

System Test Implementers Forum

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Intel Platform Compliance Operation

System Tests Impact USB Vendors



- **Device Behavior Affects Overall System**
 - Bandwidth Consumption
 - Power Usage
 - Ease of installation
- **System Bios USB Support**
 - Keyboards
 - Hubs
- **Specification Minimums**
 - 1.1 or 2.0 starting in 2001

System Test Provides Tests To WHQL

Agenda



- **Successful System Design**
- **System Test IF in Review**
- **USB Tests**
 - PC99
 - PC01
- **Resources**

Design for Requirements



Intel and Microsoft recognize that

- **consistent, objective PCxx tests**

are needed

- **earlier** in the design process

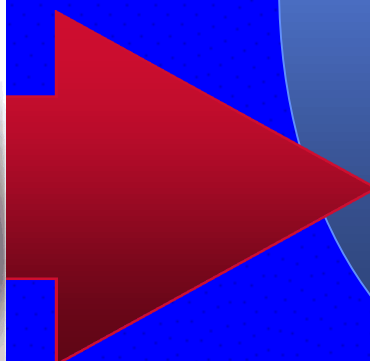
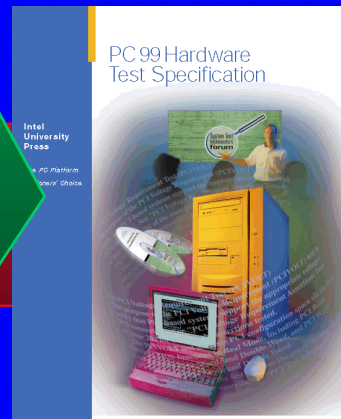
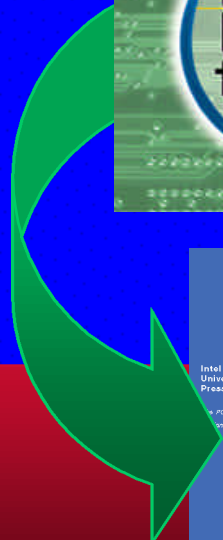
in order to

- ***design-in***

the ability to

- **meet the PCxx requirements**
- **prevent last minute redesigns**

Designing-In to Meet Requirements



**Windows[®]
Logo Tests**

**PCXX Test
Suites**

Three overlapping CD-ROMs, one in the foreground and two behind it, with colorful reflections on their surfaces.

**System Design Guide and
Test Specifications co-authored
by Intel and Microsoft**

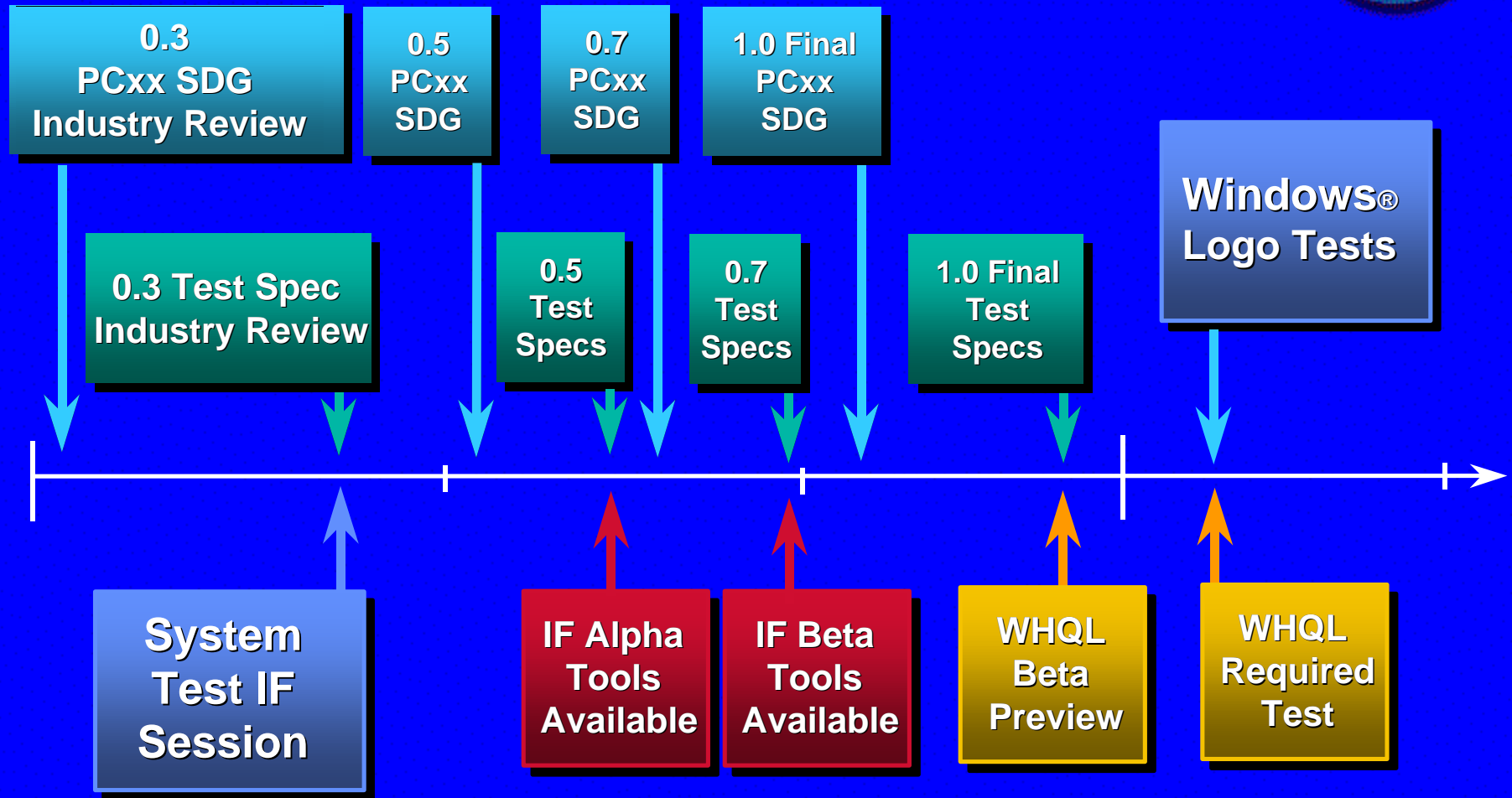
- PASS**
- FAIL**

System Test IF Process



- **PC XX System Design Guide testing criteria** are derived from published specs: *PCxx System Design Guide (SDG)*,
- **Test Specification** then provides a set of objective, non-arbitrary test criteria (Assertions)
- **Test algorithms** are derived from the Assertions.
 - Method and process defined
- **Test Tools Pass/Fail results** mapped to Assertions.

System Test IF Process Milestones



Available PC 99 Tests



- Video Input
- PC Cards
- Remote Boot
- Audio
- Graphics
- USB
- ATAPI
- Speech Input
- PCI
- ACPI
- Still Image
- TV Out
- Video Telephony
- AGP

Future PC 2001 Tests



- USB
- Docking Stations
- Remote Boot
- DVI
- Monitors
- 1394
- ATA
- ACPI
- Graphics
- Video
- AGP

PC 99 USB Test Areas



- **USB System Port Presence**
- **USB Keyboard Bios Support**
- **USB Isochronous Alternate Interface Presence**
- **USB Device Class Compliance**
- **USB Hub Specification Compliance**

PC 2001 USB Test Areas



- USB System Port Presence
- USB 1.1/2.0 Spec Compliance
- USB Host Controller Compliance
- USB System Wake Capabilities
- USB Self Powered Hubs
- USB Power Usage
- USB Device Installation
- USB Hub Bios Support

Resources



- **PC 99 H/W verification tests**
 - Run at this Conference
 - Available at www.systemtest.org
- **Draft 0.5 PC '01 H/W Test Spec**
 - Available 4/00 on IF Web site: www.systemtest.org
 - 30-day review for industry comments
 - Participate in IF industry reviews
- **Send us your test feedback and/or issues**
 - IF Web site: www.systemtest.org
- **System Test Events**
 - Test Spec Reviews (7/00)
 - TestFests (Members)

We Welcome Your Support and Input!



QUESTIONS?

System Test-IF Members



3COM Corporation

3DLabs, Inc.

Adaptec, Inc.

Advanced Micro Devices

ATI Technologies, Inc.

ASUSTeK Computer, Inc.

B-Tree Systems, Inc.

Compaq Computer Corp.

Conexant Systems, Inc.

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Dell Computer

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Fujitsu, Ltd.

Gateway 2000, Inc.

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IBM Corporation

Intermec Technologies

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Micro Design Resources

Micron PC

Micron Semiconductor

Micro-Star Int'l Co.

Mitsubishi Electric

NEC Computer Systems

NeoMagic Corporation

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Philips Components

Phoenix Technologies, Ltd.

S3, Inc.

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Toshiba Corporation

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Xircom

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Thank You for Your Support!