

Status Update LibSBGN

Tobias Czauderna
On behalf of the LibSBGN team

SBGN 9
Edinburgh, 29/04/2013 to 02/05/2013

LibSBGN and SBGN-ML

- ▶ Community project started in 2009
 - ▶ facilitate development of SBGN supporting tools
 - ▶ increase interoperability between these tools
- ▶ Electronic implementation of SBGN
 - ▶ Exchange format for SBGN maps: SBGN-ML
 - ▶ XML schema based
 - ▶ express semantics, relationships and geometry
 - ▶ Software library to interact with SBGN maps: LibSBGN
 - ▶ object model and API
 - ▶ C++, C#, Java
 - ▶ key features: reading, writing, validation, conversion and layout

M.P. van Iersel, A.C. Villéger, T. Czauderna, S.E. Boyd, F.T. Bergmann, A. Luna, E. Demir, A. Sorokin, U. Dogrusoz, Y. Matsuoka, A. Funahashi, M.I. Aladjem, H. Mi, S.L. Moodie, H. Kitano, N. Le Novère, F. Schreiber: **Software support for SBGN maps: SBGN-ML and LibSBGN**. Bioinformatics, 28(15):2016-2021, 2012.

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- C++ so far maintained by Alice
- C# implementation by Frank
- Java a couple of developers

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LibSBGN and SBGN-ML

- ▶ Wiki: **<http://www.sbgn.org/LibSBGN>**
 - ▶ documentation, road map, “how to”, useful links, ...
- ▶ SourceForge project: **<http://sourceforge.net/projects/libsbgn/>**
 - ▶ SVN repository: test suite, specs, XSD
- ▶ Mailing list: **sbgn-libsbgn@lists.sourceforge.net**
- ▶ Tools supporting SBGN-ML:
 - ▶ CellDesigner (Akira Funahashi)
 - ▶ Cytoscape SBGN plug-in (Martijn van Iersel)
 - ▶ PathVisio (Martijn van Iersel, Martina Kutmon)
 - ▶ Paxtools (Emek Demir)
 - ▶ SBGN-ED (Tobias Czauderna)
 - ▶ SBML Layout and Rendering Extension (Frank Bergmann)
 - ▶ VISIBIOweb (Ugur Dogrusoz)
- ▶ Databases supporting SBGN-ML:
 - ▶ Reactome (Robin Haw, David Croft)
 - ▶ MetaCrop (Falk Schreiber)
- ▶ Rendering comparison pipeline
http://libsbgn.sourceforge.net/render_comparison/

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- Read Only access
svn checkout [svn://svn.code.sf.net/p/libsbgn/code/](http://svn.code.sf.net/p/libsbgn/code/) libsbgn-code
- HTTP access
svn checkout <http://svn.code.sf.net/p/libsbgn/code/> libsbgn-code

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LibSBGN and SBGN-ML

- ▶ Milestone 1 (released Januar 2011)
 - ▶ Support for Process Description language L1V1.2
 - ▶ Exchange shape, position, size + Edge routing
 - ▶ XML Schema for validation
- ▶ Milestone 2 (released December 2011)
 - ▶ Support for Process Description language, Entity Relationship language, Activity Flow language
 - ▶ Extensions and Notes
 - ▶ Validation based on Schematron
- ▶ Milestone 3 (planned for November 2012)
 - ▶ External references (SBML, BioPAX)
 - ▶ Complete support for submaps
 - ▶ Complete specification of any compartment shape
 - ▶ Support for color and line thickness
 - ▶ Update to latest version of each specification

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Bugs and Features



Showing 8 results of 8

#	Summary	Milestone	Status	Owner	Created	Updated	
30	Serializations not created in C++ bindings	Milestone 2	open	Alice Villeger	2012-08-26	2012-08-27	
22	Unit of information label = prefix + value	Milestone 3	open	Alice Villeger	2010-09-21	2011-11-02	
21	Proposal for text styles	Milestone 3	open	Frank Bergmann	2010-09-08	2011-03-14	
18	Recommend a mime type	Milestone 3	open	Frank Bergmann	2010-08-15	2011-03-14	
13	Implement submaps	Milestone 3	open	Martijn van Iersel	2010-08-11	2011-11-02	
9	State variables: 3rd notation not supported	Milestone 3	open	Alice Villeger	2010-07-08	2010-07-08	
8	Underdefined glyphs	Milestone 3	open	Alice Villeger	2010-07-08	2010-07-08	
1	Size of clone marker	Milestone 3	open	Martijn van Iersel	2010-06-27	2010-07-08	

LibSBGN Community

Mirit Aladjem (MIM)

Frank Bergmann (SBML Layout)

Sarah Boyd (Dunnart)

Tobias Czauderna (SBGN-ED)

Emek Demir (Paxtools)

Ugur Dogrusoz (VISIBIOweb)

Akira Funahashi (CellDesigner)

Hiroaki Kitano (CellDesigner)

Nicolas Le Novère (BioModels Database)

Augustin Luna (MIM)

Yukiko Matsuoka (CellDesigner)

Huaiyu Mi (PANTHER Pathways)

Stuart Moodie (EPE)

Falk Schreiber (SBGN-ED)

Anatoly Sorokin (EPE)

Martijn van Iersel (PathVisio)

Alice Villéger (Arcadia)

<http://www.sbgn.org/LibSBGN>