



Open Source and the IT Industry: Managing External R&D

Jim Zemlin, June 4 2014

Software R&D is More Important than Ever

Software Abstraction

- Hardware functions are increasingly being abstracted into software
- Examples include: Server Virtualization, SDN, NFV, etc.

Dominance of Open Source

- Shared development is enabling faster time to market, higher quality, and lower cost.
- Linux, Hadoop, OpenStack, OpenDaylight, Xen, KVM, etc.

Software Talent War

- Top software talent is at an all time premium.
- Linux developers demanding premium over other programmers
- Recent anti-trust case shows desperation in Silicon Valley.

**The top ten tech
companies spend over
\$63.4 billion on
research and
development**

- 1) Microsoft, \$9B
- 2) Samsung, \$9B
- 3) Intel, \$8.4B
- 4) Nokia, \$7.8B
- 5) Panasonic, \$6.6B

- 6) IBM, \$6.3B
- 7) Cisco, \$5.8B
- 8) Google, \$5.2B
- 9) Amazon, \$2.9B
- 10) Apple, \$2.4B

How are you managing your external R&D?

External R&D Managers



These Companies Have Large Dedicated Open Source Teams

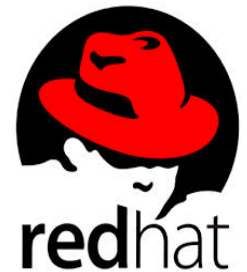
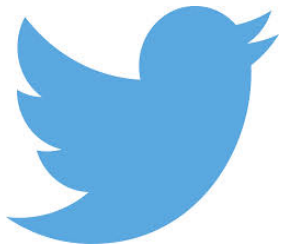
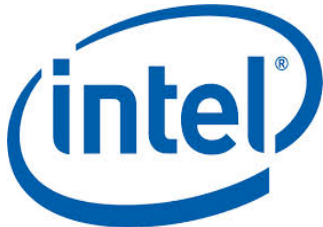
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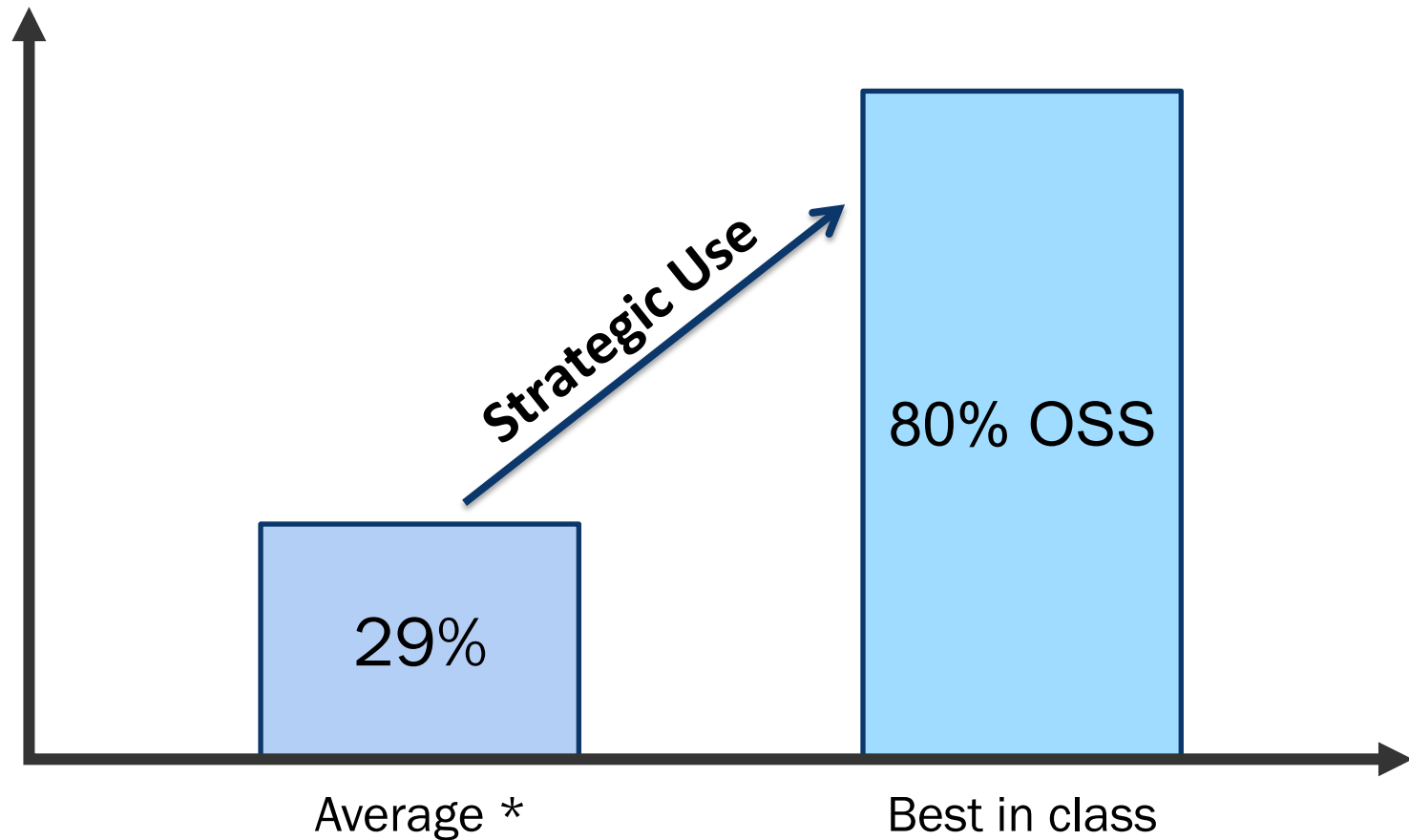
 Microsoft



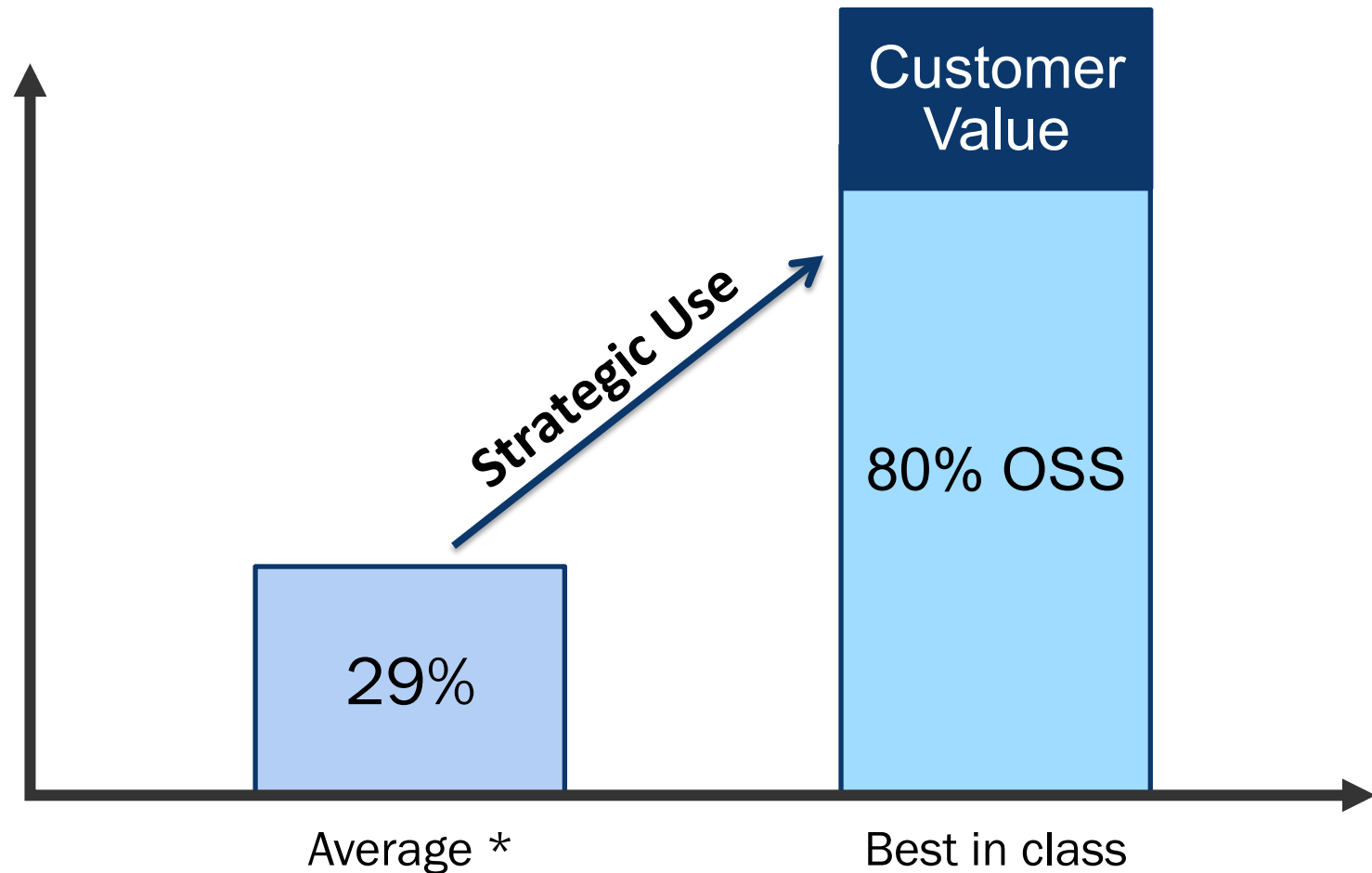
CITRIX



Moving to Strategic Use of Open Source



Moving to Strategic Use of Open Source



The results?

- Billions of dollars of free software harnessed to power core products and services.
- Business aligned with upstream projects enabling faster time to market.
- Interoperability with IT ecosystem.
- Leading edge on attracting top software talent.

**“Over 80% of the
software in our handsets
is open source”**

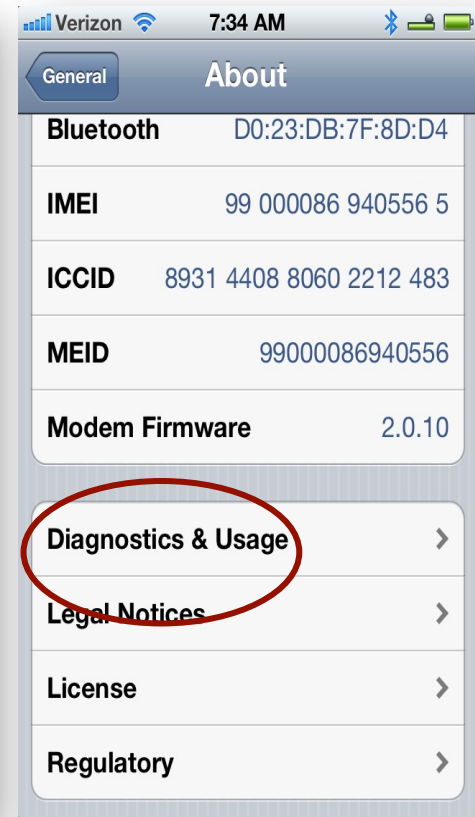
Carl-Eric Mols, Head of OSS, Sony Mobile
Communications

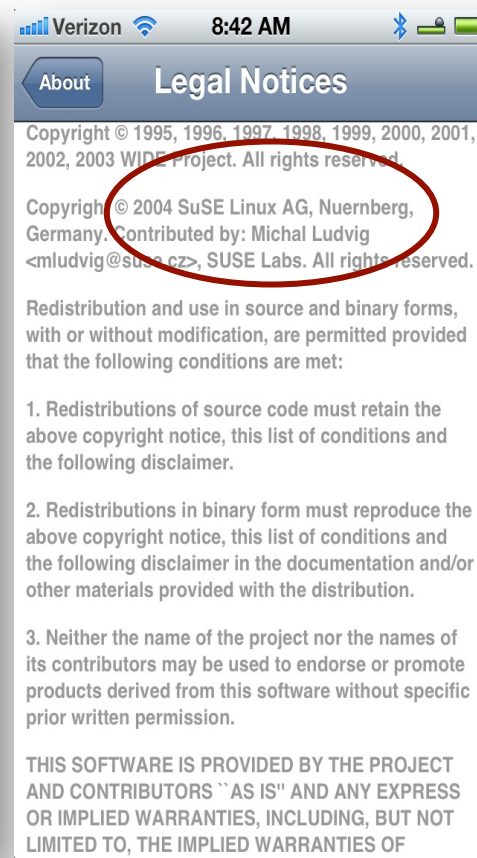
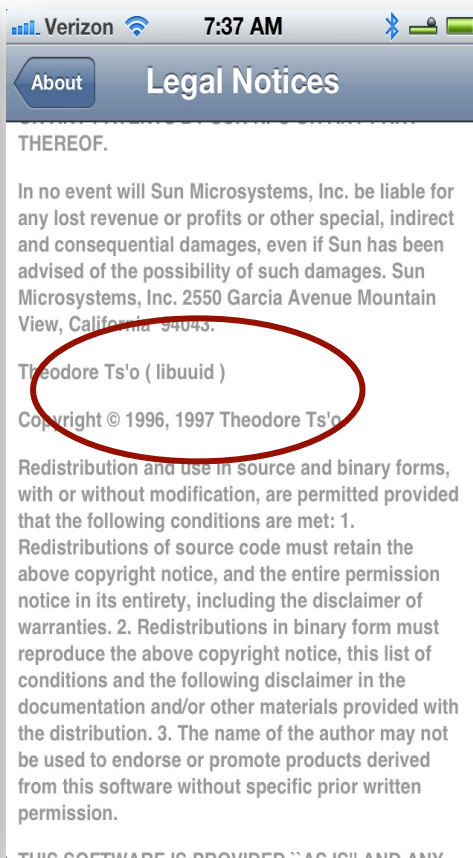
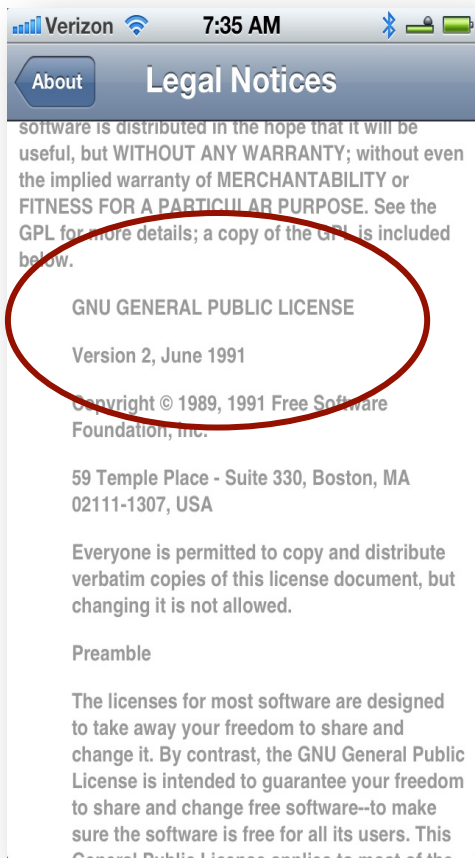
“Today you can’t build a product without using open source software.”

- Samsung Electronics, May 5,
2014 Wall Street Journal

Even Apple...







Open Source Collaboration Requires New Skills

Strategic Analysis

- Choosing best open source projects to meet goals
- License review boards
- What code to share and what code to keep

Intellectual Property

- Open Source License Management
- Contribution Agreements
- Trademark Licensing

Development Process

- Social coding style: GIT, email, IRC, etc.
- Project governance: contribution, maintainers, etc.

Business Process

- Downstream product integration
- Upstream code contributions
- License compliance

Mastering external R&D is essential

- Your industry peers are already doing this.
- By aligning external open source with your internal goals through direct investment you will shorten time to market and reduce cost.
- Visibility within the open source community is one of the best ways to recruit high level software talent which will be essential for competition.

Thank you.