

Towards a New Process for SBML Development

What's Wrong with the Current Process?

- **Bottleneck**
- **Lack of explicit process definition**
 - How are changes decided upon?
 - How and when are changes made?
 - Need transparency, accountability, and greater community involvement
- **Haphazard management of errata**
 - No decision or voting process
 - No definition of impact of errata on current spec.
- **Lack of timely responsiveness**

Past Attempts at Revision

- Ft. Lauderdale 2003:
 - More W3C-like
 - Working Groups, charters, processes, etc.
- Result?
 - Fffzzzzt.

Unfortunately, It *Must* Change

- Community has grown even larger
- More people than ever rely on SBML
 - ... including commercial efforts and journals
- SBML has grown more complex
- Current SBML editors are spread even thinner
- Bottom line:
 - Current process is no longer sustainable
 - SBML will suffer unless changes are made

Any Conclusions from Previous Attempt?

- Don't change everything
 - Current approach probably has *some* merit
- Don't propose a heavy organization
 - E.g., idea of working groups nice, but may require investment of effort higher than most people's threshold
- Keep small number of ultimate editors
 - Views of individuals in community often divergent => need someone(s) who pull things together and come to *some* decision

Proposed Procedure

- **General overview of how to proceed:**
 - **Presentation of restructuring proposal**
 - **Formal proposal written and sent to sbml-discuss**
 - **Discussions**
 - **Final electronic vote in November**
 - **Installment in December**

Overview of New Proposal

- **3 stratifications:**
 - **SBML Forum**
 - **SBML Architectural Board**
 - **SBML Editors**
- **Revised roles for SBML Team**
- **New mailing list, new procedures**

New mailing list: sbml-announce

- **Broadcast only**
- **Announcements of:**
 - **Publications of errata**
 - **Notifications of upcoming votes**
 - **Notifications of voting results**
 - **Announcements of face-to-face meetings**
- **Everyone would be strongly urged to subscribe to sbml-announce**
 - **Some current members of sbml-discuss may opt to subscribe only to sbml-announce**

“SBML Forum”

- Call it a membership
- Only requirement for membership: subscription to sbml-announce
 - Membership in the SBML Forum is defined exactly by membership on sbml-announce
- Members *encouraged* to subscribe to sbml-discuss
- An organization or institution may have any number of members in the SBML Forum
- No time limits on membership

SBML Architectural Board

- Comprised of subset of members of SBML Forum
- Principal role: Create & evaluate *formal proposals for changes to the SBML language*
 - Take into consideration requests from the SBML Forum, as well as formulate their own proposals
- Proposals may be initiated by any member
- There will be a process for proposals:
 - Template for creating them (think IETF RFC's)
 - Voting procedure + timeline
- Votes will be electronic, archived & linked to errata and sections of the SBML specification

More on the Architectural Board

- Any member of the SBML Forum can chose to be on the Architectural Board, but:
 - Members *must* be on sbml-discuss
 - Members *must* vote. Missing 2 votes in a row is grounds for removal from A.B.
 - Implies willingness to expend time and intellectual energy evaluating proposals & issues
 - Members are expected to make a good-faith effort to attend face-to-face meetings
 - No more than N individuals from the same organization (N = 4? 3? 5?)

“SBML Editors”

- Elected from members of the SBML A.B.
- Principal role: organize the development of, and write the final versions of, SBML specifications and errata
 - They would be the specification’s authors
- Take input from SBML Architectural Board
 - Can make their own proposals since they are members of the A.B. themselves
- Plan & schedule voting on each proposal
- Periodically reconcile differences and write new SBML specifications

More on the SBML Editors

- Total number: 5
- Term limit: 3 years
 - Special case: Hucka & Finney grandfathered for 2 years (so their terms would end in 2007).
- An Editor can serve more than one term, but not *consecutive* terms
 - If can't serve full term, special election held
- “Good behavior” guidelines to prevent obstructionist behavior

Voting on SBML Editors

- Have call for candidates, issued ahead of annual SBML workshops
 - At SBML workshops, candidates may introduce themselves and discuss their experiences, qualifications and desires to be SBML Editors
 - Those nominated by others must accept nomination
- Elected by electronic vote by the SBML A.B.
- Voting takes place electronically after meeting
 - Anonymous voting (but verified against A.B. membership)

Role of the SBML Team

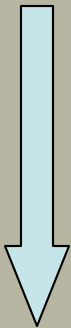
- Responsible for maintaining sbml.org, mailing lists, surveymonkey, and other resources
- Curates web pages for issue tracking, errata, proposals, voting records, other documents
- Organizes SBML Forums and Hackathons
- Seeks funding for resources and activities
- *May be involved in other activities, but these are not institutionalized. E.g. of current ones:*
 - libSBML
 - SBML Test Suites
 - SBMLToolbox
 - Translation software
 - MathSBML
 - Online facilities at sbml.org

Funding

- Likely need to move to volunteer Editors
 - Hence the suggestion to have 5 instead of 3
- SBML Team would be responsible only for funding resources and personnel for resources
- We *may* be able to find funding for continued standardization activity post-2007
 - Possible source: more NIH, or joint DOE-NIH
 - Can't count on it right now

SBML Errata

- SBML Levels introduce major architectural changes
- SBML Versions introduce features or changes within Levels
- SBML Level+Version inevitably need corrections
- Different classes of changes/implications:
 - Formatting changes that don't change content
 - Changes to content that don't affect conformance
 - Changes that may affect conformance but don't add new features
- Discovered over time



Handling Errata: SBML Issues

- Have a process for introducing errata
 - Formal proposal by SBML A.B.
 - Discussion on sbml-discuss
 - Voted on by SBML A.B.
 - Announced on sbml-announce
- Acceptance of an errata results in introduction of new **Issue** of a given SBML Level+Version
 - E.g., SBML Level 2 Version 2 Issue 3