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?**
  - Fffzzzzzt.
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
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
Any member of the SBML Forum can choose 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
  - SBMLToolbox
  - MathSBML
  - SBML Test Suites
  - Translation software
  - 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