EXDIFF

EXTENDED FILE DIFFERENCING SYSTEM

Expected Output   **Actual Output**   **Difference**
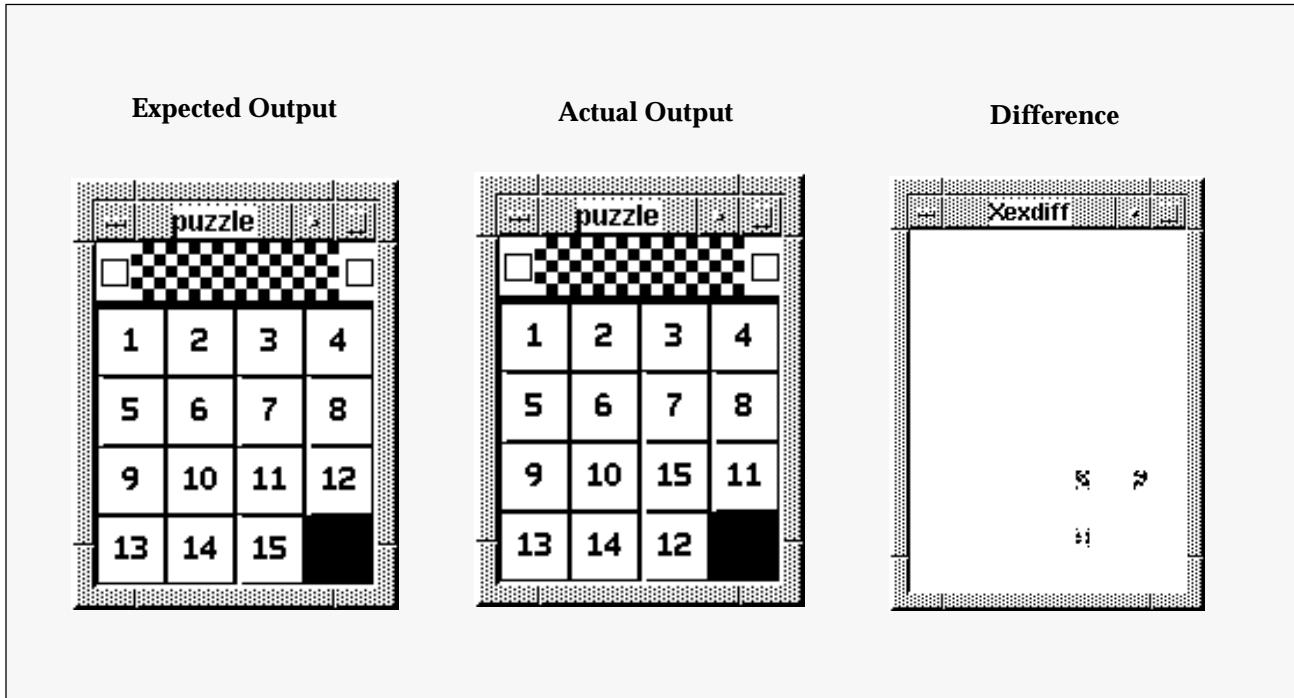
EXDIFF' allows the user to difference two image files containing screen fragments, complete windows or full screens. Following the comparison process, a differenced image (at right) is displayed to the screen.

PRODUCT DESCRIPTION

Most systems are supplied with a standard text file differencing utility. The utility either reports the compared files as the same or different. It is left to the user to determine whether the differences are of any significant value. For regression testing, such a restrictive and manual evaluation process can become quite cumbersome.

As a stand alone or within the **STW/Regression**™ tool set, **EXDIFF**™ is a test evaluation facility that extends commonly available file comparison utilities. **EXDIFF** compares files of various logical structures. This includes not only ASCII and binary files, but also bitmap image files saved either with SR's Capture/Playback tool, **CAPBAK**™ or the standard X Window Dump utility (**xwd**).

EXDIFF provides masking options which allow the user to specify areas within ASCII or image files to be ignored during the differencing process. While masking is concerned with positive masks (i.e. ignoring regions within specified boundaries), the **EXDIFF** inverse mask option enables negative masks to be differenced. In this mode, **EXDIFF** compares only the areas contained within the masked boundaries.

Xexdiff, the X Window system version of **EXDIFF**, performs a pixel-by-pixel comparison of the two saved image files and displays compared or differenced images to the screen. Positive or negative mask co-ordinates are established in the image file using the **Xmask** utility.

The **EXDIFF** default mode **exdiff** differences two ASCII files as line-oriented or byte-oriented files. Results are reported in an easy-to-read format, which indicates the necessary standard line-editor commands to remove existing differences in the com-

pared files. In this mode, **EXDIFF** is fully compatible with the standard UNIX **diff** utility. Using the **EX** utilities, similar ASCII files are reformatted for more reliable differencing with the **exdiff** utility.

With the help of its other **STW/Regression** companion tools **CAPBAK** and **SMARTS**™, the testing process is completely automated. The **SMARTS** test management system organizes test sessions recorded with **CAPBAK** into a hierarchial structure for execution individually or as part of a test suite according to the verification method selected. Typically, comparison image files represent baseline output versus newly generated outputs. Discrepancies are reported and stored by **SMARTS** for further analysis. Extraneous differences, can be discarded in the comparison process via the **EXDIFF** tool. **SMARTS** automatically generates a variety of reports based on test results.

EXTENDED DIFFERENCING CAPABILITIES

- *Bitmap Image Files* — Performs a pixel-by-pixel comparison of two saved image files with the **Xexdiff** utility.

- *Color Detection* — Indicates differences between image file colors.

- *ASCII Text files* — Provides line and byte comparisons with the **exdiff** utility.

EXTENSIVE MASKING CAPABILITIES

- *Positive Masking* — Ignores user-specified areas of an image file during the differencing process with the **Xexdiff** utility.

- *Unrestricted Mask Creation* — Allows unlimited, overlapping positive masks to be set for an individual image.

- *Reverse Masking* — Enables inverse processing of an image file mask, where only the user-specified area is compared during the differencing process.

- *GUI or Configuration File Specification* — Mask co-ordinates can be established either through the Graphical User Interface (GUI) or set in a configuration file to be read by **EXDIFF** at the start of execution.

- *ASCII Text Files* — Allows trailing blanks (spaces and tabs) to be ignored and strings of blanks to be compared as equal.

- **EX** *Utilities* — Reformats and/or divides ASCII files based on user-specified characters strings and text lines, preparing the files for more comprehensive differencing with the **exdiff** utility.

IMAGE COMPARISON OPTIONS

- *Normal Mode* — Displays only the image differences to the screen.

- *Toggle Mode* — Allows the user to alternate between the two compared images.

- *Time Display Option* — Displays a compared or differenced image for a specified number of seconds.

Rectangle masks can be used to exclude inconsequential regions in an image file.
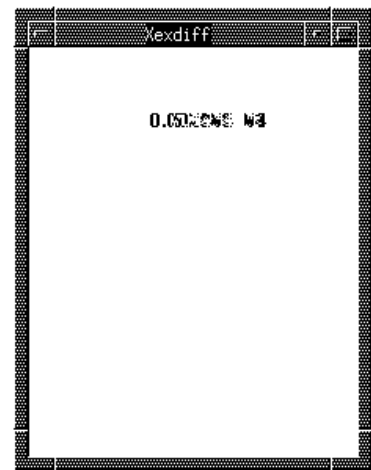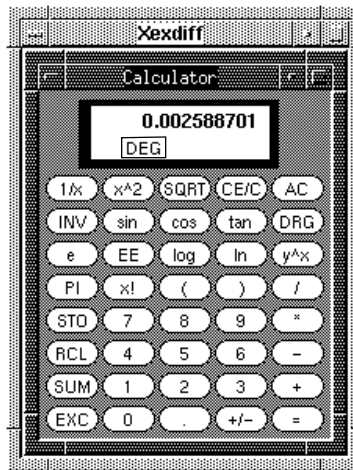
EXECUTION OPTIONS

- *CAPBAK Execution* — Performs differencing on-the-fly during **CAPBAK**'s playback.

- *Command Line Execution* — Enables differencing process to be executed either manually or as a batch process within a **SMARTS** testing script.

- *ASCII Comparison Options* — Differences output to either resemble the UNIX **diff** utility or be formatted as a more comprehensively annotated listing. Displayed ASCII comparison output can also be saved to a file.

- *Graphical User Interface* — Enables differencing process to be invoked from a window based graphical user interface.

SUPPORTED PLATFORMS

- Sun SPARC
- x86 Solaris
- SCO
- SGI
- IBM RS/6000
- HP 9000 - 700/800
- DEC Alpha
- 386/486 UNIX

TECHNICAL SUPPORT

- Telephone hot-line assistance for installation and technical questions is available.

- Maintenance contracts provide continuing product support and upgrades.

For more details on **EXDIFF**, contact:

SOFTWARE RESEARCH, INC.

1663 MISSION STREET, SUITE 400
SAN FRANCISCO, CA 94103 USA
PHONE: (415) 861-2800
TOLL FREE: (800) 942-SOFT
FAX: (415) 861-9801
E-MAIL: info@soft.com
http://www/soft.com