

BIOPAX Work Group
7/16/03 Conference Call Minutes

Participants: Gary Bader, Michael Cary, Joanne Luciano, Natalia Maltsev, Eric Neumann, Suzanne Paley, Aviv Regev.

Purpose of call: Review meeting with CellML, ISMB, and Protégé workshop; give update on ontology development.

Overview:

1. Internal Communication
 - a. PM site to become password protected
2. Submit paper to PSB? No.
3. Reports on recent meetings, conferences
 - a. CellML
 - i. Work flow now diagram (all working off same page)
 - ii. Happy to collaborate
 - b. ISMB 2003
 - i. Talks & Posters (2 talks/2 posters) – went well
 - ii. Birds of a Feather (2 meetings)
 1. Suggested 2 more subgroups: Validation and Tools
 2. Participants developing 5 use cases collaboratively
 - iii. Meeting with SBML/CellML/BioPAX
 1. Began working out mechanisms of interoperability
 - c. Protégé workshop
 - i. Workshop in general
 - ii. Protégé -> OWL (Beta version available now)
 - iii. lots of plug-ins for all kinds of things (not well advertised)
 - d. Royal Free & University College Medical School
 - i. NTRAC
 - ii. MicroCore
 - iii. Collaboration with BioPAX
 1. Will be using BioPAX format for all the hospitals data bases in network
4. Ontology work
 - a. More documentation on the way
 - b. Joanne creating a Protégé version
 - c. BioPAX on Sourceforge
5. Subgroup status reports
 - a. General – mailing lists for subgroups? As needed.
 - b. State subgroup – Gary working on documentation.
 - c. Examples subgroup
 - i. Creating automatic way of submitting examples/use cases
6. Next conference call date? August 6, 2 PM.

Summary:

We began by discussing the need for a password-protected area of the PM site for storing documents (unpublished papers, etc.) that we do not want exposed to the

entire internet. We decided that the easiest solution would be to just make the entire PM site password protected. Gary and Mike will set this up and will inform the core group members how to gain access.

Next, we began discussing the meeting with CellML, ISMB-03, and the Protégé workshop [NOTE: see Joanne's upcoming report for more details]. Eric asked how the BioPathways SIG went; Aviv said that she would send Vincent's summary to Eric and the rest of us via the pax mailing list. Eric then asked if we planned to submit a paper to PSB. Joanne wanted to know if we could have an extension, but Eric was reluctant to accept anything after next Monday. Later in the call this issue was brought up again and we decided that we would not submit a paper to PSB because A) there wasn't enough time to write it, and B) the value of a paper on the unfinished exchange format would likely be limited.

At her meeting with the CellML group in Auckland, Joanne gave the presentation that had been prepared for ISMB. They then worked together to create a work-flow diagram of a gene network reverse engineering use case. The diagram (now the last slide on the ISMB presentation posted on the BioPAX website) shows the various functions of MageML, BioPAX, CellML, and SBML. This slide was later used in both the SBML and CellML presentations at ISMB, as well as the BioPAX presentation, to show the community the niches of the various formats. Joanne said that the CellML group expressed their willingness to collaborate with us in order to make CellML and BioPAX compatible.

Several days after her meeting in Auckland, Joanne met with the CellML group again in Brisbane – this time SBML joined the meeting as well. The three groups worked out some of the details on how we would incorporate features from each other. Joanne said that Imran would be more qualified to fill us in on the specifics.

As he needed to leave shortly, Eric then spoke up to make a few quick remarks. He said his group planned to convert the BioPAX ontology (as it currently stands) to an OWL ontology (and then to RDF). He said that a lot was going on with RDF in the coming months, and he wanted BioPAX to be involved in some of it. Articles mentioning BioPAX were upcoming in BioIT World and BioInform. He agreed to send pre-prints to the group.

Joanne then resumed reporting on her travels. She gave talks at both the BioOntologies SIG and the BioPathways SIG, and presented posters at each as well. The next day, she held a BOF meeting in which a lot of people showed up – such as database users, database creators, ontology people, and representatives from GenMAPP, Lion, OMG, IBM, PATIKA, CellML, and SBML. During the first BOF meeting, the participants introduced themselves and their interests. They didn't have much change to talk about BioPAX, so another BOF meeting was held the following day. Among the suggestions that the group made were that we should do a much broader proof-of-concept than we did with CML, perhaps demonstrating the successful exchange of an entire database. The group then came up with five examples / use cases that they agreed to develop collaboratively to guide / test BioPAX development in specific areas. Joanne will manage this effort, as she is the coordinator of the Examples subgroup.

The BOF meeting participants also thought that we should create two additional subgroups: one for validation and another for tools. The Validation subgroup would serve as quality assurance for BioPAX. Aviv and Gary pointed out that there were two distinct aspects of the project that would require QA, 1) the ontology, and 2) any software we develop. Both Aviv and Gary thought that these should not be handled by the same subgroup, as they had very different requirements. Joanne did not disagree, and suggested that we could perhaps create two Validation subgroups – one for each of the above.

The second subgroup, the Tools subgroup, would develop a number of BioPAX Tools – such as translators (e.g. DIP \leftrightarrow BioPAX) and perhaps a visualization program as well. Joanne said that she would contact the participants at the BOF meetings to find out what they wished to contribute.

Gary asked if any BIND representative attended the BOF meetings. Joanne said that none had, but the Chris Hogue expressed his willingness to make a BioPAX version of BIND available for download from the BIND ftp site. Gary said that it appeared that the BIND group was will to leave BioPAX compatibility with BIND in his hands.

Next, Joanne talked about the Protégé workshop she attended in the UK. She said that there were a great number of speakers – so much that there was little time left over for any hands-on Protégé work – and that she was pleased to see how many plugins had been developed for Protégé. She also mentioned that Protégé now has a beta version of their OWL output generator available on their website. Mike mentioned that he and Gary were examining the possibility of writing a GKB \rightarrow Protégé script, which would then allow us to automatically go from GKB to OWL.

Joanne talked to a number of interesting people at the Protégé workshop, including Chris Roe (from GONG - Gene Ontology Next Generation), and Sylvia Nagl, who is involved with NTRAC (National Translational Cancer Research Network). Sylvia's group has been developing a tool (called MicroCore) to both visualize pathways and overlay microarray data on them. They have been using SBML to store their pathways, but have been having some difficulty. Sylvia was very eager to get involved with BioPAX, as it appeared that BioPAX would suit their needs perfectly.

Natalia mentioned that she planned to attend the upcoming DOE Genomes to Life workshop, and that she would mention our work there.

We next discussed our ontology work. Gary recently submitted the latest version to the pax list. He asked people to review it and comment on it on the biopax-discuss mailing list. Natalia asked for more documentation on the ontology because the GKB file Gary sent was somewhat cryptic.

Gary spoke briefly about some of the recent ontology work. He said that the ontology had incorporated some important changes since the early versions; these changes were made as a result of the May 23 meeting. For example, we no longer have “directed” and “undirected” classes under interactions – we decided to only use biologically meaningful classes. Aviv balked when Gary mentioned that we now had something called an “Equivalence Class”, but was somewhat appeased when he explained that this class would specify a certain context for the equivalence. Natalia also felt ill-at-

ease with the equivalence class, and a discussion on the topic started to take form. However, Mike pointed out that the biopax-discuss email list, and not this conference call, was probably a better forum for discussing nuances of the ontology; this point was agreed to so we moved on to the next agenda item.

Gary then mentioned that he had created a BioPAX project on SourceForge. It has a CVS system, into which he has deposited most of our documentation. He said he would send a note to the biopax-discuss list about the SourceForge site.

Joanne said that she wasn't sure that everyone who had attended the BOF meeting had signed up to the BioPAX lists. Gary asked her to send him their email addresses, and he would sign them up.

Joanne mentioned that she was in the process of recreating the GKB ontology in Protégé. Mike asked her to send it to him when she was done, as he wanted to start working with an OWL version of the ontology soon. Gary asked Suzanne if any work had been done by Peter's group on creating an OWL output format for GKB. Suzanne said that she doubted they would be able to make much progress on that front for at least another month. Gary then asked Suzanne if she could talk to Peter about the ontology, as we would like his feedback on it. She said that it could be difficult given both of their upcoming vacations, but she would try.

We next discussed the subgroups. We decided that we would create separate mailing lists for subgroups when they became sufficiently large. Joanne wished to include all participants in the ISMB BOF meetings in the Examples subgroup, so Gary will create a "biopax-eg" email list in the near future.

Joanne said that she wanted to create a repository for examples and use cases, so that people in her subgroup could submit them at will. She wanted something more than just an email list, something where people could submit documents and they would stay there. Mike offered to resurrect the wiki for this purpose, but Gary said that it should be simple and easy – like an html form. Joanne said she would work on this, and asked Mike to send her the link to the examples that he and she had collected prior to the first meeting.

Aviv suggested that Joanne could find good pathway examples from the NCBI website, by clicking on the "Books" link and browsing their online text books. Gary said that there were also some good examples in the states document, and that he would email it to Joanne for her to look at.

Regarding the states subgroup, Gary said that he would work on revising the current document and send it out to the rest of the subgroup for review.

Joanne brought up the topic of grants and said that she wanted to contact John Houghton and possibly Bill Mills about getting additional funding. No one on the call knew the status of the last batch of funding BioPAX received from DOE (Chris Sander is handling it).

We tentatively set our next conference call for Wednesday August 6th, 2003 at 2 PM EST.