ObjectWeb

Middleware the Open Source Way

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Open Source Middleware

Agenda

- Trends in open source
- Open source meeting the business world
- Modularity and business models
- ObjectWeb: a Collective Strategy
- More value for users and members

Trends in Open Source

Open Source as of 2002

- Top 3 motivations to participate in OS project
  - The code for this project is intellectually stimulating to write
  - My activity on this project improves my programming skill
  - I believe source code should be open

- 33% « believers », 25% « fun seekers », 21% « skill enhancers »
  21% « professionals »

- 65% do not participate at work, or participation not known by supervisor

- At this time 33,000 projects on SourceForge. 4 years later, about 110,000

Source: The Boston Consulting Group Hacker Survey, Jan 31, 2002

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By 2010...

- Open source will compete with closed source in every infrastructure market
- 75% of mainstream IT shops will have a formal open source acquisition policy in place
- Mainstream IT shops will consider open source for 80% of their infrastructure software needs
- Mainstream IT shops will consider open source for 25% of their business software needs

Source: Mark Driver, Gartner Research VP, The Gartner Application Development Summit, Sept 2005

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2005: a Turning Point for Open Source

- VC « Gold Rush »
  - $400m invested in US startups in 2005 (eg: Funambol)
- OSS Reaches Profitability
  - Eg: Red Hat revenue +73%, stock +110% in 2005
- OSS Hits the Legals
  - OSS Risk Management software (eg BlackDuck)
- OSS/Open Standards in EC Calls
- China
  - will have more developers than the US
  - After Linux, turns to open source middleware

Open Source Meeting the Business World

Developers of OSS

- Volunteers, best effort, work on their spare time
- Motivated by self-fulfillment, intellectual curiosity
- Bright kids who like technology for the sake of it, OS work is play to them
- Digital natives, speed of light communication
- Boost their resume, employability

- Paid developers, scholars, work *n* hrs/day
- Motivated by their paycheck, their job description
- Software is part of a bigger business case and only one aspect of life
- Corporate procedures; NDAs, legal overhead
- OSS fosters globalization

Open Source Projects

- A healthy project is developed by a crowd of committers from various backgrounds
- Adoption is a grass-root, word-of-mouth phenomenon
- Fuzzy roadmap, wishlist
- Right to fork is key to innovation
- Strong, charismatic leaders
- Most adopted projects establish de facto standards

- Code base originates from one organization; companies like to retain control over projects
- $10 k/mnth PR budget, need for reference users
- Project plan, deliverables
- Upward compatibility, durability, stability are key
- Appointed project managers
- Projects implement *de jure* standard, incompatibilities are a pain

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Users of Open Source

- Techno aware, techno addicts
- Rebels with a cause
- May fix a bug themselves
- Are well aware that no software is bug free
- Gut loyalty
- Speak English
- Long hair, T-shirt

- Corporate IT departments
- May hate libertarians
- Need a throat to squeeze
- Need 99.9% uptime and 24/7 support
- ROI, value for the buck
- Need a localized version
- Suit and tie

Open Source Organizations

- Grass roots, self organized
- Meritocracy
- IPR is annoyance, naive « raymondism »
- License proliferation is evil
- « Natural selection » of best projects
- Hierachy is flattened, bypassed or ignored
- Nonprofit, almost Charity
- Project ownership, control and rights in individuals hands
- « The community »: brings down barriers between code producers and consumers

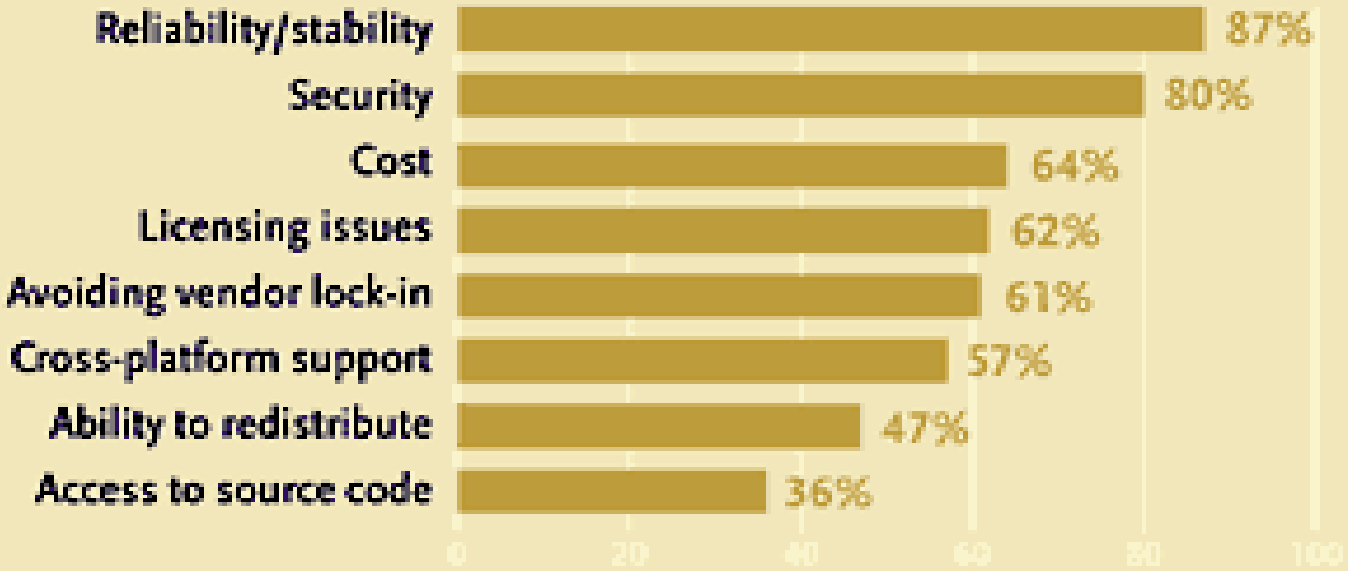
- « Who's in charge »?
- Commit-o-cracy
- IPR is opportunity for profitable business models
- Licenses suited to int'l differences
- Principles, rules, architectural vision
- Official delegations, governmental incentive, top-down decisions
- NPOs are used as smoke screens
- Companies need to retain control over the projects
- The customer/supplier paradigm dies hard

Modularity and Business Models

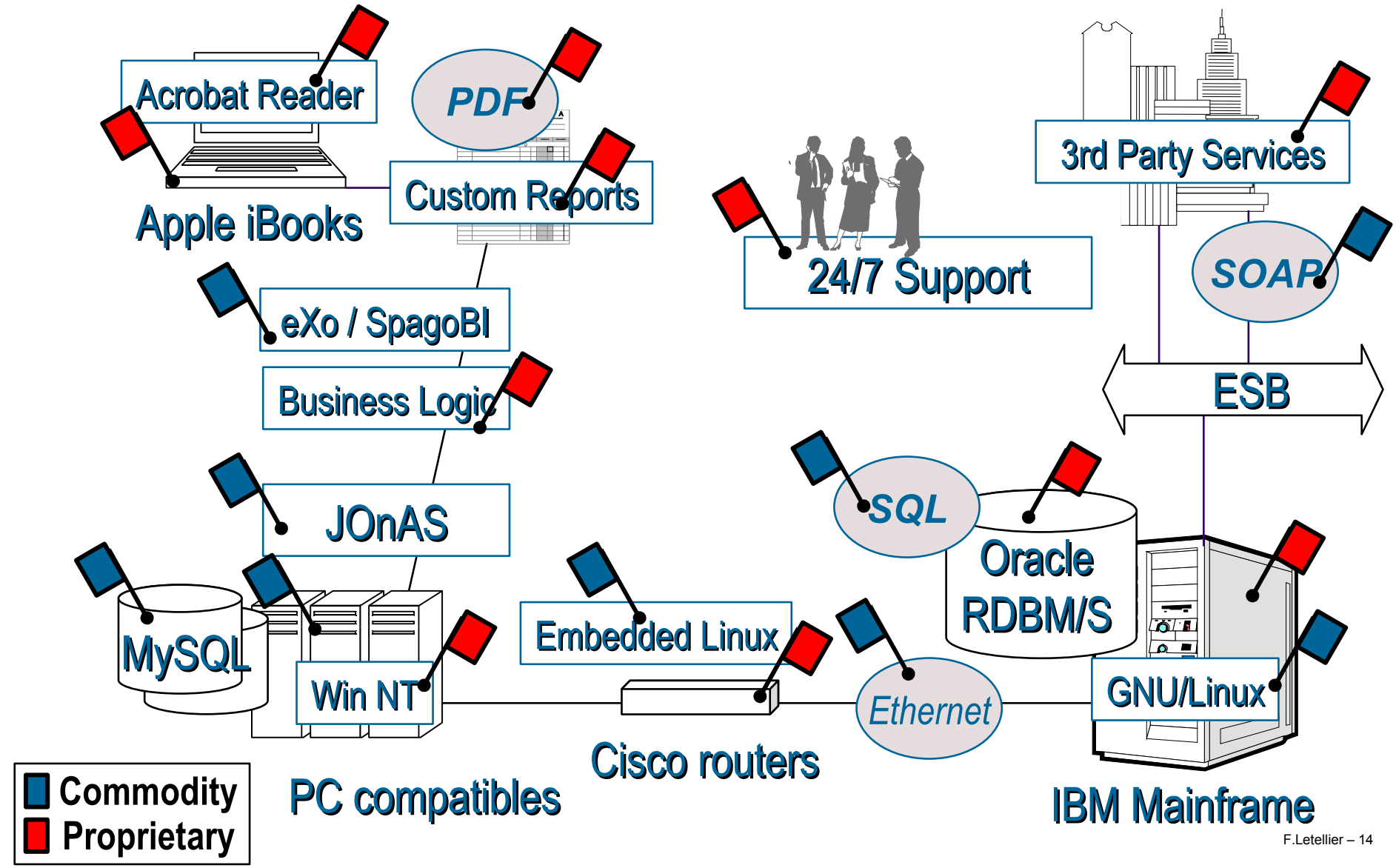
Benefits of OS Software from the User Standpoint

Business Goes Back to the Source

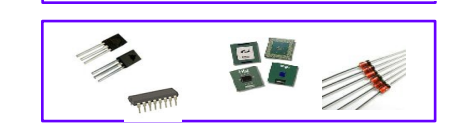
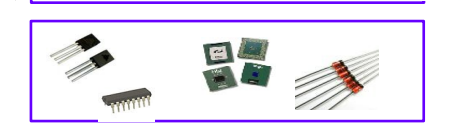
In a July 2004 *InfoWorld*/IDG survey, respondents rated a number of criteria as being important or very important to the appeal of open source — but source code itself hardly topped the list.



Cohabitation of Open and Closed Parts in the Information System



The Fine Line Between Commodity and Proprietary

Service	Service	Service	Service
Applications	Applications	Applications	Applications
Middleware	Middleware	Middleware	Middleware
Operating System	Operating System	Operating System	
Hardware	Hardware		
Electronic Components			

Key Enabling Technologies | **Open Standards** | **Free Competition**

Understanding Why and How Users Integrate Open Source

Stronger involvement

- **Reusing open source** *anonymous users*
  - Cost containment, agility
  - Using de facto standard
- **Double sourcing** Dassault Aviation
  - Negotiation power, lock-in avoidance
  - Unlimited scalability / hybrid platforms
- **Opening in-house developments** FT
  - Contribute open source code so to "outsource" maintenance and evolution
  - Percolation: outsource all that is not a competitive advantage
- **Shared R+D** INRIA
  - Flexible platform for collaborative engineering
  - Promote technology and standards

More direct business opportunities

Business Models From the OW Ecosystem

- Support and services tied to open source — Red Hat
- Aggregating and enhancing — XCalia
- Commercialize with dual licenses — eXo Platform
- Bait and hook — Iona
- Selling added value complements — SourceBeat
- Subsystems level lock-in — Librados
- Services and consulting — Atos Origin, eteration

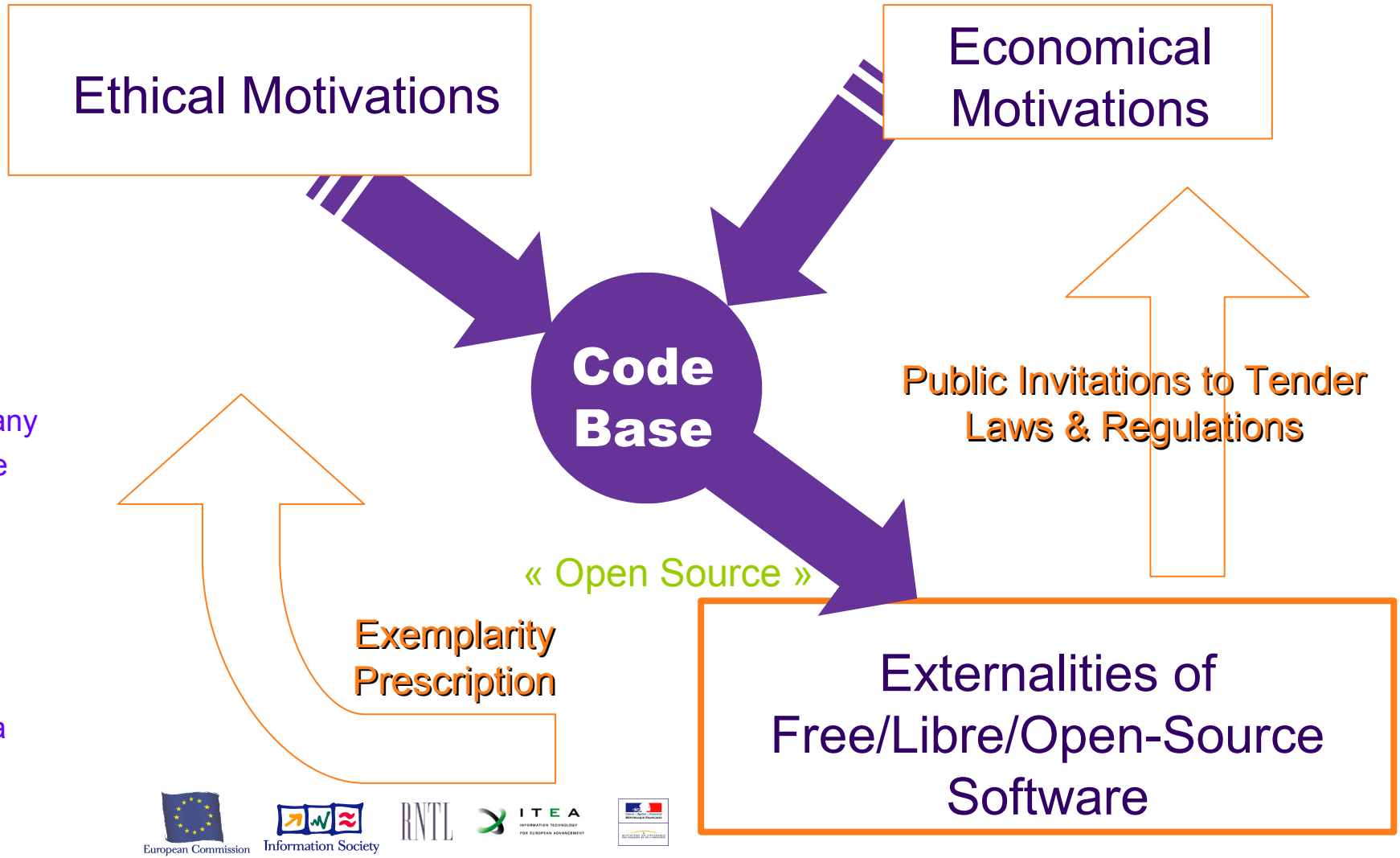
- < Here: Insert your own >

Innovation &Technology Transfer from Academia

- Share R&D Efforts
  - Gather real world needs
  - Faster technology transfer
  - Complement of activity in standardization bodies
- Place of Research in the Business Ecosystem
  - Trust and professionalism
  - Virtuous cycle between fundamental research and industrial applications
  - Global outreach

ActiveXML
Carol
C-JDBC
CLIF
JORAM
Fractal
Rubis
ProActive

Gov't Public Policies



ObjectWeb: a Collective Strategy

"Modularization" of economic activity

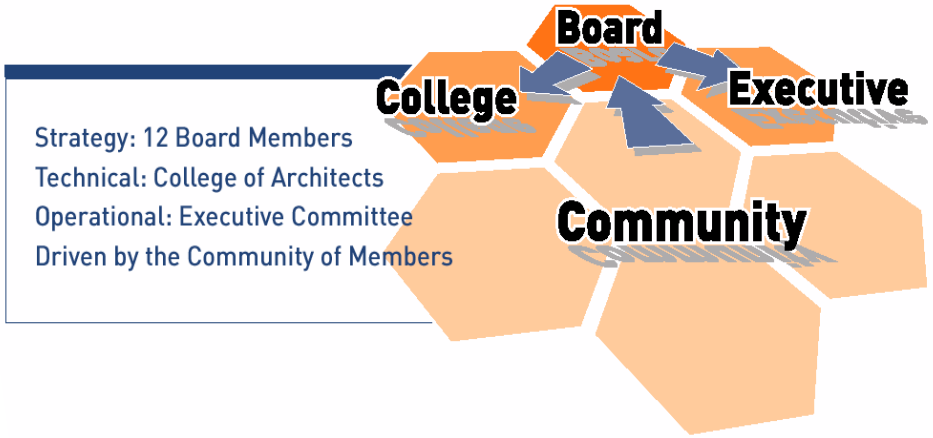
As population and economy grow, and communication and transport cost drop, functions that were previously better performed in a hierarchical setting are spun out into discrete firms

Under such conditions, we might speculate that appopriability institutions will emerge with increasing frequency to mediate these atomizing forces.

Source: « From Medieval Guilds to Open Source Software: Informal Norms, Appropriability Institutions, and Innovation, » Pr. Robert P. Merges, UC Berkeley, UC Davis, Nov 13, 2004

ObjectWeb: Collaboration and Collective Innovation

- **International**
  - Incepted 2002 by BULL, France Telecom and INRIA
  - Endorsed by 60 organisations worldwide (Public & Private, EU, US, Asia)
  - A community of 1800+ individual members from 80 countries



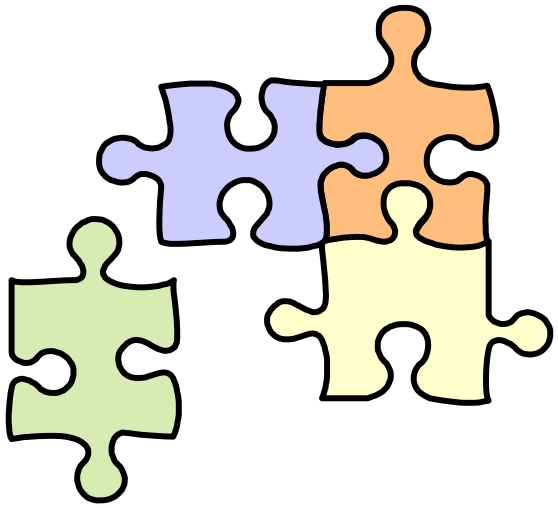
- **Mission**

  to develop middleware open source code and to foster a vibrant community and business ecosystem

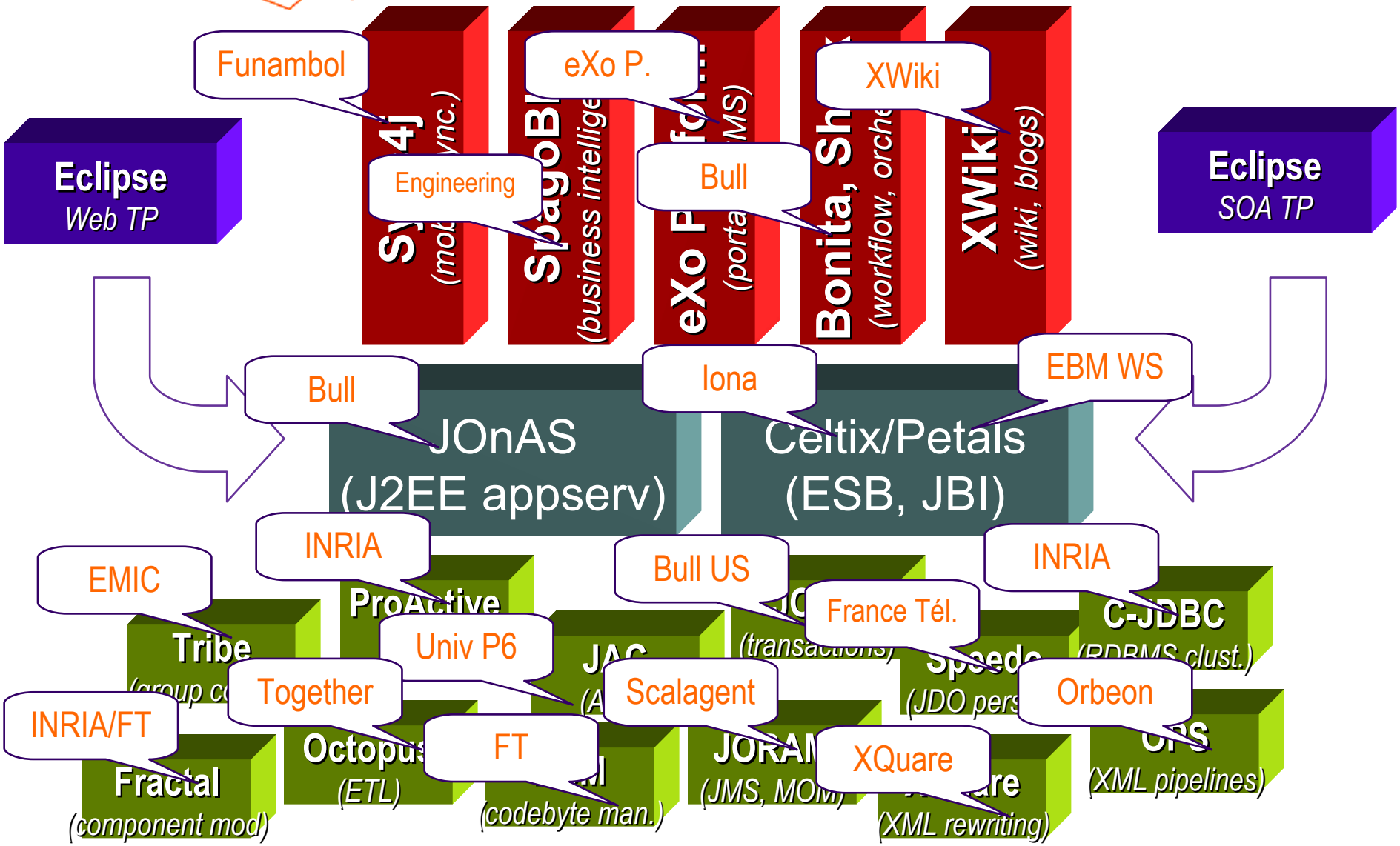
- **Open and Neutral**
  - Non-profit Consortium
  - Hosted by INRIA (cf. W3C)
  - Open to all organizations / individuals

Companies don't Collaborate like Individuals

- They act as a buffer between users and the code base: there lies business opportunities
- Time frame and decision processes
- Need of governance and business case
- Granularity tends to be at the project level



Some OW Java Projects



More Value For Users and Members

More Visibility

- **Members expectations:**
  - SME members count on ObjectWeb to gain traction
  - Large companies count on ObjectWeb to foster technology adoption
  - All members expect ObjectWeb to be more visible

- **The paradox: all members expect OW to be more visible, but very few of them communicate about ObjectWeb**

- **Challenges:**
  - Getting more visible without being seen as a software vendor
  - Raising awareness in a multi-country, multi-cultural environment

Better Packaged Software

- **Users expectations:**
  - Structured code base with clear roadmap
  - Integrated platforms with tooling
  - Single point of contact for advice and services
  - Clear licensing policy

- **Members expectations:**
  - Customer marketing material (reference users, benchmarks, qualification, compliance certification, …)

- **Challenge:**
  - Shaping the bazaar without competing with our own members

Business Opportunities

- **Members expectations:**
  - Proven, actionable, repeatable business models
  - Assistance in pre sales effort
  - Local business opportunities

- **The paradox: members tend to keep ObjectWeb out of the loop once a business deal is in sight**

- **Challenges:**
  - Developing ecosystems without losing focus on technology and without killing the open source golden goose
  - Conflicts of interest between competing members

The Future of European and Asian Information Societies?

OrientWare

- Chinese Program 863 in Middleware
- *BeiHang University, Institute of Software, Chinese Academy of Sciences, Nanjing University, National University of Defense Technology, Peking University*
- MoU with ObjectWeb for collaboration

NESSI

- European Technology Platform
- Services in a knowledge-based economy
- 7-20 years, 2.5 Billion € (>R$ 6 Billion)
- ObjectWeb 1 of the 13 co-founders

ObjectWeb Initiatives

An "initiative" is a collaborative program undertaken by some ObjectWeb members to promote a set of technologies and bring them to the mainstream

- market driven as opposed to technology driven
- fosters the development of a business ecosystem

- ESB Initiative
- RFID Initiative
- ONESSI

A Parting Word...

The crucial battle is not between individual firms but between networks of firms.

Innovations and operations have become a collective activity.

The Keystone Advantage: What the New Dynamics of Business Ecosystems Mean for Strategy, Innovation and Sustainability, M. Iansiti & R. Levien, Harvard Business School Press, 2004

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Thank you for your attention

Questions

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