



# Free to Choose Again

## *The Economics of Open Source*

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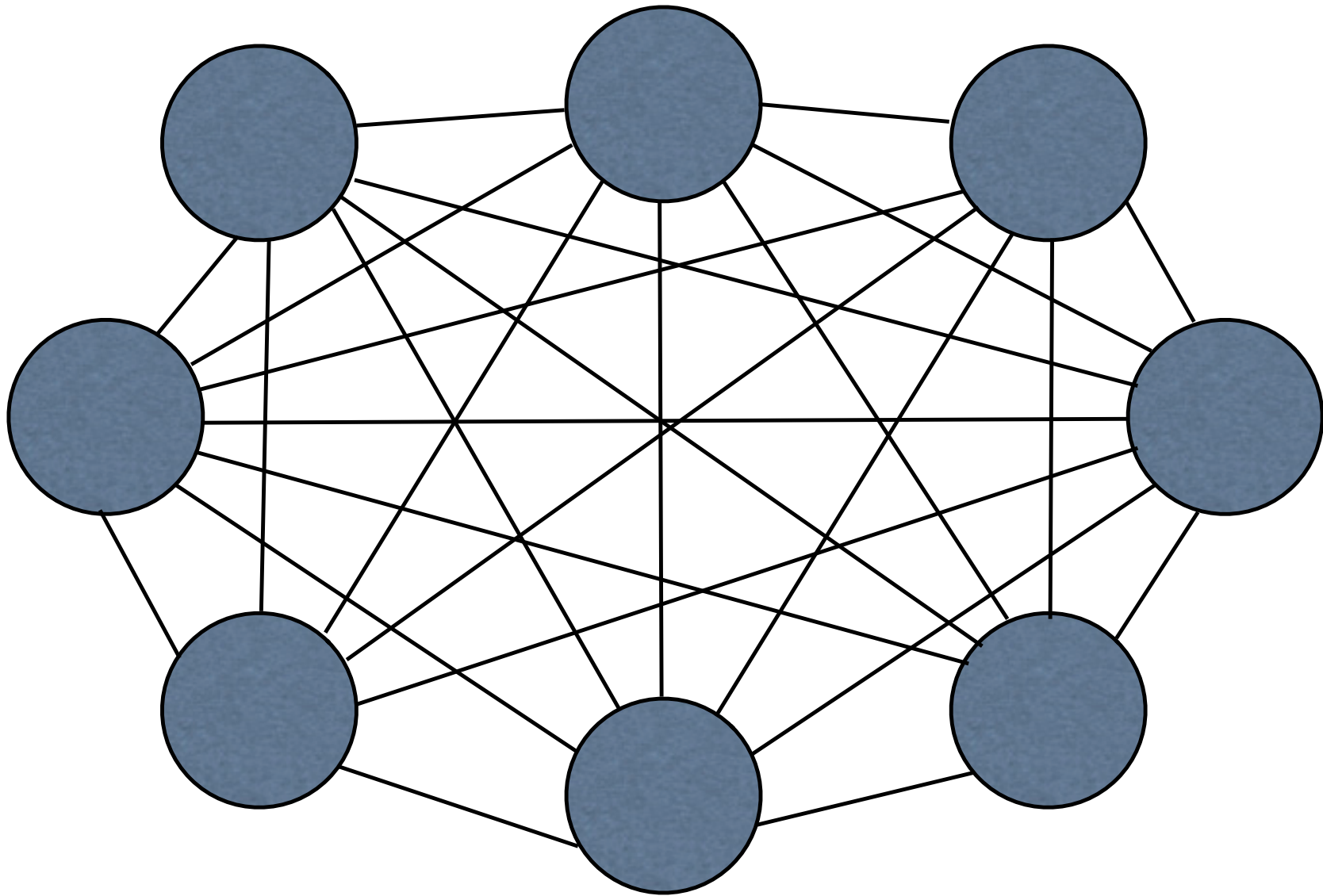
Keystone, CO  
October 31, 2003

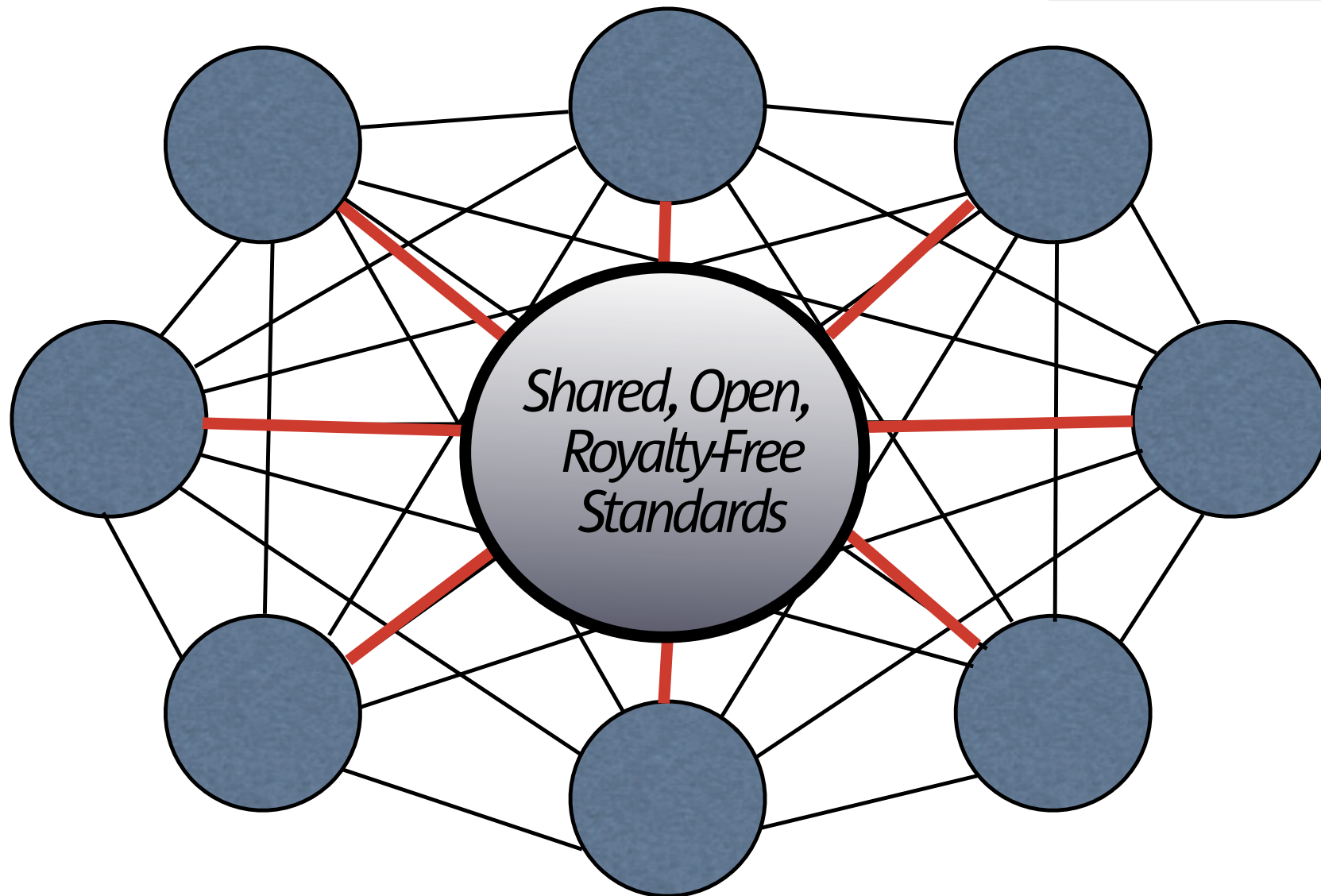
 **Sun**  
microsystems  
We make the net work.

# Context - Where Are We Now?

# The Massively-Connected Era

- Rapid Evolution
  - In just one decade the world has become massively connected
- Net Effect
  - The value of the network is proportional to the number of potential relationships
- Technology Promotes Connection
  - Device proliferation, growing bandwidth, service oriented architectures  $\Rightarrow$  many dimensions/layers of relationship
- Fractal Architectures
  - We are moving to networks of networks





# The Net Effect

- Exponential Opportunity Growth Through Connectedness
- Linear Cost Growth Through Open Standards Loosely-Coupled

# Interpreting Open for the Era

- 80s
  - Hardware-inspired standards processes
  - Committee membership, Specification
- 90s
  - Business-inspired standards processes
  - Consortium membership, Implementation
- 21st Century
  - Community-inspired standards processes
  - Community involvement, Open source

# So How Have Things Changed?

# If the network were the computer...

- There would be no boundaries to defend

# If the network were the computer...

- Software would become services

## If the network were the computer...

- Software would be licensed on scale, not on implementation details

## If the network were the computer...

- System stakeholders would be enfranchised in development

# The Network Is Now The Computer!

# Understanding Open Source: Developers

# Open Source Methodology

- ‘Commons-Based Peer Production’
  - *Yochai Benkler, <http://www.benkler.org/CoasesPenguin.html>*
- Structured and controlled development
  - Reputation-based
  - Controlled by initiators
- High quality results common
- Loosely-coupled - maintains choice
- Facilitated by Commons-creating licenses

# Licenses

- Many licenses, one objective
- Objective: community
- Select the license to facilitate the community that's sought
- Possibly separately license in a manner appropriate for the anticipated deployment community

# Open Source Communities

- Open Source: Agile Development Done By A Community
- If there's no community, there's no open source; it takes more than just applying an OSD-compatible license  
*("you can live in a garage all your life and never become a car")*

# “Open” and “Proprietary”

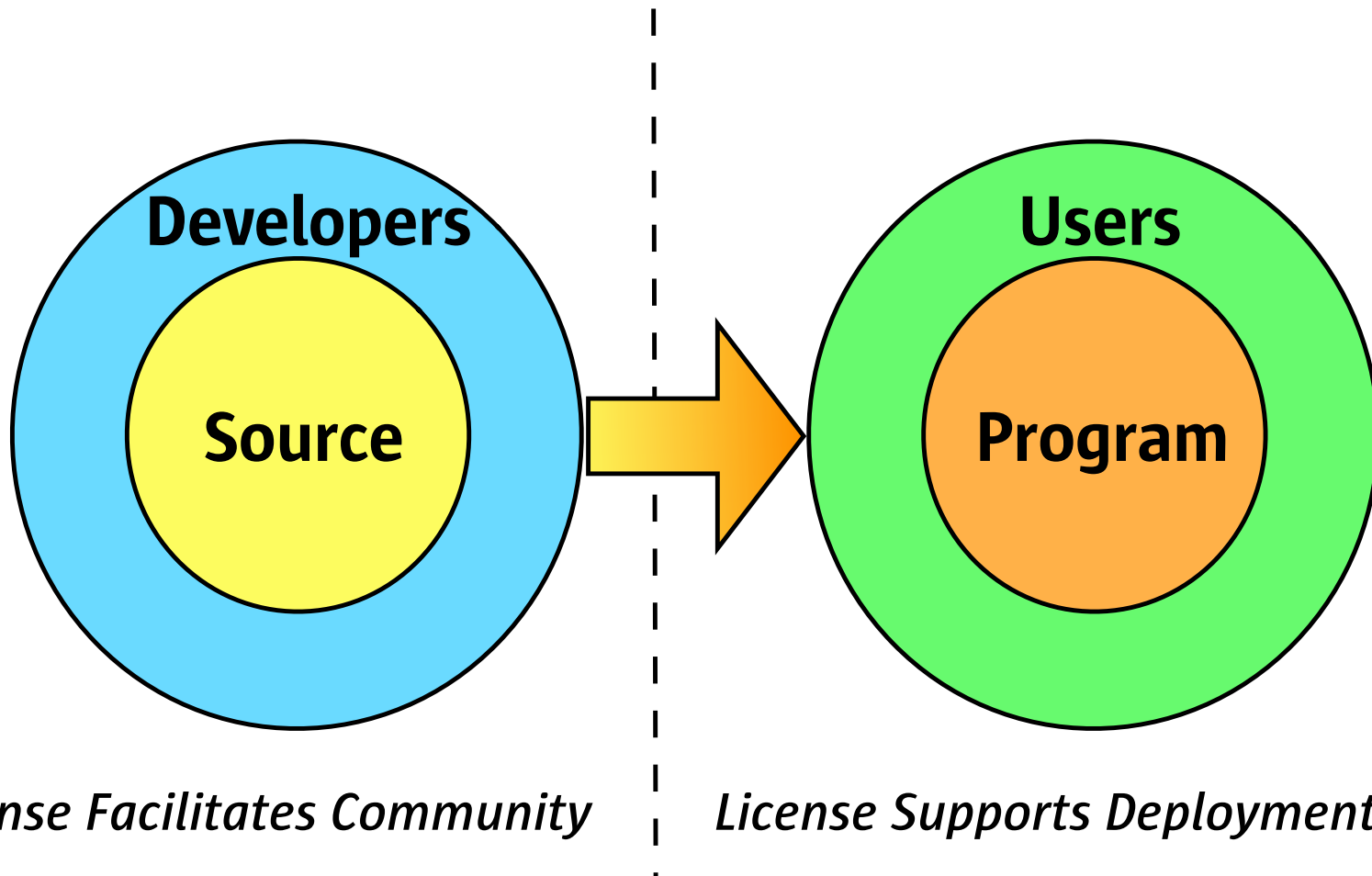
S T A N D A R D S	Open	Closed
S O U R C E	Community	Proprietary

# Staying Open...

- Licenses license copyright. Who owns it and why?
- Who are the committers? Who decided?
- The best open source projects implement recognised open standards in an interoperable way

# Understanding Open Source: Deployers

# The Scope of Free



*License Facilitates Community*

*License Supports Deployment*

# Using Open Source

- Development
  - Many community variants
- Many deployment variants, including commercial ones
  - Help-yourself
  - Package-to-product and support
  - Customise-per-use and support
  - Customise-to-product and support
  - Aggregate to bundle and support
  - ...and more

# Why Open Source?

- Research suggests the #1 factor is...
- Choice and Freedom
  - Software features, Support provider, Platform
  - “The freedom to choose again”
  - Worth \$10m to City of Munich...
- & then one other from:

# Open Source Factors for Users

- **Quality**
  - Open source development at its best is like Extreme Programming on steroids
  - More stable & reliable code - mass inspection
- **Security**
  - Inspected algorithms are secure algorithms
  - Security through obscurity is discredited
- **Cost**
  - Not free, but shared & controlled

# No Guarantee of Openness

- Open Source is about community development
- End-user openness is not inevitable
- Openness is a product of:
  - Open standards
  - Software portability
  - Interoperability
  - Open licensing

# Open Source in Practice

# Sun and Open Source

- Using several business models
- Sun Java Desktop aggregates on Linux
- StarOffice based on OpenOffice.org, which Sun sponsors
- Sun Java Studio based on NetBeans, which Sun sponsors
- Participating in Linux community in support of Cobalt and LX50 servers
- Active in many many more contexts -  
*see [www.sunsource.net](http://www.sunsource.net) for details*

# OpenOffice.org

- Office productivity suite
- Available on many platforms  
*including Windows, Mac and Unix*
- Localised for global use
- Productised by Sun as StarOffice for those preferring vendor support
- Key part of Sun Java Desktop System
- Good? Good enough to make Microsoft change course...
- Visit <http://www.openoffice.org>

# NetBeans

- Pure Java framework for GUI-based applications
- Initial emphasis on development tools
  - strong support for plug-ins and development aids
- In use by a number of companies as the basis for commercial products  
*(e.g. Sun for Sun Java Studio, BEA for a CRM product)*
- Good starting point for new projects
- Visit <http://www.netbeans.org/>

# Sun Java Desktop System

- Complete desktop for the average user - initially aimed at groups
- Mail, Office Productivity, Browser
- Linux ready configured for today's world (IM, Multimedia, Security)
- Centrally configurable
- SunRay Compatible
- Easy to own, cheap to run
- Priced per user, not per system

# Sun Java Desktop Demonstration

# Sun Java Desktop System

- StarOffice 7
- Ximian Evolution mail & calendar
- Mozilla
- Gnome
- Java Desktop Edition 1.4
- Multimedia support (Real, DVD etc)
- Linux
- Central management system
- \$50/employee list price

# Open Source Lessons Learned

# Why is Sun doing Open Source?

- Shared Innovation
- Customer and Partner benefits
- Increased quality and security
- Future direction of most software
- Base for future evolution of best practice and unexpected value
- ... and it's still great stuff even after all that!

# Sun's Experiences - Issues

- Open Source is a Big Step
- Source needs hosting
- Community needs facilitating  
*(we use CollabNet)*
- License issues outside education of most IP attorneys
- Developers find public exposure a shock
- Managers find loss of control challenging

# Sun's Experience - Benefits

- Good returns
  - Savings take time to appear
  - Community is chief asset
- Software quality is better
  - Fewer bugs, more quickly identified
  - Design tracks market needs
  - Design improved by extensive review
- Lock-in Avoided
  - No single dominant force
  - Influence of would-be market controllers largely avoided
  - Can always go elsewhere, no IP locks

## Open Source ...

- Is about communities, not licenses
- Involves collaboratively evolved source code
- Results in more stable, reliable & secure software
- Delivers business value:
  - Great code with better security
  - Preserves choice and independence
  - Shared cost
- But get a vendor to join the community for you!

# Summary

- Open Source - the methodology of the massively-connected era
- Development  $\neq$  Deployment
- Standards + Open Source = Freedom

# Thank-you!



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# Sun and Linux

# Linux is a kind of Unix

- Sun is entirely comfortable recommending it - Sun is a Unix company - always has been
- Sun is deploying Linux on new server products right now
- Sun is taking the boldest move ever in Linux, the Java Desktop System
- Linux compatibility is also an integral part of Solaris design

# Sun is a big player in the Linux community

- Co-chair of the Linux Internationalization effort
- A founding member of TV Linux alliance
- A member of Linux International
- A member of the Free Standards Group
- Contributor to many GNU tools
- Partner with Red Hat and SuSE

# Sun & Linux

- Linux represents choice
  - Spurs innovation, prevents lock-in, promotes open standards and facilitates healthy competition.
- Sun: Leading Edge Linux Software
  - Java, Sun Java Desktop System, Sun Java Enterprise System, Sun Java Studio, StarOffice, and more.
- We use Java; we're (almost) platform agnostic!