

# 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.)

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- 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.)

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- 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

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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

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

# Four Families of OS Licenses

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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

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- 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

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- 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

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- 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

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- 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!”

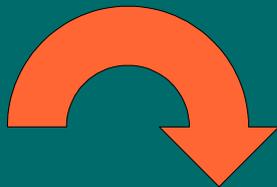
# You wot?

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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)

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- 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)

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- Feedback;
- Contributions;
- Bug testing

# An Open Source Project

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

# Let's look at it, then.



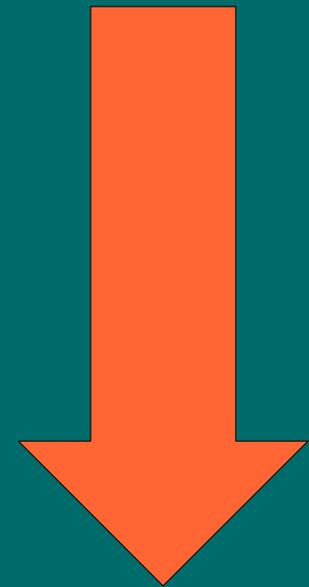
Axel's Ratings on a scale from one to five:

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

# Mailing List Myth

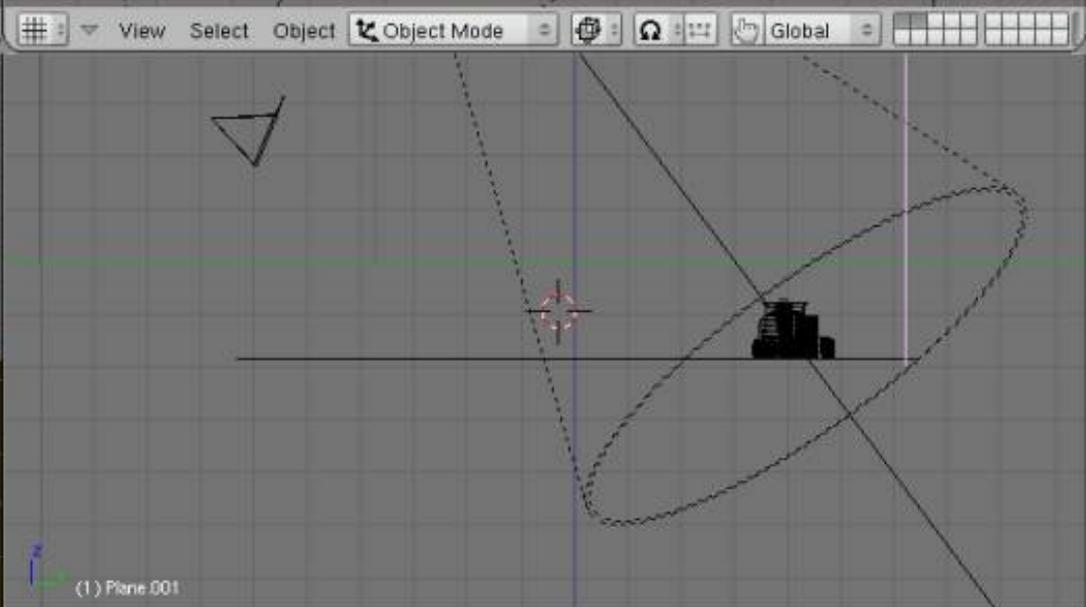
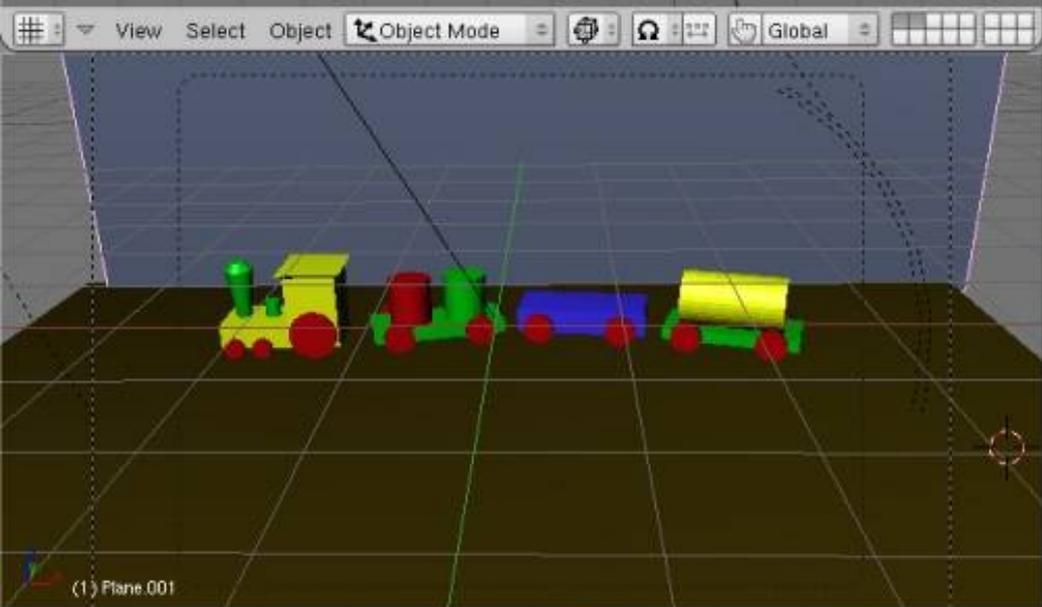
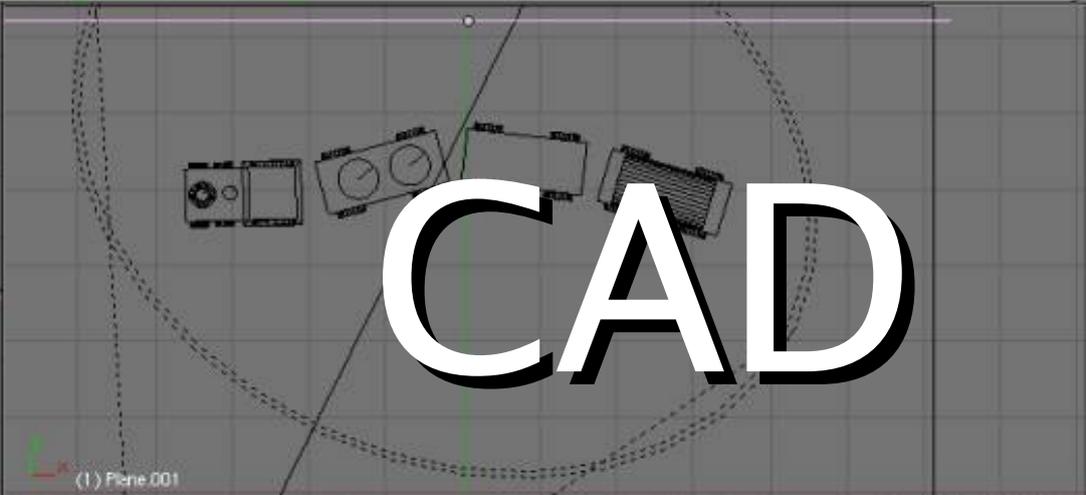
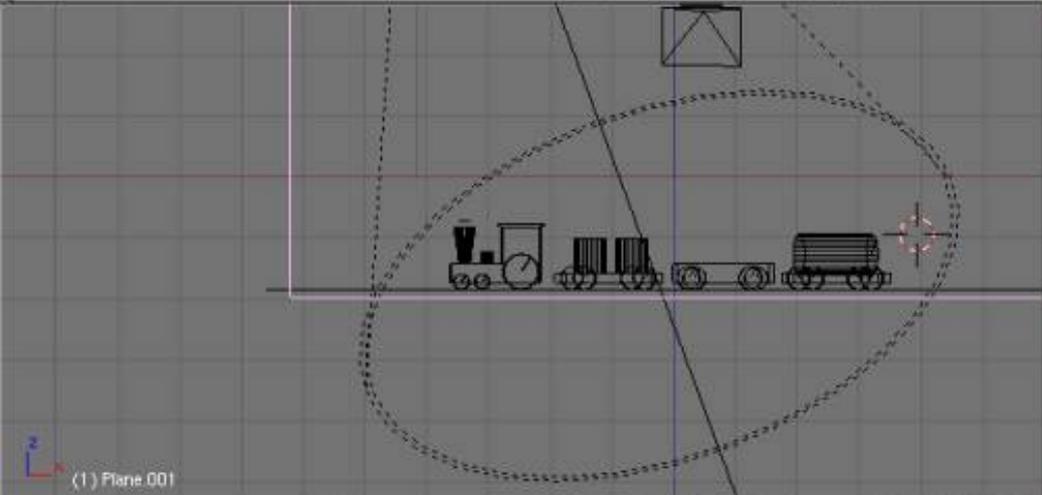
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- Software
- Man pages
- Getting Started Guide
- Tutorials
- Manuals/Hand book
- FAQ



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	22e33d2e	6699	-	ntoskrnl.exe	80400000	22e335a1	155f	-	hal.dll
801e2000	22e339cc	553d	-	setupdd.sys	80014000	22e22f22	2258	-	SCSIPT.SYS
8001c000	22e336ba	b2	-	vga.sys	80212000	22e33949	443	-	VIDEOPRT.SYS
80216000	22e22f22	2240	-	floppy.sys	8021b000	22e22f22	2242	-	i8042prt.sys
80222000	22e22f22	2245	-	kbdclass.sys	80225000	2e3c24a1	-	-	fastfat.sys
fcc00000	2e2f21fc	-	-	fd16_700.sys					

Address	dword	dump	Build	[7561	Name
fde14666c	80101e08	80101e08	00000000	0b000001	80134876 fde1469c - ntoskrnl.exe
fde14678c	80134876	80134876	fde1469c	80136e73	fde146a4 00000000 - ntoskrnl.exe
fde14680c	80136e73	80136e73	fde146a4	00000000	fde146a4 fde1492c - ntoskrnl.exe
fde146a8c	8013eaca	8013eaca	fde1492c	fde14f6c	fde14768 fde14748 - ntoskrnl.exe
fde146cc0	8013eade	8013eade	fde14f6c	fde1474c	80124b34 fde1492c - ntoskrnl.exe
fde146e0c	80124b34	80124b34	fde1492c	fde14f6c	fde14768 fde14748 - ntoskrnl.exe
fde146ecc	80136e2c	80136e2c	0b000001	0b000001	fde14940 0b000001 - ntoskrnl.exe
fde146fcc	80101e12	80101e12	00000008	00010256	fde148d0 00000010 - ntoskrnl.exe
fde14714c	80136e22	80136e22	e1000328	80187c	e1000828 00000468 - ntoskrnl.exe
fde1471c	80187c99	80187c99	e1000328	80187c	e1000828 00000468 - ntoskrnl.exe
fde14730c	80110205	80110205	33333333	80110205	33333333 00000000 - ntoskrnl.exe
fde14738c	80111d7a	80111d7a	33333333	80111d7a	33333333 00000000 - ntoskrnl.exe
fde14750c	80111f1a	80111f1a	33333333	80111f1a	33333333 00000001 - ntoskrnl.exe
fde1478c	80111050	80111050	33333333	80111050	33333333 00000000 - ntoskrnl.exe
fde147b4c	8010550f	8010550f	33333333	8010550f	33333333 00000070 - ntoskrnl.exe
fde147e0c	80136e2c	80136e2c	80198c58	ffffffffff	fde1485c 8013acb1 - ntoskrnl.exe
fde147f4c	80198c58	80198c58	ffffffffff	fde1485c	8013acb1 00000000 - ntoskrnl.exe
fde14820c	8013acb1	8013acb1	00000000	00000000	8013acb1 00000023 - ntoskrnl.exe
fde1484c	80101e08	80101e08	00000008	00010203	fde149f4 00000010 - ntoskrnl.exe
fde1488c	8013d077	8013d077	00000001	0b000005	8013d1e5 fded0ba8 - ntoskrnl.exe
fde14858c	8013d1e5	8013d1e5	fded0ba8	00000023	00000001 00000023 - ntoskrnl.exe
fde14878c	8010fd6c	8010fd6c	00000008	00000001	00000000 00000000 - ntoskrnl.exe
fde148c4c	80101e12	80101e12	00000008	00010286	e1022740 fde14944 - ntoskrnl.exe
fde14904c	80136e2c	80136e2c	80198c58	ffffffffff	fde14980 8013acb1 - ntoskrnl.exe
fde14908c	80198c58	80198c58	ffffffffff	fde14980	8013acb1 fde1492c - ntoskrnl.exe
fde14914c	8013acb1	8013acb1	fde1492c	00000000	fde14980 00000000 - ntoskrnl.exe
fde14938c	80101e08	80101e08	00000002	00000000	0b000001 0b000001 - ntoskrnl.exe
fde1495c	80137604	80137604	c0000005	00000001	fd014bd8 fde14980 - ntoskrnl.exe
fde14970c	8013d077	8013d077	00000000	0b000001	8013d1e5 00000246 - ntoskrnl.exe

# Windows

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

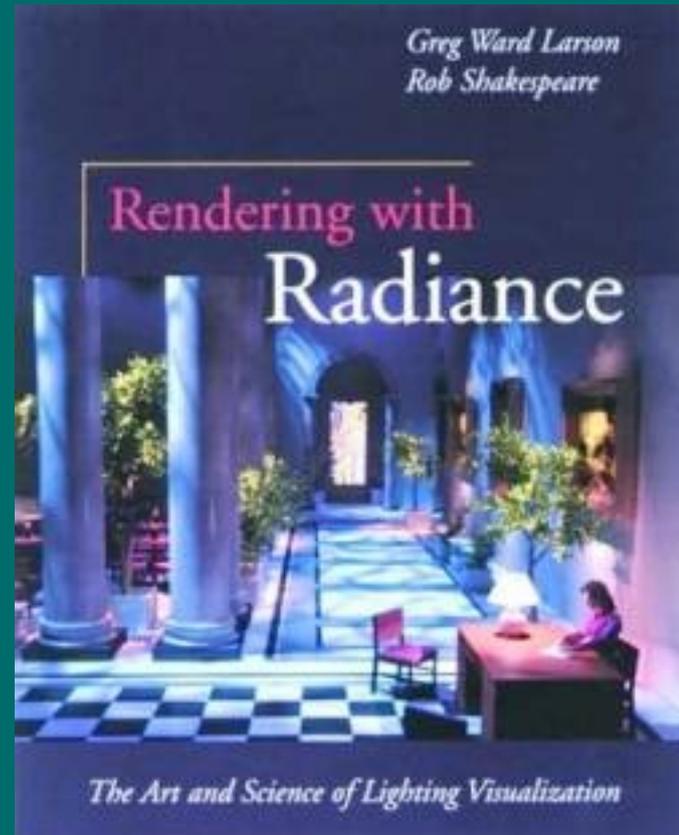
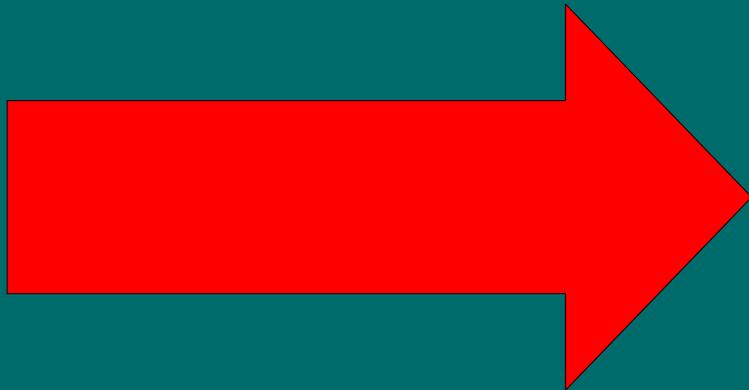
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People  
answering on  
the list will run  
out of steam.



# Hang On!

What about The  
BOOK?



# Yeah, what about it?

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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?

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- 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

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- 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?

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- **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

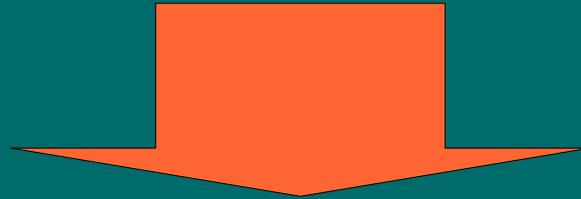
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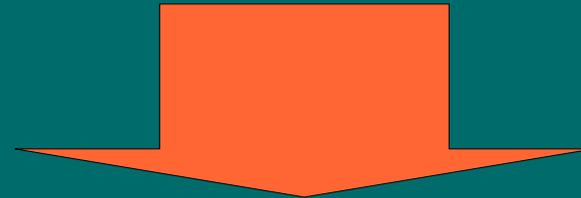
# Quick Fix

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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”

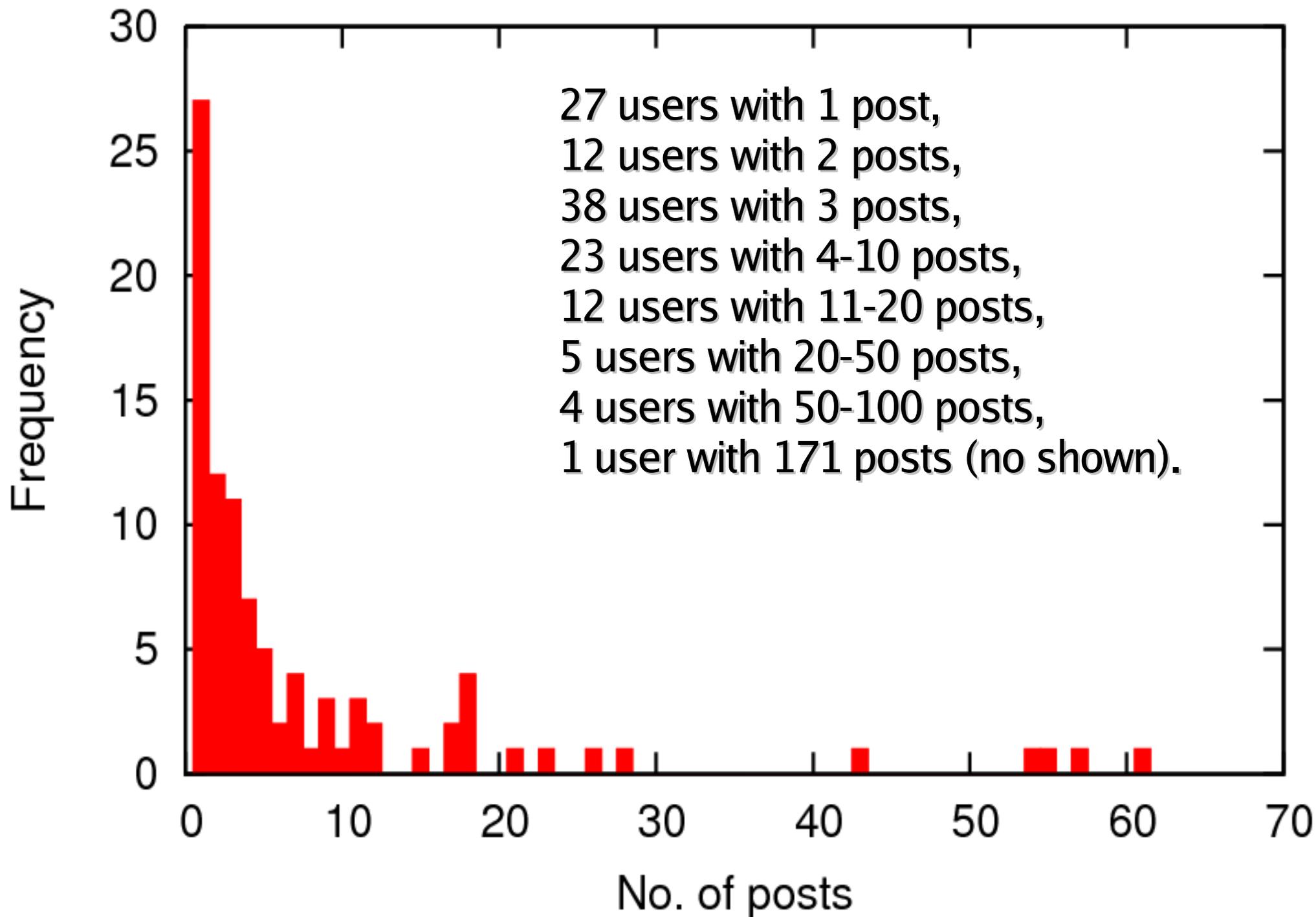
Source: <http://technology.guardian.co.uk/weekly/story/0,,1823959,00.html>

## 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



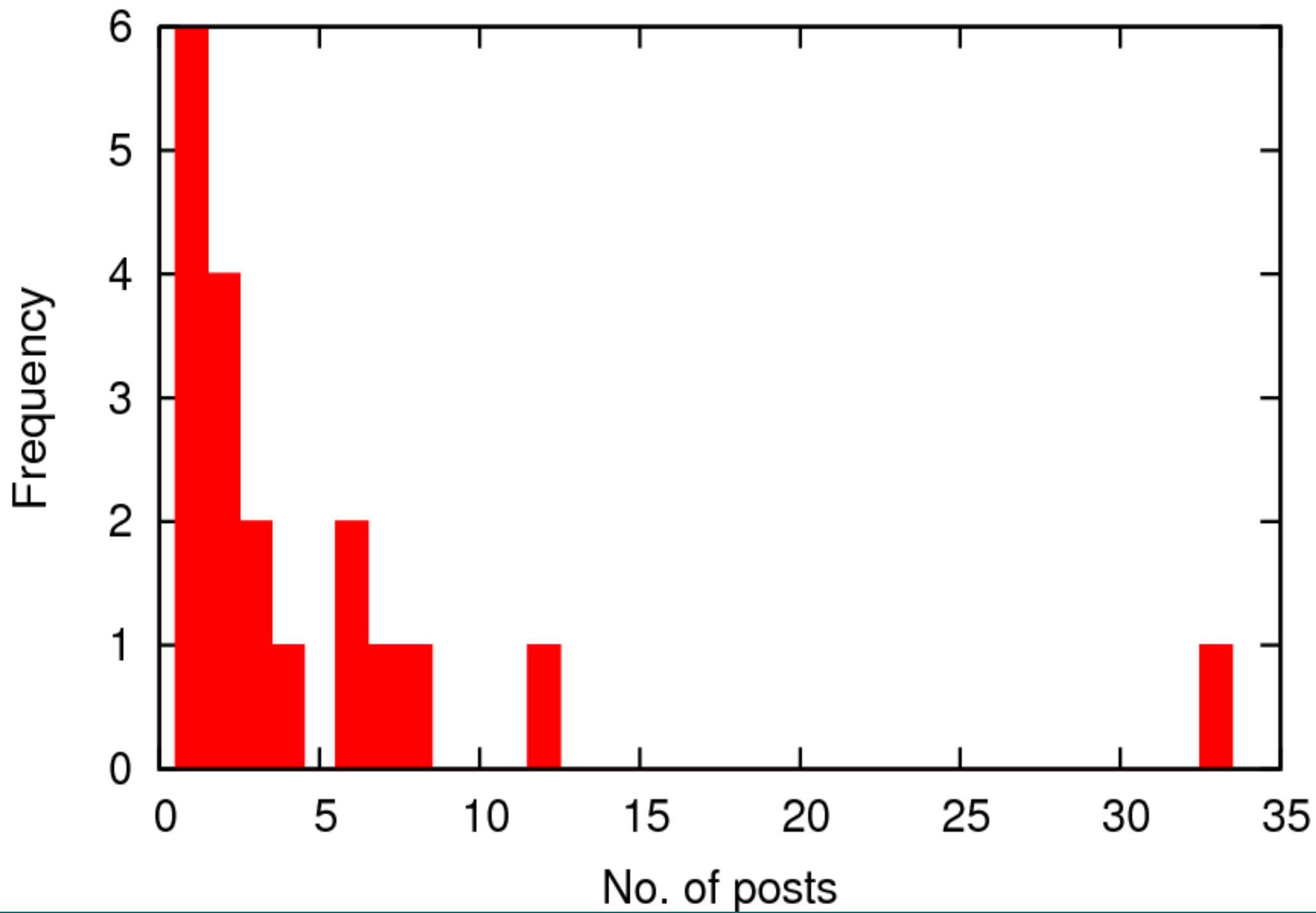


..., more Statistics, ...

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





**..., and damn Lies.**

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

# One-man band

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# Where's the orchestra?



# Conclusions



Sorted by 'niceness'...

# Conclusions (Version 1)

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

# Conclusions (Version 2)

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The RADIANCE  
community has failed  
miserably (so far).

# Conclusions (Version 3)

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RADIANCE Community?  
What Community?

# The End



Thank you for hearing me out.