Signal Toolbox / Signal GUI install

Before installing the components of the Polychrony toolset, read the License terms and check the availability of Required software. The installation and use of the Polychrony toolset suppose the agreement to the license. To get the source files and build your own toolset (SRC), you must proceed to the toolset Extraction and Installation, and then setup the toolset Access. You may also download an available Binary version (BIN) without the source code.
This notice primarily describes the commands for Unix system in a command window (the commands are almost the same in a Windows command window).

A detailed Documentation is available and can be partially rebuilt (DOC). An online user documentation is provided by the Signal GUI. For any problem, information or suggestion, send a mail to: Polychrony webmaster.

1. License (BIN+SRC)

Signal Toolbox and Signal GUI are free software under the GNU General Public License, version 2. According to the license terms any user must have access to the source code, even if you (re)distribute the original or a modified binary version.

2. Required software (BIN+SRC+DOC)

(SRC+BIN) The following software are required and not provided to build a Polychrony environment:

- cmake
- tcsh (all Unix based OS)

(SRC) The following software are required and not provided to build the executable files from the source files:

- C and C++ ANSI compilers (GCC or other)
- JDK version 1.2.2 or more (for Signal GUI)

(DOC) The following external software are required and not provided to build the technical documentation:

- doxygen
- pdflatex, makeindex

(SRC+BIN) The following external software are required and not provided to use the corresponding outputs of the Signal Toolbox:

- Graphviz for displaying graphs described in XX.dot files
- Lustre for XX.lus files (coming soon)
- **C, C++, Java compilers** for XX.c, XX.cpp, XX.java output files
- Syndex for automatic code distribution of XX.sdx files

(SRC+BIN) The following companion software are required to use the corresponding outputs of the Polychrony toolset; they can be downloaded at this Polychrony site.

- SME, the Eclipse frontend, for loading XX.ssme and XX.sme files
- Signal GUI, the Signal Graphical User Interface, for XX.gpk and XX.sig files
- Signal Toolbox for XX.sig files
- Sigali for XX.z3z files

3. Extraction (SRC+BIN)

The Signal Toolbox is provided as a compressed archive file that contains a root directory called PolychronyToolset_<Version> (where <Version> is the version of the Polychrony toolset). After an

appropriate extraction in XXX directory, you should get PolychronyToolset_<Version> as a subdirectory of XXX.

SRC+BIN	gunzip PolychronyToolset_<Version>.tar.gz tar xvf PolychronyToolset_<Version>.tar

4. Installation (SRC+BIN)

ⓘ☞ Make sure that the system variable "xK_root" is unset.

To install the extracted Signal Toolbox first configure your own distribution (SRC+BIN) and then generate the executable files (SRC):

- Configure (SRC+BIN): after unpacking the archive, move to the PolychronyToolset_<Version>/cmake sub-directory, execute the command
  - (SRC) **cmake ..**, or (BIN) **cmake .. -DBIN_INSTALL=1** for Unix/MacOs,
  - (SRC) **cmake .. -G "NMake Makefiles"**,
    or (BIN) **cmake .. -DBIN_INSTALL=1 -G "NMake Makefiles"** for Windows

SRC	*Unix, MacOS* cd PolychronyToolset_<Version>/cmake cmake ..
	Windows cd PolychronyToolset_<Version>\cmake cmake .. -G "NMake Makefiles"

BIN	*Unix,MacOS* cd PolychronyToolset_<Version>/cmake cmake .. -DBIN_INSTALL=1
	Windows cd PolychronyToolset_<Version>\cmake cmake .. -DBIN_INSTALL=1 -G "NMake Makefiles"

- Generation (SRC): after configuring move to the PolychronyToolset_<Version> directory and execute the command "makePolychronyToolSet"

SRC	cd .. makePolychronyToolset

- To rebuild the documentation execute the following command line in the same directory:

SRC	makePolychronyToolset doc

5. Access (SRC+BIN)

Before using the Signal Toolbox first execute the following setup command in a fresh command window:

Unix, MacOS: SRC+BIN source PolychronyToolset_<Version>/PolychronyToolset_setup

Windows: SRC+BIN call PolychronyToolset_<Version>\PolychronyToolSet_setup.bat

To use the Signal Toolbox execute the command **signal** with appropriate parameters and options. A short description is given by the command:

```
signal -h
```

To use the Signal GUI execute the command **polychrony** and read the online user documentation.

```
polychrony
```

6. Documentation (SRC+BIN)

All the user documentation related to the Polychrony toolset including Signal Toolbox is available on the distribution site. This includes a general presentation of the Polychrony toolset architecture.

The source documentation (SRC only) is recursively accessible from:

Unix, MacOS

```
PolychronyToolset_<Version>/doc/html/index.html
```

Windows

```
PolychronyToolset_<Version>\doc\html\index.html
```