

A Cross-platform Version of Photosphere Based on wxWidgets

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Motivation

- Existing browsers are divided in two camps:
 - File browsers with no cataloging features
 - Catalogers with no file browsing features
- None of the existing browsers support HDR
 - High dynamic range imaging considered too special-interest by most software makers
- Philosophical disagreements with the status quo too numerous to mention

Goals

- Browsing High Dynamic Range Images
 - *Radiance* RGBE format
 - TIFF LogLuv, 16-bit, and float formats
 - Making HDR images from bracketed exposures
- Maintaining Catalog Information
 - Subjects, keywords, albums, comments, etc.
- Tracking Image Files
 - Leave file management & modification to user

Realized Features

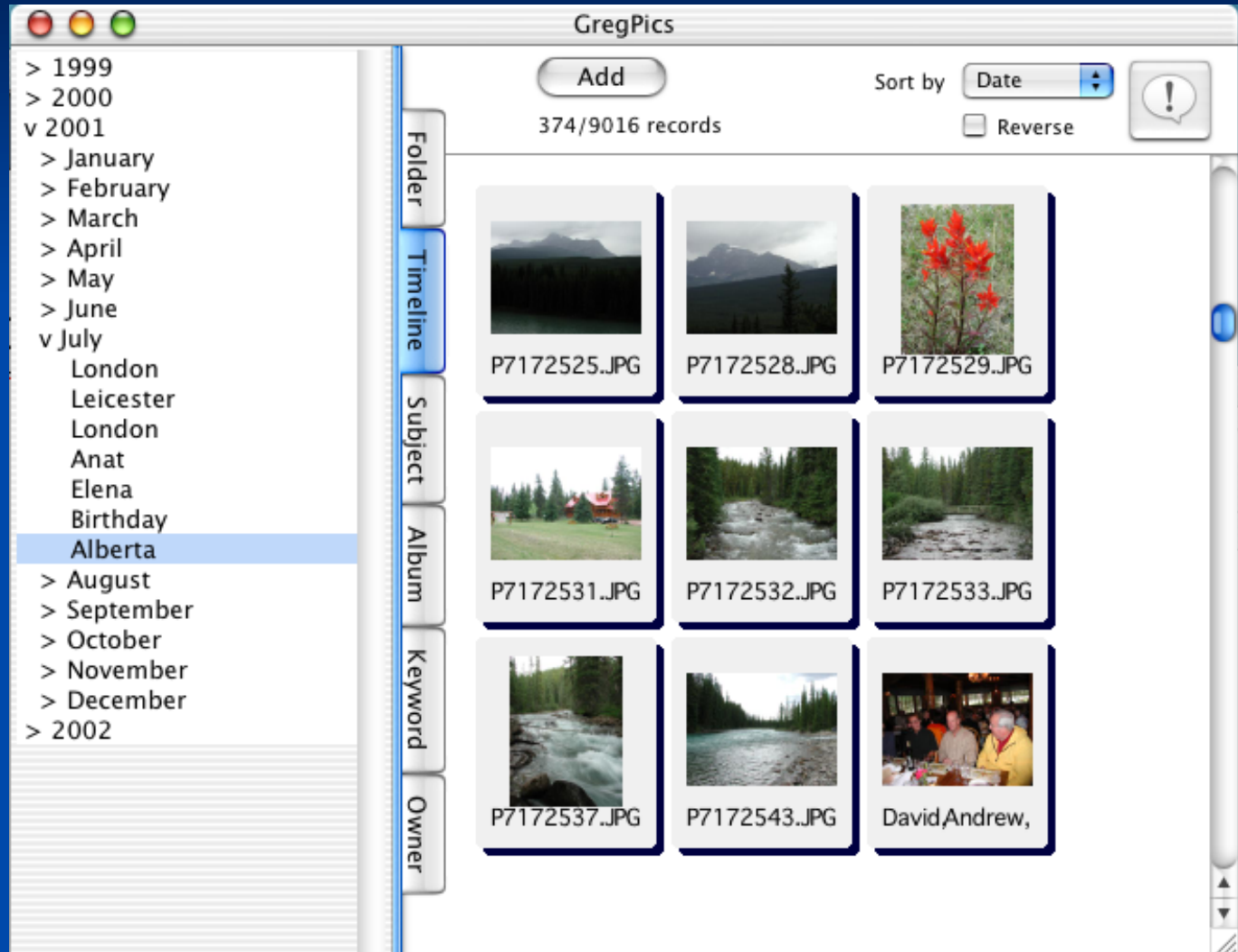
- Fast, interactive response
- Thumbnails accessible when images are not
- Interprets Exif header information
- Builds photo albums & web pages
- Displays & edits image information
- Provides drag & drop functionality
- User-defined database fields

Unrealized Features

- Accurate color reproduction on all devices
- Plug-in interface for photo printing services
- More supported image formats
 - Currently JPEG, TIFF, *Radiance*, OpenEXR, BMP (read-only)

Browser Layout

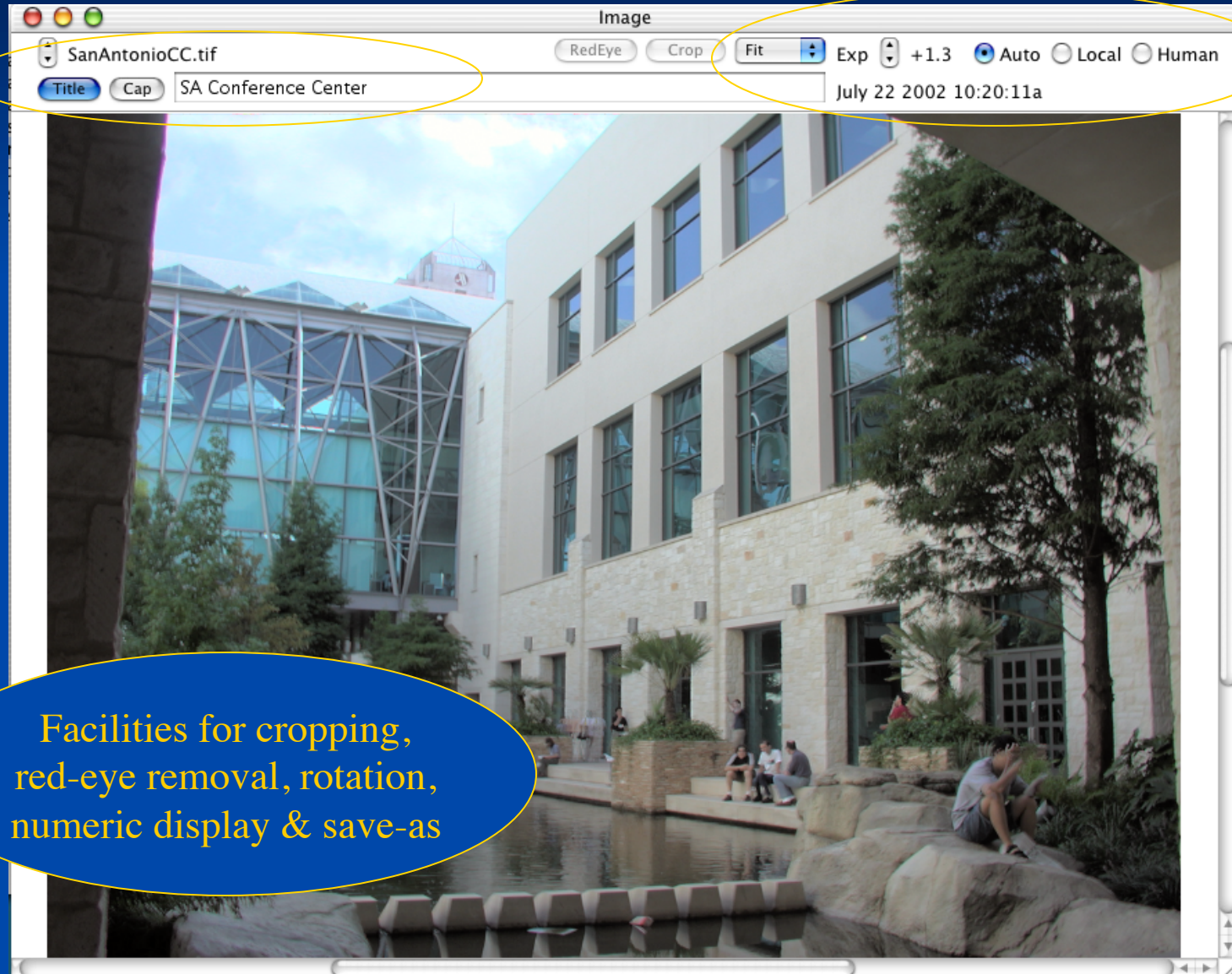
Selector Tabs
permit multiple
image selection
from file system
or catalog DB



Thumbnail sizes up to 320-pixel resolution preview

Viewer Layout

Handy settings of title & caption



Facilities for cropping,
red-eye removal, rotation,
numeric display & save-as

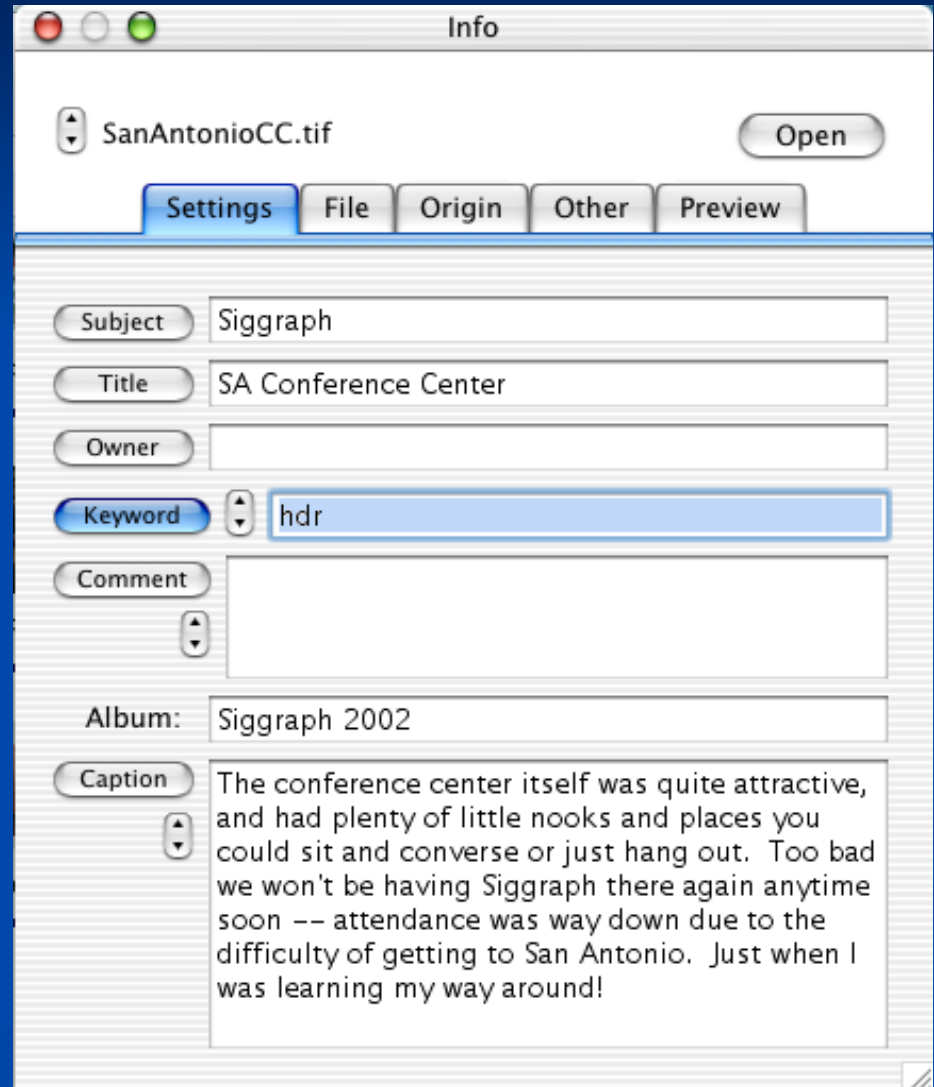
Controls for display size and tone-mapping

Info Window Layout

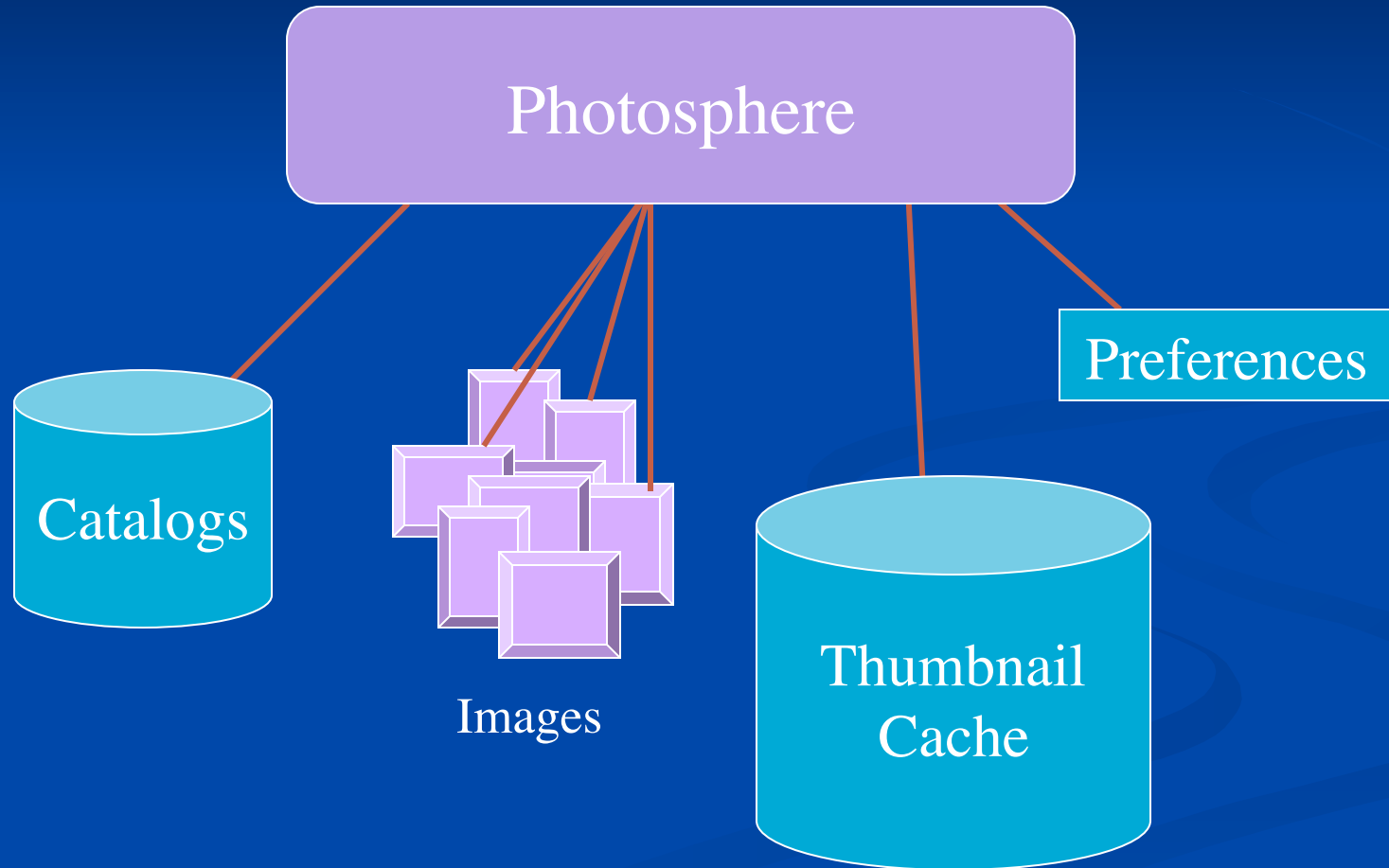
Provides convenient access to individual image settings and information

Most functionality is duplicated in application Set menu, which are more convenient for setting values on multiple images

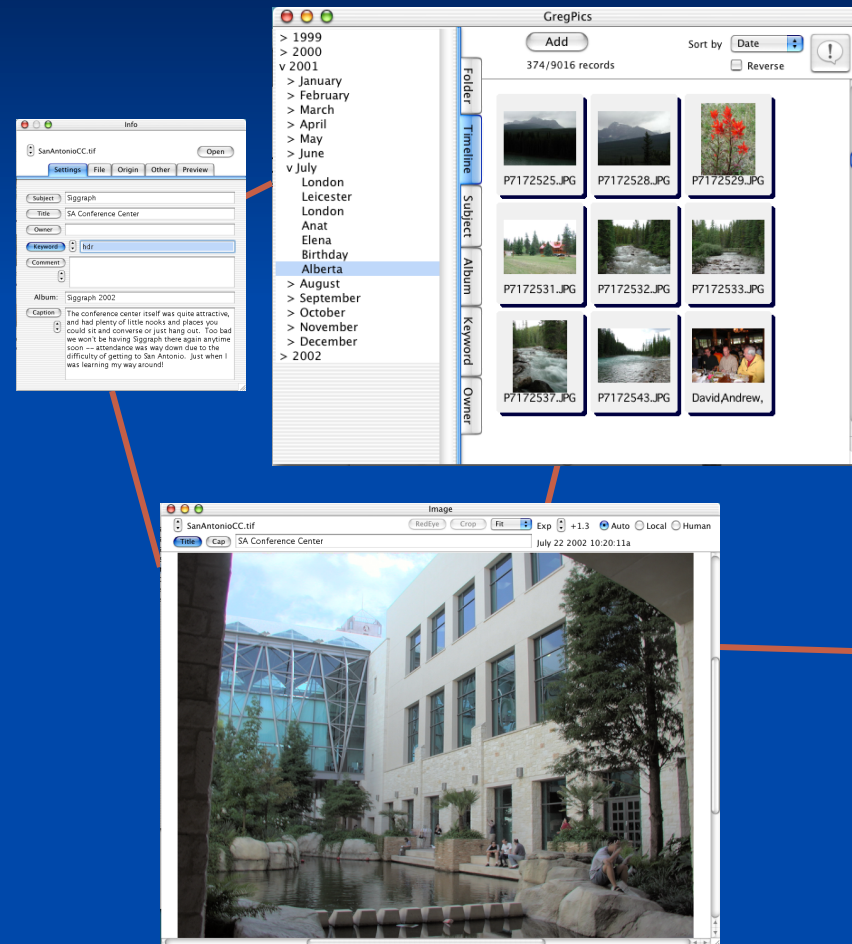
A handy browser “pop-up” feature also provides a preview and detailed image information on any selected thumbnail, and info listing is offered as alternative to thumbnail display



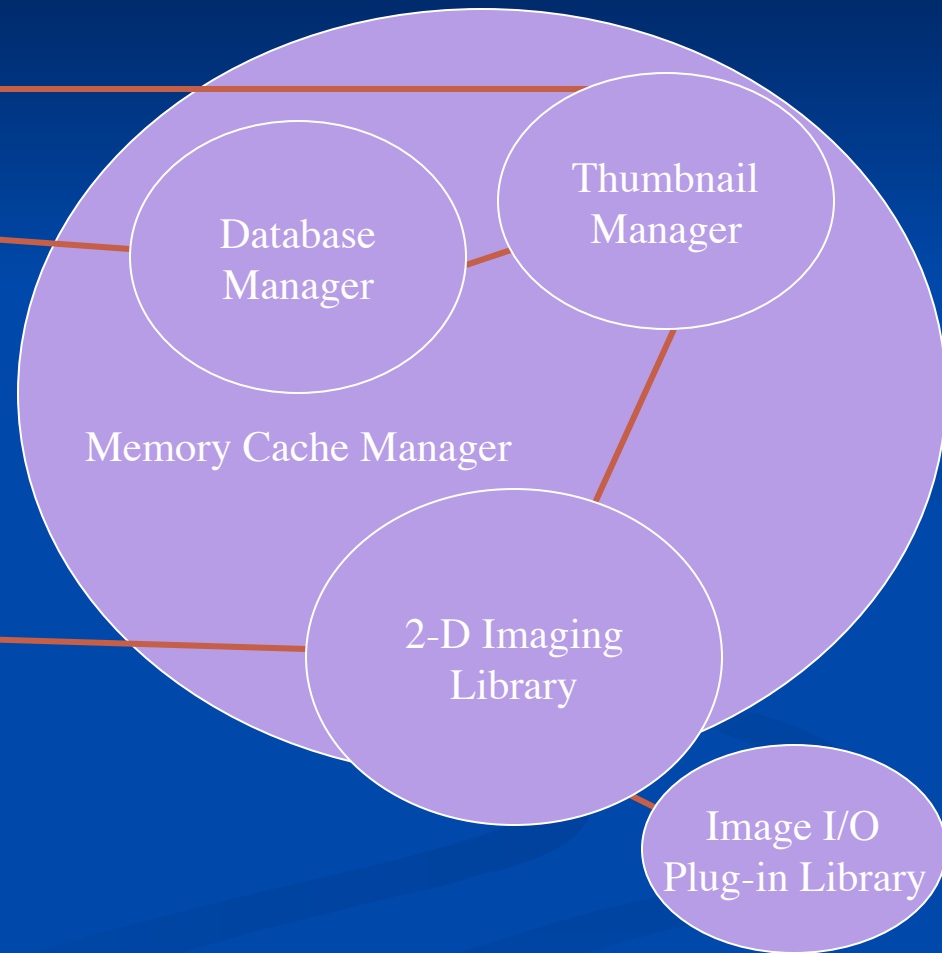
Browser Files



Browser Architecture



System-Specific GUI



System-Independent Library

Porting Strategy

- Make underlying Pancine library compatible with Windows
- Make menu bar(s) part of each window
- Rewrote thumbnail & image display code
- Rewrote GUI code for wxWidgets (C++ library vs. Mac Carbon C library)
- Added function support, item by item
- Drag & drop is easy only for user...

wxWidgets Library

- Cross-platform (Windows, Mac OS, Linux) graphical user interface library
- Uses native look & feel (system libraries) whenever possible
- Well-designed C++ API
- Offers support for additional functions, such as printing, file access, etc.
- Free, unencumbered distribution license

Demo

WINDOWS PHOTOSPHERE

Partial To Do List

- Make Windows version available
- Port back to Mac OS X
- Port to Linux (Francesco Anselmo)
- Add Unicode support (file names, etc.)
- Improve web page export & data sharing

Getting Piggy to Market

- Investment: about 12 person-years and \$30K dollars
- Unlikely to find software buyer (e.g., Adobe, Apple have their own solutions)
- General browser & cataloger, but no appeal as such to larger market
- Special-interest to lighting designers, forensics, and a few small communities

Possible Marketing Options

- Freeware
 - \$0 revenue
- Donationware
 - Almost nothing expected from this
- Shareware
 - Most likely path – annoying screen or limited feature set before purchase
- Put a dang price on it
 - Who's going to pay for unknown software?