How to make an OSX task package

0. Philosophy

Only Fredde tags releases. We only make builds from tagged commits. We only release builds that build cleanly without errors or warnings. We only release builds that pass 100% of the unit tests.

1. Prerequisites

- You will need an Intel Mac, running OSX 10.5 or later.
- You will need to install the Developer Tools, which are found on your OSX DVD.
- You will need git installed, version 1.5 or later. See http://git-scm.com
- You will need autotools installed. See http://www.gnu.org/software/autoconf

2. Get the code

2.1 Clone the task git repository. It is important that this is a throwaway clone of the repository, because we will do (locally) destructive things to it.

```
$ git clone git://tasktools.org/task.git ~/task-package.git
...
$ cd ~/task-package.git
```

2.2 Making sure you have the right version of the code. This assumes you are building task 1.9.2, but any version number is interchangeable. Check out the correct branch, and make sure it is sitting at the correct commit, via a tag.

```
$ git checkout 1.9.2
$ git reset --hard v1.9.2
```

If there is an error in this step, stop immediately, capture the output, and report the errors.

3. Build task

3.1 First build the task binary. Note the "-j 2" tells make to use both cores in your dual-core Intel CPU, which means faster compiles. If you own a quad core Mac, use "-j 4". If you own a single core Mac, just type "make".

```
$ autoreconf -f
$ ./configure
...
```

If any errors are reported, stop immediately, capture the output, and report the errors.

```
$ make -j 2
```

If there are any errors, or there are any warnings generated by the compiler stop immediately, capture the output, and report the problem. You'll need to watch as it builds.

4. Build the test suite

4.1 The test suite exists to prove that we do not break task features from one release to the next. While this is not a perfect solution, it has saved us many times from releasing code that is inferior.

The first step is to modify the test suite Makefile to remove the Lua line. This is because we do not yet have dynamic detection of the Lua library for the unit tests.

```
$ cd ~/task-package.git/src/tests
$ vi Makefile
```

Any text editor will do, but look for this line (line 5):

```
LFLAGS  = -L/usr/local/lib -lncurses -llua
```

and change it to:

```
LFLAGS  = -L/usr/local/lib -lncurses
```

Now build the unit tests:

```
$ make -j 2
...
```

4.2 Run all the unit tests.

```
$ ./run_all
Skipping benchmarks

Pass:     4241
Fail:        0
Skipped:     0
Runtime:    86
```

The output should look something like this, with 0 failed, and 0 skipped tests. If there are any failures or skips, stop and mailed the log file, named 'all.log' to Paul & Fredde.

5. Assemble the parts

5.1 There is a script that copies all the necessary files (binary, man pages etc) in the right place, ready for packaging. Run this:

```
$ cd ~/task-package.git/package-config/osx
$ ./update
```

6. Adjust the package details

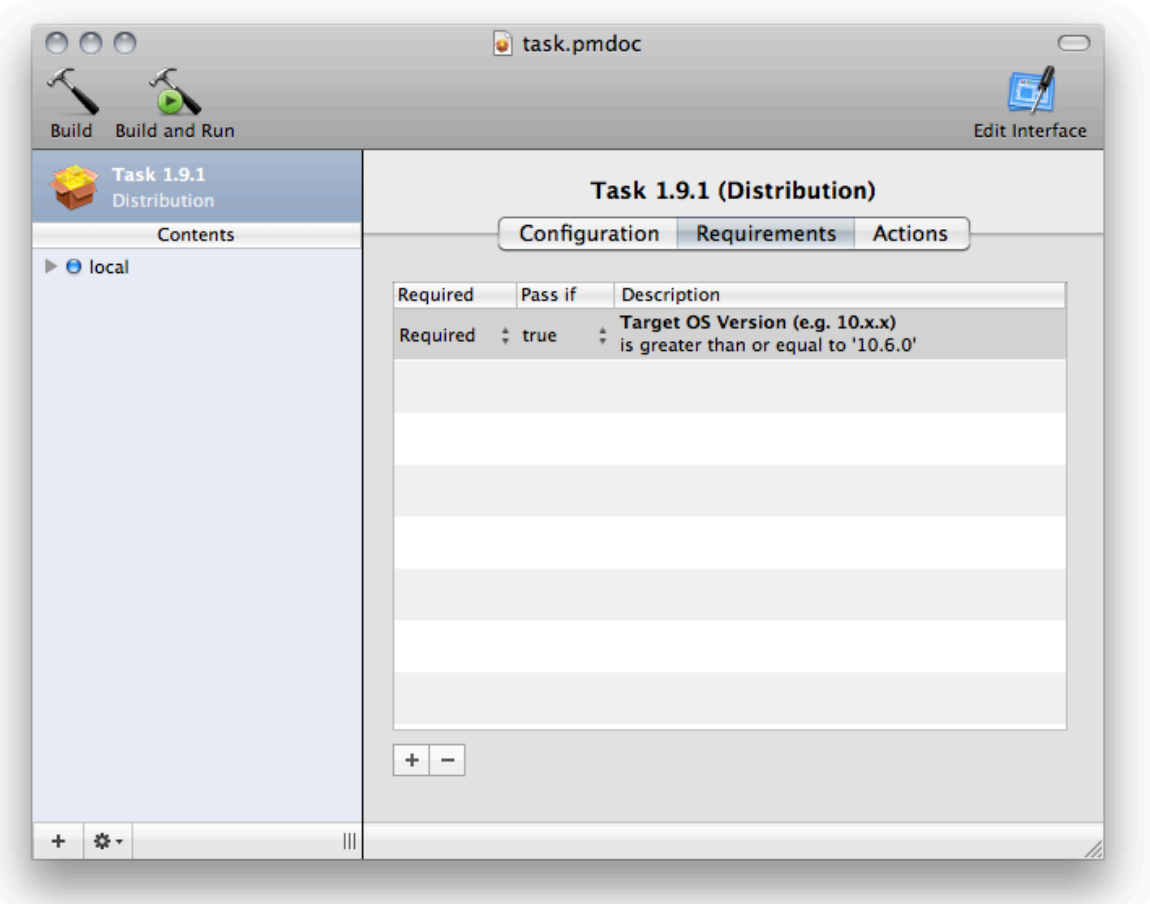
6.1 Launch the package manager.

```
$ open -a /Developer/Applications/Utilies/PackageManager.app
```

6.2 Close the 'Untitled' window that opens - we will be using a different file. Note that PackageManager is still running - it just has no windows.

6.3 Using the File -> Open menu, open the file

```
~/task-package.git/package-config/osx/task.pmdoc
```

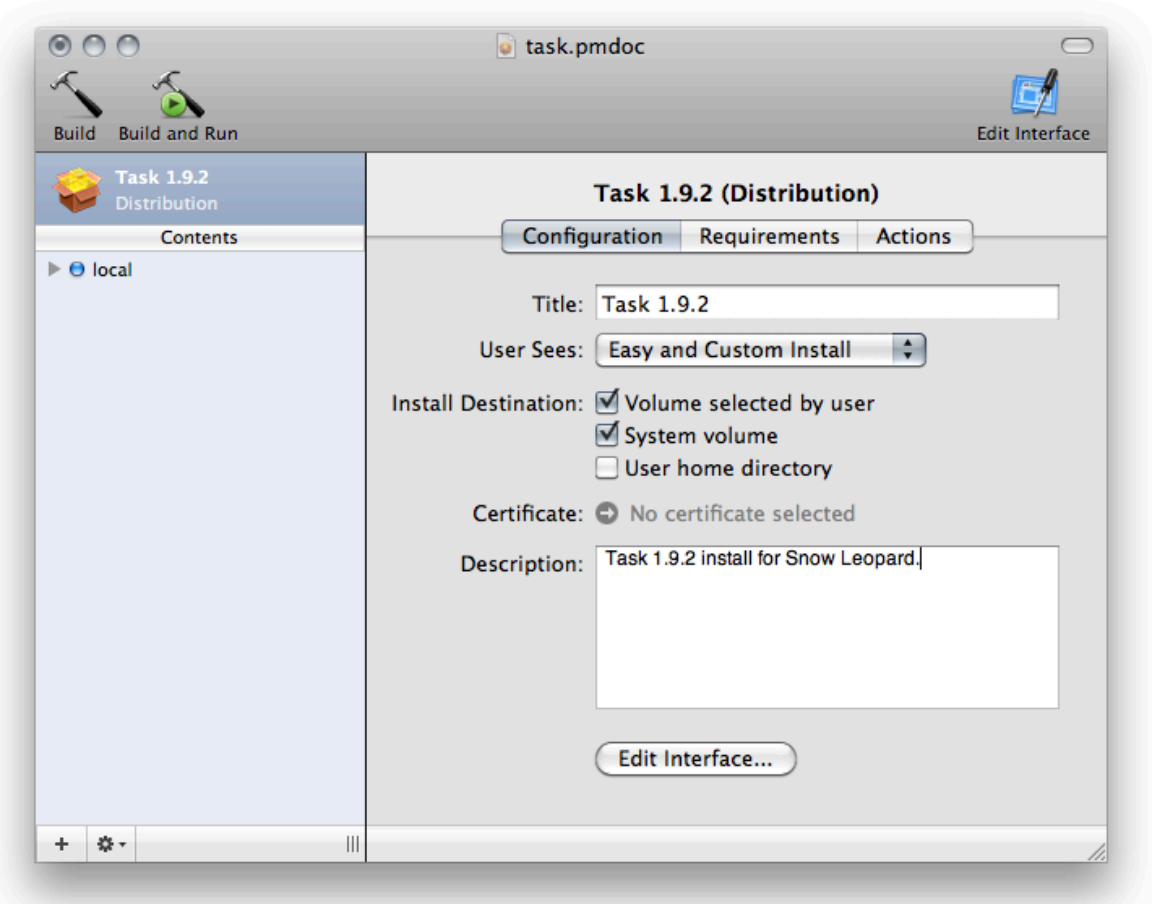


This is the file from the last time a package was created. It needs some adjustments. Start by clicking on the "Task x.x.x Distribution" with a package icon in the top left part of the window.

6.4 Click on the "Configuration" button/tab.

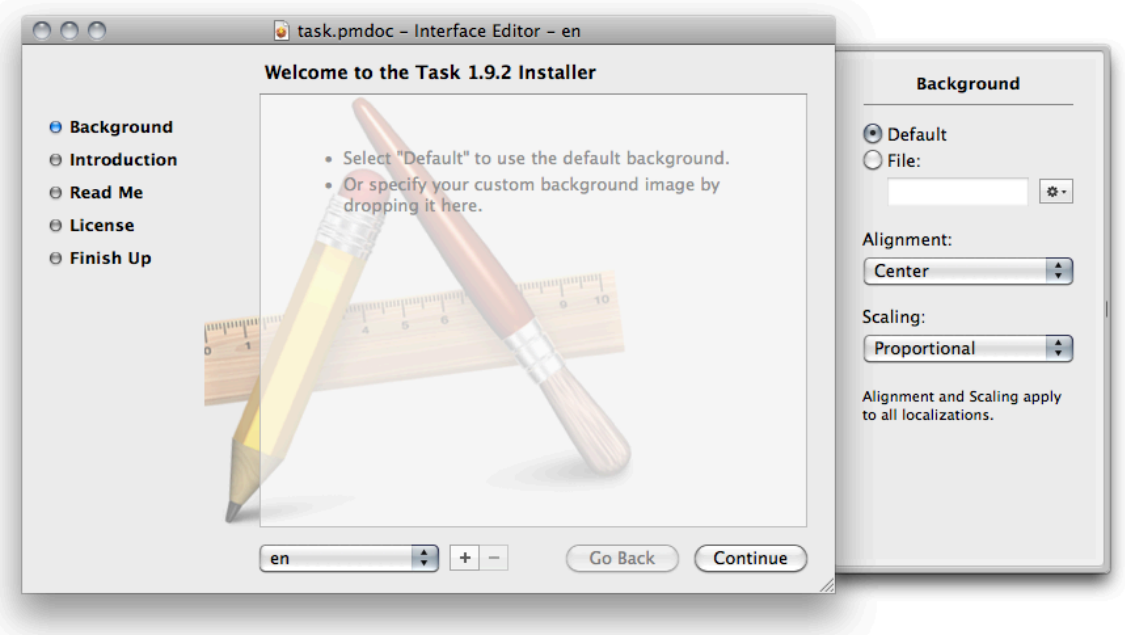
- Change the "Title" to "Task 1.9.2"

- Change the "Description" to "Task 1.9.2 install for Snow Leopard"

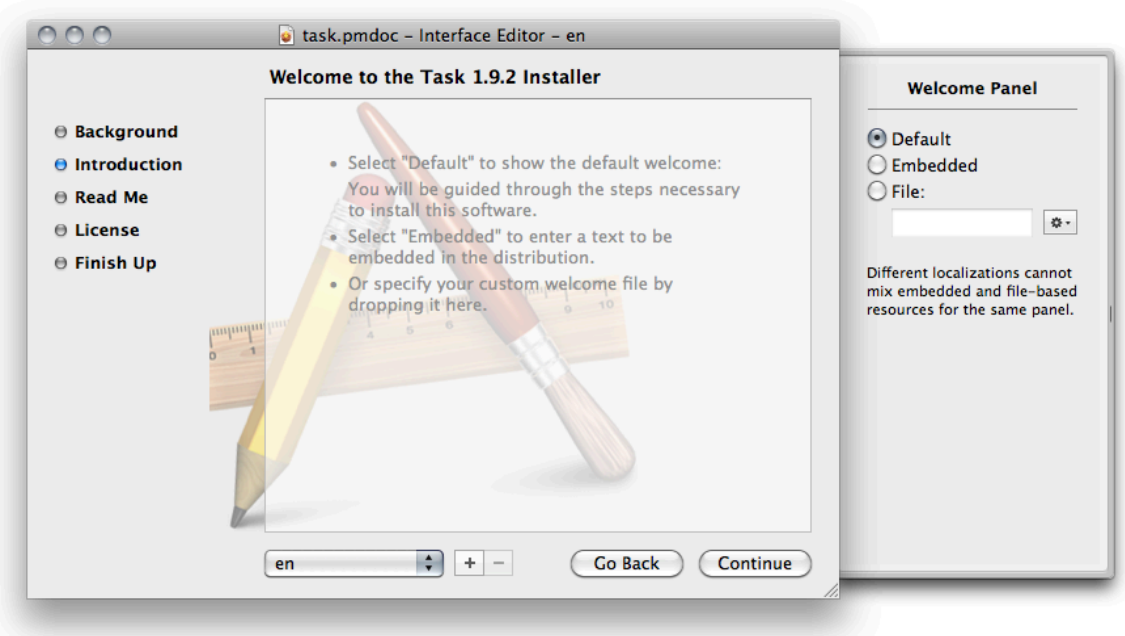


6.5 Click on "Edit Interface..."

There are 5 radio buttons on the left hand side - we will visit each and make changes. Click on "Background", make sure it matches the figure.

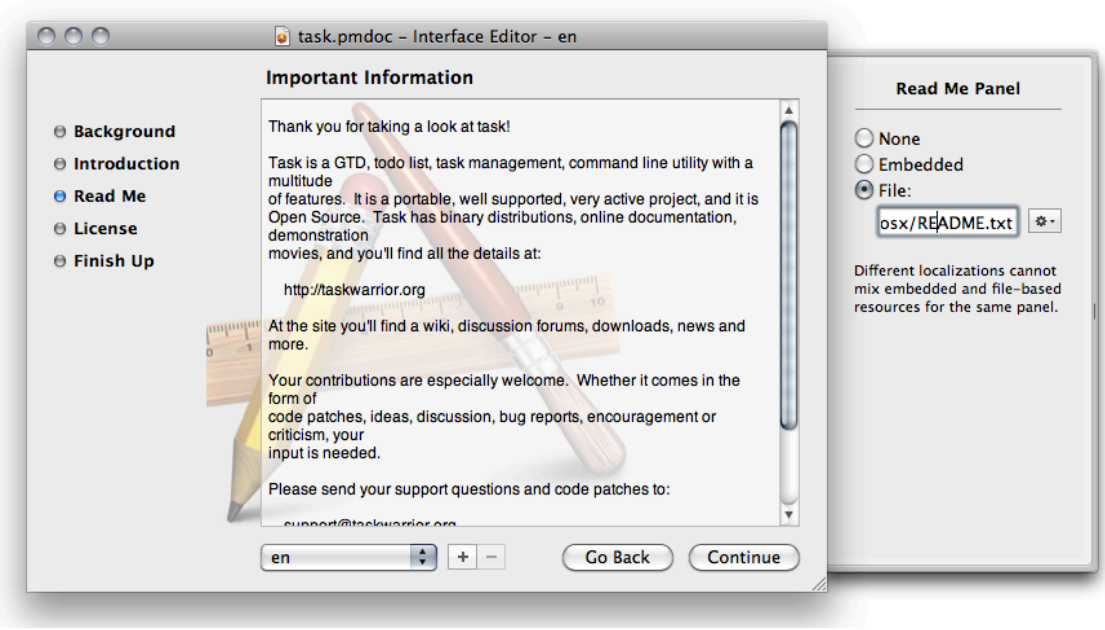


Click on "Introduction", make sure it matches the figure.



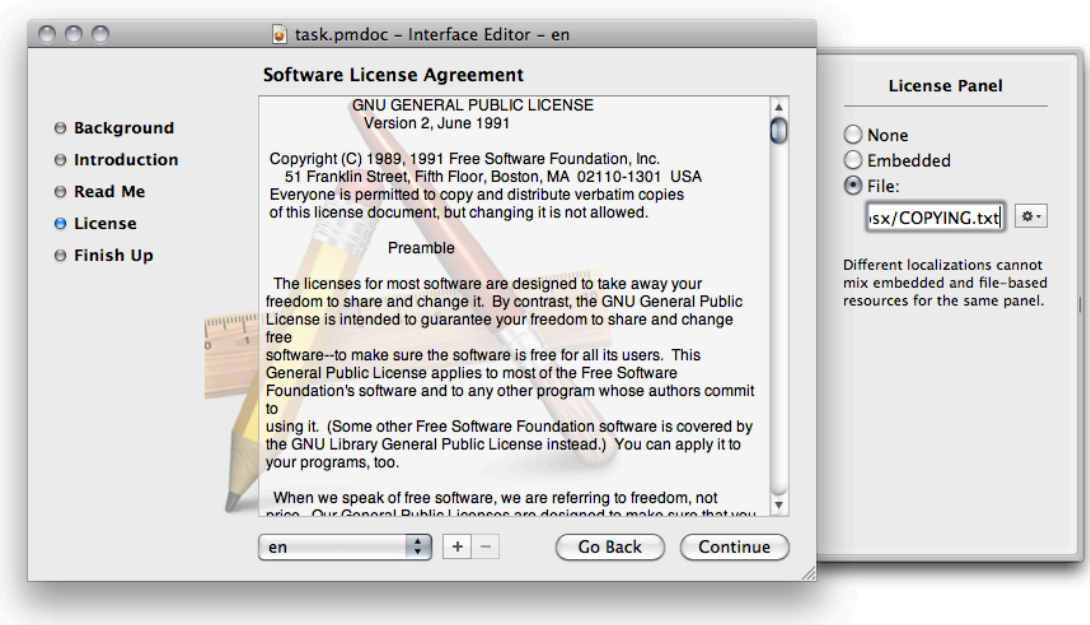
Click on "Read Me", and on the right hand side, under "Read Me Panel", click on "File" and select the file:

~/task-package.git/package-config/osx/README.txt

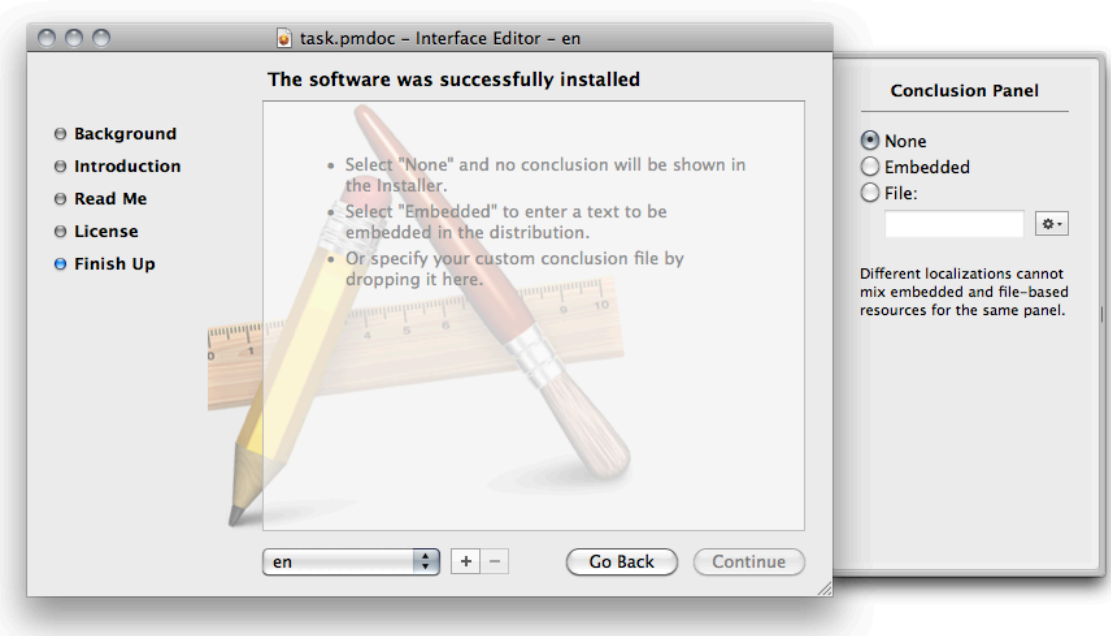


Click on "License", and on the right hand side, under "License Panel", click on "File" and select the file:

```
~/task-package.git/package-config/osx/COPYING.txt
```

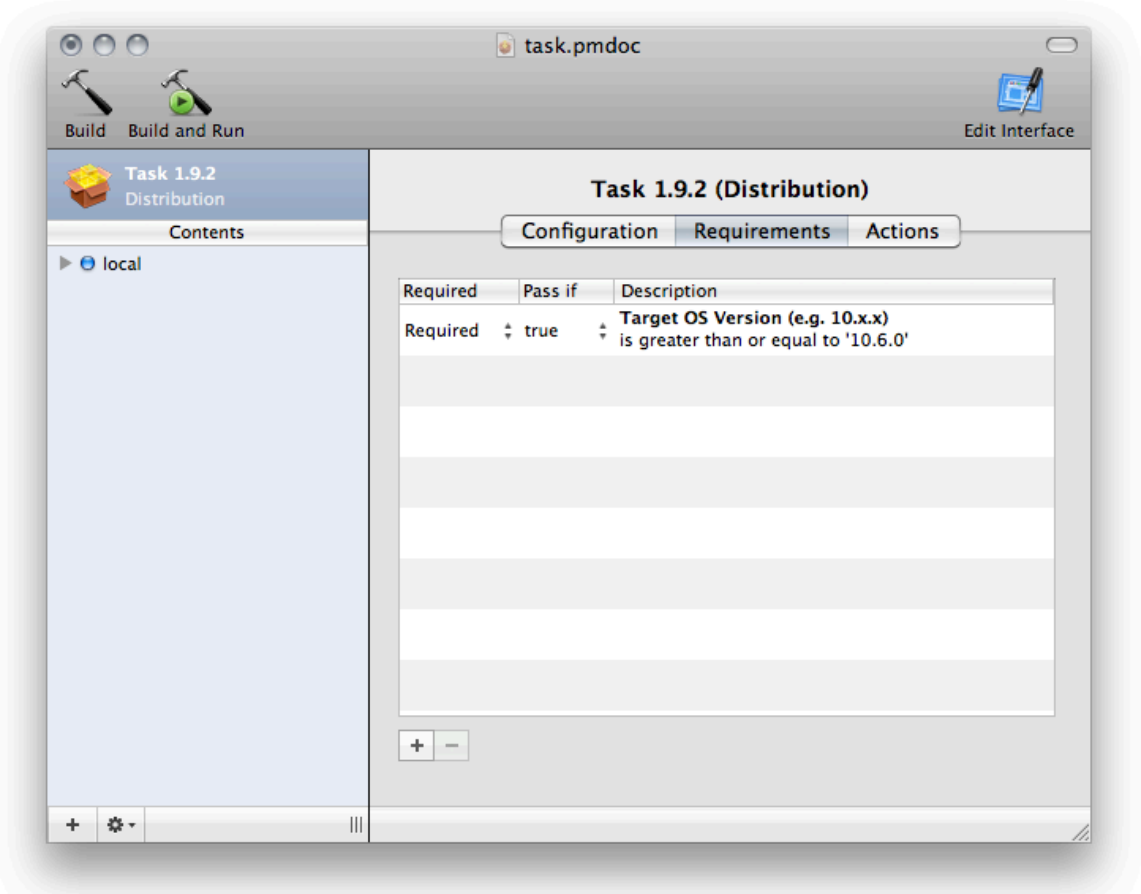


Click on "Finish Up", and make sure it matches the figure.

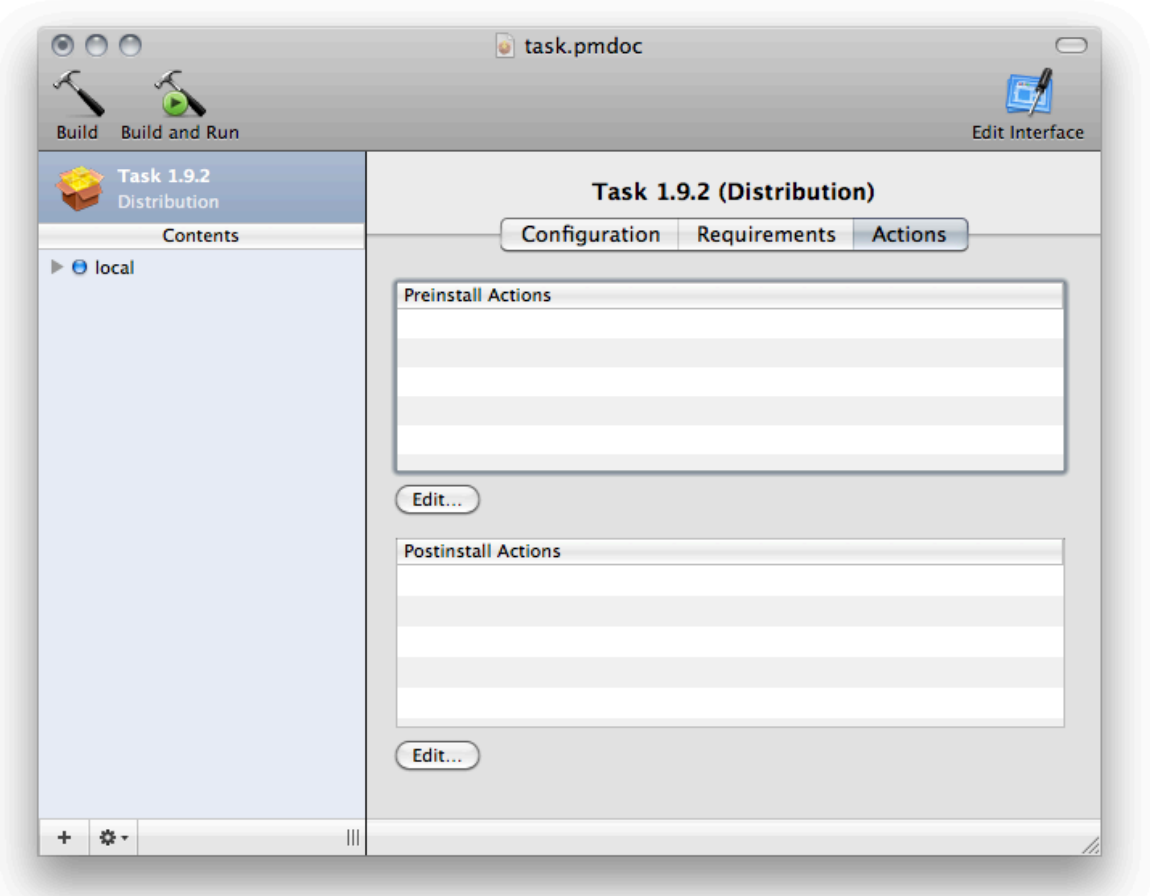


Close the Interface Editor window (it saves automatically).

6.6 Back in the "task.pmdoc" window, click on the "Requirements" tab/button, then click on the "+" button, and add a requirement rule as shown in the figure.

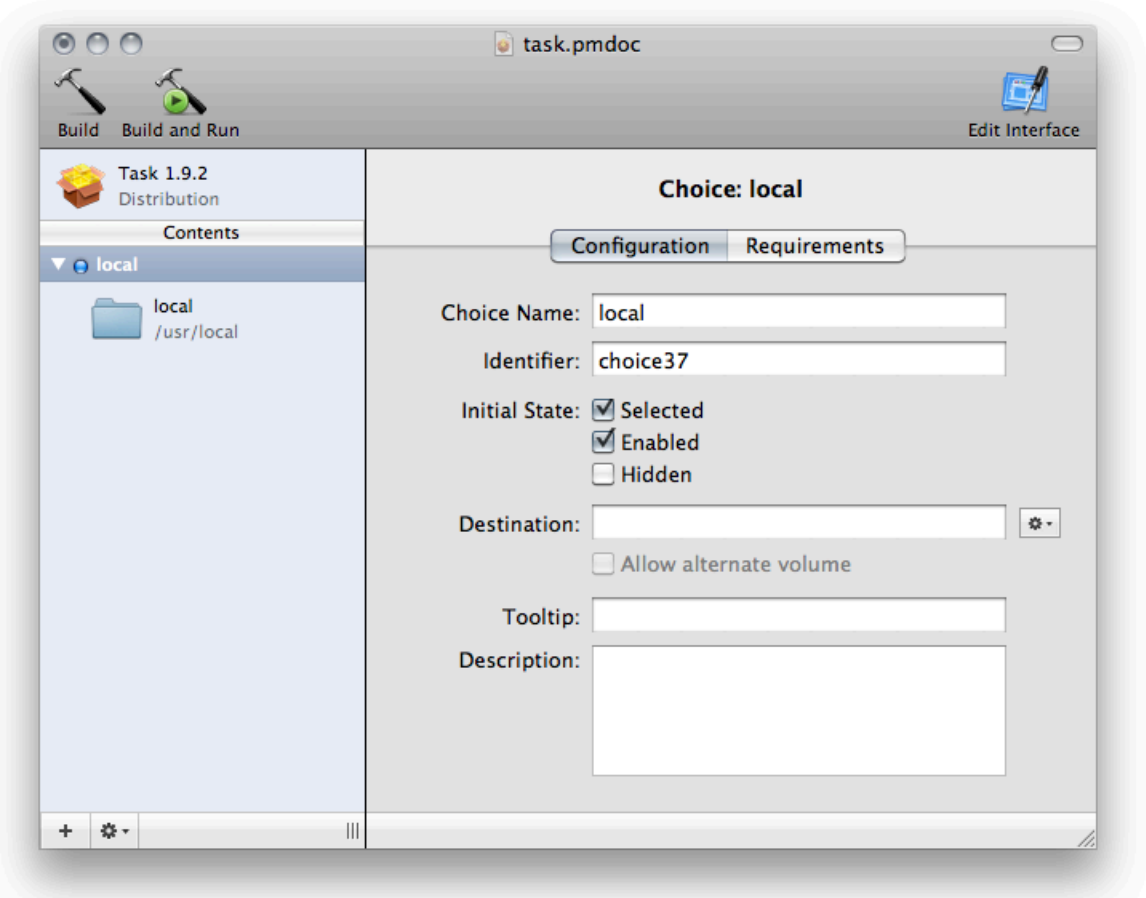


6.7 Click on the "Actions" tab/button and make sure it matches the figure.

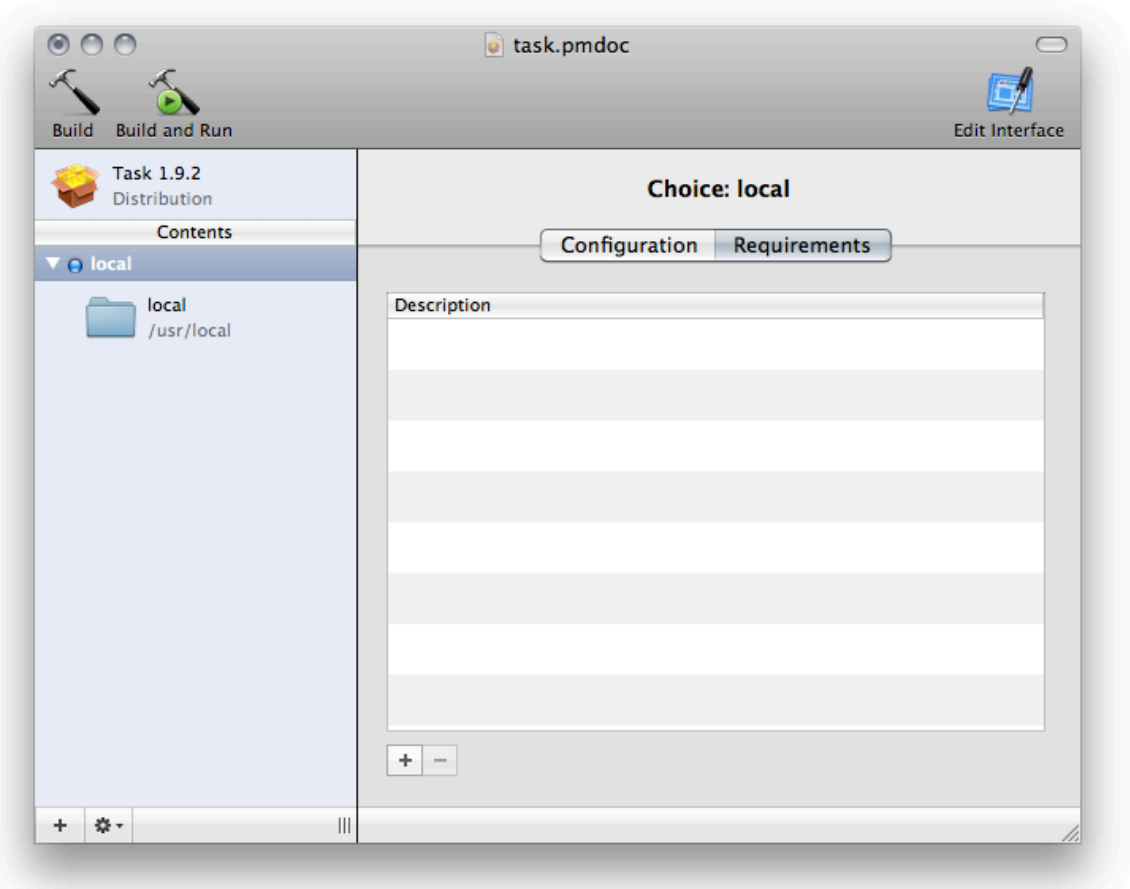


6.8 Click on the triangle next to the "local" item in the "Contents" vertical bar on the left to expand and show a folder called "local", with the path "/usr/local", but click on the "local" next to the blue radio button, not the one next to the folder. Then click on the "Configuration" tab/button.

- Change the "Choice Name" to "local"
- Leave the "Identifier" alone - it is automatic
- Make sure "Selected" and "Enabled" are checked, but "Hidden" is not

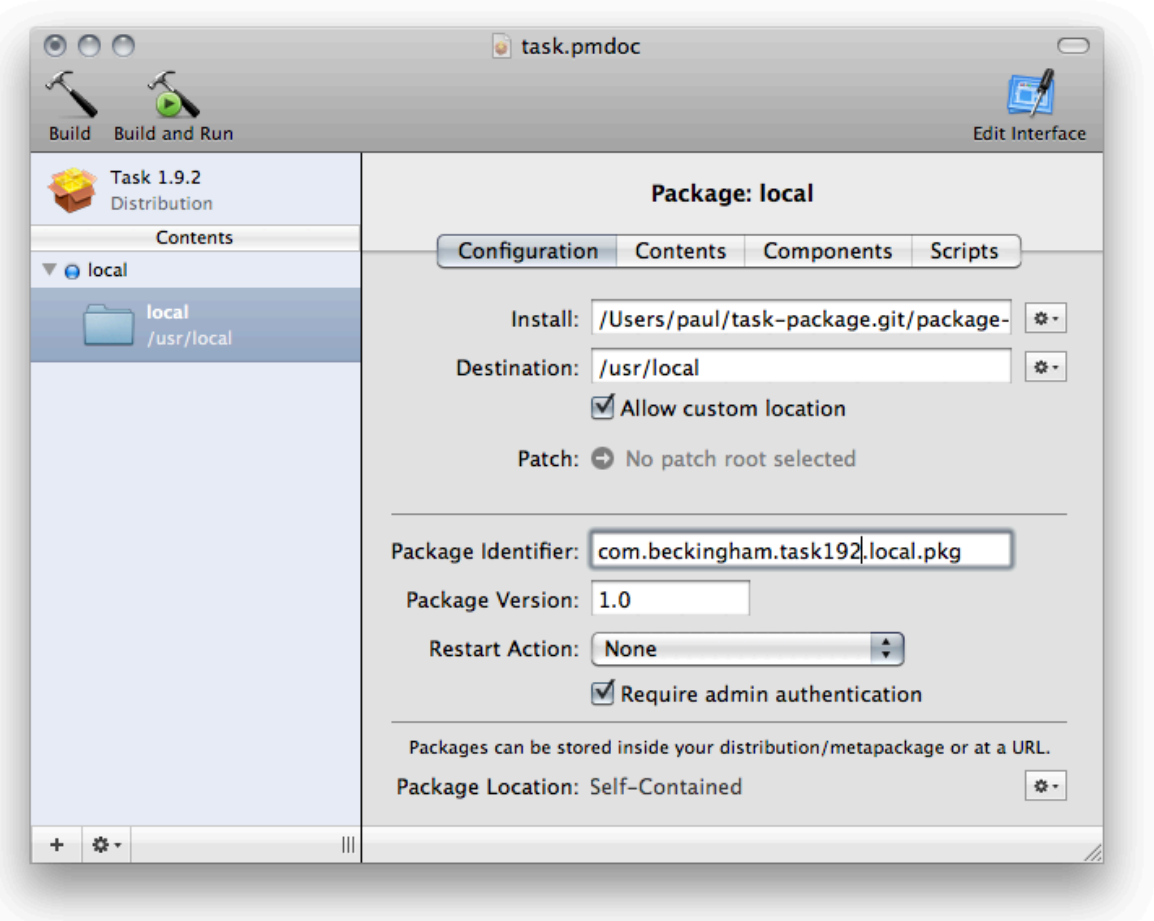


6.9 Click on the "Requirements" tab/button and make sure it is all blank.



6.10 Click on the blue folder on the left, which is labelled "local", and has a path of "/usr/local". Click on the "Configuration" tab/button.

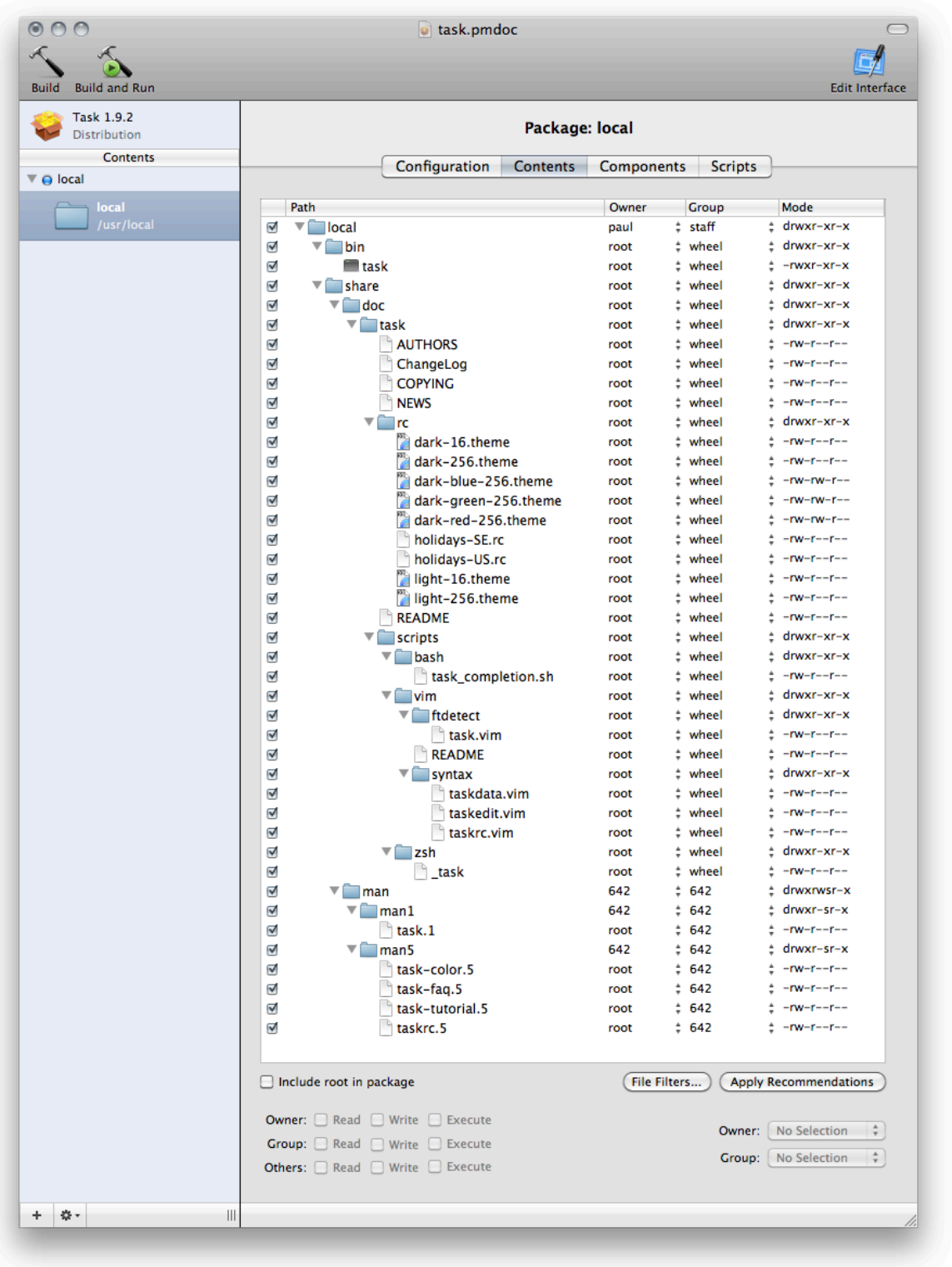
- Change the "Install" to ~/task-package.git/package-config/osx/local
- Make sure the "Destination" is "/usr/local"
- Make sure "Allow custom location" is checked
- Make sure the "Package Identifier is "com.beckingham.task192.local.pkg"
- Make sure the "Package Version" is 1.0. If you needed to make a subsequent OSX package, *for the same version of task*, then this number would be increased to show OSX that this package supersedes the earlier one
- Make sure "Restart Action" is "None"
- Make sure "Require admin authentication" is checked
- Make sure "PAckage Location" is "Self-Contained"



6.11 Click on the "Contents" tab/button.

- Click on all the triangles in the "local" folder to expand all directories
- Make sure "Include root in package is not checked"
- Click on the "Apply Recommendations" button

Make sure it matches the figure.



6.12 Click on the "Components" tab/button, make sure it is all blank.

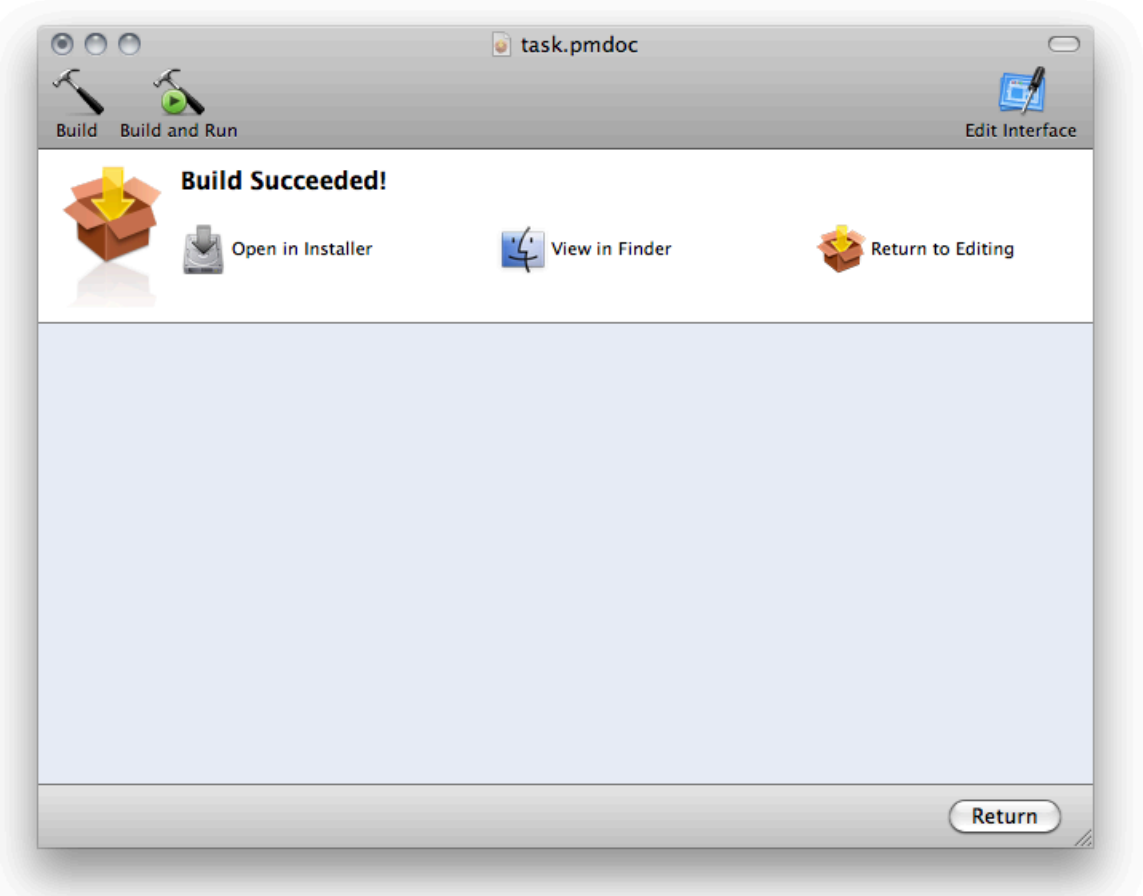
6.13 Click on the "Scripts" tab/button, make sure it is all blank.

7. Building the package

7.1 Click on the "Build" hammer icon to build the package.

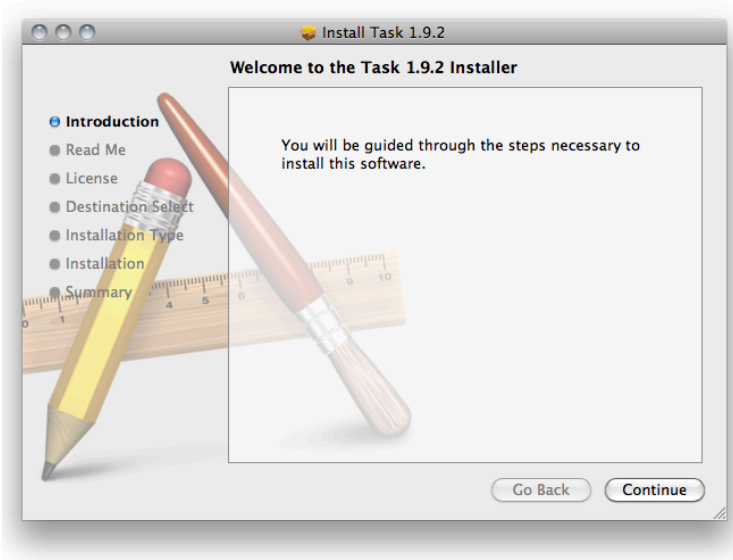
Provide a filename of "task-1.9.1-sl.pkg" for Snow Leopard (10.6), or "task-1.9.2.pkg" for Leopard (10.5), and save it somewhere, for example the Desktop.

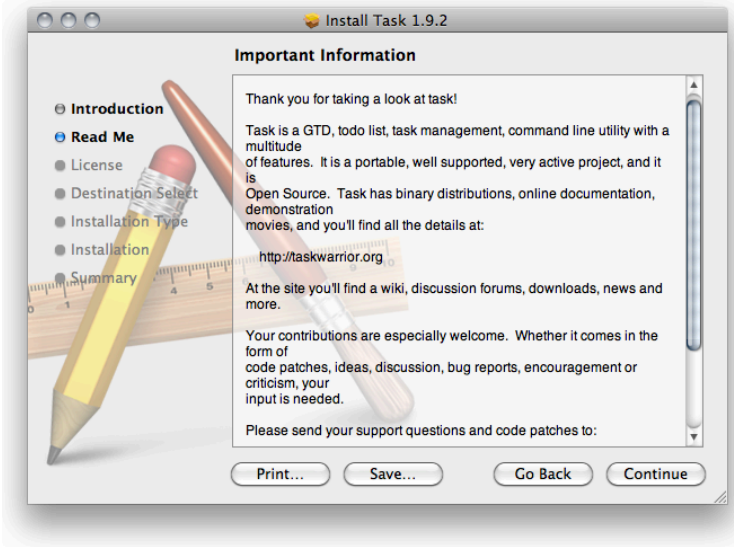
All should succeed. You can click on the "Return" button to end the build phase, and you can quit PackageManager, but make sure you save the changes you made, because you may need to go through the whole process again, if there is an emergency change, or the package is somehow corrupt.

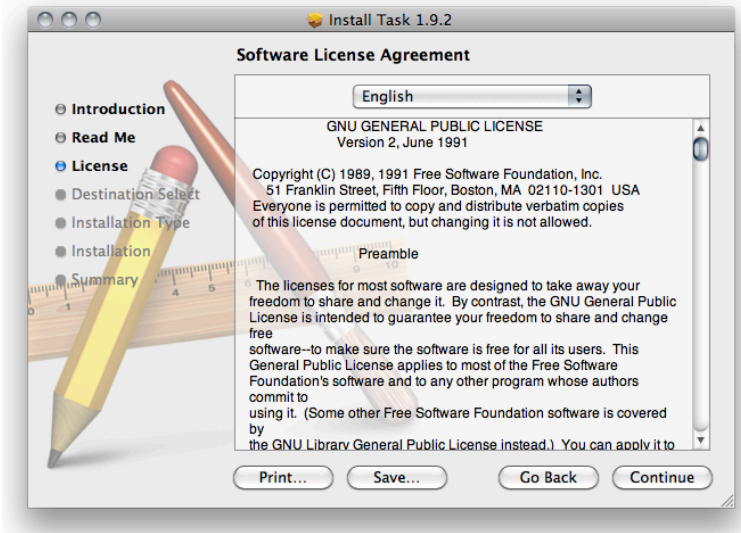


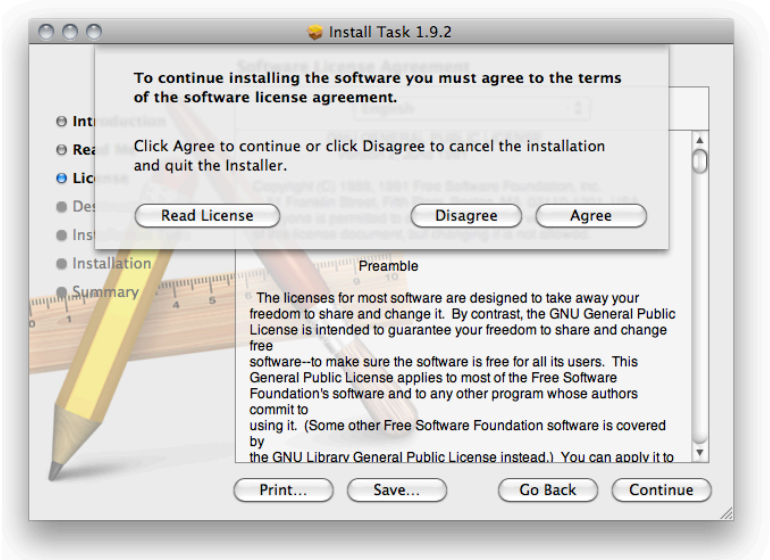
8. Test the package

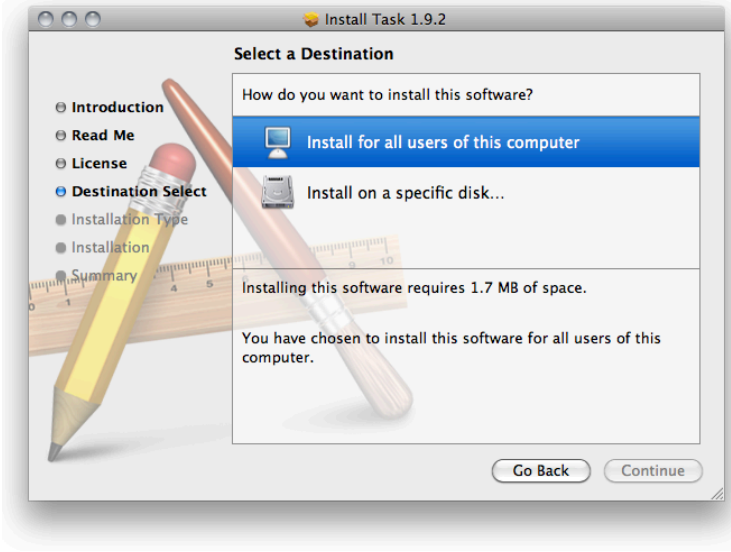
8.1 Double-click on the package you just created, and install task. You should see the README file in the UI, and the COPYING file on another page. It should succeed.

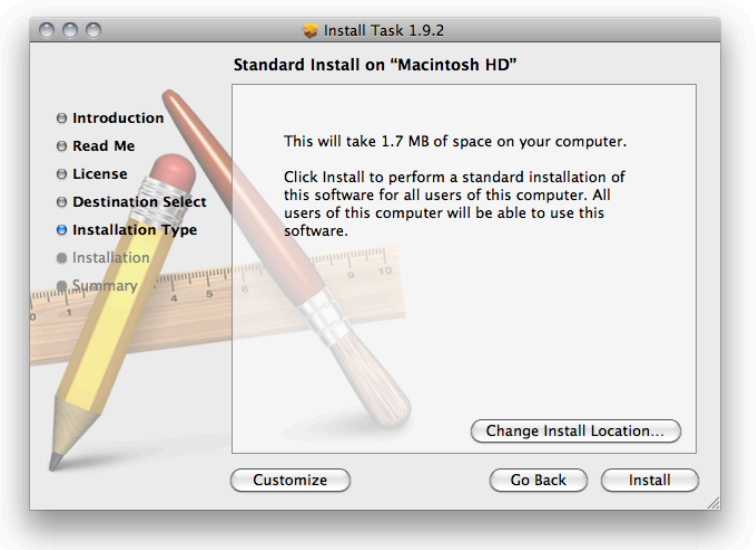

Install Task 1.9.2
Welcome to the Task 1.9.2 Installer
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Summary
You will be guided through the steps necessary to install this software.
Go Back
Continue

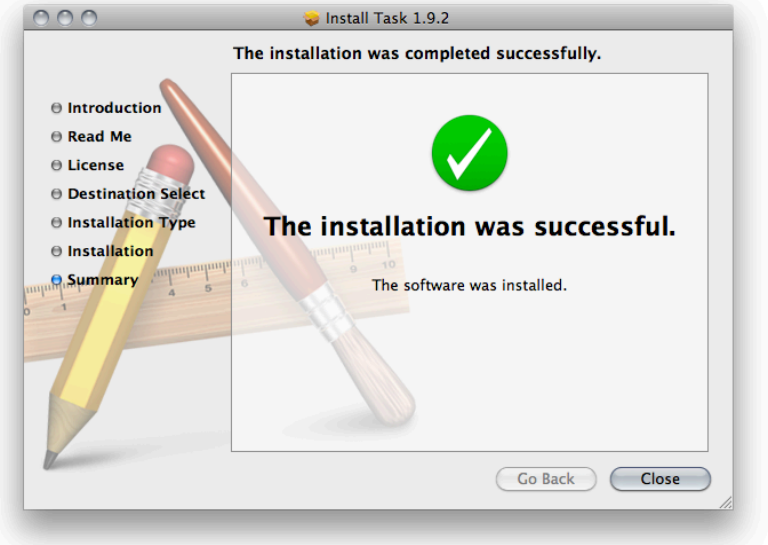

Install Task 1.9.2
Important Information
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Summary
Thank you for taking a look at task!
Task is a GTD, todo list, task management, command line utility with a multitude
of features. It is a portable, well supported, very active project, and it is
Open Source. Task has binary distributions, online documentation, demonstration
movies, and you'll find all the details at:
http://taskwarrior.org
At the site you'll find a wiki, discussion forums, downloads, news and more.
Your contributions are especially welcome. Whether it comes in the form of
code patches, ideas, discussion, bug reports, encouragement or criticism, your
input is needed.
Please send your support questions and code patches to:
Print...
Save...
Go Back
Continue


Install Task 1.9.2
Software License Agreement
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Summary
English
GNU GENERAL PUBLIC LICENSE
Version 2, June 1991
Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
Preamble
The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
Print...
Save...
Go Back
Continue


Install Task 1.9.2
To continue installing the software you must agree to the terms of the software license agreement.
Click Agree to continue or click Disagree to cancel the installation and quit the Installer.
Read License
Disagree
Agree
Installation
Summary
Preamble
The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
Print...
Save...
Go Back
Continue


Install Task 1.9.2
Select a Destination
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Summary
How do you want to install this software?
Install for all users of this computer
Install on a specific disk...
Installing this software requires 1.7 MB of space.
You have chosen to install this software for all users of this computer.
Go Back
Continue





8.2 Run the following commands to test the installation

```
$ /usr/local/bin/task version

task 1.9.2 built for darwin-ncurses
Copyright (C) 2006 - 2010 P. Beckingham, F. Hernandez.

Task may be copied only under the terms of the GNU General Public License,
which may be found in the task source kit.

Documentation for task can be found using 'man task', 'man taskrc', 'man
task-tutorial', 'man task-color', 'man task-faq' or at http://
taskwarrior.org

$ man task
...
```

```
...
task 1.9.2              2010-05-22                task 1.9.2
```

The man page should list 1.9.2 as the version number, but the date will be different.

9. Email the package to Fredde.
