

Internet Devices & Appliances

Spring Internet World, Los Angeles, CA April 15, 1999

Internet Devices and Appliances Landscape

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- ◆ Dedicated devices with IP connectivity vs General purpose computers on the Internet
- ◆ The Internet beyond the desktop PC
- ◆ The Internet everywhere

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Definitions

- ◆ **Appliance**
 - A device suited for a particular job
- ◆ **Embedded system**
 - A system designed to run without human intervention and respond to events, usually in real time.
- ◆ **Immersive IP**
 - Internet Protocol links in all electronic devices; pervasive IP; ubiquitous IP

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Platforms

- ◆ **Server appliances**
 - Security, email, electronic commerce
- ◆ **Client appliances**
 - Palmtops, smart phones, multimedia players, set-tops
- ◆ **Embedded devices**
 - Sensors, Webcams, engine controls

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Heterogeneous environments

- ◆ Many different chips
 - MIPS, StrongARM, Motorola
- ◆ Many different architectures
 - Diskless, turnkey, wireless, real-time
- ◆ Many different user interfaces
 - Keypads, touchscreens, voice
- ◆ IP connectivity

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Developing standards

- ◆ Windows CE
- ◆ Java
- ◆ Jini
- ◆ Bluetooth
- ◆ Wireless Applications Protocol
- ◆ HomePNA
- ◆ AutoPC
- ◆ CDMA, TDMA, SDMA, CDPD, ei ei o

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Market Segmentation

- ◆ Consumer
 - Home of the Future
 - Entertainment off the net
 - Automotive IP
- ◆ Enterprise
 - Personal information management
 - Field force automation
- ◆ Industrial
 - Shop floor controls
 - Factory and warehouse automation

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Consumer applications

- ◆ Set-top boxes
- ◆ Smart phones
- ◆ Multimedia players
- ◆ Home networks
- ◆ Automotive IP

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Enterprise applications

- ◆ Palmtop and handhelds
- ◆ Smart cell phones
- ◆ Field force IP
 - Sales and marketing
 - Service technicians
 - Executive decision support
 - Portable database access and transaction processing

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Industrial applications

- ◆ Sensors
- ◆ Cameras
- ◆ Real-time controllers
- ◆ Factory automation

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Immersive IP

- ◆ Everything has an IP address
 - IPv6
- ◆ Every device is designed for connectivity
 - Industry- and application-specific protocols
- ◆ More devices than people use the net
 - 5.4 billion humans, 5.4 trillion machines
- ◆ Messaging infrastructures are vital
 - Device-independent data

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Keys to success

- ◆ Solving problems
- ◆ Showing ROI
- ◆ Measuring results
- ◆ Brainstorming the immersive IP future

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