15

REPORTS

PastPerfect includes more than 200 predefined reports and a powerful custom Report Maker. All reports may be viewed on the screen or printed on an inkjet or laser printer. You can print a list of all reports including a description of each report by selecting Reports |System | Reports in PastPerfect, from the main menu.

Here are three definitions that will help when reading this chapter:

Database - A collection of similar information stored in a file. PastPerfect data is contained in numerous databases. The Objects, Photos, Archives, and Library catalog data is stored in four separate databases. Some of the other databases are Accession, Members, Dues History, and Incoming Loans.

Record - Each database contains a number of records. For example, if your Objects Catalog has 4,350 items, the Objects database contains 4,350 records. While in Browse mode, each record is represented as one row.

Field - Within each record of a database are numerous fields. This is where each piece of data is stored. While in Browse mode, each field is represented by a column. For example, each record of the Objects database contains over 150 fields, such as Object ID, Object Name, and Home Location.

To view a list of the available reports, select the Reports tab of the main menu.

The predefined reports are separated into 17 categories: Objects, Photos, Archives, Library, All four catalogs, Accession, Authority Files, Contacts, Dues & Donations, Exhibits, Field Descriptions, Lexicon, Loans Incoming, Loans Outgoing, Research, System, and Temporary Custody.

Figure 15-1
Reports Menu

Click on the report name to view a detailed description of it.
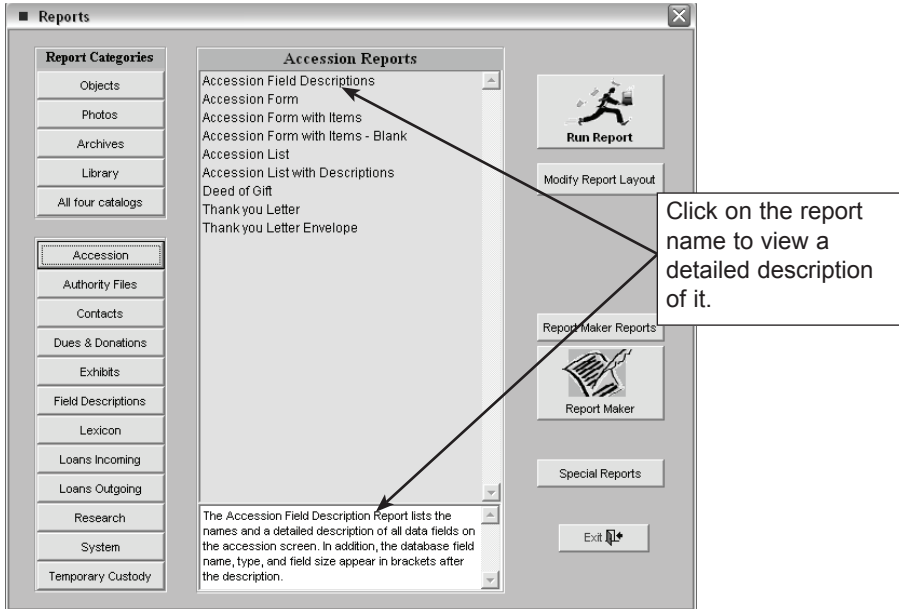
To view a list of reports in a category, click on the category. For example, if you click on the command button **Accession**, a list of accession reports will be displayed in the middle of the screen. To view a detailed description of a report, click on the report name.

To run a report, click on the report name and click the **Run Report** command. Before printing a report you will be provided with numerous options to produce

Figure 15-2
Objects
Reports
Selection
screen
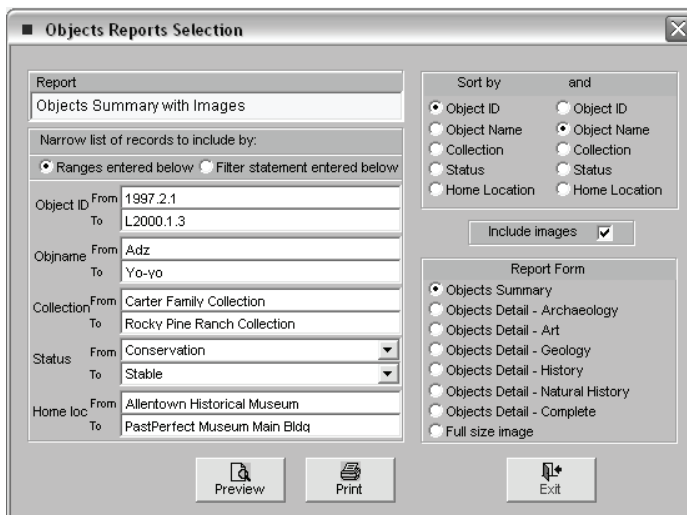
just the results you need. You can narrow the list of records by selecting ranges and sort order and choosing the form of the output on the printed page. For example, if you select the Objects Summary with Images report from the Objects Reports list, the Objects Reports selection screen will display, as in Figure 15-2.

Under Select Ranges to Narrow List, you can make entries to include only selected Object Catalog records on the report. By default, all records will be included. The From and To boxes are pre-filled with the first and last entries in a field when the catalog is sorted on that field. For example, the first object name is "Adz" and the last name is "Weight, Net." If you want to print a list of only items with the object name Adz, then change the To box to "Adz."
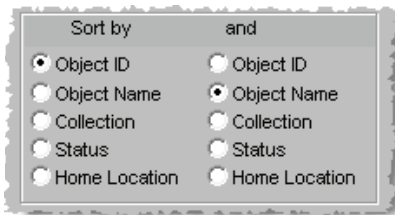
Figure 15-3
Objects Report
for Adz

Entering From and To object name as "Adz" will produce a list of just records with the name Adz.

In most cases, you should change the entries for only *one* field. Narrowing the list based on two or more fields may produce no results at all. For example, selecting a range of object IDs from 2004.1.1 to 2004.999.9999 and a range of object names from Adz to Adz would produce a list of adzes accessioned in 2004. If there were no adz accessioned that year, then no records would be selected.

When choosing your entries for the From and To fields, remember that you will be selecting records as they appear in the catalog sorted by that field. For example, if you enter the collection names From = "Krantz Collection" and To = "W," the list would not include the Waiahukini Archaeology Collection because the records with that collection name would be listed after any records with just "W" for a collection name. A more effective entry might be From = "K" and To = "WZZZ." Entries are not case sensitive.
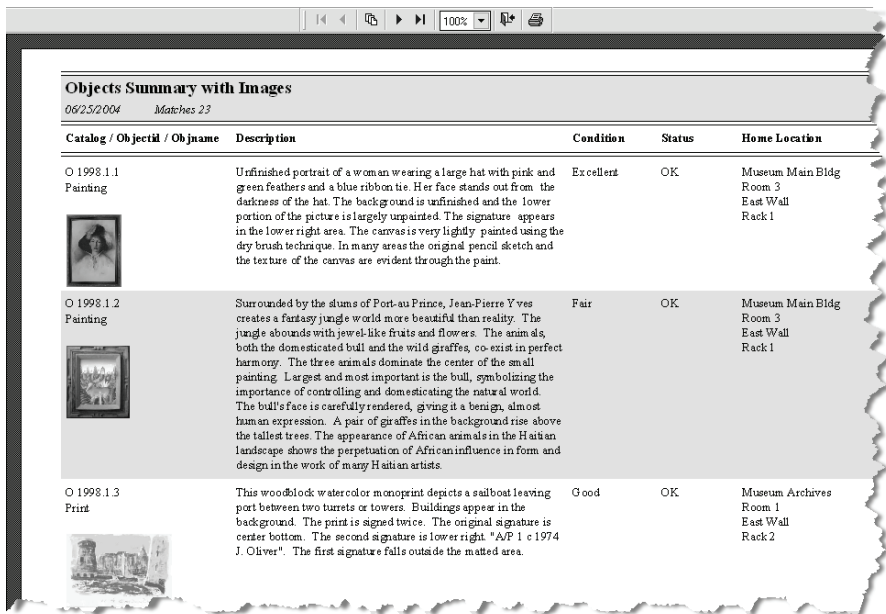
For many reports, you can choose the sort order of the results. For the Object Catalog reports, the results can be based on two sorts.

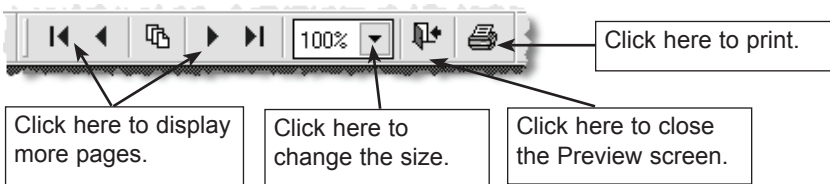Figure 15-4
Report Sort
Order

Before you print a report, use the **Preview** command button to display the results on-screen.

Figure 15-5
Report
Preview
screen

At the top of the Report Preview screen are command buttons that allow you to adjust the display, view selected pages, or send the report to the printer.

Figure 15-6
Report
Preview
commands

Click here to print.

Click here to display more pages.

Click here to change the size.

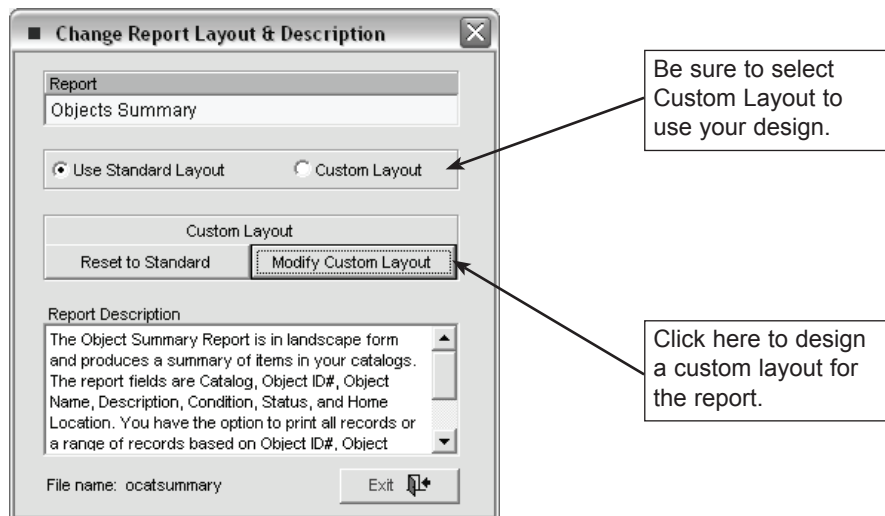Click here to close the Preview screen.

When you click on the Printer icon from the top of the Report Preview screen, the entire report will be sent to your Windows default printer. If you wish to select a different printer or print options, use the **Print** command button after closing the Report Preview screen.

MODIFYING REPORT LAYOUT

PastPerfect allows you to customize many aspects of the standard reports. You can select which fields appear on a report and how they are displayed, including arrangement on the page, font sizes, titles, and even color. To modify one of the standard reports, select the report name from the Reports menu and press the **Modify Report Layout** command button.

Figure 15-7
Modify Report
screen

Be sure to select Custom Layout to use your design.

Click here to design a custom layout for the report.

On the Modify Report screen, you can change the Report Description, which displays on the main Reports menu. There is also a **Reset to Standard** command, which lets you remove any changes and start with the standard report design. To modify the report, click the **Modify Custom Layout** command. This will take you to the **Report Designer** screen.

The Report Designer screen allows you to customize many aspects of a report, using the tools discussed below.

Figure 15-8
Report
Designer
screen

The Report
Controls toolbar.

The Layout toolbar.
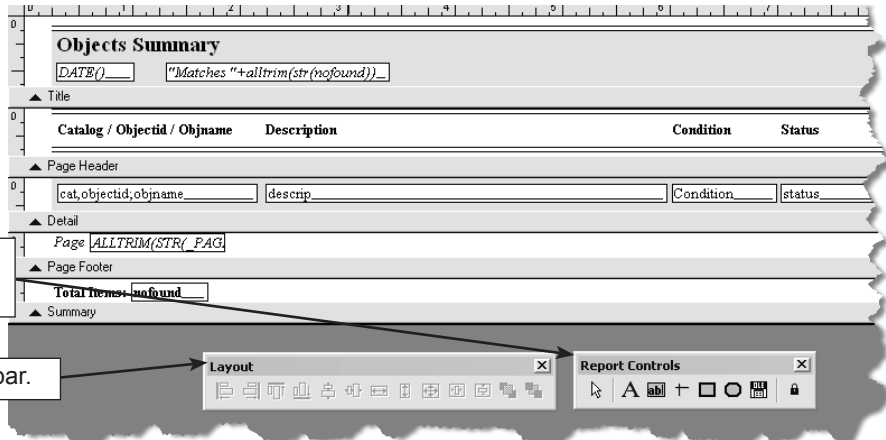
THE REPORT CONTROLS TOOLBAR

The Report Controls toolbar provides a set of tools for modifying the report. When you first open the screen, this toolbar should display in the lower right corner. If you close the toolbar, it can be redisplayed by selecting it from the pull-down View menu at the top of the screen. The toolbars offer the following tools:

Figure 15-9
Report
Controls
toolbar
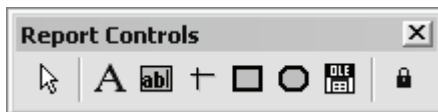
Selection pointer - This is the default tool on the toolbar. It allows you to use the mouse to select items on the report to work with. When you are finished changing selected objects, press the Selection pointer to unselect them.

Text - To add or edit text in your report, such as a title or field description, first click on the Text tool. Next, click in the **Report Design** window where you want to add or edit the text.

Field - To add a new field or expression to your report, first click the Field tool. Next, click in the form where you want the field to appear. The **Report Expression** dialog box will appear, where you can enter the field name. The Report Expression dialog box is described below.

☩   **Line** - To draw a line in your report, first click the Line tool. Next, position the cursor where you want the end of the line to be, drag until the line is the desired length, and then release the mouse button.

▢   **Rectangles** - To draw a rectangle in your report, click the Rectangle tool. Next, position the cursor where you want a corner of the box to be, drag until the box is the desired size, and then release the mouse button.

◯   **Rounded Rectangles** - To draw a rectangle with rounded corners in your report, first click the Rounded Rectangle tool. Next, position the cursor where you want a corner of the rounded rectangle to be, and drag until the rounded rectangle is the desired size. To indicate how rounded your rectangle should be, double-click on the Rounded Rectangle object to open the Round Rectangle dialog. In this dialog, you can pick the shape of the rounded rectangle, from slightly rounded to completely oval.

▦   **Image** - Use this feature to insert an image in the report. Report images must be in BMP, JPG, GIF, PNG or TIF format. If you have your logo or letterhead as an image file, use this command to put it on the report or letter.

🔒   **Button Lock** - Used to add multiple controls of the same type without having to click the control button on the toolbar more than once.

Notes on Selecting Items

- Click on an item to select it.
- Click and drag the dotted-line box around several items to select them as a set.
- Shift-click on multiple items to select them as a set.
- When items are selected, you can move them or resize them with the mouse or arrows on the keyboard. You can also change their font and color by choosing menu options from the Format pull-down menu.
- Double-click on items to open dialog boxes that let you change their attributes.
- When you are finished changing selected objects, click the Selection pointer to unselect them.
- To adjust the vertical and horizontal location of the various items, click on them and, while depressing the mouse button, drag them up or down. You can also click on them once to select and use the keyboard arrow keys to move the items.

THE LAYOUT TOOLBAR

The Layout toolbar can be quite helpful to ensure that items on the report are properly aligned. For example, to be sure that the left edge of multiple items are aligned, select the items and click the **Align Left Edges** command button.

Figure 15-10
Layout
toolbar

Use this tool to line up multiple items.
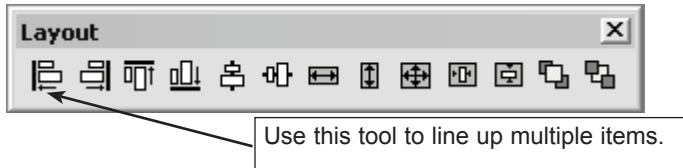
The Layout toolbar has 12 other tools, including Align Right Edges, Align Top, Align Bottom, Center Vertically, Center Horizontally, Stretch to Same Size, Move to Front, and Move to Back.

THE REPORT EXPRESSION DIALOG BOX

When adding a new field to the report, use the Field tool, described above. This will open the Report Expression dialog box. This dialog box can also be used to change an item's attributes. To open the box, double-click on the report item.

Figure 15-11
Report
Expression
dialog box

Report Expression

Expression: objname

Format:

Field position
- Float
- Fix relative to top of band
- Fix relative to bottom of band

OK
Cancel

Calculations...
Print When...

Stretch with overflow

Comment

Type in the new field name here.

Click here for more attributes.

Check here if you want the field data to continue on more lines as required by its length.

Print When

Print repeated values
- Yes
- No

OK
Cancel

Also print
- In first whole band of new page/column
- When this group changes
- When detail overflows to new page/column

Remove line if blank

Print only when expression is true:

For most reports, you can add any field that is contained in the data file on which the report is based. For a list of available fields, print the Field Description reports from the Reports menu. The field name that you enter is not always identical to the field label on the screen. The exact field names are listed in the Field Description reports inside square brackets, such as [objname: c(40)] where "objname" is the field name. If a field name is added to a report that is not contained in the underlying data file or query, the report will not run.

When you place a field on the report you should adjust its width to the minimum required, not the maximum. You can place a check mark in the **Stretch with Overflow** box on the Fields Expression screen to compensate. Records with long entries will have the data flow to additional lines. Note that Stretch with Overflow is only available on reports. It won't work on labels.

If you have numeric fields like Amount Paid that you want to print only if the amount is greater than zero, enter "amount>0" in the **Print Only When Expression Is True** box of the **Print When** screen. See Figure 15-11

You can enter more than one field name in an expression, such as "City,State,Zip."

Changing Fonts - To change the font type, size, style, or color select the item on the Report Design screen and then select Font from the Format pull-down menu.

Figure 15-12
Changing
Fonts
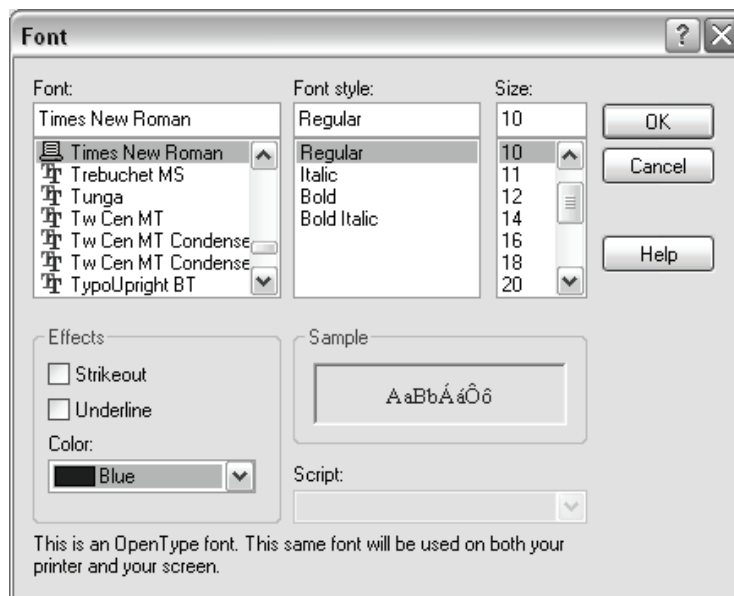
All Windows fonts are available. You can choose a style of bold, italic, or under-line, a point size, and text color. You can also select the Color Palette toolbar from the pull-down View menu to change the color of fonts, lines, or boxes on the report.

REPORT BANDS

The horizontal bars that span the column width of your report separate the report into band types. Each report contains at least three bands. The **Page Header** band is displayed at the top of each page of the report.

The **Detail** band makes up the report's body and contains output fields, and the **Page Footer** band is displayed at the bottom of each report page.

These additional bands may be added as required. The **Title** band and **Summary** band contain text that appears before the main report begins and at the end of the report. The **Group Header** and **Group Footer** bands display at the top and bot-tom of each data group on the report. To add these additional bands to a report, select Title/Summary or Data Grouping from the Reports pull-down menu at the top of the Report Design screen. Creating a Detail/Summary/Group report will be explained later in this chapter.
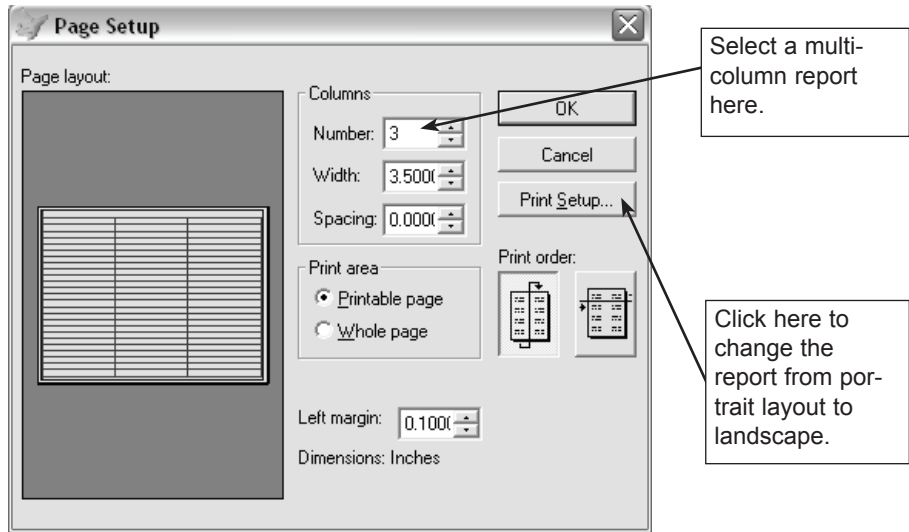
To adjust the vertical location of the various bands, click on them and, while depressing the mouse button, drag them up or down.

Changing the Page Layout - To create a report with multiple columns, select **Page Setup** from the pull-down File menu at the top of the screen. To select the paper size, or choose from portrait or landscape layout, click the **Print Setup** command.

Save Your Changes - After you have modified the report, select Close from the pull-down File menu at the top of the screen and be sure to click Yes when asked, "Do you want to save changes to report?"

Now that you know the basics, here are a couple of examples. For the first exam-ple, let's say you want to modify the Objects Summary report to include more information. The default report includes the fields Catalog, Object ID, Object Name, Description, Condition, Status, and Home Location. If you want to remove the fields Condition and Status and add the fields Other Name and Collection to the report, follow these steps.

Figure 15-13
Page Layout
screen

Select a multi-column report here.

Click here to change the report from portrait layout to landscape.

EXAMPLE 1: MODIFYING A REPORT

1. From the Reports menu, select **Objects** and then the report Objects Summary. Click on the **Modify Report Layout** command.

2. Click on the command **Modify Custom Layout**, which will open the Report Designer screen, as shown in Figure 15-8.

3. Now let's change the Condition field to Collection. To do this, double-click on the word "Condition" in the box above the Detail band. In the Report Expression dialog box, change the Expression from Condition to Collection and click OK.

Figure 15-14
Change
Expression
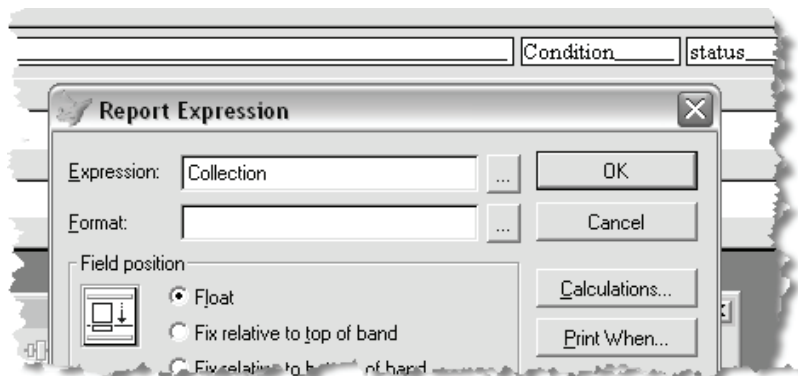
4. Next, you need to change the field name Condition as it appears in the Page Header band. To make that change, select the text tool on the Report Controls toolbar, click on the word "Condition" and type "Collection."

5. Now, to make more room for the Collection field, let's remove the Status field. First click on Status in the Page Header band and press the Delete key. Then click on the word "Status" in the box below in the Detail band and press the Delete key.

6. With the extra space available to the right, you can expand the width of the Collection field to accommodate the longer entries. To do this, first click on the Collection field in the box in the Detail band. When it is selected, you will notice that the field has eight small dots, one each on the four corners and sides.

Figure 15-15
Selected field

Click here and hold down the left mouse key while dragging to the right.

Figure 15-16
Field
expanded
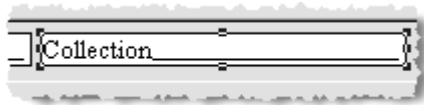
To increase the width of the field, point the mouse to the dot on the vertical right edge of the field. Press and hold the left mouse button while you drag to the right. When it reaches the desired width, release the mouse button.

7. The last step is to add the Other Name field. We want to have the Other Name print in the left column of the report, below the object name. To do this, double-click on the field "cat,objectid;objname" in the Detail band. In the Report Expression field, after "objname," add a semi-colon and the word "othername." Note that you can enter multiple fields in an expression. To print the words on the same line, separate them with a comma; to print them on a separate line, separate them with a semi-colon.

Since there isn't much space in the Page Header to add the words "other name," select the Text tool, click on Catalog/Objectid/Objname just after the "e" and add an "s." This will change the field name to Catalog/Objectid/Objnames.

8. Finally, save your changes by selecting Close from the pull-down File menu at the top of the screen and answering Yes when asked, "Do you want to save changes to report?"

Be sure to select Custom Layout on the Change Report Layout & Description screen. The standard layout is always preserved and can be used to reset the custom layout.

Figure 15-17
Change
Report Layout
& Description
screen

Click here to use the new layout.
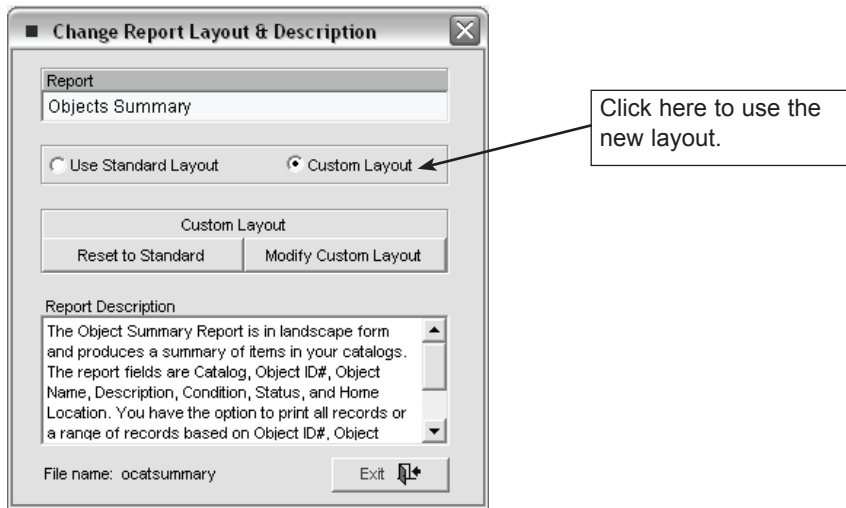
Now you can preview or print the modified report from the Reports menu.

Figure 15-18
Modified
Objects
Summary
report

ADDING AN IMAGE TO A REPORT

With PastPerfect it is also possible to include an image on a report. In this example, we will add the image of an object to the Objects Summary report.

1. First, open the design screen as before by selecting Reports | Objects, and Objects Summary. Then click Modify Report Layout and Modify Custom Layout.

2. Let's place the image on the left of the report just below the "cat, objectid, obj-name" box. You may first need to move the toolbars to another location on the screen to make room for the changes. To do this, click on the grey band at the top of the toolbar and drag it elsewhere. And you will need to increase the height of the Detail band to accommodate the image. Click on the gray Detail band and drag it down to make the space. Then select the Image tool 🔲 on the Report Controls toolbar and click on the blank area where you want to place the image.

3. The Report Picture dialog box will open, which allows you to specify the file-name of the digital image. Type the name of the image file in the File box, including its drive and path location on your computer. In this case the entry would be "imagedir+imagefile" without the quotes. Be sure to select "Scale picture, retain shape" as shown below.

Figure 15-19
Report Picture
dialog box

Type the image path and file-name here.

Click here to scale the picture while retaining the shape.
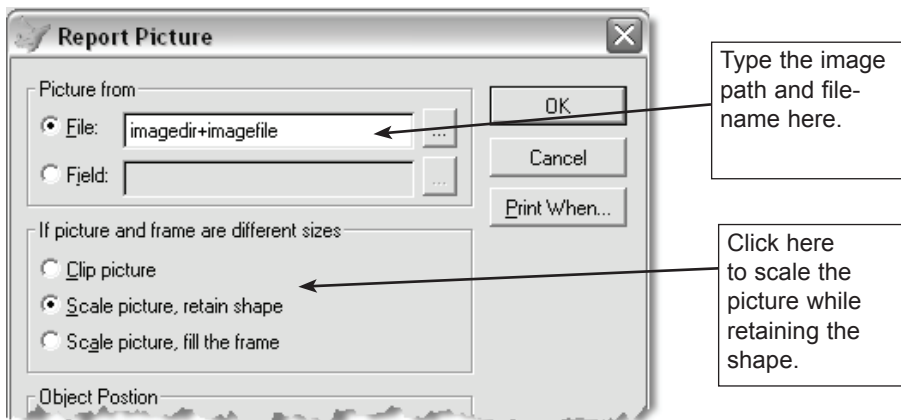
4. Click on **OK** to return to the design screen. You should now see a gray box with an "X" on the screen where the image will be placed. You may need to adjust its size by clicking on the selection dots on the edges of the image and dragging.

Figure 15-20 shows the final layout with a gray box where the the letterhead logo image will appear. As before, remember to save your changes and remember to select Custom Layout.

Figure 15-20
Report Layout
with Picture.
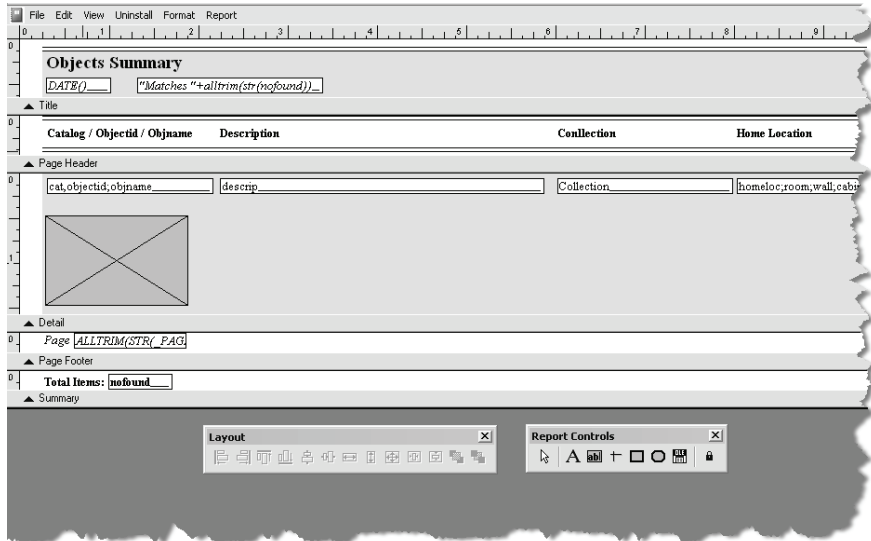
Figure 15-21 below is a Preview of the report with the picture added.

Figure 15-21
Preview of
Report with
Picture.
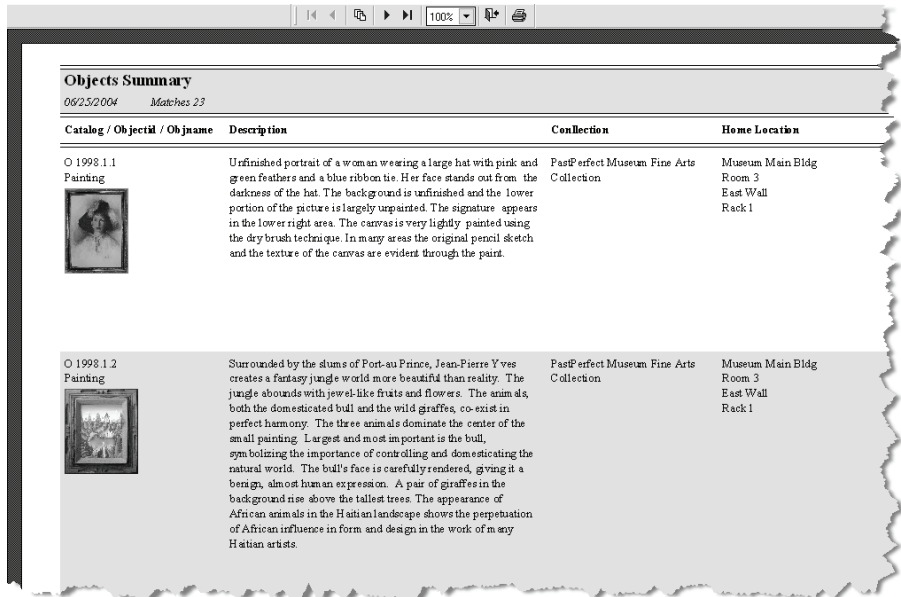
MODIFYING LABELS

The PastPerfect Reports screen can be used to print and design labels. A variety of labels are available, including mailing labels, exhibit labels, barcode labels, and catalog cards. Modifying labels is similar to modifying reports, with a few exceptions.

When you select a label from the Reports menu and click on Modify Report Layout, an extra button is available on the Change Report Layout & Description screen. This button is named **Create New Custom Label** and will allow you to select a label design from a list of standard Avery labels.

Here is an example of how to design a Contacts mailing label using a new label style. By default, Contacts mailing label style #1 and style #2 both use Avery labels #5160, which measure 1″ x 2 ⅝″ and print in three columns on the sheet. We will modify label style #2 to print on Avery Labels #5163, which are 2″ x 4″ and print in two columns.

1. First, select **Contacts** and **Contacts Labels style#2** from the Reports menu. Then click on Modify Report Layout. You may want to press **Reset to Standard** to ensure that you start with the default design.

2. So that you will not have to re-create the fields on the new label, open the old design and use the cut and paste tools to transfer the fields. Click on Modify Custom Layout to display the Label Designer screen. Click on Edit | Select All, then Edit | Copy. This will put the fields in the Windows Clipboard. Click on File | Close to return to the previous screen.

3. Now, click the **Create New Custom Label** command button. You will be presented with a list of label styles and their associated Avery number.

Figure 15-22
Select a new
label style

Avery No.	Height	Width	Columns
5097	1-1/2"	4"	2
5160	1"	2-5/8"	3
5161	1"	4"	2
5162	1-1/3"	4"	2
5163	2"	4"	2
5164	3-1/3"	4"	2
5165	8-1/2"	11"	1
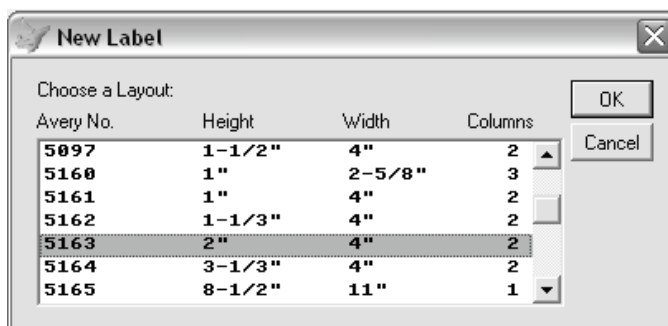
Select Avery #5163 and click on **OK**.

4. The new blank label design screen will open. Click on Edit | Paste to transfer the fields from the Windows Clipboard to the label. You will probably need to rearrange the fields to fit this larger label.

Figure 16-23
New label
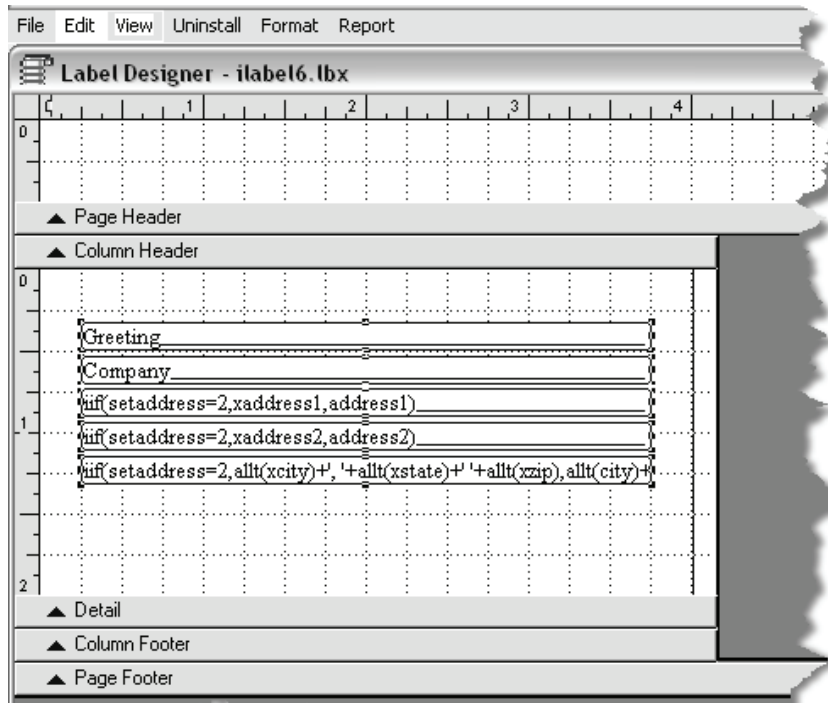
5. Finally, select File | Close and save your changes. Make sure that "Custom Layout" is selected from the Change Report Layout and Description screen. Now when you use Label style #2 you will get the new layout.

REPORT MAKER

In addition to the standard reports, PastPerfect provides a powerful custom report generator for you to create your own reports from scratch. To start the Report Maker, click the **Report Maker** command button on the Reports menu. The first screen will display a list of the 26 PastPerfect database files. You may create reports based on any data in any of these files.

Figure 15-24
Report Maker
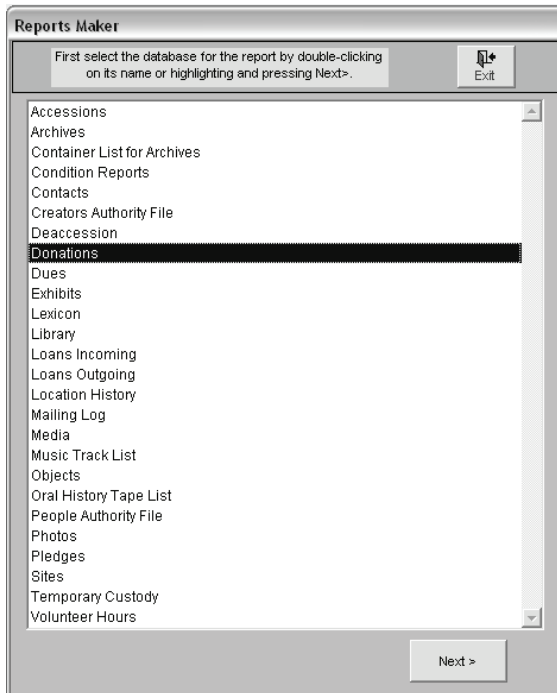
Select a database file and the Reports Manager screen will be displayed, showing titles of previously saved reports for the selected database. To modify or run an existing report, highlight it and click **Next** or double-click on it with the mouse.

Figure 15-25
Report
Manager—
Donations
database
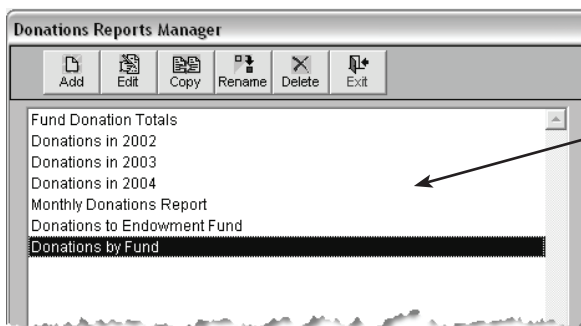
Seven custom reports are listed for the Donations database.

The Reports Manager screen also has the following command buttons:

Add - Creates a new report. This command takes you to the **Filter Building** screen, which guides you through a step-by-step process of specifying a record filter. A filter is the set of criteria that indicates which records are to be included on the report.

Edit - Modifies the report's filter, and takes you to the Filter Building screen.

Copy - Makes a copy of the current report. After picking a report to copy and clicking this command button, you will be asked for a new title. To customize your new report, click **Edit**.

Rename - Allows you to enter a new title for the current report.

Delete - Permanently removes the current report.

Exit - Returns you to the first Report Maker screen.

Once a report is created, it will be listed on the main Reports menu when you select the **Report Maker Reports** command button.

Figure 16-27
Report Maker
Reports
screens

Select the report and click Modify Report Layout to enter a description here for a new report.
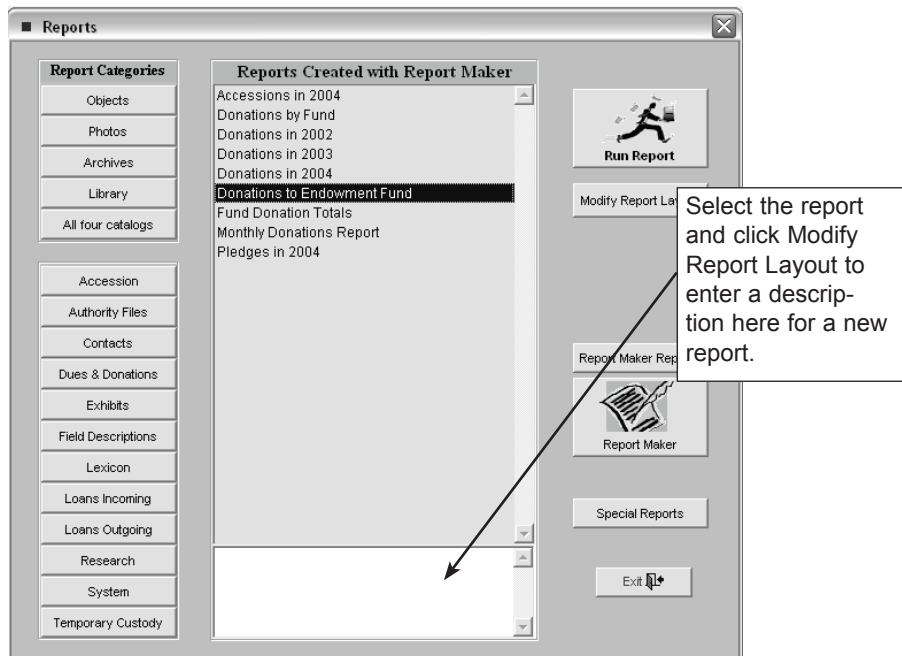
When you create a report with Report Maker, you must first run it from the Report Maker. This process will build the report layout. After that, you can run the report from the main Reports menu. To run a report from within Report Maker, go to the Report Maker screen, select the database for the report and click Next. On the Reports Manager screen, highlight the report you want to run and click **Next**. Then, on the Report Overview screen, click **Run Report**.

CREATING A NEW REPORT

From the Reports Manager screen, you can create new reports. When creating a report, you can either add it from scratch or you can copy an existing report and then modify it.

To create a report from scratch:

1. Select the Report Maker command on the Reports menu.
2. On the Report Maker screen, select the database for the report and click **Next**.
3. On the Reports Manager screen, click **Add**. Type in a title for this new report and click **OK**. You will be taken to the Filter Building screen.
4. Input from one to ten filter conditions to indicate which records should appear on the report. Then click **Done** to return to the Reports Manager.
5. Pick the fields to appear on the report. When done, you will be taken to the **Report Overview** screen, from which you can run the report.

To create a report by copying:

1. Click the Report Maker command on the Reports menu.
2. Go to the Reports Manager and highlight the report you want to copy. Click Copy to bring up a title dialog box. Type in a title for this new report. You will now have an exact copy of the report you selected, including its filter, output fields, sort fields, and report form.
3. Click **Edit** to go to the **Edit Record Filter** screen to modify the report's filter conditions, if necessary. When finished, click **Done** to return to Reports Manager.

TO MODIFY A REPORT

To modify a report, first select the report from the Reports Manager screen and click **Next** to display the Report Overview screen. The Report Overview screen is the place where you can:

*   Edit or review your record filter.
*   Select which fields to show in the report.
*   Select what type of report or output to generate.
*   Pick a record sorting order.
*   Run your query and generate your output or report.

Figure 15-27
Report Over-
view screen
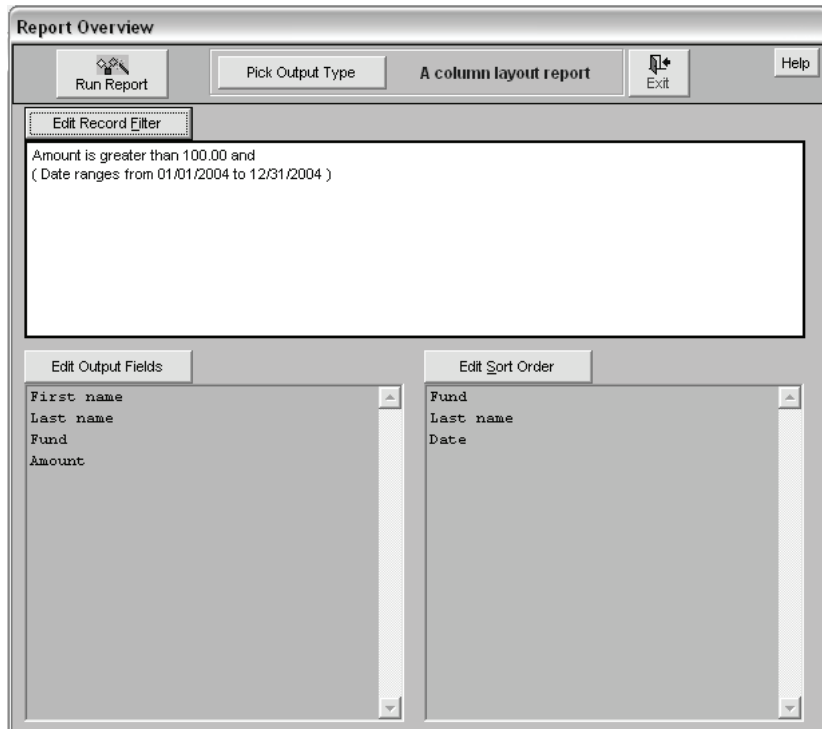
Edit Record Filter - Displays the screen where you set the conditions that the records must meet to be included on the report (for example, only those objects made of gold). (See "Edit Record Filter Screen" for more details.)

Edit Output Fields - Displays the screen that allows you to select which fields Report Maker will include on the report. (See "Selecting Fields to Show on Report" for more details.)

Edit Sort Order - Displays the screen that lets you specify how Report Maker will sort the records that are included on the report. You can specify up to nine fields to sort the results on. (See "Sorting Output Records" for more details.)

Pick Output Type - Displays the Type of Output screen, which lets you select which format Report Maker should use for your query results (report, table, work-sheet, etc.). (See "Selecting the Type of Output" for more details.)

Run Report - Prepares and displays the report or directly generates the output type you requested (report, text files, a spreadsheet).

EDIT RECORD FILTER SCREEN

Every query is an attempt to extract a sub-set of information contained within your database. The Filter Building screen is where you specify a set of conditions to determine the sub-set you are seeking. This set of conditions is your filter.

You can access this screen from the Reports Manager by clicking the **Add** or **Edit** command buttons or by pressing the **Edit Record Filter** command button on the Report Overview screen.

What is a condition? A condition is a phrase that defines the set of data you are seeking, such as "objname is equal to Chair." A condition consists of:

• a field name (objname)
• a relational operator (is equal to)
• a comparison value (Chair)

Each condition you add can narrow the results of the query-that is, fewer records may be included on the report. Each condition you delete can expand the results of the query-that is, more records may be included on the report. Each query can contain up to ten conditions.

Figure 15-28
Edit Record
Filter screen
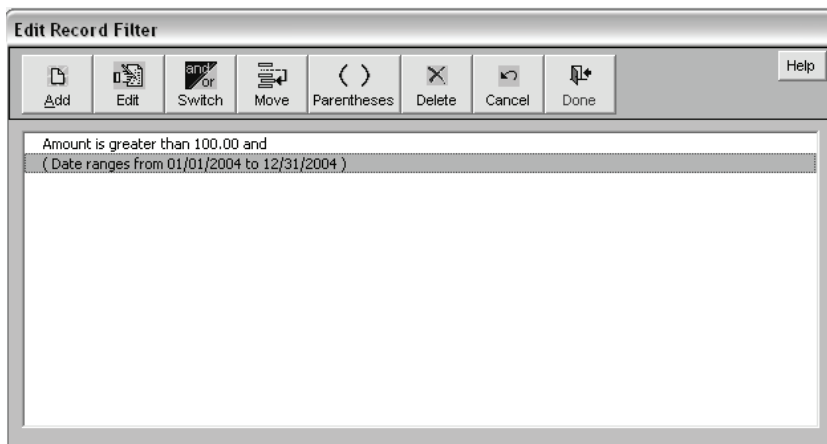
You can perform the following actions from the Edit Record Filter screen:

Add - Adds a new condition. You will be prompted to select a field, pick a relational operator, and type in a comparison value.

Edit - Edits an existing condition by changing a condition's field, operator, or comparison value (or any combination of these).

Switch - Switches a condition's connector between an AND and an OR. If two conditions are connected by an AND, both must be true (material contains gold AND material contains silver). If, however, two conditions are connected by an OR, either can be true (material is either gold OR silver).

Move - Moves the position of a condition within the list of conditions. If you are mixing both AND and OR connectors or are using parentheses, the order of the conditions can determine which records are included in the query results.

Parentheses - Places or removes parentheses around two or more conditions. Complex queries may have several AND and OR connectors. The placement and organization of these connectors can make a difference in the results. If you create queries with many AND and OR conditions, use parentheses to ensure you get the results you are expecting. Parentheses dictate how the query is interpreted. The query is evaluated first in the innermost parentheses. Without parentheses, the query conditions are evaluated from left to right and top to bottom.

Delete - Deletes a condition from the list. Deleting a condition will generally widen the results of the query.

Cancel - Exits this dialog without saving. This will undo any changes you made while you were in the Filter Building screen.

Help - Displays help.

AND/OR Connectors

A filter consists of one or more conditions. Conditions can be strung together with AND and OR connectors. How you connect the various conditions makes a big difference in the results:

AND - In the example, material is wood AND collection is Rocky Pine Ranch Collection. Every record included in the query results must meet both conditions. The material must be wood and the collection name must be Rocky Pine Ranch Collection. Rule: The conditions on both sides of the AND connector must be true.

OR - Material is wood OR collection is Rocky Pine Ranch Coffee Collection. Records included in the query results must meet either condition. The results will show all items made of wood and all items with the collection name Rocky Pine Ranch Collection. Rule: Only one side of the OR condition must be true.

SELECTING FIELDS TO SHOW ON A REPORT

When you design your report, you need to think about what you'd like to appear in the results. In most cases, you won't need to see every field in the database.

The Edit Output Fields screen is where you specify which fields you want to see on the report. You will be shown this screen the first time you click **Next** on a new report you have highlighted in the Reports Manager. If you select a report that has already been assigned fields, you will be taken directly to the Report Overview screen, where you can choose **Edit Output Fields** to view this screen.

Figure 15-29
Edit Output
Fields screen
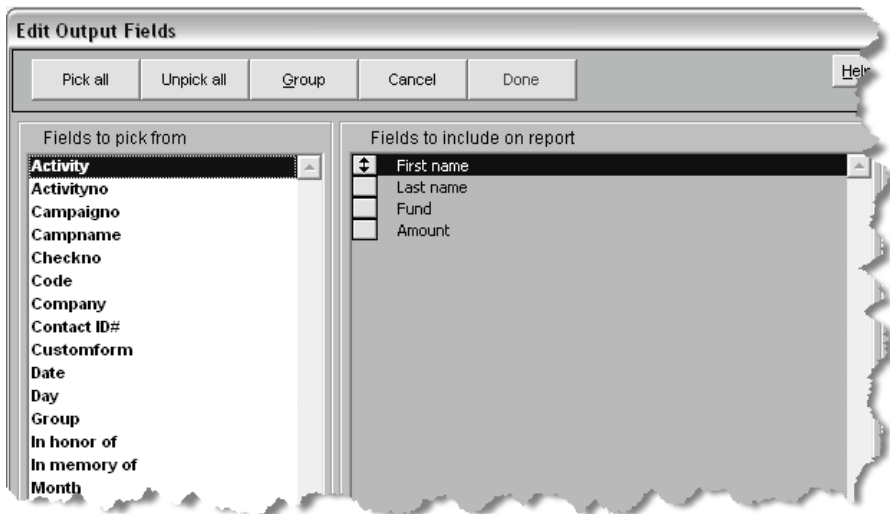
By pressing the following command buttons, you can select fields to appear on your report:

Pick All - Selects all fields to display on the report. To select a single field, you can either double-click on it or use the arrow keys to navigate to it and then press the Enter key. To unselect a field, just repeat this action on the selected field.

Unpick All - Deselects any fields in the set of fields to include on the report.

Group - Displays the **Select Group Field Type** screen, which has two organizing functions:

• To break up your query result into sub-groups.

• To calculate and show summary information on selected fields.

(For more information, see the section "Picking Group and Summary Fields.")

Cancel - Exits this screen without saving any changes that you made.

Done - Saves your selected fields and takes you to the Report Overview screen.

Selecting Output Fields Example

Suppose you want to provide a list of donations. On the report you want to see the donor's name, the amount of the donation, the fund name, and the date the donation was made. Here are the steps for specifying the output fields for this example:

1. In the Reports Manager, highlight the report you want, then click the **Next** command button. If this is the first time you've selected this report, you will see the Edit Output Fields screen. If you have already selected output fields, you will be taken directly to the Report Overview screen. If that happens, click the **Edit Output Fields** command button to go to the screen.

2. To select the fields you want, move the cursor over the **Fields to Pick From** list on the left side of the screen. Double-click on each of the fields you want to select:

First name | Last name | Amount | Fund | Date

As you double-click on each of the desired fields, Report Maker lists them in **Fields to Include on Report** on the right side of screen.

Changing the Order of Output Fields
In the course of selecting output fields, you may wish to change their order or position. In a report, the order of the vertical columns displaying your report's data is determined by the order of fields that you have selected. You can change the order by clicking on the button to the left of the field and dragging the field to its new position and then releasing the button.

Picking Group and Summary Fields

When you are in the Edit Output Fields screen, you can also designate fields to summarize your numeric data. Your summary options include:

Option	Description	Example
Totals	Sum of a field across a range or group of records	Total donations
Counts	Number of records in a group	Number of items in a collection
Average	Average value of a field in a group	Average value of items in a collection
Minimum	Lowest value of a field in a group	Smallest donation in March 2004
Maximum	Highest value of a field in a group	Largest donation in March 2004

How to Group and Summarize

To summarize on a numeric field, you need to designate at least two fields. One field must be designated as a group field and one as a summary field. A group and summary field are defined as follows:

Group field - The field that Report Maker uses to cluster information when building the summary value (for example, use Fund to group donations to the same fund into one set).

Summary Field - The field that you want to perform calculations on (for example, donations for each fund).

Example

In the following example, the report will summarize year-to-date donations (a summary field) by fund (a group field). Each record in the query results will show the year-to-date donations for a single fund.
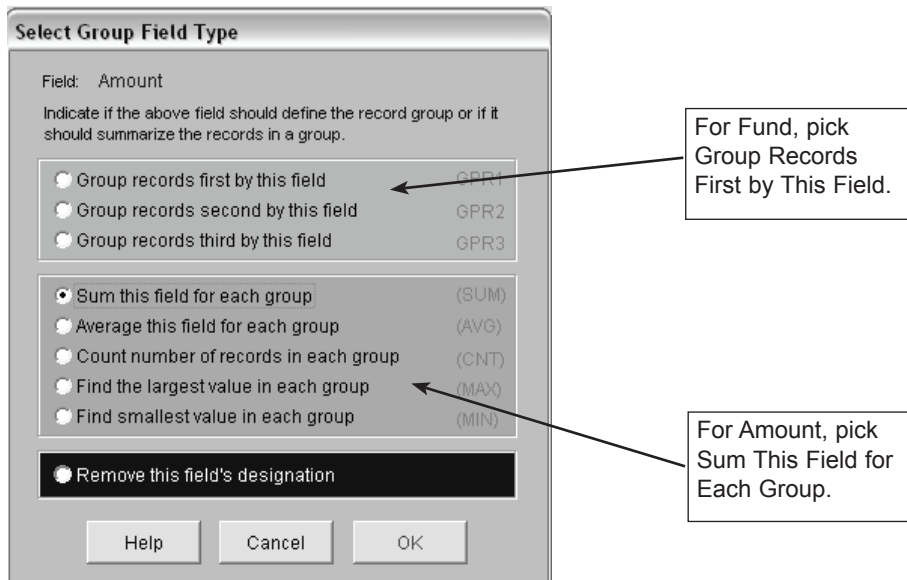
Before you start:

- Select the Donations database.
- Add a new report for donations with year equal to **2001**.
- Specify these two output fields: Fund and Amount.

After you have selected your report in the Reports Manager and picked your output fields, you will be taken to the Report Overview screen.

1. To choose summary and group fields, click the **Edit Output Fields** command button to display that screen. The right-side column of this screen shows the fields that will be displayed on the report. The left-side column shows the available fields that have not yet been selected.

2. In the left-side column, highlight the Fund field with your mouse or arrow keys. Click the Group button to go to the Group dialog box. The Group dialog box shows your selected field at the top. The first three options let you indicate the level of grouping. Report Maker permits up to three different levels of group fields. (See "Multiple Levels of Grouping.") The option you want is **Group Records First by This Field**. Selecting this option tells Report Maker to group together records by the fund to which the donation was made.

3. Click **OK** to save your group field selection and return to the Edit Output Fields screen. The GRP indicator now appears next to Fund in the right column.

4. Next, highlight Amount and click on the Group button again. This will display the same dialog you saw in Step 3. Pick the **Sum This Field for Each Group** option. This tells Report Maker to add the numbers stored in the Amount field for each record in each fund.

Figure 15-30
Group dialog
box

Select Group Field Type

Field: Amount

Indicate if the above field should define the record group or if it should summarize the records in a group.

○ Group records first by this field   GPR1
○ Group records second by this field   GPR2
○ Group records third by this field   GPR3

● Sum this field for each group   (SUM)
○ Average this field for each group   (AVG)
○ Count number of records in each group   (CNT)
○ Find the largest value in each group   (MAX)
○ Find smallest value in each group   (MIN)

● Remove this field's designation

Help   Cancel   OK

For Fund, pick Group Records First by This Field.

For Amount, pick Sum This Field for Each Group.

5. Click **OK** to save your selection and return to the Edit Output Fields screen.

6. Click **Done** to return to the Report Overview screen. The panel in the lower left-hand corner will show your two output fields next to their group and summary designations.

7. You are now ready to run the report by selecting the **Run Report** command button.

Running this report will select those records that match your filter condition and produce a summary table. Note that each fund record shows the sum of all donations to that fund.

Multiple Levels of Grouping

Report Maker allows you to create up to three levels of grouping. For example, to create a report on donations, you may want to see the report's records grouped first by fund. But within each fund, you want to see records grouped by year and month. To accomplish this:

- Set Fund so that it is marked with a GRP 1 indicator by highlighting Fund on the Fields to Show on Report screen, clicking the Group command button, and selecting Group Records First by This Field.

- Set Year so that it is marked with a GRP 2 indicator by highlighting it and selecting Group Records Second by This Field.

- Set Month so that it is marked with a GRP 3 indicator by highlighting it and selecting Group Records Third by This Field.

SORTING OUTPUT RECORDS

The Edit Sort Order screen lets you determine how your results will be sorted. To select a sort field, double-click on it with the mouse. You may specify up to nine different sort fields.

Pick All - This command button is disabled because you specify sort fields one at a time.

Unpick All - Removes all fields from the Fields to Sort Records By list. This allows you to clear all previous sort selections and display information in the order it appears in the database.

Figure 15-31
Edit Sort Order
screen
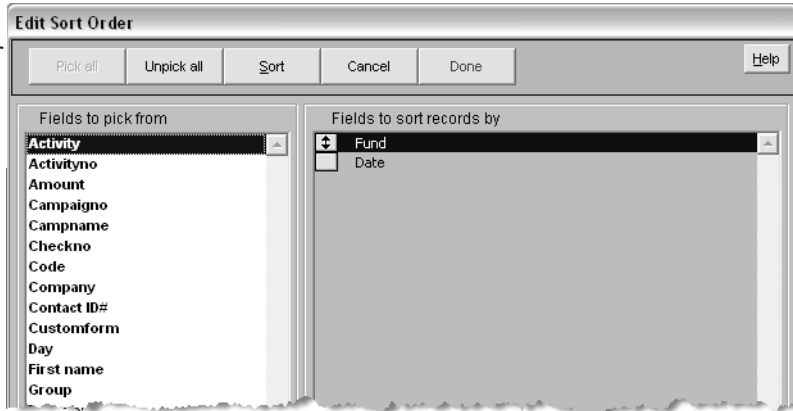
Sort - You can sort by a selected field in either ascending or descending order. (Sort is ascending unless you specify otherwise.) Highlight a field in the list. Click **Sort** to toggle between ascending and descending order. If you have specified descending order, then the DOWN indicator appears. If you have specified more than one sort field, changing the status of ascending or descending does not move fields to a different position in the list. (The first field in the list is sorted before the second, and so on.)

Cancel - Exits without saving changes.

Done - Saves your sort specifications and exits this dialog.

SELECTING TYPE OF OUTPUT

Report Maker lets you send the results of a query to a variety of formats, including reports, worksheets, databases, and text files. Alternately, you can view your query results on screen without writing the results to another format. To select any of these output options, follow the steps below.

1. Display the Report Overview screen by selecting the report from the Reports Manager.

2. On the Report Overview screen, click on **Pick Output Type**.

3. Report Maker will display the **Type of Output** screen shown in Figure 15-32.

4. Select the type of output you prefer by clicking on the associated button. For example, if you want a standard report, click on **Report in Column Layout**.

5. If you have specified the report to produce a database, text file, or worksheet, fill in a file name that Report Maker can use to save the output. Note that, by default, the file is named PPS_data and is saved onto the Windows Desktop. The default report directory is defined on PastPerfect's Setup General Information screen.

6. Click **Done** to save your choices and exit this screen.

Figure 15-32
Pick Output
Type screen

Report Types

The most common and default report type is Report in Column Layout. On this report, each field is listed as a column. This report is great if you have only a few fields. Creating a column report with more fields than will fit across the paper will result in not all fields being included.

For reports with more fields, choose **Report in Form Layout**. With this style of report, fields are listed each below the other, with the field names on the left edge of the report.

TIP

If you really want to create a column report with lots of fields and the Report Maker drops some of the fields that you think may fit if reduced in width, first select Report in Form Layout as the output type. Then press **Run Report** and **Edit form** to modify the report layout and place the fields in columns.

Creating Reports

On the Report Overview screen click **Run Report**. If you have chosen to output to a report, you will be taken to the Report Setup screen. This screen lets you customize the appearance of your report, preview the report on-screen, and then print it.

Figure 15-33
Report Setup
screen
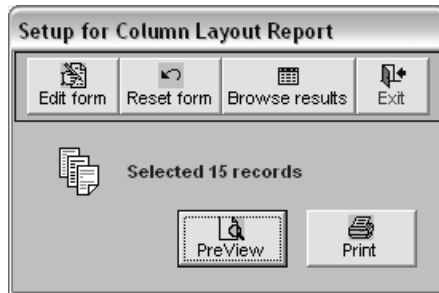
Edit form - Displays the report on the Report Design screen. Report Maker reports can also be redesigned from the main Reports menu by selecting Modify Report Layout, as described above.

Browse results - Displays an on-screen table view of the query results.

Reset form - Restores the report form to its original state (the state it was in the first time you ran the query). All changes are eliminated. Report forms return to a single-line columnar format with fields in the same order as you specified them in the Fields to Show on Report screen.

Preview - Displays a screen preview of the report.

Print - Sends hard copy output to your printer.

Creating a Detail/Summary Report

A Detail/Summary report allows you to see both detail and summary records. A detail record contains copies of the fields from the database you queried. A summary record collapses or combines two or more detail records into a single record. For example, suppose you want to generate a report that lists all donations and also shows the total donations for each fund. To do this, you would select one field in your report form to be a group field and another field to be a summary field. A group field is a field whose values remain constant across a set of records. A summary field summarizes the records in each group.

In this example, the Fund field would be the group field and the Amount field would be the summary field. For a summary statistic, you might select the Sum statistic to total the donation amounts by fund for the year. However, you could choose an **Average** to show the average donation amount by funds or choose a **Count** to show the number of donations made to each fund. The statistics available to you include:

Count - Number of records in the group.

Sum - Total of all values in the group.

Average - Mean or average value of the group.

Lowest - Single lowest value in the group.

Highest - Single highest value in the group.

Standard Deviation - Standard deviation in the group.

Variance - Degree of variation in the group.

While you can select any field to count, the other statistics require you to select a numeric field. Below is a step-by-step example.

Example

The example below assumes that you are querying the Donations file. From this file, you selected the two output fields of Amount and Fund. In this example, you will create a Detail/Summary report that groups by fund and summarizes donation amounts to each fund.

1. Go to Report Setup and create a report on the Donations database that has Fund and Amount selected as output fields. *Be sure that the report is selected to sort by fund*. Then click on **Run Report** from the Report Overview screen. This will create the default report layout.

2. Open the Report Designer by clicking **Edit Form** on the Report Setup screen or by returning to the main Reports menu, locating the new report on Report Maker Reports list, and then clicking on **Modify Report Layout**.

3. Next, click on the Report pull-down menu at the top of the design screen and select **Data Grouping**. Before you can enter a group field, you must first click in the empty text box at the top of the Group Expressions list. Once the cursor is sitting in this text box, type in the name of the group field, which in this case is FUND. Click **OK** to return to the Report Designer.

Figure 15-34
Data Grouping
dialog box

Type FUND on top line and press OK.
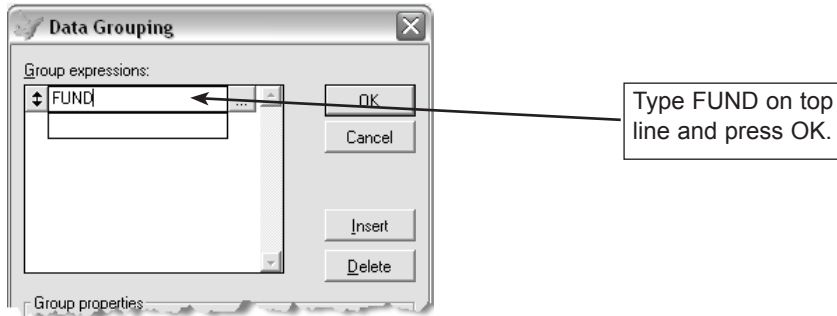
4. Return to Report Form. The Report Designer will now display your report form with two new horizontal bands. Near the top of this report form, directly under the Page Header band, will appear the first new band, labeled **Group Header 1: FUND.** Additionally, directly after the Detail band will appear the second new band, labeled **Group Footer 1: FUND.**

Figure 15-35
Group Header
and Footer
bands

Group Header band.
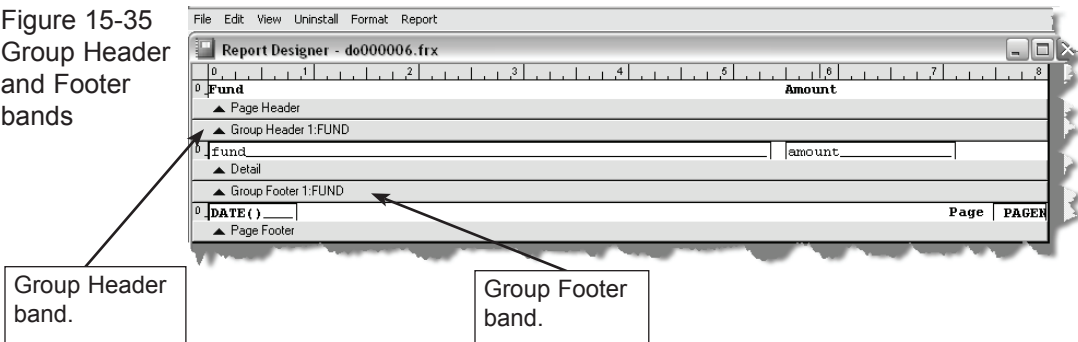
Group Footer band.

5. Before you can insert a summary field, you must first open up a space in the report form to hold it. To make this space, click on the band Group Footer 1: FUND. Then, while holding the left mouse button down, drag the mouse downward to create the space.

6. In this new space, insert the name of the field to be summarized. The best way to do this is to copy this field from the Detail band in your report form. First, select the field Amount that appears directly above the Detail band. Copy it to the

clipboard by selecting Edit from the top menu and selecting Copy. Next, paste in a copy of this field by selecting Edit | Paste. Click and drag this pasted field to the newly opened space above the band Group Footer 1: FUND.

Figure 15-36
Group Footer
with Sum field

Copy and paste the Amount field into the Group Footer band.
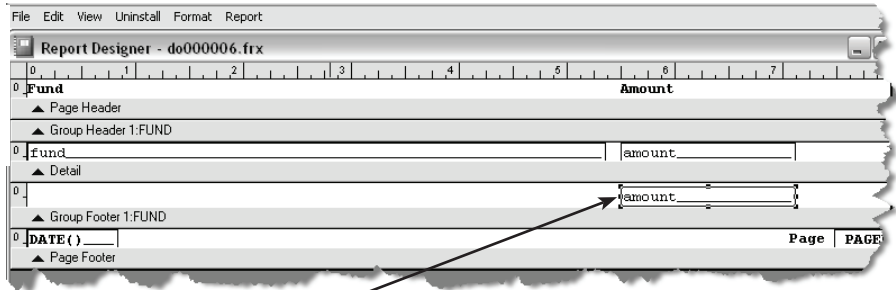
7. Once this summary field is in place, you must indicate which type of summarization should be performed. To do this, first double-click on the Amount field you just copied to the Group Footer band. This will open the Report Expression dialog. Now click on **Calculations**.

8. After clicking Calculations, click on the type of summarization you want, which in this case is Sum. Now click **OK** to exit. This will take you back to the Report Expression dialog. Click **OK** to exit this dialog and return to the Report Designer.

Figure 15-37
Calculation
field

Select Sum and click on OK.
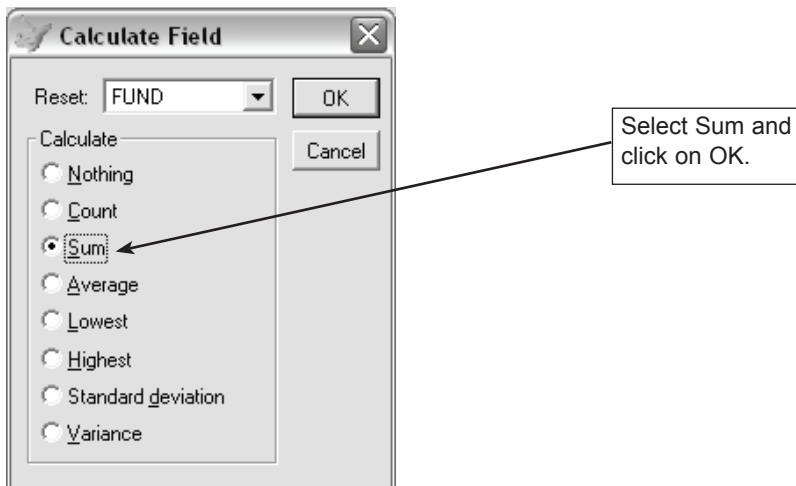
9. Click on File | Close. Be sure to answer Yes when asked, "Do you want to save changes to the Report?"

You may want to add a title and some lines or other graphics to the report to make it more appealing. See "Report Controls Toolbar" discussed on pages 216-217 of this chapter, for more detail.

CUSTOM REPORTS

If you need special reports, but don't have time to create them with the Report Maker, you can purchase custom reports designed to your specifications. These custom reports can be accessed by clicking the **Special Reports** command button on the Reports menu.