cy3sbml Build instructions

This document covers how to build cy3sbml from source.

Requirements

Main requirements are git, java and maven.

git

Follow instructions for your respective platform to install git.

Ubuntu

```
sudo apt-get install git
```

Java JDK 8

Cytoscape apps are build with Oracle Java. Follow the instructions for your respective platform to install the java JDK. The installed version should be at least Java 7 (better Java 8).

```
java -version
```

Ubuntu

remove openjdk

```
sudo apt-get purge openjdk*
```

install oracle java

```
sudo -E add-apt-repository ppa:webupd8team/java
sudo apt-get update
sudo apt-get install oracle-jdk7-installer
sudo apt-get install oracle-java8-installer
```

switch java alternatives

```
sudo update-java-alternatives -s java-8-oracle
```

test installation

```
java -version
javac -version
```

Maven

Apps are build with maven version 3 or higher. Follow the instructions for your respective platform to install maven.

```
mvn -v
```

Ubuntu

```
sudo apt-get install maven
```

Cytoscape

Download and install the lastest Cytoscape 3 version (>3.2.1) from http://www.cytoscape.org

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Build cy3sbml

Git repository

First step is cloning the code from github.
You should setup an environment variable referring to the clone folder which will simplify the subsequent setup of the maven dependencies

```
export CY3SBML=/home/mkoenig/git/cy3sbml
```

Now clone the source code into the folder

```
git clone https://github.com/matthiaskoenig/cy3sbml.git $CY3SBML
```

The master branch contains the stable releases, with development branch in develop. Get a simple overview over the branches via

```
git branch -a
```

All development work is done in the development branch. To work on the development branch, you'll need to create a local tracking branch:

```
git checkout -b develop origin/develop
```

To build the master version, checkout the master branch

```
git checkout master
```

To build the development version, checkout the develop branch

```
git checkout develop
```

Maven dependencies

Maven dependencies for JSBML

Some JSBML dependencies and the JSBML core.jar have to be added to your local maven repository. The necessary jars are located in the lib subfolder in

```
$CY3SBML/cy3sbml/lib
```

and can be added with the script

```
$CY3SBML/cy3sbml/lib/jsbml_maven_repo.sh
```

Maven requires internet access to get the dependencies. If you are behind a proxy set the proxy settings for maven
http://maven.apache.org/guides/mini/guide-proxies.html

Alternatively add the files manually to your local maven repository

```
cd $CY3SBML/cy3sbml/lib
mvn install:install-file -DgroupId=cysbml-temp -DartifactId=spi-full -Dversion=0.2.4
-Dfile=spi-full-0.2.4.jar -Dpackaging=jar -DgeneratePom=true
mvn install:install-file -DgroupId=cysbml-temp -DartifactId=jigsaw-dateParser
-Dversion=0.1 -Dfile=jigsaw-dateParser-0.1.jar -Dpackaging=jar -DgeneratePom=true
```

```
mvn install:install-file -DgroupId=cysbml-temp -DartifactId=core -Dversion=1.0
-Dfile=core.jar -Dpackaging=jar -DgeneratePom=true
```

This will resolve the maven dependencies of the form

```
<dependency>
   <groupId>org.sbml.jsbml</groupId>
   <artifactId>core</artifactId>
   <version>1.0</version>
</dependency>
```

If you want to build against the latest development version of JSBML build the core.jar from the JSBML SVN and install in the local repository

```
cd core   # only build the core.jar
ant jar   # build with ant
# register in local repository
mvn install:install-file -DgroupId=cysbml-temp -DartifactId=core -Dversion=1.0
-Dfile=core.jar -Dpackaging=jar -DgeneratePom=true
```

cy3sbml maven build

Now you can build via

```
cd $CY3SBML/cysbml
mvn install
```

After successful building the target can be found in

```
$CY3SBML/cysbml/target/
```

The last step is either installing cy3sbml as app with the created jar file from Cytoscape

```
Apps → App Manager → Install Apps
```

or set a symbolic link to the installed apps folder

```
ln -s $CY3SBML/cy3sbml/target/cy3sbml-0.1.1.jar
$HOME/CytoscapeConfiguration/3/apps/installed/cy3sbml-latest.jar
```

Eclipse setup

Instll Eclipse with Maven and git support. The latest eclipse Luna has maven & git integration already out of the box, earlier eclipse version should install the m2eclipse & Egit plugins
http://wiki.cytoscape.org/Cytoscape_3/AppDeveloper/SettingUpAnIDE/Eclipse

Now generate the project in eclipse

```
File → new → Java project
```

Project name:

```
cy3sbml
```

Location:

```
$CY3SBML/cy3sbml
```

After converting the project to Maven

`Project Settings → Configure → Convert to Maven Project`

one can build cy3sbml with maven in eclipse via

`Run as → Maven install`