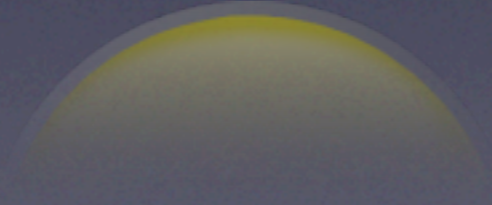
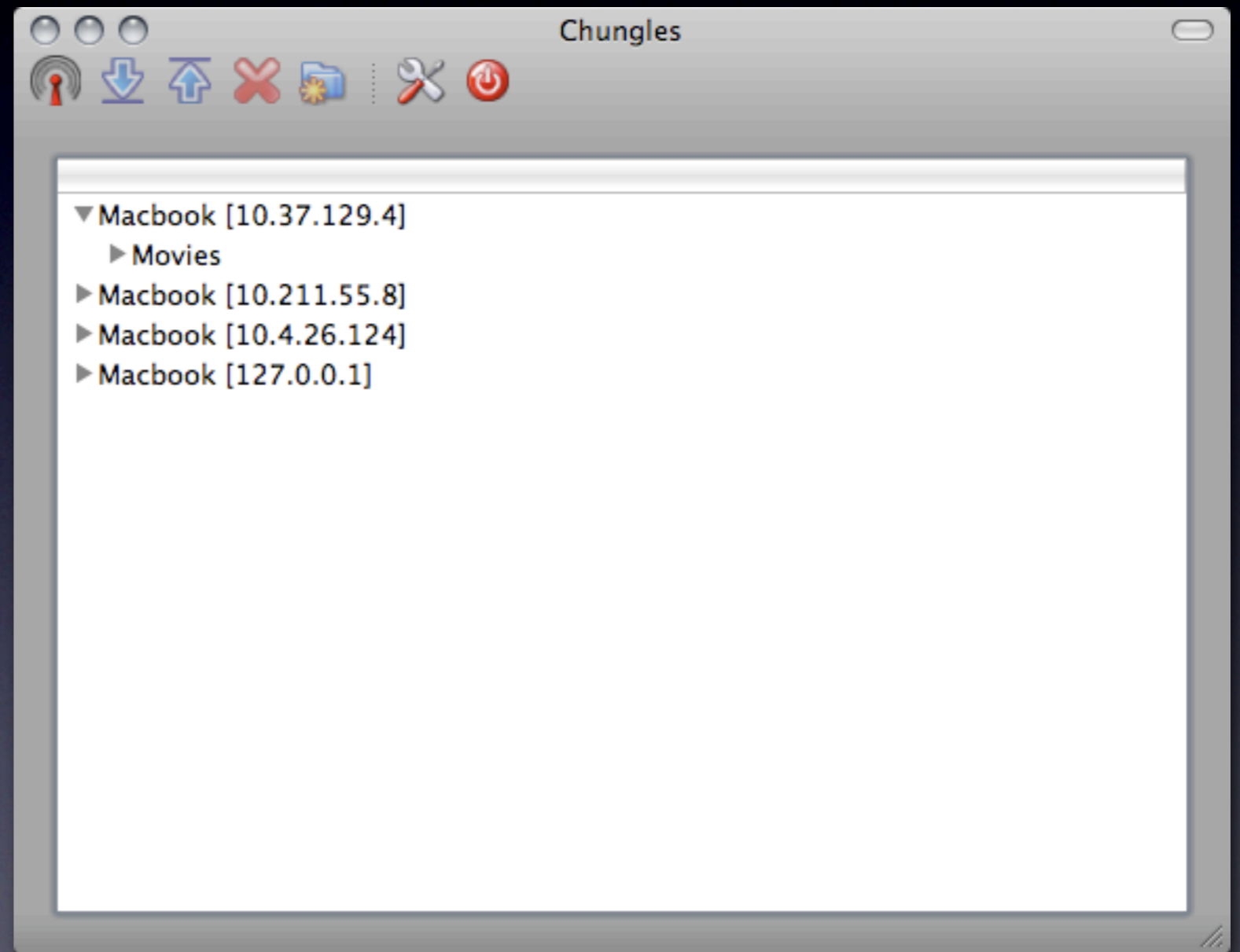


# Chungles



# Overview

- Allows users to send from one workstation to another
- Simple interface
- Cross-platform



# Framework

- Application is three major components:
  - Core - basic network functionality
  - Plugin - interface for core through plugins
  - Application - binds together core and plugins to run as application

# Core

- mDNS responder
- TCP server/client
- Multicast server/client

# Discovery

- JmDNS library used
- Publishes name of client and IPv4 address
- Binds to each active network adapter

# Server/Client

- Binds to TCP
- Spawns thread upon connection
- Parses binary commands
- Very simple commands exist at the moment

# Multicast Server/Client

- Clients listen on multicast channel
- Upon multicast transfer initiated:
  - Clients on network receive transfer to specified multicast drop path
  - TCP connection for dropped packets
  - Best case:  $O(1)$ , Worst case:  $O(n)$

# Plugins

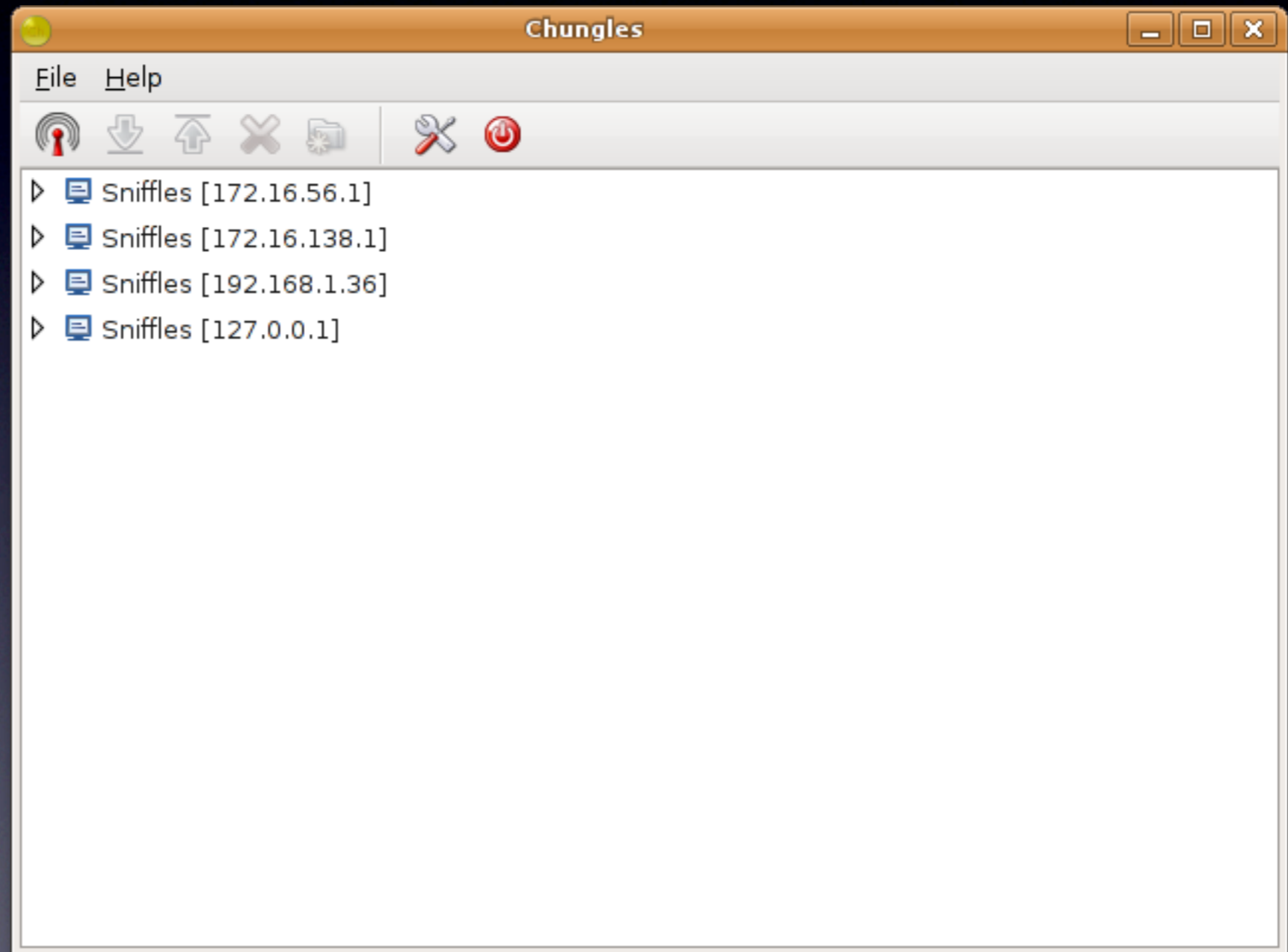
- Two types currently:
  - UI - user interfaces created by plugins
  - Other - any other plugin here (e.g. local VFS, notifications)

# Plugins (cont.)

- Plugins are bundled in JARs with metadata
- When loaded, each gets their own thread to prevent halting app.
- VFS class provided to allow hierarchal FS
  - e.g. /Chungles node[127.0.0.1]/share/file
- Current Plugins:

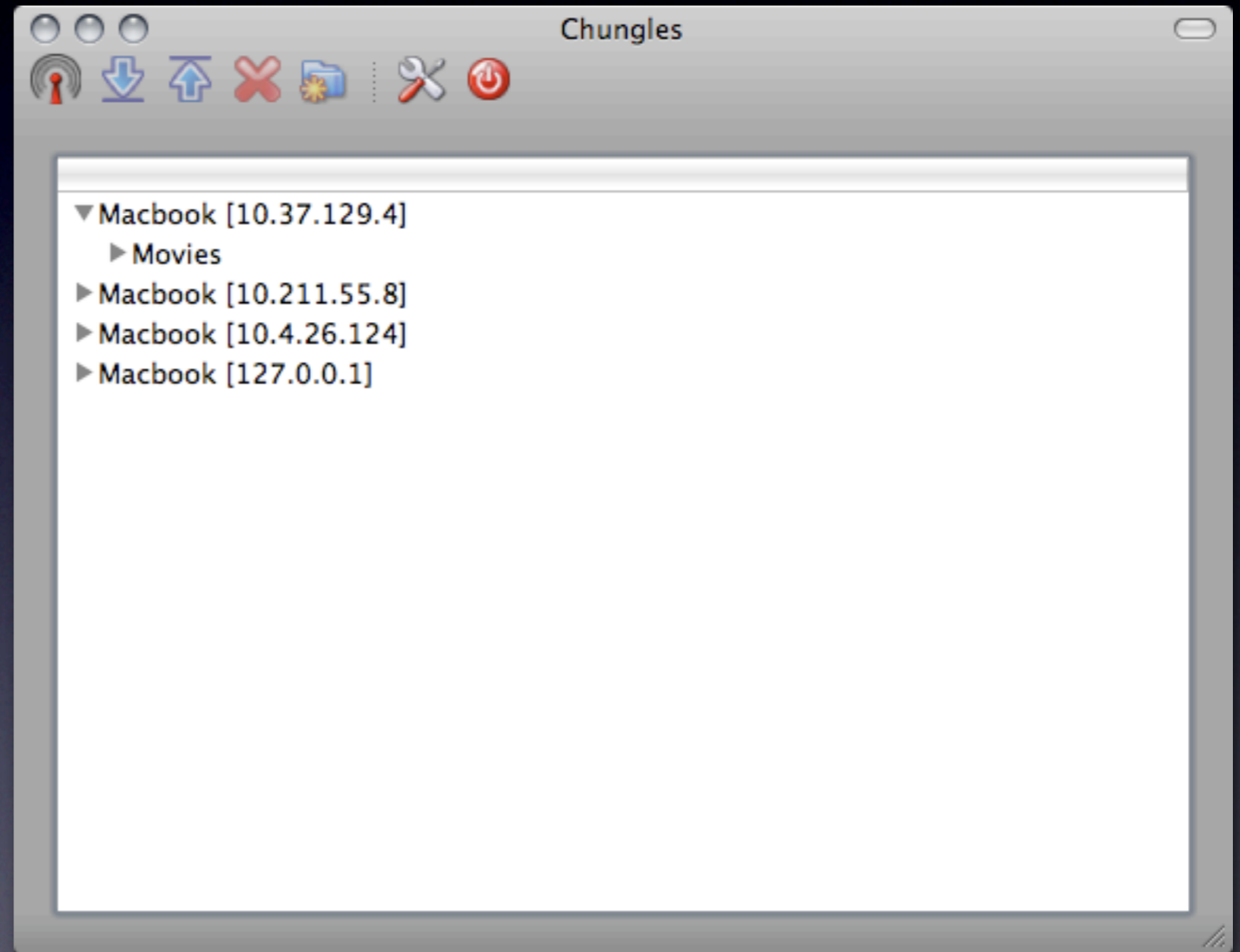
# SWT

- Cross-Platform native widgets
- Not ugly like Swing
- Works on Mac, Windows, Linux
- SWT on mac needs main thread, Chungles needs main thread -- broken on mac
- So.....



# Cocoa

- Requires JVM to be invoked by Cocoa application in separate thread
- Registers methods with Java plugin code to callback to Obj-C/Cocoa code
- Cocoa application invoking Java and calling back



# Future Plugins

- Growl - notifications when transfers complete on mac
- Libnotify - same with Gnome
- WebDAV - providing a way most platforms could mount Chungles to local VFS
- Python - Everyone loves Python -- python plugins through jython

# 0.4

- Presentation has been on future release, not current
- Current is simply Core+App+SWT in one
- Status:
  - Framework - done
  - Core - minor fixing, but working

# Status (cont.)

- Plugins:
  - SWT - done
  - Cocoa - mostly finished
  - Growl/Libnotify - code exists, wouldn't take long
  - WebDAV - proof of concept written, volunteers?
  - Python - Volunteers?

# Developers, Developers, Developers

- I am one man team
- Could use help
- Best way to help? Submit bugs, fix bugs, submit patches, submit plugins

# Demo and Questions