



If you
can't read this
then
make a new friend
'way up front

Free Software Open Source and You

Ed Nisley
April 2007
ACM Poughkeepsie



Free Software Open Source and **You**

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Upcoming Events

Why license?

Who needs one?

Which license?

What if?

How do I make money?

You Want to Write Programs


For your own use

In the privacy of your own home

From scratch

You Want to Write Programs

Go ahead ...

A satellite-style image of the Earth at night, showing the continents of North America, South America, Europe, and Africa. The landmasses are covered with a dense pattern of yellow and white lights, representing city lights and urban areas. The oceans are dark. A white callout bubble with a black outline is positioned over the eastern United States, with a pointer indicating a specific location. The bubble contains the text "Your Program".

Your
Program

Oh, You Want to Write **Useful** Programs

Life is short

Most code is boring

Other Peoples' Code

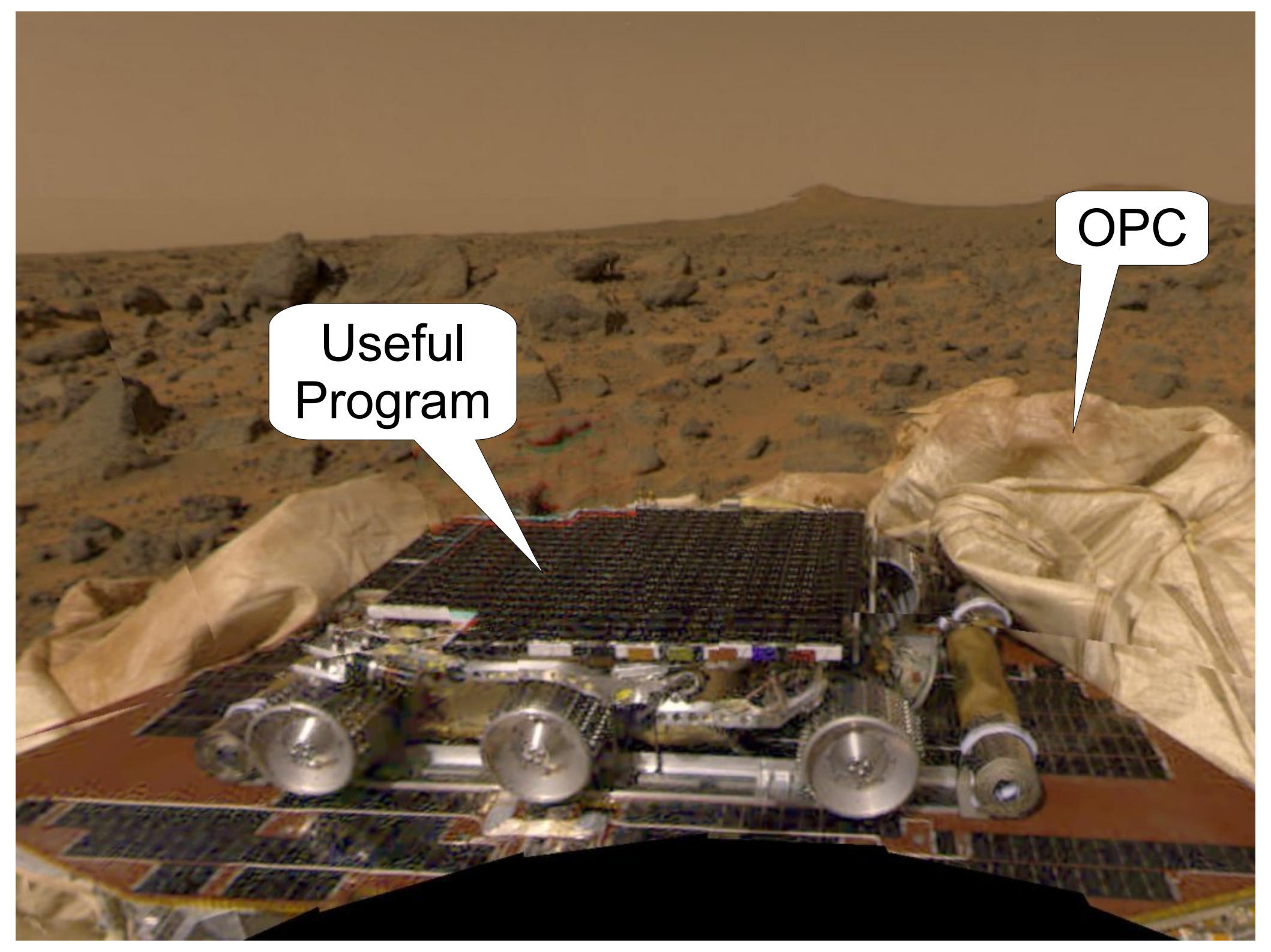
Operating Systems

Programs

Libraries

Source

Ideas

A photograph of a Mars rover on a rocky, reddish-brown landscape. The rover is equipped with solar panels, a camera, and various scientific instruments. Two callout boxes are present: one labeled 'Useful Program' pointing to the solar panels and another labeled 'OPC' pointing to a white tarp. The background shows a hazy, orange sky and distant hills.

Useful
Program

OPC

So, You Want to Use OPC

Go ahead ...

Get Permission **BeFore** Use

Huh?

Get Permission **BeFore** Use

Copyright / Patents / Trade Secrets



Buy

License

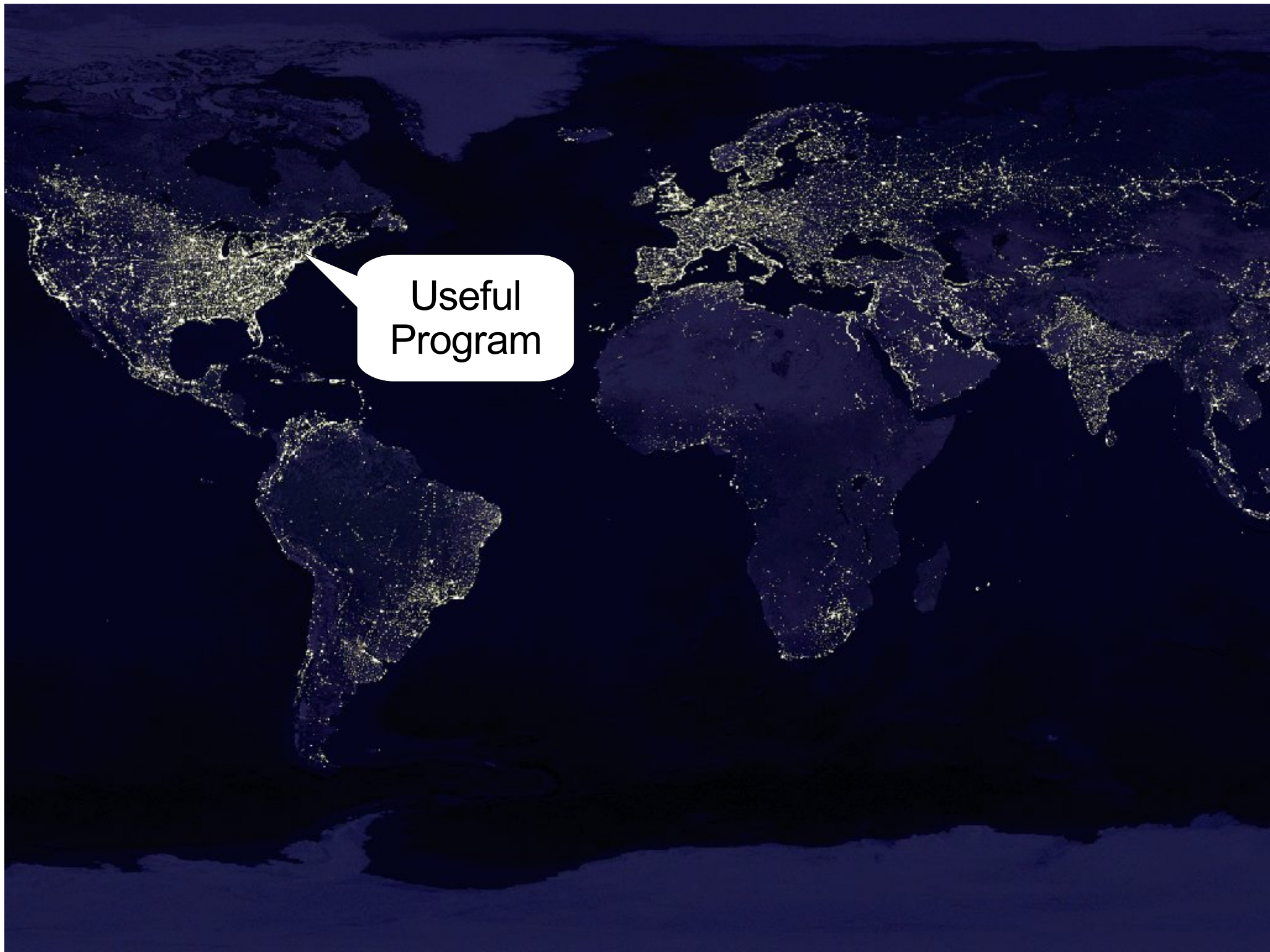
Steal

What is a License?

To license ... is to give permission.

A shorthand definition of a license is
“a promise (by the licensor)
not to sue (the licensee).”

Wikipedia



Useful
Program

It's **So** Useful ...

Somebody **else** wants to use it!

A photograph of a Mars rover, likely a Spirit or Opportunity rover, on the reddish-brown, rocky surface of Mars. The rover is a six-wheeled vehicle with a flat solar panel on top. Two white callout boxes with black text are overlaid on the image. One box points to the solar panel and contains the text 'Useful Program OPC'. The other box points to the rover's wheels and contains the text 'Useful Program'.

Useful
Program
OPC

Useful
Program

Can Somebody Else ...

Use your program?

If They Get Permission From **You**

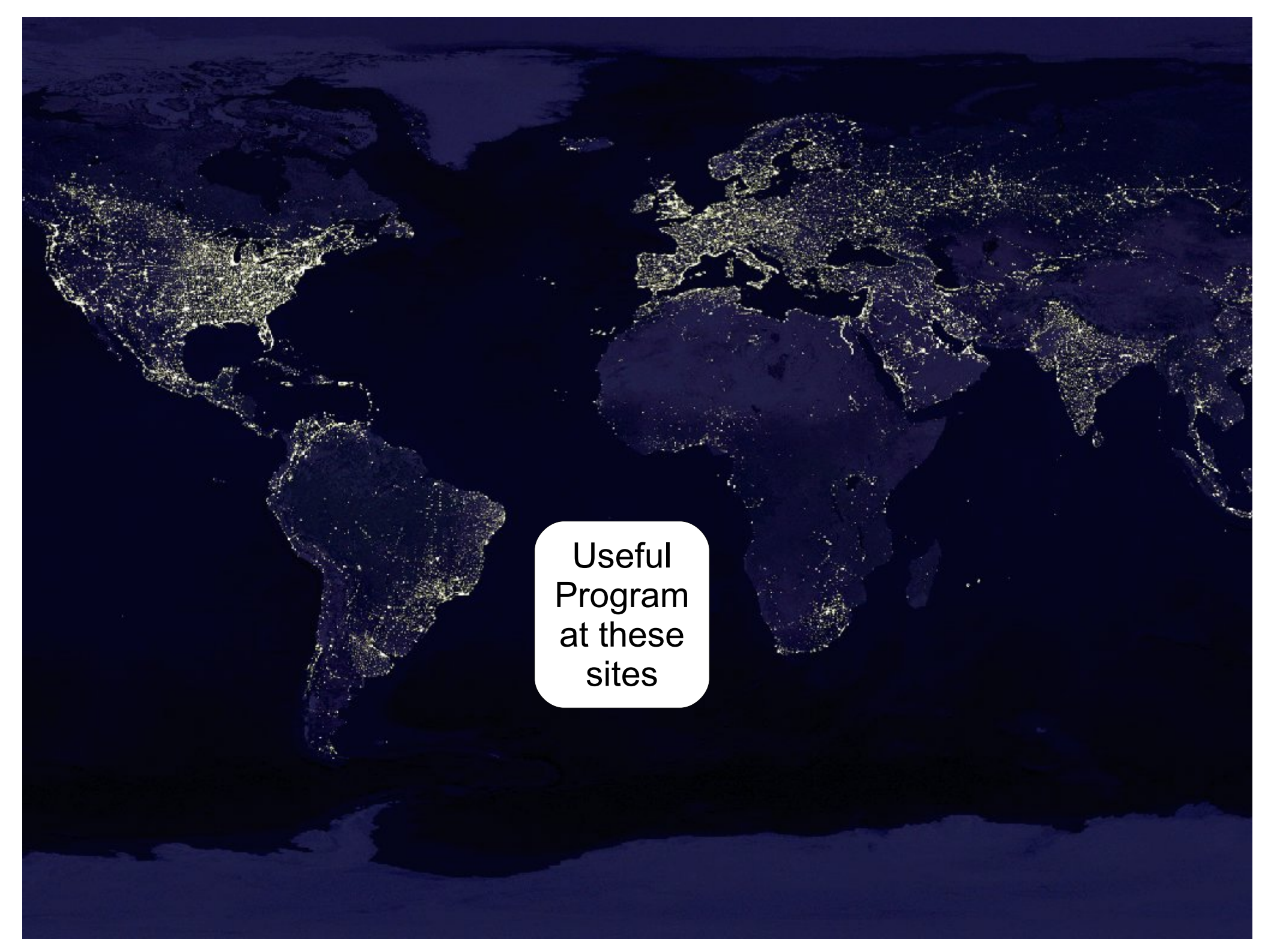
Copyright / Patents / Trade Secrets



Buy

License

Steal

A world map at night, showing the continents of North America, South America, Europe, and Africa. The landmasses are covered with a dense pattern of yellow and white lights, representing city lights and urban areas. The oceans are dark blue. In the center of the map, there is a white rounded rectangle containing text.

Useful
Program
at these
sites

Can Somebody Else ...

Modify your program?

Take OPC from your program?

Allow others to ... ?

This is recursive

Can Somebody Else ...

Uh-oh

Why License?

Obtain OPC **for** your program

Permit use **of** your program

License = Permission

Owner defines what's permissible

► and ◄

User agrees to those conditions

End User License Agreement

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As described below, using the software also operates as your consent to the transmission of certain computer information during activation, validation and for Internet-based services.

► *and 4400 more words ...* ◀

End User License Agreement

Before you use the software under a license,
you must assign that license to one device
(physical hardware system). That device is the “licensed device.”

You may install one copy of the software on the licensed device. You may
use the software on up to two processors on that device at one time.

Except as provided in the ... sections below, only one user may use the software at a time.

Before you activate, you have the right to use the version of the
software installed during the installation process. Your right to use the software after the time
specified in the installation process is limited unless it is activated.

This is to prevent its unlicensed use.

You will not be able to continue using the software after that time
if you do not activate it.

If, after a validation check, the software is found not to be properly licensed,
the functionality of the software may be affected.

► *This is all very complicated ...* ◀

End User License Agreement



Borland's No-Nonsense License Agreement

This software is protected by both United States copyright law and international copyright treaty provisions. Therefore, you must **treat this software just like a book**, except that you may copy it onto a computer to be used and you may make archival copies of the software for the sole purpose of backing up our software and protecting your investment from loss.

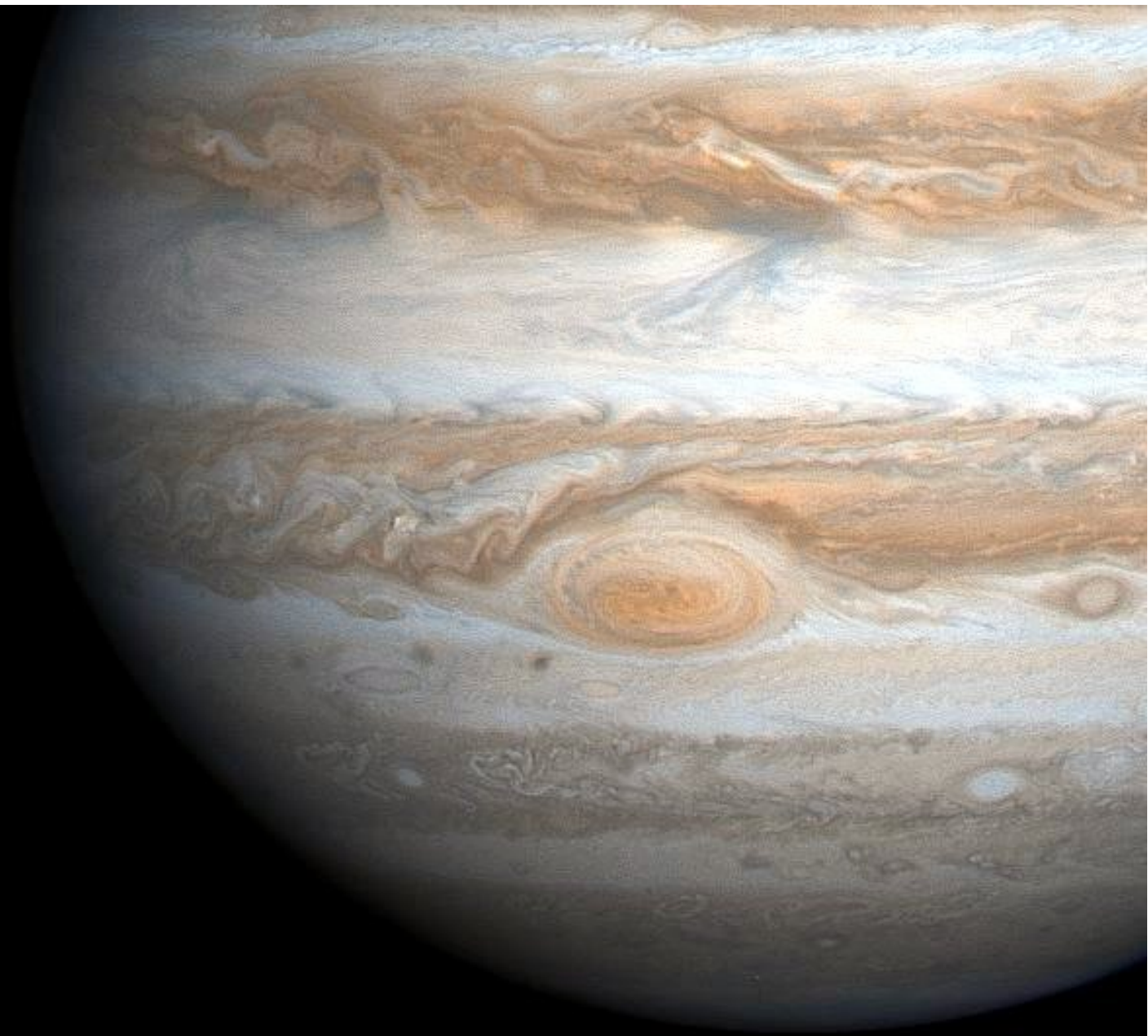
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How Can They Get Away With This?

That's easy ...

Them

You



But I'm Not an End User!

Then you can't use an E·U·L·A

Redistribution

TERMS

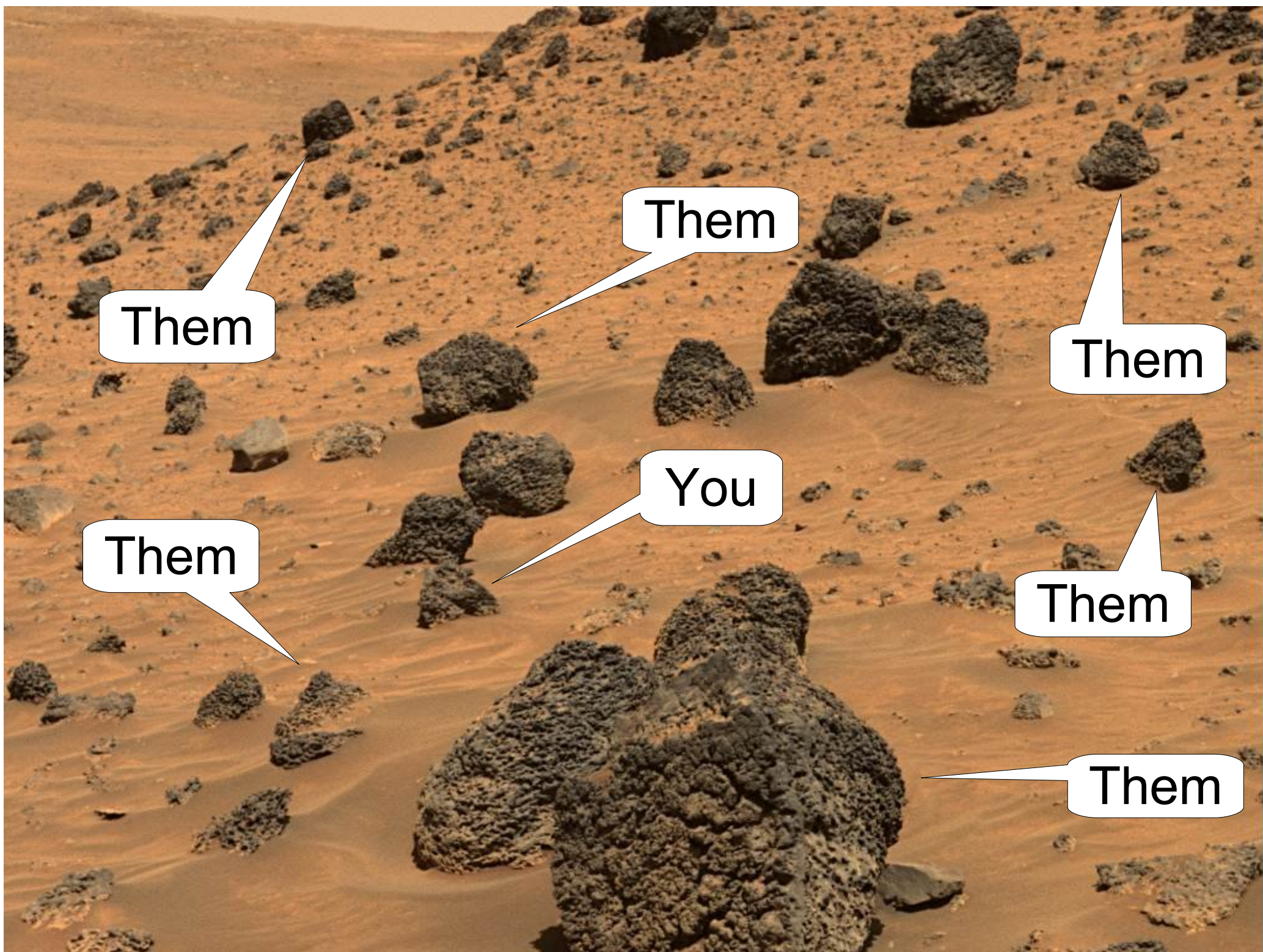
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Them

You



Them

Them

Them

Them

You

Them

Them

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1. You may copy and distribute verbatim copies of the Program's source code ...
2. You may modify your copy or copies of the Program ...
4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. ...
6. Each time you redistribute the Program ..., the recipient automatically receives a license from the original licensor ...

A deep space photograph showing a vast field of stars against a dark blue background. There are several bright, multi-colored stars (blue, white, yellow) and some faint, wispy clouds of gas or dust. Two white speech bubbles are overlaid on the image. The first bubble, on the left, contains the word "You" and has a tail pointing towards a cluster of stars in the upper left. The second bubble, on the right, contains the word "Them" and has a tail pointing towards a cluster of stars in the lower right.

You

Them

Proprietary

Whatever is not forbidden is mandatory;
whatever is not mandatory is forbidden.

not George Orwell

Free Software

Basically the GPL

Run / Change / Build / Run again

“When we speak of free software,
we are referring to freedom,
not price.”

Richard Stallman

Open Source

Many GPL-ish licenses, but ...

Not all require source redistribution

“Open source is a development method”

Eric S. Raymond

Share & Share Alike?

I'd love to, **but** ...

Share & Share Alike?

When a fellow says,


“It ain’t the money
but the principle of the thing,”

it’s the money.

Kin Hubbard
or someone like him

Share & Share Alike?

Is your program **that** special?

A deep space photograph showing a vast field of stars against a dark blue background. A large, diffuse nebula with a blue and white glow is visible in the center and lower right. The stars are of various sizes and colors, including white, yellow, and orange. Two white speech bubbles are overlaid on the image.

Your
program
is
unique

Just like all
the others

At Least It's Yours

WORLD INTELLECTUAL PROPERTY ORGANIZATION
GENEVA
DIPLOMATIC CONFERENCE
ON
CERTAIN COPYRIGHT AND NEIGHBORING RIGHTS QUESTIONS
WIPO COPYRIGHT TREATY

Article 2 -- Scope of Copyright Protection

Copyright protection extends to expressions

and not to ideas, procedures, methods of operation or mathematical concepts as such.

Article 4 -- Computer Programs

Computer programs are protected as literary works

within the meaning of Article 2 of the Berne Convention.

Such protection applies to computer programs,
whatever may be the mode or form of their expression.

Which License?

When you use OPC

they determine the license

for **their** code

Which License?

When someone uses your program

you determine the license

for **your** code

...

Which License?

... unless

those pesky OPC licenses

control your redistribution

Which License?

They all do

Why GPL?

What goes in

Must come out

Why GPL?

Unless it stays there

Firesign Theatre

Must I Share My Code?

When you

incorporate GPL code

► and ◄

distribute your program



GPL OS
(Ubuntu)

Useful
Proprietary
Program

A photograph of the International Space Station (ISS) in orbit against the black background of space. The station's complex structure, including its truss, solar panel arrays, and various modules, is clearly visible. Three white speech bubble callouts with black outlines are overlaid on the image, each pointing to a specific part of the station. The first callout, at the top, points to a central module and contains the text 'Useful Proprietary Program'. The second callout, on the right, points to a joint or connection point and contains the text 'Good Interface'. The third callout, at the bottom left, points to a large solar panel array and contains the text '(L)GPL Goodies (glibc)'.

Useful
Proprietary
Program

Good
Interface

(L)GPL
Goodies
(glibc)



Useful
GPL
Program

GPL
Components

Warranty

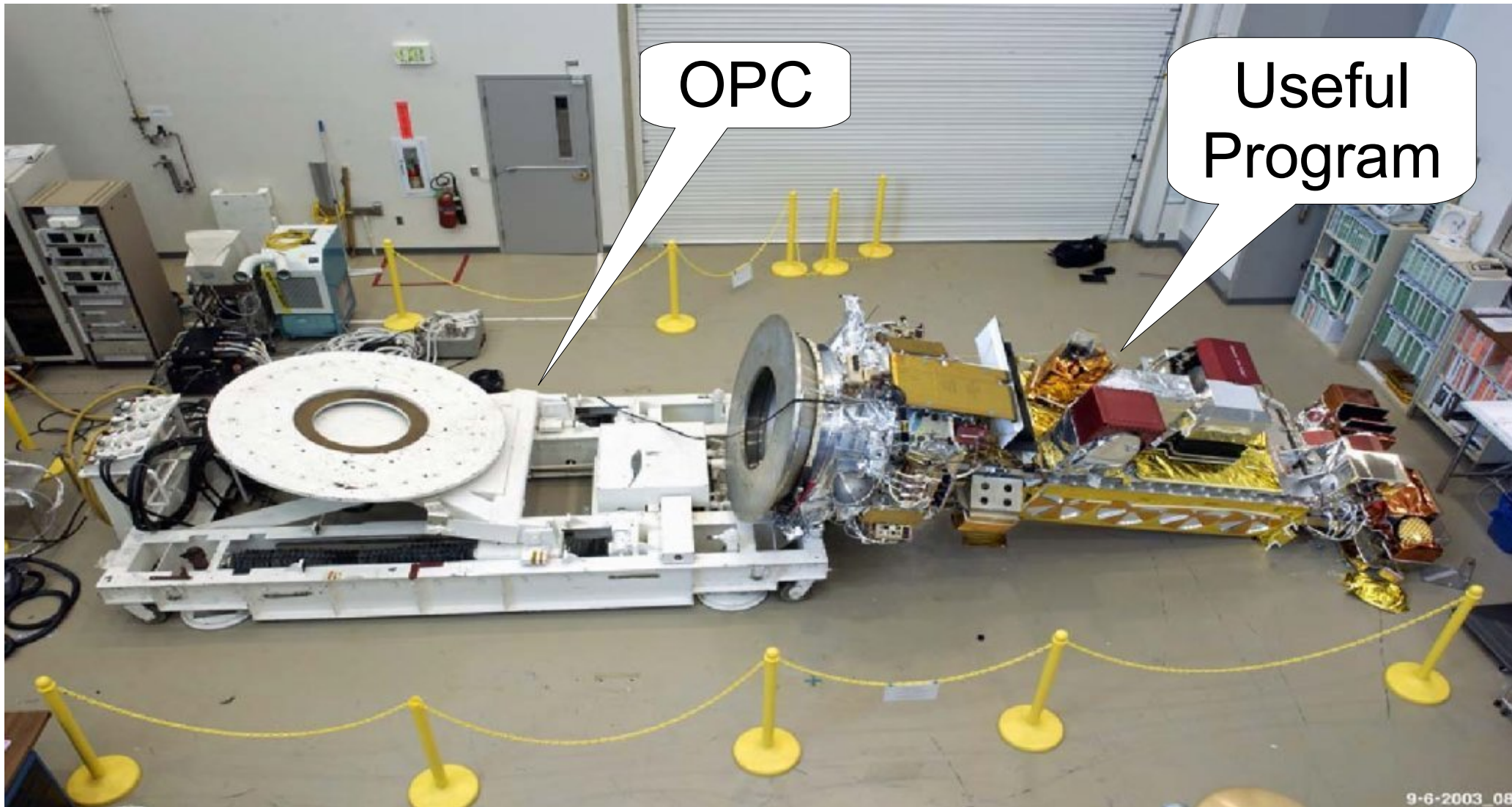
Who you gonna call?

A satellite image of North America, showing the United States and parts of Canada and Mexico. The image is in grayscale, with land appearing lighter than the surrounding oceans. A white callout box with a pointer indicates a specific area in the Great Lakes region of the United States.

Useful
Program

ISAT GeoStar 45
23:15 EST 14 Aug. 2003

Finding (the) Fault



MS Vista EULA

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D. REMEDY FOR BREACH OF WARRANTY.

Microsoft will repair or replace the software at no charge.
If Microsoft cannot repair or replace it, Microsoft will refund the amount shown on your receipt for the software.

You must uninstall the software and return any media ... to Microsoft with proof of purchase to obtain a refund.

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there is no warranty for the program,
to the extent permitted by applicable law.

...

The entire risk
as to the quality and performance of the program
is with you.

Should the program prove defective, you assume the cost of
all necessary servicing, repair or correction.

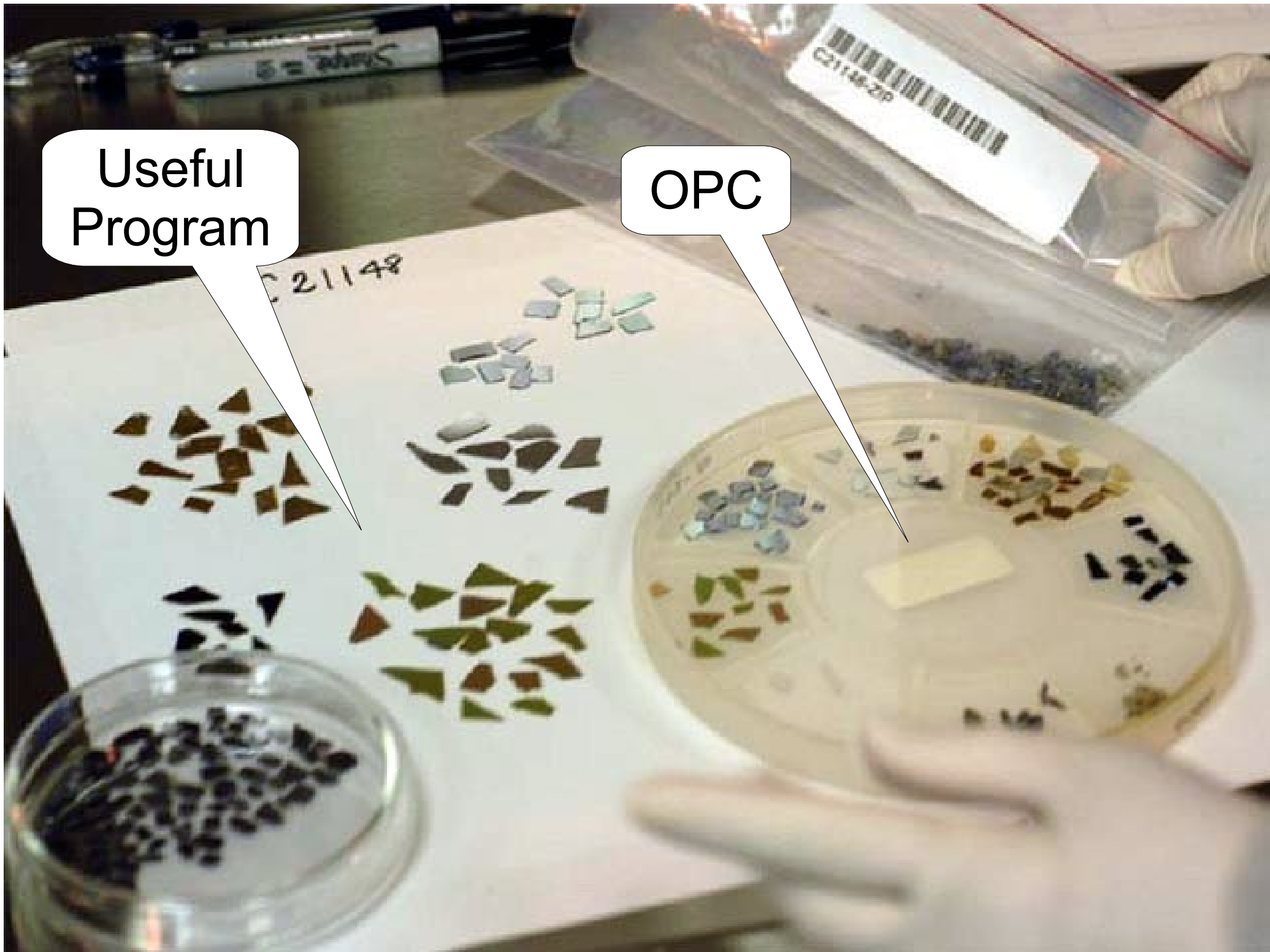


OPC

Useful
Program

Useful
Program

OPC



GPL Warranty

When

your program + OPC breaks

you have all the pieces

But What About ...

When a fellow says,

“It ain’t the money
but the principle of the thing,”

it’s the **money**.

Kin Hubbard
or someone like him

A photograph of a space shuttle on the launch pad. The shuttle is white with a grey base. It is surrounded by orange launch pad service structures. Two callout boxes are present: one labeled 'Biz' pointing to the service structure, and another labeled 'Useful Program' pointing to the shuttle's nose cone.

Biz

Useful
Program

An aerial photograph of the Kennedy Space Center. The image shows the Vehicle Assembly Building (VAB) on the left, two Mobile Launcher Platforms (MLPs) being moved by Crawler-Transporters in the center, and a Space Shuttle being mated to the External Tank and Solid Rocket Boosters on the right. Several callout boxes with the word "Biz" and one with "Useful Program" are overlaid on the image, pointing to various locations. The background features a large body of water and a forested area.

Biz

Biz

Biz

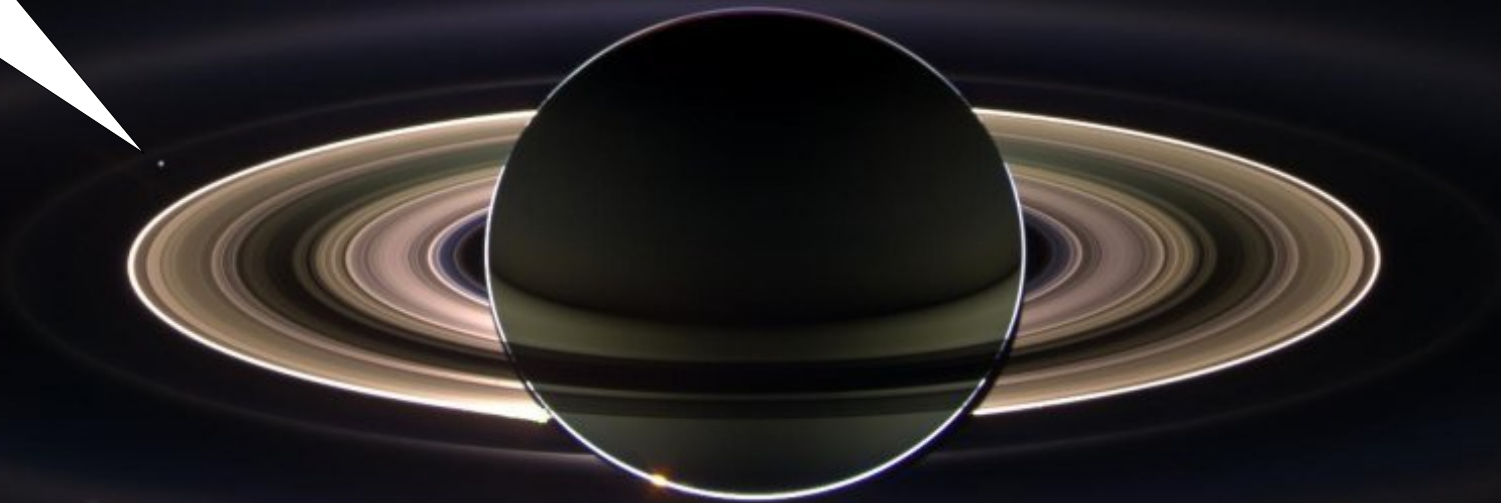
**Useful
Program**

Biz

Biz

Biz

FS
OS
&
You



Sources

Mother Lode of Copyright info

http://fairuse.stanford.edu/Copyright_and_Fair_Use_Overview/index.html

Info on Public Domain

www.copylaw.com/new_articles/PublicDomain.html

Open Source Initiative → www.opensource.org

Free Software Foundation → www.fsf.org

GPL FAQ → www.gnu.org/licenses/gpl-faq.html

Wheeler GPL essay

www.dwheeler.com/essays/gpl-compatible.html

Business models

<http://stephesblog.blogs.com/presentations/BrentWilliamsEclipseConV02.pdf>

Comparison of GPL to Microsoft EULA

www.cyber.com.au/about/comparing_the_gpl_to_eula.pdf

NASA Imagery

www.nasa.gov/multimedia/highlights/index.html

Copyright-ish Stuff

Images courtesy of NASA/JPL-Caltech
Although they are sorta-kinda un-copyrighted
www.nasa.gov/multimedia/guidelines/index.html



The “ISAT Geostar 45” picture is bogus. I mooched it from the ‘Net.
www.breakthechain.org/exclusives/blackoutsat.html

Ditto for the Windows Uh-oh dialog box.
<http://officespam.chattablogs.com/archives/Computer-Error-Your-Screwed.jpg>



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Ed Nisley

Say “NISS-lee”, although we're the half-essed family-tree branch

Engineer (ex PE), Hardware Hacker, Programmer, Author

The Embedded PC's ISA Bus: Firmware, Gadgets, Practical Tricks

Circuit Cellar

Firmware Furnace (1988-1996) - Nasty, grubby hardware bashing

Above the Ground Plane (2001...) - Analog and RF stuff

Dr. Dobb's Journal

Embedded Space (2001-2006) - All things embedded

Nisley's Notebook (2006...) - Where hardware & software collide

