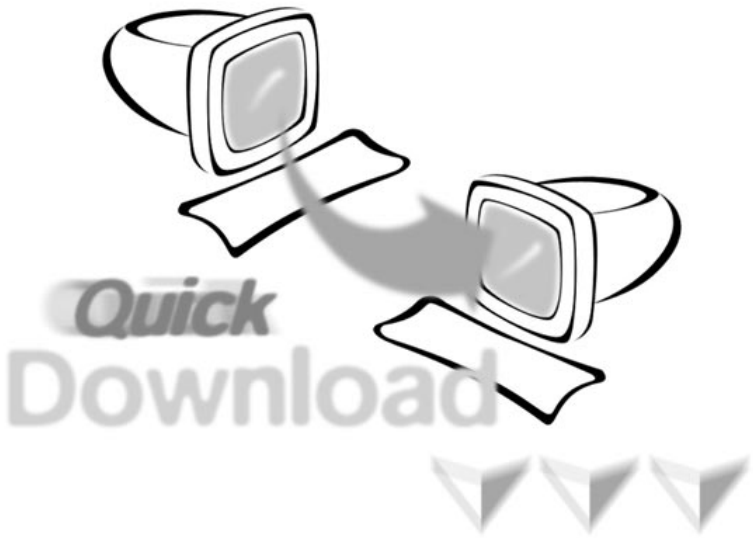
TransFast™

Version 1.1



User's Guide

Advanced Software Systems Ltd.

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TransFast™ User's Guide

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CHAPTER 1

TransFast: An Introduction 1-1
The Importance of File Transfers 1-1
Why TransFast? 1-1
Examples of Applications 1-2

CHAPTER 2

Basic Concepts 2-1
Delta Files 2-1
Report Files 2-3
Self Extractor 2-4
Name Matching 2-4
Batch Mode 2-5
TransFast Wizard 2-5

CHAPTER 3

Frequently Asked Questions.....3-1

CHAPTER 4

Getting Started 4-1
Creating a Delta File.....4-1
Creating a Delta Directory 4-6
Creating a Delta File from Archived Directories 4-11
Restoring an Updated File.....4-14
Restoring an Updated Directory 4-17
Restoring an Updated Directory from Archived Directories 4-21
Command Buttons.....4-23
Play Button (Play Mode).....4-24

CHAPTER 5

Using the TransFast Wizard 5-1
Using the TransFast Wizard 5-1
Creating a Delta File 5-1
Creating a Delta Directory 5-4
Restoring an Updated File 5-7
Restoring an Updated Directory 5-10

CHAPTER 6

Important Hints for Using TransFast 6-1

CHAPTER 7

Advanced Tools.....7-1
Using Batch Mode 7-1
TransFast Special Customization..... 7-6

APPENDIX A

TransFast Performance Table..... A-1

APPENDIX B

TransFast Options and Response File B-1

INDEX

CHAPTER 1

TransFast: An Introduction

The Importance of File Transfers

There is an ever-increasing awareness of the value of employing file-transfers in a wide range of uses.

For example, the Internet has become a dominant tool in the distribution of files and software. Practically every professional software company now offers download services both of its software and of an evaluation copy.

Many organizations, such as banks, transfer data files from their data processing centers to branch offices. Other companies offer a wide range of services by means of transferring files and information to the customer.

Research has revealed that more than **80%** of the file transfers executed world-wide are based upon centrally located files which are updated from time to time. After update, these files must be distributed to many different locations. This update methodology is used regardless of the type of data files or software which is periodically updated.

Why TransFast?

Generally, when a file is updated, most of the original information will continue to exist in the new file. Nevertheless, when transferring files between a central site and a client, the **entire**

newly updated file is transferred. This results in the needless transfer of huge quantities of information, and creates noticeable overloads in existing communications channels.

The transfer of superfluous information by a large number of users needlessly overloads the network, slows down the flow of information through the network, and may occasionally cause the system to fail. Anyone downloading software from the Internet knows that it is often a lengthy process to complete the download.

In recognition of this problem, **B.I.S. Advanced Software Systems Ltd.** has developed **TransFast,** a revolutionary product capable of effecting an immediate change in the amount of information transferred over various communications networks, and drastically influencing transfer speeds.

Examples of Applications

1. **Software developers and distributors** use the **TransFast Delta Builder** to easily build small Delta files which match the various versions of their software, maintaining these Delta files at the companies' Internet site.

   An Internet user possessing a previous version of the software, receives the new version simply by downloading **only** the appropriate **Delta version**, and by locally constructing the desired, updated version of the software by means of the **TransFast Restore** function**.**

   The savings in resources are realized by both sides by drastic reduction of overall transfer speeds on the Internet highway and by bringing about a significant reduction in communication load on the network.

2. **A banking organization** maintains large files which are updated daily (or weekly or monthly). The files are maintained at a central site, from which the branches must download after each update. **TransFast** will enable extremely fast access for each branch, as only the Delta files are transferred over the net.

3. **Software companies** distributing large quantities of software (such as Mainframe software) distributes and updates their software by exclusive means of small Delta files. This enables clients to download software from the distributor's FTP server quickly and efficiently.
4. **Any facility** possessing a number of versions of large files, can economize substantially and retain only the basic file and the relevant Delta file for each version. This results in enormous savings of valuable disk space.

CHAPTER 2

Basic Concepts

Delta Files

The software is comprised of two components:

Component 1: Delta Builder (Compress)

The **Delta Builder** component accepts two files as input:

- Base File
- Updated File

These files may be of any type:

- Executable object codes
- Data files
- Software source files
- Documents
- Graphic files

Upon input of these two files, **TransFast** computes a **Delta file** which contain the differences between the **Base file** and the **Updated file.**

Component 2: Restore (Decompress)

The **Restore** component accepts two files as input:

- Base File
- Delta File

Upon input of these two files, **TransFast** computes an **Updated File.**

The **Delta Restore** component works on three levels:

Delta Files from Single Files

When building a **Delta** file from single **Base** file and its **Updated** file, **TransFast** compares filenames of the two files and computes a **Delta** file.

Delta Files from Directories

When building a **Delta** file from a **Base** directory and its **Updated** directory, **TransFast** compares filenames in the two directories and computes a **Delta** file.

Archived Directory

The **Archived Directory** option places the **Base** and **Updated** directories into **Archive Directories** and creates a **Delta** file between the two files. This is useful when there are similar sections that appear in the various files within the directories.

Algorithms

An **algorithm** is a step-by-step procedure for performing a specific task. **TransFast** has 8 different **algorithms** for creating **Delta** files. The availability of multiple **algorithms** facilitates the creation of optimal **Delta** files for each type of file or update.

Stamps

A digital **stamp** is a complex mathematical equation that provides a sequence of bytes which is affixed to each file. Its purpose is to

verify, during the restore process, that the newly created base file is exactly identical to the original base file that was used in the creation of the **Delta** file.

This value is stored as an integral part of the **Delta** file. The **stamp** can be stored in one of two forms:

- Short - 4 bytes
- Long - 256 bytes

Report Files

TransFast writes its process messages into a **Report File.** These messages document the progress of the **TransFast** process.

A message level is assigned to all messages in a **Report File.** You can control which level of the messages should be displayed in the **Report File** by selecting the **Report Message Level** in the **Advanced** tab.

You are given 3 levels to choose from:

- **Message Level 1** will record the parameters and statistics to the report file. This is the default level.
- **Message Level 2** will record the same information as Level 1 and the statistics of each individual file to the report file.
- **Message Level 3** will record all messages to the report file, including which algorithms were used.

Here is a sample Level 1 **Report File:**

```
========S T A R T   O F   R E P O R T========
TransFast started at Thu Apr 02 16:56:34 1998  using parameters:
Operation: Create  Type:File
Algorithms 7
Base:    D:\TRANSH~1.DOC
Updated: D:\TRANSH~2.DOC
Delta:   D:\TRANSH~3.dlt
At 16:56:34 starting to build file: D:\TRANSH~3.dlt
At 16:56:34 ended    to build file: D:\TRANSH~3.dlt
  Time: 0 sec compression: 88% (11%) relative: 100+% (0%)
TransFast ended  at Thu Apr 02 16:56:34 1998
*** No errors occured ***

=== Transfast statistics ===
  Time: 0 sec compression: 88% (11%) relative: 100+% (0%)
==========E N D   O F   R E P O R T==========
```

Figure 2-1: Sample Report File

You can modify the Message text or language or alter the Message priority. See in Chapter 6, "**TransFast Special Customization".**

Self Extractor

The **Self Extractor** option operates when the user does not have **TransFast Restore**. When building a **Delta** file from single files, the **Self Extractor** automatically performs the **Restore** function. When building a **Delta** file from a directory, the user double-clicks the **Delta** file and the **Restore** function automatically expands the file to perform the **Restore** operation.

Name Matching

It has already been explained that **TransFast** computes a **Delta** file by comparing filenames in the **Updated** directory with filenames in the **Base** directory. If you have modified the filename in the **Updated** directory, the **Name Matching** option will ascertain that the new filename will be used to build the **Delta** file.

Note: The **Name Matching** option only applies when building directories.

Batch Mode

In addition to the interactive mode, you can process files/folders via the **batch mode.** This mode is accomplished by directly typing the file commands.

By using the **batch mode:**

- You can process numerous files/folders that are not under the same folder tree in a single application.
- You can quickly process files/folders without utilizing the interactive mode, thereby decreasing performance time.
- You can combine the different **TransFast** actions as part of an entire batch file. For instance:
    1. File Transfer.
    2. Run **TransFast** Restore.
    3. Run a setup program from the new restore directory.

See Chapter 7 for more information about the batch mode.

TransFast Wizard

TransFast provides the **TransFast Wizard**, which is an interactive help program that guides you through a series of choices about creating Delta files and directories or restoring Updated files and directories. Implemented as a sequence of dialog boxes, you fill in the details required and then **TransFast** will perform the desired task.

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CHAPTER 3

Frequently Asked Questions

Question: Is the delta file linear in some way with the size of the change? In other words, if the addition of a number of characters in a Word document produces a delta of a certain size, does the addition of twice as many characters produce a delta roughly twice as large?

Answer: **Of course the delta is affected by the size of changes, but it doesn't mean that the effect is linear. TransFast includes built-in compression algorithms for strings (like Zip and Arj) that compress strings without a direct correlation to the other file. Thus, the delta file may even be smaller than the size difference between the two files.**

Question: The **TransFast** documentation mentions *eight* compression algorithms. How is the best algorithm selected at compression time? Does this require user control? Can the user control the algorithm used? Is the compression file-type sensitive? How does the compressor learn about file types?

Answer: **The TransFast Delta Builder provides one or more algorithm types. The user can choose one of two methods:**

1. Keep the smallest Delta File. By using this method, TransFast keeps the smallest algorithm.

2. Keep all eight Delta files, one for each algorithm type. By using this method, the builder can determine the effectiveness of each algorithms for the particular type of file. Future versions of TransFast will accumulate historical data in order to know in advance which algorithm is best suited for a particular type of files.

The TransFast Restore program will restore the updated file regardless of the algorithm used to create the Delta file.

Question: How does the de-compressor determine correctness? In other words, is there version control (i.e. that the delta file that has just been received in fact corresponds exactly to the local version of the target file)?

Answer: **TransFast includes special software that creates a *digital stamp* for each file. The Delta file contains this *digital stamp* which is used by the TransFast Restore program to verify that the Delta file corresponds to the version of the file on the local computer.**

Question: Can delta files be composed (i.e. can I upgrade a target file based on a series of deltas)?

Answer: **Absolutely. Delta files for each version can be created, based on the previous version, or based on a Base version. We recommend, that as long as each version does not significantly change, it is better to build the delta for each version based on a Base file (version 1.0) rather than on a previous version. In this manner, it is much easier to maintain the Delta files needed, and there is no need to keep all versions on-line along with all combinations of delta between any two versions.**

Question: What kind of savings in file sizes and download time can be expected?

Answer: **This is a function of the type of information to be downloaded along with the extent of the differences between versions. We have provided a table with examples of a number of version updates that we have tested. See Appendix A.**

CHAPTER 4

Getting Started

Creating a Delta File

Figure 4-1: TransFast Dialog Box

To create a single Delta file from an existing Base and Updated Files:

- Click . (Alternately, from the **Action** menu, choose **Delta File / Directory Creation.**) A **Delta File / Directory Creation** dialog box with the **General** tab opens.

General tab

Figure 4-2: General tab, Single File Creation

1. Make sure **Single File** is clicked. (This is the default option.)
   - The **Directory Option** boxes are disabled.
2. To add the **Restore** function into your operation, click **Create Self Extractor.**

3. Enter the **Base File Name.**

   - If desired, click **Browse** to select an existing file.

4. Enter the **Updated File Name.**

   - If desired, click **Browse** to select an existing file.

5. Enter the **Delta File Name**.

   Note: A single filename without an extension is given the extension **.DLT** by default.

   - If desired, click **Browse** to select an existing file.

6. Optionally, enter the **Report File** name if a process report is to be written to a file.

   Note: A report filename without an extension is given the extension **.LOG** by default.

   - If desired, click **Browse** to select an existing file.

   Note: At this point, it is possible to run the **TransFast** application without modifying the other tabs. See the sections "Command Buttons" and "Play Buttons" at the end of this chapter.

Delta Algorithms tab

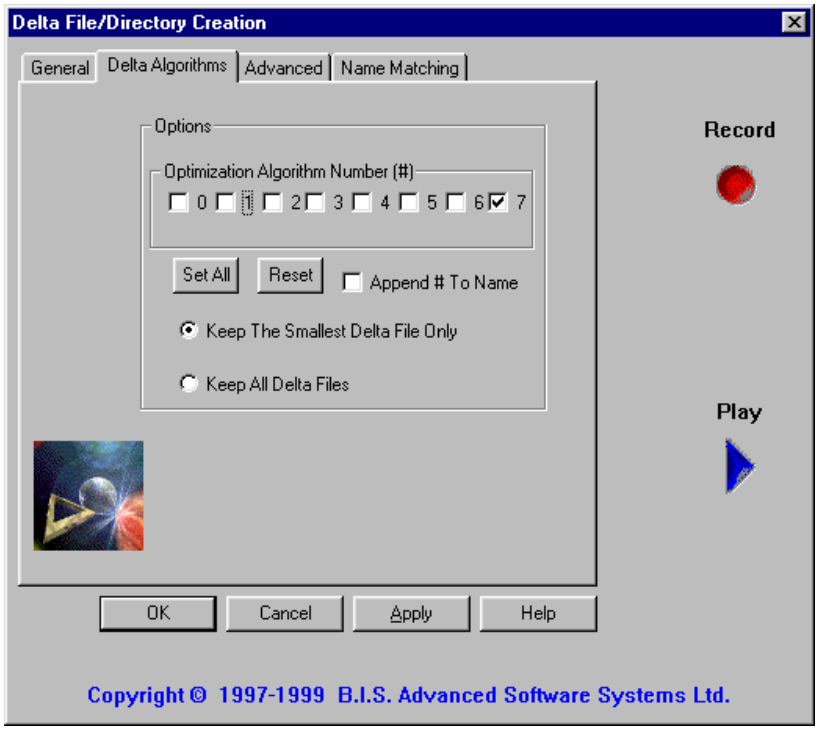


Figure 4-3: Delta Algorithms tab, Single File Creation

1. In the **Delta File/Directory Creation** window, select the **Delta Algorithms** tab.
2. Select the **Optimization Algorithms Number** to be used. (Algorithm number 7 is usually recommended, as it is quick and efficient.)
3. Click **Set All** if you want to use all of the algorithms.
4. Click **Reset** if you want to clear all of the algorithms.
5. Click **Append # To Name** for appending the Algorithm number to the created Delta file name (for a file name of up to 7 characters. For a file name of 8 characters or more, this will substitute the 8th character.).

6. Click **Keep the Smallest Delta File Only** to keep the smallest Delta file created. If more than one algorithm was selected, all other Delta files except the smallest are deleted.
7. If you want to keep all Delta files, click **Keep All Delta Files.**

Advanced tab

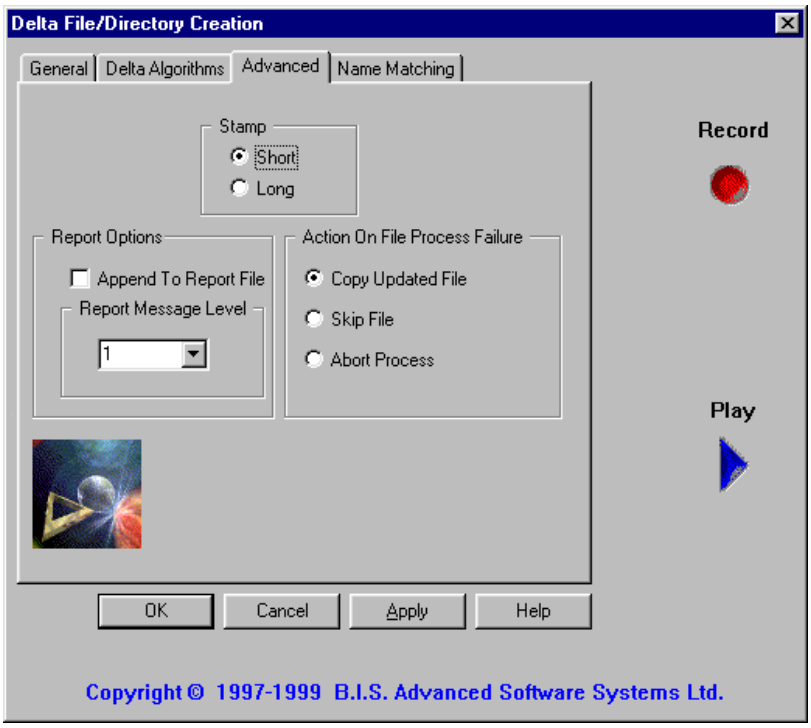


Figure 4-4: Advanced tab, Single File Creation

1. From the **Delta File/Directory Creation** window, select the **Advanced** tab.
2. Click either **Short** or **Long Stamp.**
3. Select **Append to Report File** to have the **Report** appended to a previous (report) file.
4. Choose the **Report Message Level.**

5. In the **Action On File Process Failure** box, choose one of the following:
   - **Copy Updated File** to copy the **Updated File** as is.
   - **Skip File** to skip the desired file and continue the process with other files.
   - **Abort Process** to complete the process and exit.

Name Matching tab

In a single file creation, the **Name Matching** tab properties are disabled.

Creating a Delta Directory

To create a Delta Directory from an existing Base and Updated Directories:

- Click . (Alternately, from the **Action** menu, choose **Delta File / Directory Creation.**) A **Delta File / Directory Creation** dialog box with the **General** tab opens.

General tab

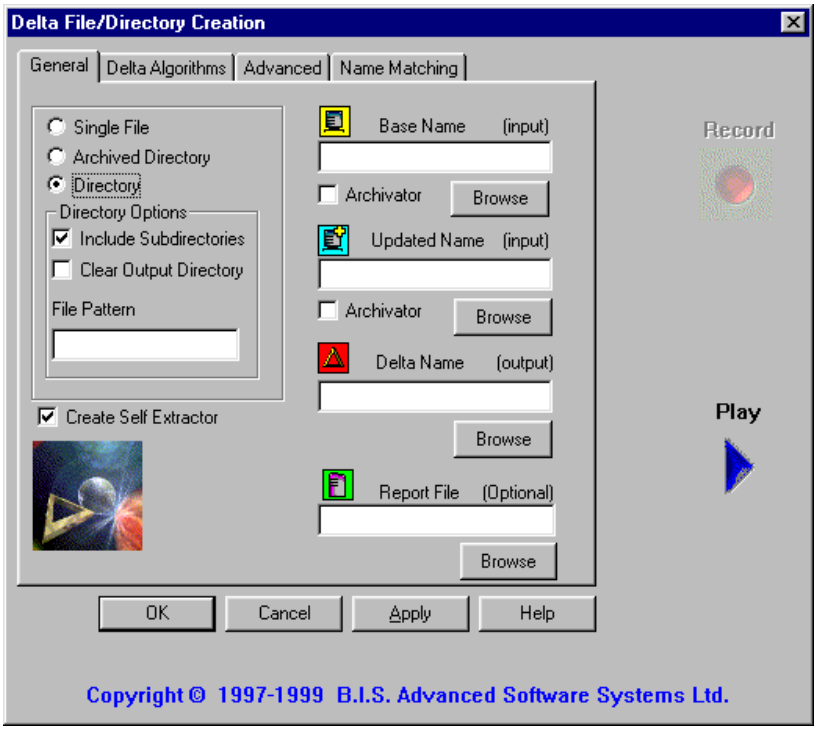


Figure 4-5: General tab, Directory Creation

1. Click **Directory.**
2. If desired, select the **Clear Output Directory** box. (The **Include Subdirectories** box is selected as the default option; if desired, it can be cleared.)
3. Type the **File Pattern** in the **Directory Options** box if you want to limit the Delta file to files with a particular pattern (e.g., all files with a particular extension).
4. To add the **Restore** function into your operation, click **Create Self Extractor.**
5. Enter the **Base Directory Name.**
   - If desired, click **Browse** to select an existing directory.

- If desired, select **Archivator** to indicate that the **Base Directory** is an Archive.

6. Enter the **Updated Directory Name.**
   - If desired, click **Browse** to select an existing directory.
   - If desired, select **Archivator** to indicate that the **Updated Directory** is an Archive.
7. Enter the **Delta Directory Name.**
   - If desired, click **Browse** to select an existing directory.
8. Optionally, enter the **Report File** name if a process report is to be written to a file.

   Note: A report filename without an extension is given the extension **.LOG** by default**.**
   - If desired, click **Browse** to select an existing file.

Delta Algorithms tab

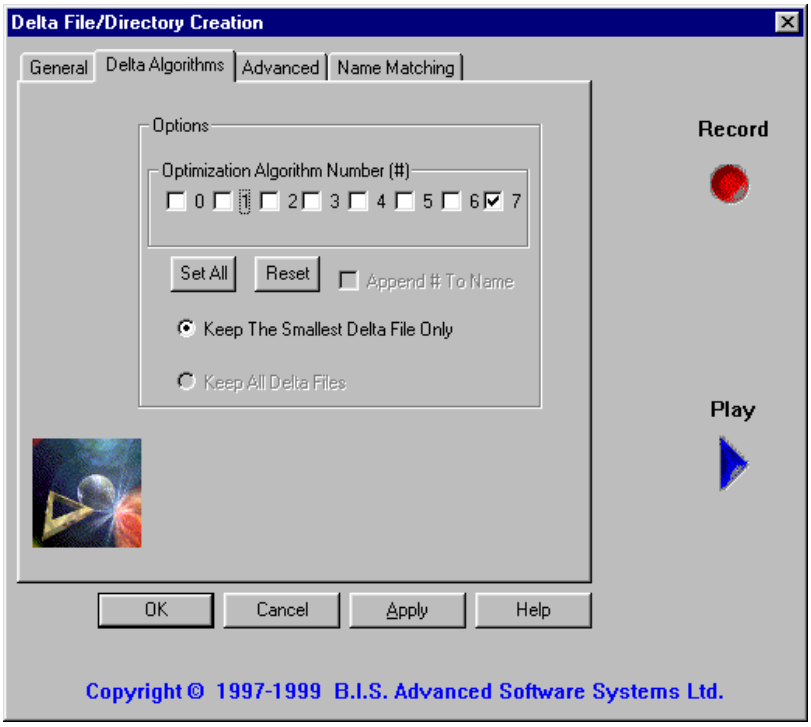


Figure 4-6: Delta Algorithms tab, Directory Creation

1. In the **Delta File/Directory Creation** window, select the **Delta Algorithms** tab.
2. Select the **Optimization Algorithms** to be used. (Algorithm number 7 is usually recommended, as it is quick and efficient.)
3. Click **Set All** if you want to use all of the algorithms.
4. Click **Reset** if you want to clear all of the algorithms.
5. Click **Keep The Smallest Delta File Only** if you want to keep the smallest Delta file created. If more than one algorithm are selected, all other Delta files, except the smallest, are deleted.
6. The **Append # To Name** and the **Keep All Delta Files** options are disabled, since they are only applicable to single files.

Advanced tab

Follow steps as described in the **Advanced** tab in the **"Creating a single Delta File"** section, Figure 4-4, above.

Name Matching tab

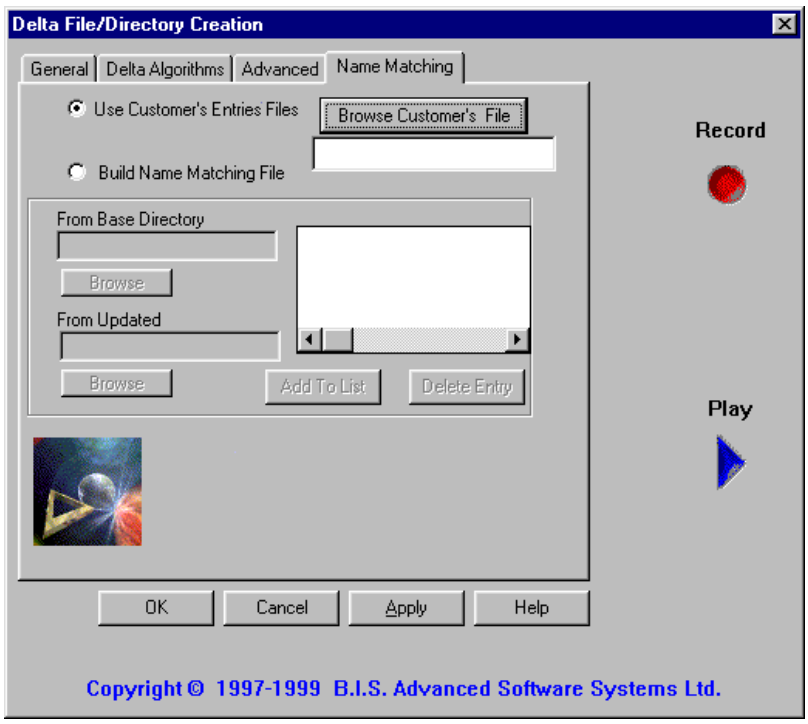


Figure 4-7: Name Matching tab, Directory Creation

If you have modified the filename in the **Updated** directory, select the **Name Matching** tab from the **Delta File/Directory Creation** window and perform either of the following:

- Choose **Use Customer's Entries Files** and type a text filename that contains the old filename in the **Base** file box and the new filename in the **Updated** file box.

  Click **Browse Customer's File** to select the desired filename.

- Choose **Build Name Matching File** for building the entry file from the selected base and updated files.

If you select **Build Name Matching File:**

1. In the **From Base Directory** box, type the selected file. Click **Browse** to search for the desired file.
2. In the **From Updated Directory** box, type the selected file. Click **Browse** to search for the desired file.
3. Click **Add To List** to add the selected files to the entry list.

Creating a Delta File from Archived Directories

To create a Delta File from an existing Base and Updated Archived Directories:

- Click . (Alternately, from the **Action** menu, choose **Delta File / Directory Creation.**) A **Delta File / Directory Creation** dialog box with the **General** tab opens.

General tab

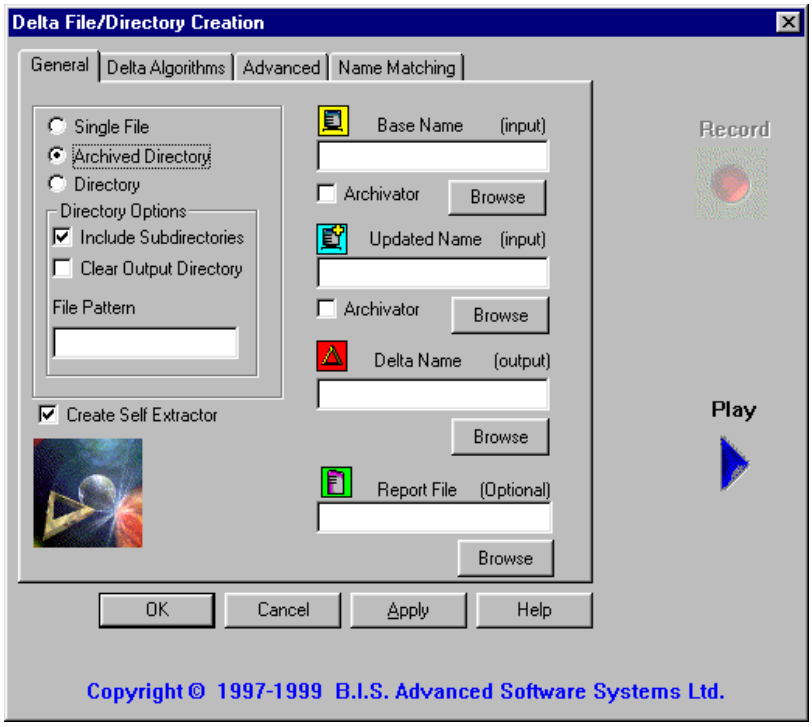


Figure 4-8: General tab, Archived Directory Creation

1. Click **Archived Directory.**
2. If desired, select the **Clear Output Directory** box. (The **Include Subdirectories** box is selected as the default option; if you desire, it can be cleared.)
3. Type the **File Pattern** in the **Directory Options** box if you want to limit the Delta file to files with a particular pattern (e.g., all files with a particular extension).
4. To add the **Restore** function into your operation, click **Create Self Extractor.**
5. Enter the **Base Directory name.**

   •• If desired, click **Browse** to select an existing directory.

- If desired, select **Archivator** to indicate that the **Base Directory** is an Archive.

6. Enter the **Updated Directory name.**
   - If desired, click **Browse** to select an existing directory.
   - If desired, select **Archivator** to indicate that the **Updated Directory** is an Archive.
7. Enter the **Delta File name.**
   - If desired, click **Browse** to select an existing file.
8. Optionally, enter the **Report File** name if a process report is to be written to a file.

   Note: A report file whose name is missing an extension is given by default the extension **.LOG.**
   - If desired, click **Browse** to select an existing file.

Delta Algorithms tab

Follow steps as described in the **Delta Algorithms** tab in the **"Create a single Delta File"** section, Figure 4-3, above.

Advanced tab

Follow steps as described in the **Advanced** tab in the **"Create a single Delta File"** section, Figure 4-4, above.

Name Matching tab

Follow steps as described in the **Name Matching** tab in the **"Create Delta Directory"** section, Figure 4-7, above.

Restoring an Updated File

To restore an Updated file from an existing Base and Delta files:

- Click . **(**Alternately**,** from the **Action** menu, choose **Restore Updated File / Directory.)** A **Restore Updated File / Directory** dialog box with the **General** tab opens.

General tab

Figure 4-9: General tab, Single File Restoration

1. Make sure **Single File** is clicked. (This is the default option.)
   - The **Directory Option** boxes are disabled.
2. Enter the **Base File Name.**

- If desired, click **Browse** to select an existing file.

3. Enter the **Updated File Name.**

   - If desired, click **Browse** to select an existing file.

4. Enter the **Delta File Name.**

   Note: A single filename without an extension is given the extension **.DLT** by default.

   - If desired, click **Browse** to select an existing file.

5. Optionally, enter the **Report File** name if a process report is to be written to a file.

   Note: A report filename without an extension is given the extension **.LOG** by default.

   - If desired, click **Browse** to select an existing file.

   Note: At this point, it is possible to run the **TransFast** application without modifying the other tabs. See the sections "Command Buttons" and "Play Buttons" at the end of this chapter.

Advanced tab

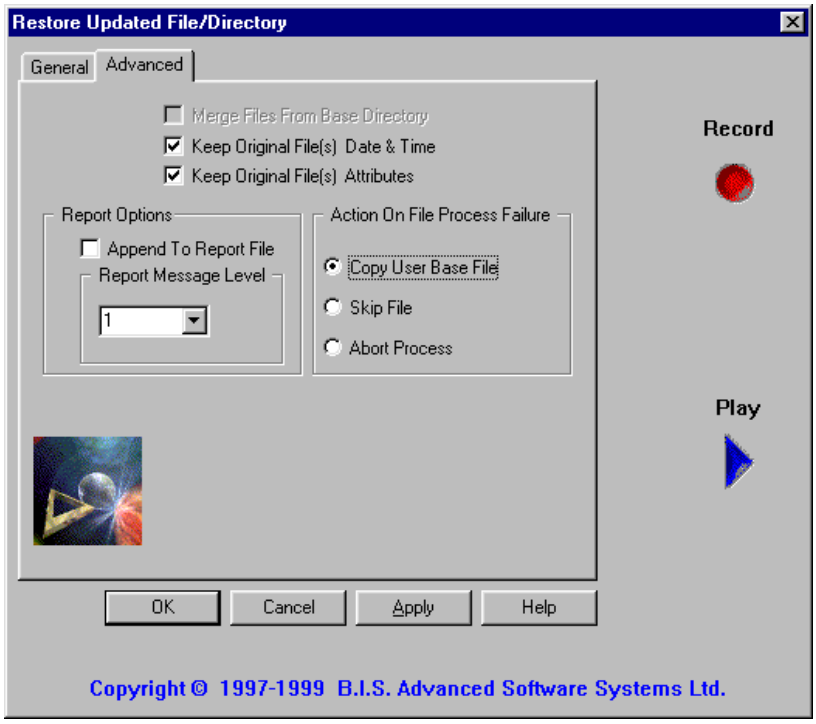


Figure 4-10: Advanced tab, Single File Restoration

1. In the **Restore Updated File/Directory** Window**,** select the **Advanced** tab.
2. If desired, select one or more of the following:
   - Click **Keep Original File(s) Date & Time** to copy dates and times from the original updated files.
   - Click **Keep Original File(s) Attributes** to copy file attributes from the original updated files.
   - The **Merge Files From Base Directory** option is disabled.
3. Select **Append to Report File** to have the **Report** appended to a previous report file.
4. Choose the **Report Message Level.**

5. In the **Action On File Process Failure** box, perform one of the following:
   - Click **Copy User Base File** to copy the **User Base File** as is.
   - Click **Skip File** to skip the desired file and to continue the process with other files.
   - Click **Abort Process** to complete the process and exit.

Restoring an Updated Directory

To restore an Updated Directory from an existing Base and Delta Directories:

- Click **. (**Alternately**,** from the **Action** menu, choose **Restore Updated File / Directory.)** A **Restore Updated File / Directory** dialog box with the **General** tab opens.

General tab

Figure 4-11: General tab, Directory Restoration

1. Click **Directory.**
2. If desired, select the **Clear Output Directory** box. (The **Include Subdirectories** box is selected as the default option; if desired, it can be cleared.)
3. Type the **File Pattern** in the **Directory Options** box if you want to limit the **Delta** file to files with a particular pattern (e.g., all files with a particular extension).
4. Enter the **Base Directory Name.**
   - If desired, click **Browse** to select an existing directory.
   - If desired, select **Archivator** to indicate that the **Base Directory** is an Archive.
5. Enter the **Updated Directory Name.**

- If desired, click **Browse** to select an existing directory.
- If desired, select **Archivator** to indicate that the **Updated Directory** is an Archive.

6. Enter the **Delta Directory Name.**
   - If desired, click **Browse** to select an existing directory.
   - If desired, select **Archivator** to archive the Delta directory into a single file.
7. Optionally, enter the **Report File** name if a process report is to be written to a file.

   Note: A report filename without an extension is given the extension **.LOG** by default.
   - If desired, click **Browse** to select an existing file.

Advanced tab

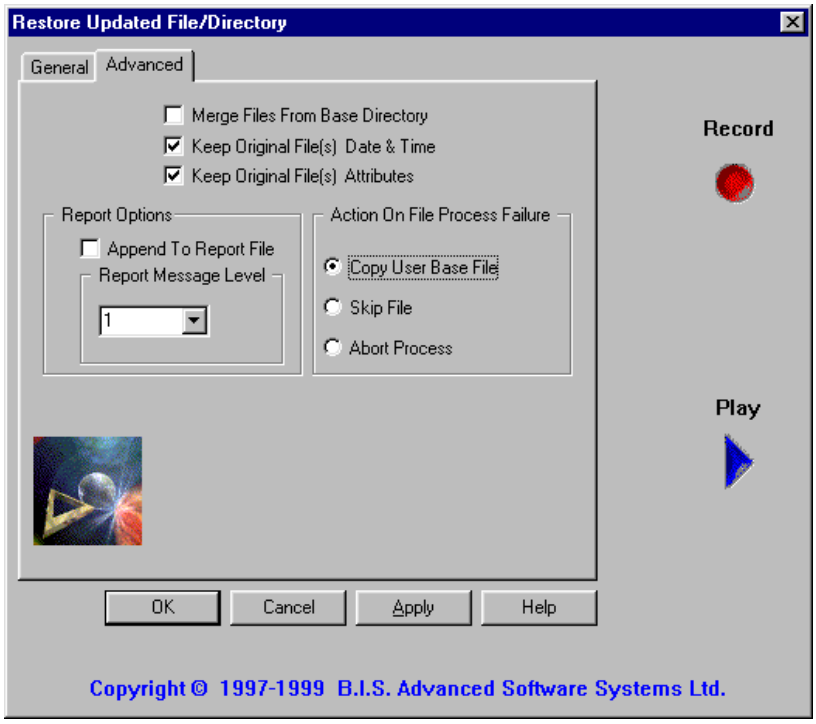


Figure 4-12: Advanced tab, Directory Restoration

1. In the **Restore Updated File/Directory Window,** select the **Advanced** tab.

If desired, select one or more of the following:

- Click **Merge Files From Base Directory** to merge the newly created files with the original user base file.
- Click **Keep Original File(s) Date & Time** to copy dates and times from the original updated files.
- Click **Keep Original File(s) Attributes to copy** file attributes from the original updated files.

2. Select **Append to Report File** to have the **Report** appended to a previous (report) file.
3. Choose the **Report Message Level.**

4. In the **Action On File Process Failure** box, perform one of the following:
   - Click **Copy User Base File** to copy the **User Base File** as is.
   - Click **Skip File** to skip the desired file and to continue the process with other files.
   - Click **Abort Process** to complete the process and exit.

Restoring an Updated Directory from Archived Directories

To restore an Updated Directory from an existing Base Archived Directories and Delta Files:

- Click . **(**Alternately**,** from the **Action** menu, choose **Restore Updated File / Directory.)** A **Restore Updated File / Directory** dialog box with the **General** tab opens.

General tab

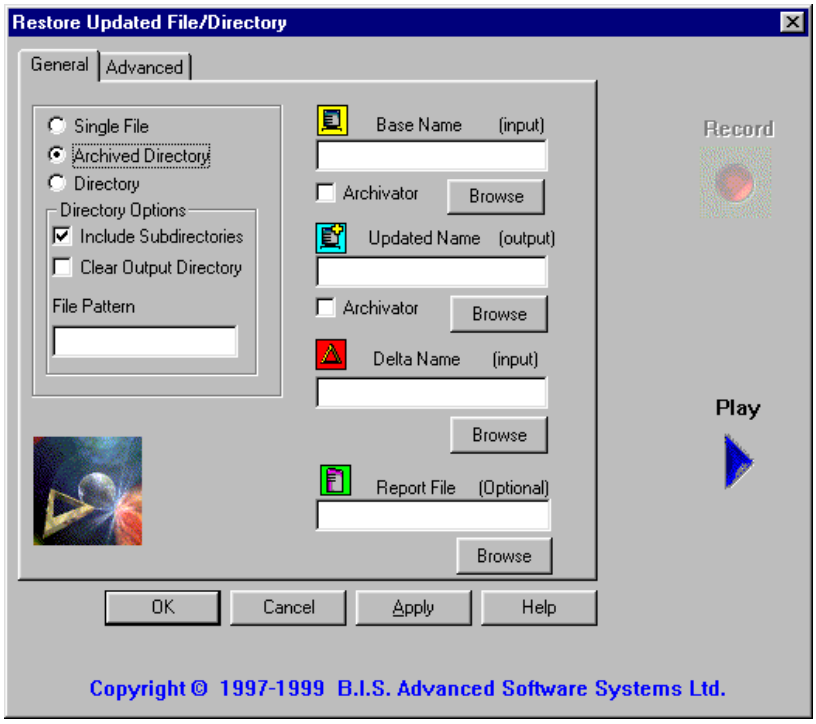


Figure 4-13: General tab, Archived Directory Restoration

1. Click **Archived Directory.**
2. If desired, select the **Clear Output Directory** box. (The **Include Subdirectories** box is selected as the default option; if desired, it can be cleared.)
3. Type the **File Pattern** in the **Directory Options** box if you want to limit the **Delta** file to files with a particular pattern (e.g., all files with a particular extension).
4. Enter the **Base Directory Name.**
   - If desired, click **Browse** to select an existing directory.
   - If desired, check **Archivator** to indicate that the **Base Directory** is an Archive.
5. Enter the **Updated Directory Name.**

- If desired, click **Browse** to select an existing directory.
- If desired, check **Archivator** to indicate that the **Updated Directory** is an Archive.

6. Enter the **Delta File Name.**
   - If desired, click **Browse** to select an existing file.
7. Optionally, enter the **Report File** name if a process report is to be written to a file.

   Note: A report filename without an extension is given by default the extension **.LOG.**
   - If desired, click **Browse** to select an existing file.

Advanced tab

Follow steps as described in the **Advanced** tab in the **"Restoring Updated Directory"** section, Figure 4-12, above.

Command Buttons

- Click

to record your setting to the **history file.** These records can later be used by clicking the play button.
- Click

to exit **Run Mode** and enter **Play Mode** in order to browse a previous recorded setting.
- Click

to create the **Delta/Updated** file and exit to the main **TransFast** window.
- Click

to exit without performing any action.
- Click

to create the **Delta/Updated** file without exiting to the main **TransFast** window.

- Click Help for an online copy of this manual.

Play Button (Play Mode)

In response to pressing the

button, you can do the following:

- Click Set to set all values from the selected prerecorded settings and to exit from the **Play Mode** back into the **Run Mode.**

  Note: You can modify the settings on the play dialog box.

- Click Reset to exit from the **Play Mode** without setting the values from the **history file.**

- Click Delete to delete one of the prerecorded settings in the **history file.** Alternately, highlight a prerecorded setting press the DELETE key on the keyboard to delete a setting.

CHAPTER 5

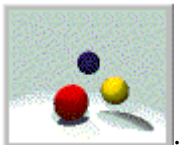
Using the TransFast Wizard

Using the TransFast Wizard

Let the **TransFast Wizard** whisk you through the **TransFast** process, as it lets you create Delta files and directories or restore Updated files and directories in just five easy steps.

Creating a Delta File

To create a single Delta file from an existing Base and Updated files using the TransFast Wizard:

- Click  . (Alternately, from the **Action** menu, select **TransFast Wizard.**) The **TransFast Wizard - Step 1** dialog box opens.

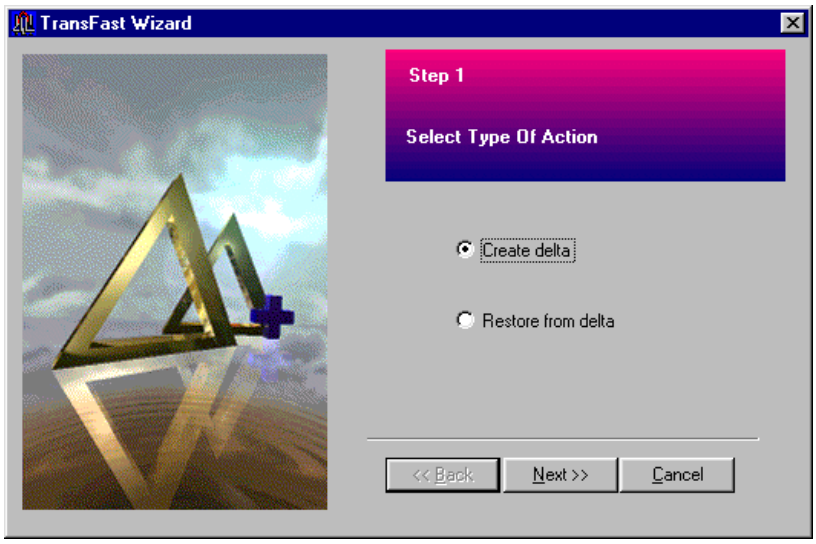


Figure 5-1 TransFast Wizard Step 1

•• Click **Create delta** and then select **Next.** The **TransFast Wizard - Step 2** dialog box opens.

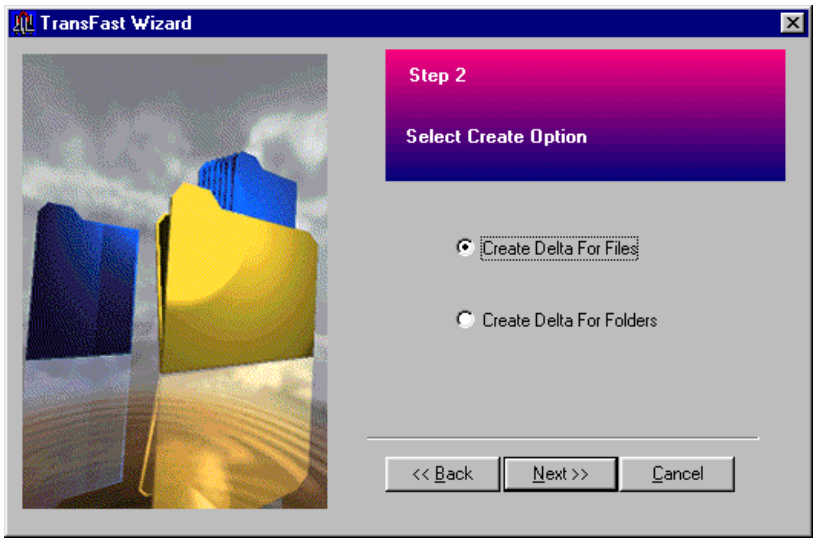


Figure 5-2 TransFast Wizard Step 2

•• Click **Create Delta for Files** and then click **Next.** The **TransFast Wizard - Step 3** dialog box opens.

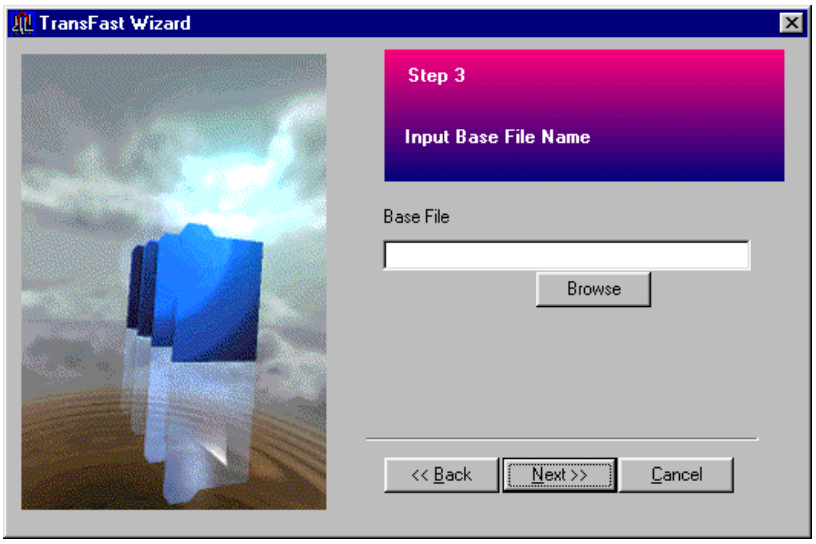


Figure 5-3 TransFast Wizard Step 3

•• Enter the **Base File Name** and then click **Next.** (If desired, click **Browse** to select an existing file and then click **Next.**) The **TransFast Wizard - Step 4** dialog box opens.

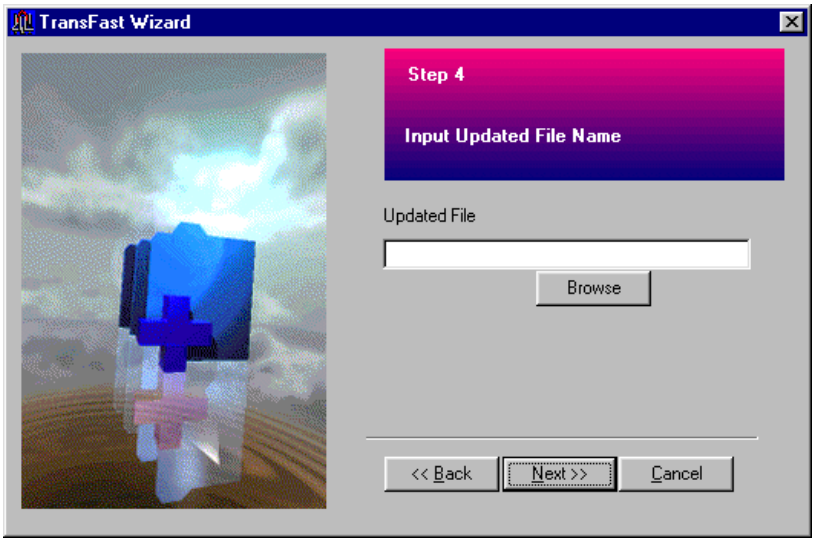


Figure 5-4 TransFast Wizard Step 4

•• Enter the **Updated File Name** and then click **Next.** (If desired, click **Browse** to select an existing file and then click **Next.**) The **TransFast Wizard - Step 5** dialog box opens.

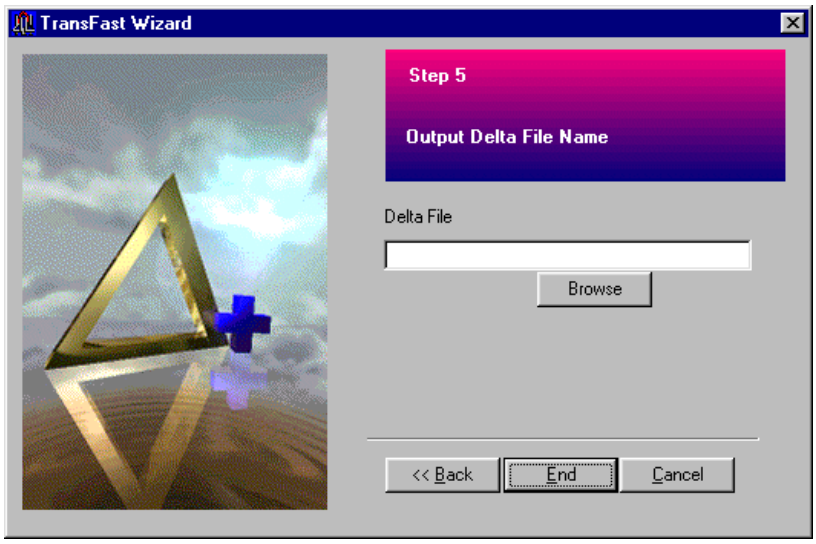
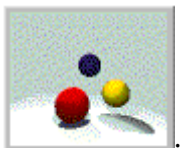


Figure 5-5 TransFast Wizard Step 5

•• Enter the **Delta File Name** and then click **End.** (If desired, click **Browse** to select an existing file and then click **End.)** The desired file is created.

Creating a Delta Directory

To create a Delta Directory from an existing Base and Updated Directories using the TransFast Wizard:

•• Click  . (Alternately, from the **Action** menu, select **TransFast Wizard.**) The **TransFast Wizard - Step 1** dialog box opens.

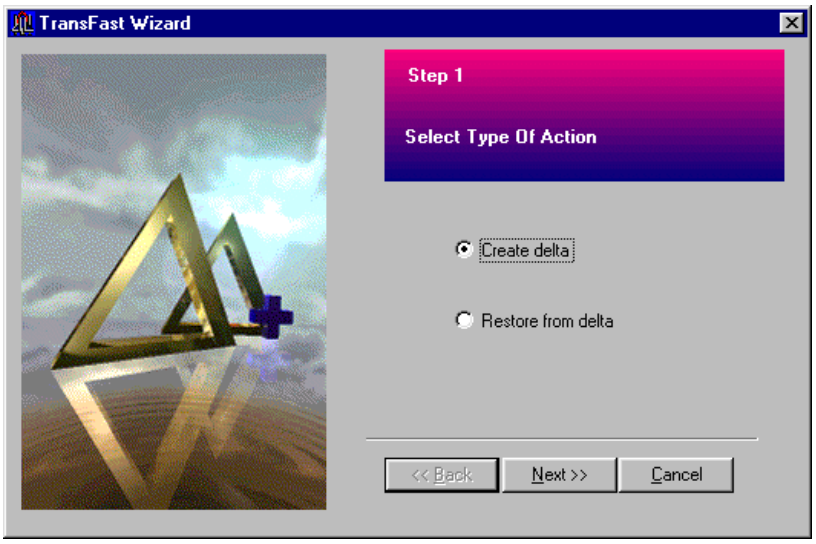


Figure 5-6 TransFast Wizard Step 1

•• Click **Create delta** and then select **Next.** The **TransFast Wizard - Step 2** dialog box opens.

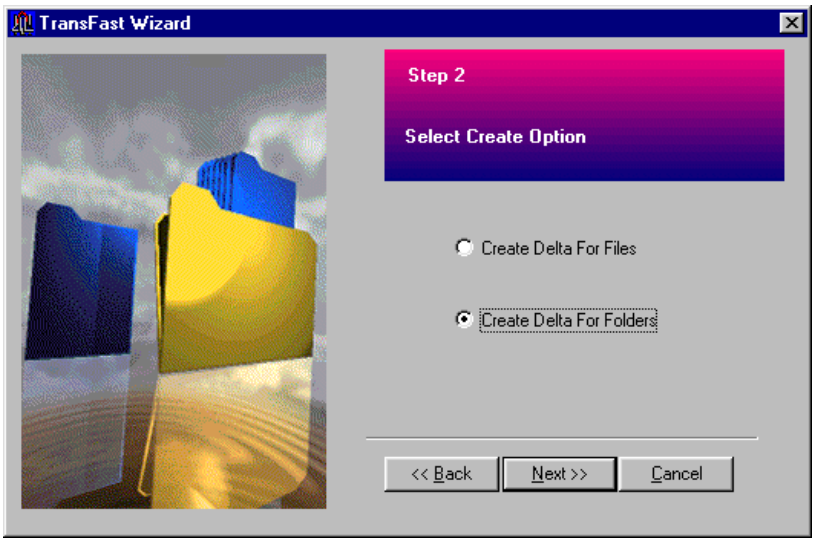


Figure 5-7 TransFast Wizard Step 2

•• Click **Create Delta for Folders** and then click **Next.** The **TransFast Wizard - Step 3** dialog box opens.

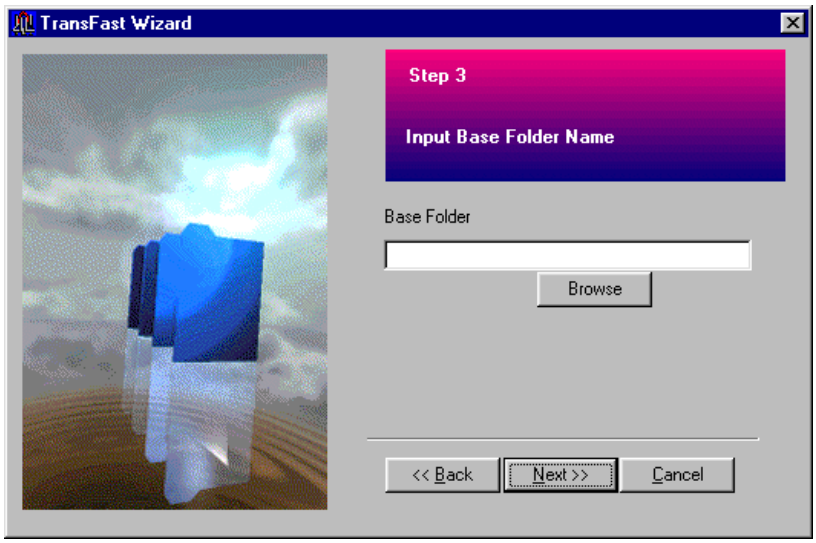


Figure 5-8 TransFast Wizard Step 3

•• Enter the **Base Folder Name** and then click **Next.** (If desired, click **Browse** to select an existing file and then click **Next.**) The **TransFast Wizard - Step 4** dialog box opens.

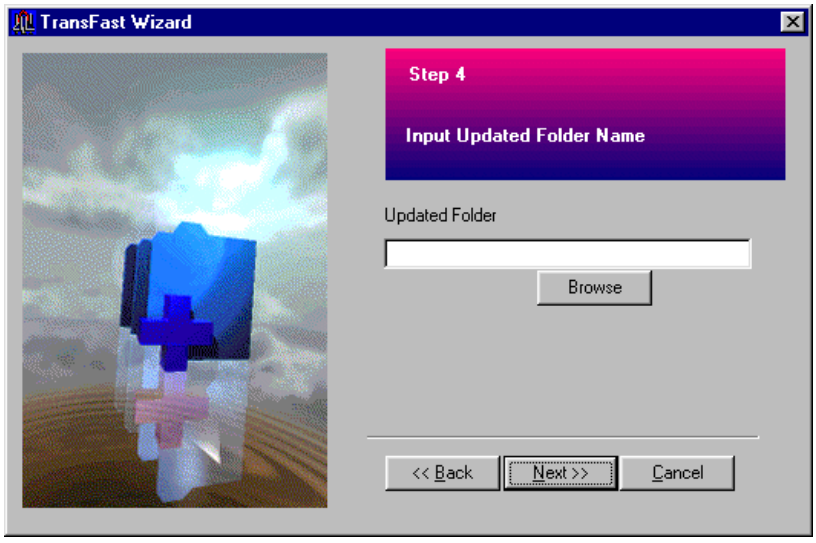


Figure 5-9 TransFast Wizard Step 4

•• Enter the **Updated Folder Name** and then click **Next.** (If desired, click **Browse** to select an existing file and then click **Next.**) The **TransFast Wizard - Step 5** dialog box opens.

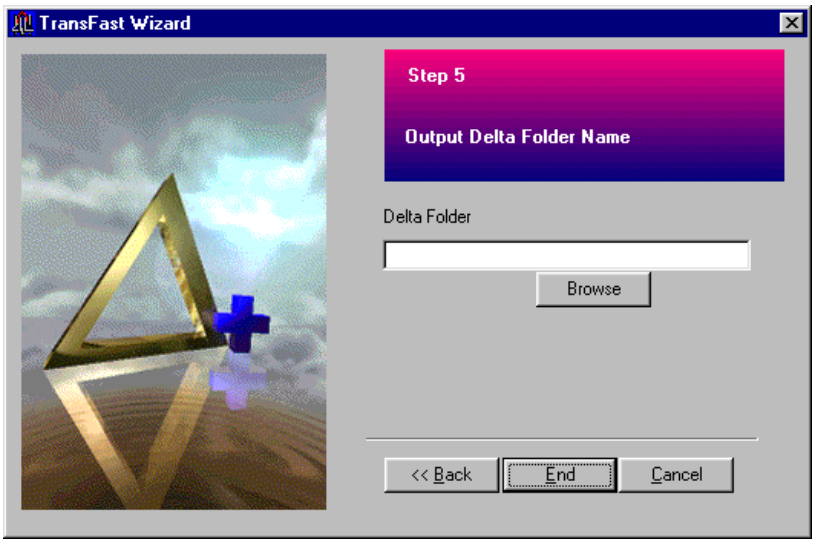
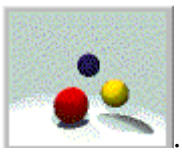


Figure 5-10 TransFast Wizard Step 5

•• Enter the **Delta Folder Name** and then click **End.** (If desired, click **Browse** to select an existing file and then click **End.)** The desired folder is created.

Restoring an Updated File

To restore an Updated file from an existing Base and Updated files using the TransFast Wizard:

•• Click  . (Alternately, from the **Action** menu, select **TransFast Wizard.**) The **TransFast Wizard - Step 1** dialog box opens.

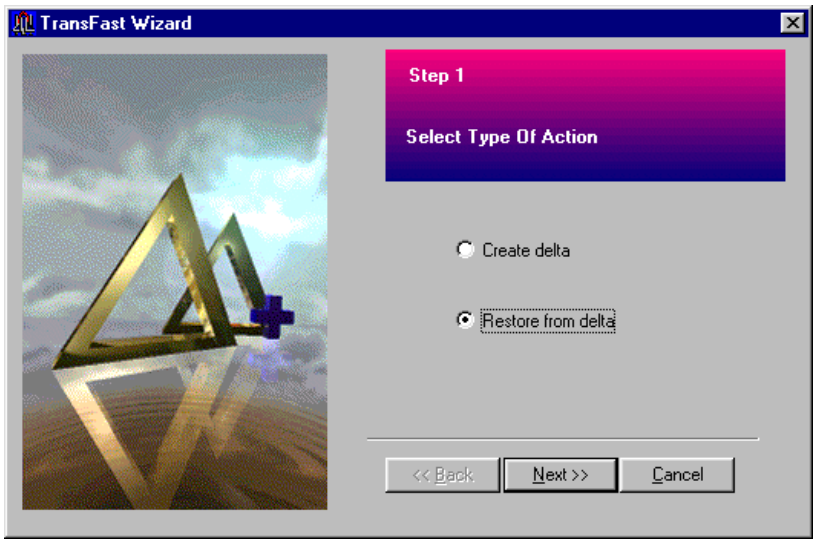


Figure 5-11 TransFast Wizard Step 1

•• Click **Restore from delta** and then select **Next.** The **TransFast Wizard - Step 2** dialog box opens.

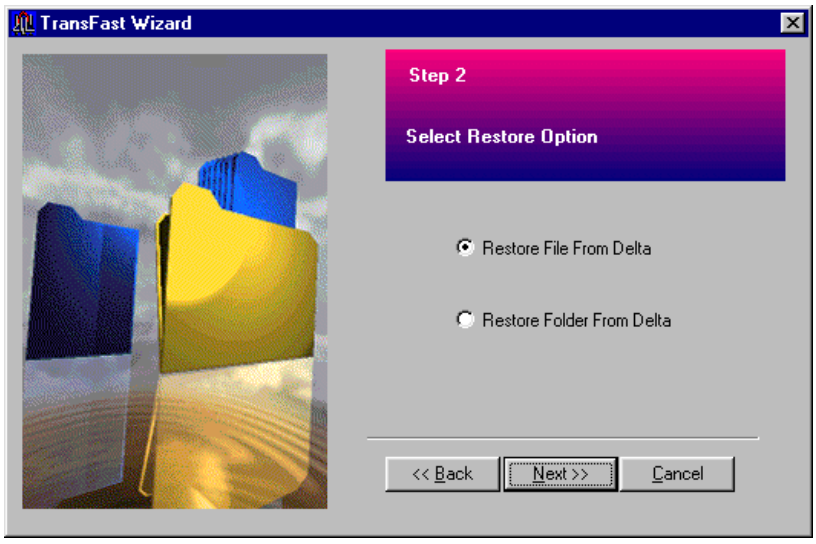


Figure 5-12 TransFast Wizard Step 2

•• Click **Restore File From Delta** and then click **Next.** The **TransFast Wizard - Step 3** dialog box opens.

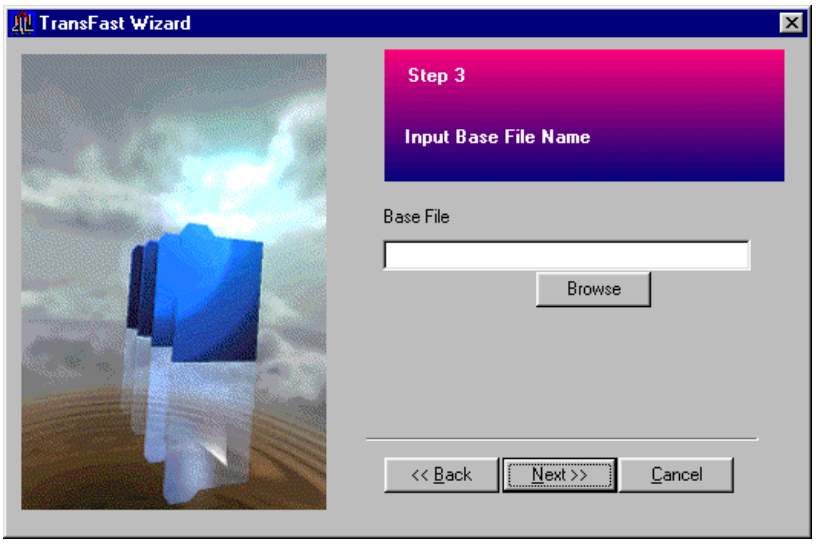


Figure 5-13 TransFast Wizard Step 3

•• Enter the **Base File Name** and then click **Next.** (If desired, click **Browse** to select an existing file and then click **Next.**) The **TransFast Wizard - Step 4** dialog box opens.

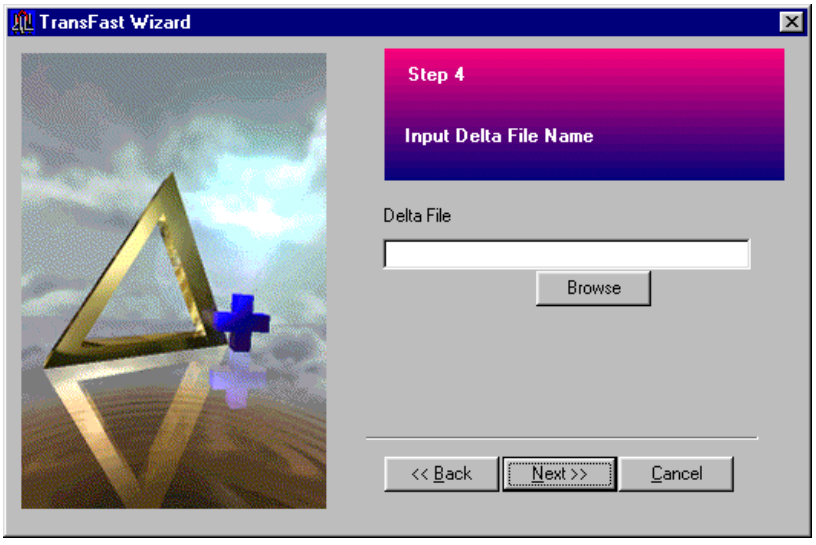


Figure 5-14 TransFast Wizard Step 4

•• Enter the **Delta File Name** and then click **Next.** (If desired, click **Browse** to select an existing file and then click **Next.**) The **TransFast Wizard - Step 5** dialog box opens.

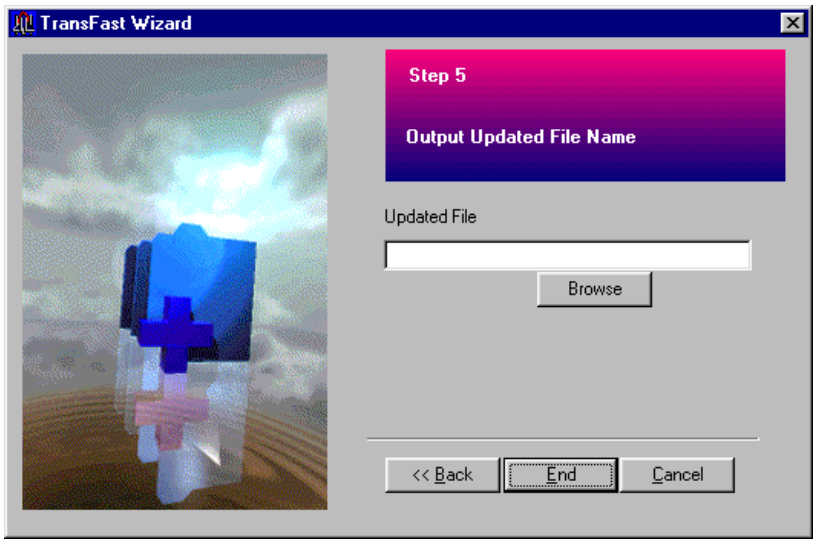
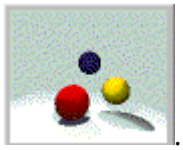


Figure 5-15 TransFast Wizard Step 5

•• Enter the **Updated File Name** and then click **End.** If desired, click **Browse** to select an existing file and then click **End.** The desired file is created.

Restoring an Updated Directory

To an Updated Directory from an existing Base and Updated Directories using the TransFast Wizard:

•• Click  . (Alternately, from the **Action** menu, select **TransFast Wizard.**) The **TransFast Wizard - Step 1** dialog box opens.

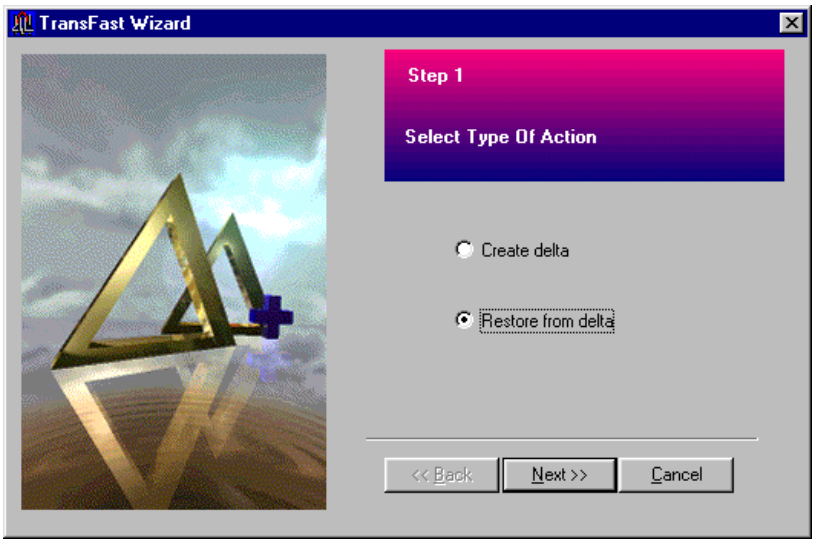


Figure 5-16 TransFast Wizard Step 1

•• Click **Restore from delta** and then select **Next.** The **TransFast Wizard - Step 2** dialog box opens.

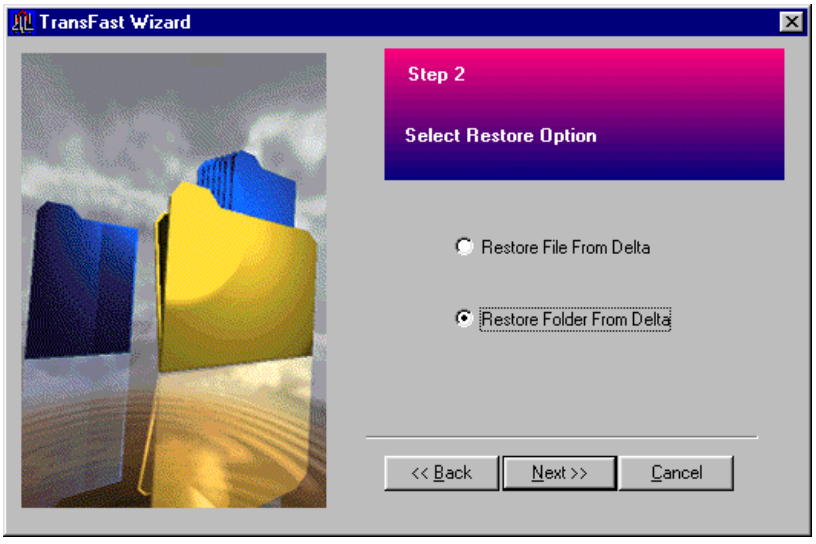


Figure 5-17 TransFast Wizard Step 2

•• Click **Create Delta for Folders** and then click **Next.** The **TransFast Wizard - Step 3** dialog box opens.

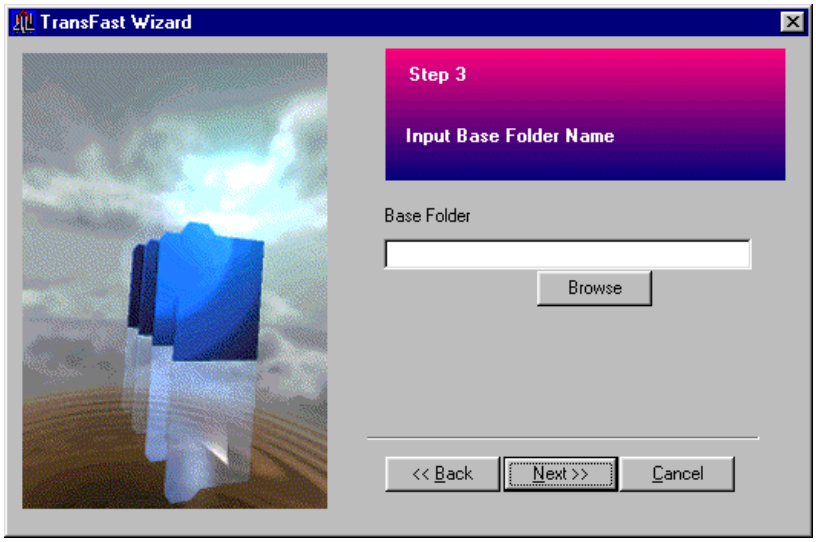


Figure 5-18 TransFast Wizard Step 3

•• Enter the **Base Folder Name** and then click **Next.** (If desired, click **Browse** to select an existing file and then click **Next.**) The **TransFast Wizard - Step 4** dialog box opens.

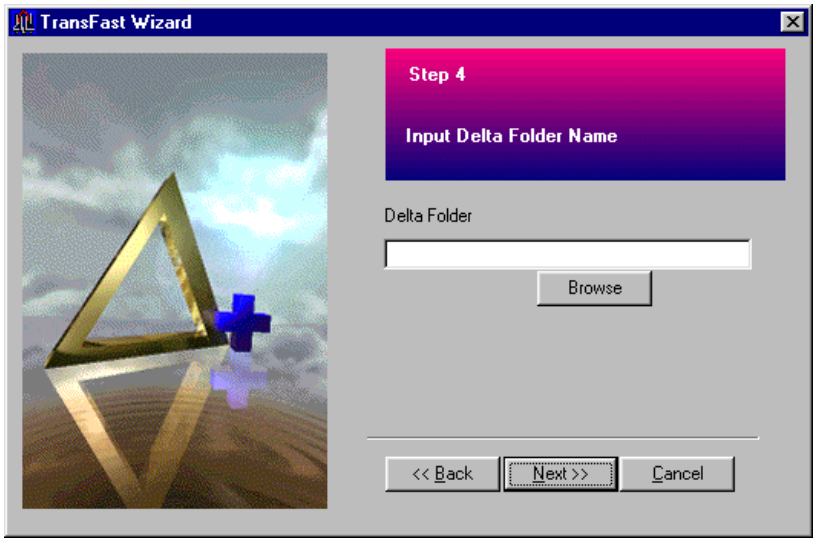


Figure 5-19 TransFast Wizard Step 4

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•• Enter the **Delta Folder Name** and then click **Next.** (If desired, click **Browse** to select an existing file and then click **Next.**) The **TransFast Wizard - Step 5** dialog box opens.

Figure 5-20 TransFast Wizard Step 5

•• Enter the **Updated Folder Name** and then click **End.** If desired, click **Browse** to select an existing file and then click **End.** The desired folder is created.

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CHAPTER 6

Important Hints for Using TransFast

1. Best results (smallest **Delta Files**) are achieved when running the **Delta Builder** on non-compressed and non-encrypted files. Two similar files may look very different if they are compressed (Zip, Arj, etc.) or encrypted.
2. If the updated object is an archived folder (directory), use the **Directory** option to create a **Delta Folder**. You will receive better results (i.e., smaller Delta files) by running the **Delta Builder** on **Base** and **Updated** directories, rather than running it on **Base** and **Updated** archives (Zip, Arj, etc.) of these directories.
3. **Use a Long term Base File method for files which are frequently updated.** Whenever you have a new updated file/folder, build a Delta File/Folder which will use the same Long term Base File/Folder, instead of building a Delta File/Folder for each two versions of the file. This will enable you to maintain just one Delta File/Folder on the Server.

   The Client (who must have a copy of the Long term Base File) will always be able to download the Delta File/Folder from the Server and use **TransFast Restore** to restore the most updated version, regardless of the current version.

   Example: The January version of the Catalog and Price list, which is updated monthly, may be used as a **Long term Base File.** A **Delta File**, based on January version, can be built every month and stored on the Server. The Client downloads the **Delta File** and **Restores** the most updated version by using the same January copy as a **Base File.**

CHAPTER 7

Advanced Tools

Using Batch Mode

What is a batch file?

A **batch file** is a text file, whose extension is BAT, that contains existing MS-DOS commands. These commands are combined to create a special-purpose command that allows you to specify parameters to run the program rather than choosing them through **TransFast** various window options. A **batch file** in MS-DOS is similar to a **macro** in Windows Word. In both operating systems, existing commands are combined to create one special-purpose command of your choice.

The License File

Prior to using **TransFast** batch mode in MS-DOS, the set **TransFastLid=<name of license file>** must be executed. For example, if the license file is in the same folder as **TRNFSBxx,** type the following at the start of the batch mode:

set TransFastLid=trnsfst.lic

Otherwise, the full path must be specified.

Creating the Batch Mode

To run one or more file(s)/folder(s) in a single process use the following command line:

TRNFSB16 (or TRNFSB32 for Windows 3.11)

[-options1]

@response_file

[-options2]

Explanation of terms in command line:

- Options1 - list of **TransFast** options.
- Response file - name of a text file which contains set of **TransFast** batch mode definitions (optional).
- Options2 - list of additional **TransFast** options (optional).

TransFast Options and Response files are fully described in Appendix A.

Note: In case of conflicting options, Response file options will override Options1 definitions, and Options2 will override Response file definitions.

Use of the Batch Mode

TransFast batch mode can be used in one of the following four ways:

- ***Use the* TRNFSBxx *command within DOS and execute it.***

For example, type in MS-DOS mode:

E:\TransFast>trnfsb32 -o:cr -t:fol -b:d:\transf1 -u:d:\transf2 -d:d:\transf4 -c -r

Once the command is executed, the following report is displayed:

```
= = = = = = = = START OF REPORT = = = = = = = =

TransFast process started at  Mon June 29  17:29:36  1998  using
parameters:

Operation:  Create       Type:  Directory

Algorithms:  7

Base:     d:\transf1

Updated:    d:\transf2

Delta:       d:\transf4

TransFast process ended at  Mon  June 29  17:29:37  1998

*** No errors detected ***

TransFast statistics

Time:  1 sec.  compression:  88% (11%) ,  relative:  100+%
(0%)

= = = = = = = = END OF REPORT = = = = = = = =
```

Figure 7- 1

- ***Use the* TRNFSBxx *command within a batch file (.bat) and execute it.***

For example:

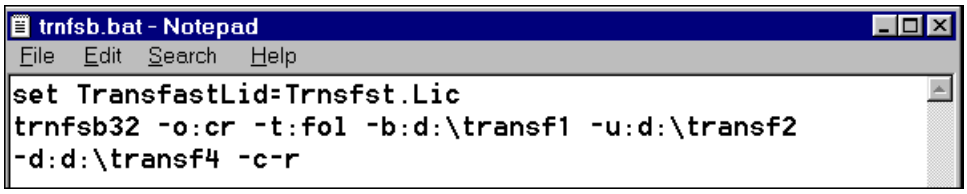

Figure 7- 2

- ***Use the* TRNFSBxx *command in a batch file as a step in a multiple step sequence and execute it.***

For example:

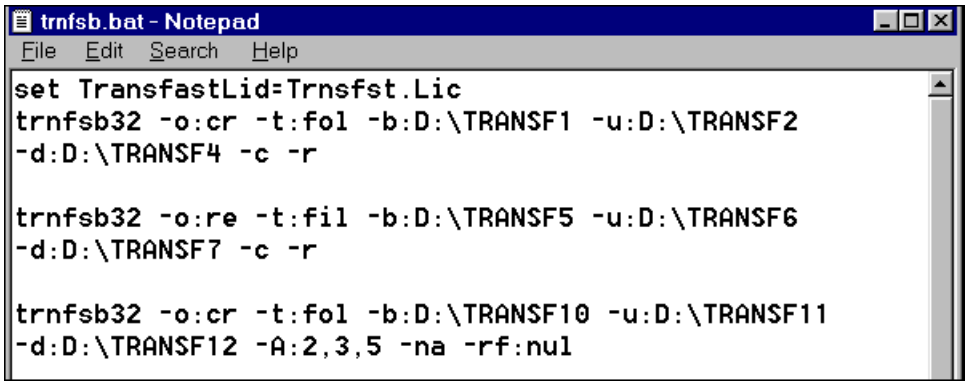

Figure 7- 3

- ***Use a Response file which includes a set of definitions for TransFast batch mode and refer to it from the* TRNFSBxx *command as described above.***

For example: prepare a Response file named batch1.txt:

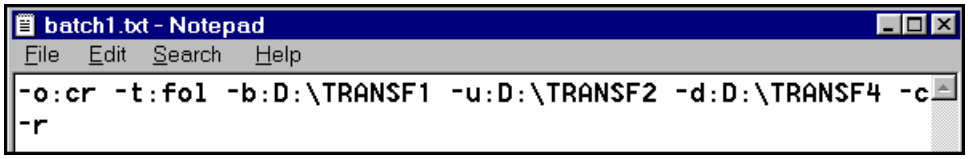

Figure 7- 4

Then, prepare trnfsb.bat which will use batch1.txt as a Response file:

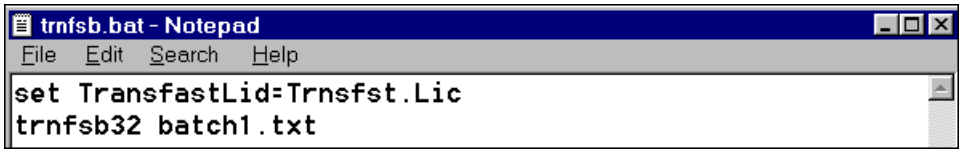

Figure 7- 5

To perform the operation:

- **Using DOS:** As shown above.
- **Using the Explorer:**

  1. Double-click **[file].bat** (the MS-DOS batch file). The **Finished** screen appears and the **batch process** will be completed, as shown below:

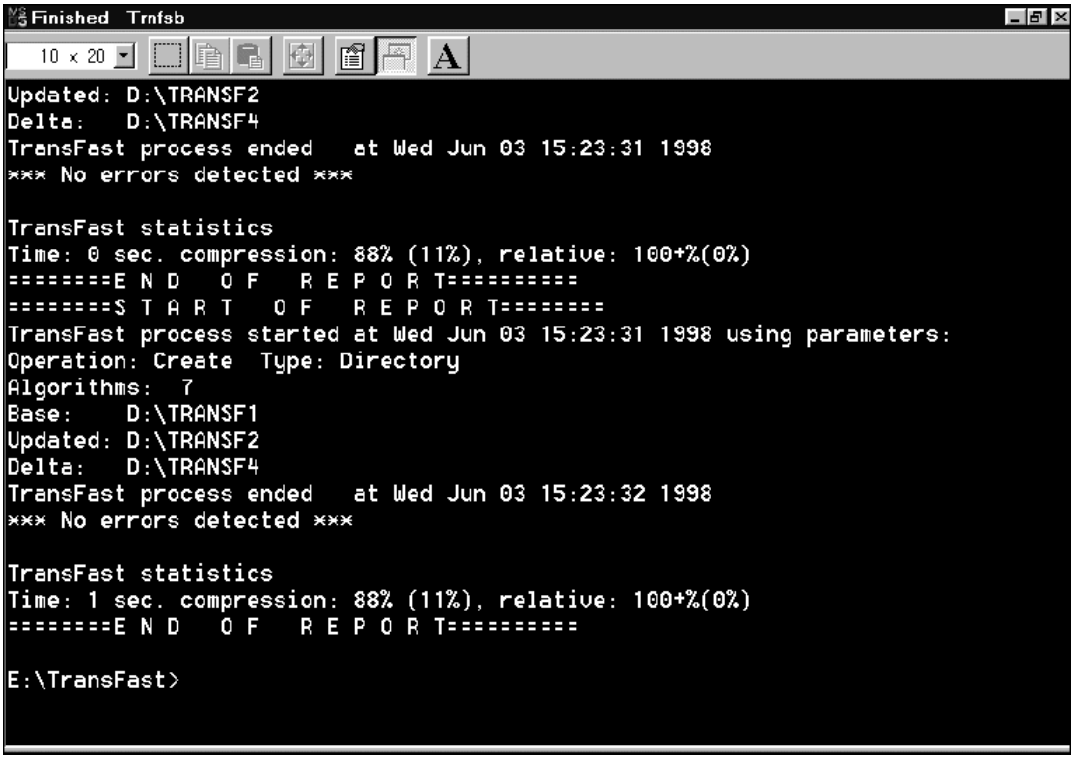

Figure 7- 6

  2. To exit from the batch mode, click ×.

- **Using a shortcut from your desktop:**

  1. In the **Explorer,** right-click the **MS DOS batch file.**
  2. Click **Create Shortcut.** A shortcut file is created.

3. Place the shortcut on your desktop using the copy and paste operation. Whenever you want to complete the process, double-click the batch file icon on your desktop.

TransFast Special Customization

To modify Message text/language, Messages priority, etc, perform the following:

1. The following components of Visual C++ must be installed:
   - Application studio (apstudio.exe)
   - Resource compiler (rc.exe)
   - Standard resource files (afxres.h, afxres.rc, afxprint.rc)
2. Run the application studio.
3. From the **File** menu for trnfst16.rc, select **Open.**
4. Select string table.
5. Browse the table until you reach TFMSGOOO.
6. Edit the messages text.
7. From the **File** menu, select **Save** and **Exit.**

   If apstudio.exe is unavailable, then it is possible to manually edit the file messages.rc that is included in trnfst16.rc.
8. In the directory that has trnfst16, run the command: rc trnfst16.

APPENDIX A

TransFast Performance Table

Product Name	Product Type (Programs)	File 1 Name	File 1 Size	File 2 Name	File 2 Size	Delta File Size	Compression Rate Absol.	Rel.
F – Prot	Anti-virus	fp227a sign.def	566K	fp228 Sign.def	568K	60K	89%	90%
F – Prot	Anti-virus	fp227a.zip	1009K	FP228. Zip	1049K	700K	33%	35%
Ssentry (20/20)	Software Protection	SSlite 32.EXE	1083K	Sslite32(4). EXE	1083K	1K	100%	100%
Ssentry (20/20)	Software Protection	SSlite 32.EXE	1083K	Sseval (1).EXE	1,524K (+441K)	526K (85K)	65%	92%
Netscape	Internet Standard/ Professional	Cb32e403. EXE	8390K	CP32e403(1). EXE	15,985K (+7595K)	11,200K (3605K)	30%	57%
Netscape	Internet Standard 3.04/Gold 3.04	N32e304p(2). EXE	5665K	G32e304p(1). EXE	5706K (+41K)	1,456K (1,424K)	74%	75%
Netscape	Internet Gold 3.03/Gold 3.04	G32e303p(1). EXE	5706K	g32e304p(1). EXE	5706K	1796K	68%	68%
Netscape	Internet Standard V3.03/V3.04	N32e303p(1). EXE	5665K	N32e304p(1). EXE	5665K	1696K	70%	70%
Net-Pass C-N-S	Mainframe to Any Mainframe Software V4.1.0/V4.1.5	NETP410	1102K	NETP415	1127K (+25K)	39K (14K)	97%	99%

APPENDIX B

TransFast Options and Response File

The following **TransFast** options are to be used when invoking **TransFast** via the **Batch mode.**

OPTION	DESCRIPTION
O:CREATE	Build delta
O:RESTORE	Restore updated file
T:FOLDER	Perform the operation for all files in folder and optionally in all their subfolders.
-T:FILE	Perform the operation for a single file.
-R	For T:FOLDER, specifies to include files in subfolders.
-C	For T:FOLDER, specifies to delete all files from output directly before the operation.
-B:basefile	Name of the base file or a base file folder.
-U:updated	Name of the updated file or a updated file folder.
-D:deltafile	Name of the file or a base file folder.

Note: For T:FOLDER, the above three options contain folder name only; there is no *.* at the end to specify to select all files in folder.

OPTION	DESCRIPTION
-P:filematchpattern	For T:FOLDER, only files with names that match the pattern are included. The pattern may contain the ?and * characters, and the meanings are as in DIR shell command.
-A:algorithm_list	A list of numbers from 0 to 7, separated by a comma (e.g. -A:2,3,6).
-KA	Keep the delta files generated by all algorithms. **The parameter is optional.** If not specified, only the smallest file is kept.
-M	For restore for folders, specifies that any files found in base folder (and its subfolders if -R is specified), and do not have a matching file in delta folder, are copied as is to the updated folder.
-ND	All the files created by this process will be assigned new dates, which is the current date. **The parameter is optional.** If not specified, CREATEDELTA will assign to the delta files the date of the updated files, and RESTORE will assign to the updated files the dates of the delta files.
-NA	All the files created by this process will be assigned new attributes, the default attributes for newly created files. **The parameter is optional.** If not specified, CREATEDELTA will assign to the delta files the attributes of the updated files, and RESTORE will assign to the updated files the attributes of the delta files.
-E:SKIP	If an error occurs, skip the file and try the next file in the folder. This is the default if

OPTION	DESCRIPTION
	no -E: is specified.
-E:ABORT	If an error occurs, abort further processing in folder.
-E:ABORTALL	If an error occurs, abort entire batch. See later about batch processing.
-E:COPY	For restore operation, if an error occurs, copy the base file to updated file.
-RF:report_filename	The filename to receive the report. **The parameter is optional.** If not specified, the report will be written to standard output device.
-RL:report level	The details level of the report, from 1 to 3. Optional default is 1.

Response file

Response file is the name of an ASCII text file, consisting of lines separated by newline or CR/LF characters (the format used by almost all text editors or word processors in non document mode). The file has different files/folders grouped together to be processed in one run.

Each command line has the same format as **TRNFSBxx** single command line, except that the command name **(TRANSFAST)** is excluded.

When each command line is carried out, it is prefixed by **TransFast options** [options1] and followed by **TransFast options** [options2]. When conflicting options are specified, the last one is used. So, for example, [options1] can be used to specify options common to all commands in the response file, and [options2] can be used to override options from the file.

A

Advanced tab, 2-3

Algorithm
Define, 2-2
Optimization Number, 4-4

Archivator, 4-8, 4-13

Archived Directories
Advanced dialog tab, 4-13
Creating Delta File, 4-11
Delta Algorithms tab, 4-13
General tab, 4-12
Name Matching tab, 4-13
Restoring Updated Directory, 4-21

Archived Directory
Define, 2-2

B

Base File, 2-1, 6-1
Long Term method, 6-1

Batch Mode, 7-1
Define, 2-5

C

Command Buttons, 4-23

D

Delta Builder, 1-2, 3-1
Define, 2-1

Delta Directory, 4-6
Create, 4-6
Delta Algorithms tab, 4-9
General tab, 4-7

Delta file
Advanced tab, 4-5
Creating, 4-1
Define, 2-1
Delta Algorithms tab, 4-4
General tab, 4-2

F

Frequently Asked Questions, 3-1

M

Message Level, 4-5

N

Name Matching, 4-10
Browse Customer’s File, 4-10
Customer's Entries Files, 4-10
Define, 2-4

O

Output Directory, 4-7
Clear, 4-7

P

Play Button (Play Mode), 4-24

R

Report File, 4-3, 4-8, 4-13
Report Message Level, 2-3
sample, 2-3

Report Files
Define, 2-3

Response file, B-3

Restore, 1-2
Define, 2-2

Restoring Updated Directory
Advanced tab, 4-20
General tab, 4-18

Restoring Updated File
Advanced tab, 4-16
General tab, 4-14

S

Self Extractor
Create, 4-2, 4-7
Define, 2-4

Stamps, 4-5
Define, 2-2

T

TransFast, 1-1, 1-2

TransFast Performance Table, A-1

TransFast Restore, 6-1

TransFast Special Customization, 2-4, 7-6

TransFast Wizard, 5-1
Define, 2-5

U

Updated Directory
Restoring, 4-17

Updated File, 2-1, 2-2
Restoring, 4-14

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