Development, landscape, and release

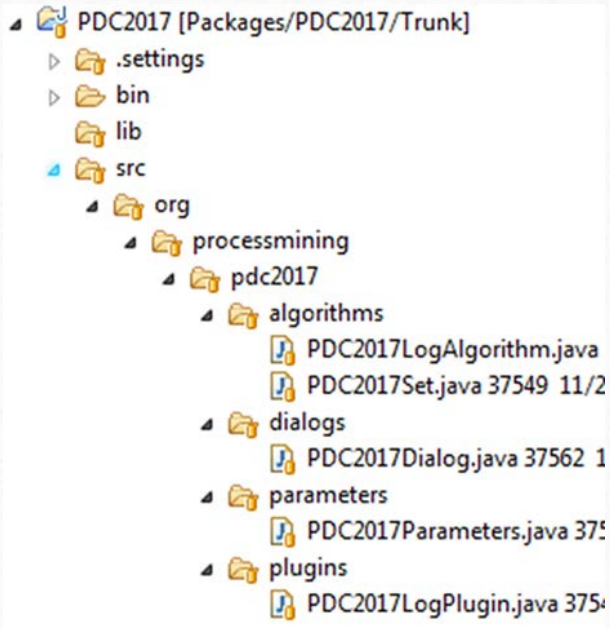
Eric Verbeek

Development

Using PDC2017 package as example

Package

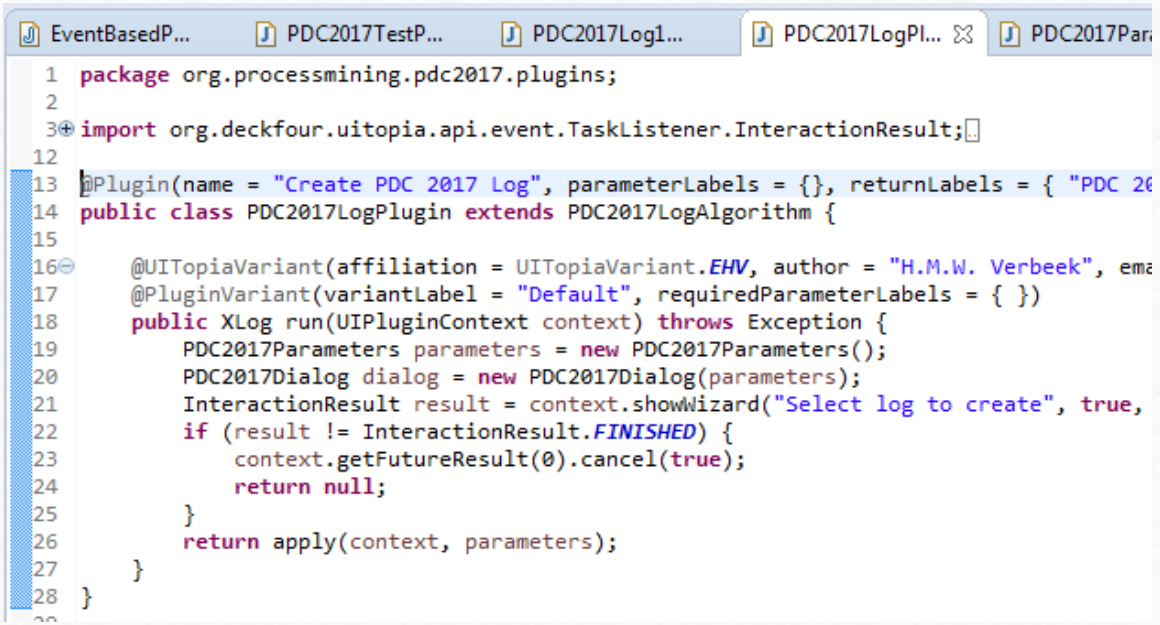
- Algorithms
- Connections
  - Dialogs
  - Models
- Parameters
  - Plugins



Plug-ins

Wrappers for algorithms

- Parameterized headless
  - Default headless
    - GUI-aware



Parameters

Values needed for running the algorithm from start to end

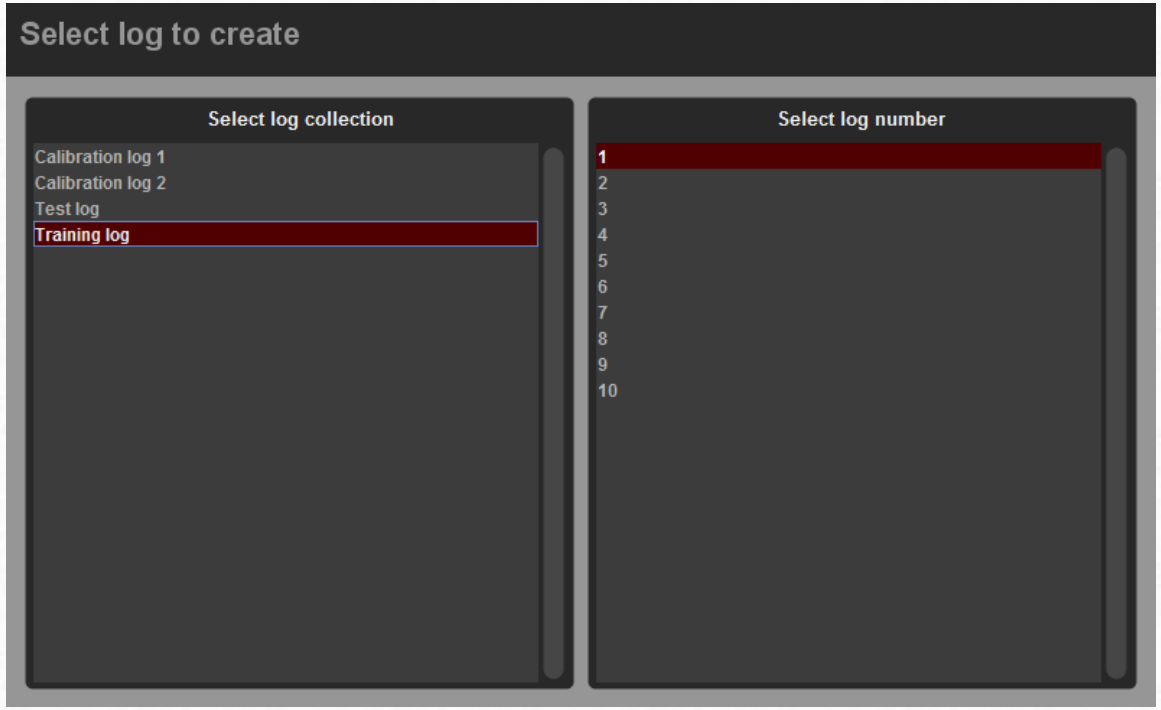
- Which collection?
(TRAIN, CAL1, CAL2, TEST)
- Which number?
(1..10)

EventBasedP... PDC2017TestP... PDC2017Log1... P

```
1  package org.processmining.pdc2017.parameters;
2
3  import org.processmining.pdc2017.algorithms.PDC2017Set;
4
5  public class PDC2017Parameters {
6
7      private PDC2017Set set;
8      private int nr;
9
10     public PDC2017Parameters() {
11         set = PDC2017Set.TRAIN;
12         nr = 1;
13     }
14
15     public PDC2017Set getSet() {
16         return set;
17     }
18
19     public void setSet(PDC2017Set set) {
20         this.set = set;
21     }
22
23     public int getNr() {
24         return nr;
25     }
26
27     public void setNr(int nr) {
28         this.nr = nr;
```

Dialog

Allows user to set values



Algorithm

Doing the heavy lifting

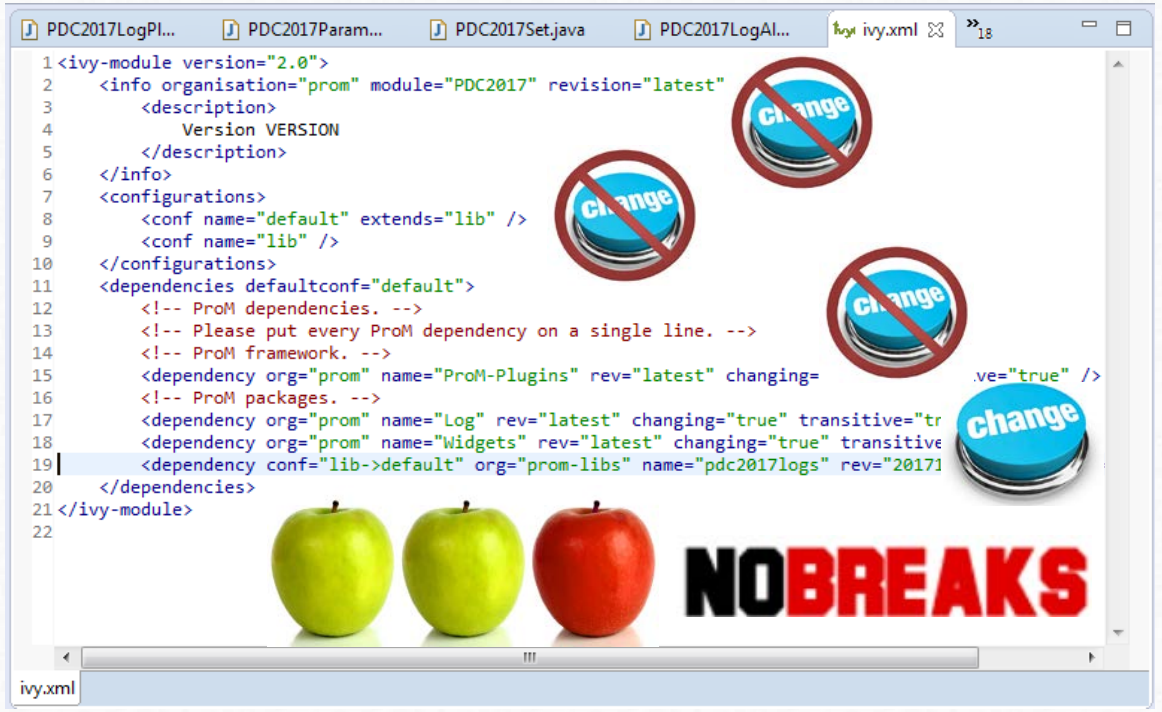
May have a plug-in context

PDC2017LogPl... | PDC2017Param... | PDC2017Set.java | PDC2017LogAl...

```
22
23      public PDC2017LogAlgorithm() {
24          loadedLogs = new HashMap<String, XLog>();
25      }
26
27      public XLog apply(PluginContext context, PDC2017Parameters parameters) throws Exception {
28          String fileName = parameters.getSet().getFileName(parameters.getNr());
29          if (!loadedLogs.containsKey(fileName)) {
30              System.out.println("[PDC2017LogAlgorithm] Loading log from file " + "pdc2017logs/" + fi
31              InputStream logFile = ClassLoader.getSystemClassLoader().getResourceAsStream(
32                      "pdc2017logs/" + fileName + ".xes");
33              File tmpFile = File.createTempFile("tmp" + fileName, ".xes");
34              BufferedReader br = new BufferedReader(new InputStreamReader(logFile));
35              String line = br.readLine();
36
37              PrintStream out = new PrintStream(tmpFile);
38              while (line != null) {
39                  out.println(line);
40                  line = br.readLine();
41              }
42              out.flush();
43              out.close();
44              loadedLogs.put(fileName, (XLog) logImporter.importFile(context, tmpFile.getAbsolutePath
45          }
46          return loadedLogs.get(fileName);
47      }
48  }
49
```

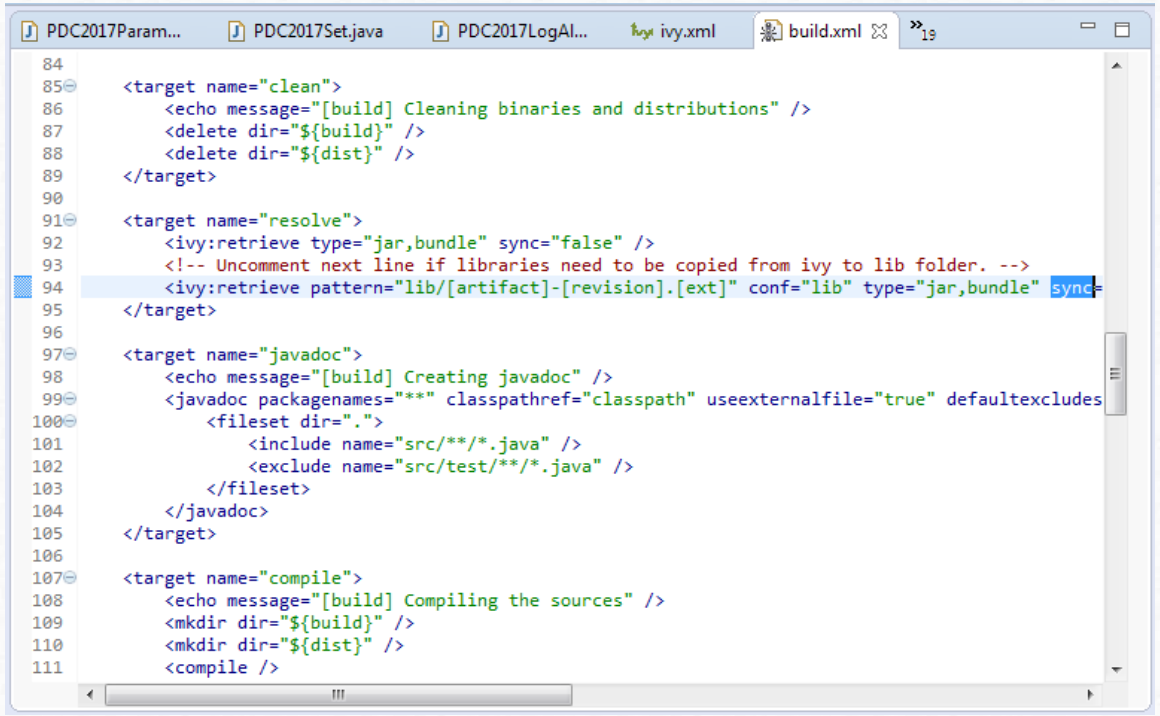
Dependencies

- ProM framework (ProM-Plugins)
- ProM packages (Log, Widgets)
- Maven2 repository
- ProM libraries (pdc2017logs)



Resolving libraries for Nightly Builds and Releases (where there is no Ivy)

1. No libraries: Comment out
2. Libraries, empty lib folder: Uncomment, set sync="true"
3. Libraries, non-empty lib folder: Uncomment, set sync="false"

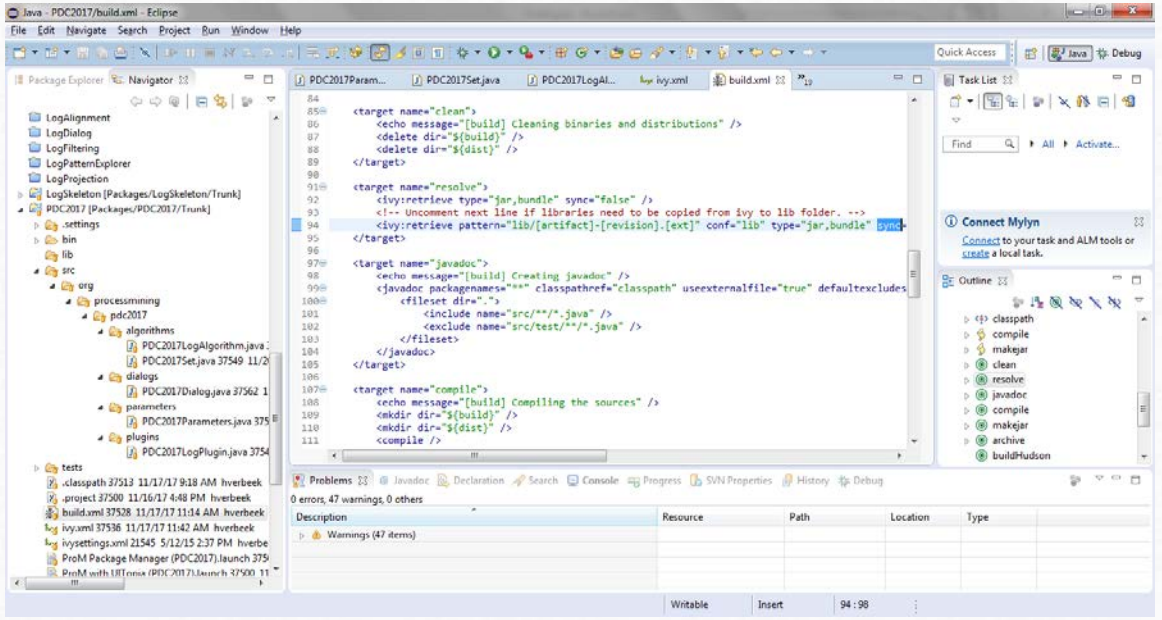


Landscape

Local workstation, SVN+Trac, Hudson, Webserver

Local workstation

- Eclipse
- Subclipse
- IvyDE

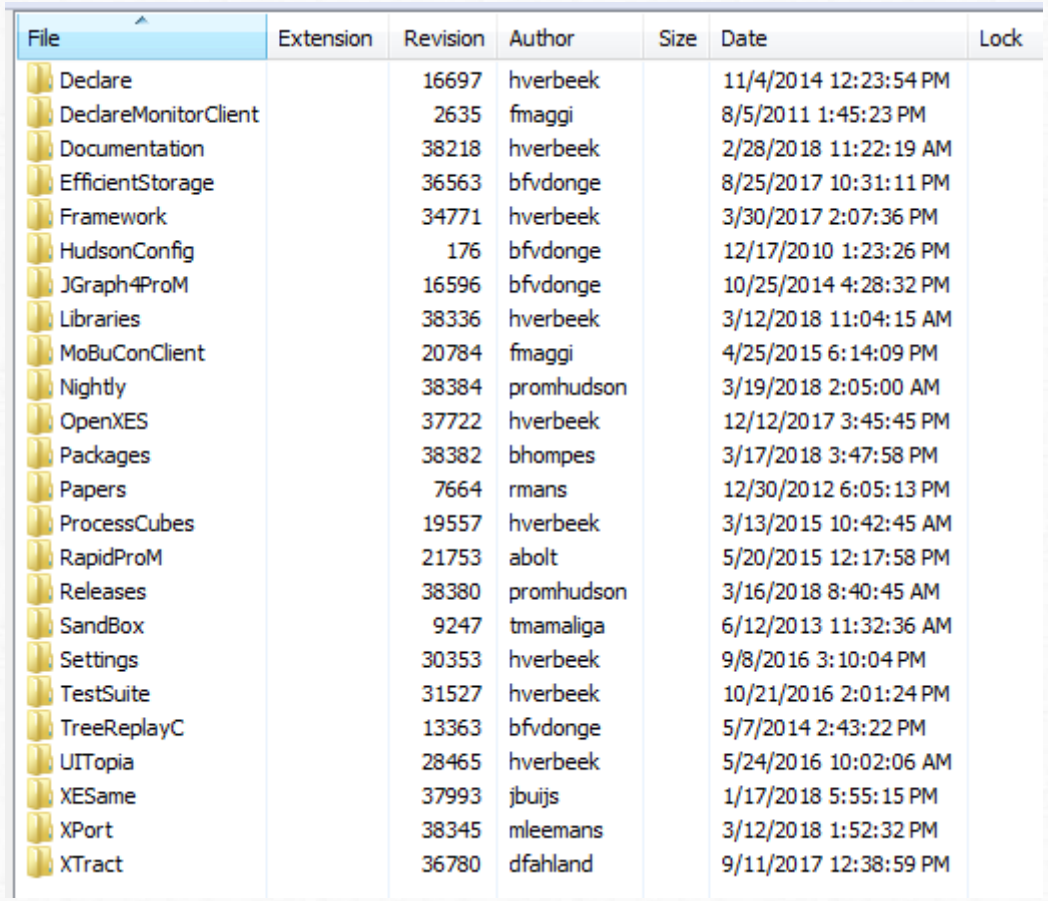


- Developer test of plug-in

SVN repository

https://svn.win.tue.nl/repos/prom

- Documentation
  - Libraries
  - Packages
  - Releases

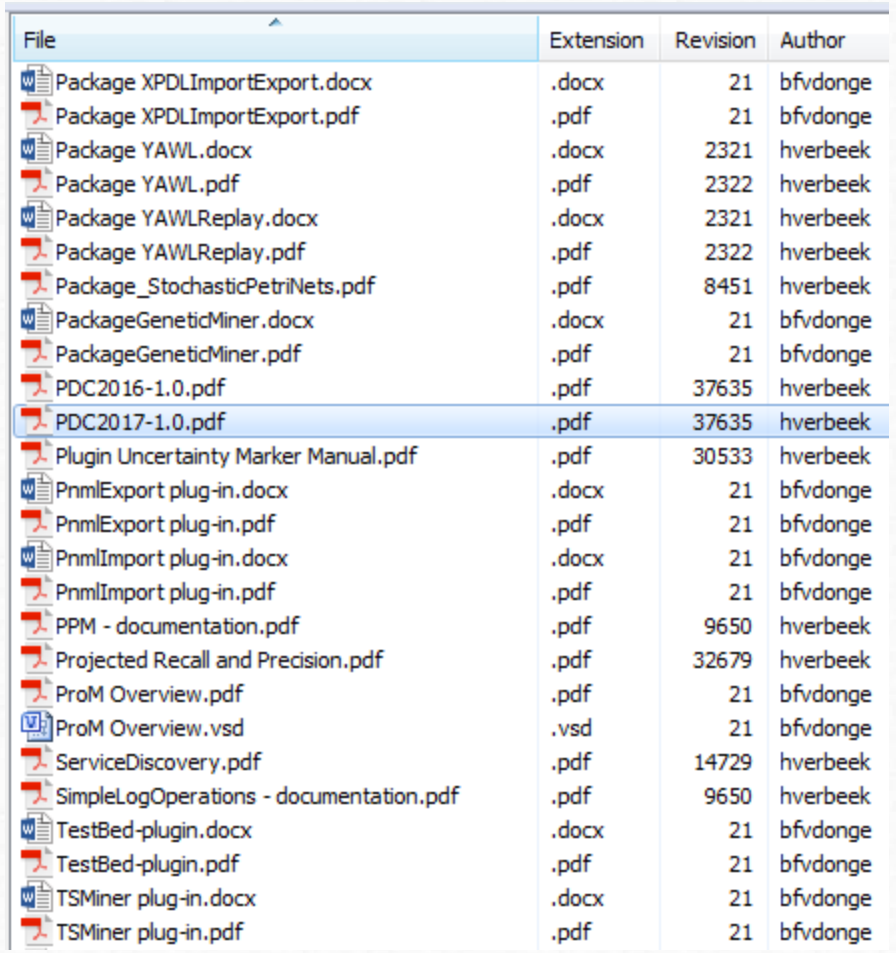


File	Extension	Revision	Author	Size	Date	Lock
Declare		16697	hverbeek		11/4/2014 12:23:54 PM	
DeclareMonitorClient		2635	fmaggi		8/5/2011 1:45:23 PM	
Documentation		38218	hverbeek		2/28/2018 11:22:19 AM	
EfficientStorage		36563	bfvdonge		8/25/2017 10:31:11 PM	
Framework		34771	hverbeek		3/30/2017 2:07:36 PM	
HudsonConfig		176	bfvdonge		12/17/2010 1:23:26 PM	
JGraph4ProM		16596	bfvdonge		10/25/2014 4:28:32 PM	
Libraries		38336	hverbeek		3/12/2018 11:04:15 AM	
MoBuConClient		20784	fmaggi		4/25/2015 6:14:09 PM	
Nightly		38384	promhudson		3/19/2018 2:05:00 AM	
OpenXES		37722	hverbeek		12/12/2017 3:45:45 PM	
Packages		38382	bhompes		3/17/2018 3:47:58 PM	
Papers		7664	rmans		12/30/2012 6:05:13 PM	
ProcessCubes		19557	hverbeek		3/13/2015 10:42:45 AM	
RapidProM		21753	abolt		5/20/2015 12:17:58 PM	
Releases		38380	promhudson		3/16/2018 8:40:45 AM	
SandBox		9247	tmamaliga		6/12/2013 11:32:36 AM	
Settings		30353	hverbeek		9/8/2016 3:10:04 PM	
TestSuite		31527	hverbeek		10/21/2016 2:01:24 PM	
TreeReplayC		13363	bfvdonge		5/7/2014 2:43:22 PM	
UITopia		28465	hverbeek		5/24/2016 10:02:06 AM	
XESame		37993	jbuijs		1/17/2018 5:55:15 PM	
XPort		38345	mleemans		3/12/2018 1:52:32 PM	
XTract		36780	dfahland		9/11/2017 12:38:59 PM	

SVN Documentation

https://svn.win.tue.nl/repos/prom/Documentation

Required for Established packages



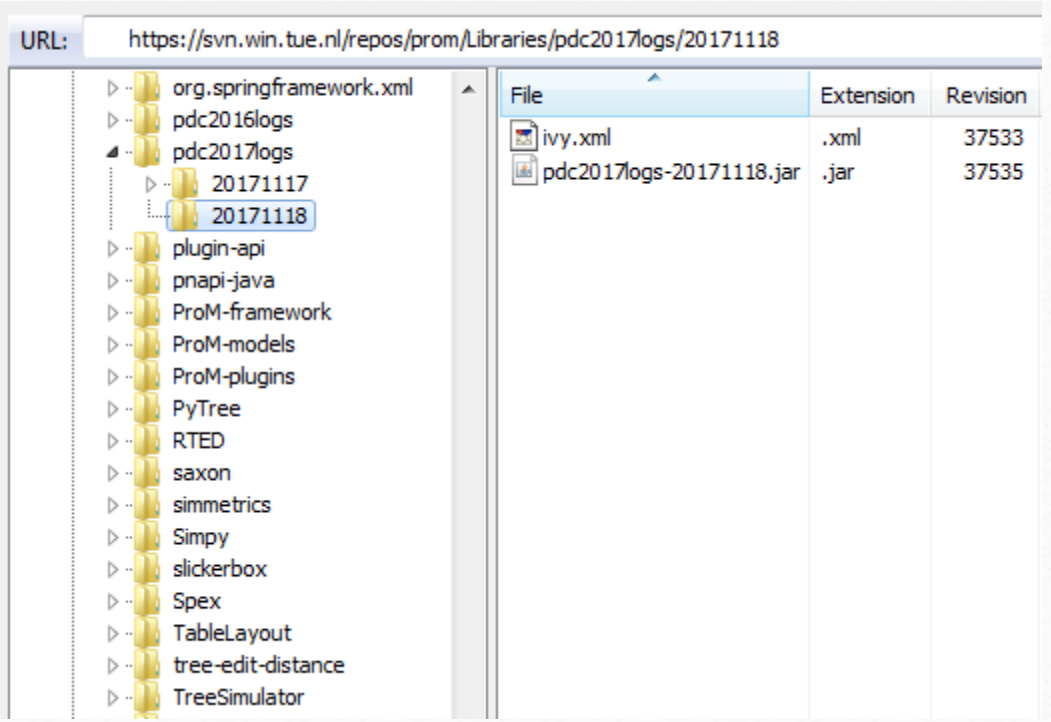
File	Extension	Revision	Author
Package XPDLImportExport.docx	.docx	21	bfvdonge
Package XPDLImportExport.pdf	.pdf	21	bfvdonge
Package YAWL.docx	.docx	2321	hverbeek
Package YAWL.pdf	.pdf	2322	hverbeek
Package YAWLReplay.docx	.docx	2321	hverbeek
Package YAWLReplay.pdf	.pdf	2322	hverbeek
Package_StochasticPetriNets.pdf	.pdf	8451	hverbeek
PackageGeneticMiner.docx	.docx	21	bfvdonge
PackageGeneticMiner.pdf	.pdf	21	bfvdonge
PDC2016-1.0.pdf	.pdf	37635	hverbeek
PDC2017-1.0.pdf	.pdf	37635	hverbeek
Plugin Uncertainty Marker Manual.pdf	.pdf	30533	hverbeek
PnmlExport plug-in.docx	.docx	21	bfvdonge
PnmlExport plug-in.pdf	.pdf	21	bfvdonge
PnmlImport plug-in.docx	.docx	21	bfvdonge
PnmlImport plug-in.pdf	.pdf	21	bfvdonge
PPM - documentation.pdf	.pdf	9650	hverbeek
Projected Recall and Precision.pdf	.pdf	32679	hverbeek
ProM Overview.pdf	.pdf	21	bfvdonge
ProM Overview.vsd	.vsd	21	bfvdonge
ServiceDiscovery.pdf	.pdf	14729	hverbeek
SimpleLogOperations - documentation.pdf	.pdf	9650	hverbeek
TestBed-plugin.docx	.docx	21	bfvdonge
TestBed-plugin.pdf	.pdf	21	bfvdonge
TSMiner plug-in.docx	.docx	21	bfvdonge
TSMiner plug-in.pdf	.pdf	21	bfvdonge

SVN Libraries

https://svn.win.tue.nl/repos/prom/Libraries

- Maikel Leemans
- Eric Verbeek

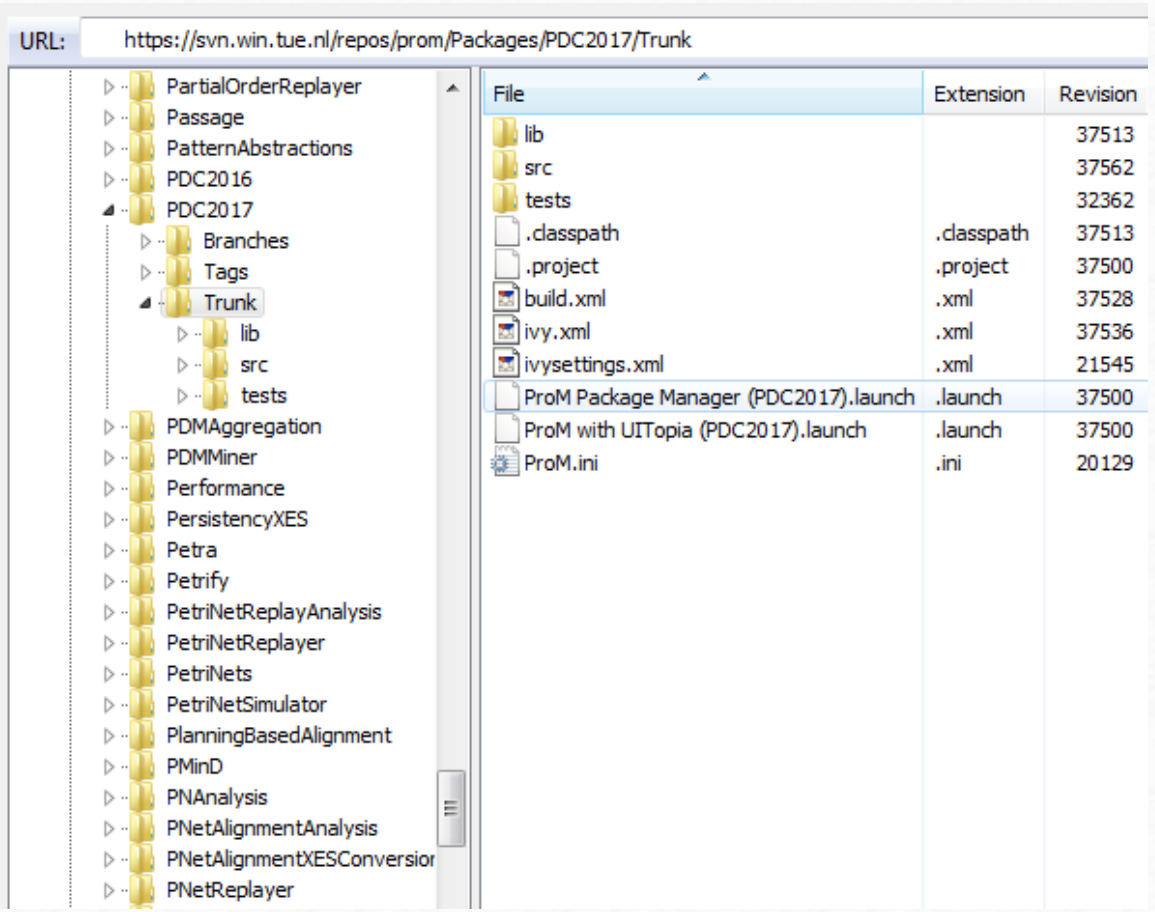
For libraries not included in Maven2 repository



SVN Packages

https://svn.win.tue.nl/repos/prom/Packages

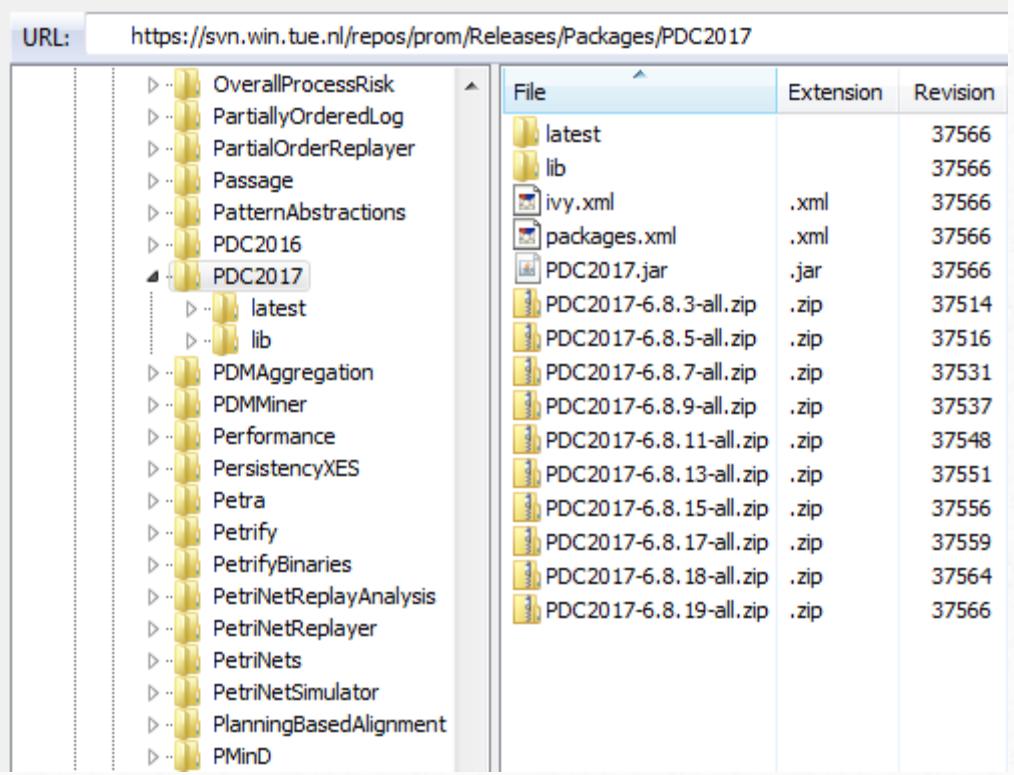
Folder containing package sources



SVN
Releases

https://svn.win.tue.nl/repos/prom/Releases/Packages

Folder containing released packages

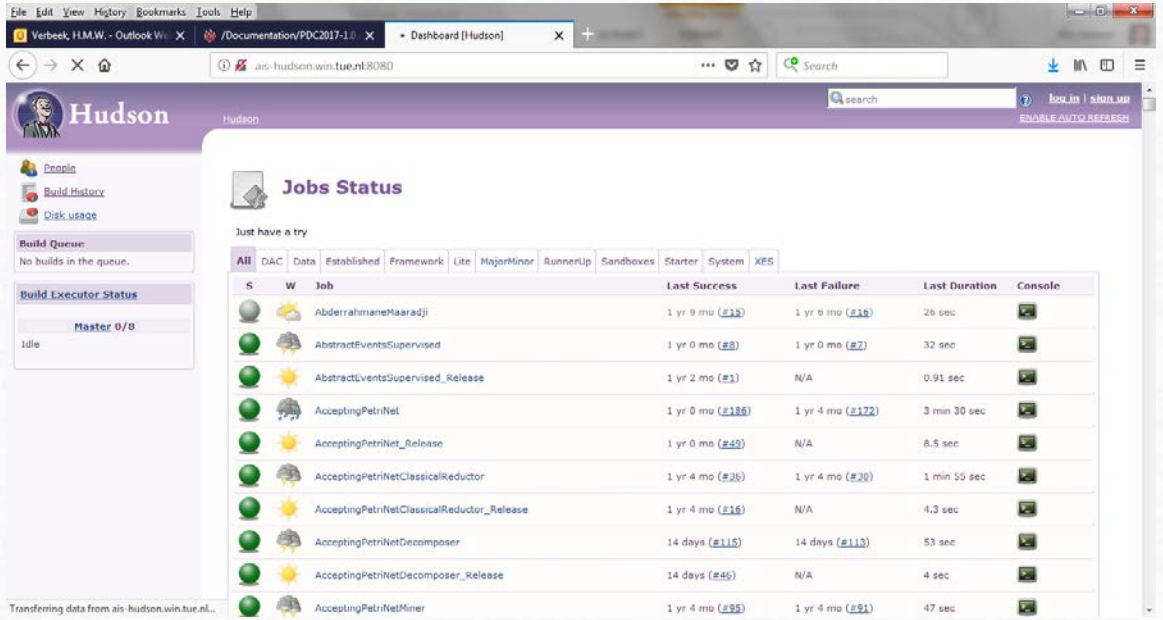


Hudson

http://ais-hudson.win.tue.nl:8080/

Continuous build server

- Builds
- Releases
- Master Package Lists
- Utilities



Hudson Builds I

http://ais-hudson.win.tue.nl:8080/view/Established/job/PDC2017/

- Automatic
- Manual (requires log in)

Sends e-mail if build fails.

Shows included libraries as artifacts.

Upstream job: PDC2017_Release

Hudson Builds II

- Checks changes on downstream (ProM, not Hudson) **Established** packages
  - Build fails if downstream build of downstream package fails
  - Protection from upstream changes (upstream developer is responsible)

Hudson Builds III

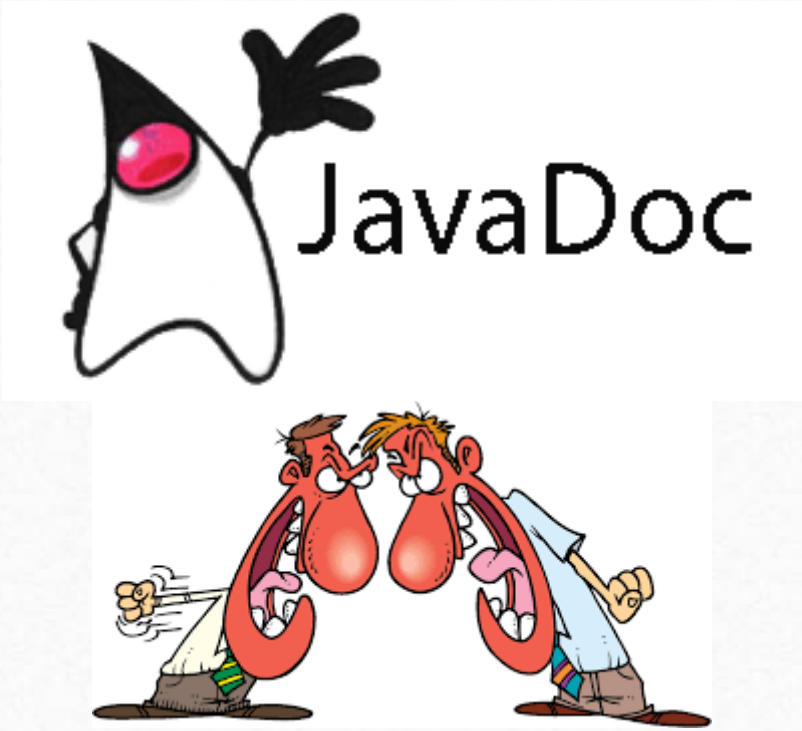
Make changes **the royal way**:

1. Add the new implementation next to the old implementation
2. Inform all downstream developers that there is a new implementation, and how to change to it in their package
3. Wait for these downstream packages to have changed to the new implementation
4. Remove the old implementation

Hudson Builds IV

Javadoc quirk

- Cannot (always) handle a library that contains multiple classes with the same name
- Downstream build may fail as a result
- If possible, avoid classes with the same name
  - Otherwise, split package



Hudson Releases

http://ais-hudson.win.tue.nl:8080/view/Established/job/PDC2017_Release/

Manual (requires log in)

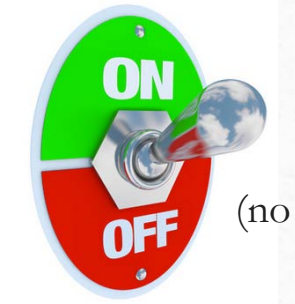
Copies **latest successful build** to SVN Releases folder

Clears workspace and triggers new build for package to fill workspace again

Webserver updates package for Nightly Build within an hour

Hudson
Master Package Lists

http://ais-hudson.win.tue.nl:8080/view/Established/



- Established
- RunnerUp
(no protection from upstream changes)
- Starter
(not installed by default)
- Sandboxes
(no releases)

Hudson Utilities

http://ais-hudson.win.tue.nl:8080/view/System/job/Libs/lastBuild/console

Shows list of libraries, and in which package they are included

Check this list before including another copy of some library!

Hudson

Hudson » System » Libs » #1068

- Back to Job Dashboard
- Status
- Changes
- Build Now
- **Console Output**
- Configure Build
- Configure Job
- Downloadstream build view
- Previous Build

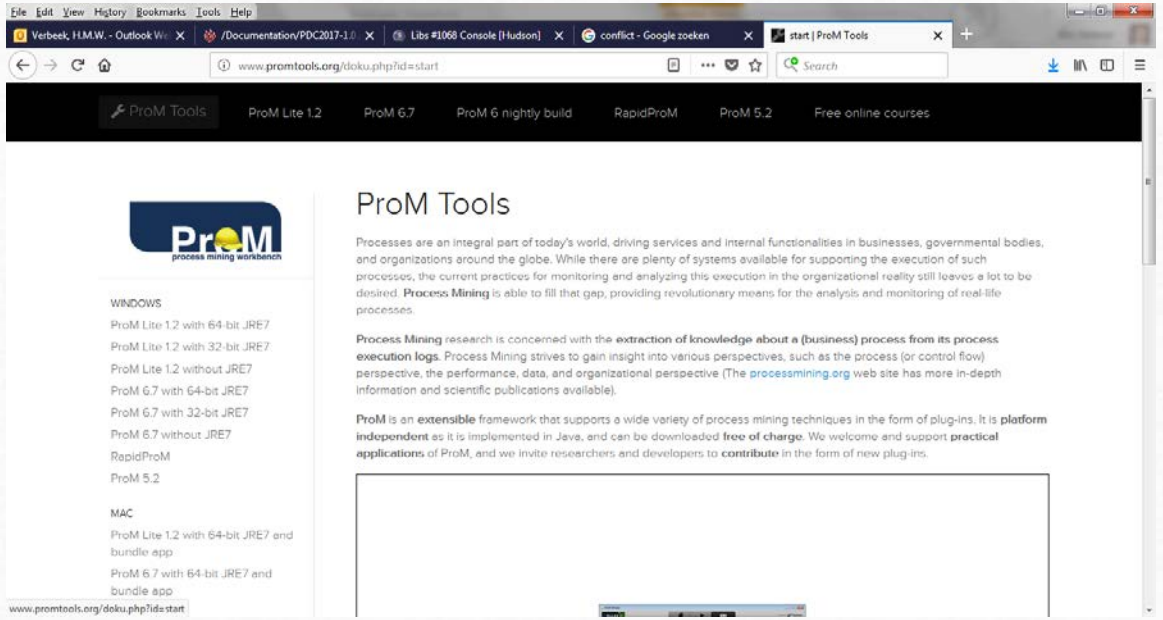
Console Output

```
Started by timer
[workspace] $ /bin/sh -xe /tmp/hudson1982819433309592860.sh
+ /home/hverbeek/hudson/scripts/sortLibs.sh
~/jobs ~/jobs/Libs/workspace
AccessCPN-unknown.jar CPNet
ant-1.9.4.jar ApacheUtils
ant-1.9.4.jar ContextAwarePerformance
antlr-2.7.7.jar Uma
antlr-runtime-3.2.jar ModelRepair
antlr-runtime-3.2.jar Uma
arpack_combined_all-0.1.jar ContextAwarePerformance
arpack_combined_all-0.1.jar Weka
autocomplete-2.5.8.jar DataPetriNets
automaton-1.12-1.jar DeclareMinerFul
avalon-framework-api-4.3.1.jar GPLv2Utils
avalon-framework-impl-4.3.1.jar GPLv2Utils
axis-1.4.jar ProM-Plugins
axis.jar Framework
backport-util-concurrent-3.1.jar ContextAwarePerformance
batik-anim-1.9.1.jar GPLv2Utils
batik-awt-util-1.9.1.jar GPLv2Utils
batik-bridge-1.9.1.jar GPLv2Utils
batik-codec-1.9.1.jar GPLv2Utils
batik-constants-1.9.1.jar GPLv2Utils
batik-css-1.9.1.jar GPLv2Utils
batik-dom-1.9.1.jar GPLv2Utils
batik-ext-1.9.1.jar GPLv2Utils
```

Webserver

http://www.promtools.org/doku.php

- Latest regular releases
(Fixed, no changes)
- Latest Lite releases
(Framework fixed, packages may change)
- Nightly Builds
(…for the brave and the impatient)



Nightly Build

Packages are checked every hour for updates

User test of plug-in

If possible, install **all** packages

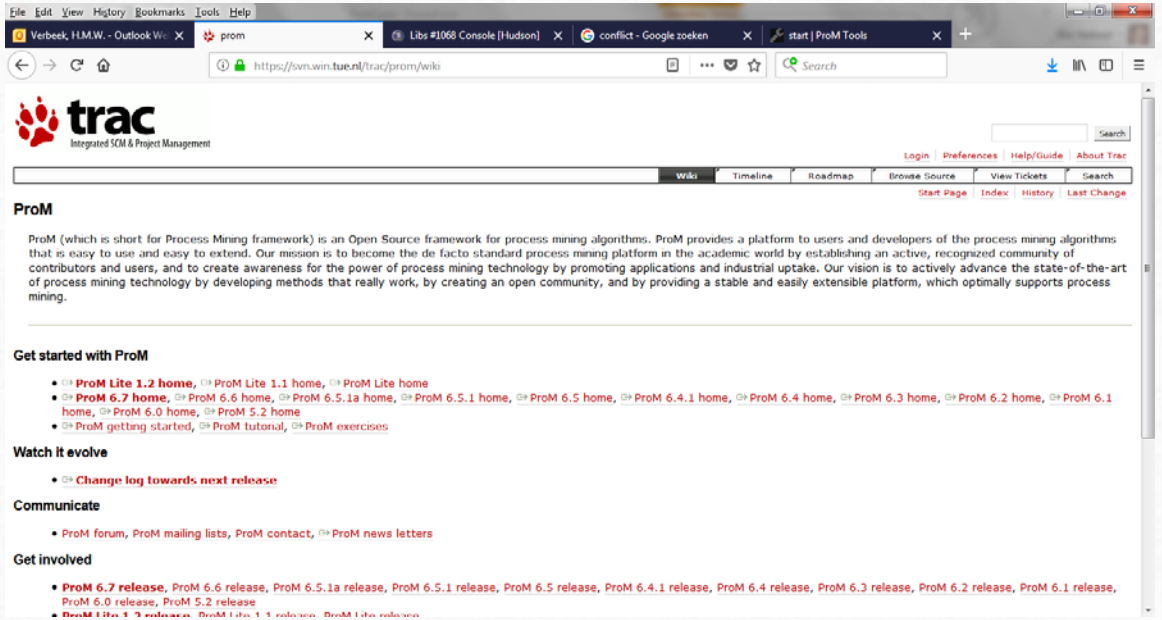
Do not rely on developer test of plug-in only!

SVN
Trac

https://svn.win.tue.nl/trac/prom/wiki

ProM development

- Source browser
- Documentation
  - Bug reports
- Release candidates (ProM 6.8 alpha)



ProM 6.8 alpha

SVN
Trac
Prom 6.8 alpha

https://svn.win.tue.nl/trac/prom/wiki/ProM68

- Important Dates
- Downloads
- Change Logs
(Log, PNetReplayer, IM, …)
- Release Notes
(Please add where you see fit)

trac
Integrated SCM & Project Management

ProM 6.8 release

Important dates

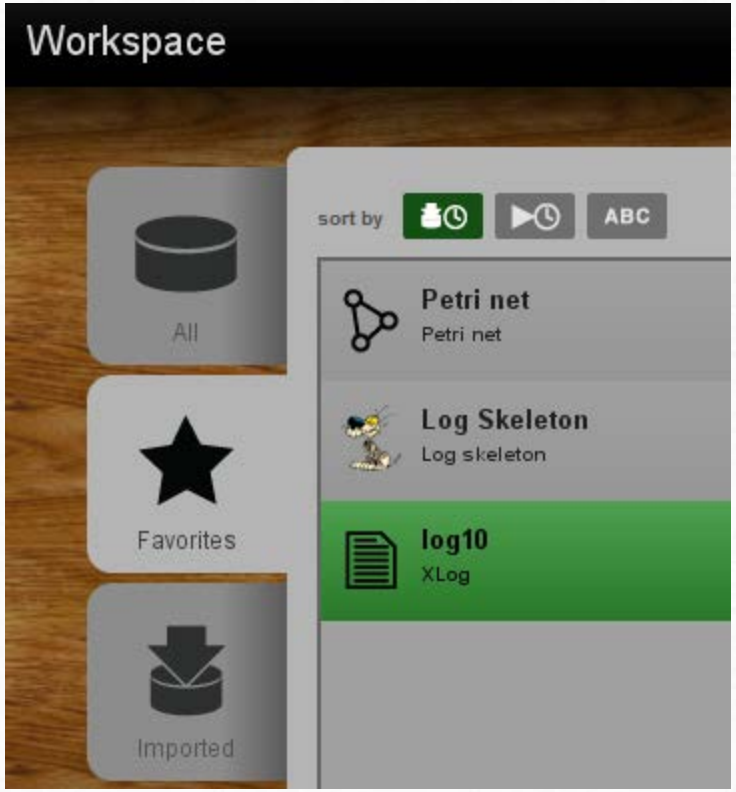
- March 12: Alpha release
- March 12 - May 14: Alpha testing
- May 14 - June 26: Alpha bug fixing
- June 25: Beta release
- June 25 - July 9: Beta testing and bug fixing
- July 9: Release

KEEP CALM BECAUSE EVERYTHING CHANGES

ProM icons

ProM icons
I

How to do it?

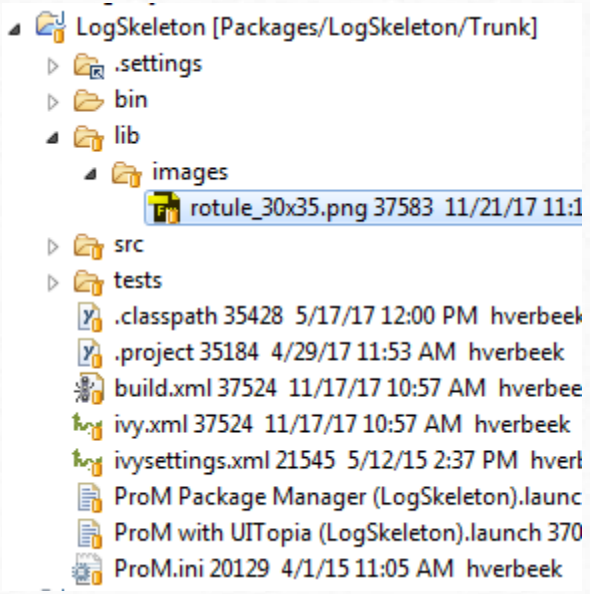


ProM icons II

Create your icon in the lib/images folder

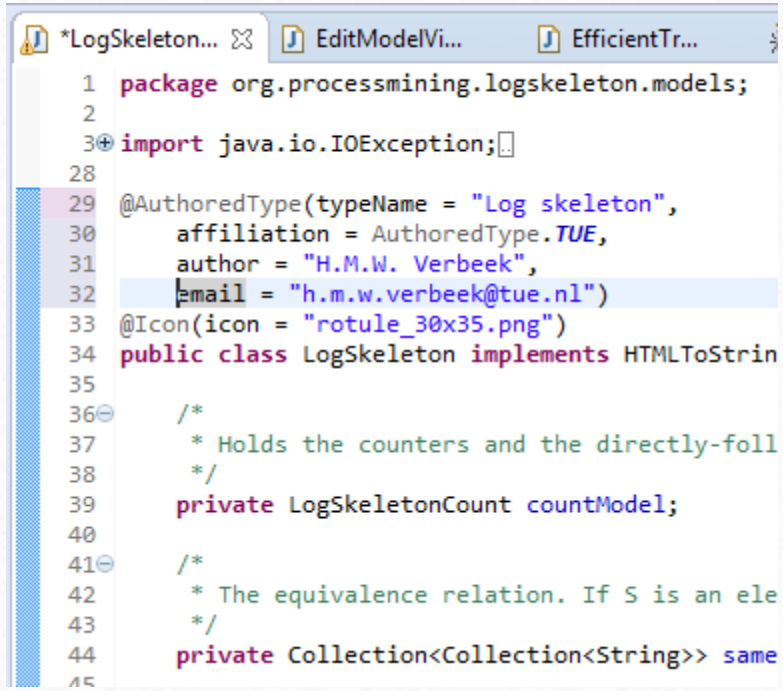
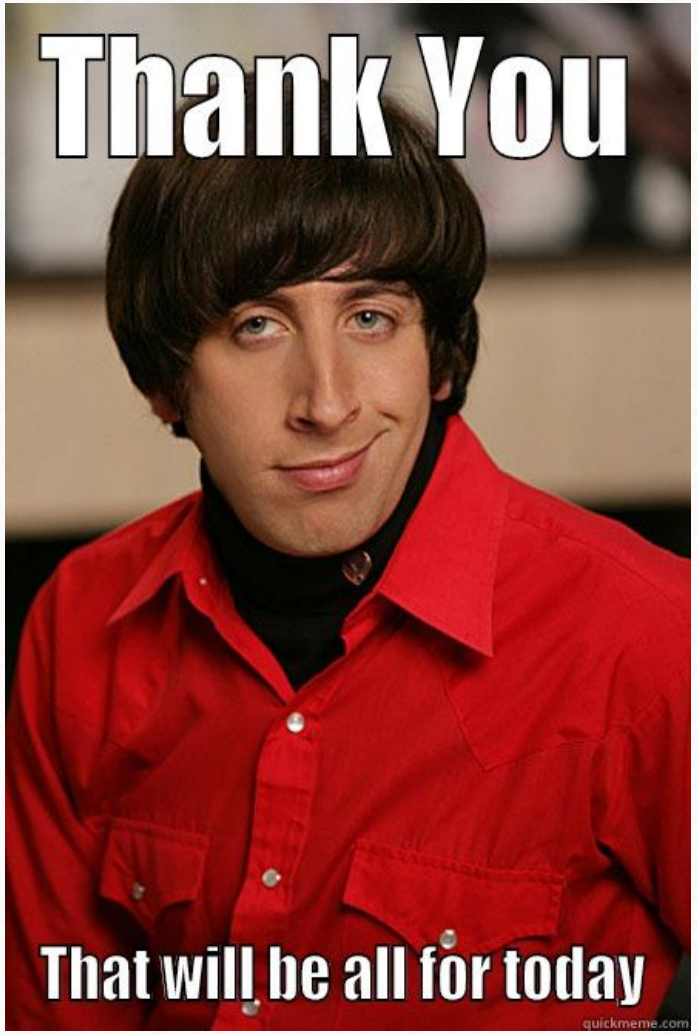
Make it 30 pixels wide and 35 pixels high

Update (if necessary) the resolve target in your build.xml file, as the lib folder is not empty: **If needed set sync to false**.



ProM icons III

Add the required annotations to your model class



Questions?