

Odie and Sherpa

Building Extensions from Scratch

What is Odie?

- A build environment for Tcl/Tk and its extensions
- Focused on building tools from source
- Tailored to wrap compiled extensions for the Teapot

What is Sherpa

- A command line utility which uses recipes to build extensions
- Built by the Odie bootstrapping process
- A self-contained executable that can run outside of Odie

Live Demo

(Ignore the man behind the curtain)

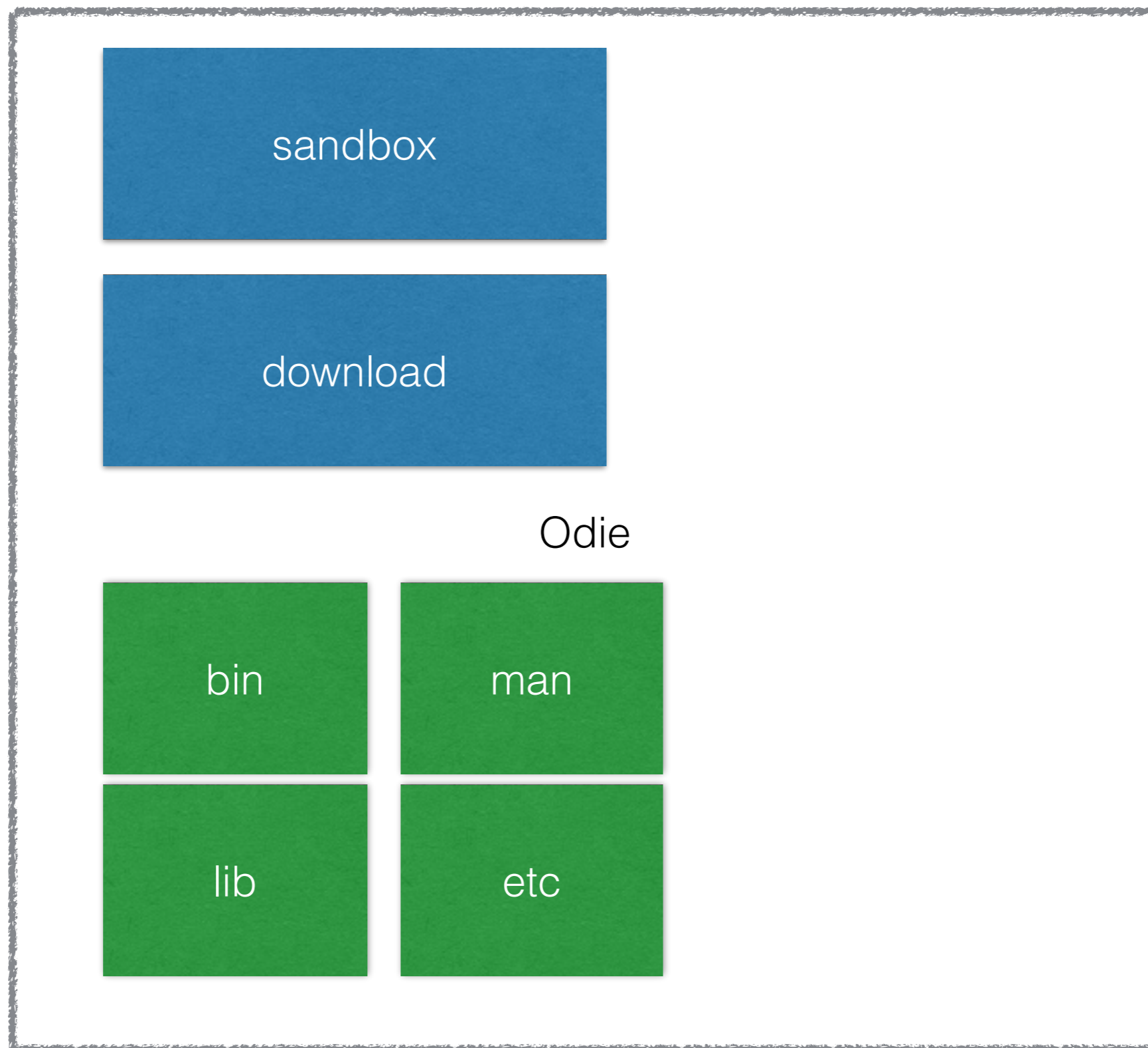
Installing (Unix)

```
mkdir -p ~/odie-demo/sandbox/odie
cd ~/odie-demo/sandbox/odie
fossil open ~/odie/download/odie.fos
./configure \
    -prefix=$HOME/odie-demo \
    -download=$HOME/odie/download
    -enable-cocoa=no
make install
```

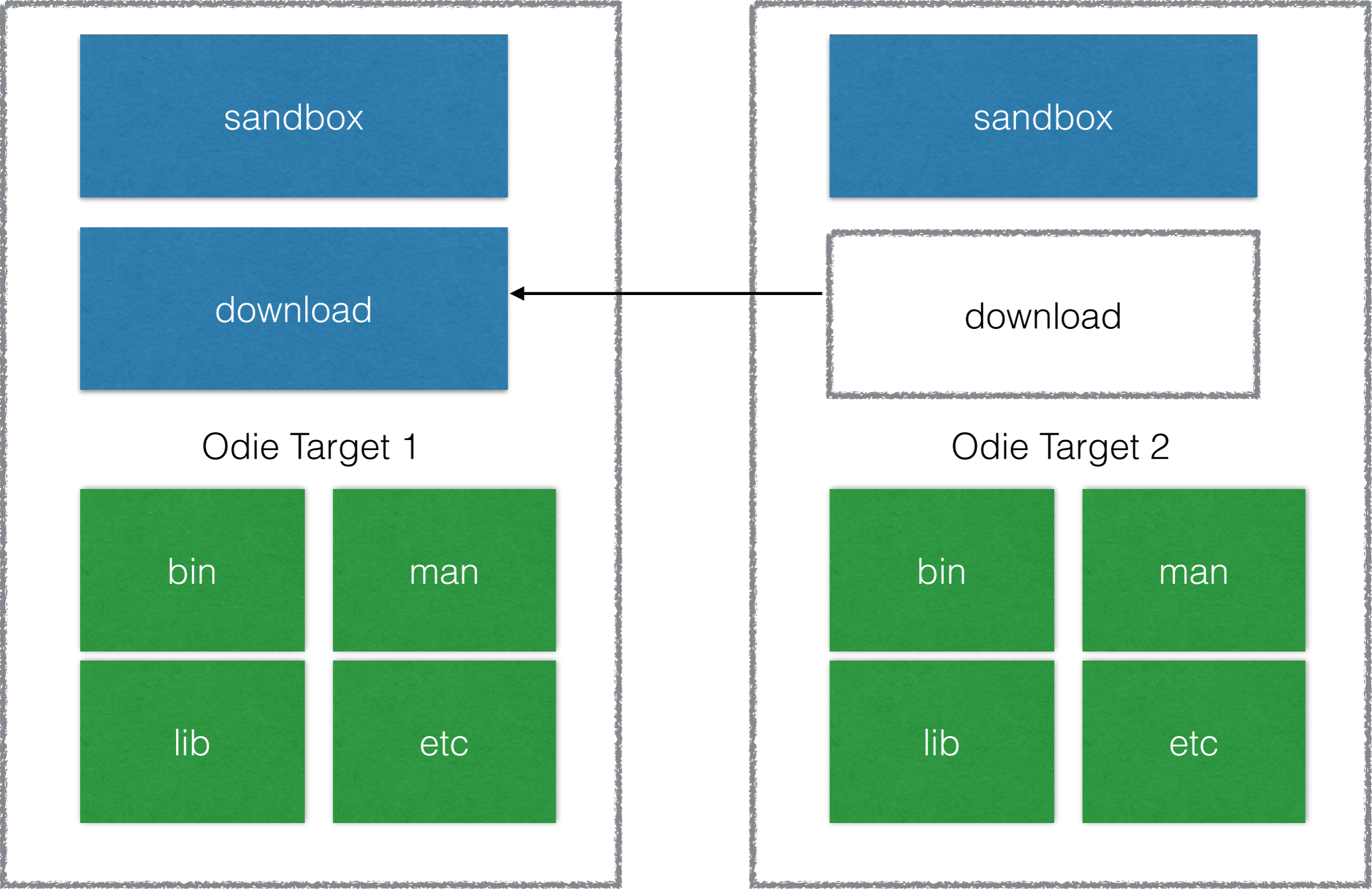
Installing (Windows) Inside MSYS/MinGW

```
mkdir -p c:/odie-demo/sandbox/odie  
cd c:/odie-demo/sandbox/odie  
fossil open c:/odie/download/odie.fos  
./configure \  
    -prefix=c:/odie-demo  
make install
```

Odie File Structure



Odie File Structure



Fossil

Tcllib
Canvas3d
Tklib
Taolib

Git

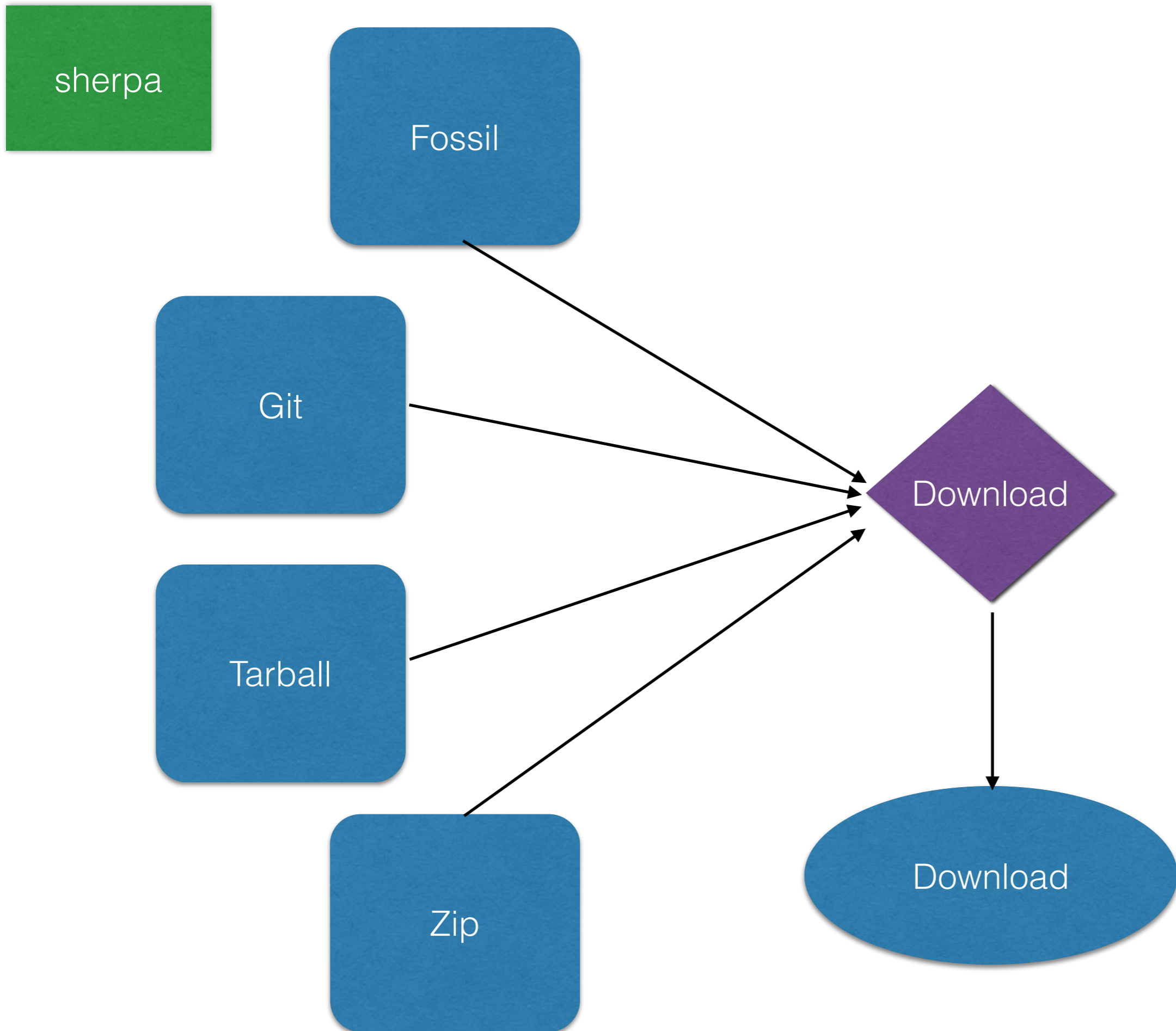
VecTcl
Steve Haskala's Stuff
Critcl

Tarball

TkTable
TkImg
Sqlite

Zip

Twapi



sherpa

Sandbox

Unpack

Download



sherpa

Sandbox

Compile



sherpa

Sandbox



Install



Temp Location



Build
Teapot



Local Teapot

sherpa

Teapot
Service



Download



Local Teapot

sherpa

Local Teapot



Install



Odie

Local
Teapot

tclsh

wish

tcllib

critcl

Odie

basekit

sherpa

TclApp

It makes tons of Julianne Fries!!

Local
Teapot

Pkgs

tclsh

wish

tcllib

critcl

Odie

basekit

sherpa

TclApp

Package
Manifest

VFS

How does it work?

(Very well, thank you
very much...)

Odie

- Distributed via Fossil
- Autoconf
- Shell Scripts to Bootstrap Tcl
- Tcl scripts to build the rest

Sherpa

- ZipVFS Self-Contained Application
- Uses bits of Tcllib
- Recipes are written in a Domain Specific Language (DSL)
- The DSL is written in Tao

Sample Recipe

```
::sherpa::recipe tclconfig {  
  fossil_url http://core.tcl.tk/tclconfig  
} {  
  superclass \  
    sherpa.distribution.fossil sherpa.module  
}
```

Sample Recipe

```
sherpa::recipe tdom {  
  package_binary 1  
  package_binary_tk 0  
  git_branch trunk  
  git_url https://github.com/tDOM/tdom  
  package_name tdom  
  package_version 0.8.3  
} sherpa.module.tea_git
```

Recipes

- Distributed in the Odie fossil repository
- Packages with no recipe are retrieved from upstream teapots
- Local config files can add new recipes or modify existing recipes

Future Direction

- Create a web-editable recipe repository
- Devise a mechanism for distributions to populate their own customizations