

RADIANCE Workshop 2006



Bouncing forwards,
tracing back.

2002

- January: George W. Bush faints after choking on a pretzel
- February: Crown Prince Willem-Alexander of the Netherlands marries Máxima, Princess of Orange in Amsterdam
- March: U.S. invasion of Afghanistan
- April: Funeral of Queen Elizabeth, the Queen Mother

2002 (contd.)

- May: First Eurovision Song Contest in a former Soviet country: Estonia
- June: Mozilla 1.0, the first 'official' version, is released
- July: During Bastille Day celebrations, Jacques Chirac escapes an assassination attempt unscathed
- August: Central Europe is ravaged by floods

2002 (contd.)

- September: Switzerland, known for its neutrality, finally joins the United Nations.
- October: U.S. Congress passes a resolution, which explicitly authorizes the President to use the Armed Forces as he deems to be necessary and appropriate, against Iraq
- November: Iran bans advertising of US products
- December: Total solar eclipse

Open Source Announcement



December 11, 2002

Dear Radiance community,

Following your enthusiastic response to the announcement of our plans for the Radiance software, we are happy to announce the new Radiance Open Source License! The objective of the Radiance Open Source License is to encourage further development and distribution of the Radiance software and derivative applications, so that a larger number of users can benefit from Radiance's capabilities.

The Radiance Open Source License follows the "Apache" open source paradigm, which provides complete freedom on the use, development and distribution of the Radiance source code and executables. The initial version of the Radiance software that is distributed under the new open source license is version 3.4, which has been available through the Radiance web site (<http://radsite.lbl.gov/radiance>) since January 2002.

Open Source

OSS: Open Source Software

FOSS: Free Open Source Software

FLOSS: Free, Libre, Open Source Software

The term 'free' is ambiguous in English Language:



'Free' as in speech
(livre)



'Free' as in beer
(gratis)



Evil

Confusion



'Source code available' vs 'Open Source'

Personal anecdote: Solar geometry formulae
(DayMedia, now CLEAR:

<http://www.learn.londonmet.ac.uk/>

[packages/clear/visual/daylight/sun_sky/sun_calc.html](http://www.learn.londonmet.ac.uk/packages/clear/visual/daylight/sun_sky/sun_calc.html))

Open Source Requirements

- Free redistribution,
- Source code access,
- Derivative works,
- No discrimination,
- No restrictions on other software.

Four Families of OS Licenses



Open Source Definition (OSD) by the Open Source Initiative (OSI)

- strong copyleft licenses
- weak copyleft licenses
- no copyleft licenses
- other open source licenses

Strong Copyleft Licenses

- GNU General Public License (GPL)

Anyone who modifies the source code and distributes it to the public must license the modifications back to the public under the same terms as the original software.

Weak Copyleft Licenses

- Mozilla Public License (MPL)

For programmers who wish to contribute to open source software don't want to give up all their ownership rights in their modifications.

Watered-down Strong License.

No Copyleft Licenses

- Berkeley Software Distribution (BSD) License,
- Apache Software License,
- MIT License

Permits users to do virtually anything:

- They may distribute the software (either for free or commercially) without providing the source code;
- They may modify it and distribute the changes without providing the source code.
- Anyone can turn software distributed under no-copyleft licenses into proprietary software.

Other OS Licenses

- Artistic License,
- Academic Free License

Combine elements from the other license families and contain additional provisions as well.

RADIANCE OSS License



“The objective of the Radiance Open Source License is to encourage further development and distribution of the Radiance software and derivative applications, so that a larger number of users can benefit from Radiance's capabilities.”

RADIANCE OSS License



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Encouraging



“LBNL encourages Radiance developers to contribute enhancements and improvements to the Radiance software back to the Radiance community. LBNL will be happy to evaluate contributions for inclusion in the official LBNL version. We intend that end-user applications using the LBNL version of the Radiance software will be entitled to use a "Powered by Radiance" logo (although this logo does not exist yet) to indicate that the underlying engine is the LBNL-approved version of the Radiance engine.

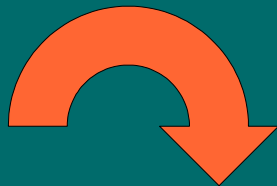
“We look forward to exciting new opportunities on improving the Radiance software and making it easier to use!”

You wot?

Apache license:

“Take the code and run,
and don't even send me postcard.”

BTW: Does LBNL actually have any resources to maintain the code?



Many potential contributors
might be put off by this license.

Advantages of OSS (user)

- No restriction of how the software is used;
- No single entity on which the future of the software depends;
- No “black boxes” are possible;
- Possibility of “forking”;
- No per-copy fees for modified versions;
- Fewer conflicting priorities due to marketing pressures;
- Provides a new forum for democratic action

Advantages of OSS (developer)

- Feedback;
- Contributions;
- Bug testing

An Open Source Project

- Software
- Man pages
- Getting Started Guide
- Tutorials
- Manuals/Hand book
- FAQ
- Mailing list

Let's look at it, then.

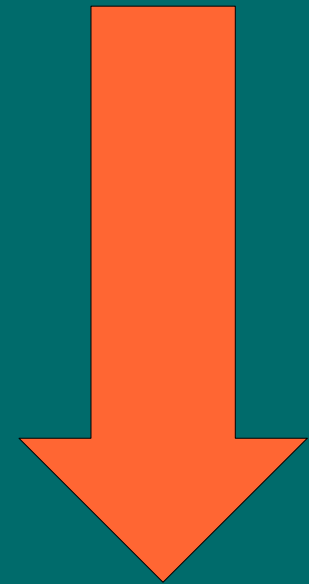
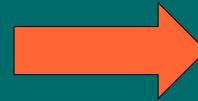


Axel's Ratings on a scale from one to five:

- Software -> 5
- Man pages -> 5
- Getting Started Guide -> 1
- Tutorials -> 1
- Manuals/Hand book 1
- FAQ -> 0
- Mailing list -> 2

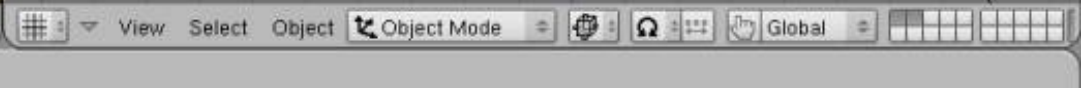
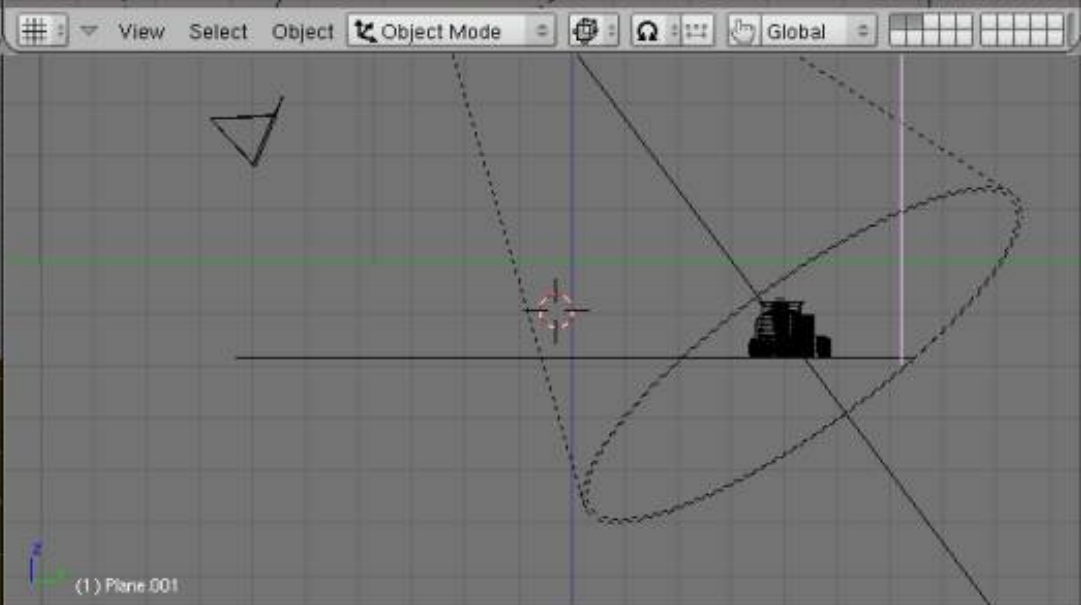
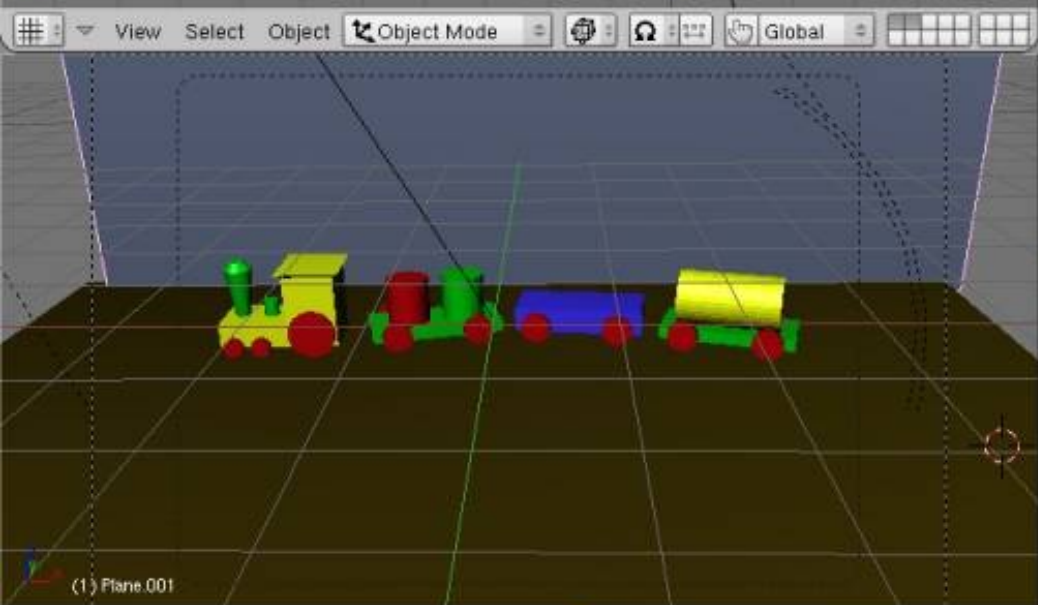
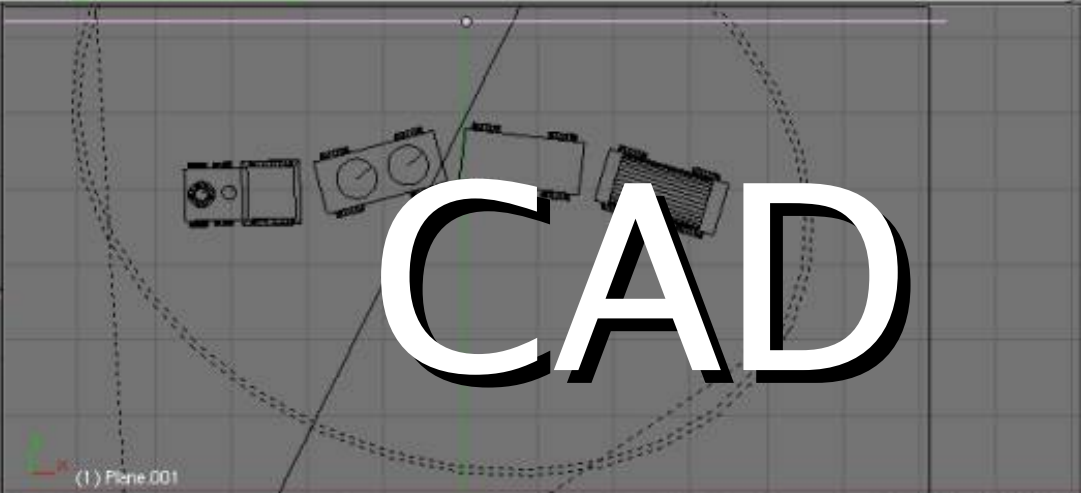
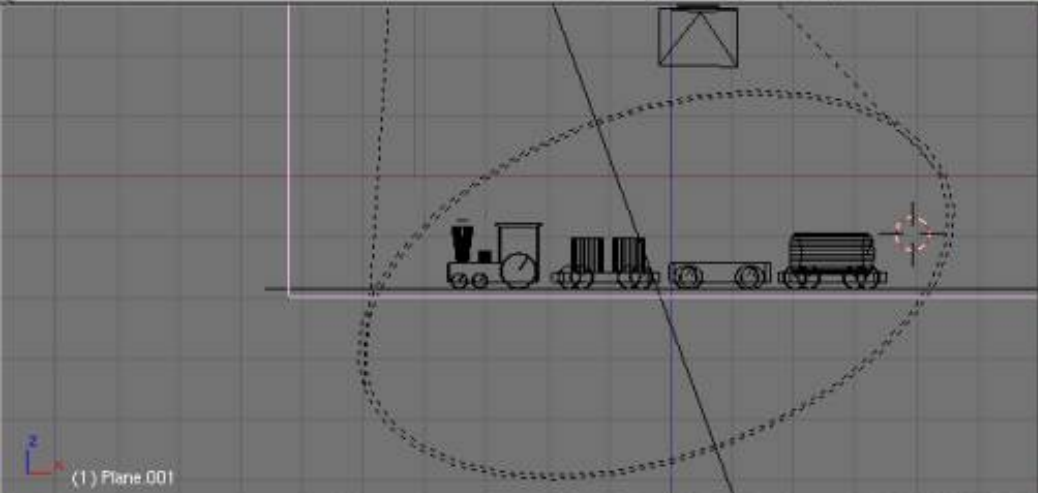
Mailing List Myth

- Software
- Man pages
- Getting Started Guide
- Tutorials
- Manuals/Hand book
- FAQ



All ends up here:

- **Mailing list**





Water

IES



*** STOP: 0x0000001E (0xC0000005,0x80101E08,0x00000000,0x0B000001)
KMODE_EXCEPTION_NOT_HANDLED*** Address 80101e08 has base at 80100000 - ntoskrnl.exe

p7-0108 irq1:1f SYSVER 0xf00002f4

Dll	Base	Date	Stmp	-	Name	Dll	Base	Date	Stmp	-	Name
80100000	2e3d2e69	-	ntoskrnl.exe	80400000	2e35a15f	-	hal.dll				
801e2000	2e39c53d	-	setupdd.sys	80014000	2e2f2258	-	SCSIPTORT.SYS				
8001c000	2e36bab2	-	vga.sys	80212000	2e394943	-	VIDEOPRT.SYS				
80216000	2e2f2240	-	floppy.sys	8021b000	2e2f2242	-	i8042prt.sys				
80222000	2e2f2245	-	kbdclass.sys	80225000	2e3c24a1	-	fastfat.sys				
fcc00000	2e2f21fc	-	fd16_700.sys								

Address	dword	dump	Build	[7561	-	Name
fde1466c	80101e08	80101e08	00000000	0b000001	80134876	fde1469c - ntoskrnl.exe
fde14678	80134876	80134876	fde1469c	80136e73	fde146a4	00000000 - ntoskrnl.exe
fde14680	80136e73	80136e73	fde146a4	00000000	fde146a4	fde1492c - ntoskrnl.exe
fde146a8	8013eaca	8013eaca	fde1492c	fde14f6c	fde14768	fde14748 - ntoskrnl.exe
fde146c0	8013eade	8013eade	fde14f6c	fde1474c	80124b34	fde1492c - ntoskrnl.exe
fde146e0	80124b34	80124b34	fde1492c	fde14f6c	fde14768	fde14748 - ntoskrnl.exe
fde146ec	80136e2c	80136e2c	0b000001	0b000001	fde14940	0b000001 - ntoskrnl.exe
fde146fc	80101e12	80101e12	00000008	00010256	fde148d0	00000010 - ntoskrnl.exe
fde14714	80136e2c	80136e2c	e1000028	80187c66	e1000028	00000468 - ntoskrnl.exe
fde1471c	80187c96	80187c96	e1000028	80187c66	e1000028	00000468 - ntoskrnl.exe
fde14730	80110205	80110205	33000000	80136e73	fde146a4	00000000 - ntoskrnl.exe
fde14738	8011d7a8	8011d7a8	33000000	80136e73	fde146a4	00000000 - ntoskrnl.exe
fde14750	8011f1a7	8011f1a7	33000000	80136e73	fde146a4	00000000 - ntoskrnl.exe
fde1478c	801105c9	801105c9	33000000	80136e73	fde146a4	00000000 - ntoskrnl.exe
fde147b4	801050fd	801050fd	33000000	80136e73	fde146a4	00000000 - ntoskrnl.exe
fde147e0	80136e2c	80136e2c	80198c58	ffffffffff	fde1485c	8013acb1 - ntoskrnl.exe
fde147e4	80198c58	80198c58	ffffffffff	fde1485c	8013acb1	00000000 - ntoskrnl.exe
fde147f0	8013acb1	8013acb1	00000000	00000030	00000023	00000023 - ntoskrnl.exe
fde14820	80101e08	80101e08	00000008	00010203	fde149f4	00000010 - ntoskrnl.exe
fde1484c	8013d077	8013d077	00000001	0b000005	8013d1e5	fde140ba8 - ntoskrnl.exe
fde14858	8013d1e5	8013d1e5	fde140ba8	00000023	00000001	00000023 - ntoskrnl.exe
fde14878	8010fd6c	8010fd6c	fde140788	00000023	00000001	00000000 - ntoskrnl.exe
fde148c4	80101e12	80101e12	00000008	00010286	e1022740	fde14944 - ntoskrnl.exe
fde14904	80136e2c	80136e2c	80198c58	ffffffffff	fde14980	8013acb1 - ntoskrnl.exe
fde14908	80198c58	80198c58	ffffffffff	fde14980	8013acb1	fde1492c - ntoskrnl.exe
fde14914	8013acb1	8013acb1	fde1492c	00000000	fde14980	00000000 - ntoskrnl.exe
fde14938	80101e08	80101e08	00000002	00000000	0b000001	0b000001 - ntoskrnl.exe
fde1495c	80137604	80137604	c0000005	00000001	fd014bd8	fde14980 - ntoskrnl.exe
fde14970	8013d077	8013d077	00000000	0b000001	8013d1e5	00000246 - ntoskrnl.exe

Restart and set the recovery options in the system control panel or the /CRASHDEBUG system start option. If this message reappears, contact your system administrator or technical support group.



gensky

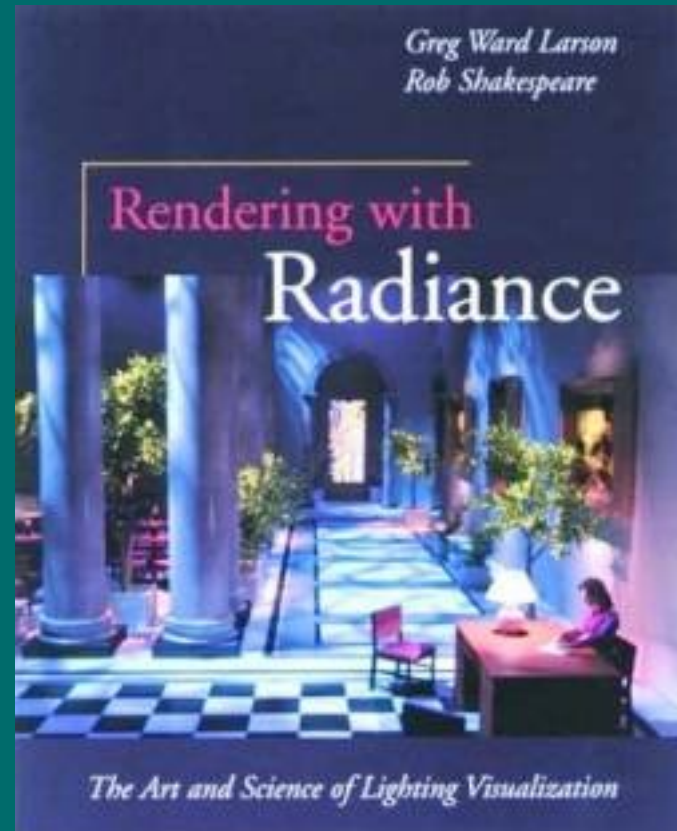
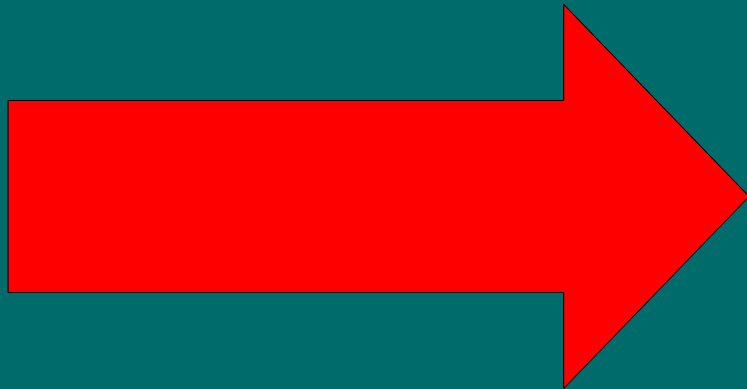
Result

People
answering on
the list will run
out of steam.



Hang On!

What about The
BOOK?



Yeah, what about it?

Very good resource, but:

- Tries to be all things to all users,
- No open documentation,
- Limited shelf life (like all computing books),
- Can't possibly cover all or even the most important aspects of RADIANCE,
- Non-editable,
- Indirectly discourages other documentation (How can I possibly compete with The BOOK?)

What Makes OSS Developers Tick?

- Enjoy coding just for the sake of it
- Code to solve a problem, then share it with others
- Acknowledgment from peers, “Hacker” status
- Pat on the shoulder

Common Misconceptions

- Coders are 'cool'
- Writing documentation is for losers that can't do anything decent
- 'Baby, do you wanna see my code' sounds better than 'Would you like to read my documentation?'
- Once the software is there, the rest will sort itself out.

WRONG!



- An Open Source project is nothing without the documentation to go with it!
- Since before the OSS announcement, the software has been mostly complete, but good documentation IS STILL MISSING (four years later)!
- Axel is cool (but writes documentation)!

What Needs Doing?

- Developers: Produce the tools for people to create contents. A thriving community requires a functioning infra-structure.
- Users: Produce and share documentation for RADIANCE!
- Designers: Have a logo competition, design a new community web site!
- All: There is something that can be done for **ANYBODY**, with **ANY** experience and with **ANY** skills.

Logo

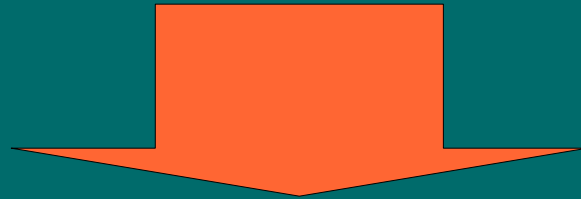


Logo

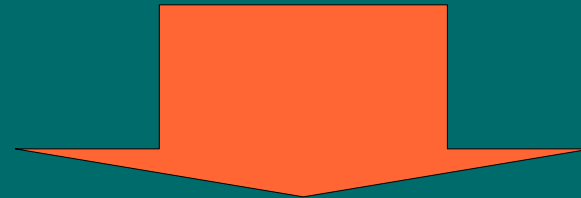


Quick Fix

Create moderated topics from mailing list threads
(remove duplication, make it more readable)



Put up for discussion (Wiki?), get comments



Include screenshots and examples.

Problem



Missing infrastructure
(Community web site)

This needs addressing very badly!!!

Or is it all there?




Maybe all this documentation exists,
but it's just impossible to find
(like extraterrestrial intelligence)?

Where is RADIANCE's Area 51?

RadHub Home - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://localhost/radhub/

RadHub

About

RadHub Home

Submit

Suggest Keywords

Artwork

ChangeLog

RadHub - RADIANCE Resource Index

Please select which keywords to display. Selected keywords are logically combined with OR.

<input type="checkbox"/> AddOns	<input checked="" type="checkbox"/> Ambient	<input checked="" type="checkbox"/> Animation	<input type="checkbox"/> Daylighting
<input checked="" type="checkbox"/> Export	<input checked="" type="checkbox"/> Generators	<input type="checkbox"/> HDR	<input checked="" type="checkbox"/> Import
<input checked="" type="checkbox"/> LightSources	<input checked="" type="checkbox"/> Materials	<input type="checkbox"/> Modelling	<input checked="" type="checkbox"/> Parameters
<input type="checkbox"/> Patterns	<input checked="" type="checkbox"/> Reference	<input checked="" type="checkbox"/> Scripting	<input type="checkbox"/> Textures
<input type="checkbox"/> Tutorial	<input checked="" type="checkbox"/> Validation		


2 Generate material primitives from colour values

URL: <http://localhost/resources/radiance/cp4r/index.html>

Keywords: Materials, AddOns

3.0 (2)

Vote: Useless ☐ ☐ ☐ ☐ ☐ Great




5 Axel's WebHDR: Create HDR images on-line

URL: <http://localhost/webhdr/index.shtml>

Keywords: Daylighting, Materials, HDR

2.5 (6)

Vote: Useless ☐ ☐ ☐ ☐ ☐ Great




6 LEARN RADIANCE Resources

URL: <http://www.learn.londonmet.ac.uk/student/resources/radiance/index.shtml>

Keywords: Materials, Modelling, Ambient

2.5 (13)

Vote: Useless ☐ ☐ ☐ ☐ ☐ Great



Vote for your favourite sites: , or clear the votes: .

Last modified 20 June 2006, 13:33 GMT

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RadHub



When feedback requested on the dev-list, the comments were:

- RadHub was 'SILLY';
- Did nothing that Google didn't.

'Developers' need to understand what's needed by the RADIANCE users and provide the necessary tools.

Change of climate required (oh, what irony!)

1% Rule



“It's an emerging rule of thumb that suggests that if you get a group of 100 people online then one will create content, 10 will "interact" with it (commenting or offering improvements) and the other 89 will just view it...

“Wikipedia: 50% of all Wikipedia article edits are done by 0.7% of users, and more than 70% of all articles have been written by just 1.8% of all users”

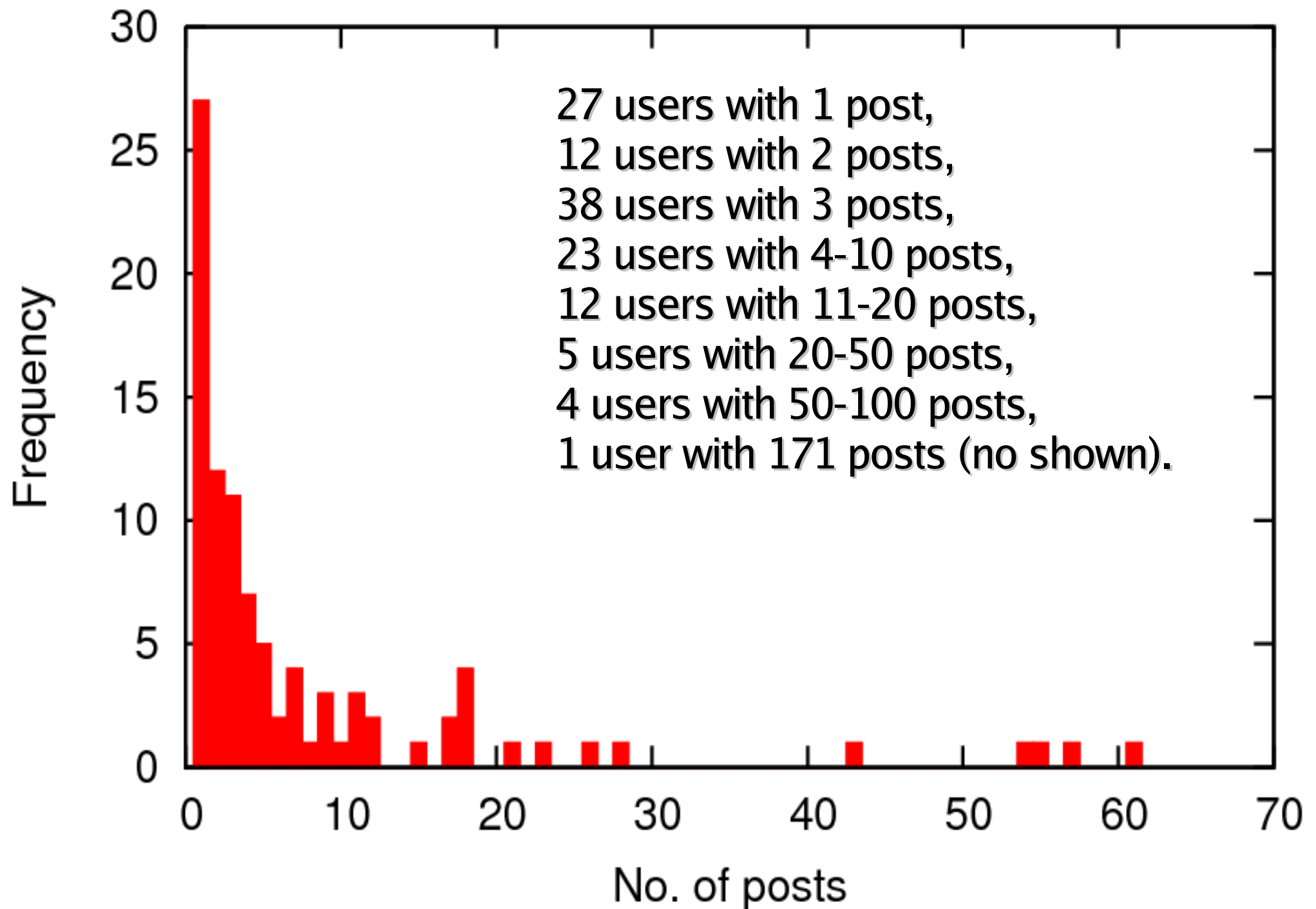
Source: <http://technology.guardian.co.uk/weekly/story/0,,1823959,00.html>

Statistics, ...

Over the one year
from April 2005 to March 2006:

- 233 Questions were asked on RADIANCE-General
- 95 users wrote 939 posts.
- 50% of all posts were made by seven users.

1-year Activity on RADIANCE-General



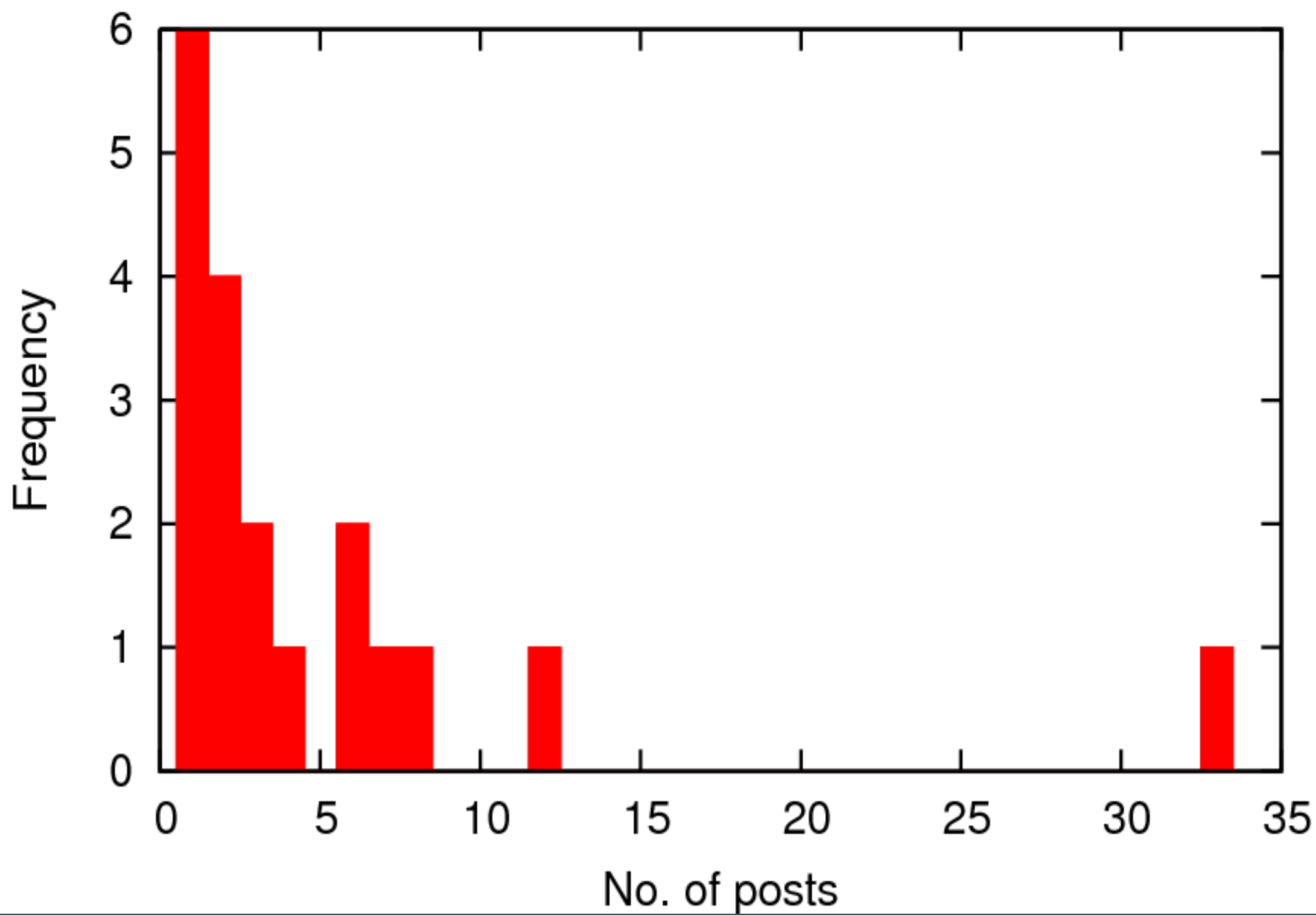


..., more Statistics, ...

Over the same year:

- 28 topics were discussed on RADIANCE-Devel
- 19 users wrote 96 posts.
- 50% of all posts were made by two users.

1-year Activity on RADIANCE-Devel



A close-up photograph of a tree trunk covered in vibrant green moss. The moss is thick and textured, growing along the length of the trunk. The background is a blurred, light-colored surface, possibly snow or a light-colored wall. In the lower right corner, a small, bright red object, possibly a piece of wood or a small animal, is visible.

..., and damn Lies.

**RADIANCE is doing well and
has a flourishing community.**

One-man band



Where's the orchestra?



Conclusions



Sorted by 'niceness'...

Conclusions (Version 1)

The RADIANCE community has not realised the potential of Open Source Software yet.

Conclusions (Version 2)

The RADIANCE
community has failed
miserably (so far).

Conclusions (Version 3)



RADIANCE Community?
What Community?

The End



Thank you for hearing me out.