Quick Start

This note shows you how to use the basic components of CAPBAK ⁄ MSW.

## 1.1   Getting Acquainted with CAPBAK/MSW

It is recommended that you complete the example in this chapter before continuing to other sections. This chapter gives you a feel for how the system is organized and permits you to create more efficient and effective tests.

When you have completed this chapter, you should be familiar with the main activities involved in using *CAPBAK /MSW*, including setting up a test, recording and playing back a test, viewing captured images, and comparing captured images. When you record a test, you establish a baseline of expected behavior. Each time you want to retest an application's operations, you play back the test. The playback lets you determine if your application performs as it did when the test was recorded. Playback creates a response of actual behavior. You can verify a recording and playback session by examining the captured images and comparing expected and actual images.

This chapter is best used if you also make reference to Chapters 4 to 11 on user manual for detailed explanations on functionality.

1.1.1   STEP 1: Starting CAPBAK/MSW

1. From **Start** click on the **TestWorks for Win32** icon in **Programs** menu.This will display the **TestWorks Group** window.
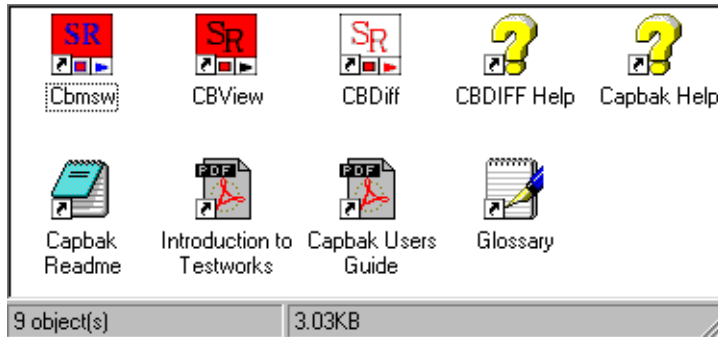
2. This window contains icons for the programs that come with CAPBAK :

   • Cbmsw (**CAPBAK MS-Windows)** invokes *CAPBAK/MSW*'s record/playback utility

   • **CBVIEW** invokes *CAPBAK/MSW*'s utility for displaying captured images

   • **CBDIFF** invokes *CAPBAK/MSW*'s utility for comparing captured images

   • Acrobat Reader setup

This tutorial demonstrates the following utilities.

3. For the first part of this tutorial you will be using the record ⁄ play-back utility of *CAPBAK/MSW.* To start this utility double click on the **Cbmsw** (CAPBAK MS-Windows**)** icon.

4. The **Record/Play** window pops up. Its VCR-like control panel records and plays back sessions.

5. The status window prompts you: `Ready` mode after initializing the OCR.

NOTE: If you want to start over, you can terminate *CAPBAK /MSW* by clicking on the **File** menu and selecting the **Exit** option.

After you click on the **Cbmsw** icon, *CAPBAK/MSW* loads. Depending on which version of Windows you are using, one of the following screens will appear:
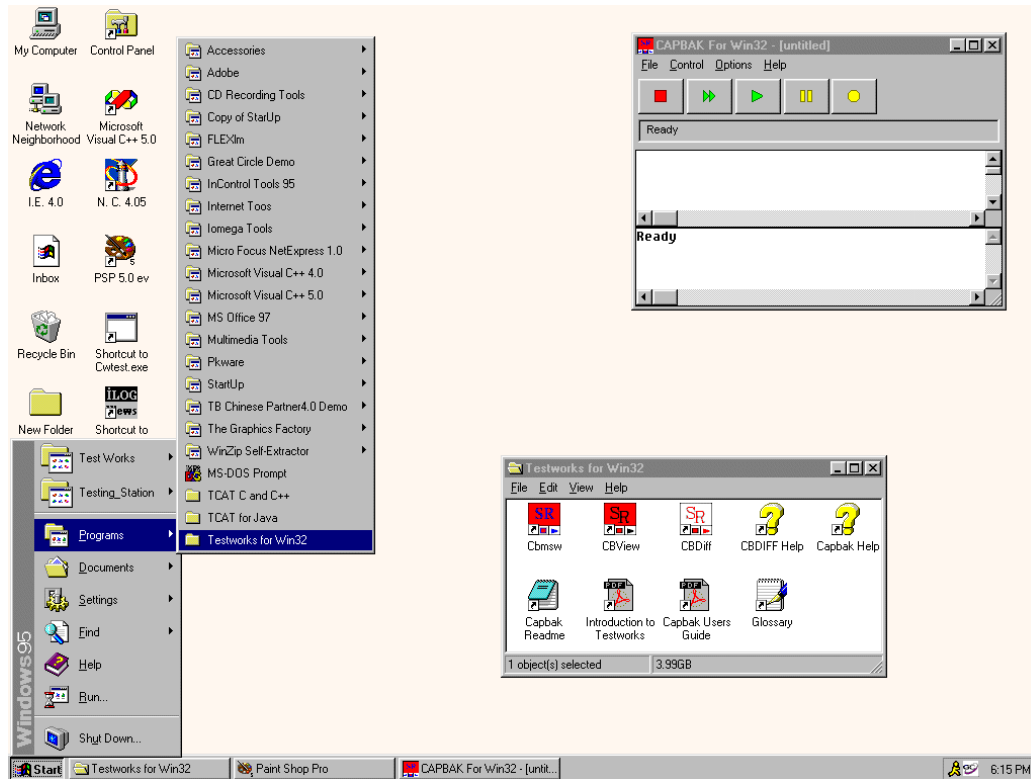
FIGURE 6   Invoking CAPBAK/MSW (Windows 95 and NT 4.0)

1.1.2   **STEP 2: Starting a Recording**

To start a recording session. Here's how:

1. Click on the control panel **Record** button labeled (red rectangle).

2. The **Record /Play**'s status window indicates that recording has started with the following message: **"Recording in Object Mode"**

3. You are now in recording mode. Any keyboard and mouse input you enter is recorded.

4. For this session, we will use the commonly available Microsoft Windows calculator (as described in **STEP 3**).

NOTE: You can stop recording anytime, then overwrite the old keysave file when you try recording a new session again.

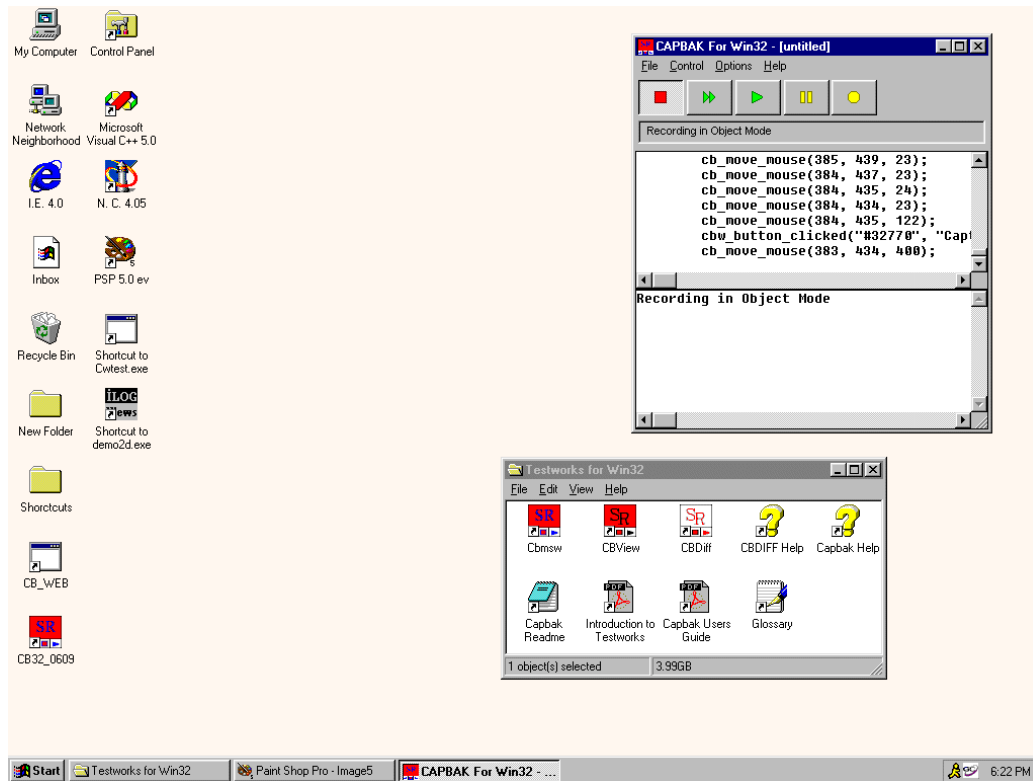When initiating a recording test session, your display should look like this.

FIGURE 7   Beginning a Recording Session

1.1.3   STEP 3: Creating a Test

For this test session, try to make your recording last 5 minutes or less. Follow these steps:

1. Move the mouse around.

2. The calculator is normally located in the **Accessories Group** window.

3. Click on the **Programs** from **Start** menu. Then click on **Calculator** from **Accessories**.

4. The **Calculator** window pops up.

5. Use the calculator in a simple example, such as adding or multiplying two numbers.

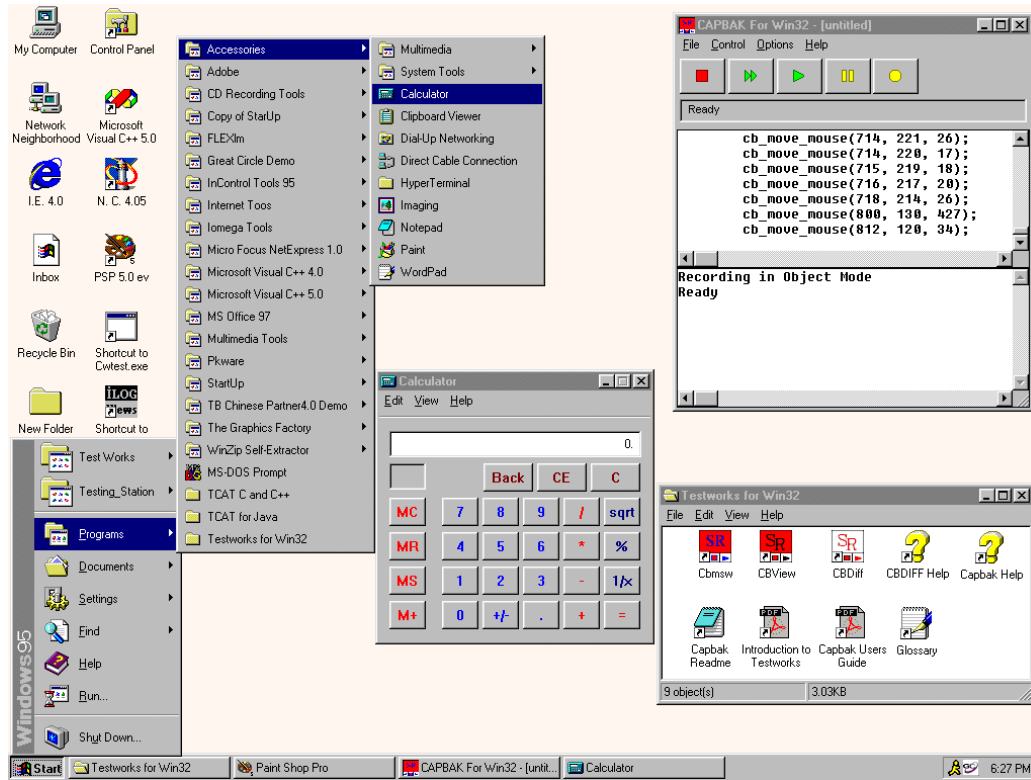The screen display of the calculator looks like this:

FIGURE 8   Creating a Test

1.1.4   **STEP 4: Capturing a Window Image**

During a test session, you have the option to command *CAPBAK /MSW* to place comments in the keysave file, define windows or images for synchronization during playback, or capture windows, images or the entire screen. These activities can be performed by either using options from the **Record/Play**'s **Hotkey** window or by using your keyboard's function keys.

During this test session, you are going to capture the **Calculator**'s window with the mouse. These instructions show you how to capture a window using either the **Hotkey** window or the function keys.

Using the **Hotkey** window:

1. Press and hold the **Ctrl**, **Alt** and **F1** function keys all at the same time when you are ready to capture the calculator window, then lift them up. Recording pauses and the **Hotkey** window pops up. The **Record/Play** window indicates recording has paused with the message: `Pausing. Recording Suspended.`

2. Make sure no part of the **Calculator** window is hidden by another window.

3. Click on the **Hotkey** window's **Save Window** button. The mouse pointer turns into a cross-hair symbol.

4. Move the cross-hair to the **Calculator** window, then click and release the mouse button. Be sure not to do this on top of any of the calculator's buttons.

5. The image is captured as <**name**>.*b01* in your working directory.

Using **Function** Keys:

1. Make sure no part of the **Calculator** window is hidden by another window, before attempting to capture it.

2. Move the mouse pointer over the **Calculator** window.

3. Press the **Ctrl**, **Alt** and **F6** function key all at the same time, then lift them up. Recording pauses as the image is being captured and the status window signals the window capture with the following message: `Saving window image in DIB file`

4. The image is captured as <**name**>.*b01* in your working directory.

    test.b01 serves as your baseline (image captured during the recording session) file.

When saving a window with the **Hotkey** window, your display should look like this:
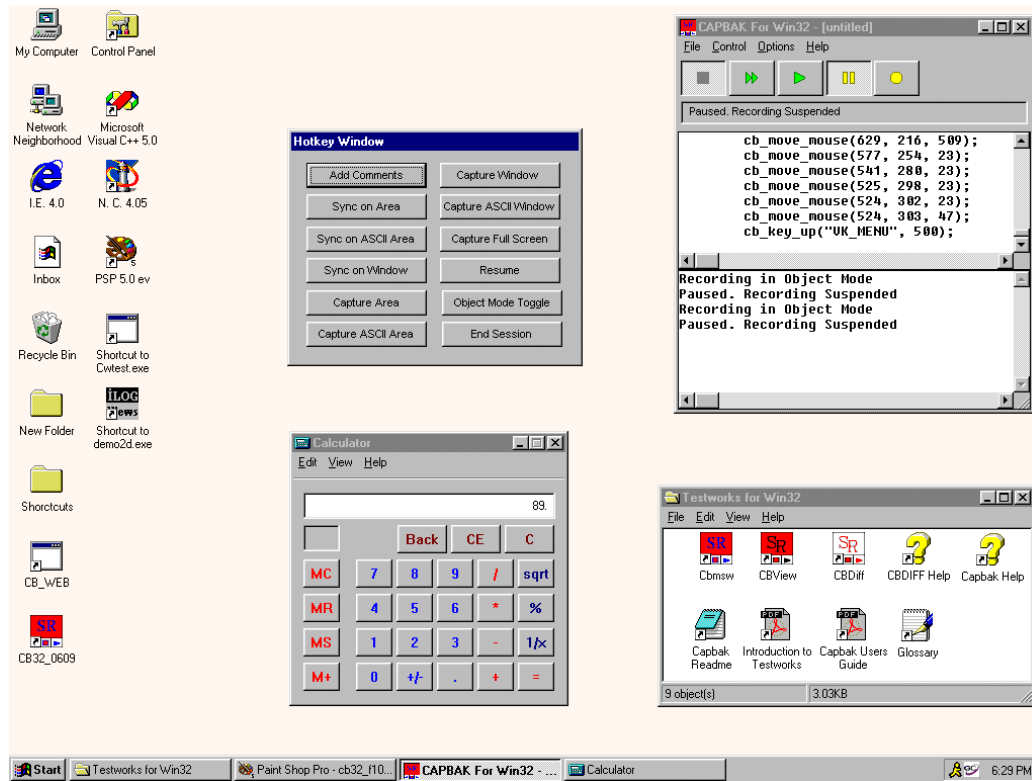
FIGURE 9   Capturing a Window

1.1.5   **STEP 5: Completing a Recording Session**

When you end a recording session, you should close all the applications that you opened, so it's easier for playback to begin from the same initial state that the recording session did. Depending on how you saved the calculator window, you can end your session one of two ways:

Using the **Hotkey** window:

1.   If you captured the calculator using the **Hotkey** window, the calculator should still be displayed on your screen.

2.   Click on the **Resume** button. The **Record/Play** window indicates recording is resumed with a `Recording` message in the status window.

3.   Click on the **Calculator** window's control menu bar, then select **Close**.

4.   Leave the **Record/Play** window up, as you will need it to later play back this test session.

5.   Click on the **STOP** button. The **Record /Play**'s status window signals the end of a recording session with the message: `Ready`

Using the **Functions** Keys:

1.   When you are ready to stop recording, press the **Ctrl**, **Alt** and **F10** function keys all at the same time and then lift them up, or you can press the **STOP** button on the **Record/Play** window.

2.   Either way, the **Record /Play**'s status window signals the end of a recording session with the message: `Ready`

For Both Methods:

This completes the recording part of this tutorial. What you just did was establish a baseline of expected behavior of the **Calculator**. In terms of the **Calculator**, this isn't much of a test. In real-life software testing, however, this type of test can be useful in finding any differences between two versions of an application program. This test can serve as one of many tests of the **Calculator**.

If a change is made is to the **Calculator**, you can play back the recording to verify the **Calculator** still works as expected.

NOTE: In most application testing situations, you will create more than one test. You can use *SMARTS* to organize your tests. Please refer to the *SMARTS User's Guide* for further information.

At the end of a recording session, your display should look like this.
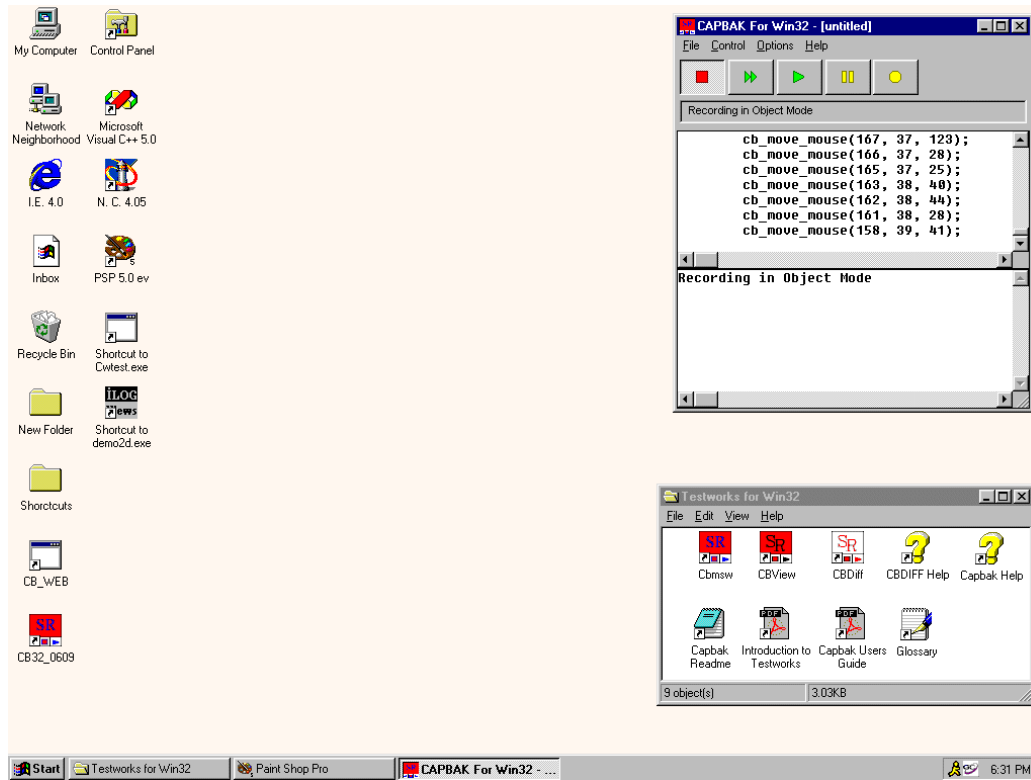

FIGURE 10   Completing a Recording Session

1.1.6   **STEP 6: Saving a Keysave File**

After recording a test session, use **Save As** to specify a keysave file name in which to save the test session inputs. These include all mouse, key-strokes, and any screen capture input statements. In other words, it represents your test session. Please refer to Appendix A "UNDERSTANDING THE KEYSAVE FILE LANGUAGE" for further information on keysave files.

Here's how to save a keysave file:

1. Click on the **File** menu.

2. Select the **Save/Save As** submenu. A file selection dialog box pops up.

3. Type in `test.ksv` in the **File Name** entry box. The *.**ksv** extension (as listed in the **List Files of Type** box) distinguishes keysave files from other types of files.

NOTE: When saving a keysave file, the first character must be alphabetic and *not* numeric.

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4. Click on **OK** or press the **Enter** key, after you type in the file name.

1.1.7   STEP 7: Initializing the CBVIEW Window

You can verify your recording test session's success by looking at the **Calculator** window image you saved during the recording session with the **CBVIEW** window. To display it:

1. Click on the **CBVIEW** icon in the **TestWorks Group** window.

2. The **CBVIEW** window pops up.

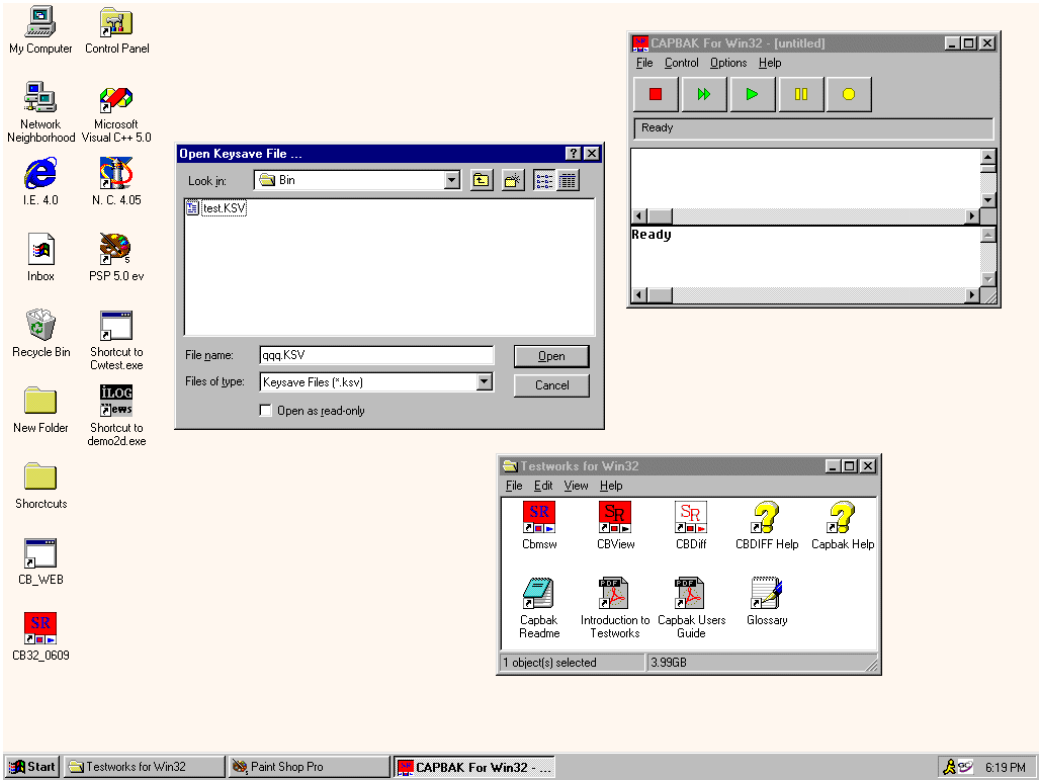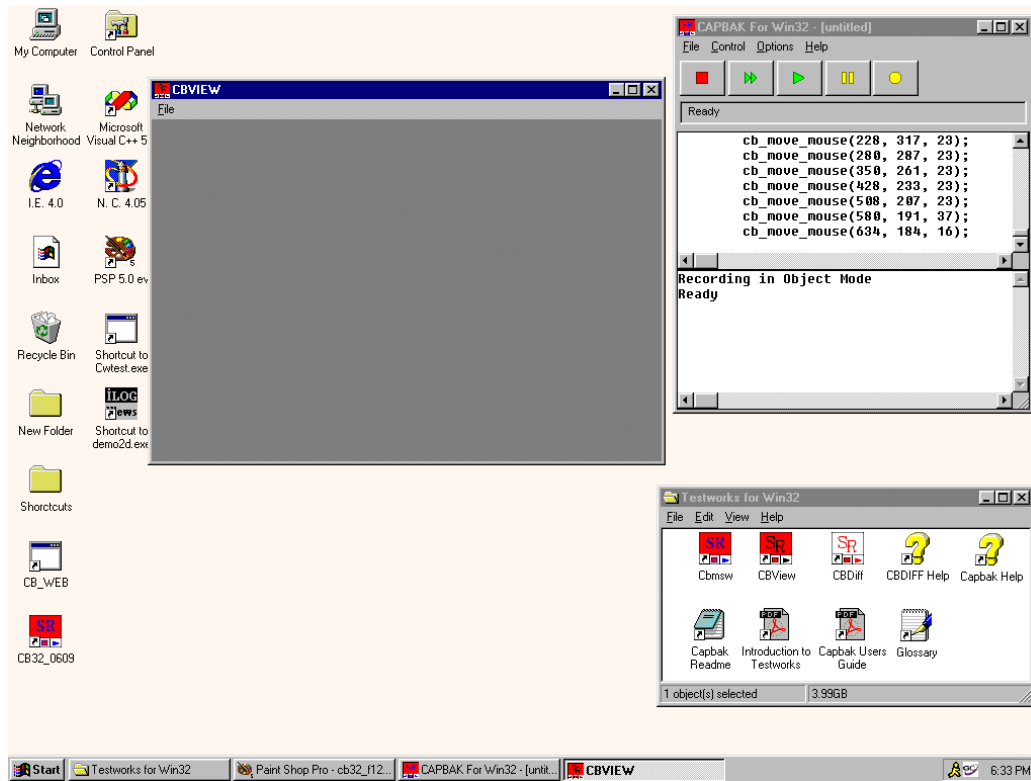When selecting a keysave file, your display should look like this:

FIGURE 1   Saving a Keysave File

When the **CBVIEW** window opens, your display should look like this:


FIGURE 11 Initializing the CBVIEW Window

1.1.8 **STEP 8: Displaying a Captured Image**

To look at the captured image:

1. Click on the **File** menu and select the **Open** submenu. A file selection dialog box pops up.

2. Double click on *test.b01* in the file list box. You can also highlight or type in the file name and then click on **OK** or press the **Enter** key.

3. The saved **Calculator** window automatically appears in the **CBVIEW** window.

4. When you are finished viewing the image, click on the **File** menu and choose the **Exit** option.

When you display the saved **Calculator** window, your display should look like this:
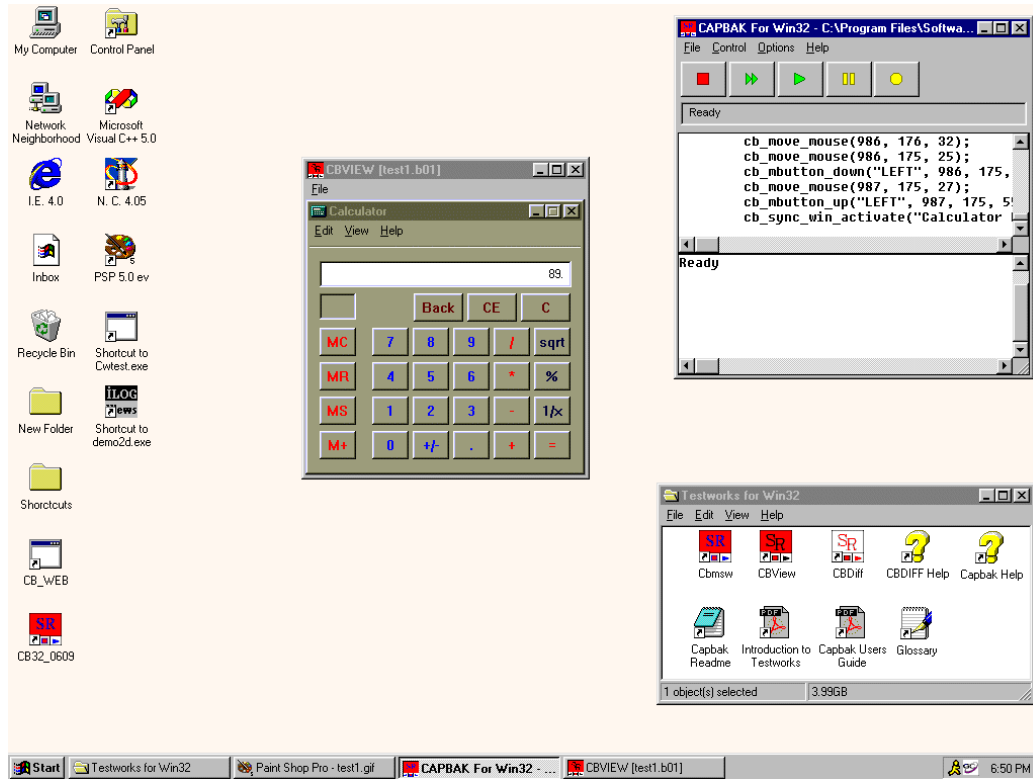
FIGURE 12　　　Viewing a Saved Image

1.1.9   **STEP 9: Playing Back the Keysave File**

Let's pretend we get an updated version of the software application, which we have to test. We can play back the recorded test session to verify the operation of the application.

Follow these steps to play back a keysave file:

1. Click on the **Record/Play** window's **PLAY** button.
2. Playback begins and the status window reads: `Playing back`
3. Mouse movements play back exactly as you entered them during the recording test session.
4. As the keysave file is playing back, do not try to move the mouse or enter keystrokes, as this may interfere with the application-under-test.
5. Watch as the **Calculator** window appears. You might see it jump to the location it popped up at during the recording session. This is *CAPBAK/MSW*'s automatic event synchronization.
6. Watch the **Calculator** window as it is captured. The image you captured during your recording test session is automatically recaptured as a response file during playback.
7. Playback ends when the status window reads: `Ready`
8. Click on the **Record/Play** window's **File** menu, then select **Close**.

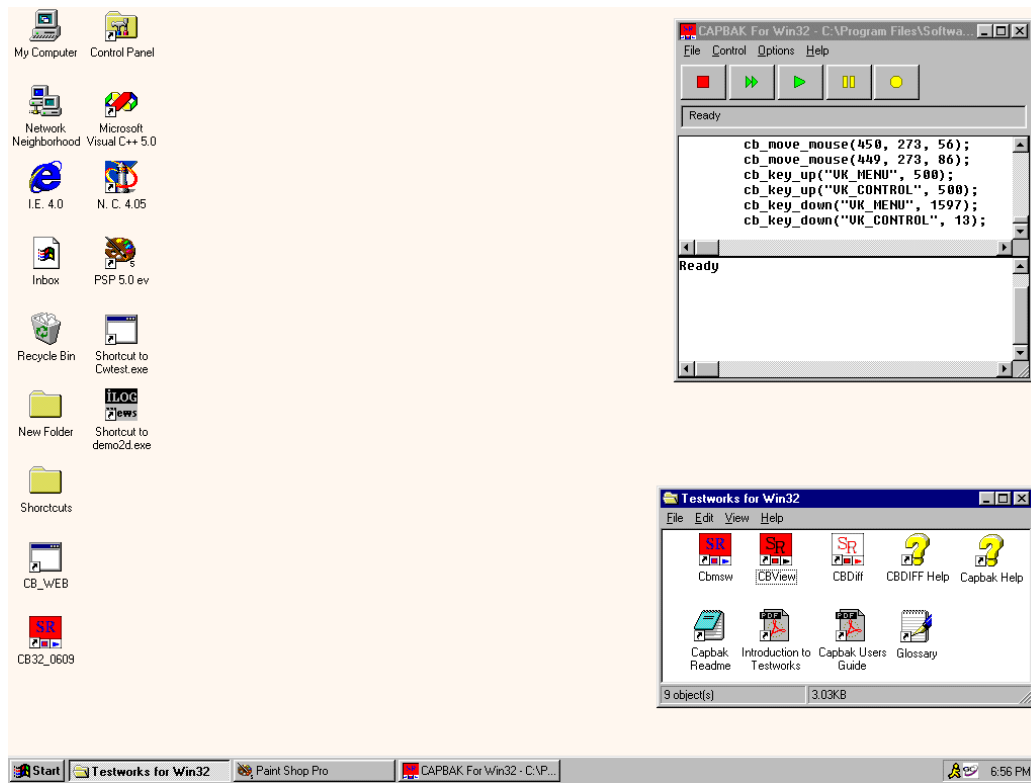At the end of a playback test session, your display should look like this:

FIGURE 13   Ending a Playback Session

1.1.10   **STEP 10: Reviewing Test Results**

When you have completed the preceding nine steps, you should have three files in the working directory:

- A keysave file named *test.ksv*.
- A baseline image file named *test.b01*. This is the baseline image you captured during the recording session.
- A response image file named *test.r01*. This is the response image captured during the playback session.

test.b01 and *test.r01* image files should be identical to one another. You can either view these images with the **CBVIEW** window or you can compare them for differences (see **STEP 11**). To view them:

1. Click on the **CBVIEW** icon in the **STW Group** window to invoke the **CBVIEW** window.

2. First view the baseline image file *test.b01* just as you did in **STEP 8** and then the response image file *test.r01*.

3. If they look the same, they are most likely identical, which indicates a successful playback. You would need to use the **CBDIFF** utility to be completely sure that no differences exist.

4. Click on the **File** menu and select **Exit** to close the **CBVIEW** window.

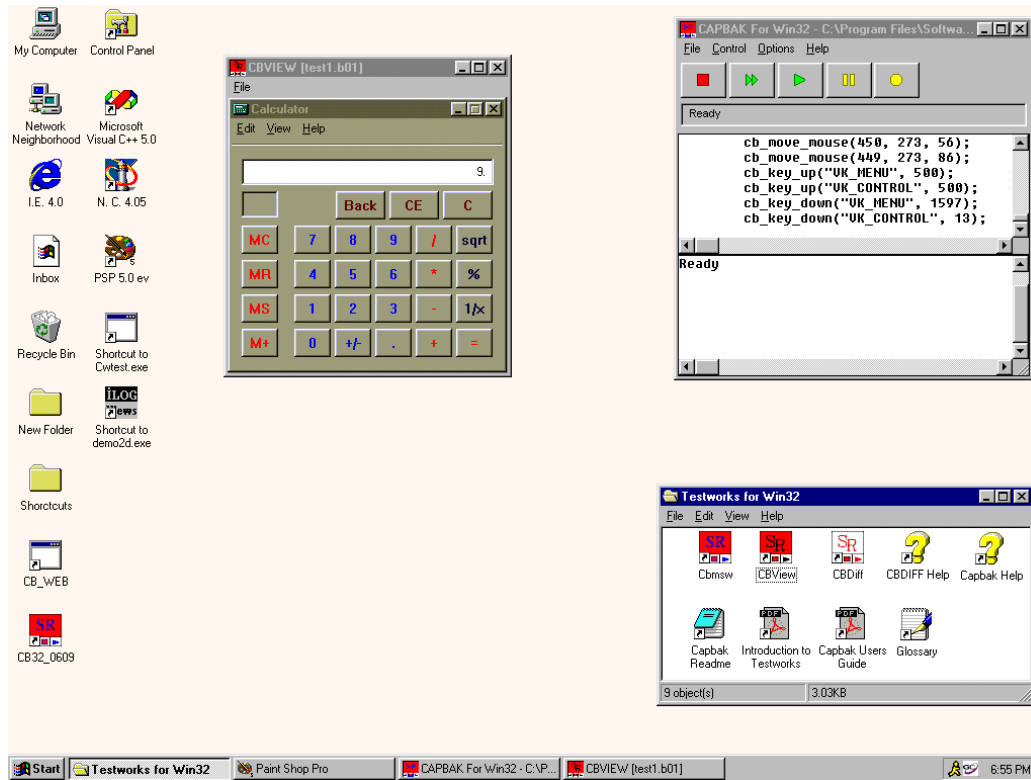When you view the response image file, your display should look like this:

FIGURE 14   Verifying Playback

1.1.11   **STEP 11: Comparing Saved Images**

CAPBAK/MSW can compare differences between two saved images with its **CBDIFF** utility.

1. Click on the **CBDIFF** icon in the **TestWorks Group** window to invoke the **CBDIFF** window.

2. First, select the baseline image file *test.b01.* Click on the **File** menu and select the **Open Baseline** submenu.

3. When the file selection dialog box pops up, choose *test.b01.* The image is automatically displayed in the **CBDIFF** window.

4. Next, choose the response image file *test.r01.* Click on the **File** menu and select the **Open Response** submenu.

5. When the file selection dialog box pops up, choose *test.r01.* The image is automatically displayed in the **CBDIFF** window.

6. To compare the images: Click on the **Difference** menu and select the **Do Diff** option.

7. If both images match, then the **CBDIFF** window should be white; if the images do not match, then the **CBDIFF** window will display those bitmap differences.

8. When you are finished, click on the **File** menu and select the **Exit** option. The window closes.

9. Iconize the **TestWorks Group** window by clicking on its control menu box and selecting **Close**.

NOTE: *CAPBAK/MSW* can also verify if expected and actual images match on-the-fly during playback with its *Quick Check* mode. Please see Section 7.3 and Section 7.4 on user manual for complete information.

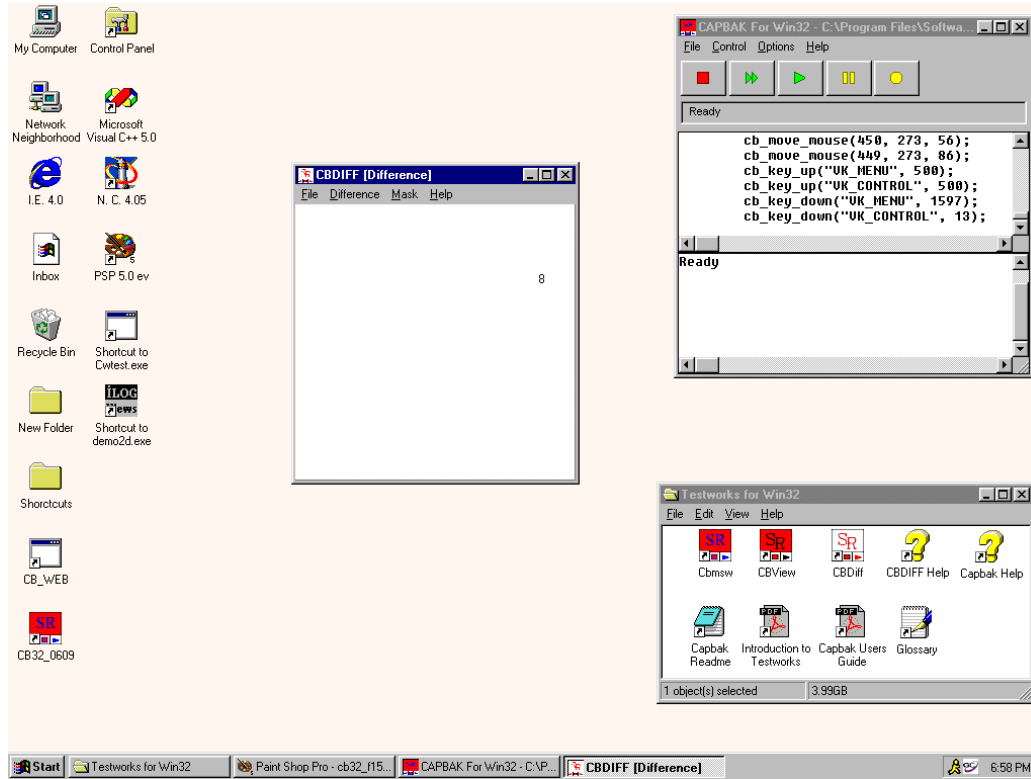When you compare baseline and response image files, your display should look like this:

FIGURE 15 Comparing Images

1.2　　Summary

If you successfully completed the preceding eleven steps, you've seen and practiced the basic skills you need to use *CAPBAK /MSW* productively. In this chapter you should have learned how to invoke *CAPBAK/MSW*, open a keysave file, record a test, capture a window, view the captured window, and play back the test, and, finally, verify a test.

- At this point, you could:
- Repeat **STEPS 1** - **11** without the manual.
- Repeat **STEPS 1** - **11** with your application.
- Turn to the chapters 4-9 on user manual to learn about additional features.
- Begin testing if you feel comfortable with *CAPBAK /MSW*.