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Licenses, Features and the Open Source Community in Higher Education

Jim Farmer

Open source is now "important"

Inaugural Issue
July/August 2005

Credits

This presentation is based on a presentation made by Justin Tilton at the "Open Source in Government Conference," March 16, 2004, at George Washington University and his subsequent research at the University of Maryland's Robert H. Smith School of Business.

im+m's Jon Allen provided graphical design and graphics, and suggestions on presentation.

*Focus on e-Learning
as an example from education*

The e-learning market

- About 5.000 e-learning providers worldwide can be counted and none of them keeps a market share of more than 5% (NFO Infratest 2003).

- 96% of 161 commercial e-learning providers interviewed in 2001 identified companies as their main target group (Berlecon Research 2001).

- The worldwide market for e-learning for 2004 is averaged about 30 billion USD (+/- 30%). The e-learning turnover in the USA for 2003 was valued with 7 billion USD, an increase of more than 438% compared to 2001. Estimated with 4 - 6 billion USD the European market for e-learning is smaller.

Hoppe and Breitner, "Sustainable Business Models for E-Learning," 7 January 2004.

Where the IT dollars go

Mårten Mickos, MySQL AB, Open Source Business Conference 2005
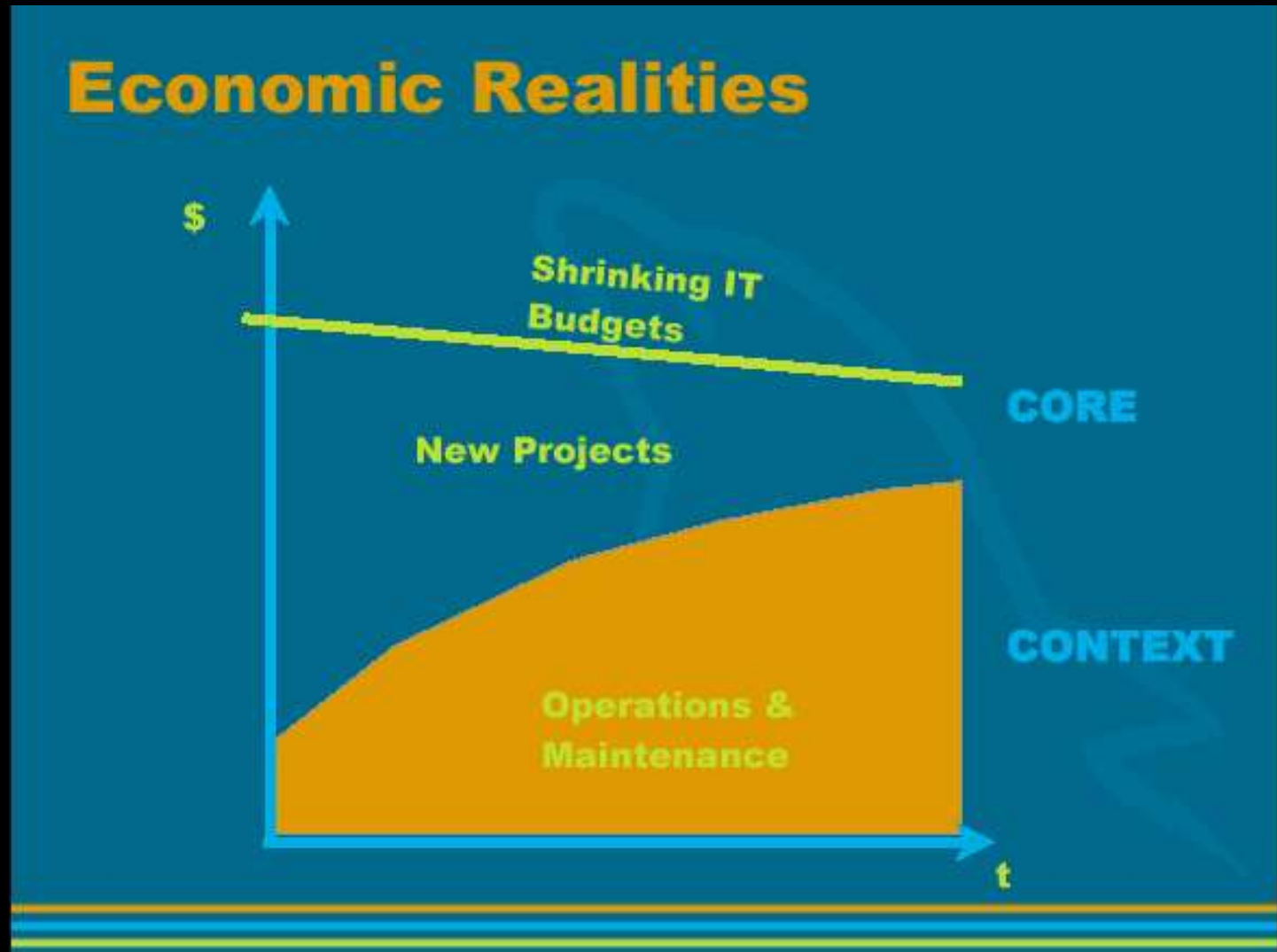
Moore: Core versus context

Darwin's Lesson:
Competitive Advantage is Core—
Everything Else is Context

- **Core**

  - Any process that contributes directly to sustainable differentiation leading to competitive advantage in target markets.

- **Context**

  - All other processes required to fulfill commitments to one or more stakeholders.

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Geoffrey Moore, Open Source Business Conference 2005

Strategic role of open systems

The Strategic Role of Open Systems

- **Focus on context processes**
  - Allow customers to focus on core
- **Embrace commoditization**
  - Reduce risk
  - Lower cost
- **Provide flexible APIs**
  - Let core interface cleanly to context
  - Support value-adding differentiation

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Geoffrey Moore, Open Source Business Conference 2005

Users want

- Required features
- Sustainability
  - Reliable software
  - Long-term product support
  - Training and documentation
  - Active user community
  - Enhancements synchronized with needs
  - Reasonable costs
- Integration with other software
- Availability of trained staff
- Freedom to choose suppliers

The dilemma of "open standards"

Standards Mean Substitutabilty

**Geoffrey Moore calls this "context"
(and commodity pricing follows)**

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The dilemma of "open standards"

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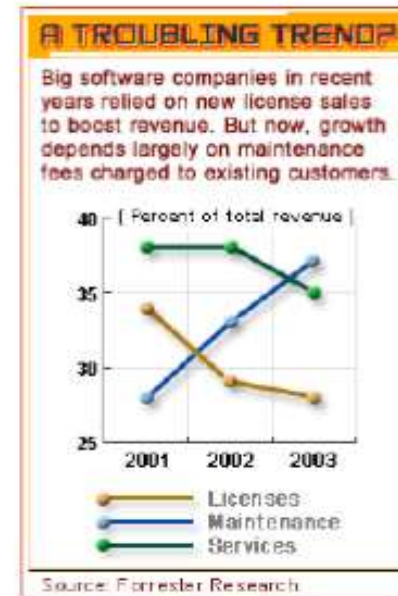
Open Standards vs. Open Source

Ÿ Open standards offer
- Choice
- Flexibility
- Standardization
- Lower cost

Ÿ Open standards are more important to an enterprise than open source

ORACLE

Edward Screven, Oracle Corporation, Open Source Business Conference 2005

Open source changes business model

Enterprise Software Model is Broken

- Enterprise software today
  - Long sales cycles
  - Expensive
  - Inaccessible to SMB
  - Inaccessible to small developers
  - Disconnect between license cost and manufacturing cost
- 76% of New license revenue today goes to sales and marketing[1]
- We are charging customers (a lot!) to convince them they need our software!

A TROUBLING TREND?

Big software companies in recent years relied on new license sales to boost revenue. But now, growth depends largely on maintenance fees charged to existing customers.

[Percent of total revenue]

2001   2002   2003

— Licenses
— Maintenance
— Services

Source: Forrester Research

[1] Source: Goldman Sachs

medsphere
Proven Healthcare Information Solutions

Larry M. Augustine, Medsphere Systems, Open Source Business Conference 2005

Siebel meets open source

	Siebel Proprietary		Siebel Open Source	
Revenue				
Software license	$487,127	36.4%	$0	0.0%
Maintenance	$469,751	35.1%	$469,751	55.1%
Professional Services	$382,915	28.6%	$382,915	44.9%
Total Revenue	**$1,339,793**	**100.0%**	**$852,666**	**100.0%**
Cost of Revenue				
Software license	$13,316	1.0%	$13,316	1.6%
Maintenance	$0	0.0%	$0	0.0%
Professional Services	$443,585	33.1%	$443,585	52.0%
Total Cost of Revenue	**$456,901**	**34.1%**	**$456,901**	**53.6%**
Gross Profit	**$882,892**	**65.9%**	**$395,765**	**46.4%**
Expenses				
R&D	$299,051	22.3%	$149,526	17.5%
S&M	$337,690	25.2%	$84,423	9.9%
G&A	$104,541	7.8%	$66,508	7.8%
Total Expenses	**$741,282**	**55.3%**	**$300,456**	**35.2%**
EBITDA	**$141,610**	**10.6%**	**$95,309**	**11.2%**

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An observation

- Higher education has little "market power"

Except for

- Software firms that earn most of their revenue from higher education

Or when there are

- Open source projects that have an active, large and supporting user base.

Is higher education different?

- Bright and productive people are "cheap" (as compared to the market)

- Contributing people's time is less difficult than approval for an equivalent amount of funds spent for supplies or services.

- Research staff can be assigned to "related" projects and remain "accountable."

Education is a distorted market

Commercial firms must monetize services

The "PeopleSoft Experience"

- Moved administrative software decisions from the Chief Information Officer to the Chief Business Officer or the Board.

- Introduced proprietary "lock in" PeopleTools technology and Microsoft Windows clients.

  > Maybe "standard" COBOL wasn't so bad after all.

- Added functionality, but increased software licensing prices by 900% unless discounted.

- Increased daily consulting rates by 300%.

- Increased annual maintenance from 10% to 17% of "list" price of the software.

"Wall Street"-based pricing

The cost of annual maintenance can, and will, be increased to meet the profit goals that supports a desired stock price.

For the past five years, Oracle's annual increase in annual software maintenance has been 22% per year.

Analysis of the Potential Purchase of PeopleSoft, 2003

The "Wall Street" view

The value of software is the long-term "annuity" income, not the original license fee. Discounts of 20% to 98% of the software license fee are typical.

R&D? Enhance software to attract new customers, not improve functionality for current users.

Trial documents, Oracle v PeopleSoft, 2003

Open source and proprietary

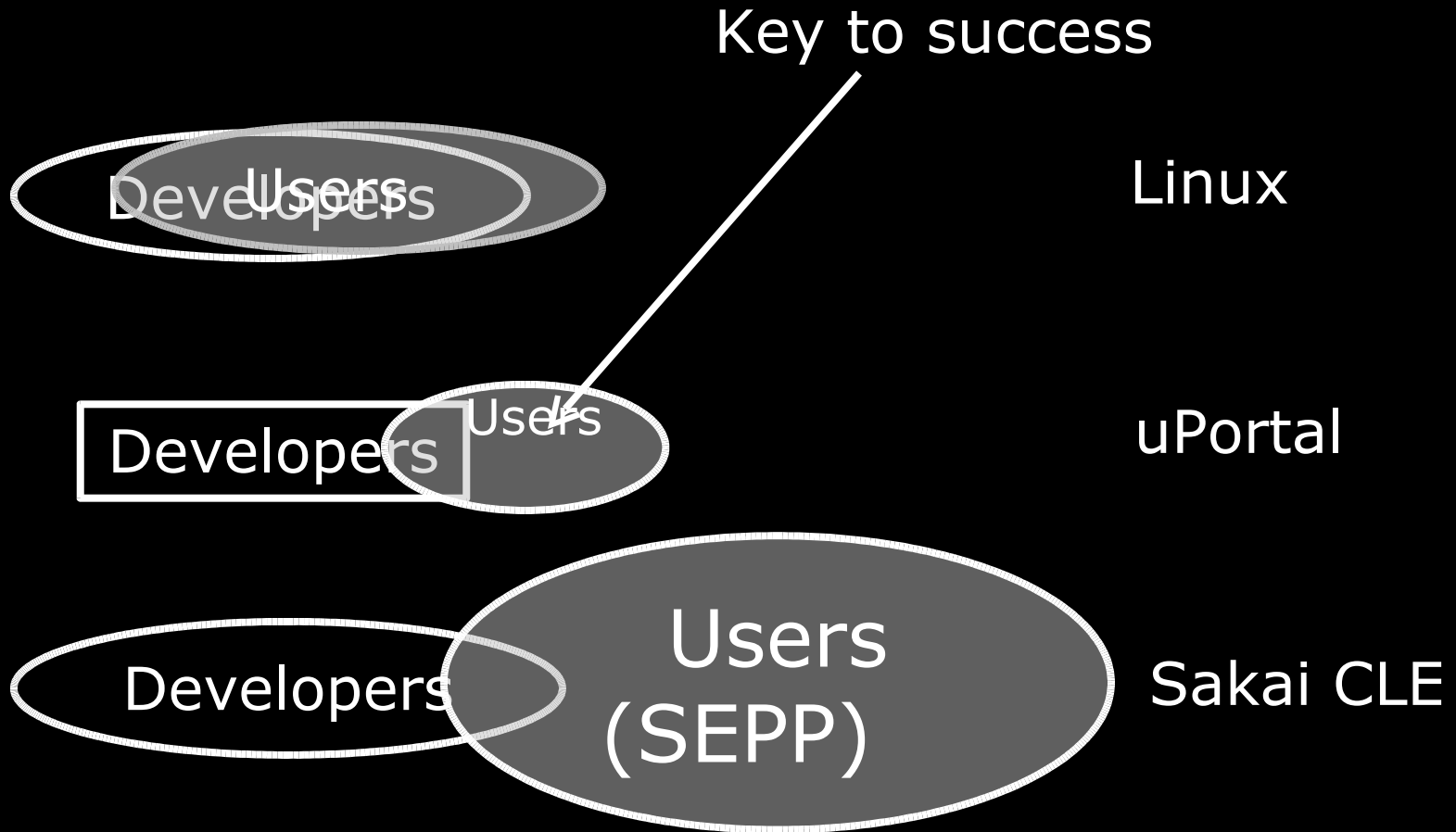| Open source	Proprietary
Developed by a community to meet their needs	Developed by a firm to meet the anticipated needs of a market
Community "shares"	Firm restricts market use
Success depends upon value to user	Firm depends upon long-term fees for profit

Open source, an alternative but ...

- Most open source software development projects fail.

- Most consortium software development projects in higher education have failed. (CodeX and uPortal are exceptions). Some of those led by higher education software firms have succeeded.

- Projects with limited scope are more likely to succeed. Components, such as Sakai partner tools, or extending existing software, such as Sakai CLE and uPortal, are more likely to succeed.

- Developing software products is always a risky business.

*Building community
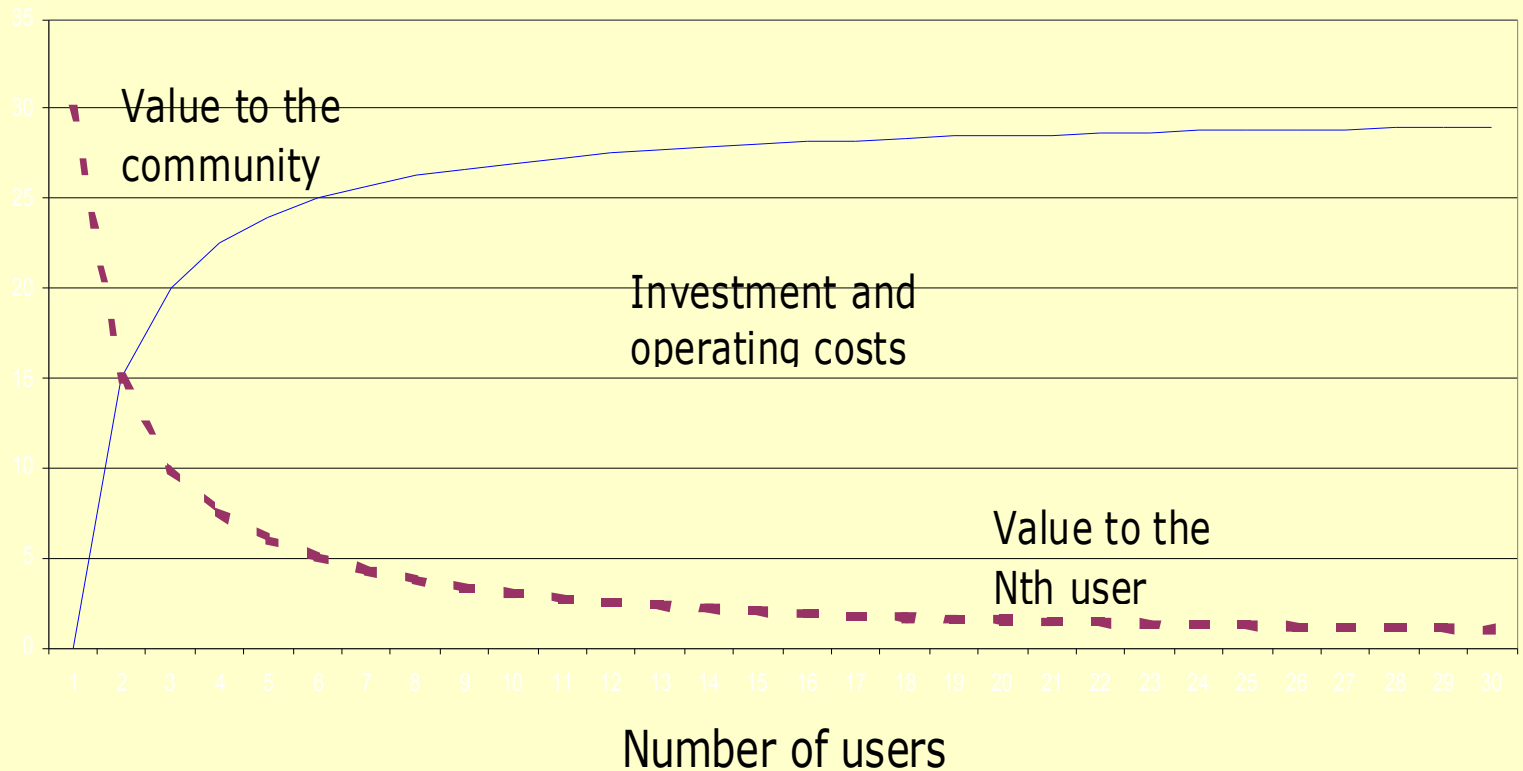and the business model*

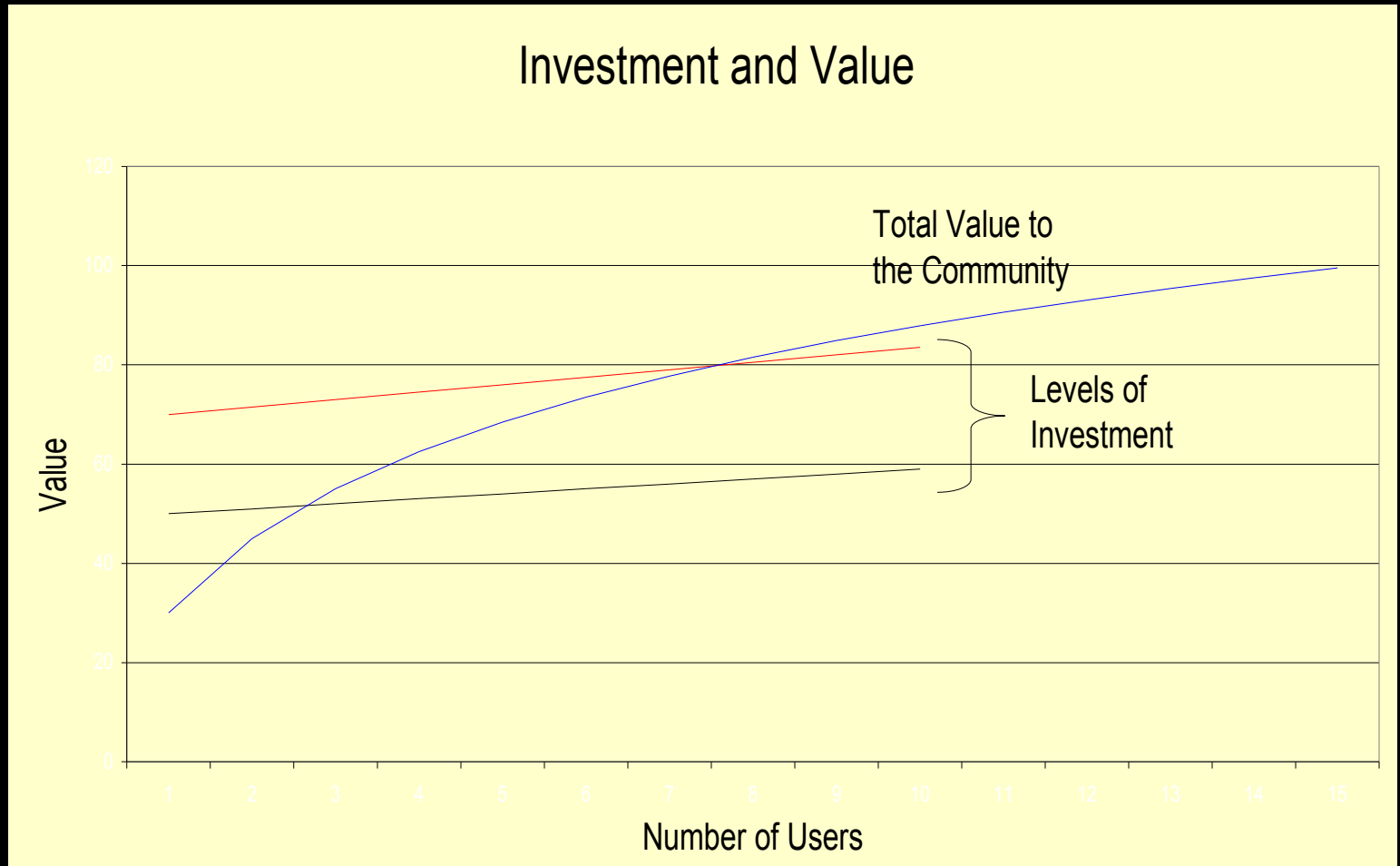# *"Olivier" communities*

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Key to success

Developers Users — Linux

Developers | Users — uPortal

Developers Users (SEPP) — Sakai CLE

Interpreted from comments by Bill Olivier, CETIS, December 2004

Features and value

Community Size and Value

Value to the community

Investment and operating costs

Value to the Nth user

Number of users

Features and value

Investment and Value

Why commercial partners

- Open source is a services business
  - Geoffrey Moore: "Control culture"
- Access to multiple products and "projects"
- Access to investment capital

Requires "open" license for supported open source products

Some foundation-funded and user-capitalized consortia may have the same characteristics of commercial firms, including access to capital.

Jonathan Schwartz on open source

→ **Connecting Technologies drive value and wealth creation (network effects)**

→ **Restrictions and fear stifle progress**

→ **Openness propels growth and will enable the Participation Age**

Jonathan Schwartz, Sun Microsystems, Inc., Open Source Business Conference 2005

Higher Education

- Most of these features apply to Higher Education

Aggregated Layout
For distributed layout control

- System Integration & Consistency
- Single Sign-on & Security
- Personalization
- Collaboration
- Component Reuse
- Task Management & Workflow
- Internationalization
- Customer Relationship Management
- Syndicated Content Subscription

- uPortal is bridging the gap between corporate portals and the needs of Higher Education Institutions

Justin Tilton, "Open Source in Government," 16 March 2004

Open source developers

Major motivations

2. Altruism
3. Anti-Microsoft Passion
4. "Cool hobby"
5. Great personal career development
6. Useful for my job

Cited by Geoffrey Moore, Open Source Business Conference 2005

"Developers may be attracted by learning opportunities, but getting them to turn their hobby into a full-time job requires paying them salaries comparable to what they'd be earning in the proprietary software world."

Marc Fleury, "The Challenges & Opportunities…", July/August 2--5

Who pays for development?
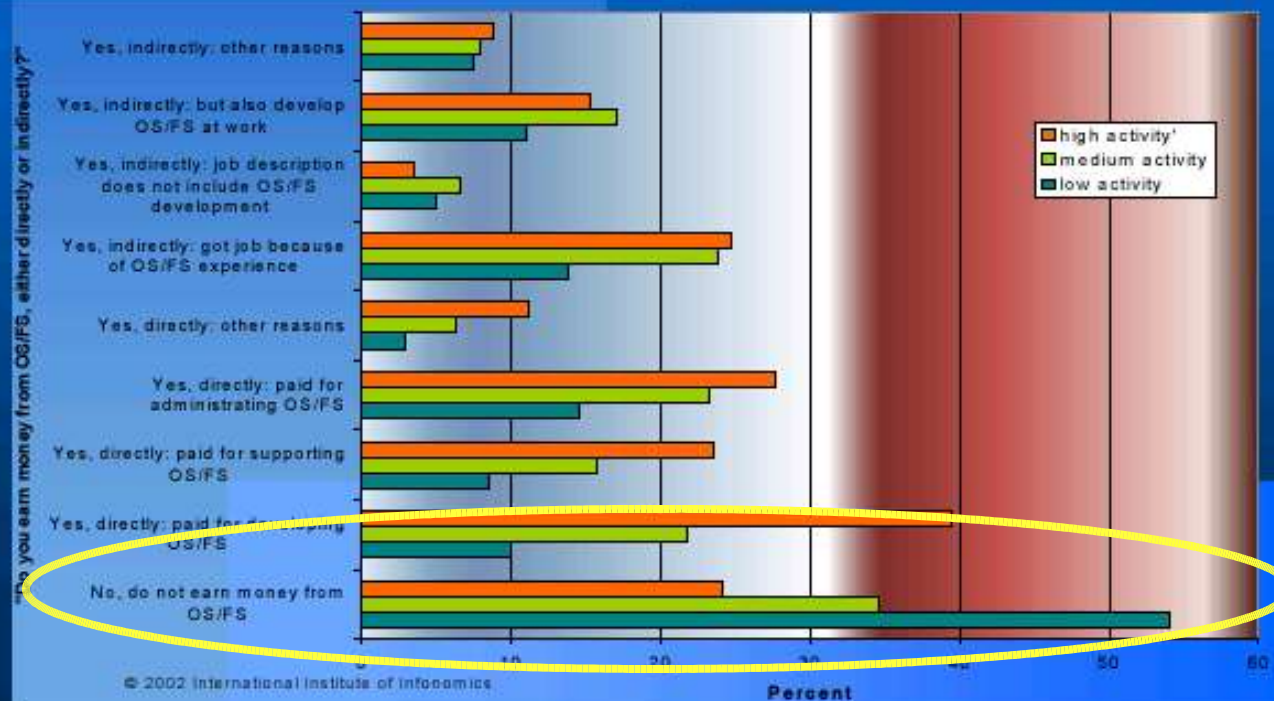
Mentoring

Area	*Affiliation*
Internationalization (XLIFF)	Oracle Corporation
Layout (XSLT)	Software A.G.,
Remote portlet (WSRP)	IBM Corporation
Integration	SAP A.G., HR-XML and IFX Forums
Learning systems	Airbus, Boeing
Security	NIST, NSA
Performance	Wells Fargo

JA-SIG and uPortal

Open source business models

1. "Packagers" such Red Hat and SuSE.

   - Bundle software developed by a third party and offer a shrink-wrapped product.

2. "Professional open source" such as MySQL AB and JBoss, Inc. (Hibernate, Tomcat, BPM)

   - Depends upon dual open/proprietary licensing

   - Paid high-quality, full-time developers

   - "Safe" for the enterprise – competitive enterprise levels of service (e.g. 27/7 technical support)

Open source business models

1. Tri-level products (such as IBM)

   - Open source for developers (e.g. open source Apache Derby)

   - Low-cost, limited service for small businesses (Cloudscape)

   - High-cost, full service for mission critical large-scale enterprise implementations (DB/2)

2. Integrated Product "Suites"

   - Assemble a tested package of multiple products, open source and proprietary (e.g. uPortal, Sakai, Moodle, and Harvest Road's Hive)

Sustainability

"Adopted to economics, sustainability focuses on constancy, permanence and [preserving] economical resources. The term is associated with long-term goals, long-term planning and long-term success. Economical sustainability is medium- and long-term profit maximization. Sustainable products are products offering medium-and long-term customer-value. They persist over a longer period of time."

Hoppe and Breitner, "Sustainable Business Models for E-Learning," 7 January 2004.

Is uPortal successful?

There's another project, which was funded by the Mellon Foundation … that has been very, very successful—that's uPortal. It's in use at scores of institutions now. It is the primary enterprise portal at those institutions.

Ira Fuchs, Andrew W. Mellon Foundation as quoted in "Learning Management Systems: Are We There Yet ?," Syllbaus Magazine, July 1, 2004.

Is uPortal sustainable?

- The open source portal/portal framework uPortal was also highly recognized and expected to succeed in the marketplace. uPortal came out on top from those respondents that rated their knowledge as excellent or expert.

- The open source course management system (CMS) Sakai emerged as the most recognized … over 75% of the respondents had heard of Sakai.

Ron Abel, "Preliminary Analysis of the Open Source in Higher Education Survey," Alliance for Higher Education Competitiveness, May 3, 2005.

The survey numbers

All Respondents		Most Knowledgeable	
Sakai	4.4	uPortal	6.3
uPortal	3.3	Sakai	4.6
Moodle	1.6	OSP	1.9
OSP	1.6	Kuali	1.4
Kuali	1.1	Moodle	1.1
OKI	0.6	OKI	0.6
LionShare	0.3	LionShare	0.3

Ron Abel, "Preliminary Analysis of the
Open Source in Higher Education Survey," Alliance for
Higher Education Competitiveness, May 3, 2005

*It is "open standards,"
not "open source" that matters*

Why open standards?

- Preserves future options; choices of software tools

- Sharply reduces software maintenance

- Leads to commodity pricing

- Facilitates data exchanges with others

- Lowers training costs

The End

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Publisher's Note

- uPortal is a project of the JA-SIG Collaborative led by Carl Jacobson at the University of Delaware and funded, in part, from the Sakai Project.

- im+m has contributed to uPortal, and the University of Hull's CREE project referenced in these presentations.

- The author is Chairman of the Board of im+m and Sigma Systems Inc., contracted by the University of Michigan as Sakai Community Liaison for the Sakai Educational Partners Program, part-time researcher for the U.S. Department of Education and volunteers as uPortal Project Administrator.

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