MOTIVATION

- Needed ‘easy’ way to produce reliable, cross-platform Radiance installers
- Radiance for Windows
  - Include Windows versions of GUI apps (e.g. rvu)
- Keep pace with Radiance source development
- Regular Radiance releases related to specific OpenStudio releases
HISTORY

- **Axel Jacobs**
  Learnix (last update ~2016)
- **Francesco Anselmo**
  Windows binaries compiled with mingw, (last update ~2008)
- **Georg Mischler**
  Rayfront ~2003, Windows rvu!
- **LBNL**
  Desktop Radiance (2000?)
NREL’S ANSWER
• Implemented ‘makefile management system’ with CMake
• Custom build targets for cross platform apps
• Created a new, Qt-based rvu application that runs on Windows
• Wrote initial suite of tests using ctest
• Created mirror of the main Radiance source code repository
  • One-way sync between authors’ code (in CVS) and the Git repository
Mirror of the master Radiance cvs source repo, used for the creation of Radiance installers for the NREL OpenStudio project

- 6,349 commits
- 5 branches
- 29 releases
- 2 contributors
- View license

Branches:
- master

- Gregory J. Ward: Moved -pd to ignored options where it belongs (2 years ago)
- build_utils: Update to CMake build system from Rob G. and Alex S., adding test cases (2 years ago)
- doc: SCons Option to build Pmap with OOC data on unix (6 days ago)
- platform: Made it so output names don’t collide when rcode2bmp run on all (2 years ago)
- resources: Update from Rob G. (2 months ago)
- src: Moved -pd to ignored options where it belongs (5 days ago)
- test: Noted absence of obj2mesh test, which could use gensurf as input (5 months ago)
- .gitignore: Added missed files from CMake update (2 years ago)
- .gitlab-ci.yml: Update from Rob G. to switch tests over to Ruby (2 months ago)
- CMakeLists.txt: Checked in Rob G’s changes for unit testing (5 months ago)
5.2 Official Release

rpg77 released this on Oct 9, 2018 - 292 commits to master since this release

Radiance 5.2 Official

This is the “NREL Release” of Radiance 5.2 Official. Full text from readme.txt follows.

Hello and welcome to the Radiance synthetic imaging system. This is the twenty-fourth release, Version 5.2, and it includes all source files for local compilation with a standard C compiler. To find out what’s new in this release, check the text file doc/notes/ReleaseNotes.

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WE BUILT IT, THEY CAME FOR IT

robertguglielmetti$ ruby release_stats.rb

https://api.github.com/repos/NREL/Radiance/releases
Release: 5.2 Official Release
Published: 2018-10-09T20:52:20Z
Downloads (asset name, download count):
  -- radiance-5.2.dd0f8e38a7-Darwin.dmg, 911
  -- radiance-5.2.dd0f8e38a7-Linux.tar.gz, 3182
  -- radiance-5.2.dd0f8e38a7-Windows.exe, 7235
Total downloads: 11328
BUT WHAT ABOUT THE TESTS?

Yeah, what about the tests?
- RADCOMPARE utility
  - See Greg’s pres.
- Tests(!)
  - Greg happens…
- Test wrappers
  - So that normies and CI suites can actually use the tests
- Dashboard (doh!)
  - Googs leaves NREL… \(\_\(\_\(\_\(\_\)\)/\)
  - Work in progress for 2019/20
TEST WRAPPER

• Written in Ruby (get over it)
• Can run on all existing tests, or call specific tests, or “clean”
• Auto grabs all available cores for multithreaded apps (can be user specified)
• Make targets are all replicated in Ruby, and future additions in make will simply be replicated in this script

• Works like this:
  From build/resources:
  ruby ./test_lib.rb
~/src/Radiance/build/resources $ ruby ./test_lib -n 16 -t test_rtrace

running test: test_rtrace

generating input file: rtmirror_fish.hdr

oconv basic.mat diorama_walls.rad closed_end.rad front_cap.rad glass_pane.rad antimatter_portal.rad bubble_in_cube.rad mirror.rad sunset_sky.rad > mirror.oct

command: vwrays -ff -vf fish.vf -x 2048 -y 2048 | rtrace -n 8 @mirror.opt -ffc -x 2048 -y 2048 mirror.oct |
pfilt -1 -e +3 -r .6 -x /2 -y /2 > rtmirror_fish.hdr

command: pfilt -1 -r 1 -x 128 -y 128 -pa 1 rtmirror_fish.hdr | radcompare -v -rms 0.07 -max 1.5 -h ref/mirror_fish.hdr -

radcompare: input file type is 32-bit_rle_rgbe

radcompare: comparing inputs as HDR images

radcompare: relative RMS difference of reals in 'ref/mirror_fish.hdr' and '<stdin>' is 0.014809

result: PASS
• Continued funding for this work has been promised by DOE
• Greg will add more (make-based) tests
• Rob will fold them into the “Ruby test wrapper”
• NREL will continue to host a Radiance source mirror on GH
• A Jenkins-based build/test workflow will be enabled and hosted at NREL, and test results will be posted to the NREL Radiance GH site
• Rob et al. will fix the build issues with rvu and address the still missing files from the NREL packages
• Timeframe: now-2020
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THIS ENTIRE COMMUNITY.
THANK YOU!

Questions, Complaints, What-have-you?

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https://github.com/NREL/Radiance