

Creating Postable Records On-the-Fly

Application in
ONLINE Edition



TOM PETIT

When you need to create records you can post to for a reports or archive database, here's an easy and efficient way to do it.



RECENTLY, a client's requirements posed an interesting challenge. It was a non-profit organization that sometimes received multiple donations from the same donor. The client wanted the donor's record to show each donation date and amount, but he also wanted some donation recap reports that would show breakdowns by date ranges or the various projects donors supported.

The Donors database was a *multi-lineitem* database. (See Figure 1.) With the donation dates, amounts, and other information stored in the donor records as lineitems, the reports posed a problem. For example, a February 5 donation from donor Jones might be entered on the first donation line of his record, whereas a donation on the same day from donor Smith might appear on the second or third donation line of her record. How could I create a report sorted by any criteria and hope to include the two donations in the same column?

The first step

I started out by copying each donation in the donor's record to a separate donations database. (I'll refer to the original database as **Donors.dtf**, and the second database as **Donates.dtf**.) This separate database contained a record for each donation, with the following fields:

Donor ID: (Speedy field)
Date: (Date field)
Check No: (Text field)
Amount: (Money field)
Project: (Text field)

Figure 1 shows a screenshot of a database form titled "DONORS". The form displays donor information for "Donor ID: 4322", including name, address, city, state, zip, and phone. Below this, there is a section titled "Donations" which contains a table with columns for Date, Check, Amount, Project, and Posted. The table lists four donation records (D1 through D4) with their respective check numbers, amounts, and projects. At the bottom of the form, there is a status bar indicating "DONORS.DTF Retrieved form 1 of -- Total Forms: 1 Page 1 of 1" and a row of function keys: Esc-Exit, F1-Help, Alt+F6-Table, F7-Search, F8-Calc, and F10-Continue.

Date	Check	Amount	Project	Posted
D1: 10-26-97	C1: 2344	A1: \$200.00	P1: Kids	Pst1: x
D2: 12-15-97	C2: 2432	A2: \$100.00	P2: Building	Pst2: x
D3:	C3:	A3:	P3:	Pst3:
D4:	C4:	A4:	P4:	Pst4:

Figure 1. The Donors database has a multi-lineitem structure (at the bottom of the form) that isn't well-suited for reports.

The Quick Answer

The Independent Guide to Q&A Expertise

February 1998

Volume 9, Number 2

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With each donation stored in the separate database this way — one record per donation — it would be easy to generate reports by donor, donation date range, amount levels, or project.

The

question was, how best to copy a new donation from the Donor's record to a new record in the Donates database.

I looked at several options. Jeff Nitka's article on how to create reports from a multi-lineitem database in the October 1997 *Quick Answer* offered an interesting approach that exports the records from the original database into a second database designed for reports. What I needed, though, was a way to copy each donation to the second database as soon as it was entered in the Donors database.

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Now We're Cookin'!

TOM MARCELLUS

BY the time you read this, *The Quick Answer's* Web site should be up and running. If you have an Internet connection, set your browser to <http://www.quickanswer.com> and give it a look-see. (You'll get the best viewing results with Internet Explorer 3.0 or higher or Navigator 3.0 or higher.) For more on the benefits of subscribing to *The Quick Answer Online edition*, see *Upgrading to the Online Edition* at the Web site, or on page 11 in last month's issue.

Application in
ONLINE Edition

Speaking of the Online edition, you'll see this icon at the top of two of this month's articles (pages 1 and 7) and in upcoming issues as well. It indicates that the sample databases featured in the article, complete with programming and macros – ready-to-use as-is or modify – are included with the Online edition. (You can download a sample issue of *The Quick Answer Online edition* from our Web site.)

Here's a comment from a reader who recently took a look at the new Online edition:

Got Acrobat Reader 3.01 downloaded and installed. Opened the Jan 1998 issue... Amazing! Looks great! Printed darn good on the lowest quality setting on my inkjet... Great job!

Meanwhile, at another reader's suggestion, we're considering a plan to better serve Online subscribers. Each month, around the 5th, we'll send each Online subscriber an email notification with a hyperlink in the message. This way, they simply click on the hyperlink to go to the Web site to pick up their new issue.

This month **Bill Halpern** and **Gordon Meigs** take over the @Help column from T.J. Shufflin, whose professional obligations in the forensic field (he directs a crime lab) have placed increasing demands on his available time. Good luck, T.J. – and don't work too hard!

Erika Yoxall and **Jeff Nitka** show how to create custom interfaces that make Q&A easier than ever to use. And **Tom Petit**, in his first *Quick Answer* appearance, shows how he makes Q&A automatically create, on-the-fly, the new records he can then post to.



Tricky Date Calculations

Two tricky date calculations are often required to determine billing cycles and the like—the

number of days in a month, and the date of its last day. Using **MyDate** (Date), **DaysInMonth** (Text or Number), and **LastDateOfMonth** (Date) fields, you can find the two variables with the following program in the MyDate field:

```
> Rem" If MyDate isn't January, add 1 month,  
    make the day 01, then subtract 1 day";
```

```
If @Month(MyDate) <> 12 Then  
DaysInMonth = @Right(@ToDate(@Left(MyDate, 5)  
+ @Str(@Month(MyDate) + 1) + "/01") -1, 2)
```

```
Else  
DaysInMonth =  
@Right(@Left(MyDate, 8)  
+ "31", 2);
```

```
If @Month(MyDate) <> 12  
Then  
LastDateOfMonth = @ToDate(@Left(MyDate, 5)  
+ @Str(@Month(MyDate) + 1) + "/01") -1  
Else  
LastDateOfMonth = @Left(MyDate, 8) + "31"
```

The two parts of the program work independently. That is, you don't need the DaysInMonth field to get the LastDateOfMonth value, and vice versa. For a current month calculation, you can dump the MyDate field, and replace it in the program with @Date.

The
**Quick
Answer**™

Editor / Publisher
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The Quick Answer (ISSN 1052-3820) is published monthly (12 times per year) by Marble Publications, Inc., 1927A Harbor Blvd., Costa Mesa, CA 92627 USA

Cost of domestic subscriptions: 12 issues, \$89; Outside the U.S., \$109; Online edition, \$69. Single copy price: \$10; outside the U.S., \$12.50. All funds must be in U.S. currency. Back issues are available upon request, for the same price as a single copy.

Postage paid at Costa Mesa, CA. **POSTMASTER: Send address changes to The Quick Answer, 1927A Harbor Blvd., Costa Mesa, CA 92627.**

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Postable Records ... continued from page 1

Eventually, I decided to use Q&A 5.0's XPost command because it would post a new donation to the second database on-the-fly in real time.

But this introduced a new problem. *XPost can't create new records to post to.* I would have to make sure a target record existed in the Donates database for every XPost from the Donors database.

In the March 1996 issue, Tom Marcellus showed how to use @Shell to launch a second copy of Q&A, add a new record to the target database, then return to the original record in the first copy of Q&A to execute the post. This seemed like a good solution for situations where an occasional new target record was needed. In my case, though, a new target record was needed every time a donation was received. I wanted an easier way to get the same result.

The simplest way, it seemed to me, was to pre-fill the target database (Donates) with a quantity of blank records. This way, I could execute an XPost from Donors, and have Q&A simply pick a blank Donates record to post the donation data to.

Fine so far, but what happens when all the blank Donates records have been used up? I simply add a bunch of new blank ones. And I do it in a way that's fast and efficient, and doesn't interrupt the normal flow of data entry.

Adding the elements to the Donates database

I added a text field named *Form* to the end of the Donates database. I made it three characters long, and Speedy, so it's value can be the matching key value for the XPost commands in the Donors database.

Next, I added a quantity of records to Donates with AAA in the *Form* field, leaving all the other fields empty. To do this, I created a Standard ASCII file in Write with 60 lines containing "AAA", like this:

```
"AAA",  
"AAA",  
"AAA",  
"AAA",  
"AAA",  
"AAA",  
"AAA",  
"AAA",  
...
```

This way, when it's time to add some new blank records, I can have my program in Donors run a macro that imports this file (AAA.ASC) into Donates.

The Merge Spec for the import includes a 1 in the *Form* field, so that's the field in all 60 new records that gets the AAA.

Programming the Donors database

In my case, the Donors database included a *Donor ID* field, along with the following lineitem donation fields at the bottom of the form:

Date	Check	Amount	Project	Posted
D1:	C1:	A1:	P1:	Pst1:
D2:	C2:	A2:	P2:	Pst2:
D3:	C3:	A3:	P3:	Pst3:
D4:	C4:	A4:	P4:	Pst4:

I added the following program to the *Pst1* field:

```
< If D1 <> "" and Pst1 = "" then  
XPost("Donates", "AAA", "Form", Donor ID, "Donor ID");  
If @Error Then {@Msgbox("No blank records to post to.",  
"Press Enter to add some","to Donates database");  
@Macro("Add records to Donates") }  
Else {  
XPost("Donates", Donor ID, "Donor ID", C1, "Check No");  
XPost("Donates", Donor ID, "Donor ID", D1, "Date");  
XPost("Donates", Donor ID, "Donor ID", A1, "Amount");  
XPost("Donates", Donor ID, "Donor ID", P1, "Project");  
XPost("Donates", Donor ID, "Donor ID", "", "Form");  
Pst1 = "x"  
}
```

When a new donation has been entered, Q&A looks for a Donates record with AAA in the *Form* field. If it finds one (no error), it posts the Donor ID plus the line 1 fields (D1, C1, A1, and P1) to it.

If, on the other hand, the first post attempt generates an error, it means Donates needs some more blank records to post to. The macro, which I'll show you later, takes care of adding the blank records, then returns to the originating Donor record to perform the post. The final XPost command blanks the *Form* field to prevent the record from being posted again.

Once the post is complete, an "x" is placed in the *Pst1* field to prevent reposting.

The other three Post fields (Pst2, Pst3, and Pst4) contain the same program, except that their references are to the fields on the same donation line, such as D2, A2, P2, and Pst2 for the second donation lineitem.

The record-adding macro

The program we looked at earlier contains an @Macro("Add records to Donates") command that triggers if the target database contains no blank records. Here's what the macro looks like:

```
<begdef><nokey><name>"Add<sp>Records<sp>to<sp>Donates"  
<vidon><home><home><home><f11><capsf10>uis<home>  
c:\qa\aaa.asc<enter>donates<enter><end><end><end>1  
<f10><f10><esc>sdonors<enter><f12><f10><dn><dn><dn>  
<dn><dn><dn><enddef>
```

These are the steps the macro performs:

1. Moves to the Donor ID field (in this case, the first field on the form), and copies the ID to the Clipboard with F11.
2. Saves and exits the Donor record.

Continues on page 12

Using Your Q&A Data in Word/WinFax Fax-Merges

WILLIAM HALPERN



With a little help from Microsoft Word, Symantec's WinFax Pro 8.0, and any fax modem, you can run fully personalized fax-merges using your Q&A data.



In the December 1997 issue, Tom Marcellus showed two ways to automate the process of creating a Q&A export file for Microsoft Word and having Word run a mail-merge with it. Both ways use an @Shell technique to create the export file on-the-fly and start Word with an autorun macro. (You can also use Q&A 5.0's External Programs feature to start Windows 95 programs and run macros in them to automate procedures. See the Sidebar.)

So, there's no problem mail-merging your Q&A data with Word documents in order to take advantage of the powerful formatting, font, and graphics capabilities of a Windows word processor.

But what if you want to run a Word *fax-merge* using your Q&A data?

Since version 3.0, Q&A has supported plain-Jane fax-merges via a SatisFAXtion fax modem, but your faxes can't contain fonts or graphics. Now, with Q&A 5.0, Word, and WinFax Pro 8.0, you can perform a fax-merge to multiple recipients, with each fax as personalized as any merge-letter. What's more, your faxes can contain attractive fonts, tables, graphics, and features that just come natural to a Windows word processor like Word. What makes it possible are special Word macros that come bundled with WinFax Pro 8.0, and Q&A's ability to run external programs in the Windows 95 environment.

Using Microsoft Word to illustrate (WinFax comes with similar macros for WordPerfect and Ami Pro), I'll show you how to set up a Word/WinFax fax-merge using your Q&A data. Tom covered the finer points of designing a Word merge document and merging the Q&A data with it, so I'll cover only what you need to know about using the resulting merge document in a fax-merge.

Getting started

If you haven't installed the Word macro that comes with WinFax Pro 8.0, start Word, and select File / Open. Navigate to your WinFax\Macros subdirectory, and open the appropriate Word document—*Word60.doc* for Word 6.0, *Word70.doc* for Word 7.0 (Word 95), or *Word97.doc* for Word 97). Depending on your default settings in Word, Word might ask you to confirm that you want to open a document containing a macro. In addition to installing

Starting Windows Apps Via External Programs

When you use Q&A 5.0's Alt-F9 External Programs feature to start Windows applications, you have to make sure the command line is properly set up. For example, a command line to start Microsoft Word and run an autostart Word macro might look like this (your path might be different):

```
C:\Msoffice\Winword\Winword.exe /m%f
```

As shown in this example, you first specify the path to Word. You then follow it with a space and the /m Word macro startup switch. Finally, you tack on the %f parameter to pick up the value of the current Q&A database field, which in this case contains the name of the Word macro you want to run.

If you wanted avoid having to press Alt-F9 and select Word, you could record a Q&A macro to do it for you. You could then have an @Macro command run the macro from the field that contains the Word macro's name. The macro would simply "press" Alt-F9 to display the External Programs menu, then select Microsoft Word from it.

If the name of the Word macro you wanted to run was always *Merge1*, you could use an External Programs command line like this instead:

```
C:\Msoffice\Winword\Winword.exe /mMerge1
```

This would let you start Word from the External Programs menu from anywhere in Q&A, and would always invoke the *Merge1* Word macro.

To return to Q&A automatically after quitting Word, you must be running Q&A in a Window. Also, Q&A's shortcut properties must include both Expanded and Extended memory set to 1024, and Q&A must *not* be set to prevent it from detecting Windows. (To find out how to change Q&A's shortcut properties, see David Dvorin's articles in the October and November 1997 issues.)

the macro and a set of required WinFax *styles*, the document contains instructions you should read.

Once you've installed the WinFax macro, any *future* Word documents you create can be made fax-mergeable. To make an *existing* Word document fax-mergeable, you'll have to copy its text into a new Word document, then take it from there.

Using Word's Mail Merge Helper

The following instructions for setting up a Word/WinFax fax-merge are distilled from a Symantec document available at www.symantec.com. To read and optionally download the document, go to [symantec.com](http://www.symantec.com), and choose Technical Support / Knowledge Base. Select WinFax Pro 8.0 from the Products list, and search for the keywords *Microsoft Word*. The document you want is *How to Use Microsoft Word Mail Merge with WinFax PRO 7.x or 8.0*. It's also available by return fax as Fax On Demand Document #04240; 01142.

Word has a Mail Merge Helper. To start it, pull down the Tools menu and select *Mail merge*. To start a new merge document from a blank screen, select *Create / Form Letters / Active window*. (See Figure 1.)

The Helper will then prompt you to specify the data source for the merge. You can specify your existing exported Q&A data (in a form such as dBASE or ASCII). If you export as an ASCII file, you'll have to create a Word *header* file containing the field names that correspond to (and are in the same order as) the data in the export file. You can avoid this by using Q&A's dBASE export format, then selecting the dBASE file as your data source in Word.

With a valid data source, Word will let you select the records (recipients) to include in the fax-merge.

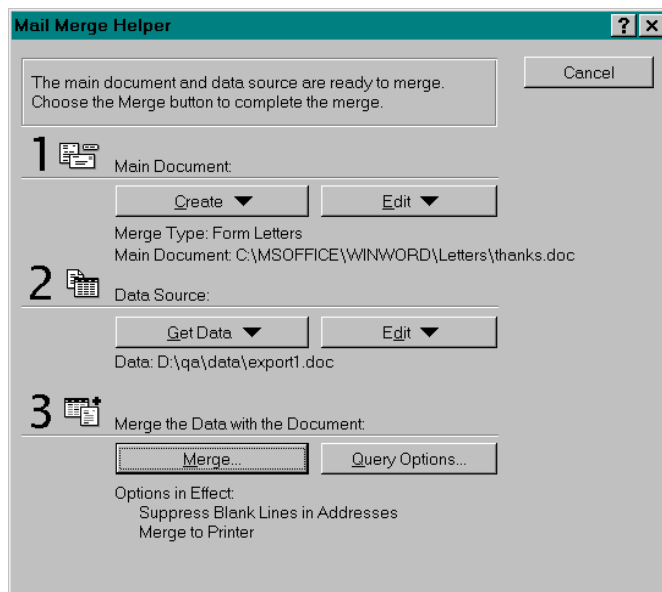


Figure 1. Word's Mail Merge Helper. When the merge document and data source have been defined, as in this example, the Merge button under Step 3 will be available.

Once you've defined your data source, you can add your merge fields to the document.

Creating the merge document

First, type the document's boilerplate text—the text that will appear unchanged in each merged fax. Then, follow these steps to add and apply the proper WinFax styles your merge fields:

1. The document must contain the fax number as the first *WinFax* merge field. (Other Q&A merge fields, such as those for the name and address, can be above it.) Place your cursor on an empty line where you want to insert the fax number, click the Insert Merge Field button, and select the fax number field from the list. (To make the fax number invisible—so it doesn't print in the fax—see the sidebar "Cleaning Up Your Fax-Merge Document.")
2. With the cursor on the fax number field, pull down the styles list on the left side of the screen just below the toolbar (it should contain *Normal* by default) and select *WfxFaxNum* from the styles list. Word will apply the style to the line, and WinFax will recognize the data merged here as the recipient's fax number.
3. Place your cursor on another empty line where you want to add the next WinFax merge field, insert it, then use the Styles list to apply the appropriate style to it. (See Table 1.)
4. Insert the rest of the merge fields from the Q&A data source to your document.

- A merge field can appear in a document more than once, but a *Wfx* style *can't be applied more than once*.

- The macro that performs the fax-merge scans the document from top to bottom for *Wfx* style markers, so the *Wfx* styles *must* appear in the document in the precise order listed in Table 1.

Table 1. Available WinFax (*Wfx*) styles. You don't have to use them all. Those you do will appear in your WinFax Send log. Each style can appear only once in the document.

Merge Field	WinFax Style
Fax number (47 characters max.)	WfxFaxNum
Recipient's name (31 characters max.)	WfxRecipient
Transmit time (HH:MM:SS time format)	WfxTime
Transmit date (MM/DD/YY date format)	WfxDate
Company (42 characters max.)	WfxCompany
Subject (79 characters max.)	WfxSubject
Keywords (33 characters max.)	WfxKeyword
Billing code (26 characters max.)	WfxBillCode

You don't have to use all these merge fields and their corresponding styles. Just remember that those you *don't* use won't appear in your WinFax Send log.

Word styles affect the *entire paragraph*, so make sure

that any line containing a Wfx style contains only one merge field and nothing else. For example, you can't have something like *Fax Number: <<Fax>>* on the same line because WinFax will try to dial the literal string and fail. If you want to include a label to identify merged data, place it above the field, like this:

Fax Number (Normal text – no Wfx style applied)
 <<Fax>> (Merge field with *WfxFaxNo* style applied)

Tip—You can place Wfx-styled merge fields in a Word table, and apply your Wfx styles to the appropriate cells, leaving adjacent cells unstyled. This way, you can place a WinFax merge field along with text and non-WinFax merge fields on the same line (the same row of the table). If you like, you can format the cell and table borders not to print. See **Figure 2**.)



Figure 2. You can work around the “one-style-per-line” restriction by placing your elements in a Word table.

Make sure *Fax Preview* is turned off in your WinFax Setup, or you'll have to manually click the Send button to fax each document.

When your document is finished, pull down the Tools menu, select Mail Merge, then click Merge. Select *Merge to New Document*, and Word will create a new document (consisting of all the faxes) with the data all nicely merged. Review the faxes. If they're okay, you can go ahead and send them this way:

1. Pull down the Tools menu and select *Macro*.
2. From the Macro list, choose *DDEFaxMerge*. (In Word 97, choose *DDEFaxMerge.Main*.)
3. Click Run. A *DDEFaxMerge Macro* dialog box will appear.
4. Select *Don't Show WinFax Send Dialog*, then click OK (In

Cleaning Up Your Fax-Merge Document

You don't have to sacrifice the appearance of your faxes for the sake of the specially-styled WinFax merge fields. For example, the merge document *must* contain a Wfx-styled fax number field, yet for aesthetic reasons you might not want the fax number to appear in it. Here's a trick you can use to make the fax number (and any other WinFax merge fields) invisible. Place the field on a line by itself, assign the correct Wfx style to it, then do this:

1. Select (highlight) the entire line.
2. Pull down the Format menu, and choose *Font*.
3. Choose the smallest font size and line spacing you can, so the line won't take up much space in the document.
4. Change the color of the font to *White* so it won't print. (You can't *Hide* the merge field, because then WinFax won't be able to see it if your word processor is set to *not* print hidden fields.)

Repeat these steps with any other Wfx-styled merge fields you don't want to appear in the fax.

Word 97, Just click OK.)

When the faxes have been sent, a WinFax icon will appear in the lower left-hand corner of your screen.

You see, we can still use our favorite database manager to store and manipulate our information, and at the same time take advantage of the power and flexibility that Windows 95 programs offer.

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Letters Making the Autodialer Work

When trying to implement Bill Halpern's Q&A 5.0 phone autodialer featured in the May 1996 *Quick Answer*, I couldn't figure out why the variable (the phone number in field #10) wasn't being passed to the Dial.bat batch file. It turns out that it must be passed to the batch file as a *number*, not text. So, for anyone trying to use this great little custom feature, the part of

the program that invokes the batch file should read as follows:

```
#20=@Shell("C:\QA5\DIAL.BAT " + @Num(#10));
```

The field containing the program was formatted for text to accommodate the Dial label, so the @Num function is required to pass the variable correctly.

JAMES POGANY, OAKVILLE, ONTARIO, CANADA

Simplify Record Selection with a Query Builder

ERIKA YOXALL

Application in
ONLINE Edition



Filling out a Retrieve Spec can be frustrating because

you have to tell Q&A precisely what you want. Wouldn't it be nice if you could choose your retrieval criteria from pop-up selection lists? You can!



ONE of the things that bugs me about using a Retrieve Spec in Q&A is that I can't get a list of values to choose from for a given field. I have to try to remember how to spell something, or use a wildcard that might not get me exactly what I want. It also makes it difficult for anyone other than the person who does the data entry to figure out what to search for. There had to be a way to create a point-and-shoot method to find records without having to deal with the Intelligent Assistant, so I came up with what I call a *Query Builder*.

The key to making the Query Builder work is Q&A's ability to evaluate a programming expression to retrieve a set of records. For example, if you have a number field named **Apples** and another number field named **Oranges**, you can get the records where the total of both fields is greater than 50 by placing { (Apples + Oranges) > 50 } in any Retrieve Spec field. If you have a **LastName** field, and you want to retrieve the records where *LastName = Yoxall*, rather than typing *Yoxall* into the **LastName** field, you can type {LastName = "Yoxall"} into any field.

This means that as long as you use correct syntax, you can write your retrieval expression anywhere you want and simply paste it into the first Retrieve Spec field.

Sample application

To illustrate the technique, I created a simple Query Builder database (Querybld.dtf). (See Figure 1.) It's a one-record database I use to find records in an external database named Shipment.dtf. Querybld.dtf contains the following fields:

Customer: Text
PartNumber: Text
BeginShipDate: Date
EndShipDate: Date
RetrieveSpec: Text, accessible by clicking ViewRecords
ViewRecords: Text, JC, Set to contrasting color at Palette Spec to look like a button. Initial Value = View Records. Accessible only by clicking.

Programming

Clear (Customer, PartNumber, BeginShipDate, EndShipDate, RetrieveSpec)

This on-record-exit statement clears all the fields in preparation for the next query.

```
<Customer:
If Customer = "" Then
Customer = @XUserselect("Shipment", "Customer")
Offers a selection list of customer names to choose from.

< PartNumber:
If PartNumber = "" Then
PartNumber = @XUserselect("Shipment", "Part Number")
Offers a selection list of part numbers to choose from.

> BeginShipDate:
EndShipDate = BeginShipDate
Makes sure EndShipDate isn't empty if a BeginShipDate is entered.

< ViewRecords:
GoTo RetrieveSpec
Goes to the RetrieveSpec field when clicked.

< RetrieveSpec:
RetrieveSpec =
"{ " +
@Txt(Customer<>"", "Customer = " + @Chr(34)
+ Customer + @Chr(34) + " and " )
+ @Txt(PartNumber<>"", "PartNumber = " + @Chr(34)
+ PartNumber + @Chr(34) + " and " )
+ @Txt(BeginShipDate<>"", "(Ship Date >=" + @Chr(34)
+ @Str(BeginShipDate) + @Chr(34) + " and Ship Date <="
+ @Chr(34) + @Str(EndShipDate) + @Chr(34)
+ " and Ship Date <=" + @Chr(34) + @Str(EndShipDate)
+ @Chr(34) + " )" + " }";

If @Right(RetrieveSpec,5) = "and }" Then
RetrieveSpec = @Repllas(RetrieveSpec, "and ", "");

@Macro("Run Query")
```

The RetrieveSpec field's program is where all the work gets done. It takes the selected and entered values

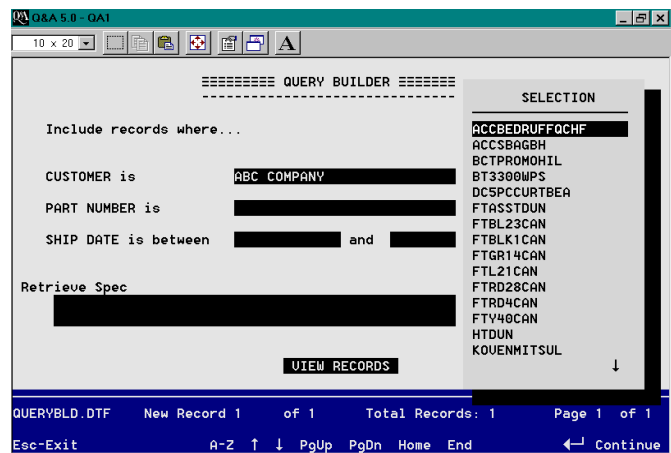


Figure 1. The Querybld database lets you choose the company and part number to query from pop-up selection lists.

from the other fields and strings them together into an expression suitable for use in a Retrieve Spec. (See Figure 2.) @Txt is used to determine if a field is blank before adding its elements to the expression. This way, it works regardless of whether some fields are left blank. @Chr(34) is the ASCII character code for a double quote (").

The last thing the program does is run a simple macro that exits Querybld.dtf, opens Shipment.dtf in Search/Update mode, and pastes the programming statement into the Retrieve Spec:

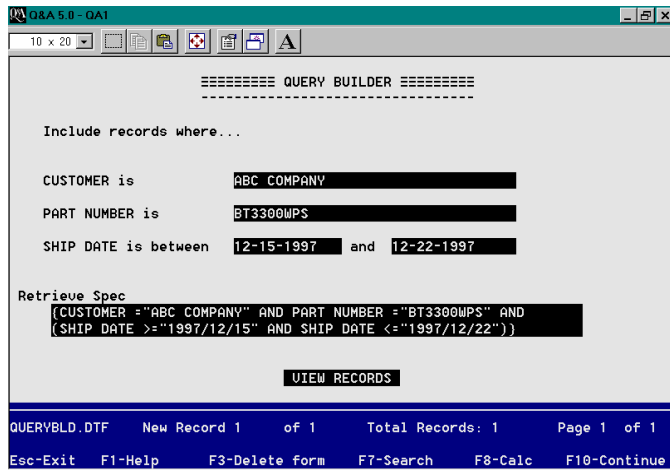


Figure 2. The retrieval expression created by the programming appears long enough for the macro to copy it to the clipboard to paste into the target database's Retrieve Spec.

```
<begdef><nokey><name>"Run<sp>Query"<vidon><f11><capsf10>
sshment<enter><f12><f10><enddef>
```

You can use this technique to create a highly customizable form to allow you and your users to find exactly what they need in a database. The programming expression you create can be used in any Retrieve Spec, including Report and Print Specs. I use this method to create executive report menus, record selection forms of all kinds – anything where my client can benefit from being able to quickly select a set of records without having detailed knowledge of the data or knowing how to use a Retrieve Spec.

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[Q&A evaluates a retrieval expression against every record in the database (without using any available indexes). So expect record retrieval times to correspond roughly to the number and size of the records in the database and your PC's speed.

For a custom interface technique that's similar in some respects, see Jeff Nitka's "Selective Mail Merge Made Easy" in the December 1997 Quick Answer. Also, see Jeff's article in this issue, where he uses a specialized database as an interface to simplify creating reports. – Ed.]

This application is available for download from The Quick Answer's Web site at <http://www.quickanswer.com>

Quick Tip

Ensure Correct Form Navigation



Sometimes, clients' users "out-smart" the usual form

navigation rules. A "clever" user finds out he or she can move through a form more rapidly by pressing the Down Arrow key rather than the usual Tab or Enter key. This can bypass fields and defeat critical on-field-entry or on-field-exit programming.

We don't like to "hard-code" strict cursor movement because it requires a navigation program in virtually every field, and makes it difficult for the DB administrator or programmer to quickly move through a form when necessary.

So, what we sometimes do in cases like this is redefine the Down Arrow key.

Please read all of this tip before attempting what I'm about to suggest. You might also want to clear your regular macro file (Shift-F2, Clear Macros), and after defining the new macro, save it to a file other than your default qamacro.asc file.

Press Shift-F2, Define macro. When Q&A prompts for the macro identifier, press the Down Arrow key. Q&A will respond

with a message saying, *That key is already used by Q&A. Do you want to redefine it? (Y/N).* Answer Yes, press the Tab key, then press Shift-F2 to save the macro. You can name it *New Down Arrow*, then save it to a new macro file.

One of the first things you'll notice is that you can no longer navigate Q&A's menus or List of Files screens using the Down Arrow key. Therefore, you, as the DB Administrator, might want to define a "secret" Down Arrow key—one this isn't normally used, such as the right square bracket. Do this *before* you redefine the Down Arrow key. Otherwise, when you record the keystroke to assign to the right square bracket key, the *real* Down Arrow key won't be available. After defining your "secret" Down Arrow key, don't tell anyone about it.

With the Down Arrow key redefined as Tab, users can press Tab, Enter, or Down Arrow to move through forms correctly, helping to ensure that your field programming will be executed.

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EDITED BY **BILL HALPERN**
AND **GORDON MEIGS**

Updating Fields from an ASCII File



I regularly receive an ASCII file containing updated parts price information, and I want to use it to update the list price and cost fields in my main parts database. I'd like Q&A to find matching part numbers in both files, and update the price and cost in my parts database only if they've changed. Also, can Q&A do a mass part number change? If I have 50 records with "47" in the part number, can I change it to "48"?

Mitchell King via email

Q&A can do both. Let's take your questions one at a time.

Update prices on matching part numbers

First, create a temporary database with a field for each field in the ASCII file. Import the file into it using *File / Utilities / Import / ASCII (Standard or Fixed, depending on the file's structure)*. Make the part number field Speedy. Now you can Mass Update your main parts database using the temporary database as a lookup source. Use an Update Spec program like the following to lookup the price and cost on each part number match.

```
#1: XLookup("TempDb", Part Number, "Part Number",
           "NewPrice", Price, "NewCost", Cost)
```

Follow these steps each time you receive an updated ASCII file, and your prices will be current with very little effort. Just remember that this will work only if the part numbers are unique in both databases.

Update a portion of a part number

If the 47 occurs anywhere in the part number, and you want to change it to 48, you can Mass Update the database using ..47.. in the part number field at the Retrieve Spec. In your Update Spec, you can use the @Replace function to change the 47 to 48 and leave the rest of each part number unaffected. If the part number field were #10, the Update Spec would look like this:

```
#10=@Replace(#10, "47", "48")
```

Always make a backup copy of your database before attempting a Mass Update like this.

Eliminate Report Headings



Is there any way to create a Q&A report *without* column headings and the dashed lines underneath them?

Justin Bratnober, St. Paul, Minnesota

Yes. By default, Q&A uses the field name for the column heading and a dashed line as the separator between the heading and report body. Suppressing these involves using special commands. For a *Customer Name* field, for example, you might use a simple Column/Sort Spec code of *10,AS*. To suppress the heading, add *H(\)* (a backslash followed by a space) To suppress the separator line, add *HS(\)* to the column's spec. The resulting spec would read *10,AS,H(\),HS(\)*. You can suppress a derived column's heading by placing the *H(\)* code on the Heading line, and suppress the separator by placing the *HS(\)* code on the Column/Sort Spec line. If you want something besides a dashed line as the separator, simply specify the character to use. A few other examples:

HS(_) uses the underscore character as the separator.

HS(*) uses an asterisk.

HS(=) creates a continuous double underline using ASCII character 205. (To type it, hold down the Alt key and type 205 on the numeric keypad.) Appendix H of the *Q&A User Manual* provides a table of ASCII characters and their codes.

Here are some other codes you can use to create custom separator lines:

SL(\) suppresses the single separator line on subcalculations and breaks.

SL(+) changes the single separator line on subcalculations and breaks to the plus sign. (Choose whatever character you like.)

DL(\) Suppresses the double separator line when



Stumped?

Send your Q&A questions to @Help, The Quick Answer, Marble Publications, Inc., 1927A Harbor Blvd, Costa Mesa, CA 92627 or email to mailbox@quickanswer.com. Include your name, address, phone, and your Q&A version number (and whether DOS or Windows) and a detailed description of the problem. We'll publish those questions we feel are of general reader interest; individual responses aren't possible.

printing grand totals.

DL(+--+) changes the double separator when printing grand totals to a string of plus and minus signs. (Choose whatever characters you like.)

Needs More Custom Menu Selections DOS

I wish my custom main menu (which I display by pressing Alt-M) could have more than nine selections. I know I can use other key combinations to call other menus (Alt-A, Alt-B, and so forth), but I'd prefer having more selections on my one main menu.

Dana Kusic, Bridgeport, NJ

Nine selections is the limit on a custom menu, but you can have your custom main menu call other menus, giving you fast access to as many selections as you need. For instance, a custom main menu when viewed at the Application Menu Options screen (*Shift-F2, M - Create Menu*) might look like the sample menu in Figure 1. The macro names listed on the right side of the screen are actually menu names. The six selections take you to six other menus, each of which can include up to nine choices. Those choices can either run macros or call other menus. This custom main menu is designed to return to

Q&A's Main menu when the Esc key is pressed. To have your submenus return to your custom main menu, just enter the name of the main menu in the *On Escape, Show Menu* line.

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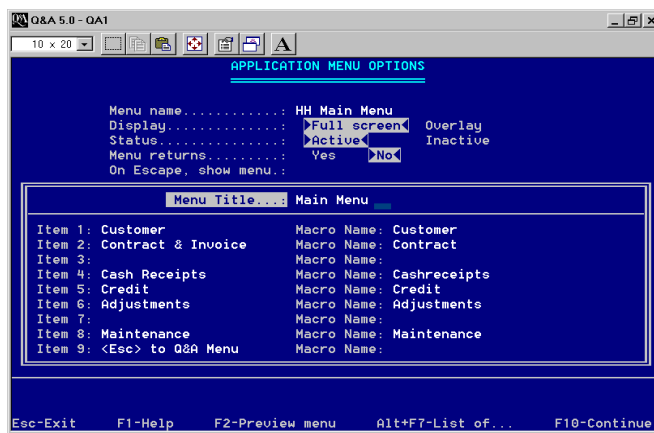


Figure 1. A custom Main menu with selections that call other menus.

Quick Tip

Add Custom Instructions to the Tops of Your Selection Lists



Userselect and XUserselect lists always appear near the upper right corner of the screen, one line below the top. I place an Instructions field on the top line, defined with angle brackets (< and >) so it doesn't show. This way, whenever I display a selection list, I can fill the field with custom instructions, like this:

```
< Customer:
If Customer = "" Then
{
Instructions = "Select a Customer name.";
Customer = @XUserselect("Customer","Name");
Instructions = ""
}
```

You can set the Instructions field to a contrasting color using the Change Palette Spec, and place it so the right angle bracket is at the far right side of the screen with the text justified right. You can also make your instructions blend in with the list (like they're part of the list) as shown in Figure 1.

Erika Yoxall, 330-527-4018, hammer@apk.net

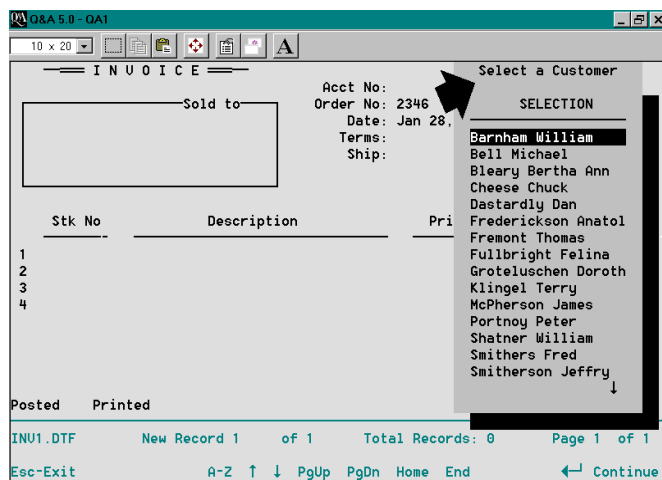


Figure 1. If you make the Instructions field 23 characters wide, center justified, and use the @Color command to temporarily set its background to white and text to black, you can make your custom instruction line look like it's part of the picklist.

Designing a Custom Report Interface, Part 1

JEFF NITKA



If there's one thing that can frustrate a novice user, it's designing a report. But you can simplify the process with a custom report design interface.

ONE of Q&A's great strengths is its easy interface. Sometimes, though, it isn't easy enough. I had a client who wanted employees to have the freedom to create whatever crosstab reports they needed. The problem was that most of them weren't Q&A-savvy enough to deal with the steps a crosstab requires. Having to figure out which records to include, which fields should be used for the *row*, *column*, and *summary*, then which type of output—it involved just too much.

Rather than train all the employees on how to deal with the various crosstab report specs, the client wanted me to design a custom interface that would simplify crosstab setup. It had to provide the following features:

- Picklists of available fields for the Row, Column, and Summary field, and a picklist for the type of output.
- The ability to provide flexible record selection criteria.
- Onscreen help to guide users through the process.

My solution met the client's requirement for ease of use, but it took some doing. First, there was the interface itself—what the users saw. Then, there was the programming to make it functional. Finally, macros to handle report printing. I'll show you how I did it in several installments over the next few months. First, I'll deal with the starting point—the interface design.

Interface design

Consider a simple invoice database like Figure 1.

Figure 1. A simple multi-line item invoice database for data entry.

The custom interface shown in Figure 2 is actually a graphic representation of the data entry database form shown in Figure 1—but with a twist. It lets users enter record selection criteria into any of the fields, just as though they were running the report directly from the Crosstab Spec. It also provides fields for the user to select a row field, a column field, a summary field, along with the output device—all from picklists. These four additional text fields are shown in Figure 2.

(Keep in mind that with a technique like this, you can always eliminate any fields that wouldn't be used for record selection.)

The first interface field (**Start**), along with the last two (**Check** and **Run**), are needed for programming and macro execution, as you'll see in the next installments.

At this point, the interface design is done. All the various report characteristics are on one screen (instead of three) providing a complete picture of the report. How users work within the interface will be next month's topic. (In a nutshell, the user fills in the fields using a combination of picklists and basic data entry.)

The next task is to program the fields in a way that gives users all the flexibility they need to create the kinds of report they want. That's where the real fun begins.

Jeff Nitka develops Microsoft Access and Q&A applications for Epoch Software, 105020.2215@compuserve.com. Jeff is the author of the Program Evaluator (a Q&A program debugging utility), SurfDrive (a Q&A disk drive reader), and FaxMan (a Q&A faxing database), all of which are available from Marble Publications.

Figure 2. A representation of the invoice database with additional fields for selecting various crosstab specifications.

Postable Records...continued from page 3

3. Imports the AAA.ASC file as a Standard ASCII file into the Donates database, adding 60 new blank records with AAA in the *Form* field.
4. Returns to the Donor record by pasting the Donor ID into the Donor ID field at the Donor.dtf Retrieve Spec.
5. Moves the cursor into the donation lineitems area so the user can now perform the post.

Depending on how you use the post-to database, there might a small liability connected with having blank records in it—you have to remember to *exclude* them during retrieval operations. In this case, you'd have to be sure to exclude any records that contain anything in the *Form* field. You can do this by placing "=" (the equals sign) in it at the Retrieve Spec for any report you're designing.

When you have a quick and easy way to keep enough blank records in your post-to database, as in the two examples I've shown, you'll never have to do double data entry again or interrupt your work flow to add a new record to post to.

Tom Pettit is the owner of DataBase Systems in Indianapolis, Indiana. He has been designing custom Q&A applications for a variety of businesses and organizations for 12 years. 317-251-8541.

Using This Technique in Non-Lineitem Databases

For non-lineitem databases, you can use this same technique to create new records to post to. Suppose your Orders database displays an XUserselect picklist of customer names from a customer database. You start to enter a new order, when you find that the customer's name isn't on the list. With some blank records in the customer database, you could create a new customer record from the Orders database using a program along these lines:

```
If ...your posting conditions ... Then {
XPost("Customer", "AAA", "Form", Name, "Name");
Xpost("Customer", "AAA", "Form", Phone, "Phone");
XPost("Customer", "AAA", "Form", Address, "Address");
XPost("Customer", "AAA", "Form", City, "City");
XPost("Customer", "AAA", "Form", State, "State");
XPost("Customer", "AAA", "Form", Zip, "Zip");
XPost("Customer", "AAA", "Form", "=", "Form"); }
```

When you XPost using this technique, Q&A will post all the data to the first AAA record it finds. The final post command will then blank the *Form* field to prevent the record from being posted again. And the next time the picklist of customer names displays in the Orders database, the new customer will be on it.



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