

Presentation by Mike Hucka at
SBML Forum 2008,
Göteborg, Sweden,
August 2008

Back to the future: SBML Level 3

Modularizing SBML

◎ The future of SBML

- Major extensions have been requested and are sorely needed
- But SBML is complicated enough
 - Only the largest-scale efforts have implemented most of Level 2

◎ The path forward: modular SBML

- Layer additional language **packages** on top of a **core**
 - Similar to XML: XML is core, then there's XPath, MathML, etc.
- Additional benefits:
 - Can decouple development of individual Level 3 packages
 - Software can recognize & work with packages it needs

Level 3 packages with significant progress

Package label	Description
core	Level 3 core, based on L2v4
multi	Multicomponent species & multiple state attributes
layout	Diagram layout
render	Diagram rendering
qual	Qualitative models
comp	Hierarchical model composition

In need of revision or further development

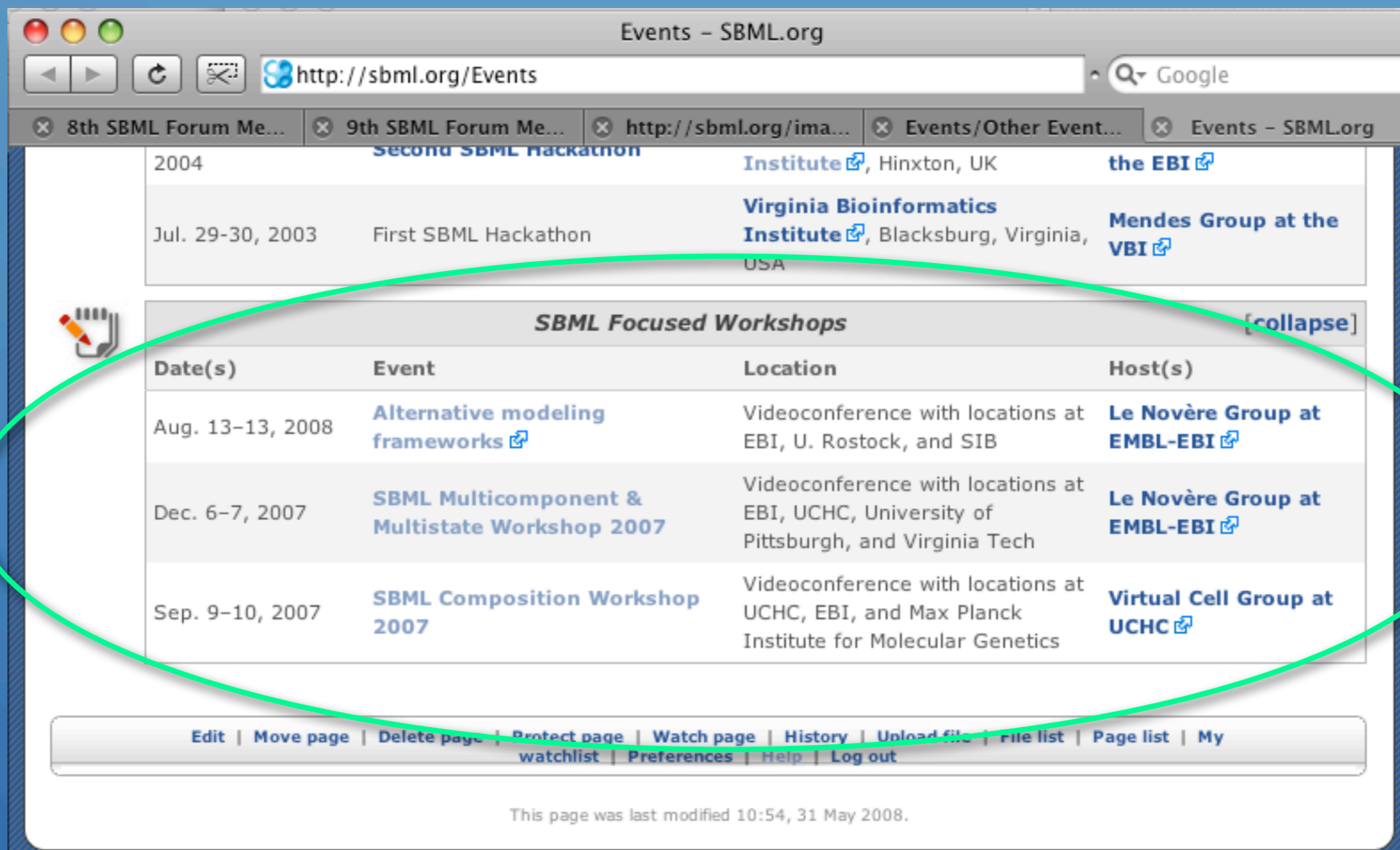
Package label	Description
distrib	Distributions and ranges of values
spatial	Models containing spatial diffusion
geom	Description of 2-D and 3-D spatial geometries
arrays	Arrays and sets of components (e.g., compartments)
dyn	Dynamic structures (creation, destruction)
steady	Steady-state models (e.g., flux-balance analysis)

Development approach

- ◎ Any interested persons can propose the need for a package
 - Detailed proposals are especially welcome
 - Can be made at any time (e.g., by sending to sbml-discuss)
- ◎ Others in community will comment on need & feasibility
 - SBML Editors will tend to analyze relationships to existing capabilities
- ◎ For packages currently being worked on, Editors are doing integration
 - As part of this, we are developing templates & procedures for allowing package proposals in the future to be proposed more formally and developed in more detail in parallel by interested groups
 - LibSBML will support modular package additions

Focused workshops

- Progress difficult in large meetings or without focused attention
- Thus, new approach: focused topic development workshops



The screenshot shows a web browser window titled "Events - SBML.org" with the URL "http://sbml.org/Events". The page displays a list of events, with a section titled "SBML Focused Workshops" highlighted by a red oval. This section contains a table with the following data:

Date(s)	Event	Location	Host(s)
Aug. 13-13, 2008	Alternative modeling frameworks	Videoconference with locations at EBI, U. Rostock, and SIB	Le Novère Group at EMBL-EBI
Dec. 6-7, 2007	SBML Multicomponent & Multistate Workshop 2007	Videoconference with locations at EBI, UCHC, University of Pittsburgh, and Virginia Tech	Le Novère Group at EMBL-EBI
Sep. 9-10, 2007	SBML Composition Workshop 2007	Videoconference with locations at UCHC, EBI, and Max Planck Institute for Molecular Genetics	Virtual Cell Group at UCHC

Below the table, there is a navigation bar with links: Edit | Move page | Delete page | Protect page | Watch page | History | Upload file | File list | Page list | My watchlist | Preferences | Help | Log out. At the bottom, it states: "This page was last modified 10:54, 31 May 2008."