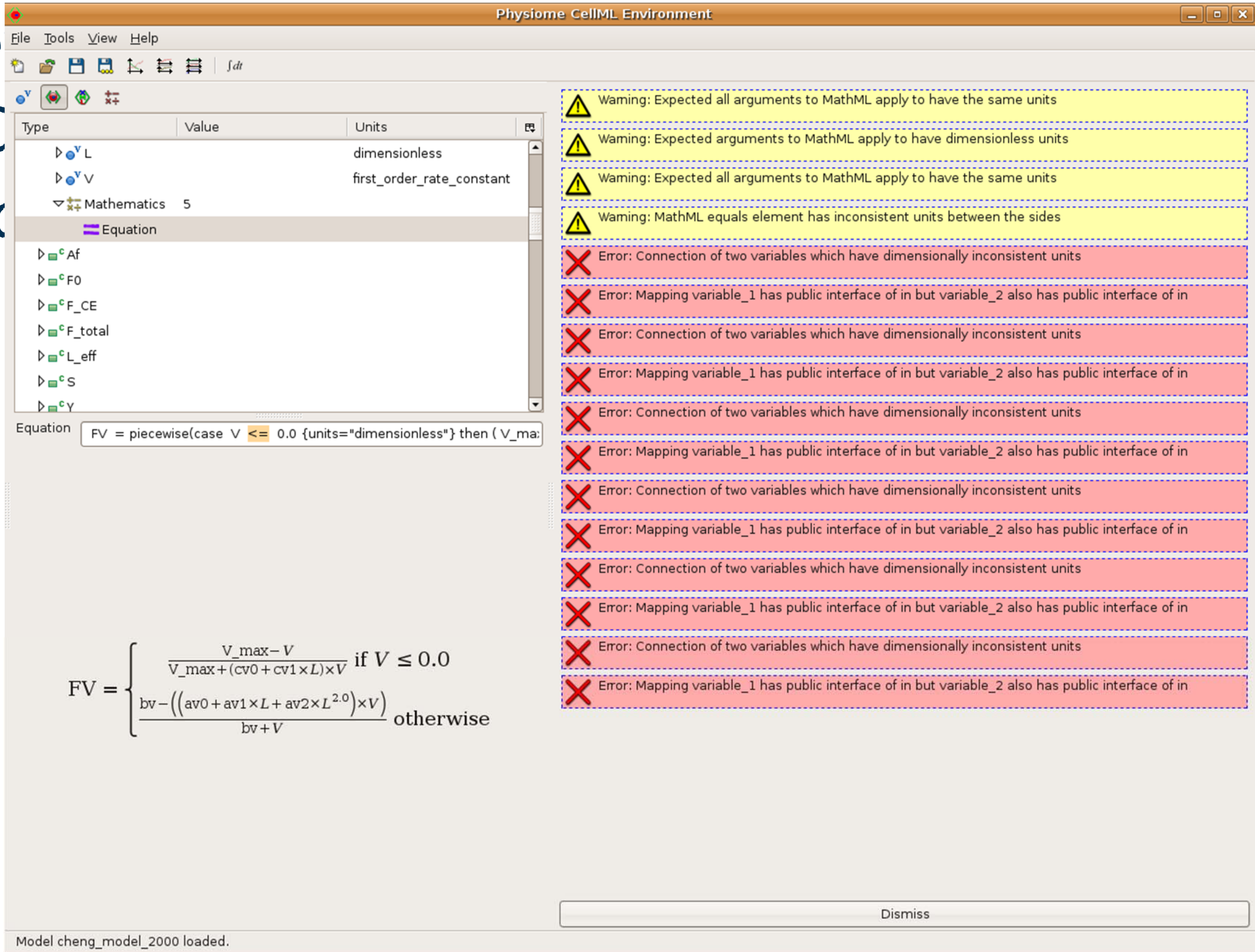

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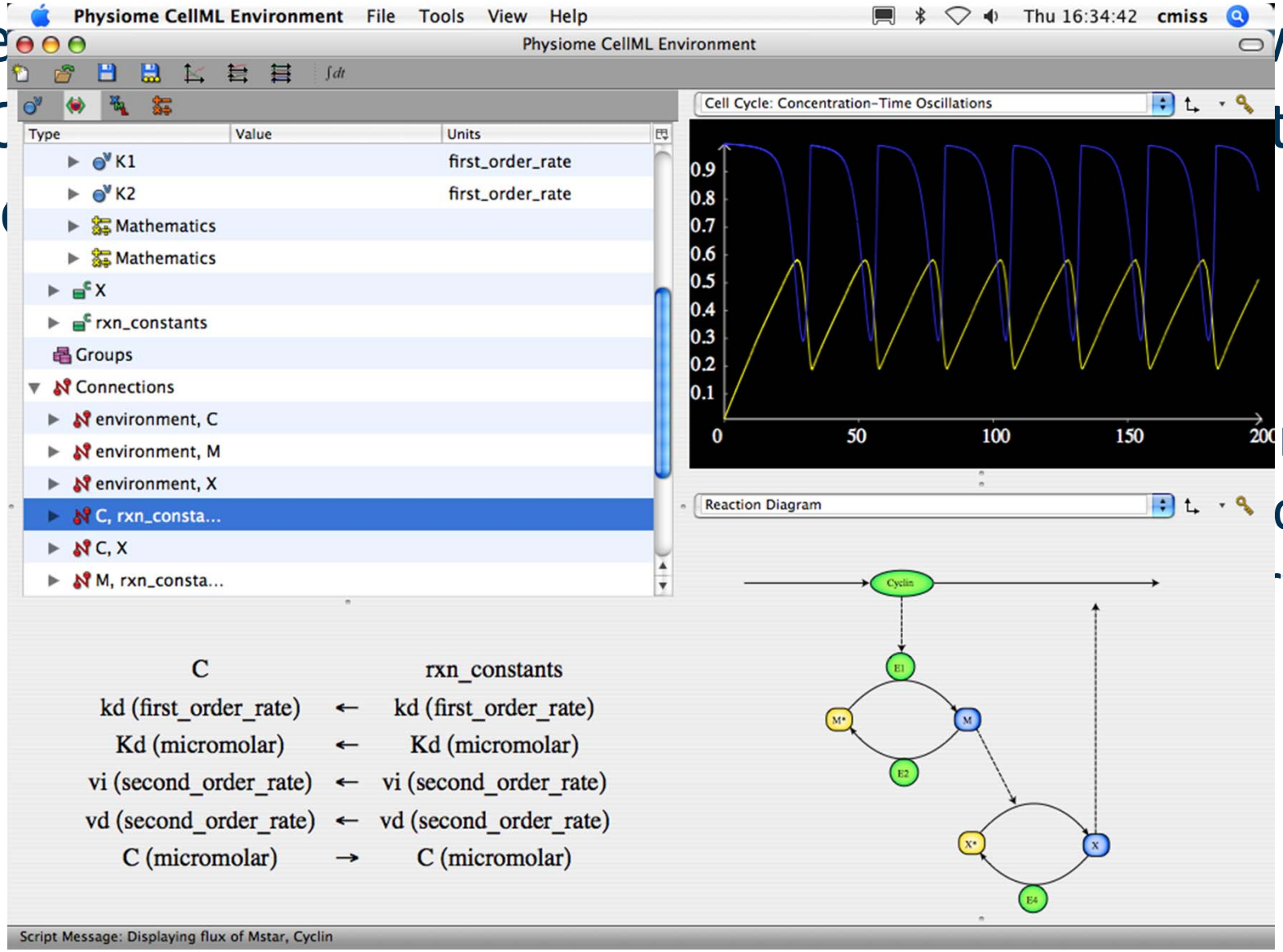

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  - **OpenCell 0.7:** support for drag and drop editing of connections and graph traces, multiline math input, experimental Fortran 77 code export; and
  - **OpenCell 0.8RC1:** support for IDA as an integrator, copy and paste of parts of models from the tree views.

EDITING IN OPENCELL

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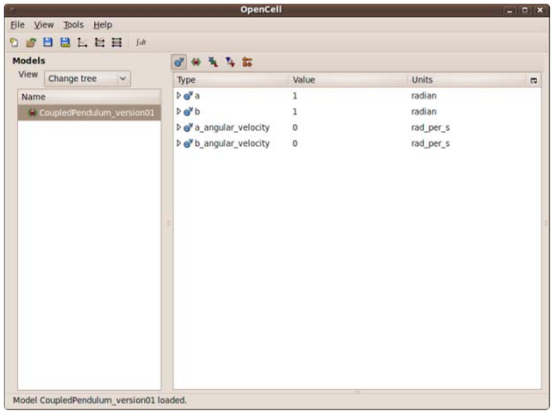
  - The initial conditions/constants view;



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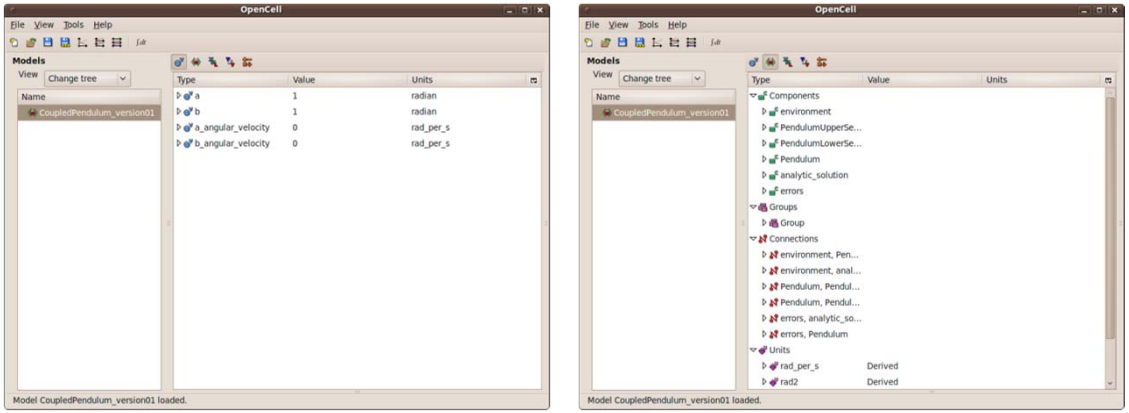

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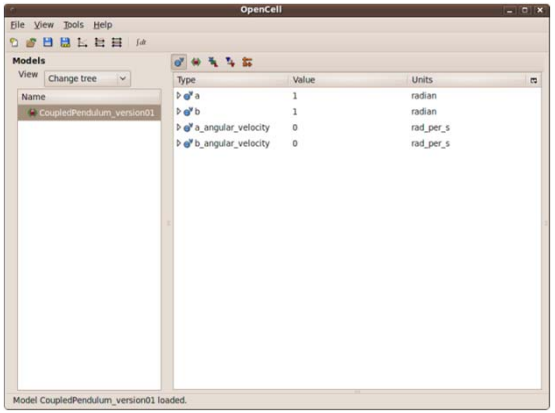

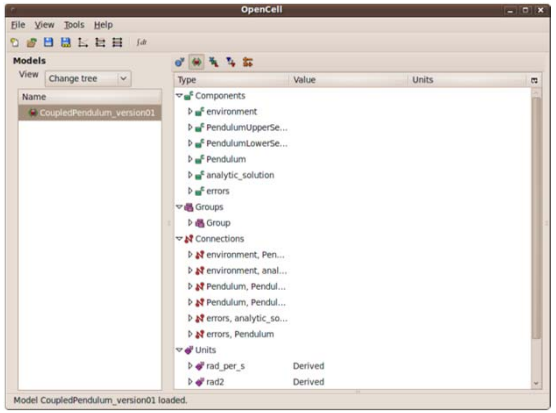

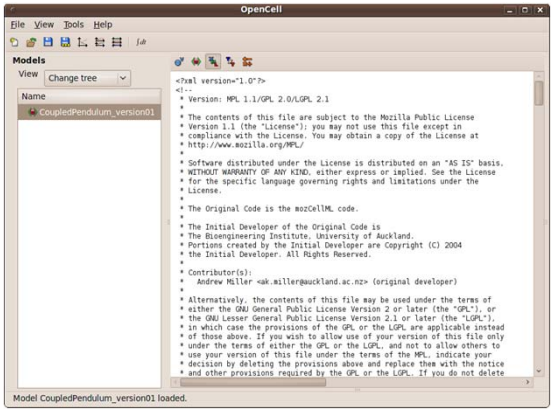

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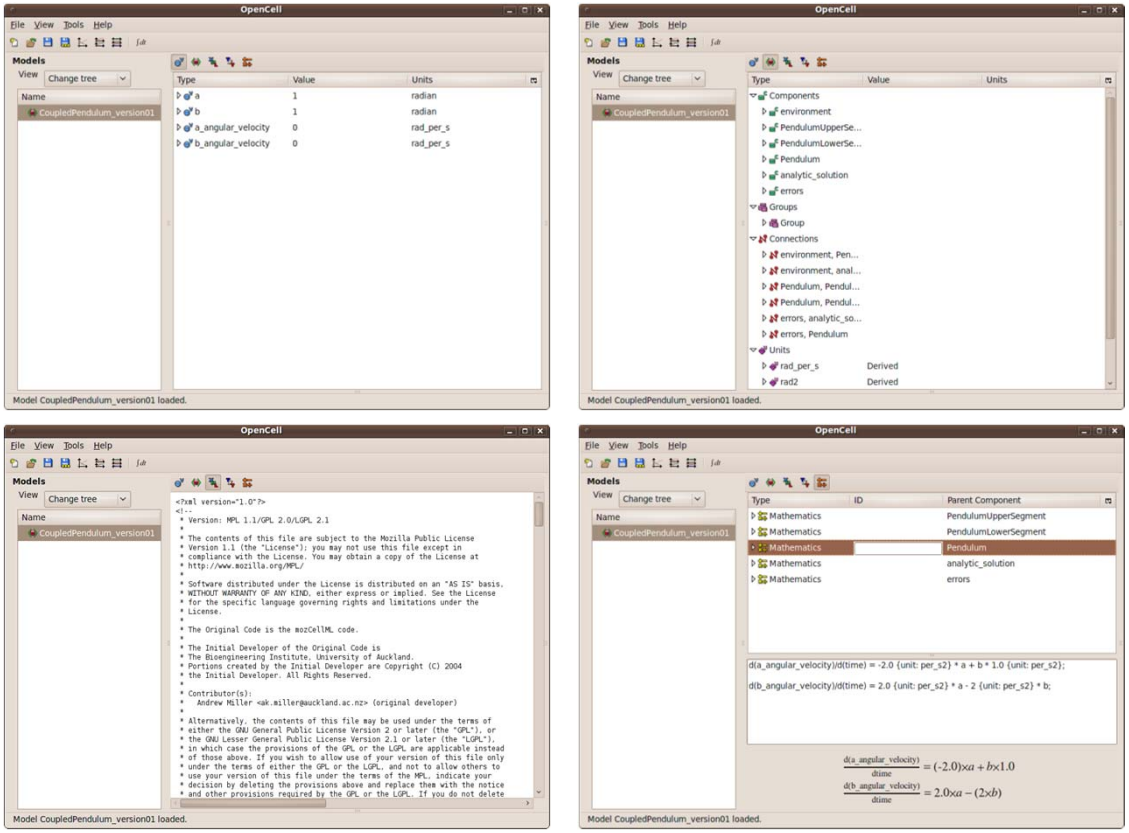

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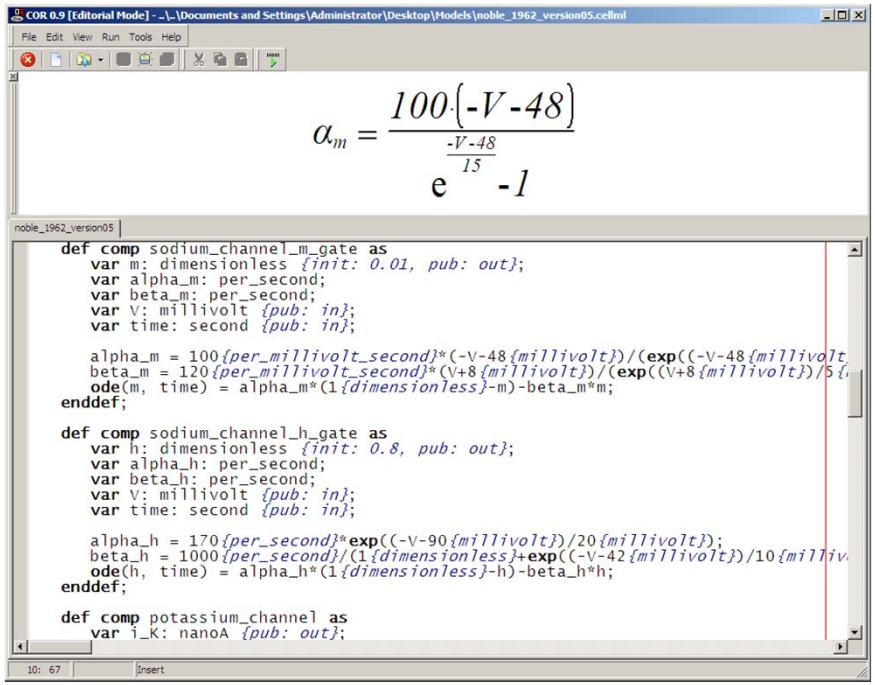
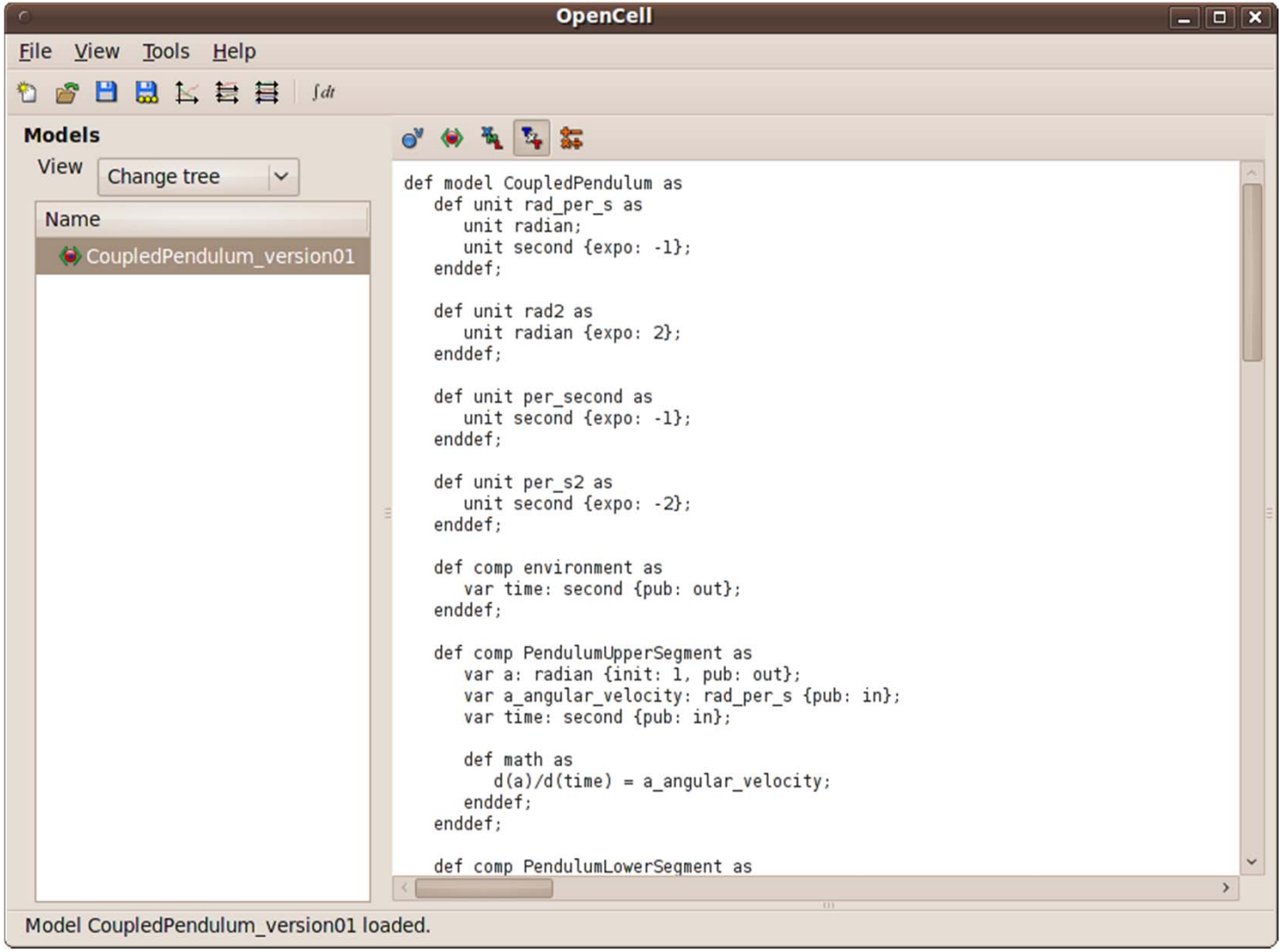
- Editing of CellML files can be done using:
  - The initial conditions/constants view;
  - The complete model structure view;
  - The XML view; or
  - The equations view.
- However, this may not always be the fastest and/or most obvious way to edit a CellML file.
- Another possible approach is that of COR which relies on a proprietary language.



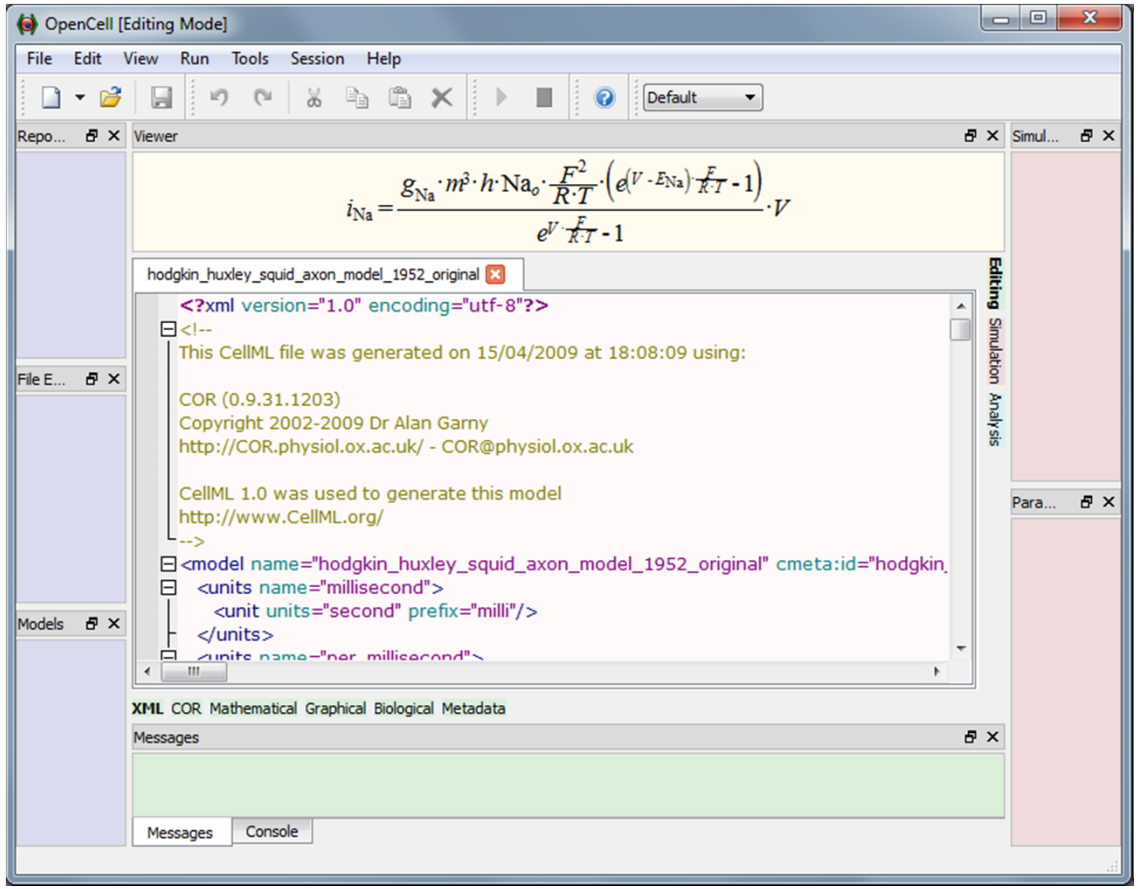
COR-Like View in OpenCell

- Not 100% compatible with COR, but CellML 1.1 capable.



PLAN FOR A NEW OPENCELL

- OpenCell currently relies on the Mozilla XULRunner Framework, making it difficult to develop OpenCell further.
- New OpenCell to be developed using Qt/C++.



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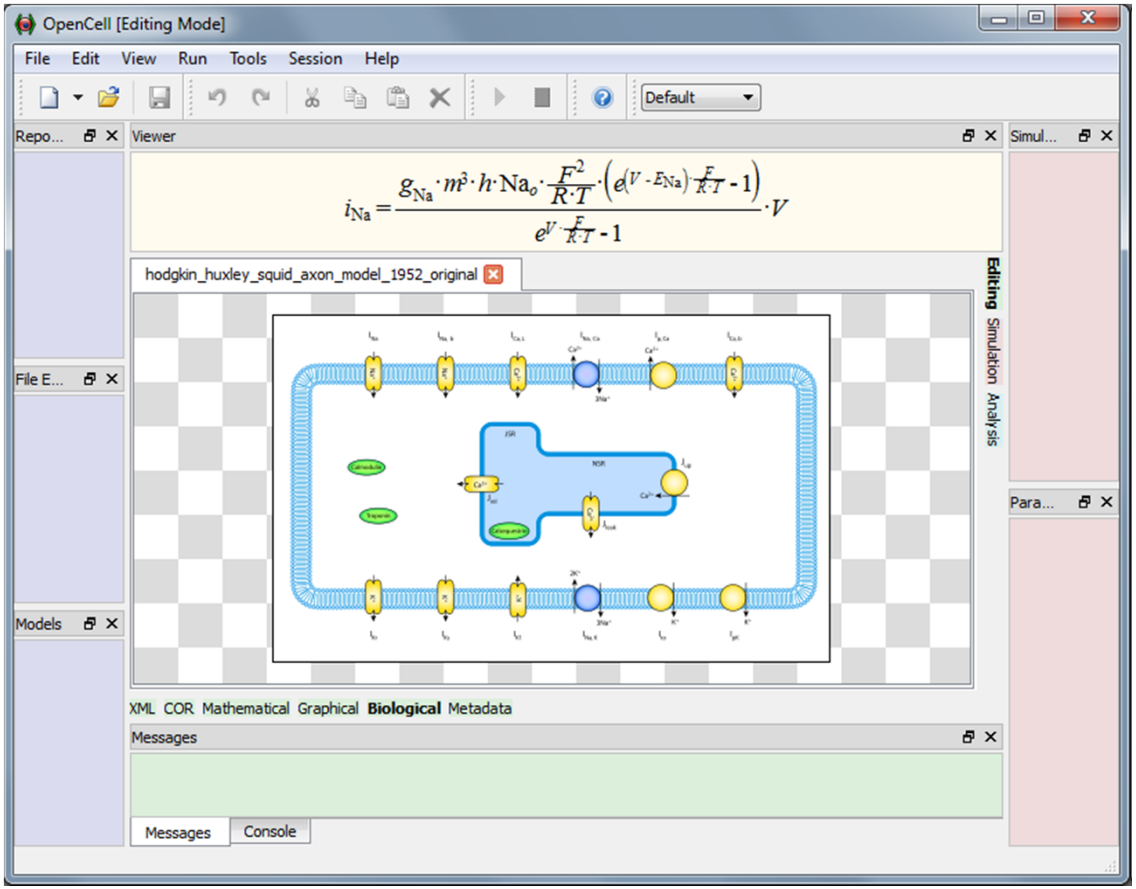

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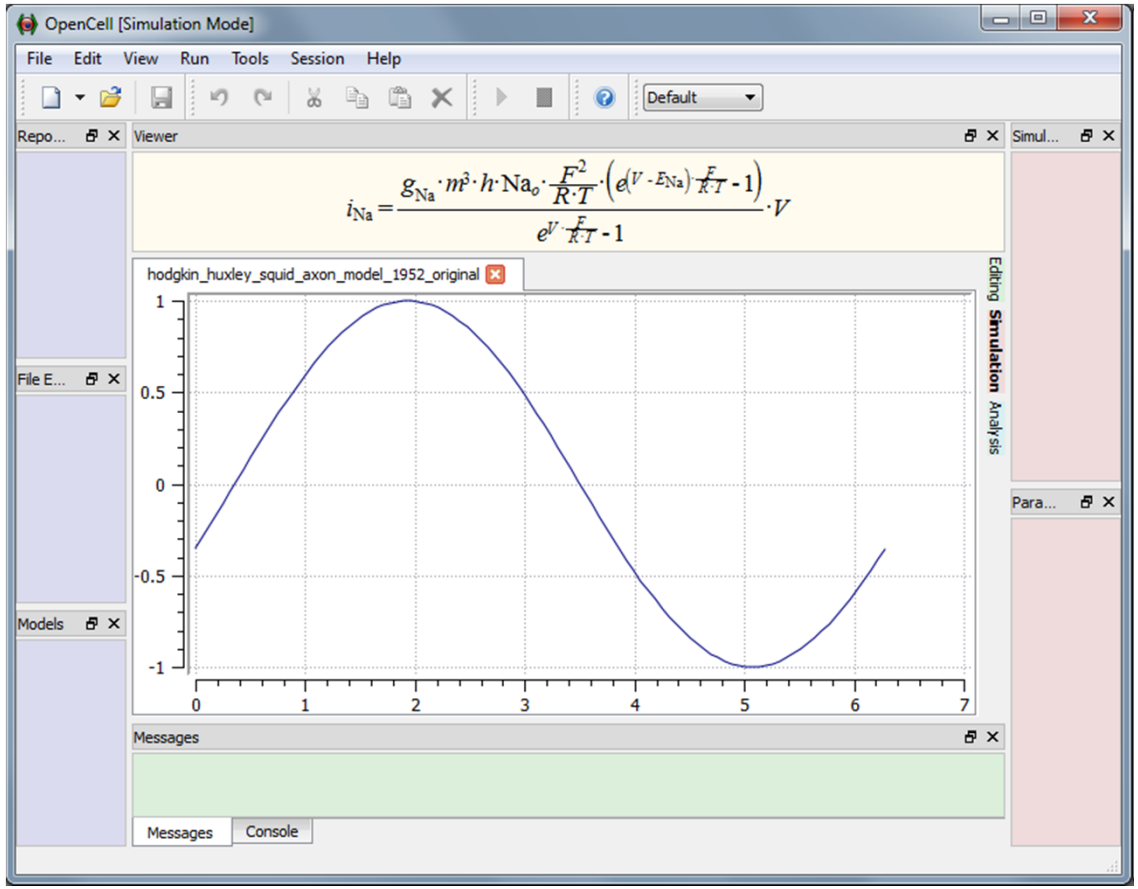

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- OpenCell currently relies on the Mozilla XULRunner Framework, making it difficult to develop OpenCell further.
- New OpenCell to be developed using Qt/C++.
- Aiming at a working version by the end of next year.
- Initial focus will be on combining the current versions of OpenCell and COR.
- Next, the focus will be on metadata, ontologies, etc.

CONCLUSION

- OpenCell 0.8 is soon to be released (OpenCell 0.8RC1 is currently available for download).
- There might be an OpenCell 0.9 (with the COR-like view).
- OpenCell, as we know it, is soon to enter maintenance mode.
- A new OpenCell is to be developed (led by Oxford), using the existing CellML 1.0/1.1 API (led by Auckland).
- A first public release is expected by the end of next year.

www.opencell.org

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