Introduction
In June 2003, the Department of Energy (DOE) allocated funds in support of the development of A Data Exchange Format for Biological Pathway Databases (BioPAX). The primary objective of the BioPAX initiative is the development of a single, consensus-based standard for a data exchange format for biological pathway databases that can be widely adopted in a timely manner as a strategy for the interchange of biological pathway data in the life science community.

This document serves as the final technical report of work done by BioPAX since receipt of the DOE Workshop Grant.

Progress of BioPAX
Support from the DOE has enabled BioPAX to make significant progress in reaching its objective. Most significantly, BioPAX Level 1, Version 1.0 was released under an open-source license at the start of July, 2004. It can be freely downloaded from http://www.biopax.org. This proposed standard can represent metabolic pathways and networks and is expected to be supported by the BioCyc and WIT databases in the near future, two of the major metabolic databases in Bioinformatics. The proposed standard itself supports any metabolic pathway database and it is hoped that other databases will support the data exchange format in the future. BioPAX Level 1 was the result of a significant community-based development effort from multiple database and user groups across the country at workshops significantly funded by this grant.

Since June 2003, the biopax.org website has had 3,740 unique host visits (as measured by the analog reporting software). Since the release of BioPAX Level 1 at the end of June, there have been 85 downloads of the full package and 491 downloads of the core BioPAX ontology in OWL format. The three mailing lists, which were set up to facilitate communication with and representation of the life science community from which this initiative emerged, have proved to be a successful medium of communication with and within the community. These mailing lists allow for communication, discussion, and resolution of technical issues in-between face to face meetings of the core group and meetings held in conjunction with the major conferences. The biopax-announce mailing list has 159 members; biopax-discuss has 157 members. The archives of both of these public email lists are accessible via the project’s main website. The biopax-discuss and pax mailing lists have had over 1300 e-mails since November 2002. The core group continues to conduct bi-weekly conference calls to discuss technical and administrative issues with all meeting minutes and presentations posted at the BioPAX website. The core group contains 18 members who have attended at least one face to face meeting or conference call. Eight face to face workshops have been held since November 2002 (five during the course of this grant). In addition, BioPAX has made several presentations to the Life Sciences community at large, including presentations and/or reports to the I3C, ISMB-03, NIST, PSB-04, the W3C, PSI-MI and the caBIG initiative of NCI. BioPAX has received enthusiasm and interest for its work from the community at large.

Work will continue on the BioPAX standard with meetings, input and feedback provided for Level 2 of the standard, and beyond. A roadmap for BioPAX releases is posted at the website, which details when signal transduction, molecular associations and genetic regulatory networks will be addressed in later BioPAX levels.

---

1 Significant support was also provided by Memorial Sloan Kettering Cancer Center, SRI, International, University of Colorado Health Sciences Center, and Argonne National Labs and the BioPathways Consortium.