



Magic of Open * (& working w/the Java community)

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Sun Microsystems, Inc.

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The Sun Microsystems logo, featuring a stylized sun icon to the left of the word "Sun" in a serif font, with "microsystems" in a smaller sans-serif font below it.



Who is a Technology Evangelist?

- Developer by heart
- “preach” and “teach”
 - I speak and publish extensively. I also teach.
- Strive for credibility:
 - In the developer and OS community
- Aptitude to **simplify complexity and separate the wheat from the chaff**
- My Evangelical Mission:
 - It's better to have an unanswered question than a unquestioned answer

Speaker's Qualifications

- Raghavan “Rags” N. Srinivas is a Technology Evangelist at Sun Microsystems
- Rags writes frequently for JavaWorld™ and other online publications
- Rags is an adjunct faculty at Brandeis University

Agenda

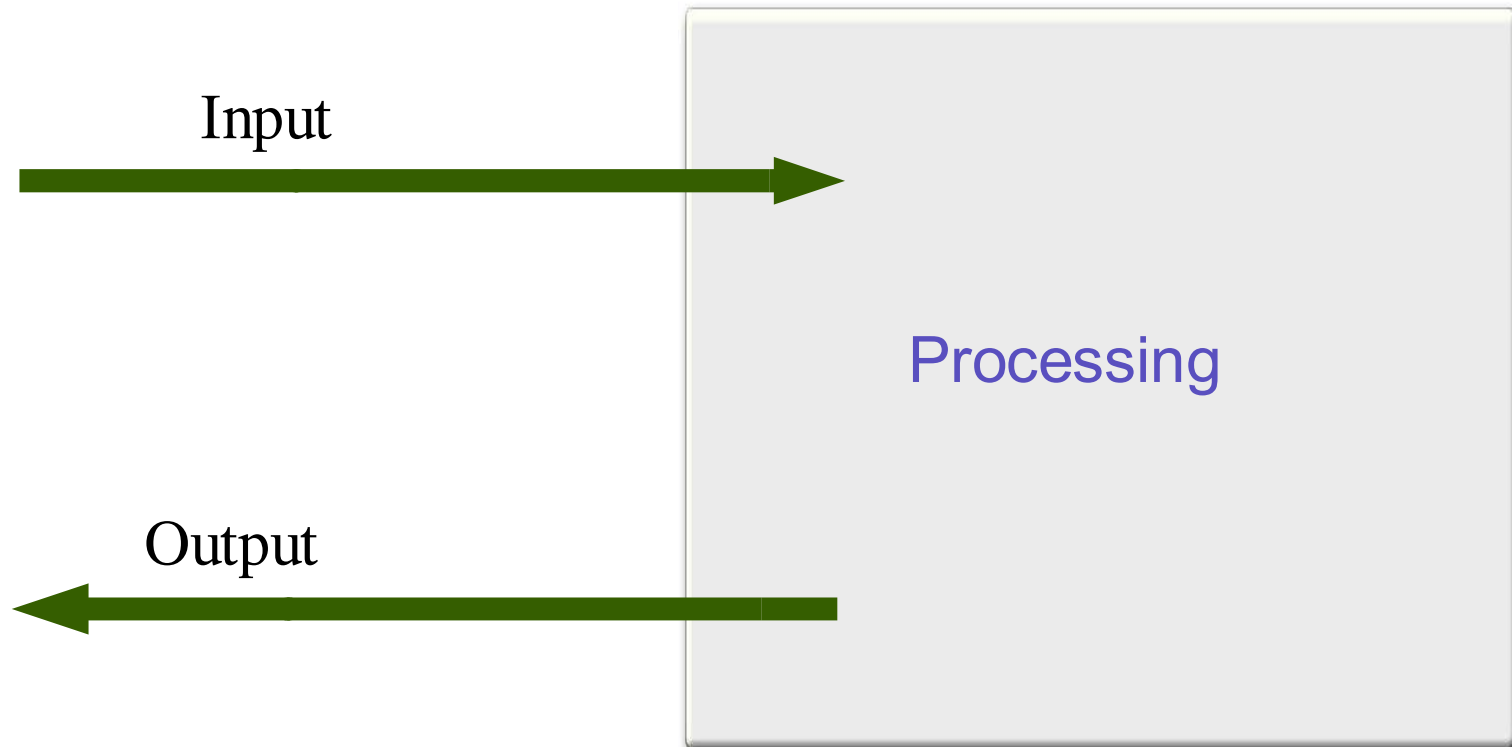
- Relevance of Open * computing
- Sun and Open * computing
- Licensing and Open Source
- java and java.net
- Many, many examples
- Demos (when possible and relevant)
- Resources and Summary



Relevance of Open * Computing

March, 2005

Computing (simplified)



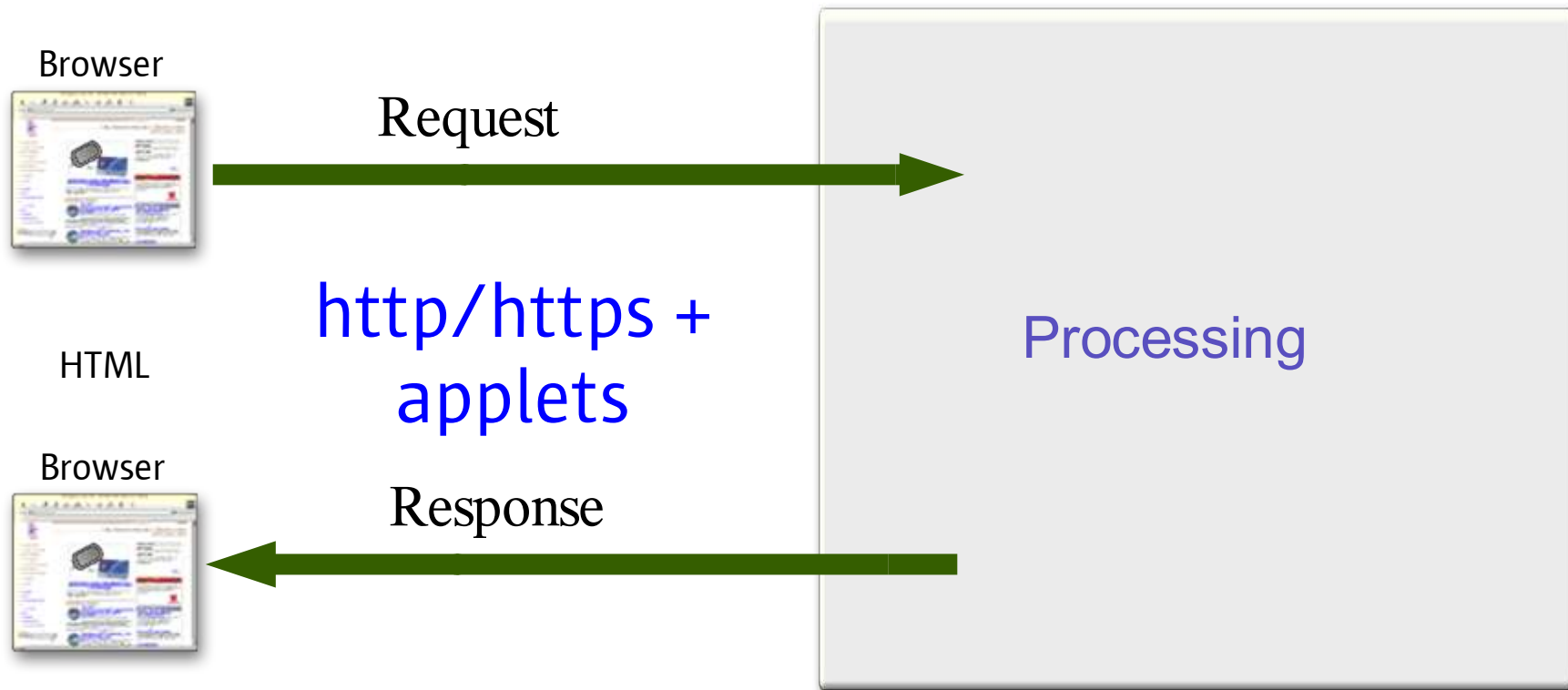
Computing = Input + Processing + Output

Secure Computing



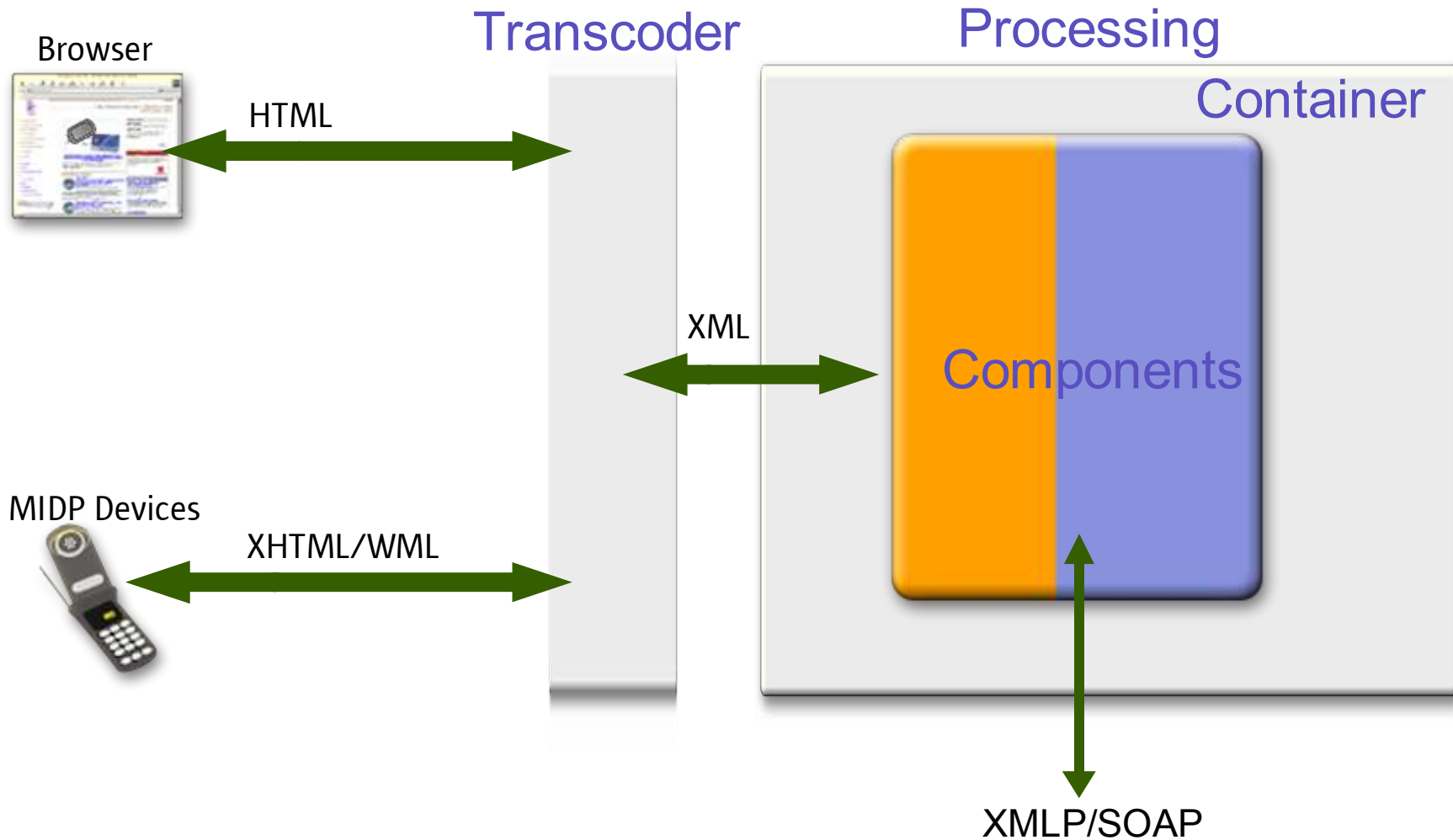
Secure Computing = Computing + Public Key algorithm

Ubiquitous Computing



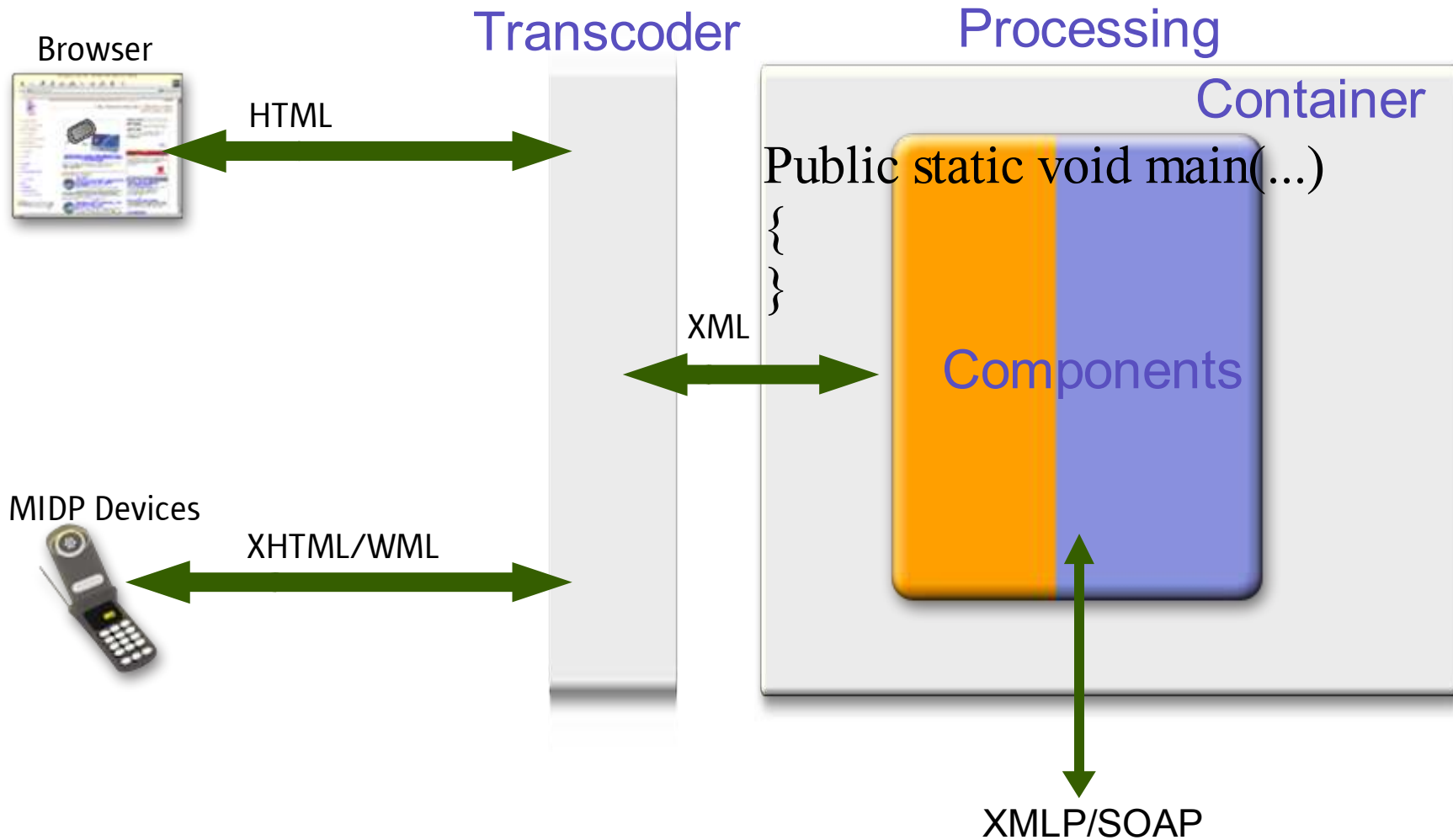
Ubiquitous Computing = Computing + Public Key
algorithm + Public Standards + Public Protocols

Portable Computing



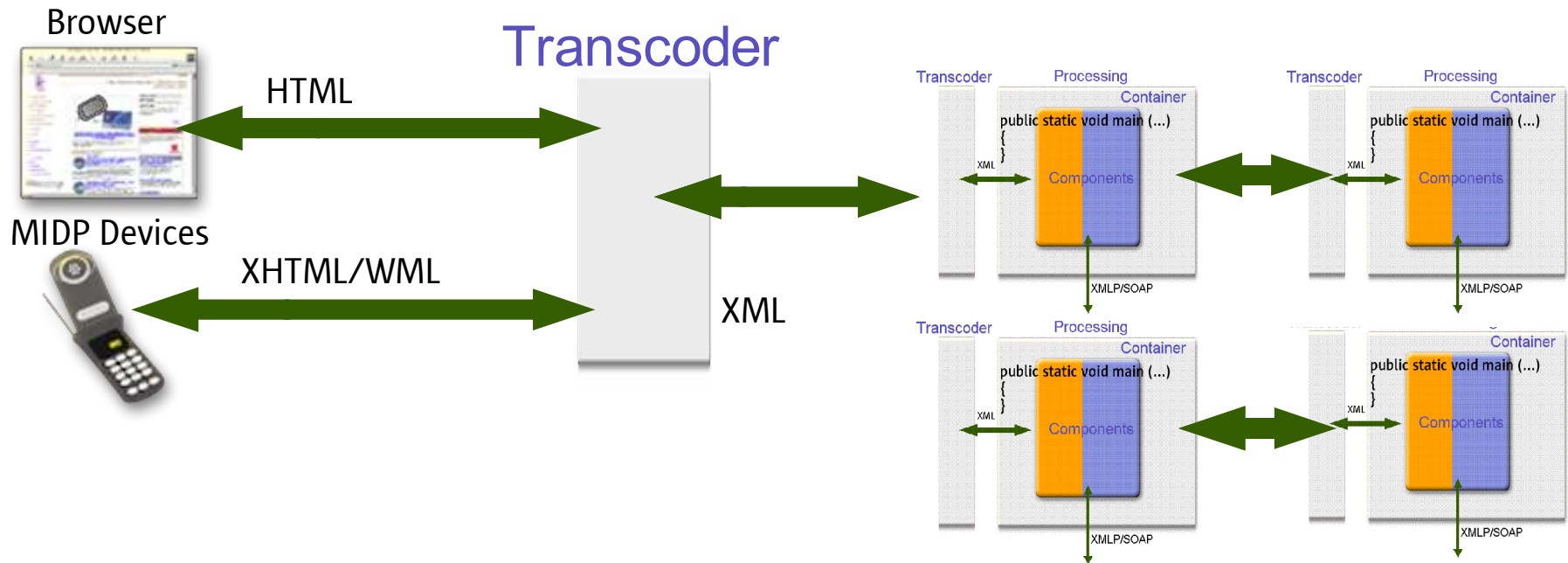
Portable Computing = Ubiquitous Computing +
 “trans”latable output

Open * Computing

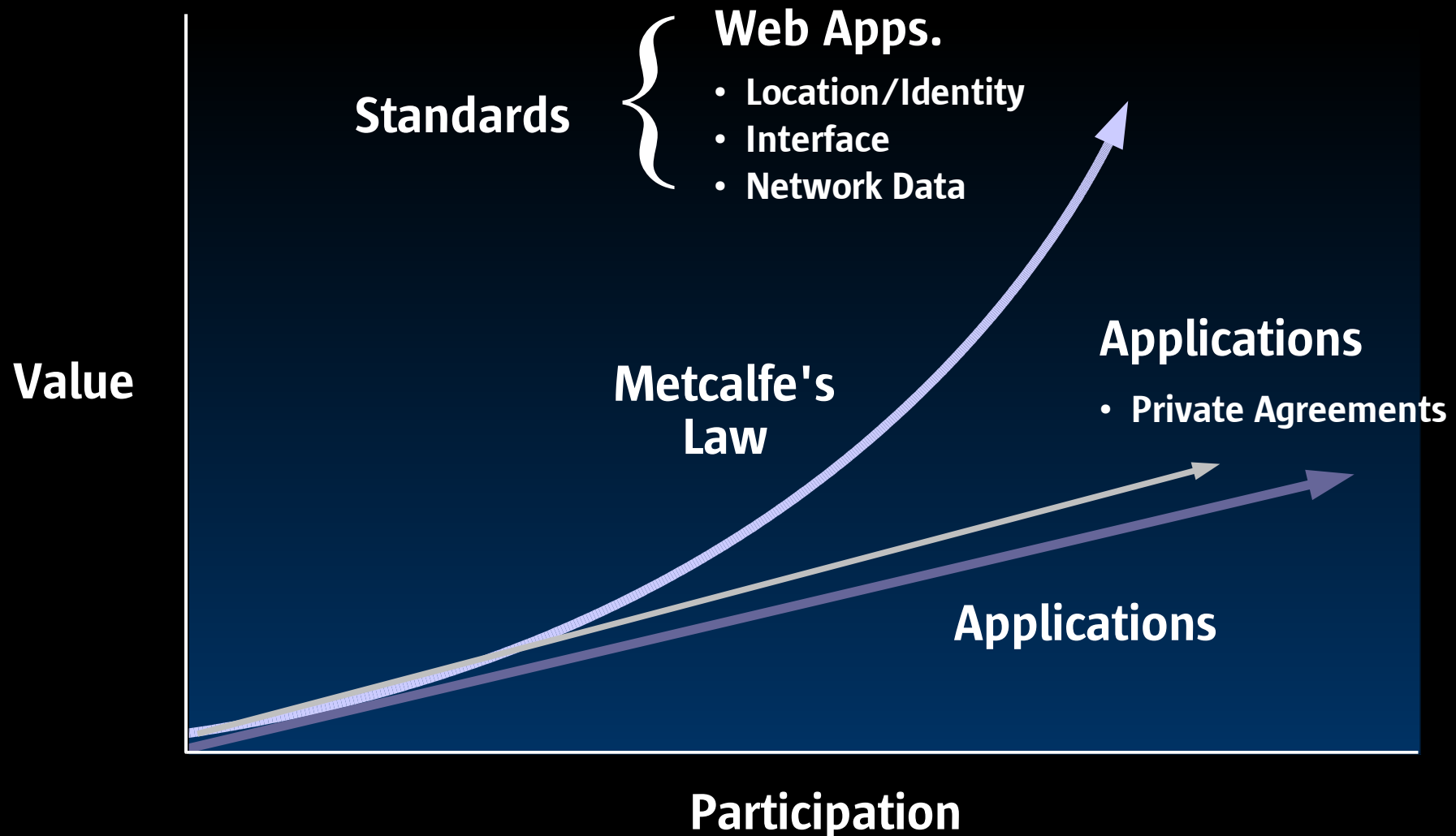


Open * computing = Portable Computing + Open Source
+ Open Processes

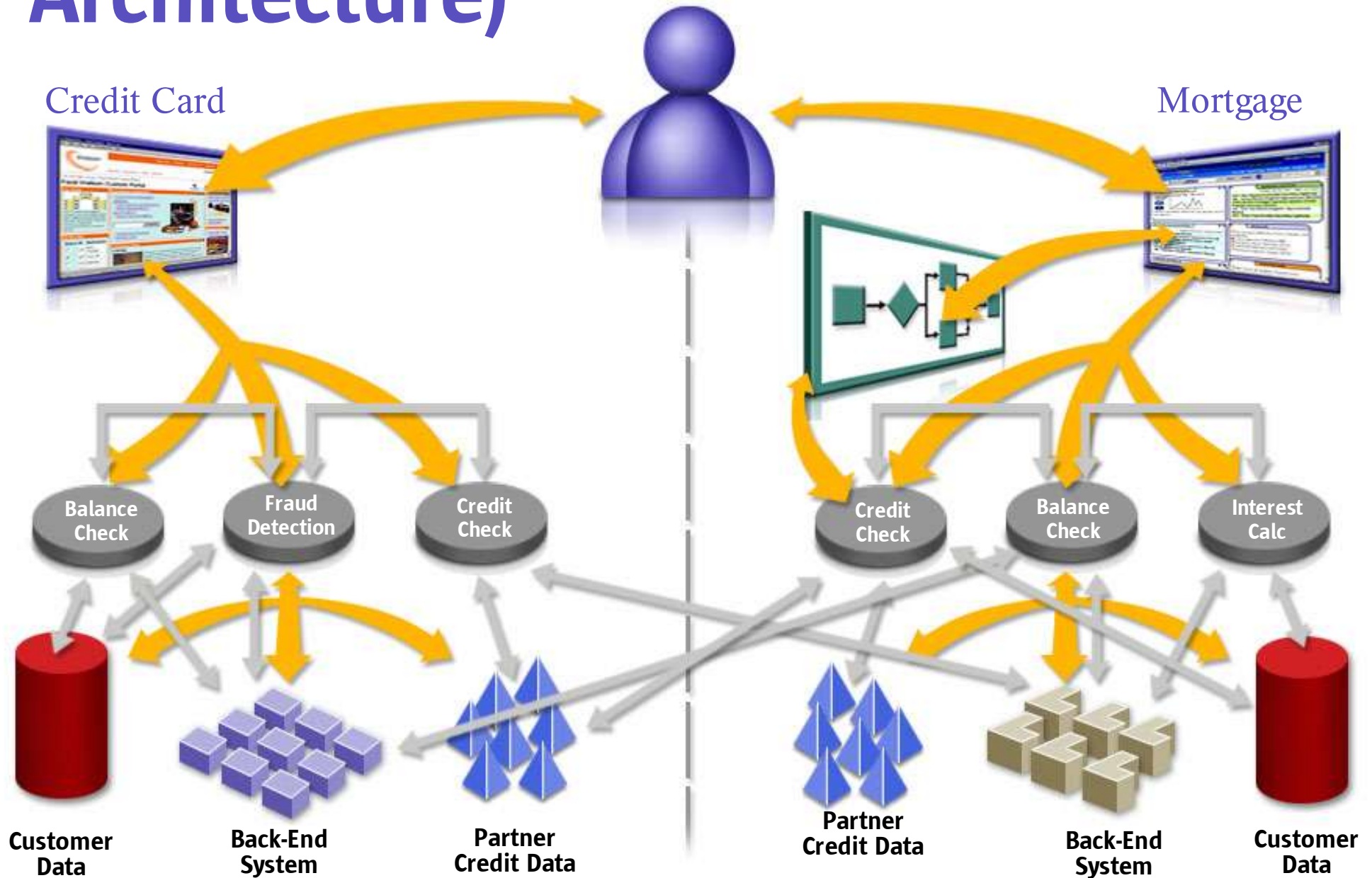
Network of Open * Computing



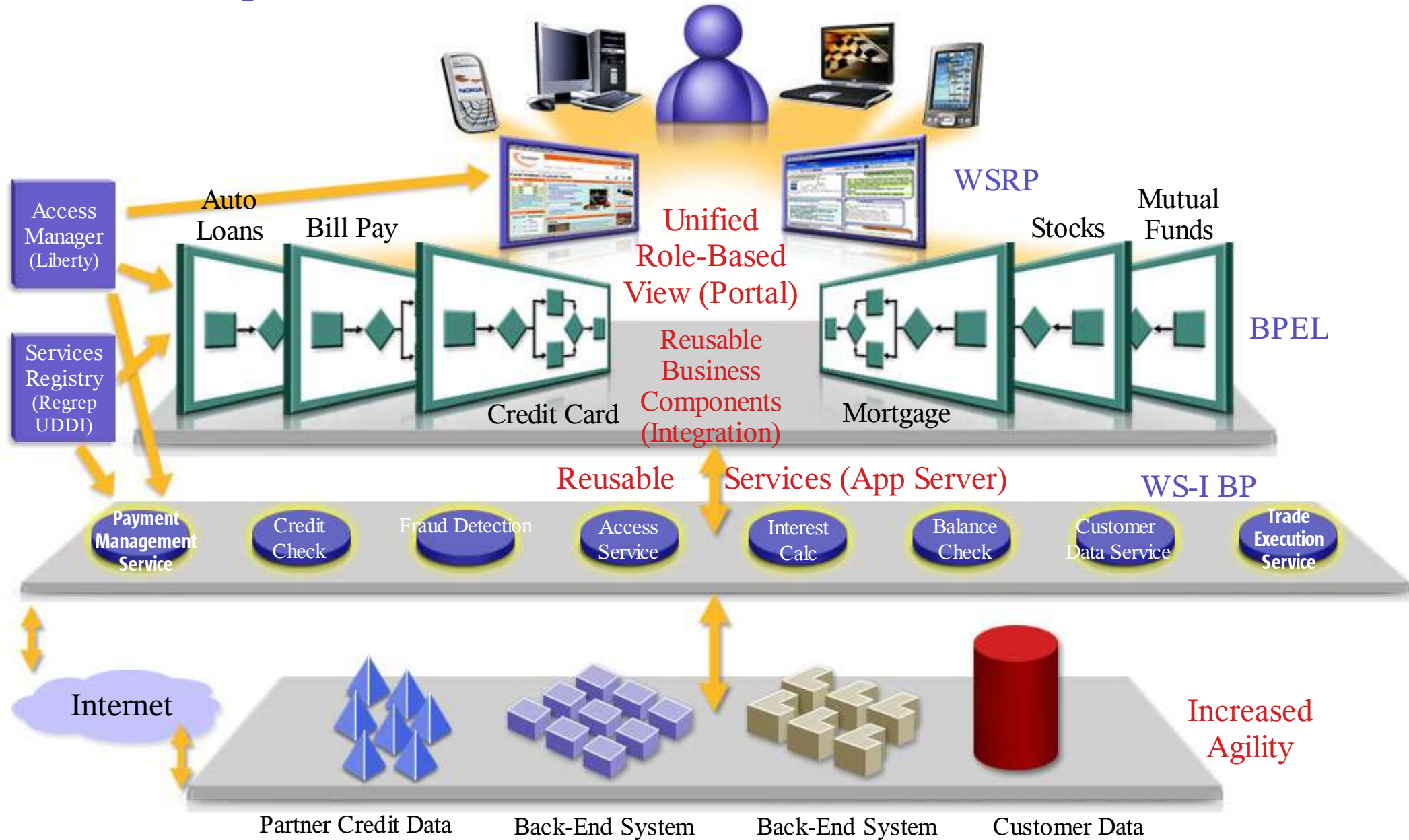
Applications vs. The Swarm.



Customer Pre-SOA (Service Oriented Architecture)



Enterprise Post-SOA



Open * computing – Notable Milestones

Year	What?	Who?
1975	Public Key Infrastructure	Diffie and Hellman
1979	Berkeley Software Distribution	Bill Joy
1983	Free Software Foundation	Richard Stallman
1991	Linux	Linux Torvalds
1993	http and web	Tim Berners Lee
1994	Apache Software Foundation	Brian Behlendorf
1995	Java	James Gosling
1998	J2EE	Java Community
1998	mozilla	Mozilla Foundation
1999	XML	W3C
2000	?	?



Relevance of Open * Computing

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Our Beliefs

**Sun's vision: Everything of value
will be connected to the network...**

**From our very beginning: things connected together are
inherently more valuable than things disconnected...**

We Believe in Innovation

**(and that innovation happens
“everywhere...”)**

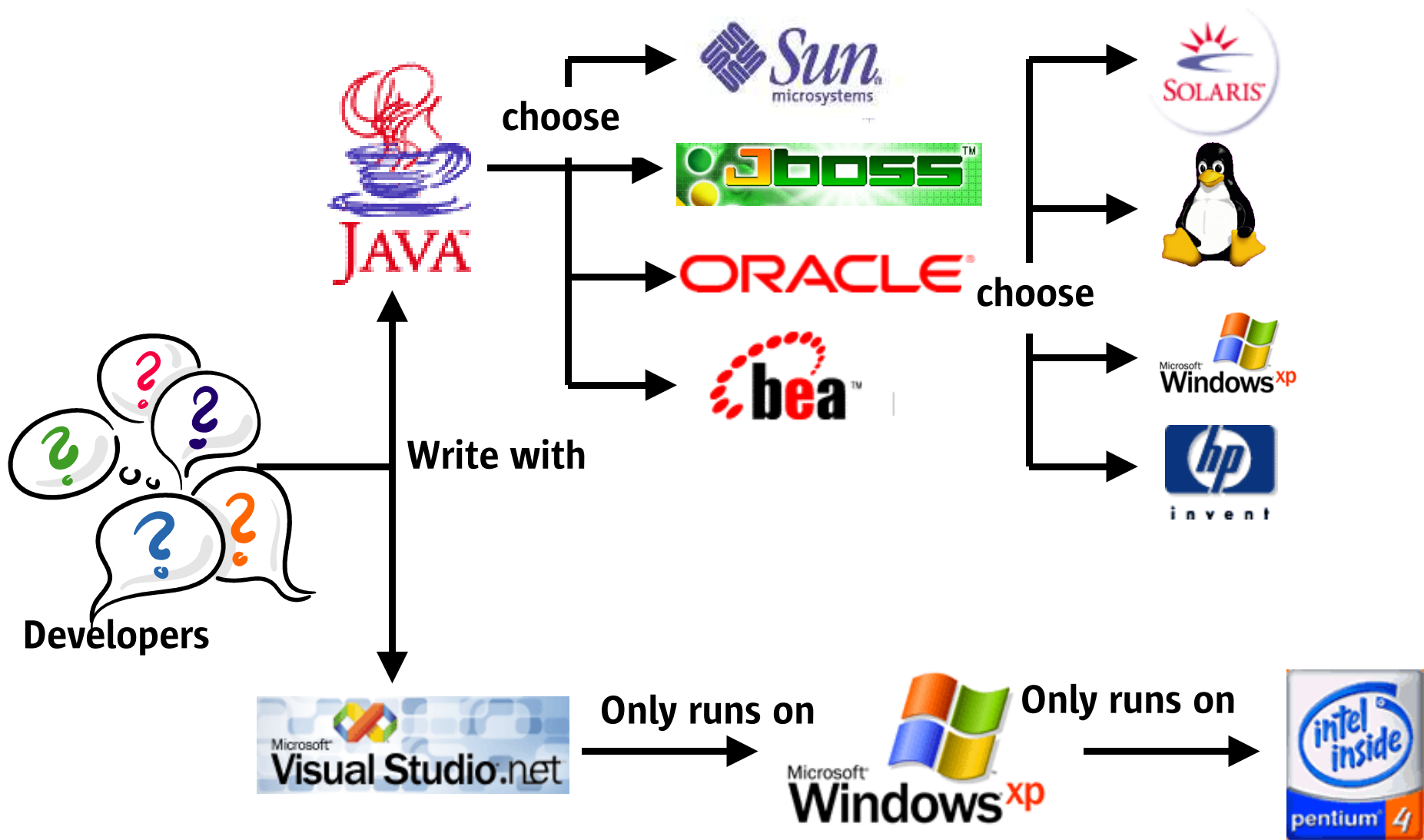
**We Believe Open *
Always Wins**

Sun's role in Open Source...

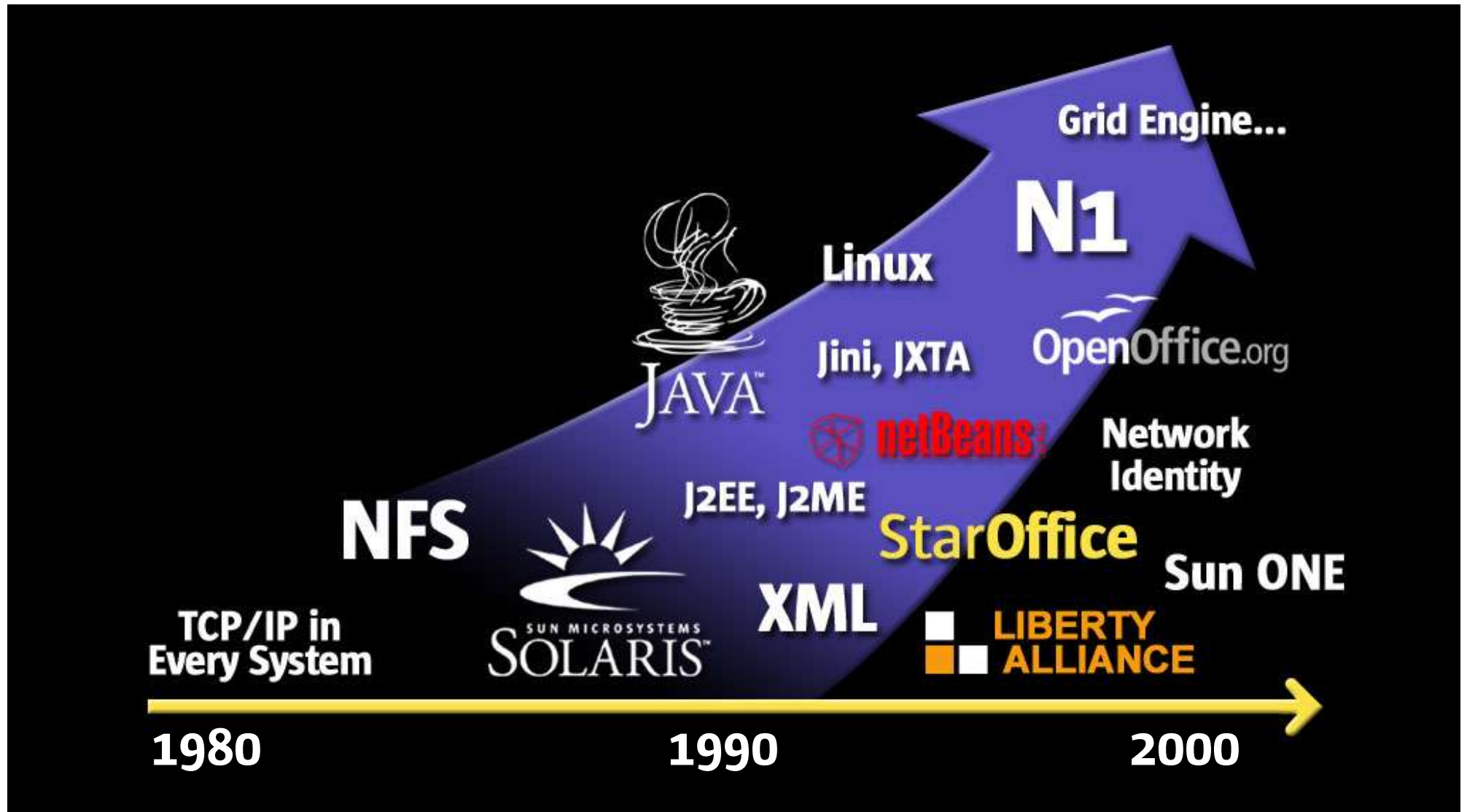
Sun has contributed more lines of source code to the various Open Source communities than any other commercial or non-commercial entity on the planet

(over 20M lines of code to date)

Developer eco-system



Sun and Open * computing





Licensing and Open * Computing

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A Licensing Primer

SOFTWARE	Free?	Redistribute?	Unlimited Usage	Source Available?	Source Modifiable?	Public Check-ins	Derivatives Free?	Example
Commercial								
Shareware	Almost!							
Royalty Free Binaries	Y	Y	Y					
Royalty Free Libraries	Y	Y	Y	Y				
Open Source	Y	Y	Y	Y	Y			BSD
Open Source (Apache)	Y	Y	Y	Y	Y	Y		Apache
Open Source (GNU, Linux)	Y	Y	Y	Y	Y	Y	Y	GNU, Linux

Characteristics of Open * computing

Pros

- Choice
- Code
- Community

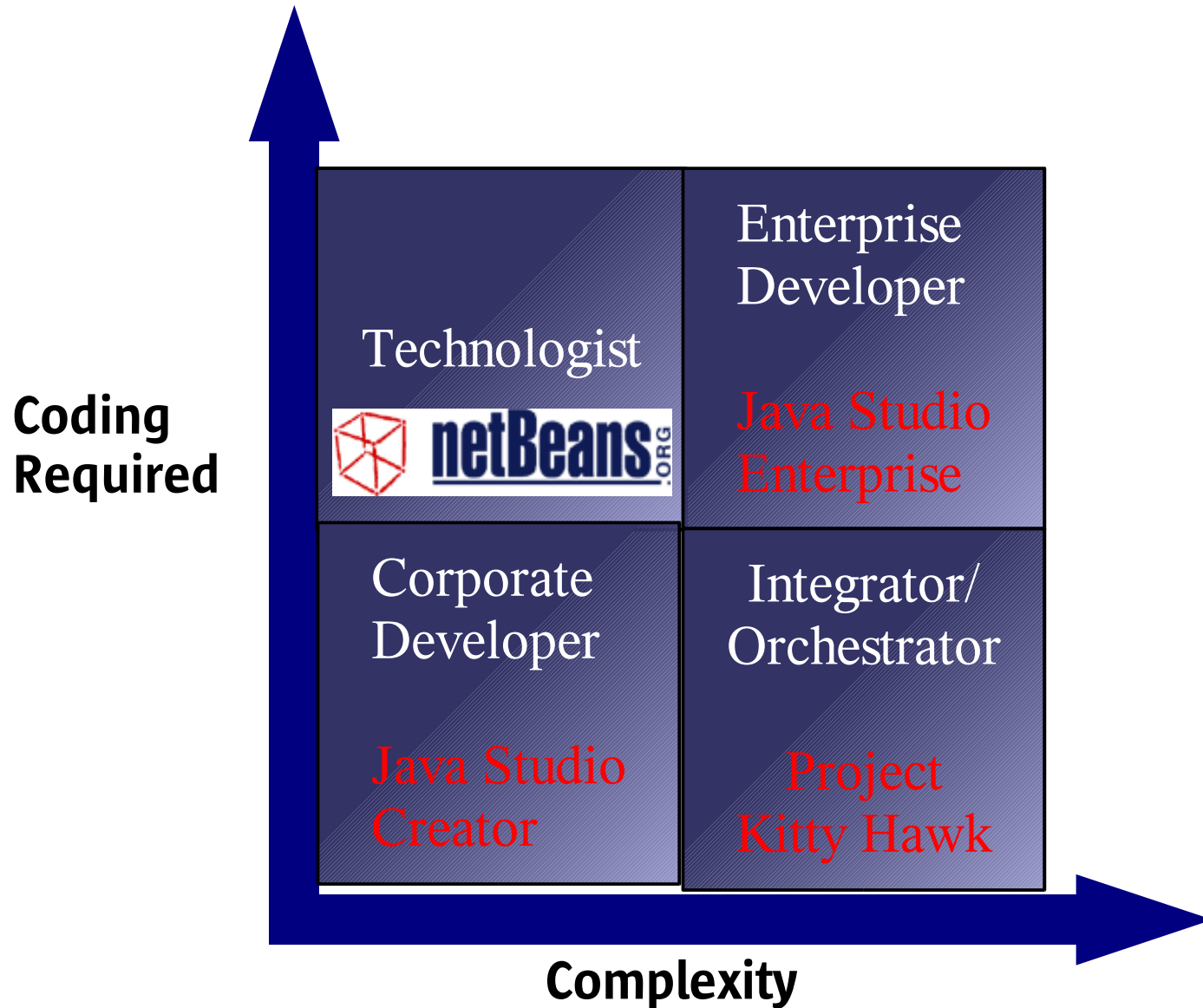
Cons

- Chaos
- Code-centric
- Coterie

Open * computing and \$s or Euros

- Innovation Happens Everywhere (IHE) strategy
 - Consulting
 - Dual Licensing
 - Optimizing
 - Service Hosting ...
- Key strategy is to **move up the food chain**

Open Source makes Money

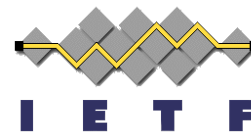
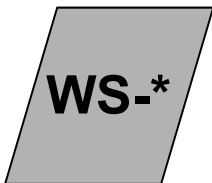




java and java.net

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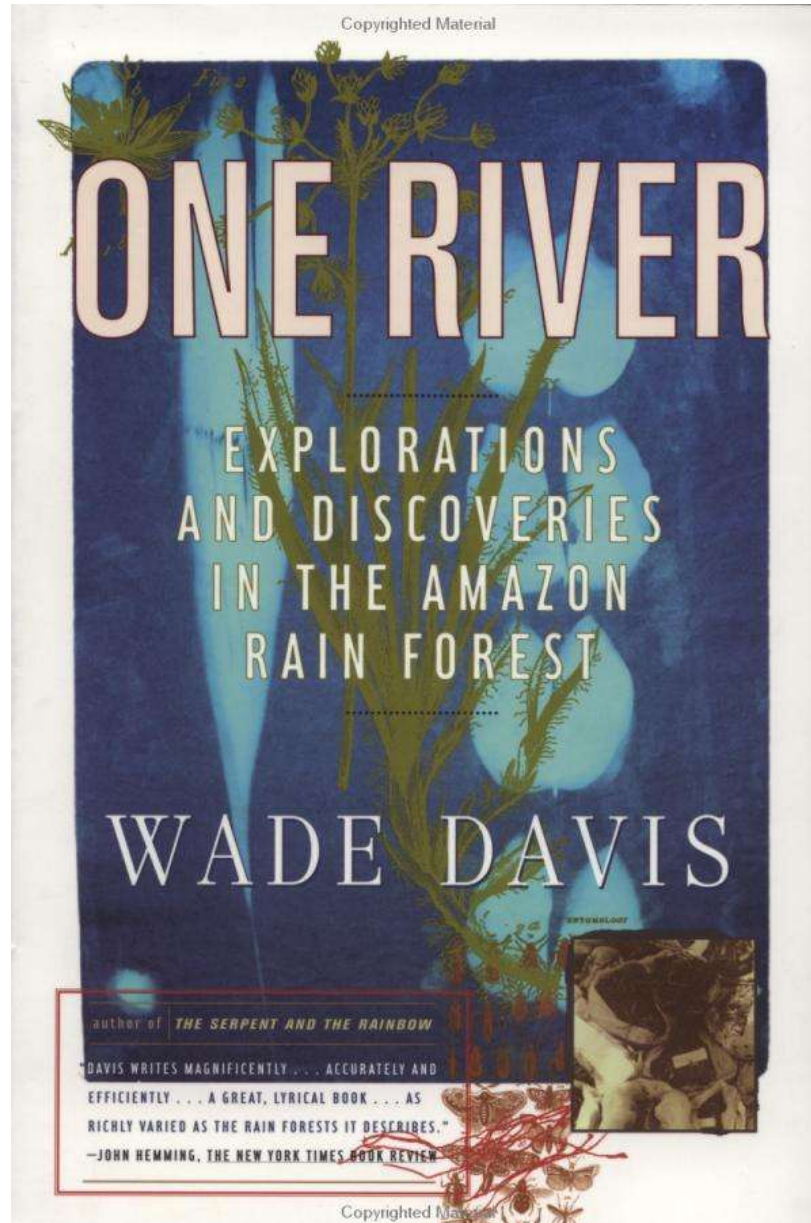
Proliferation of Standards



Java Community Process

- Java:
 - Compatibility. No tolerance to forks
- Open Source:
 - Forks are OK
- Project Geronimo:
 - Open Source implementation of J2EE 1.4 application server with branding via the Technology Compatibility Kit (TCK)

One River?



- Rhetorically, the Amazon is one river.

... or many?

- Practically, it is many.

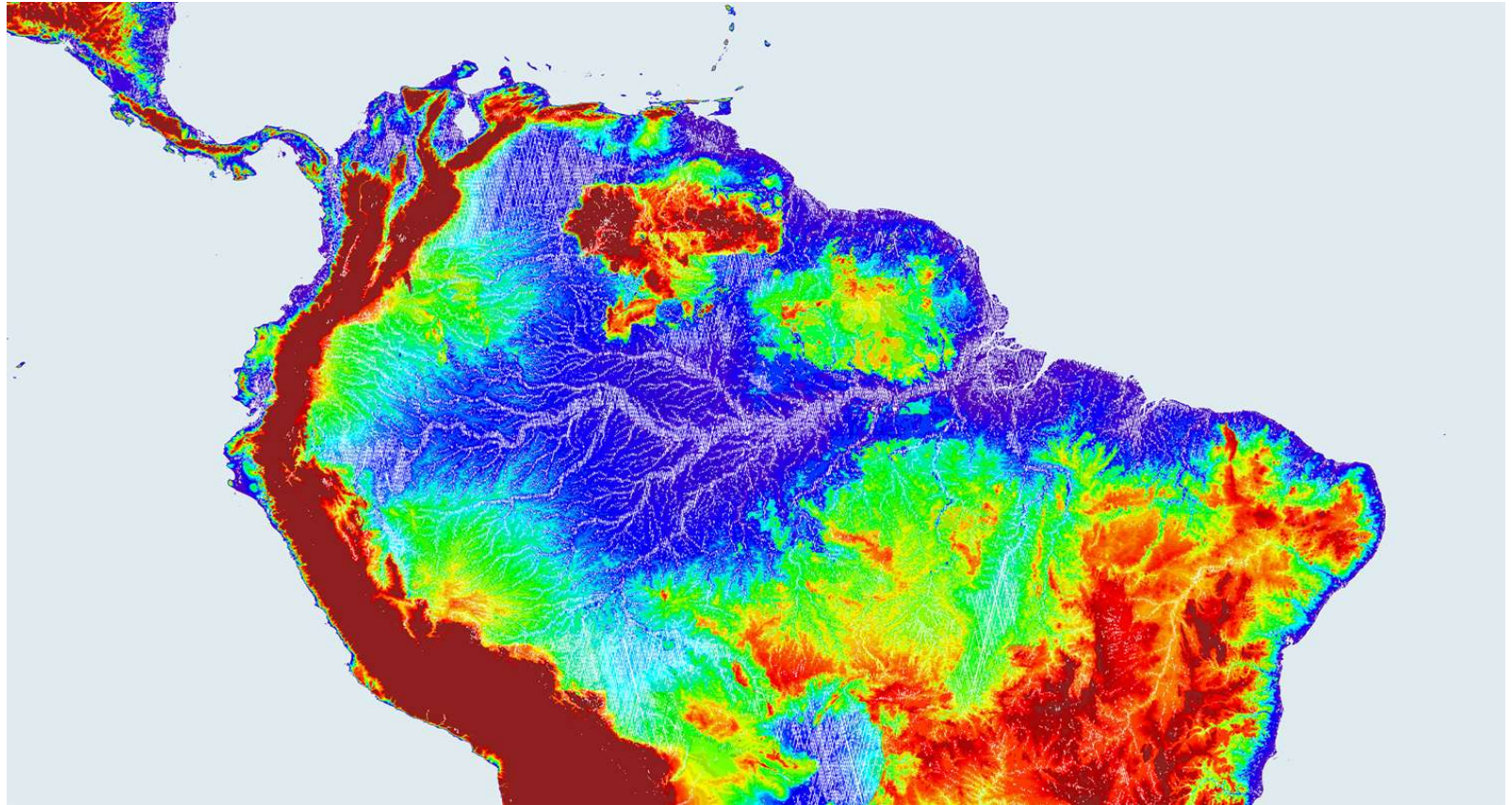
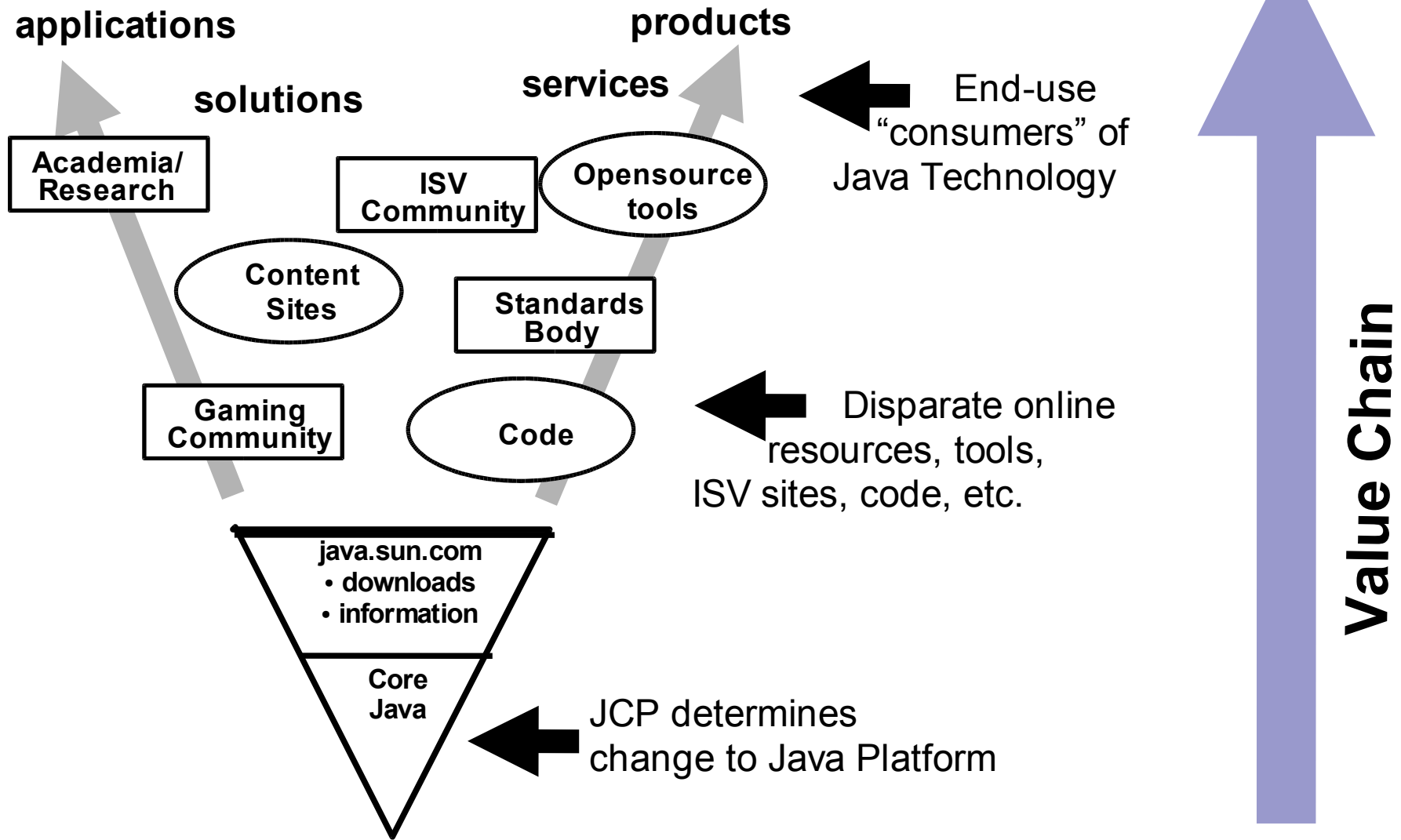


Photo credit: European Space Agency,
http://esamultimedia.esa.int/images/EarthObservation/amazon_river.jpg

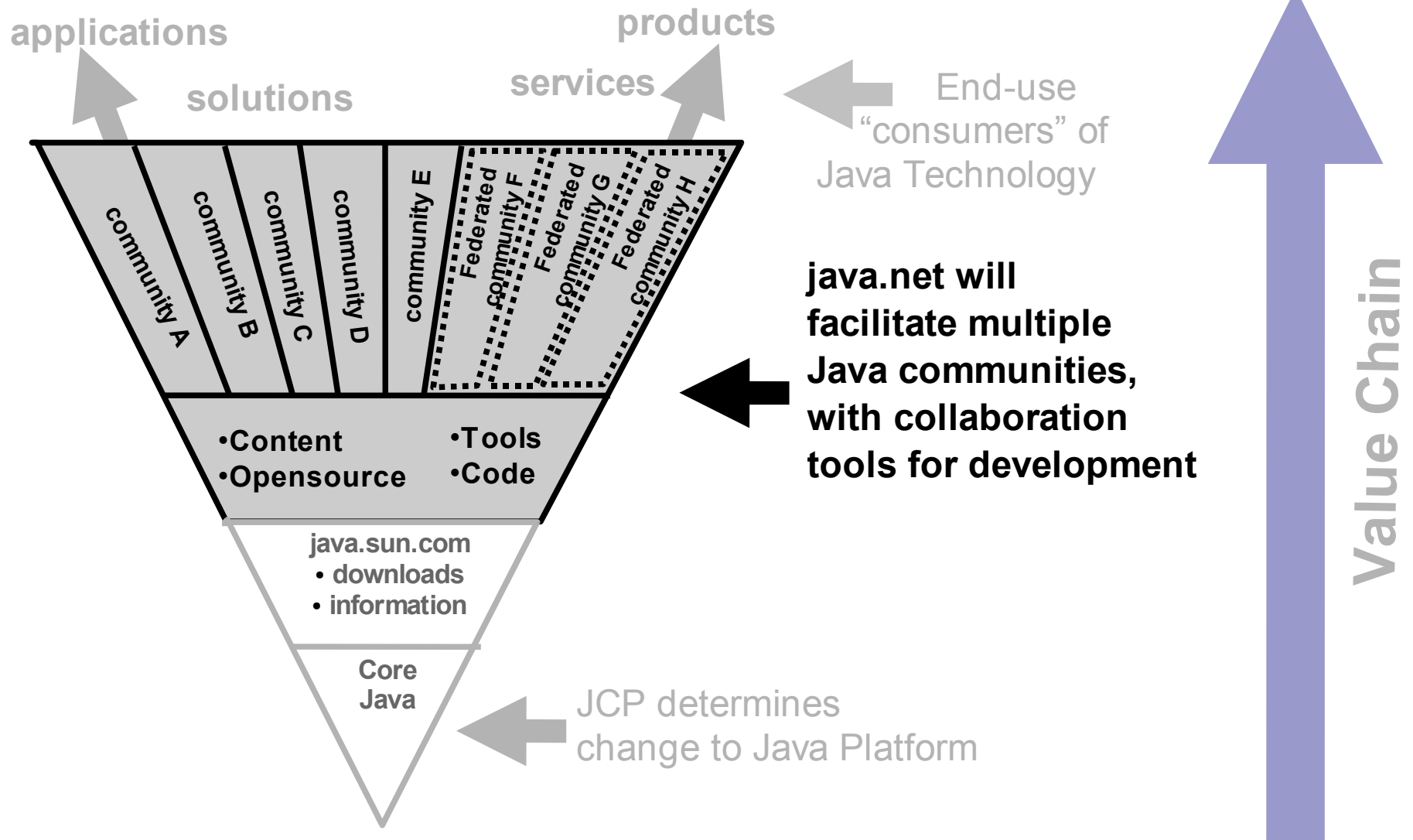
Freedom In Common

- Objective of OSI (open standards initiative)
 - Freedom through standards
- Objective of FSF
 - Freedom through source access
- Objective of Java & JCP
 - Freedom through compatibility
- Objective of OSI (open source initiative)
 - Freedom through licensing
- Each solving a different part of the same problem; freedom is the goal

Java Community (diverse and rich)



java.net (collaboration is key)



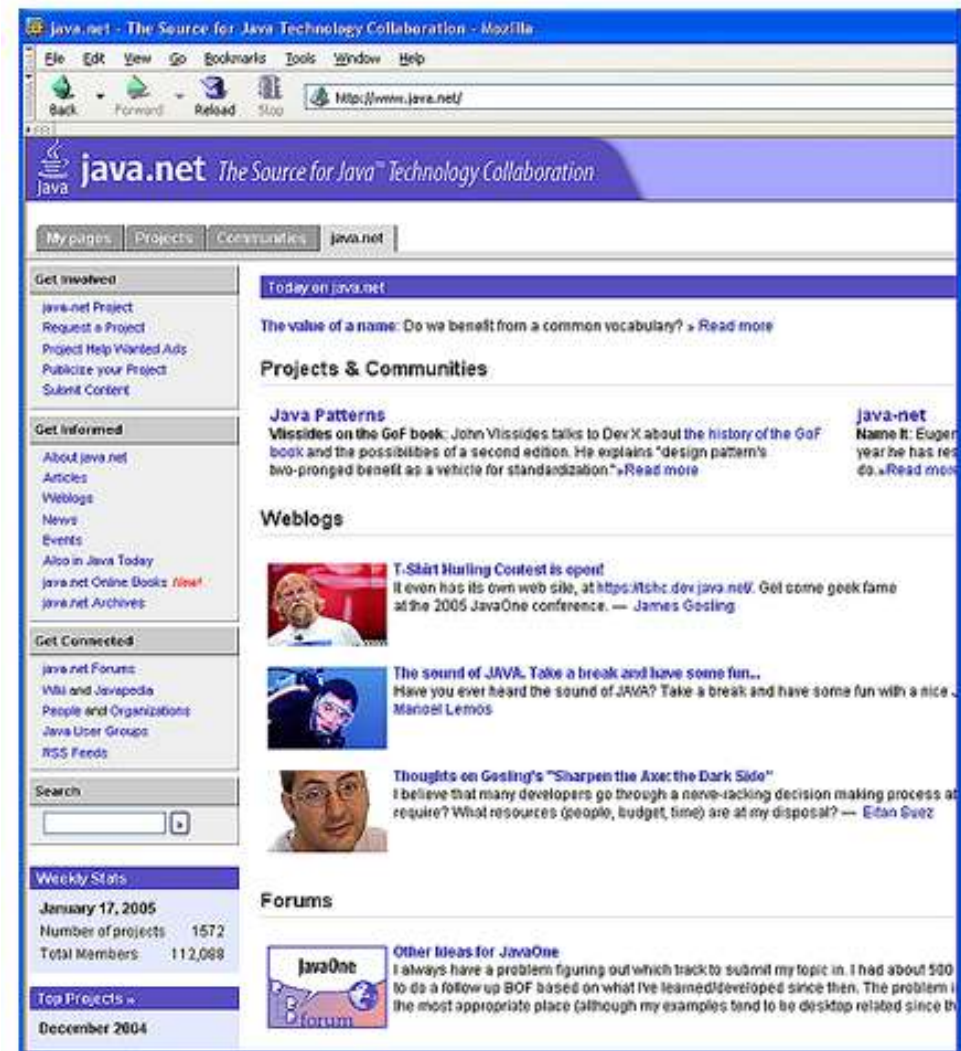
java.net — Building the community

Community “Home” for Java

- The “playground” for Java open source and open development projects

Status:

- 130,000+ members
- ~1,800 projects, 110 JUGs
- 18 active communities
- Blogs, Wikis, RSS, lots of dialogs!
- Interesting projects (Visible development of Mustang)
- James Gosling and other key Java technology leaders participate





Many, many examples



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NetBeans.org



The screenshot shows the NetBeans.org website homepage. At the top left is the NetBeans logo with ".ORG" below it. To the right, it says "Available NOW". Below this is a navigation bar with links for "Products", "Download", "Support & Docs", "Community", "Projects", and "About". There is also a "Printable Version" link. The main content area is divided into several sections:

- Downloads:** A list of download links including "IDE 3.5.1 Release", "Platform 3.5.1 Release", "Module Catalogue", "IDE Builds", and "Platform Builds".
- Welcome:** A central message: "Welcome to netbeans.org, the project that develops NetBeans IDE, the full-featured integrated environment for Java Developers and NetBeans Platform, the widely adopted infrastructure backplane for complex desktop applications." It includes a "More About NetBeans" link.
- Join netbeans.org!:** A registration form with fields for "username:" and "email:" and a "JOIN" button.
- Calendar:** A calendar showing dates from "16 Oct 2003 - 17 Oct 2003" and an event: "The 6th China Java Convention".
- Get Involved!:** A section titled "NetBeans is an open source project where your participation and help is welcomed!". It lists ways to contribute: "help answer users' questions on the mailing list, translate the IDE or website content into your language, help us test it, and last but not least ... contribute code to make the IDE rock!". It includes a "How to Contribute" link.
- News:** A list of recent news items:
 - 02 Oct: Enhydra Kelp 5.1 Final - IDE Plugins For Enhydra Development released
 - 15 Sep: Sprout 14, the NetBeans Monthly Newsletter
 - 04 Sep: NetBeans IDE 3.5.1 (ML) Co-Bundle With J2SE 1.4.2
 - 15 Aug: The NetBeans IDE 3.5.1 Chinese Version is Available
 - 12 Aug: Get Your Own Cool NB Gear Now, The Web Shop Is Open
- New Articles:** A section with an article dated "27 Aug" by "Maxym Mykhalchuk" titled "NetBeans Interviews - Peter Zavadsky and Tim Boudreau".
- Catalogue Additions:** A list of new additions including "XTT", "Web Browser Ant Task", "Convertor", and "Registry".

- Center for Innovation, News and Support
- 3.5 Million Downloads of NetBeans tool
- 100 add-ons and extensions
- Visitors from 160 countries
- Active Community supporting developers in English, French, Russian, Japanese, and simplified Chinese

NetBeans: Core IDE Features

- State-of-the-art Editor
- Ant-based project system
- Versioning: CVS, PVCS, VSS, and more
- Debugging: Multi-session, multi-threaded
- Testing: JUnit
- Refactoring and JavaDoc generation
- JDK version management
- Highly configurable
- Extensive templates

OpenOffice.org

- **60 million downloads** and growing
- **100,000 community members**
- **Over 40 community localisations**
- **15 local-language mail lists** for self-help
- **Community ports to virtually every known platform**
- **Archival document formats!**
- **Conversion** to and from Microsoft Office formats
- **No virus problems**
- **Open APIs**
- **StarOffice has enterprise-level support & warranty**

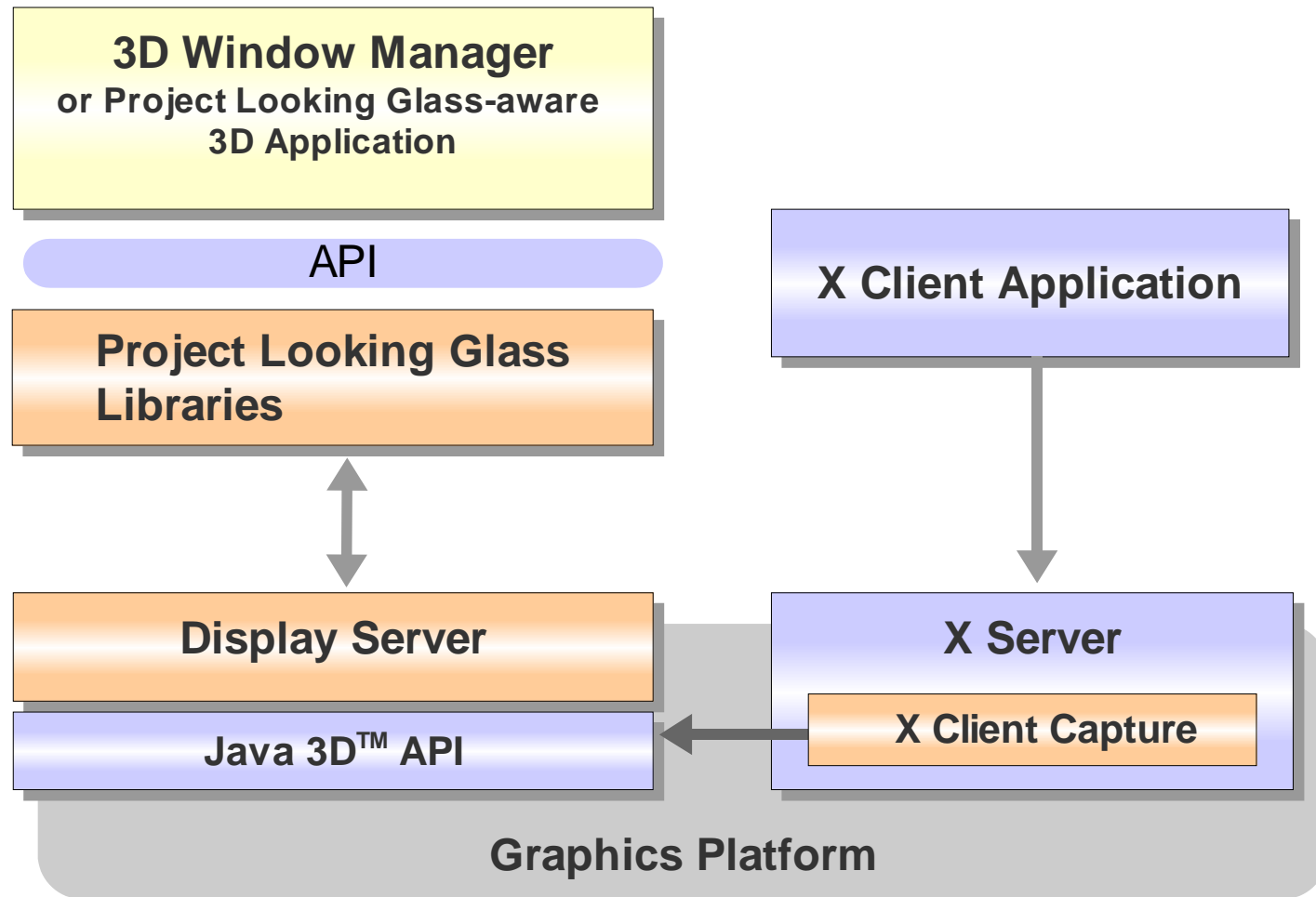
Project Looking Glass

Existing 2D Applications

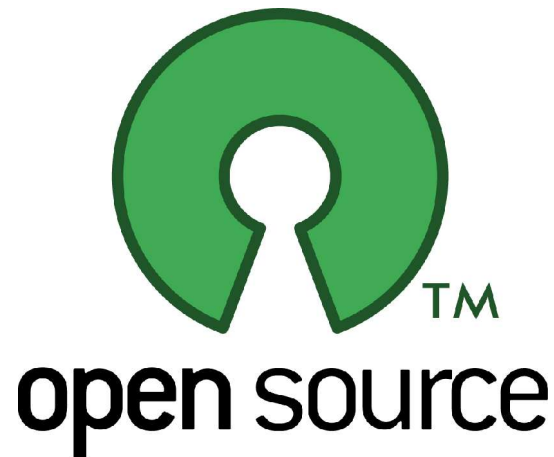


New 3D Applications

Looking Glass High-level Architecture Overview



opensolaris™



All Solaris Source Code

OSI Approved License

Buildable Source

Q2CY2005

1600+ patents released into
the community

Largest ever donation of
to open source

www.opensolaris.org

J2SE 6.0 “Mustang” Themes

- Compatibility, Stability, Quality!
- Diagnosability, Monitoring & Management
- Ease of Development
- Corporate / Enterprise Desktop
- XML & Web Services

- Transparency

“Mustang” Component JSRs

- JSR 105: XML Digital Signature
- JSR 199: Java Compiler API
- JSR 202: Java Class File Specification Update
- JSR 221: JDBC 4.0
- JSR 222: JAXB 2.0
- JSR 223: Scripting for the Java Platform
- JSR 224: JAX-RPC 2.0
- JSR 260: Javadoc Tag Update
- JSR 268: Java Smart Card I/O API
- JSR 269: Pluggable Annotation Processing API
- JSR TBD: JAXP.next

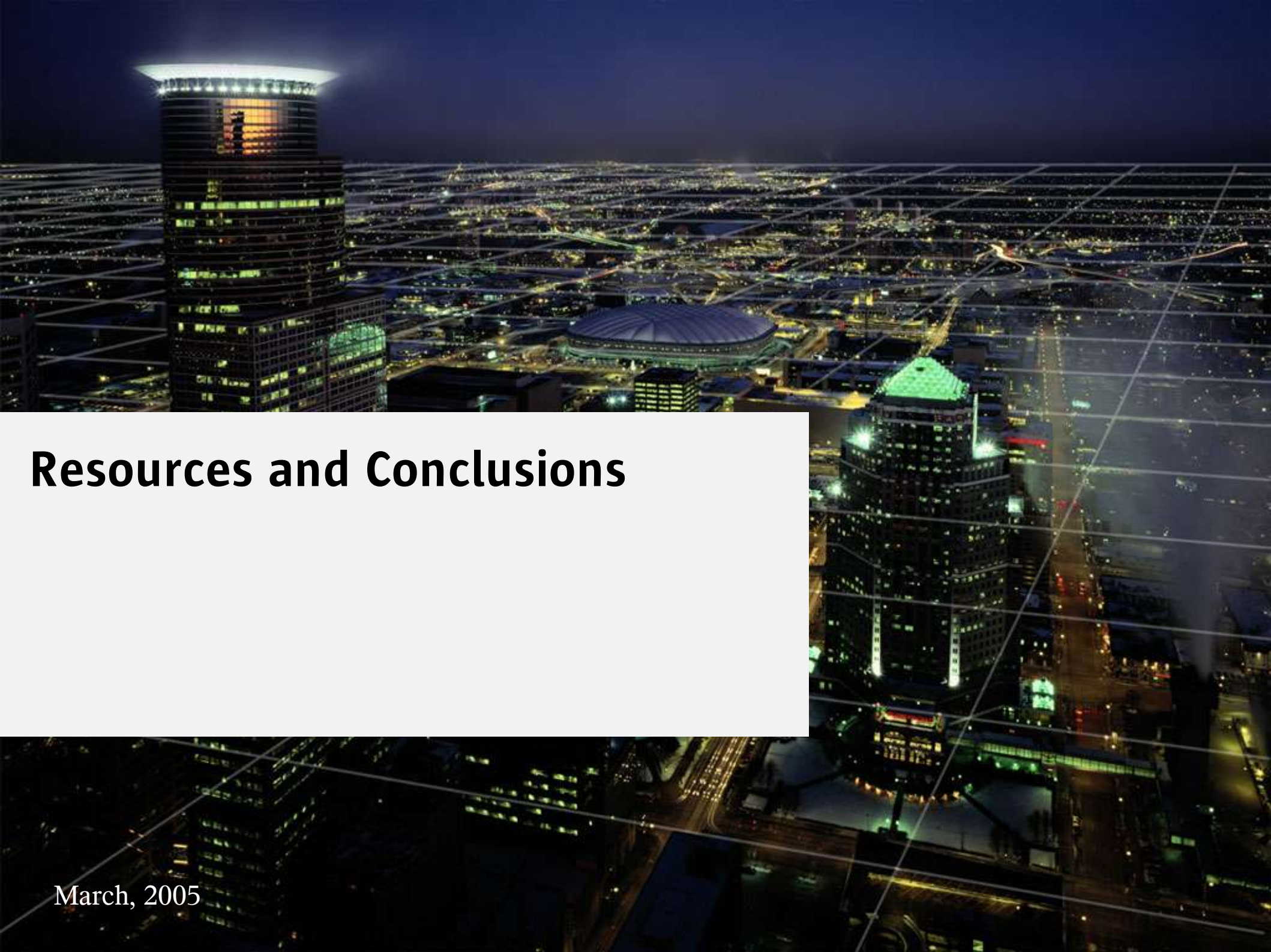
Please note:
JSRs may be added
or removed.

Open development w/Java

- “Visible Development” Project: J2SE initiative for open development
 - Improve collaboration with developer community
 - Publish weekly Mustang build sources and binaries
 - Encourage contribution of bug fixes & enhancements
 - Simplify build process so anyone can participate
 - Provide visibility into Sun engineering processes
- Encourage R&D using Java source code



<https://jdk.dev.java.net>



Resources and Conclusions

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Java.net topical poll



User: Password:
[Register](#) | [Login help](#)

[My pages](#) | [Projects](#) | [Communities](#) | [java.net](#)

Get Involved

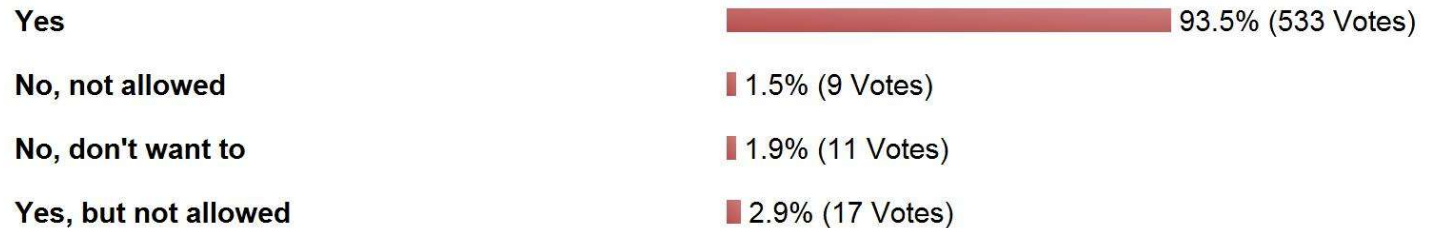
- [java-net Project](#)
- [Request a Project](#)
- [Project Help Wanted Ads](#)
- [Publicize your Project](#)
- [Submit Content](#)

Get Informed

- [About java.net](#)
- [Articles](#)
- [Weblogs](#)
- [News](#)

POLL RESULTS

Do you use Open Source software at work?



Resources

- Netbeans
 - <http://www.netbeans.org>
- java.net
 - <http://java.net>
 - <http://j2se.dev.java.net>
 - <http://lg3d-core.dev.java.net>
- Open Solaris
 - <http://opensolaris.org>
- Open Office
 - <http://openoffice.org>

Call for Action!

- Develop on Open * computing
- Use a platform that is robust and evolving
- Participate in java.net and open source
- Enjoy the rest of the day and ask questions!



java.net
<http://java.net>

rags@sun.com



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