

VCML and SED-ML

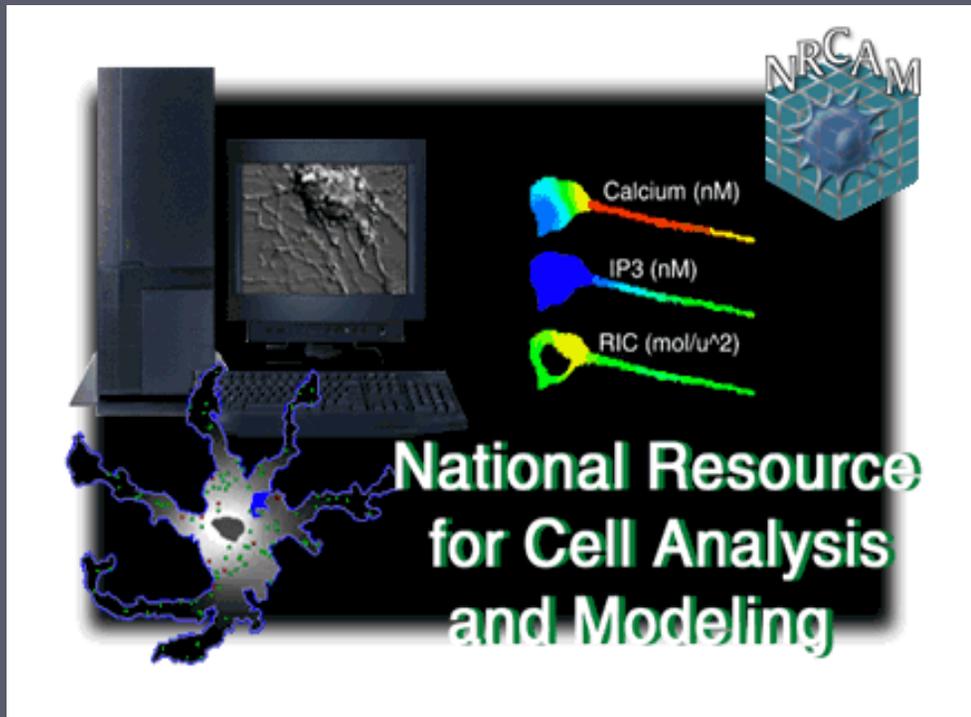
– Specific and generic implementation –

<http://vcell.org>

The VCell Team

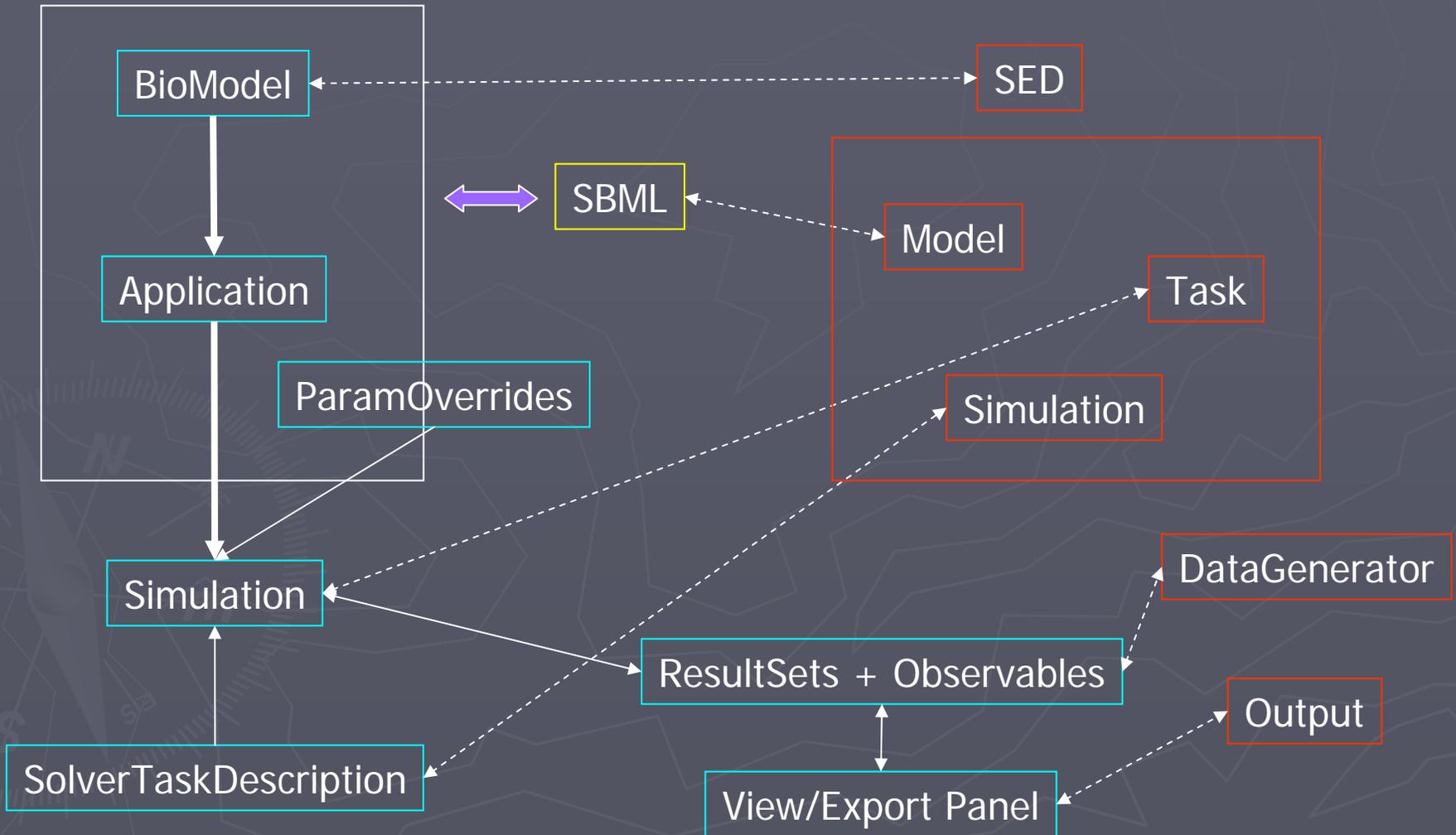
Les Loew Ion Moraru
Jim Schaff Boris Slepchenko

Michael Blinov
John Carson
Yung-Sze Choi
Ann Cowan
Jeff Dutton
Fei Gao
Pavel Kraikiwski
Susan Krueger
Anu Lakshminarayana
Frank Morgan
Igor Novak
Diana Resasco
Oliver Ruebenacker
Dan Vasilescu
Li Ye



Rashad Badrawi
Michael Levin
Daniel Lucio
Dong-Guk Shin
John Wagner
Elizabeth Weitzke
Nick Hernjak

VCML – SBML – SEDML Mappings



SED-ML – what to implement?

- ▶ DOM functionality (libSEDML?)
 - Read XML
 - Validate
 - Edit/modify objects
 - Write XML
- ▶ Run functionality
 - Execute tasks
 - Produce data output
 - Produce graphic output
- ▶ VCell integration
 - “Native” VCell client support
 - VCML internal mappings

SED-ML – what to support?

- ▶ DOM functionality – generic...
 - Validation: **on demand**? live?
 - Editing: add GUI? add scripting support?
- ▶ Run functionality – partially specific...
 - Model languages: **SBML**, VCML, others?
 - Simulators (solvers): **VCell**, Copasi, others?
 - Post-processing: **interpolation**, normalization, other?
 - Plotters: **VCell**, GnuPlot, others?
- ▶ VCell integration – specific...
 - **BioModel** vs. MathModel
 - FieldData, MergeData