



OPEN SOURCE AND SUN

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OpenSolaris Software
Sun Microsystems



Sun's Business

We Drive
Participation

On the
Network

To Drive
Revenue




**Driving
Demand**



solaris

What is Open Source?

| Source | Binary | OSI |
|--|--|--|
| <pre>static void vdev RAIDZ_reconstruct_q(raidz_map_t *rm, int x) uint64_t *dst, *src, xcount, ccount, count, mask, i; uint8_t *b; int c, j, exp; xcount = rm->rm_col[x].rc_size / sizeof(src[0]); ASSERT(xcount <= rm->rm_col[VDEV_RAIDZ_Q].rc_size / sizeof(src</pre> | <pre>011011010010000001100010011011110111010 101111001011000010110111001110100001011 100000110100001010000011010000101001010 100011010000110010100100000011011010110 10010110111001100100001000001100010011 011110110011101100111011011000110010101 110011001110110010000001110111011010000 11011110010011011100110010000001100010 011001010110100001101001011011100110010 000100000011101000110100001100101001000 000110011101101111011001110110011101101 10001100101011001100111111010000110110 110001100001011010010111001001110110011 011110111100101100001011011100111010000 111010001000000100100100100111011011010 010000001100010011011110111010101111001 011000010110111001110100001011100000110 11001100111011001000000111011011010000 110111100100111011100110010000001100010</pre> | <p>Definition</p>  <ol style="list-style-type: none"> 1. Free Redistribution of Code 2. Source Code Available 3. Allows Derived Works 4. Allows Integrity of Author's Source Code 5. No Discrimination Against Persons or Groups 6. No Discrimination Against Fields of Endeavor 7. Distribution of License with Code 8. License Must Not Be Specific to a Product 9. License Must Not Restrict Other Software 10. License Must Be Technology-Neutral |

- The best way to foster innovation in software
- Sun seeks to influence open source
- Open source requires freedom:

Open Source Momentum

“the most significant all-encompassing and long-term trend that the software industry has seen since the early 1980s.”

**IDC Group
Report
August 2006**

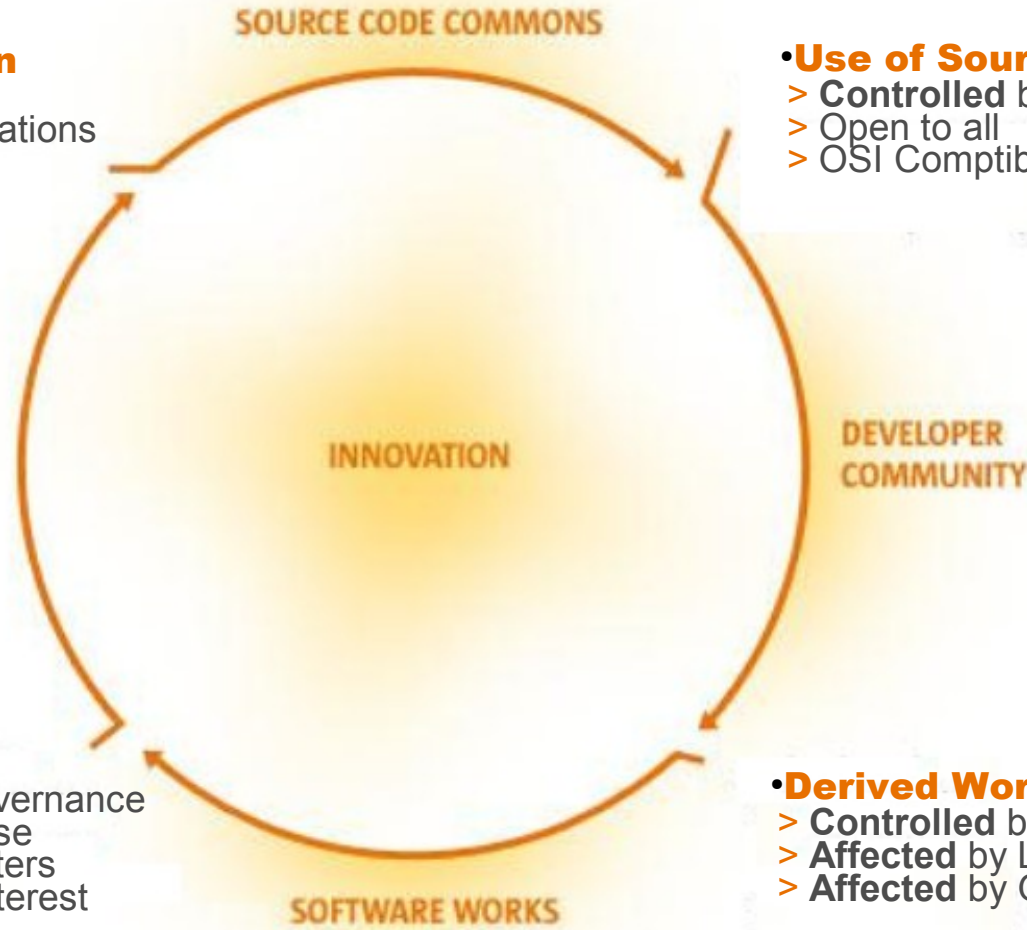
Virtuous Cycle Model of Open Source

- **Initial Contribution**

- > **Requires** ownership
- > Many possible motivations

- **Use of Source**

- > **Controlled** by License
- > Open to all
- > OSI Comptible



- **Contribution**

- > **Controlled** by Governance
- > **Affected** by License
- > **Gated** by Committers
- > **Fuelled** by Self-Interest

- **Derived Work**

- > **Controlled** by Business Model
- > **Affected** by License
- > **Affected** by Governance

Benefits to the Developer



Co-Developers

Adds to Commons
 Accelerated development cycles
 Increased user base
 Builds core technologies
 Borrows non-core technologies
 Lower maintenance burden



Deployer-Developers

Develops on top of Commons
 Accelerated development cycles
 Free access to try latest technologies
 Access to code that meets immediate needs

Monetization in Software Market 3.0

Acquisition

Deployment

c.1970-1980

1.0 Sold to make hardware work



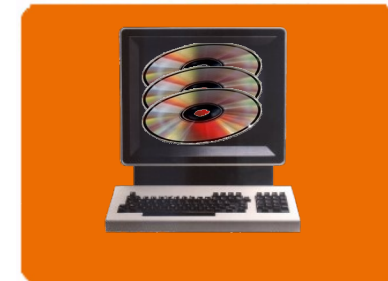
c.1980-2000

2.0 Sold unbundled



c.2000-

3.0 Pay when you deploy



Benefits to the User

- No cost at the point of acquisition
 - > Low barrier to adoption
 - > Flexibility at deployment, predictable license costs
- Vendor lock-in is reduced:
 - > Low / no barrier for suppliers to enter the market
 - > Low / no barrier to customer to exit a relationship
- Increased customisability of software
- Commercial and community support

Benefit at the point of purchase

Open Source Business Models

- **1) “Dual” License**
 - > Differentiation of open source and commercial
 - > Add value to base & sell

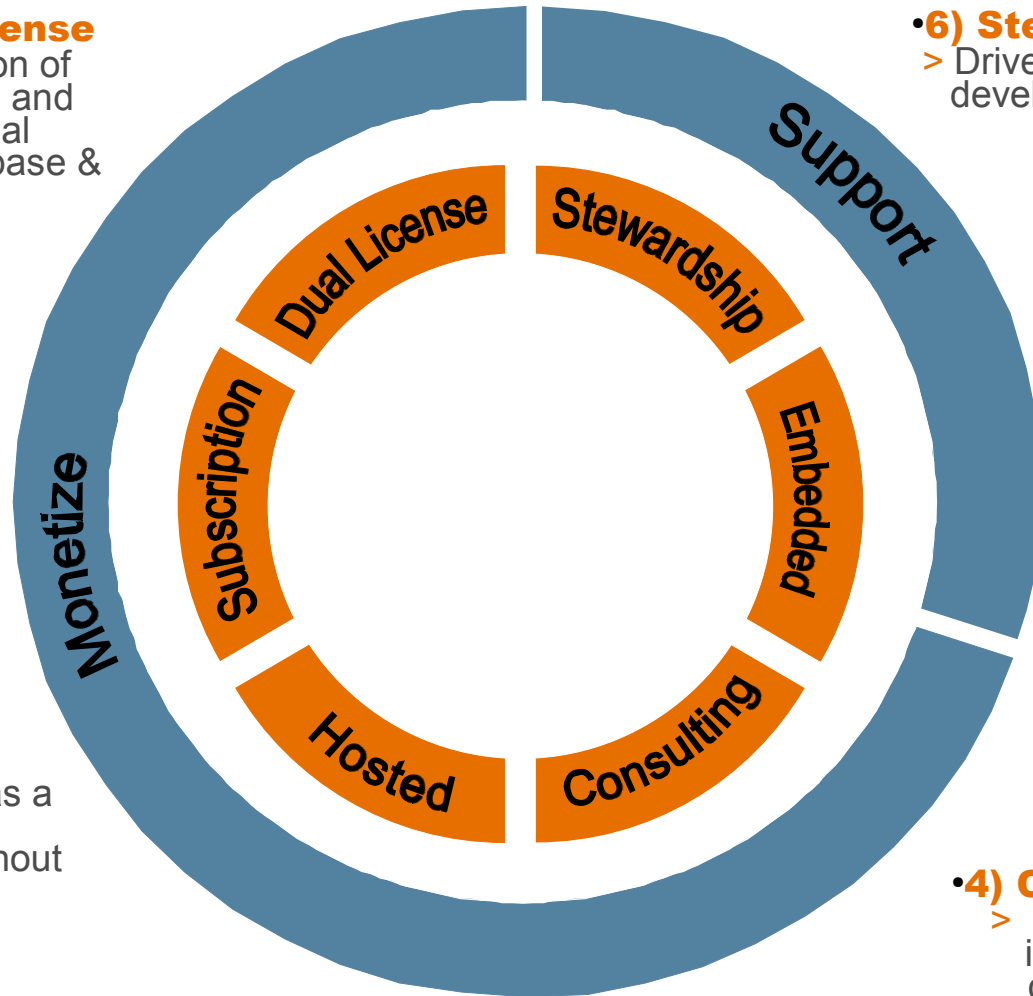
- **6) Stewardship**
 - > Drives standards, developer capture

- **2) Subscription**
 - > Combined offering of software and support

- **5) Embedded**
 - > Use as a minor part within another product

- **3) Hosted**
 - > Software as a service
 - > With or without data

- **4) Consulting**
 - > Enterprise integration consulting



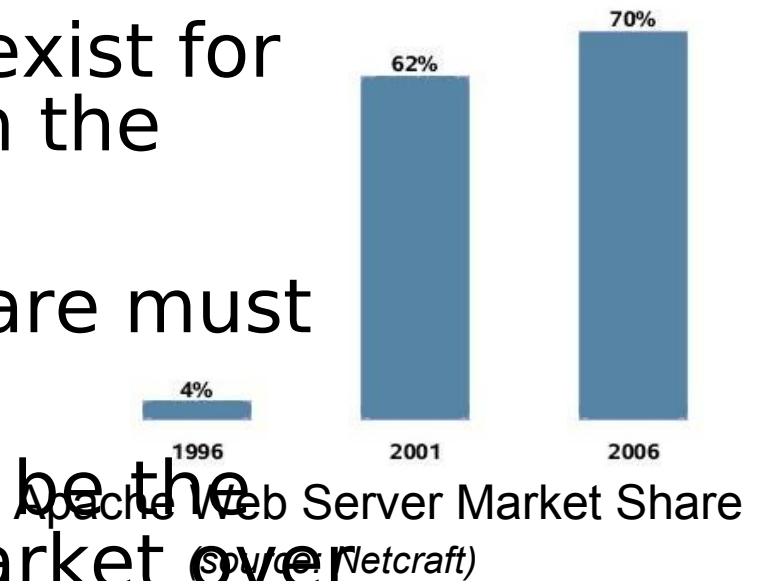
Open Source Landscape

- Well established in parts of the stack for years.
- GNU/Linux:
 - > well established in the data centre
 - > moving to the desktop (Suse and Ubuntu)

• Open Source equivalents exist for almost all software, also in the enterprise.

• Closed / Proprietary software must be highly differentiated.

• Open Source is favorite to be the leading player in every market over time



Open Source Licensing

The three main categories:

A. Unrestrictive Licenses

“Attribution” licenses

Most “free”: fewest requirements, unrestricted scope of use.

Unrestricted development of derived works

Examples:

Apache: **JXTA**, **Jini**
BSD: **Sun Labs (various)**

B. File-Based Licenses

Community fostering licenses

Files derived from common files must be shared with the commons.

Other derived works may be licensed in any manner.

Examples:

CDDL: **OpenSolaris**,
JavaEE / Glassfish,
NetBeans

C. Project-Based Licenses

Project fostering licenses

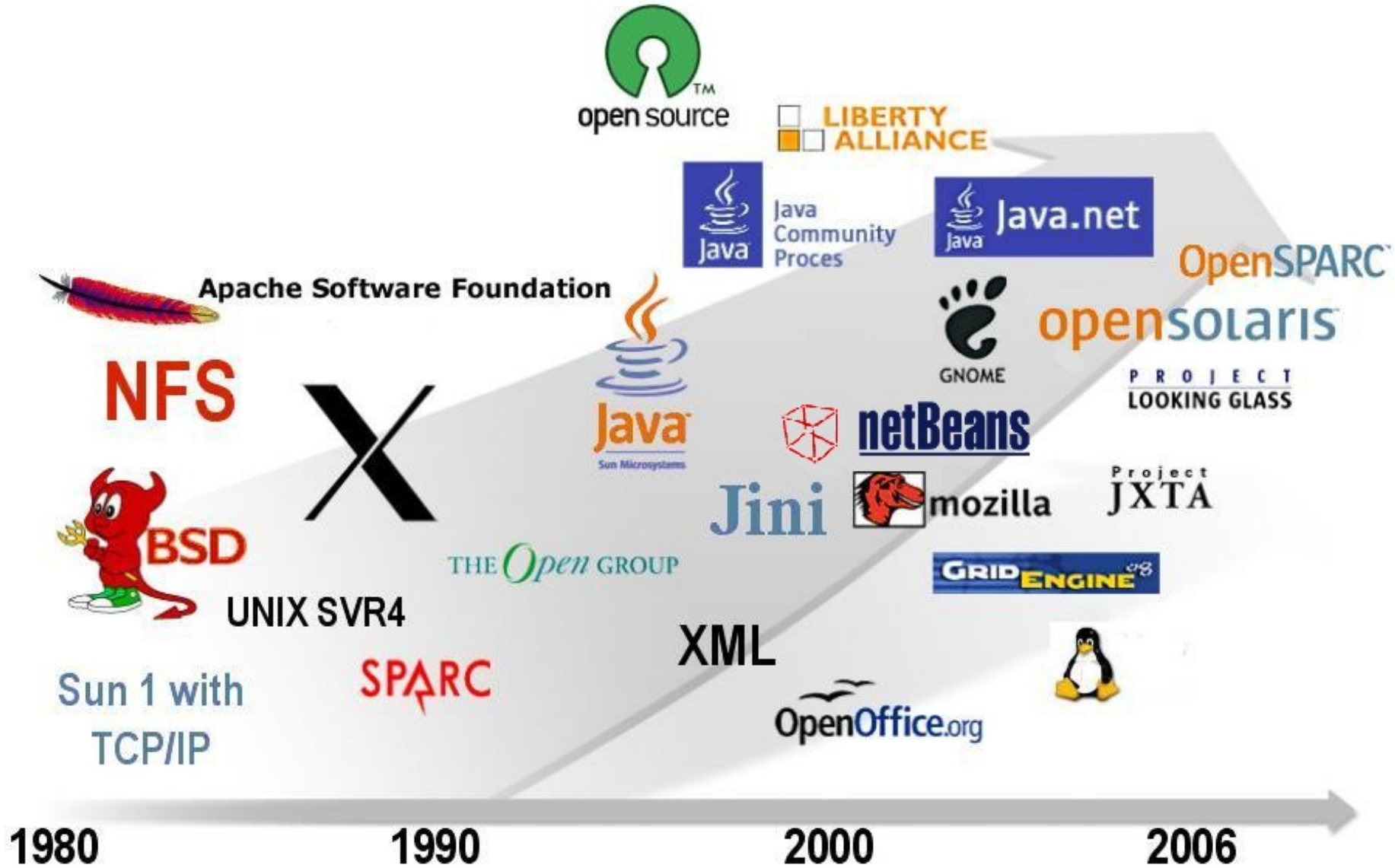
Least “free”: seek to propagate open source.

All work (including derived works) must be shared with the commons.

Examples:

GPL: **OpenSPARC**,
Project Looking Glass
LGPL: **OpenOffice**

Sun's History of Community



Open Source and Sun, then

- 1982: Sun 1 Workstation
 - > 1MHz, 1 megapixel, 1MB
 - > BSD OS 4.02
- Long-standing support for open standards
 - > TCP/IP
 - > NFS
 - > X Windows
- 1990: Sun buys rights to UNIX
 - > Enables OpenSolaris today



Sun 1
Workstation

Open Source and Sun, now

- Sun is the biggest contributor of code to open source in the world.
- Sun has always maintained its commitment to open standards.
- Sun has continued to contribute to open source throughout the 90s and 00s.
- Sun has a public commitment to open all of our software...and is getting there...

Project
JXTA

GRID ENGINE^{OS}

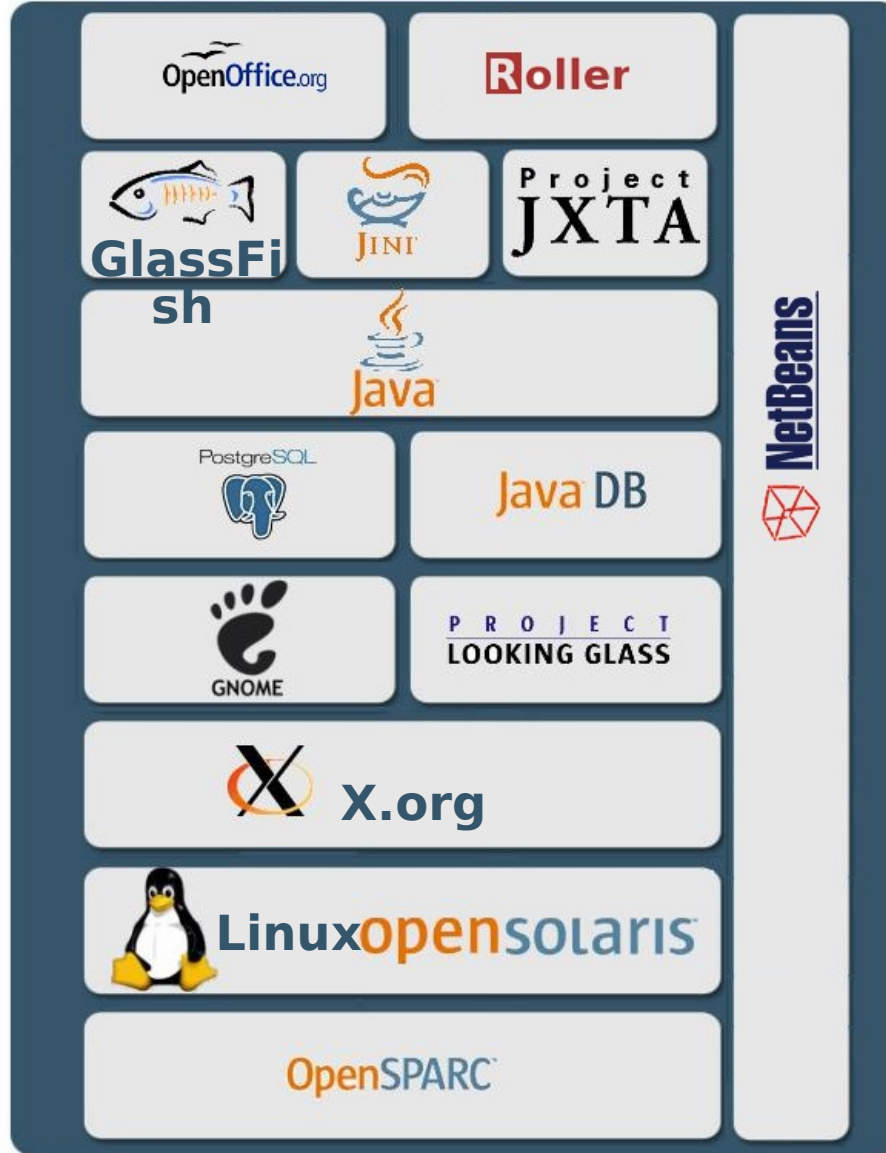


 **netBeans**.ORG

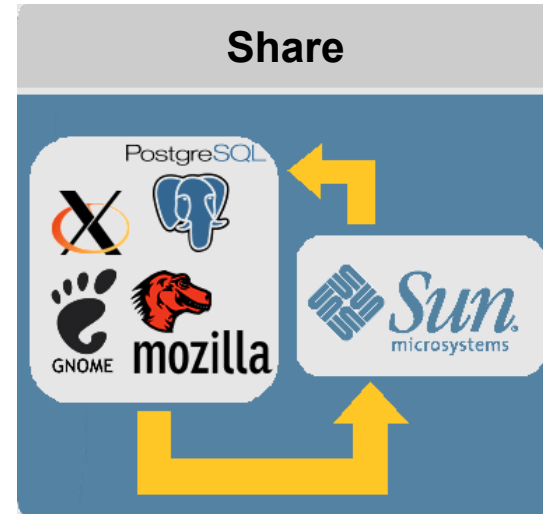
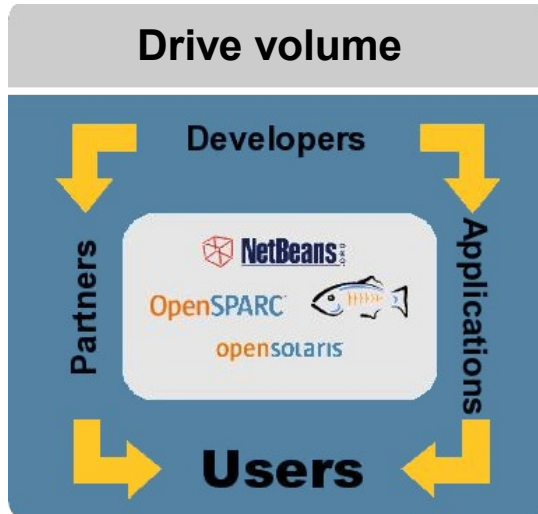
 **OpenOffice.org**

opensolaris™ **OpenSPARC**™

Sun's Open Source Stack

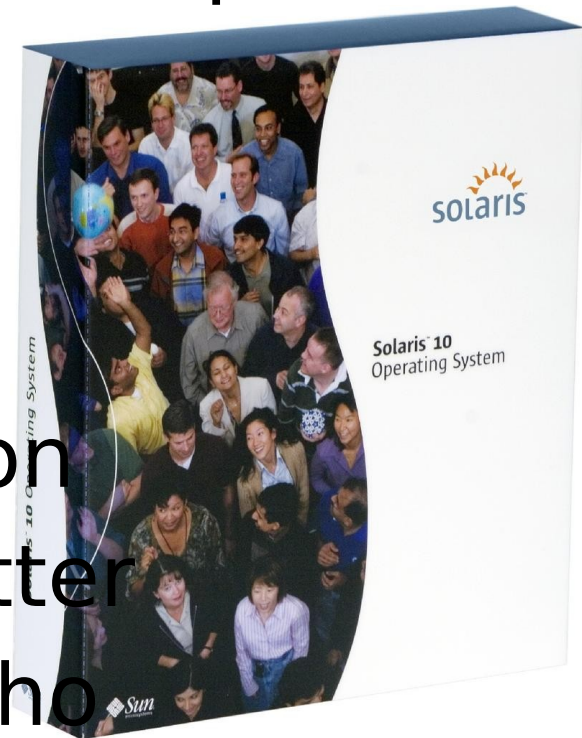


Sun's Open Source Strategies



What Sun Sells: Added Value

- Sun's open source software is free at the point of acquisition:
 - > Zero-cost right-to-use (RTU)
- You pay for software at the point of value:
 - > Developer support
 - > Enterprise support
 - > Indemnification
 - > Training and education
- The more users the better
- Customers are users who purchase support



Open Source Software For Business?

- Sun believes open source is **first class software**
 - > Same quality processes for open and proprietary code
 - > Sun offers warranty and indemnification for software built on open source projects
- Sun knows its code
 - > Huge diligence around open sourcing
 - > We require signed contributor agreements
- Sun protects its code



The M in LAMP

Sun announced intention to acquire
MySQL AB for consideration of
approx \$1bn

More than **100 million** downloads
Approx **50,000** downloads per day

OpenOffice.org



multi-platform open source
office suite

More than **69 million** downloads

More than **800 thousand** user
surveys since v2.0

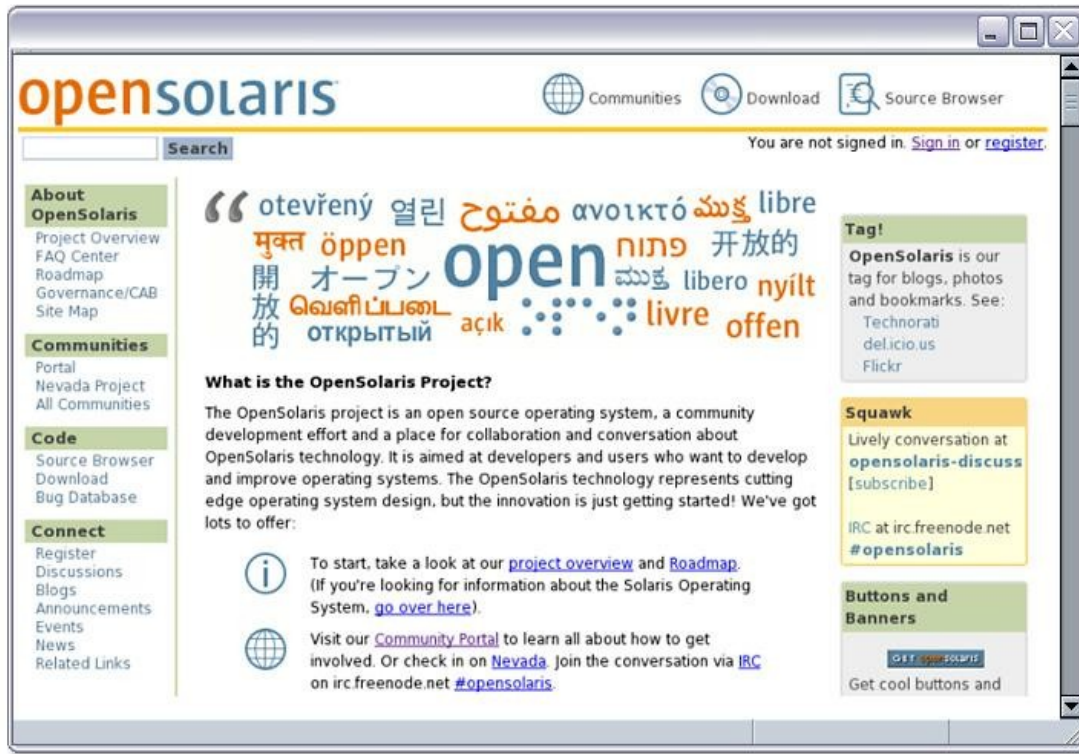
More than **35,000** mailing list
subscriptions

More than **720** signed Joint
Contributor Agreements

Over **80** active projects (including 52
native language projects)

OASIS OpenDocument

OpenSolaris



Innovation Happens Everywhere
www.opensolaris.org

opensolaris™

30 major community projects,
 BrandZ, DTrace, Solaris ZFS, Zone

30 User Groups Worldwide

250 Code Contributions

33,000 Downloads

5 OpenSolaris Distros Available:
 Solaris, SchilliX, BeliniX, Mart-UX,
 Nexenta

2006 Code "Best Open Source
 Solution"

2005 Open Source World Editor's
 Choice

2005 InfoWorld Innovators Award

2005 MT Young Innovator Bryan
 Cantrill



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