Center for Bits and Atoms
12 October 2006

Internet Zero and
Sun Microsystems, Inc.

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Sun Microsystems, Inc.
Sun Contributors

• Danny Cohen – Internet protocol design
• Arshan Poursohi – Sun SPOTS exploration and integration
• Doug Johnson – I0 Community development and standards
Waves of the Internet

Computers

10^11

Embedded Computers

10^14

Thermostats

Switches

Milk Cartons

Smart Dust

MEMS Devices

Desksops

Phones

Games

TVs

Cars

The Future:

Embracing Disruption,
Changing how things work,
Innovation Happens Elsewhere

Client/Serv

Protocols

FTP

Telnet

SMTP

RPC/XDR

HTTP

Client/Serv

N-tier

Web Applications

Web Services

Polyarchical

Fractal
Sun SPOTS

- Sun SPOTS designed to enable easier wireless sensor and transducer development.
  - 32-bit ARM CPU, 512K RAM/4M flash
  - 11-channel, 2.4 Ghz 802.11.15.4 radio
  - J2ME CLDC 1.1 Java VM

- [http://www.sunspotworld.com/](http://www.sunspotworld.com/)
- Allows developer to focus on task, not integration
- Key idea being explored is to allow a mid-level, capable platform for interfacing with IoT networks
The Three Revolutions

- **Open Standards**
  - Mutual corporate self-interest to “level playing fields”
  - Crisis: *ex post* IPR bandits

- **Open Source**
  - Freedom for developers (not end-users)
  - But binary distributions still rule

- **Network Services**
  - From selling bits to selling their execution
You Can’t Create Community without Contribution

OpenSPARC™

NetBeans java.com opensolaris

solaris Java java.net

Looking Glass

JXTA

OpenOffice.org Mozilla Firefox java.sun.com
Sun Thrives Because Of Community

Sun Sponsored Open Source Projects

OpenOffice.org  JXTA  NFS  PARC  Jini.org  netBeans.org

Java.net  Liberty Alliance Project  Java Community Process  Java Project Looking Glass  javatools community

opensolaris  Grid Engine

WBEM Services

Open Source Standards and Industry Group

mozilla  The Apache Software Foundation  GNOME

OSDL  BSD

CEN  ISO  IEC  ITU  OASIS

IEEE  OECD  DMTF  ETSI  Globus Consortium

OMG  The Open Group

WSI  OMG

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* Not a complete list
Internet Zero Community Goals

• Venue for technical exploration
• Development of specifications and standards while recognizing need for openness
• Resource for sharing development and continued work
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