Chapter 7
Distributing Reports

Introduction

This chapter provides information that is particularly useful to application developers who are creating reports for distribution to other users, whether the reports are designed for use interactively or with the Runtime. Information on required files for distributing reports is presented in the following sections:

- ❑ Distribution Files for the Runtime Executable
- ❑ Distribution Files for the Runtime DLL
- ❑ Distribution Files for the Custom Control
- ❑ Retrieving Report Files
- ❑ Consistency Checking

Distribution Files for the Runtime Executable

Figure 7.1 lists required and optional files to be distributed in order to enable users to run R&R reports with the Runtime executable. You can specify locations for some of these files either with command switches or with the Runtime control fields (for example, RI_LIBRARY for library file name and location).

Note that R&R saves the location of tables, indexes, image files, and text memo files with the report. The Runtime will automatically find these files if they are in the saved locations. If they are not in the saved locations, the Runtime will look for them in the default directories specified on the Runtime command line or in the RRW.INI file, if it is available. If the report files are not in either of these locations, use the parameters in the Runtime control file to specify file locations.

If you make RRW.INI available to users, it should be placed in the user's Windows directory. The UDF library file, RRW.UDF, and the required DLL files (except as noted) should be in the same directory as the Runtime executable, RRWRUN.EXE.

Note also that if your users will be exporting reports to Excel Chart or PivotTables, they must have Excel 5.0 installed on their systems.

File	Description	Location
RRWRUN.EXE	The Runtime executable program. Required.	Program directory
RRWRENG.DLL	The Runtime English resource file. Required.	Program directory
RRWPD.DLL	The Runtime printer DLL. Required.	Program directory
ACCUSFT5.DLL	Image import file. Required if reports contain images.	Windows System directory
RRCTL.DLL	Dialog box control file. Required.	Program directory
Library File(s)	One or more files that contain the reports to be run. The RI_LIBRARY control parameter must specify the library file. At least one report library is required.	Any directory
Runtime Control Table or Text Control File	The database table or text file that provides the Runtime with information about the report(s) to be run. Required unless your application creates one at runtime.	Any directory
Data Files	The tables, indexes, text memo files, and image files used by your reports. All data files used by your report(s) are required.	Any directory
RRWEXP.DLL, RRDBFX.DLL, RRWKSX.DLL, RRWRTFX.DLL, RRWCSVX.DLL	Required only if your Runtime reports have Export destinations of Text, Xbase, Worksheet, RTF, or Text Data/Word merge, respectively.	Program directory
RRCHART.EXE, RRXCHART.DLL	Required only if your Runtime reports have Export destinations of Excel Chart.	Program directory
RRAUTO.EXE, RRXTAB.DLL	Required only if your Runtime reports have Export destinations of Excel PivotTable.	Program directory

Figure 7.1 Runtime Distribution Files (continued on next page)

File	Description	Location
RRW.UDF	User-defined function file. Required if your Runtime reports use any user-defined functions.	Program directory
RRW.INI	The R&R configuration file; it is optional and can be customized for different users. If RRW.INI is in the Windows directory, Runtime uses the defaults defined in that file. However, command-line switches take precedence; any setting you specify using a command-line switch will always override the corresponding RRW.INI setting.	Windows directory
RRW.SRT	A text file that controls case sensitivity and character collation in R&R. Optional.	Program directory

Figure 7.1 Runtime Distribution Files

Distribution Files for the Runtime DLL

In addition to the required files listed in Figure 7.1, you must include RREPORT.DLL when distributing reports for Runtime access using the Runtime DLL. Your user(s) should place this DLL in the Windows System directory.

Note that since the Runtime DLL communicates directly with the Runtime executable, a control table or file is not required unless you need one for use with the **getRuntimeRecord** function.

If the Runtime executable (RRWRUN.EXE) will not be in the same directory as the application that calls the Runtime DLL, modify the ProgDir setting in the [Defaults] section of RRW.INI. This setting identifies the R&R program directory. For example, if you plan to have your user(s) place RRWRUN.EXE in D:\RRPROG, you would include the following entry in the RRW.INI file that you distribute:

```
[Defaults]
ProgDir=D:\RRPROG
```

As a result, the Runtime DLL will be able to find RRWRUN.EXE regardless of the calling application's directory location.

Distribution Files for the Custom Control

In addition to the required files listed in Figure 7.1, you must include the following files when distributing reports for Runtime access using the R&R Custom Control:

- ❑ Your Visual Basic executable;
- ❑ RRW.VBX;
- ❑ THREED.VBX;
- ❑ RREPORT.DLL;
- ❑ VBRUN300.DLL.

Your user(s) should place the VBX and DLL files in the Windows System directory so that these files can be shared by VB applications in any directory.

If the Runtime executable (RRWRUN.EXE) will not be in the same directory as your Visual Basic executable, modify the ProgDir setting in the [Defaults] section of RRW.INI. This setting identifies the R&R program directory.

For example, if you plan to have your user(s) place RRWRUN.EXE in D:\RRPROG, you would include the following entry in the RRW.INI file that you distribute:

```
[Defaults]
ProgDir=D:\RRPROG
```

As a result, the R&R Custom Control will be able to find RRWRUN.EXE regardless of the calling application's directory location.

Retrieving Report Files

Before R&R will display or print a report, it must locate all the files used in the report, including tables, indexes, text memo files, or image files. If R&R cannot locate these files it will return an error message when you try to display or print the report. In the Runtime, this error will appear in your output status table. R&R follows the rules described in the following sections to save and locate files used in a report. If you are developing reports that will not be retrieved from the same drive/directory in which they were saved, you need to know these rules.

In the following rules, "master" drive/directory is the drive/directory where the master table is currently located; "default" drive is the drive where the default data directory is located; and "saved" drive/directory/file name is the drive, directory, and name of any file as it was when the report was last saved.

Master Table

If the master table and report library were in the same directory when the report was saved, R&R searches for the master table in 1) the drive/directory in which the report library is currently located, 2) the saved drive:\saved directory of the master table, and 3) the default drive:\default directory.

If the master table and report library were in different directories when the report was saved, R&R searches for the master table in 1) the saved drive:\saved directory of the master table and 2) the default drive:\default directory.

Related Tables and Indexes

When you save a report, R&R follows a set of rules to save the name of each related table and index file used in the report. In the following rules, assume that the master table is in C:\DIR1.

1. If the file's drive and directory are the same as the master drive and directory, R&R saves only the file name in the report definition. For example, if the full path and name of an index file is C:\DIR1\FILE1.NDX, R&R saves only FILE1.NDX.

    When the report is retrieved, R&R tries to locate required files by searching 1) master drive:\master directory\saved file name and 2) default drive:\default directory\saved file name. In each directory searched for an index file, the saved index file name extension will be tried first, then the default index extension specified in RRW.INI or on the Runtime command line.

2. If the file's drive is the same as the master drive, but the directories differ, R&R saves both the file name and the directory. For example, if a report uses an index in C:\DIR2 and the index file name is FILE2.NDX, R&R saves \DIR2\FILE2.NDX.

When the report is retrieved, R&R tries to locate required files by searching 1) master drive:\saved directory\saved file name, 2) master drive:\master directory\saved file name, and 3) default drive:\default directory\saved file name. In each directory searched for an index file, the saved index file name extension will be tried first, then the default index file name extension.

3. If the file's drive differs from the master drive, R&R saves the entire path and file name. For example, if the report uses an index file whose name is D:\DIR3\FILE3.NDX, R&R saves D:\DIR3\FILE3.NDX.

When the report is retrieved, R&R tries to locate required files by searching 1) saved drive:\saved directory\saved file name, 2) master drive:\master directory\saved file name, and 3) default drive:\default directory\saved file name. In each directory searched for an index file, the saved index file name extension will be tried first, then the default index file name extension.

Text Memo Files

When you save a report, R&R saves the complete path and name of any attached text memo file. When you retrieve a report that uses a text memo file, R&R first looks for the file in the drive/directory saved with the report, then in the master drive/master directory, then in the default data directory.

Image Files

When you save a report, R&R records whether the image was saved in the same directory as the report library. If it was, R&R will look for the image file in the directory that contains the current report library. If the image was not saved in the same directory as the report library, R&R will look in the directory that contained the image when the report was saved. If interactive R&R does not find the image in the library directory or the saved directory, it will look in the default image directory. If the Runtime does not find the image file in the library or saved directory, it will search the default image directory specified in RRW.INI or identified with the **/I** command switch.

Consistency Checking

When a report is retrieved, R&R checks to see whether the saved report is consistent with the current database and index files. While you are

responsible for keeping your indexes up to date, R&R will notify you of other discrepancies between the report and the files it uses. For example, R&R checks to see whether you have changed the field names in any of the tables since you last saved the report.

The following database changes affect reports saved in R&R:

❑ Deleting a field;

❑ Deleting a linking field;

❑ Changing the name or data type of a field;

❑ Changing the width of a field;

❑ Changing the name of a file.

The following sections explain how R&R responds to these changes. In many cases, R&R notifies you of the inconsistency between the report and the database. In interactive R&R these messages will appear on the display. In the Runtime they will appear in your output status table and, if RI_DISPERR is set to true, on the display.

You can then edit the retrieved report to accommodate the changes made to your tables. (Note that you will not be notified of changes in field width.)

Deleted Field

If you delete from a table any field that is used by a report, R&R notifies you that the field is missing when it retrieves the report. It erases the field from the report, as well as erasing any totals based on it. If the deleted field is used in a calculated field expression, the calculated field will appear in the Field Menu flagged with a question mark in front of it. If any flagged fields are used in your report, you will have to edit the fields' expressions before printing the report.

If you delete a field used in a query, you will be prompted to edit the query when you try to print the report.

If you delete a sort or group field, R&R also deletes the sort or group fields below it in the Sort-Group Table. For example, if you delete COMPANY from your table, both COMPANY and PRODUCT will be deleted from the following list of four sort fields:

1 STATE
2 CITY
3 COMPANY
4 PRODUCT

Your Sort-Group Table will then contain only the following fields:

1 STATE
2 CITY

If you have deleted fields used to group your report, you may need to edit your total fields so that they reset at the appropriate level.

Deleted Linking Field

If you delete a database field that is used as a linking field, R&R creates a "dummy" linking field so it can retrieve the report. The dummy field has the same name as the missing linking field, with the prefix "?_" (as in ?_NAME). When you open the report, R&R displays a message notifying you that the field is no longer in the database, then displays the message "Relation must be edited." Use the Database $\Rightarrow$ Relations dialog to correct or remove each relation whose description is flagged with a question mark (?). You cannot print or preview the report until you have corrected or deleted all incomplete relations.

Changed Field Name or Data Type

If you change the name or data type of a database field, R&R behaves as if the original field had been deleted and a new field added: the original field is removed from the composite record structure, along with any fields that total it, and the new field is added to the composite record structure. Use Insert $\Rightarrow$ Field to insert the new field. Any calculated field that uses the changed field will appear in the Field Menu flagged with a question mark. If any flagged fields are used in your report, you must edit the fields' expressions before printing the report.

Changed Field Width

If you change the width of a field used in the report, R&R does not automatically adjust the width of the field on the report layout or in any calculated fields that use the field. You must use Format $\Rightarrow$ Field to make any necessary adjustment. If you use the field more than once in a report, you must adjust each occurrence of the field individually.

Changed File Name

If the name of a file has been changed, R&R searches for the file using the search rules previously described. If it can't find the file under its old name,

R&R then displays the path and name of the file it can't find. Press Enter; then select or enter the path and file name of the renamed file.

Save the Revised Report

You should save a report after correcting for database or file location changes. If you don't, you will have to repeat the corrections the next time you retrieve the report. If you're not sure of the corrections, save the report under a different name.