SBOL Meetup

Date: June 5th, 2012

Time: 9:00 am - 6:00 pm

Location: [Marriot Courtyard in Downtown San Francisco](http://www.marriott.com/hotels/travel/sfocd-courtyard-san-francisco-downtown/)

Room: **SOMA2**

**Attendees**:

JC Anderson, Swapnil Bhatia, Joanna Chen, Douglas Densmore, Michal Galdzicki, Raik Gruenberg, Jennifer Hallinan, Nathan J. Hillson, Cassie Huang, Allan Kuchinsky, Florencio Mazzoldi, Ernst Oberortner, Sunny Park, Darren Platt, Matthew Pocock, Cesar Rodriguez, Nicholas Roehner, Almer van der Sloot, Anil Wipat

**Remote Attendees**:

Aaron Adler, Jacob Beal, Jeffrey Johnson, Chris Myers, Umesh P, Hector Plahar, Mandy Wilson

**Acknowledgements:**

* Remote connection is provided by the [Virginia Bioinformatics Institute](http://www.vbi.vt.edu/)
  + AdobeConnect for presentation screen sharing
  + Vita Card for conference call
* Funding: [IWBDA](http://iwbda2012.csb.pitt.edu/mediawiki/index.php/IWBDA:2012) (and NSF)
* Projector is provided by [Autodesk](http://usa.autodesk.com/)

**Agenda:**

1. 9:00 am - **Welcome** 
   1. Presenter: Ernst
      1. Organization of materials for the workshop
      2. Present (and eventually edit) the Agenda
2. 9:15 am - **SBOL in Action** [10 min. live demo + 5 min. discussion each]
   1. Demonstrations [Session Chair: Raik]
      1. Michal Galdzicki
         1. Converter for the iGEM Registry - Provide information from a parts registry in SBOL RDF/XML format
         2. Distributed Repositories
            1. WikiDust and Magpie
      2. Nicholas Roehner
         1. SBOL and SBML
         2. Tool: iBioSim
      3. Jen
         1. Newcastle’s Parts Repository
      4. Matthew
         1. SBOL Stack
      5. Cesar
         1. Towards SBOL XML Compliance in a Commercial Tool
         2. Tool: Genome Compiler
3. 10:15 am - **Break**
4. 10:30 am - **Extension Sessions [10 min. presentation + 5 min. discussion each]**

[Session Chair: Darren Platt]

* 1. SBOL Serialization [Michal]
     1. Integrated XML and RDF combined
     2. Experience
  2. SBOL Visual [Aaron/Cesar]
     1. Quick Overview of the Temme paper
        1. Discuss pros and cons
        2. What’s next?
     2. Process for approving new and retiring old symbols
  3. SBOL Modeling [Nicholas / Neil]
     1. iBioSim / MoSeC
     2. Discuss: approaches to cross-annotating SBOL and SBML models
  4. SBOL Performance [Nicholas / Neil]
     1. Need to discuss what performance information is needed
  5. SBOL Script [Cesar & Ernst]
     1. Needed syntax, vocabulary, and grammar
  6. New Extension Idea [Michal]
     1. Tracking Sequence Verification Results
  7. Protein (& Chassis) Extension [Raik]
     1. Capture Amino Acid sequences and codon optimization

1. ~12:30 pm - **Working Lunch**
2. 1:00 pm - **Brainstorming -** [Session Facilitator: Cesar]
   1. Discussion driven mainly by imagination and a lot less by technical details
   2. SuggestedTopics - Emphasis on Suggested
      1. How do we gather and respond to experimental synthetic biologist’s needs and requests?
      2. How do we stimulate more industry uptake?
      3. SBOL sequence publication guidelines for dummies
      4. CAD fetching DNA components from a repository
         1. Specific Instances
            1. Clotho fetching parts from the iGEM Registry
            2. Gene Designer fetching parts from the BIOFAB
            3. Genome Compiler providing fetched parts from the iGEM Registry
         2. What’s next?
      5. Sending a genetic design to a wetware construction service
      6. Specifying genetic designs simultaneously with graphical and textual languages
         1. Specific Instance
            1. Clotho Spectacles and Eugene
         2. What’s next?
      7. Connecting a genetic design editor with a simulation framework
         1. Specific Instances
            1. TinkerCell
            2. iBioSim
         2. What’s next?
3. 2:30pm - **Workflows to define case studies** [Session Facilitator: Doug]
   1. Currently, we have one nice workflow of how SBOL members exchange SBOL files (i.e. Utah, Newcastle, BU). We should discuss about other possible examples/workflows of exchanging SBOL files
4. 3:00 pm - **Funding** [Session Chair: Anil Wipat]
   1. SBOL entering maintenance phase
      1. Steady funding is needed
      2. Acknowledgement of sponsorship on the website
   2. What is the relationship with DARPA?
   3. Potential Grant targets
      1. NIST, NIH, and DOE
      2. What is the best approach for each?
   4. Should we consider Kickstarter-type funding?
5. 4:00 pm - **Publications / References**
6. 4:30 pm - **Governance** [Session Chair: Mike]
   1. SBOL Values
   2. Looking for a new editor to replace Cesar after he completes his term
7. 5:30 pm - **Meeting at Imperial College** 
   1. What should be the goal of the next meeting?
8. **Dinner**
   1. Organized during meeting
   2. Pay individually

**Meeting Notes:**

**SBOLv**

Doug: how do we let people put their own flavor on SBOLv while being compliant.

Chris A: there is an established iconography for genetics/ molec bio ~50 yrs of history. There is an established culture.

Anil: But, there is no “standard” .

Chris A: ~The technical issues need to be fixed.

**Modeling Extension**

Nic: proposed a SBML annotation format for embedding SBOL into SBML.

Raik: proposed a diagram showing connections between extensions

**Funding:**

Doug more centralized, workshop grants, but work should be central.

**Education and promotion:**

Doug: Establish an SBOL YouTube channel to place tutorials

**Funding:**

Allan: It would be useful to have SBOL as [part of] a formal non-profit organization. It would facilitate gathering donations from corporate entities.

Doug: Problem with using Kickstarter for fundraising is that large corporate entities are unlikely to use this approach. Allan agreed.

Layout goals and tangible 3 month or so long SBOL projects. Keep a list for professors to use for interested students.

Doug: We need to secure a sizable amount of funding to afford professional software developers. Inconsistent, small amounts won’t get the job done.

**Publications**

Michal: The SBOL paper is being targeted as a Nature Biotechnology Perspective.

General preference for higher impact papers.

**Compliance/ Acknowledgement:**

Doug: Provide award stickers to iGEM students if there tools are SBOL compliant. Provide compliance icons

Matthew: Possible compliance icons. The promoter symbol for SBOL Visual. Arrow pointing out for export. Arrow pointing in for import.

-proposed design due at next meeting, if only 1 proposal accept at next meeting by default otherwise vote to choose

Raik: Establish demonstrations at scientific and trade meetings

**Governance**

SBOL Core Values:

* **Useful**
  + Does what is needed, doesn't get in the way
* **Useable**
  + TBD
    - Who is envisioned as the eventual user? different cultures, backgrounds of training
    - Added value for the user
    - Community should be the users
  + Educational /feedback forum at a synbio conf -
* **Used**
  + Becomes the de-facto standard for data exchange in Synthetic Biology and Genetic Engineering
    - Maybe this should be higher on the order of priorities
* **Agile**
  + Changes to reflect the changing needs of the community
* **Free**
  + Beer and Speech
* **Transparent and Accountable Governance**
* **For the Community by the Community**
  + Diversity of the community
    - participation by underrepresented minorities,
    - Welcoming and inclusive of all communities
    - and industry and academia, non-profit
  + Recognizing that diversity is a strength
* capture the next generation of thinkers
  + - * iGEM

**Next meeting:**

Workflows will be due at ICL meeting

precanned presentations on extensions

start discussion on mailing list prior to meeting

Needed for next workshop:

Mandy: If providing Remote Access to meeting get a:

Spreed USB Conference Speaker Microphone <http://www.amazon.com/Spreed-USB-Conference-Speaker-Microphone/dp/3936710058>