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# Monthly Billing Statements in Report



**TOM MARCELLUS**

Need an easier way to prepare monthly statements to mail to your customers? Try this hassle-free alternative

Application in  
**ONLINE Edition**



# The Quick Answer

The Independent Guide to Q&A Expertise

**July 1998**

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**B**ILLING statements are what you send to customers to show them their open (unpaid) invoices. A statement normally lists the invoice numbers, dates, amounts, and total due. (See Figure 1.)

Since all the information you need for billing statements is already in the invoice or sales order database, generating them *should* be a simple matter of running a report that prints a statement on a separate page for each customer with one or more open invoices.

But you can't just mail your customers "their page" of some report. A statement has to look like one. The customer's name and address along with the date should appear at the top, like a letter. Below that should be the detail on the invoices, with the total amount owed clearly shown.

A monthly *time and services* statement is similar, except that it gives a description of services performed by date, along with the number of hours, the amount, and a grand total due (See the sidebar on page 6.)

How can you can get statements like these in a Q&A 5.0 report?

## A handy new report feature

With Q&A 5.0 you can print a derived column in a report header. You

simply create an invisible column that formats the name and address in a block, then tell Q&A to print it in the header. Q&A will print the block *above* the statement detail.

The result is a billing statement like Figure 1, where everything above the invoice detail is in the header.

It doesn't matter how many customers or open invoices there are—you can print your monthly statements with no more effort than it takes to run an ordinary report.

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June 15, 1998

— STATEMENT —

Customer	Invoice No	Date	Amount	Days past due
LONG45	3688	3/12/98	\$76.32	65
	3690	3/25/98	\$202.12	52
	3698	3/31/98	\$103.43	46
	3872	4/12/98	\$324.55	34
	3897	4/15/98	\$123.56	31
	3902	4/22/98	\$94.66	24
	4102	5/19/98	\$22.87	
	4122	5/26/98	\$32.99	
	4138	5/31/98	\$287.02	
	4149	6/2/98	\$443.50	
<b>Total:</b>			<b>\$1,711.02</b>	

PAST DUE AMOUNT...\$924.65

Questions? Call Jan at ext. 54

**Figure 1.** A nice monthly billing statement in a Q&A 5.0 Report. The name and address are in the header, the Past Due Amount is in the footer, and both change with each statement.

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This *derived-column-in-the-header* technique is readily adaptable, too. You can use it in any report where you need to print one or more lines of variable data above the report body, and where you want a new page to start and the header data to change when the sorted value—a customer number, a student name, a state, or whatever—changes.

## Getting started

I'll show you how to design a *Billing Statements* report that prints statements like the one in Figure 1. (Online Edition

Continues on page 3

# Hardly Worth Mentioning?

TOM MARCELLUS

ONCE in a while you'll uncover a hidden gem in a software program. The documentation barely mentions it, if at all, and gives no clue as to what you can actually *do* with it. But sometimes what you can do with it after a little fiddling turns out to be pretty wild.

Case in point: an obscure Q&A 5.0 feature that lets you print a derived column in a report header. Don't yawn—this "trifling" feature (hardly worth a mention in the README file) helped me solve an old problem. (See my article in the January 1991 *Quick Answer*.)

The problem was how to get monthly billing statements from Report to look like statements, not reports.

I've got a new client using it. At the end of any month, he might have 200 customers with open invoices. For statements, he'd run this *hold-on-to-  
yer-hats-folks!* macro that printed his open invoice data to a file, cleaned it up, imported it into a "temporary" database, compiled it with a mass update, then printed it again in a Write merge document—a procedure so convoluted that even *he* couldn't quite remember how it all worked.

Today, all he does is run a report. He gets a separate statement for each customer, complete with all the open invoice detail and any past due amounts. They print on his company's letterhead and fit right into a #10 window envelope with the customer's name and address showing through.

Even if you don't need statements, I think you'll find the technique instructive. You can use it for all kinds of reports where you need the header data to change when the primary sorted value changes.

ONLINE EDITION subscribers will find *Billing Statements* and *Time & Services* statement reports in the ORDERS1.DTF and TIMEBILL.DTF databases in their download file, along with Jeff Nitka's handy phone log database (see page 7) that features a built-in telephone auto-dialer.

## Quick Tip Autonumber Fields

Though I'm partial to Q&A, I *do* use other programs—sometimes to perform tasks at which Q&A doesn't excel. Here's an example.

When defining a Merge Spec to copy records from one database to another with a different form layout, you need to know the sequence of fields in the destination database, starting from the first field at the top left (field 1), down to the last field on the form.

Usually, I'll select File / Utilities / Export / Standard ASCII, choose the destination database, and display the Merge Spec. I'll then type the sequence of numbers in all the fields, and press F2 and F10 to print it out. (I also usually press Shift-F8 and save the Merge Spec to something like *All Fields Numbered* in case I ever need this layout again.) I then use the printout to help me number the fields in the

Merge Spec so the data will be copied to the right fields in the destination database.

With a large number of fields, however, numbering them even once can be quite a task. Recently, I had a database with 286 fields to number. Instead of typing all those numbers, I used Microsoft Excel to do the numbering. Here's how.

Assuming you're running Windows 95 and have a desktop shortcut for Q&A, check the shortcut's *Misc Properties* and make sure *Fast Pasting* is *Off*.

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# Billing Statements...continued from page 1

subscribers note: This report is in the ORDERS1.DTF database you received with your download.) Once you've seen what it takes, you can modify it to suit your needs. (For *time and services* statements, see page 6.)

For the *Billing Statements* report, set the following Report Global Format Options for the database:

```
# of spaces between columns: whatever you like
Default to repeating values: No
Action on blank value.....: Leave blank
Action on column break.....: Don't skip line
```

## Retrieve Spec

When deciding which invoice records to include in your monthly *Billing Statements* report, you'll probably want those where the balance due is greater than 0. You should have a field in the database that shows the unpaid balance in case the customer makes a partial payment. It's *that* field you'll use for your Retrieve Spec.

---

**The ORDERS1.DTF database with the Billing Statements report and the TIMEBILL.DTF database with the Time & Services report (see page 6) are in the download file for Online Subscribers. They can also be purchased for \$39.**

---

## Column/Sort Spec

We're using an ordinary invoice database. If you don't have one but want to try the technique, create a database with the following fields, and fill them in as shown here at the report's Column/Sort Spec. (Be sure the Date field is formatted for dates and the Amount field for money):

```
Customer No: 1, AS, P
Invoice No: 5, F(JC)
Date: 10, AS, CS
Amount: 15, ST
Name: 20, I
Addr1: 25, I
Addr2: 30, I
C/S/Z: 35, I
```

Here, you're sorting on the customer number field first (that's the order in which the statements will print) and telling Q&A with the *P* code to start a new page (a new statement) each time the customer number changes.

You're sorting next on the Date so the invoice detail for each customer will appear on the statement in chronological order. At the same time, though, you're telling Q&A to cancel subcalculations (CS) so you won't get a subtotal after every invoice.

The *ST* code in the Amount field (this would be the *unpaid* amount for our purposes) tells Q&A to print the total for each customer's open invoices. (It's actually a *subtotal*—this report doesn't have a total.) Make the *ST* boldface so it'll stand out.

The four fields for the customer's name and address are all invisible. We'll use them in a derived column, as

you'll see. In the sample statement shown in Figure 1, the Addr1 line contains *Attn: Accounts Payable*, while the C/S/Z field contains the city, state, and ZIP code.

## Derived Columns

The report has six derived columns, the last four of which are optional. Here they are:

```
Heading: Carriage Return, Line Feed & Indent
Formula No. 1 @Chr(10) + @Chr(13) + @Text(5," ")
Column Spec: 40,I
```

```
Heading: Address, Date & "Statement" in Header
Formula No. 2 #20 + #40 + #25 + #40 + #30 + #40
+ #35 + #40 + #40 + #40
+ @Month$(@Date) + " "
+ @Str(@Dom(@Date)) + ", "
+ @Str(@Year(@Date)) + #40 + #40
+ @Text(22, " ") + "—S T A T E M E N T—"
ColumnSpec: 45,I
```

```
Heading: Days!past due
Formula No. 3 @Text(@Str(@Date - Date - 30) > 1,
@Str(@Date - Date - 30))
Column Spec: 50,F(JR)
```

```
Heading: Past due amounts
Formula No. 4 @Text(#50 > 0, #15)
Column Spec: 55,F(M),I
```

```
Heading: Total past due amount
Formula No. 5 @Total(#55, #1)
Column Spec: 60,F(M),I
```

```
Heading: Format Total past due amount
Formula No. 6 @Left((#60 + .001), @Len(#60 + .001) -1)
Column Spec: 65,I
```

The first derived column (#40) is the key to the technique. In its formula, the @Chr(10) linefeed character and @Chr(13) carriage return character are combined with five spaces to create a new line and indent it five spaces. This column is invisible—it comes into play in the next derived column.

The second derived column (#45) creates the customer's name and address block (using the carriage return/linefeed formula in column #40 to wrap the lines). It also adds the date and —STATEMENT— line. (The solid lines are ASCII 196.) This column is invisible as you want it to print not in the report body but in the *header*.

The third derived column (#50) prints an invoice aging. Based on Net 30 Days invoice payment terms, it tells the customer how many days past due each open invoice is. If an invoice *isn't* past due, nothing is printed for it in the column.

The fourth derived column (#55) stores a copy of the amount of each past due invoice. It's invisible.

The fifth derived column (#60) is also invisible. It tabulates the total past due amount. (The sum of all the past due invoices.)

The sixth and final derived column (#65) is also invisible. It's formula converts column #60's total past due amount to a text value so it can be printed in each statement's footer. (Without it, an amount such as \$643.20 will print as \$643.2, without the final zero.)

## The Define Page screen

The final step is to prepare your page at the Define Page screen. (Press F8 from the Report Print Options screen.) Use the following page settings:

Page width.: 250    Page length.: 60  
Left margin: 5      Right margin.: 250  
Top margin.: 15    Bottom margin: 10  
Characters per inch: 10

You might wonder why the Page width and Right margin settings are so large. To Q&A, the entire header is *one long line*. By making the Page width and Right margin 250, you prevent Q&A from wrapping the header text, so line breaks will occur only at the carriage return/linefeeds in the derived column formula. These settings won't otherwise affect the report. It's the left margin that counts, not the right.

You can decrease the Page length setting (60) a bit to increase the statement's overall linespacing, though this will mean fewer invoices can print on each page.

## The Header

On the Define Page's Header 1 and 2 lines, type the following and boldface line 2:

**←\*p500y**    Press Alt-F10 then Alt-27  
**\*Pg{?2}\***    to type the left arrow

As Q&A sends each statement to the printer, the first thing to hit the page is Header line 1. So whatever is on that line can control where printing begins. The HP LaserJet printer control code on Header line 1 tells the printer to begin printing 1.67-inches (500 dots) down from the top of the page. Since the printer's internal top margin is .3-inches, Header line 2 will begin printing 2-inches below the top edge of the sheet, ensuring that each statement's name/address block prints in the same position on the page which, by the way, is ideal for a #10 window envelope.

To type the left arrow that starts the control code, press Alt-F10, then hold down the Alt key and press 27 on the numeric keypad. The rest of the code is case-sensitive. (See the sidebar, "If You Don't Have a LaserJet")

The **\*Pg{?2}\*** command on the second Header line is the cornerstone of the technique. It tells Q&A to place the *second* derived column here—the one with the name and address block, statement date, and so forth. The text in that column has already been pre-formatted by its formula, and Q&A retains that formatting when printing it in the header. The header changes with each statement and page to reflect the new customer name and address returned by the derived column.

## The Footer

On the Footer 1 and 3 lines, type the following (or something similar) and boldface the lines:

**PAST DUE AMOUNT...\$\*Pg{?6}\***

**Questions? Call Trudy at ext. 54**

This footer will print at the bottom of each statement as shown in Figure 1. Footer 1 line requests payment of the total past due amount, which comes from the sixth and final derived column. That line will look like this:

**PAST DUE AMOUNT...\$924.65**

Your completed Define Page screen should look like Figure 2 on page 5.

## If You Don't Have a LaserJet

The printer control code in Header 1 line should work with any HP LaserJet or printer that can emulate one. Even if yours doesn't, most printers support a printer control code that forces printing to start in a precise position on the page. Check the manual that came with your printer (look for an appendix that lists the printer's control codes, specifically a section on printer "cursor positioning") or contact the manufacturer's technical support department.

The left arrow is called an "Escape code." It tells the LaserJet or compatible printer that a control code follows.

I use an HP LaserJet 4P. Alec Mulvey tested the statements on his LaserJet 6P and reports that they "print perfectly without even changing the settings to A4 paper. . . the address is perfectly positioned for the standard DL window envelope for Z-folded A4 paper, the universal envelope used in Europe."

Bill Halpern reported that the statements printed perfectly on his Okidata OL810e laser printer using its HP LaserJet 4 emulation.

If you want to direct attention to the past due amount, you can use a couple of LaserJet control codes to produce a shaded box around the footer text. Place the following control codes on the Footer 1 line:

**←\*p100x2780y ←\*c1200a200b15g2p ←\*p500y**

And you'll get a shaded box like this around the footer:

**PAST DUE AMOUNT...\$924.65**  
**Questions? Call Trudy at ext. 54**

The first two codes tell the printer to print a 1200 x 2780-dot, 15% shaded box at page coordinates 100x and 2780y (100 dots in from the printer's left margin, and 2780 dots down from its top margin—at 300 dots per inch).

## Print Options

If you want the body of the report to print double-spaced, set Line Spacing to *Double* at the Report Print Options screen. This won't affect the header or footer. To increase the statements' *overall* linespacing a bit, simply reduce the report's Page length at the Define Page screen.

Page Preview won't render the header properly. Just select a few customers with open invoices and print their statements to see how things look.

## Summary

All it takes is an hour or so to setup the specs, and you can print good-looking statements month after month by doing nothing more than running a report. Each statement will print on its own page (on your company letterhead) and fit a #10 window envelope for mailing. (See next page for a sample monthly *time and services* statement.)

You can, of course, modify the report specs to suit your needs. The only tricky part is the derived column that creates and formats the information for the header. If you need to modify it for any reason, you might have to experiment a bit to get the result you're after.

Always modify a *copy* of a working report. That way you'll have the original to fall back on.

Tom Marcellus is editor of *The Quick Answer* and author of *PC World Q&A Bible*, editor@quickanswer.com.

```

                DEFINE PAGE
-----
Page width.: 250      Page length.: 60
Left margin.: 5       Right margin.: 250
Top margin.: 15      Bottom margin.: 10
Characters per inch: 10 12 15 17
-----
HEADING
1: *Pg(72)*
-----
FOOTER
1: PAST DUE AMOUNT...$*Pg(76)*
2:
3: Questions? Call Trudy at ext. 54
-----
ORDERS1.DIF          Define page for Billing Statements
Esc-Exit      F1-Help      F9-Go Back to Print Options      F10-Continue

```

Figure 2. Define Page screen for the *Billing Statements* report.

## Proportional Fonts in Reports

The billing statement shown in Figure 1 was printed in the printer's default font (monospace Courier 10). No font file or fonts were assigned to the report. Q&A's generic bold was simply applied to the customer number, the *ST* code in the Amount field, and the header and footer.

I wanted to see how the statements would look when printed in a few of the other LaserJet's fonts, CG Times and Univers (both proportional fonts), and Courier 12 (a smaller monospaced font). Some adjustments were required, but before I go into that, a little refresher course on fonts and reports.

Q&A for DOS does a good job with proportionally-"fonted" reports, as long as you use the font's *own* bolface complement. **Rule: Never apply Q&A's generic bold to a proportional font in a report** because it can cause column entries to the right on the same line to print misaligned. (It hinders Q&A's ability to calculate horizontal spacing.) If you use bold, use the font's *own* bold complement, not Q&A's generic bold.

Q&A's generic bold can also cause "mysterious" problems when applied to proportional fonts in Write documents. It can throw justification off, cause lines to wrap prematurely, and even make text print in the margin!

Another way to court trouble with proportional fonts is to apply one enhancement on top of another. Always return the text to *Regular* (no enhancement) before applying the font's actual enhancement complement (bold, italic, and so forth).

With the above in mind, and using the HPLASER4.FNT font file, I assigned CG Times 12 pt. as the *Regular* font, and CG Times 12 pt. Bold as *Font 1* at the Font Assignments screen (Ctrl-F9 from the Column/Sort Spec). I then applied Font 1 to the same two fields and the header and footer. After some trial and error, I was able to get the header to print correctly by increasing the 5 in the *first* Derived Column's @Text function to 10.

To do the same with Univers 12 pt., I had to increase the 5 to 9. To print it in Courier 12 Bold, changing the 5 to 6 did the trick. You'll have to make a similar adjustment depending on the font and point size you're using for the header text.

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# Time and Services Statements

A *time and services* statement is a variation of the billing statement. With time and services, you're not billing for unpaid invoices, but for services performed during the month. (See Figure 3.) A simple time and services database might include the following fields, shown here at the Column/Sort Spec.

Date: 5,AS,CS  
Client ID: 1,AS,P

Hours: 15,ST  
Work Done: 10,H(40:)

Company: 20,I  
Addr1: 25,I  
Addr2: 30,I  
CSZ: 35,I

The detail in this report includes the date the service was performed, a description of the work done, the number of hours billed for it, the dollar amount (the hours multiplied by your hourly rate), and a grand total amount for the month.

It's assumed that each day you would add a new record to the database for any client you did work for that day.

In this database (TIMEBILL.DTF—Online Edition subscribers receive it with their download), **Work Done** would be a multiline field where you'd enter a description or narrative of the work performed.

The **Work Done** column is confined to 40 characters, as shown by the H(40:) command. This way, Q&A will wrap the descriptions within the column.

The other fields (report columns) work the same as in the *Billing Statements* report we covered earlier.

The *Time & Services* report has six derived columns. The first two are the same as the *Billing Statements* report. Columns 3 through 6 look like this:

Heading: Amount  
Formula No. 3 #15 \* 85  
Column Spec: 50,ST,F(M)

Heading: Current Amount  
Formula No. 4 @Total(#50, #1)  
Column Spec: 55,I

Heading: Past Due Amount  
Formula No. 5 @XLookup("Clients", #1, "Client ID", "Overdue")  
Column Spec: 60,I

Heading: Total Due  
Formula No. 6 @Left((#55 + #60 + .001), @Len(#55 + #60 + .001) -1)  
Column Spec: 65,I

Column #50 multiplies the hours worked by your hourly rate—\$85 in this case. Column #55 stores the current balance. Column #60 looks up the past due amount from the **Overdue** field in the clients database. (This assumes you keep your client records up to date with respect to amounts billed, paid,

and any amounts past due.) And column #65 converts the total due (current plus past due amount, if any), to a text value to print in the footer.

The Define Page settings are the same as the *Billing Statements* report, except for the Footer 1 line, which looks like this. (Figure 3 shows the result):

PAST DUE (\$\*Pg{?5}\*) . Please Pay TOTAL DUE....\$\*Pg{?6}\*

The Print Options are the same except that you might want to set *Allow Split Records* to **No** to prevent a record from breaking between two pages.

In the sample time and services statement shown in Figure 3, the default font is *Courier 12*, and the header, footer, and total amount (the *ST* code in the Amount field) are in the larger *Courier 10*. This gives you room for a 40-character-wide **Work Done** column with enough space for the other columns. The larger address block and footer text, along with the slightly smaller font applied to the detail section, impart a clean, professional look.

The TIMEBILL database that comes with the Online Edition also includes a report that bills clients who aren't in the current billing cycle but have unpaid balances.

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— S T A T E M E N T —

Client ID	Date	Work Done	Hours	Amount
CLIF607	6-16-98	Site visit to evaluate database requirements. Preliminary work on rentals database. Construct Lookup Table.	2.5	\$212.50
	6-23-98	Finish database design and customize to client requirements. Conference call with Bill Jamison. Program Xlookups and Xberslects. Site visit. Deliver database for preliminary testing and debugging. Client requirements change. Wants database linked to Microsoft Word for rental agreement contracts.	4.5	\$382.50
	6-26-98	Design client's rental contract merge document in MS Word. Design and implement merge fields link from rentals database to MS Word.	2.5	\$212.50
	6-27-98	Site visit. Install completed rentals database and MS Word rental contracts merge document. Test and debug.	3.5	\$297.50
Total:			13.0	\$1,105.00

PAST DUE (\$343.60) . Please Pay TOTAL DUE....\$1448.50

**Figure 3.** A sample monthly time and services statement. This one also shows, in the footer, any past due amount and the total due.

# Create a Phone Log with an Auto-Dialer



JEFF NITKA

Need an easy way to track calls and results? This handy little database comes complete with an auto-dialer!

Application in  
**ONLINE Edition**



In the May 1996 issue of *The Quick Answer*, Bill Halpern showed a neat way of using Q&A 5.0 and DOS batch file commands to create an automatic phone dialer.

With a few enhancements, you can turn his feature into a handy telephone log.

Here's how it works. You'll add a record to DIALER.DTF, choosing the person to dial from a pop-up selection list. After you've finished the call, you have the option of dialing another number, or moving to a field to enter some comments about the call. After that, you're given the option to save the record.

## Setting up

The database requires these text fields in the order shown:

Name  
Location (Read-Only)  
Contact (Read-Only)  
Fax Number (Read-Only)  
Phone Number (Template ###-###-####)  
Comment  
Help

After adding the fields, go to the Navigation Spec and type these programs in the indicated fields:

```
Name:
< If @Add then
  @Msg("Enter some letters of the person you " +
    "wish to dial, then press ENTER.")

Help:
> If @Add then
  If @AskUser("Do you wish to save this record?","","")
  then @Exit else Goto Name
```

Next, go to the Program Spec and type in the following programs in the indicated fields:

```
Name:
> If @Add then {
Name = @XUSR("Contacts","Name","Name",Name,Name);
Clear(Location,Fax Number,Phone Number,Contact);
If Name <> "" then {
  XLU("Contacts",Name,"Name","Name",Name,
    "Phone Number",Phone Number,"Contact",Contact,
```

```
"Fax Number",Fax Number,"Location",Location);
  Goto Phone Number }
else Goto Name }
```

```
Phone Number:
< If @Add then
  If Phone Number <> "" then
  @Msg("Press END twice to dial " + Name + " at " +
    Phone Number)
  else @Msg("PHONE NUMBER is blank!")
```

```
Comment:
< If @Add then
  @Msg("Record any comment about this call." +
    " When finished, press PGDN.")
```

```
Help:
< If @Add then
  If Phone Number <> "" then {
  Help = @Shell("C:\qa5\Dial.bat 1" + Phone Number);
```

```
@MsgBox("After the number is dialed,",
  "pick up phone receiver.",
  "Then press ENTER to talk.");
  Help = @Shell("C:\qa5\Release.bat");
```

```
  If @AskUser("", "You just dialed " + Name + ".",
    "Create a record of this call?")
  then Goto Comment
  else Goto Name }
else Goto Name
```

## The batch files revisited

The batch files required for auto-dialing are reproduced from Bill Halpern's article. (Don't forget to save these as ASCII files and place them in your Q&A directory):

```
Dial.bat
@Echo Off
Echo ATDT %1 > Com1
```

```
Release.bat
@Echo off
Echo ATH > Com1
```

Note that the programming executes only in Add Data mode. This way, each saved record serves as a complete record of the call. To enhance searching and reporting, you can use other fields, such as call Date and Time, and perhaps even a Topic field. It's a lot easier (and safer) than cluttering up your desk with post-it notes.

Jeff Nitka develops Microsoft Access and Q&A applications for Epoch Software, email: JNitka@compuserve.com. You can download a slightly more enhanced version of this application (DIALER.ZIP) from *The Quick Answer's* Web site ("Freebies" page) at [www.quickanswer.com](http://www.quickanswer.com).



## Running Concurrent Q&A Sessions



Is there a way to run two sessions of Q&A 5.0 in Windows 95 at the same time? Please let me know as this would be worth a million dollars to me!

Wayne Dalton, via the Internet

Let's get past the legal implications first. In order to run multiple copies of Q&A on a single PC, you must be licensed to do so. This means either that you must own two or more legal copies of Q&A, or own a Network Pack that allows you to run up to three additional copies of Q&A. That said, let's get down to the heart of the problem. (Just to whet your appetite, I'm currently running four *concurrent* sessions of Q&A 5.0 on my PC.)

There are two ways to get what you want.

**Option 1:** Simply install your second copy of Q&A in a new directory. (Let's say in a C:\QACOPY2 directory.) Make sure you also create a temporary files directory for this copy to use, such as C:\QACOPY2\TEMP.

Next, create a Windows 95 shortcut to this new copy with the same properties as your first copy, except that the Command line (under the shortcut's Program tab) should read C:\qacopy2\qa.com, and the Working Directory line should read C:\qacopy2.

Start your new copy, go to Utilities / Set Global Options, and set your appropriate data, document, and temporary files directories.

**Option 2:** This approach requires that you have a properly installed Network Pack. Create a new directory (such as C:\QACOPY2). Assuming your original copy of Q&A resides in a directory named C:\QA50, copy your original Q&A desktop shortcut, then change its properties so that the Command line reads:

```
C:\QA50\QA.COM -pc:\qacopy2 -alc:\qa50\qamacro.asc
```

Next, copy your C:\qa50\qa.cfg file into this new directory. This will allow you to run a second copy of Q&A concurrently with the first but with its own separate configuration files. The -p switch (network personal path)

is what allows this to work. Just remember that when you start this second copy the first time, all its configuration settings will be the same as the original copy.

With either approach, if you plan to access the same databases from your local hard drive in either copy, be sure to set their Sharing Mode to *Allow* (File / Design a File / Secure a file / Declare Sharing Mode). Windows 95 will take care of the sharing end of things.

To have a third copy of Q&A available to run concurrently, repeat the above steps using a directory named C:\QACOPY3. Past issues of *The Quick Answer* include tips and techniques for setting up your Windows 95 shortcuts optimally for Q&A for DOS. You can use the Topic Index at [www.quickanswer.com](http://www.quickanswer.com) to find them.

*There's your million dollar baby!*

One word of caution: If you run multiple DOS programs in Windows 95 and leave them open on the task bar while you do other things, you'll notice a slowdown in your computer's operation. It seems that Windows 95 doesn't handle memory and video memory all that well where DOS sessions are concerned. The amount of RAM and video memory on your PC will determine at what point you start noticing the slowdown. On my 233Mhz Pentium MMX with 64M RAM and 4M video memory, I start to see a slowdown with the third or fourth concurrent DOS session. To regain the performance, quit the DOS sessions (Q&A) in the reverse order you started them. If your system is still sluggish, restart your computer and you'll be back in the fast lane.

## Q&A and Windows 98



I've been an avid Q&A user and *Quick Answer* subscriber for many years. My first question is this: Will I be able to run Q&A 5.0 in Windows 98? I've read that I might not. If true, it could mean that I'll have to redesign all my Q&A applications in a new and unfamiliar Windows database program, which isn't worth the next five years of my life.

Wayne Dalton via the Internet



## 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](mailto: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.

We don't know where you got your information, but from what we've been able to gather, Windows 98 will handle DOS programs as well as if not better than Windows 95. The only big differences you'll see are a default browser-like interface, improved multimedia, better hardware support, and more than "3,000 bug fixes" (from Windows 95). DOS program support in Windows 98 might even be better than in Windows 95. By the time you read this, we'll probably have performed a complete evaluation, and will be reporting our findings to *Quick Answer* readers in an upcoming issue and at the September 25th Masters Seminar in Washington, D.C.

## Q&A 5.0 and Novell Networks



We have a Novell 4.0 network, and on all three Windows 3.1 PC's we keep getting a *System error Ref#: 04CC*. Any idea what could be causing this? I'm getting the error only on a certain group of databases that have been redesigned many times. Then with Write documents, on one of the PC's, we always get the message, *Unable to read/write files on your disk (C-4)*. Press return to try again or Esc to cancel. Once I press Esc then press Enter, I'm able to select my document. Any ideas as to where the problem is?

Gregory Davis via the Internet

From the symptoms you describe in your second question, we can pretty safely assume you're running Q&A 5.0. The first error message has to do with databases; the second has to do with documents. First, the documents problem.

Q&A 5.0 and networks don't get along well when fonted documents are copied, moved, renamed, and so forth, from or to a network drive. They also rebel at different users on the network with different printer configurations accessing a fonted document not created or saved at the PC accessing it. The reaction of the system will either be what you're seeing, or a "disk drive door open" message. Pressing Esc will let you open the document, but it won't solve the problem. And if a macro is attempting to retrieve the document, the result could be disastrous.

There's no easy way around this problem. Document recovery (Yes, Virginia, there's a Recover command for Write documents on the Write / Utilities menu) will fix the document and make the message go away. But it will also remove the document's fonts and enhancements! The best solution is to first make sure that all users have their Q&A printer drivers set up the same. Then, with the document on the network drive, recover then redesign it with the fonts you want. But a word of caution: Do *NOT* assign a font to the *Regular* line of the Font Assignments screen.

The only other alternative we can think of is to provide copies of the documents on each PC's local drive, and modify any macros accordingly.

System Error Ref# 04CC means the database's file structure has been damaged. Recovering the database might help, but the error will probably return shortly thereafter. The two most likely causes are these:

- The database was created in Q&A 4.0, and wasn't properly prepped prior to upgrading it to 5.0. See the January 1997 issue of *The Quick Answer*, or the updated version of the same article at [www.quickanswer.com](http://www.quickanswer.com). (From the Home Page, select *Upgrading from Q&A 4.0 to 5.0? – How to Make a Smooth Transition*.)
- The database design has been modified then copied using Q&A's File / Copy / Copy Design Only feature.

In either case, the problem has to do with having created a new copy of the database where all the Specs and data aren't of the same generation. To remedy the situation, first copy the database to a new name using the F5 copy command at the List of Files screen, or use File / Utility / Backup. Working with the *copy*, follow the steps in the aforementioned articles to create a design with a single generation. Recover this new copy, then use Copy Design Only to copy the database to a new name, then copy the records into it. Recover it one more time, and you should have a repaired database. Test it thoroughly, delete the old copy, then rename your new copy to the old name and you should be back in business.

## Magic Windows 95 Speed Up Key



With Q&A 4.0 or 5.0 running in Windows 95, there's a problem with the speed of certain operations as compared with running Q&A in plain old DOS. For example, if you're copying records from one database to another (Copy Design / Copy Selected Records), the process will be sluggish. Same for Mass Updates, Remove Records, Recover Database, and probably other operations as well.

However, there's a way to speed up such operations dramatically. Try this: After starting the operation, hold down the Shift, Ctrl, or Alt key. You'll get Windows' undivided attention and the operation will speed up! I've even placed the end of a stapler on the Ctrl key so I don't have to hold it down. Since the Shift, Alt and Ctrl keys do nothing unless in conjunction with some other key, holding one of them down is harmless. The underlying problem is that Windows 95 won't give full attention to *any* DOS program unless there's some extenuating circumstance that commands its attention.

Paul Anderson via the Internet

We've known about this curious anomaly since the early days of running Q&A on Windows 95. We even demonstrated it at last year's Q&A Masters Seminar. There are no Windows settings we know of that will

*Continues on page 11*

# New Utility Helps Busy Database Administrators

ALEC MULVEY



If you're a busy security-conscious database or network administrator, this handy utility can make your life a lot easier.



**J**OHN DOW is well known for his Q&A Utilities. Two of his most popular ones, DTF SPECS and DTF DOCTR, have been reviewed or discussed in past issues of *The Quick Answer*. (See December 1994, October 1995, July 1996, October 1996, January 1997, and June 1997.) John also creates utilities for administrators of multi-user Q&A installations. These can be of great benefit when managing security with many users or many databases. Last month we looked at John's DTF ADMIN, a security documenter. This month, we'll cover DTF PASWD.

## DTFPASWD

DTFPASWD is a utility for changing passwords. Imagine a situation where there are half a dozen databases in use by multiple users. Good practice dictates that passwords should be changed periodically. Q&A only lets you change the password for one database at a time, but DTF PASWD lets a user (or the database administrator) change the password in *all* the databases at once.

## Installing and using DTF PASWD

DTFPASWD is a single executable file you can install in your Q&A database directory, or any directory in the path. It's safe to do this as nothing can be achieved with it without knowing the User ID/Password combinations. In other words, you can't do anything with it that Q&A itself wouldn't allow.

Once DTF PASWD is installed, you'll need to set up an initialization file named DTF PASWD.INI and store it in the same directory as DTF PASWD.EXE. This .ini file contains a listing of the user IDs and the databases to which they have access. (DTF ADMIN is useful for collecting this information.) Here's a sample DTF PASWD.INI file:

```
DTFPASWD.INI

// This is a sample DTF PASWD.INI file
// Created 4 May 98 by Eleanor Washington

brennan PUPILS
brennan STAFF
brennan ACADEMIC
```

```
brennan OLDGIRLS
kennet ACADEMIC
kennet PUPILS

"db admin" ACADEMIC
"db admin" STAFF
"db admin" PUPILS
"db admin" OLDGIRLS
```

```
bursar PUPILS
bursar STAFF
```

```
anderson PUPILS
anderson OLDGIRLS
anderson PREPSCHL
```

```
bracknell STAFF
bracknell PUPILS
```

This is simply a list of User IDs and database names. (Different capitalization has been used here just for clarity. Q&A and DTF PASWD aren't case sensitive for User IDs or passwords.) Notice that the User ID "DB ADMIN" is in quotes. Q&A allows spaces in User IDs and passwords. DTF PASWD requires quotes around any User ID or password that contains a space.

You can add comments by preceding them with //.

There's also support for defining groups of users, including "EVERYONE," avoiding having to list a universally-used database against the name of each user. This can save time setting up the .ini file, and is described in the DTF PASWD's documentation.

DTFPASWD can run in two modes—interactive or command line. Interactive mode, which you might prefer, offers the distinct advantage over Q&A that it doesn't show passwords as they're typed. An annoying shortcoming of Q&A is that when entering an initial password, or changing one, it's visible to onlookers.

## Interactive mode

To run DTF PASWD in interactive mode, you simply run the executable:

```
DTFPASWD
```

A dialog screen then displays with these prompts:

```
DTFPASWD UTILITY FOR Q&A
Sets your password in multiple databases
User id      :
Old password :
Again       :
New password :
Again       :
```

You enter the User ID whose password you wish to change, then the old password (twice) and the new password (twice). This is necessary because you can't see the password. If the password is incorrect for any of the databases, you'll receive a message like this:

```
Doing PUPILS
Your password is wrong for PUPILS.DTF.
Press any key to continue, ESC to stop:
```

This allows you to continue to process other databases. When done, DTFPASWD gives a tally of passwords successfully changed, along with any failures.

### Command line mode

To run DTFPASWD in command line mode, you type DTFPASWD followed by the User ID, the old password, then the new password. Like this, for example:

```
DTFPASWD BURSAR CEDAR CATCH23
```

This would change the password for user BURSAR from "CEDAR" to "CATCH23" for all databases registered in DTFPASWD.INI.

Although this mode offers convenience, you lose the benefit of the "hidden" password, so you shouldn't use it when someone might be looking on.

An additional option is available with the command line mode—you can change the User ID as well if you wish.

This can be very useful for a database administrator when there's a staff change. For example, if Sally (whose password was "MULBERRY") leaves and is replaced by Jenny, then all the administrator needs to do is give Sally's rights to Jenny and assign her the new password "GROVE11." The following command will do the trick:

```
DTFPASWD SALLY MULBERRY GROVE11 NEWID=JENNY
```

In this case, DTFPASWD asks for a User ID and password of a database administrator—that is, someone

with Assign Password rights. All that the administrator would need to do then is to remember to change the DTFPASWD.INI file accordingly.

One facility I'd like to see in DTFPASWD is a way to apply a password change to multiple databases, even if they have different passwords. Consider this scenario: A user changes a password in one database, overlooking the fact that this affects just that one database, and then finds that she is constantly re-entering passwords as she moves between databases. In the current version of DTFPASWD the administrator would need to first use DTFADMIN to determine the various passwords, then run DTFPASWD multiple times, supplying the correct password each time. Such an option wouldn't undermine Q&A's security, as Q&A allows a database administrator to clear or reassign passwords of other users, albeit one database at a time.

Entering DTFPASWD ? at the command line displays a summary of options.

DTFPASWD accesses Q&A databases in shared mode, so you can run the program even while the databases are in use.

### Summary

DTFPASWD offers three important features: A time-saving way to change a user's password in multiple databases in one operation; a way to likewise change User IDs; and a way to change your password without fear of it being "spied" by an onlooker. DTFPASWD can be used by the database administrator or made available to individual users. Users would only be able to change their own passwords.

**DTFADMIN and DTFPASWD are available from John T. Dow (412-521-1577, [jtd@pgh.net](mailto:jtd@pgh.net)) or in the UK from Alec Mulvey**

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---

## @Help . . . *continued from page 9*

correct this deficiency. Maybe it'll be fixed in Windows 98, but don't hold your breath.

We keep a piece of tape in our office labeled "Win95 Speed-Up Key," which we use to hold down the Ctrl key when running certain procedures. The speedup (with Q&A running in a Window) is about 30%. It seems to cause Windows to dedicate the processor to the active Window. For some operations, another way to get almost the same speedup is to run Q&A in full-Screen mode. In other circumstances, such as with large database XLookups and record retrieval and sorting scans, the windowed mode with the "Speed-Up Key" works much

better. However, it could be disastrous if somebody forgot about the stapler or tape, and pressed another key when the operation was complete. It could invoke a macro (say, Ctrl-F, if you have one) from the wrong place in Q&A and you know what *that* could do. Also, your overall system will do some very strange things, even outside Q&A, with any of these keys still depressed.

Bill Halpern and Gordon Meigs own Professional Computer Technology Associates (PCTA) in Newtown, Pennsylvania. PCTA specializes in data management and supporting systems and services. 215-598-8440, [71023.356@compuserve.com](mailto:71023.356@compuserve.com)

## Autonumbering . . . *continued from page 2*

Start Q&A, and put it in a Window. (Press Alt-Enter to toggle between full screen and window mode.)

Start Excel. Excel has a useful feature called *AutoFill*. Type 1 in a cell, then type 2 in the cell just to the right of it. Now, click on the first cell and drag to the second, so you have a block. In the lower right corner of the block you'll see a small black square called the *fill handle*. As Excel's Help says: *When you point to the fill handle, the pointer changes to a black cross. To copy contents to adjacent cells or to fill in a series such as dates, drag the fill handle.*

Accordingly, grab the handle, and drag it *across a row (to the right)* until you have enough numbers to fill all your database fields. All the cells will be numbered, and the whole block will be selected. Click Edit / Copy.

Switch to Q&A. If the Toolbar isn't visible, right-click in the middle of the Title bar at the top, and click Toolbar On. Select File / Utility / Export / Standard ASCII, specify the *destination* database, and use any file name for the export file.

At the Merge Spec, click on the Paste icon (the one with the clipboard on it). Your fields will be autonumbered faster than a speeding bullet.

This works because when you copy the numbers from Excel to the Clipboard, Excel places a Tab between each number. In

Q&A, you normally press Tab or Enter to move to the next field. When the Paste occurs, the Tab is preferable because if you have any multi-line fields in your database, Tab will move you to the next field, whereas Enter won't.

One caution, though. If a pasted number has more digits than the field's width, that field won't be correctly numbered. For example, if the operation attempts to paste 26 into a one-character field, that field will wind up containing just 6. If the too-large number ends in zero, it can cause subsequent fields to be one number higher than they should be. So be aware of this, and be sure all fields are numbered correctly in sequence after the paste is complete.

You can also use Excel's AutoFill feature for numbering fields (as columns) in a report's Column/Sort Spec. In Excel, if you put 10 and 20 in two consecutive cells, then use the AutoFill feature described earlier, Excel will number the cells by 10s, and you can then copy and paste them into your Column/Sort Spec. Numbering report columns by multiples of 10 is always a good idea. It can save you from having to renumber all your columns if you need to insert a derived column between two previously-numbered columns.

Gordon Meigs

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