

# **ZOOM OUT BREW 2008 CONFERENCE**

**Device Validation – Previewing changes to  
Studio and OAT**

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## New product names

- Device Validation Suites = OAT + BREWStone + new test Areas
- Device Test Studio = PEK Studio
- Products are released separately
- Planned release date: October 2008



## Why test?

“There’s an old story about the person who wished his computer was as easy to use as his telephone. That wish has come true, since I no longer know how to use my telephone.”

- Bjarne Stroustrup  
Inventor of the C++ Language



## Studio is about managing complexity

- PEK 3.1.5 Statistics
  - 78 Modules (functional areas)
  - 4000+ selectable test cases
  - 8700+ test results per device
  - 350+ “POST PROCESS” tests
  - 500 Device Pack Items
- BREW<sup>®</sup> DTS = More testing
  - New modules
  - New types of tests
  - Tests from separate products



## PEK Studio in the last year

- Augmented Test Information
  - Added a “severity” field to reports
  - Users can comment on results
  - Linked published Known Issues with test failures
- Enhanced Test Analysis
  - Flagged unexecuted tests and modules
  - Comparison report
  - Post-processing



# BREW Device Test Studio

- Introduction
- Major Redesign
  - Extensive user interface work
  - More intuitive workflows
  - Embedded scripting engine
    - Script-based reporting
    - Script-based automation



## Re-thinking the Studio report

- Existing report can be 700 pages long!
- Interactive report that can be “drilled down” into
- Report evolves into an “executive summary”
- Customizable by the end-user

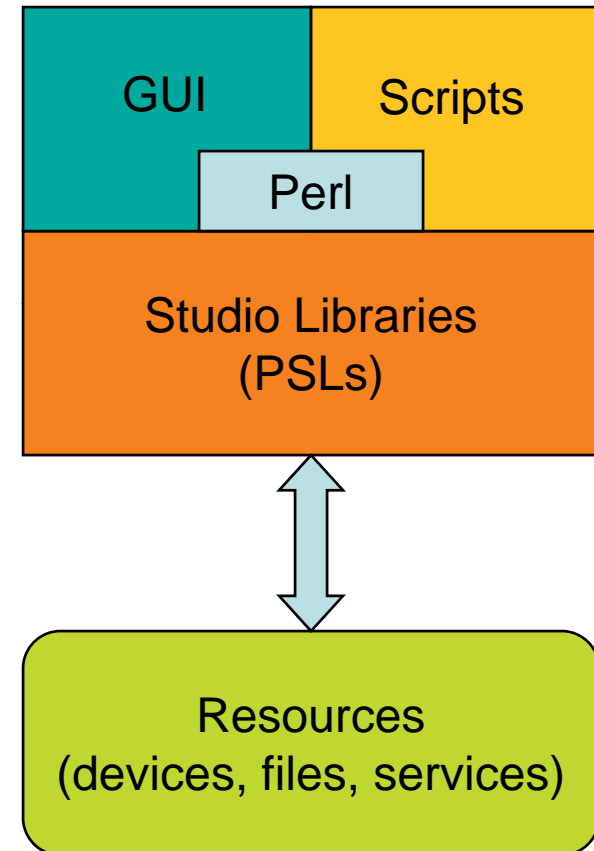


## Studio's new user interface

- Integrated help & monitoring
  - Monitor and remotely control PEK testing
  - Get help on items interactively
- Continuous Post-Processing
- Imports custom OAT modules
- Intuitive, integrated main UI
  - Module Manager, “Configure Tests”, “Comment Editor” all in one.

# Studio automation architecture

- Functionality is pushed into “~~PEK~~ Portable Studio Libraries” (PSLs)
- PSLs each have a C++ and perl interface.
- Embedded perl engine allows for user customizable reports.





## Studio automation goals

- UI or command-line based
- Specify three things:
  1. Workspace (results, config, and requirements)
  2. Which tests to run
  3. Device(s) to run the tests on
- Handles failure recovery



## Other Studio features

- XML-Based Workspaces and Results
  - No strict file structure requirements
  - File association with Studio
- Signature manager
- Script-based Reporting

**Thanks! We'll take questions  
after Eric's portion**



## PEK 3.x – Available releases and features

- PEK 3.1.5SP02 (Released on 5/15/08)
  - The most recent PEK 3.x release available
  - Can be used to test BREW 3.1.4, BREW 3.1.5 and BREW 3.1.5SP01 devices
  - Contains features from previous PEK 3.x releases:
    - PEKStudio features
    - Post processing
    - Removal of “verify” category
    - Touch Screen support
    - Backward Compatibility with older version of OAT modules



## DVS – Upcoming features

- Independent release from Test Studio
- Test coverage enhanced for entire BREW platform
- DVS PNP (Plug N' Play) support
- OAT Development support
- Enhanced Performance Testing



## DVS – Upcoming features - Cont'd

- Enhanced Stress testing
- Stability testing (New!)
- Test execution w/o DPK dependency
- Continued OAT interactive tests automation
- Continued severity logging
- HTML based documentation



## DVS - Separation of Test Studio and DVS

- Release Device Test Studio (DTS - the PC tools) and DVS (the device test suites) separately
- Ability to use a single “the latest and the greatest” version of the tool with different versions of DVS, to test corresponding version of BREW devices
  - DTS will be backward compatible with previous versions of DVS. For example, DTS 5.1.1 can be used with previous DVS versions such as: 5.1.1, 5.1.0, 5.0.0 etc.
  - Each DVS version will be tied to a specific BREW version. For example, use DVS 5.0.0 to test BREW 5.0.0 devices; use DVS 5.1.1 to test BREW 5.1.1 devices



## DVS - Test coverage enhanced for entire BREW platform

- Tests coverage added for:
  - BREW application framework (formerly known as uiOne™ HDK)
  - Some core BREW Extensions



## DVS - DVS OAT module Plug N' Play

- Capability to import add-on OAT modules into DVS base release and use them just like built-in OAT modules
- For Oct. 2008 DVS release, only binary PNP is supported.
- After Oct. 2008 DVS release, source PNP will be supported.
- *NOTE: DVS PNP feature relies on DTS module importing feature*



## DVS – OAT Development Support

- Help you to develop customized DVS modules/tests
- Provides a fairly complete sample module that is compilable and reusable
  - OAT Wizard tool also upcoming
- Provides extensive documentation about OAT framework APIs, OAT supported test types



## DVS - Enhanced performance testing

- Expand the OAT framework to support performance testing needs.
- Revamp and enhance BREWStone to provide more consistent and reliable results.
- Add new API level performance tests
- Add new system level scenario based performance tests (e.g. MTP sync scenario)



## DVS - New stress testing strategy

- Purpose: To verify the robustness, availability and error handling capability of the device at or beyond its specified system boundary.
- First phase of stress testing covers:
  - Database and Persistent Storage
    - File System, Database, Addrbook, Content Gallery
  - Memory
    - Heap, FIFO
  - Network
    - Socket, Sockport, Web
- A reuse-able resource hogger will be provided.



## DVS - New stability testing strategy

- Purpose: To check for unstable device behavior that may only occur with prolonged execution ( e.g. memory leaks).
- Stability test to execute on the device for an extended period of time.
  - Send pseudo-random events/key strokes to device under test and apps loaded.
  - Simulate pre-defined user scenarios.
  - Replay capability to reproduce the abnormal device behavior for further debugging.
- Supports both keypad and touch screen based devices.



## DVS – Other features

- Test execution w/o DPK dependency
  - Separate Test execution and Requirements verification steps
  - User will be specify requirements in enhanced DPK format (e.g. “NUM of TCP sockets >10”, “ 1GB < FS size < 4GB” etc.)
- Continued OAT interactive tests automation
- Continued severity logging
- HTML based documentation



# Questions and Answers

Questions?