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Review

Instant 'Q&A' Messaging Across Your Network

TOM MARCELLUS

The Quick Answer

The Do-It-Yourself Guide to Q&A

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1 ***Review*—Instant Q&A Messaging Across Your Network**
Tom Marcellus

2 **Letters**
- ***Using Printer Escape Codes***
- ***Printing to DISK Wrecks Alignment***

5 **Get Your Data in Shape for *Sesame***
Alec Mulvey

6 **@Help—*Edited by Bill Halpern***
- ***Print One Page of Multipage Record***
- ***Mouse Not Working in 2000/XP***
- ***Resetting the Record Number***
- ***Calculating Business Days***
- ***When Autocalc Won't***

8 **Put Your Q&A Data On Your Web Site, Part 3**
Tom Marcellus

11 ***Sesame Seeds*—*Sesame* Terminology**

11 ***Sesame Seeds*—New Field Formatting Options**

MARBLE PUBLICATIONS

IT'S a testament to Q&A's staying power that people are still developing useful add-ons for it and discovering new ways to get more out of it. I was tickled pink when a *Quick Answer* reader from The Netherlands recently sent me a little program that lets network users "instant message" (that's a verb) one another right from inside Q&A.

Network messaging systems aren't anything new. You see them all the time in office environments with networks large and small. User Bill, for example, can open the messaging program on his PC, type a message, and send it to user Jane. Jane could be in the next cubicle, in a building on the other side of the campus, or in a distant city, depending on the network. Jane receives the message on her computer and can respond to Bill simply by clicking a Reply button, typing her reply message and clicking Send.

If you're unfamiliar with network messaging, think of it as a kind of stripped-down email. Indeed, on some networks, Internet email *is* the messaging system. In such a case, the company might have its own mail server. Company staff—regardless of where they might be located—communicate with one another via regular email using programs like Outlook or Eudora. One difference between ordinary messaging and *instant* messaging is that the former sends a message which the recipient may then have to check for and retrieve from the server, while the latter *instantly* alerts the recipient to the incoming message and may even thrust it willy-nilly right onto their screen as soon as it arrives.

Messaging systems like this can be pretty sophisticated and can take considerable time, money and other resources to establish and maintain. If all you need is the ability for the users on your network to send instant messages to one another, you can do it far more simply and inexpensively.

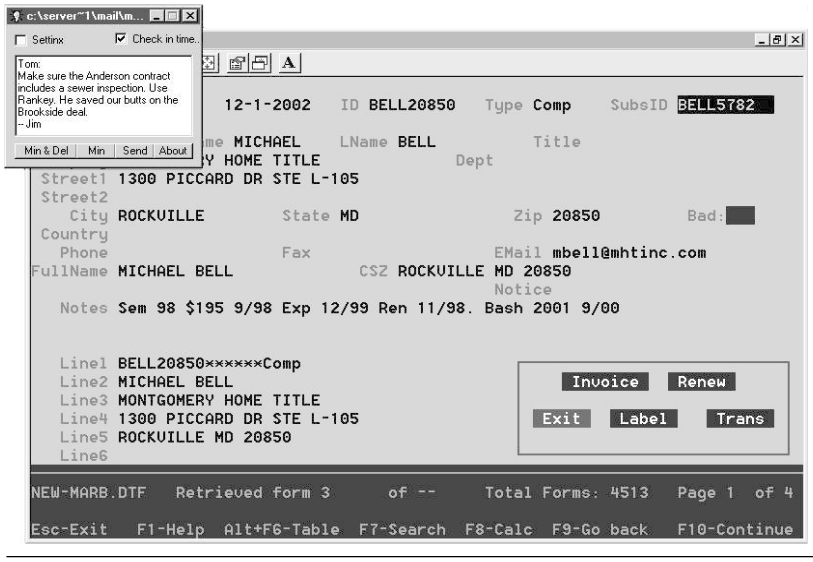

Figure 1. The little instant messenger pops up right at the top of your Q&A window.

In fact, it should take you only an hour or so to setup an efficient little instant messaging system where your people can exchange messages with one another without having to resort to the "sneaker net" or intercom.

How it works

CHECK is a compact little program developed in Visual Basic 4.0 for 32-bit Windows operating systems. (It does not take any memory away from Q&A.) To use it, the computers on your network must be running Windows 95 or later

Continues on page 3

Letters

Using Printer Escape Codes

In your December 2001 article, "A Deposit Report You Can Take to the Bank," you refer to the use of the LaserJet printer control code <-*&12*X to print trwo copies of a report. But how do you get the little left-arrow escape character ("<-") into the Q&A *Printer Control Codes* field? This has puzzled me for years!

—Mike Middleton

To type the escape character in Q&A for DOS, you press Alt-F10 first, then release the keys and press Alt-27, typing the "27" on the numeric keypad. The particular code you're referring to consists of the escape character, ampersand, lowercase ***L***, number ***2*** and capital ***X***. These codes are case-sensitive.

Escape codes are sent directly to the printer by Q&A, just ahead of the rest of the print job—they are not interpreted by the Q&A printer driver you're using, so they tend to be more reliable. If you know the escape code that invokes a particular printer feature on the printer you're using, an escape code can be handier than the usual decimal-style printer conrol code—and will usually work when its decimal code counterpart won't. In the case of reports, Q&A doesn't give you the option of printing multiple copies, so the Printer control code technique is an ideal solution.

In the "old days," printer manuals came with all the printer control codes listed. These days, they aren't in the manual, but printer manfacturers can often supply you with them.

One of the things that makes escape codes so useful is the fact that today's printers have features you cannot invoke from Q&A by any other means.

You can enter escape codes in any Printer Control Codes field (Print Options screens) and directly into Write documents at the point in the text where you want them to tell the printer to start (or stop) doing something .

Records Printed to DISK Lose Alignment

I'm a real estate appraiser and use a Q&A for DOS database to track all the properties I get involved with. When I need to send someone a database record by email, the first thing I do is print it to DISK. But when I open the file in my Windows word processor to add some comments, nothing aligns—the columns are all crooked and the field names and data are all over the place, not at all like in the record they came from.

—Al Beamer

When I had you open the same DISK file in Q&A Write, you saw that the columns *did* align, just as they're aligned in the database form you carefully designed with organized rows and columns.

A DISK file contains only the raw data and spaces—no tabs or other formatting information. It looks fine when you view it in Q&A's word processor because Write's display is *monospaced*, meaning that each character—including upper- and lowercase letters, numbers, punctuation marks, spaces, and any other character—occupies the same amount of horizontal space on the display.

In contrast, when you open the DISK file in a graphical Windows word processor, nothing aligns (the columns are jagged) because your default font is a *proportionally* spaced font— Times Roman, in your case.

All you have to do in Microsoft Word or WordPerfect is select all the text (*Edit / Select All*) and apply a monospaced font, such as *Courier New*, to it. "Magically," the data will line itself up and look more like the database record from which it came.

In any modern Windows word processor, you can set a default font for all new documents. By setting it to Courier or Courier New, you won't have to do so when you open one of these DISK files created in Q&A.

Or, you could create a macro in the word processor to do the work for you. If you linked the macro to a toolbar icon, all you'd have to do is open the DISK file and click the icon to format the document to your specifications.

The Quick Answer™

Editor / Publisher
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Instant Messaging... cont'd from page 1

and, for use inside Q&A, users must be running Q&A within Windows (not as MS DOS Mode programs outside of Windows). It doesn't matter whether they're running Q&A from their local workstations or from the server via a network license, or if Q&A is being run full screen or in a Window. If a user is running Q&A for DOS full screen, they'll hear an audible "ding" when they have a new message, Q&A will minimize on the Task Bar, and the message will display.

When running Q&A in a window—which is how I always run it—an incoming message will appear in the top left area of the screen (see Figure 1 on page 1) where you can easily read and reply to it simply by clicking the Send button and typing your reply.

To send a message to another user on the network from anywhere in Q&A—or anywhere at all, actually—you simply type the number of the recipient's computer (1, 2, 3, and so forth) followed by the text of your message, and save it to a plain text file. From inside Q&A, you'd type the text of your message, then save it to a DISK or ASCII file to the preset filename in the specified *messages* directory. The CHECK program, which you've set up to monitor that directory in the background, then picks up the message and sends it along to the recipient's computer. The receiving computer must be running CHECK to receive the message.

For example, suppose you're updating a Q&A for DOS database record when you want to send a message to another user. You could move to an empty text field, press F6 to expand it, and type:

```
7 Hey Suzie: Let's NOT go to MacDonald's for lunch
today! -Linda
```

You'd then press F2, select *Print to DISK* in IBM ASCII format, and save the message, for example, to *f:\check\mail\message* (*message* being the filename, in this case). You'd then delete the text of the message from the field and you'd be back where you started. (All this can be done with a macro, more on which later.)

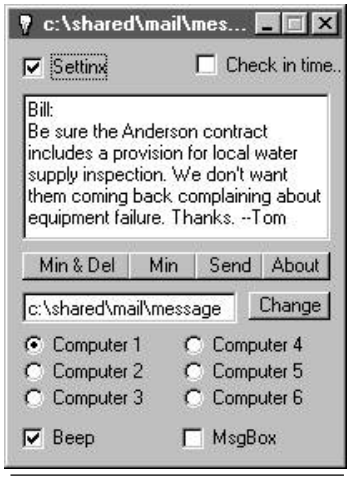


Figure 2. CHECK's bells & whistles.

Meanwhile, CHECK has spotted the new message and sent it to Suzie on computer 7 (with the "7" prefix removed). On Suzie's computer, a little 2-inch square message box pops up with the message. Suzie can then respond simply by clicking the Send (reply) button and typing:

```
1 Linda: Agreed. All that fat! Let's do Burger
King instead -Suzie
```

That's all there is to it. Unlike the sender in this case, the recipient, when replying, doesn't have to go through the steps of saving their reply message to a file because CHECK provides, via its Send button, a handy little pop-up text field to type and transmit a reply.

Actually, even originators don't have to save their messages—they can use CHECK to compose and send them. (If you use Q&A for Windows, see the sidebar.)

The only thing is, you have to know whose body is slumped in front of which computer number.

If you don't specify the computer number as the first character of your message, CHECK will broadcast it to every workstation where CHECK is running.

Options

As Figure 2 shows, CHECK includes a few bells and whistles. You have options to minimize CHECK and delete the message, minimize it (which is the way it starts), or send a message to another user. When using the *Send* feature, CHECK provides its own text box for you to type your message—you don't need to go through the steps of saving it to the right directory and filename.

The "Settinx" checkbox causes more options to spring into view. (See Figure 2.) You can change the message directory and filename, use the radio buttons to pick which computer (user) to send a message to, and specify if you want a "Beep" alert and/or a prompt to appear on your desktop when you have an incoming message. These settings aren't sticky since CHECK doesn't employ any kind of user configuration file.

There's another checkbox labeled "Check in Time." By default, it's checked which, I'm told, means that it checks regularly to see if the common message file has changed. (This supposedly works for up to six users.) I'm not sure of what practical use this widget is, since all you're going to see in any case is the last message sent to you. In other words, if *two* messages are sent to you in rapid succession or while you're away from your desk, you'll never catch the first one.

Using Check with Q&A for Windows

In Q&A for Windows you can't save the contents of a database field to a disk file like you can in Q&A for DOS. Moreover, If you compose and save your messages in Q&A Win Write (cumbersome in itself), the ASCII filename you'll save them to will require an extension that will have to be the same on all PCs. So with Q&A for Windows, you're better off using CHECK exclusively to compose and send your messages.

The best way I found to use CHECK is to keep it minimized on the Task Bar. This way, when I receive a message, CHECK automatically maximizes so I can read it. I can then compose and send my reply right from CHECK, then minimize it again and get on with things.

Installing and setting up CHECK

Getting CHECK working is a no-brainer. You simply place a couple of files in a directory, set up your batch files, and you're good to go.

You "install" CHECK by creating or using an existing shared network directory and copying the two files into it (*check_v2.exe* and *vb40032.dll*). This might be a directory on the server such as:

```
F:\Check\Mail\
```

In a typical installation, for each PC on which you want to use CHECK to send and receive messages, you'd start CHECK from a DOS batch file immediately after boot-up. The batch file might look like this:

```
f:\check\mail\check_v2.exe 1 f:\check\mail\message
```

This starts CHECK from the network *F:\check\mail* folder and specifies this computer as *Computer 1*. It also specifies the path and filename (*message)* that CHECK is to monitor for new messages.

The batch file on Computer 2 would be the same, except that you'd change the "1" to "2." And so on for the other workstations. CHECK can accommodate up to 9 workstations numbered 1 through 9.

You could place the batch file on your desktop as an icon, as long as you can remember to run it right after boot-up. On my networked Windows 98 PCs, I was able to run *check.bat* from the WIN.INI file. Under the [windows] section at the top of WIN.INI, I added this command:

```
run=c:\batfiles\check.bat
```

You can optionally add CHECK to your Windows Registry and start it that way on boot-up. *(Do not attempt to edit your Registry unless you know what you are doing. If you goof something up, your computer might not restart.)* Run *Regedit* and navigate to the following key: *HKEY_LOCAL_MACHINE / Software / Microsoft / Windows / CurrentVersion / Run*. Add a new name and string value pair to the *Run* key. The name can be *Check* and the string value will be something like:

```
f:\check\mail\check_v2.exe 1 f:\check\mail\message
```

Unlike email programs, CHECK doesn't accumulate or save messages sent or received—each new message from anywhere overwrites the previous one. This means that if you send a message to someone whose computer isn't running CHECK, CHECK won't tell you so and they will probably never see it. Any unread message will be overwritten as soon as another message gets sent. On the other hand, since CHECK is an *instant* messaging system, you'd expect co-workers in the CHECK system to have their PCs on with CHECK running.

You don't need to be in Q&A to use CHECK. You simply run CHECK minimized. This way, incoming messages will automatically display, and you can open CHECK from the taskbar if you want to type a message to someone. It's the *ability* to send messages from almost anywhere within Q&A that makes this little program a dandy add-on for multi-user Q&A systems.

Oddities, ideas, and where to get it

CHECK was developed at a Netherlands company with heavy Q&A for DOS network usage, which is why it integrates so handily with Q&A. Even though your messages will be in English (if that's the language you compose them in), you'll find a few widget labels ("Settinx") and other elements of CHECK that might look a bit odd. For example, you'll see a message that reads "geen berichten" which, in Dutch means something like "no messages." Otherwise, most of the descriptive text and labels in the program are in English. For a fee, CHECK's creator might be able to compile a version of the program for you with whatever replacement text you want.

One thing that I would like to see in CHECK is the ability to specify user names in lieu of computer numbers. It would be nice, for example, to designate my computer as "Tom:" in my batch file so that another user could compose a message to me like this:

```
Tom: Will you have that Smith contract done by
4:00PM?  -Sadie
```

Which I would receive worded like this:

```
Tom: Will you have that Smith contract done by
4:00PM?  -Sadie
```

As it now stands, though, CHECK only recognizes the numbers 1 through 9 as message targets.

It would be even nicer if CHECK remembered the computer ID from the sender, so that you'd not only know a message's source, but could reply to it without having to tell CHECK where to send it.

In Q&A for DOS there's a lot you can do to simplify

Concludes on page 12

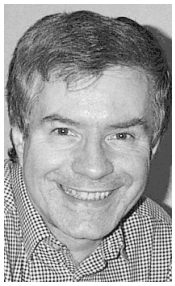
Good Communication Practices

When using an instant messaging system like CHECK, good communication practices are not just common courtesy—they're essential. Each message should be acknowledged *on receipt* to let the sender know you got it. Unlike email, there is no way to resend or recover earlier messages as the message file is overwritten with each new message.

The Quick Answer

Get Your Data in Good Shape for *Sesame*

ALEC MULVEY



Good old Q&A lets you get away with haphazard data entry, but the coming Q&A replacement product won't be so "open-minded."

WITH *Sesame* just months away, now is the time to be looking at your Q&A databases and tidying them up for a smooth transition. Although the vast majority of the elements of your Q&A databases will translate seamlessly into *Sesame*, there are some things you will need to do manually. Most of these fall into the category of getting your data in good shape: healthy and consistent. In this article I'll show you how you can ensure that your Q&A data will conform to the more rigorous data typing of *Sesame*.

What is "data typing"?

Your database consists of fields. When you create a new Q&A database or redesign one, the next screen you see when you press F10 to save the design is the Format Spec. This is where you tell Q&A what *type of data* you propose to store in each field. The choices are as shown in the help panel that automatically appears with the Format Spec. (Figure 1 shows the Q&A for DOS Format Spec. In Q&A for Windows, use *Select / Database Structure.*)

The way the data behaves varies according to which data type you select for a field. For example, if you make a field a Date (D) field, then Q&A will only let you enter a valid date. The 31st of September is not a valid date and Q&A will tell you so as you exit a date field containing such an entry. A number field will only permit numbers to be entered, not text. A Yes / No field will allow only suitable entries. (These are more numerous than you may think; as well as *Yes* and *No* and *Y* and *N*, Q&A allows you to enter *True*, *False*, *T*, *F*, *0* and *1*.)

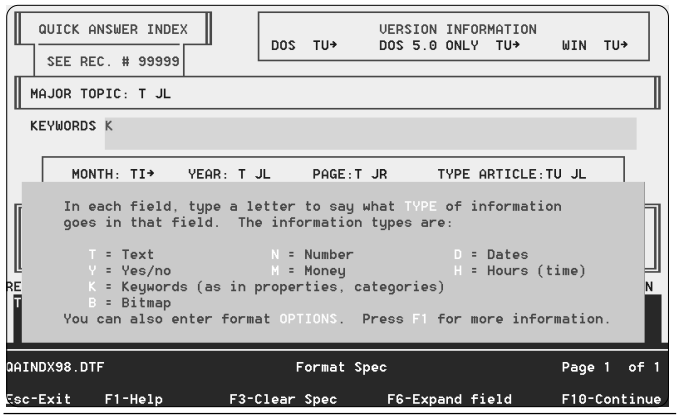


Figure 1. Q&A for DOS Format Spec showing the various data (field) types.

This is all well and good, but there's a snag. Q&A is not very strict about enforcing these "rules." If, for example, you try to enter "Maybe" into a Yes / No field, you will get this message:

```
This doesn't look like a yes/no value. Please verify.
```

If you press Enter, Q&A then considers you have "verified" the entry and allows you to keep it! Similarly with dates. If you're inclined to just ignore the warning message, then you can put Shakespeare's 23rd sonnet into a date field!

You might see this as a virtue—if you don't know the date, you can put in a partial date, such as "Feb. 99?." While this might appear to be a neat solution, the downside is that this record won't show up if you search a date range on this field. It effectively "disappears" from the database. This won't matter if all you want to do is view the record and check the date visually. But imagine if a user enters a transaction date of "30 February 2002" and ignores the warning. This sale will be missing from reports that show sales for any date range—sales orders, billings, receivables…. You get the picture.

What's different about *Sesame*?

The *Sesame* team feels that data integrity is far more important than the ability to enter data haphazardly or for the sake of momentary convenience. So *Sesame's* data type rules will be strictly enforced. A date field will only accept a valid date—even if you try to "force" a non-date entry via a Mass Update! Likewise with Yes / No, Time and currency fields.

So, what about *existing* values? When importing a Q&A database, *Sesame* will look at the data in a field and check that it conforms to its data type. It will only import, in full, fields where all the values are valid. (Invalid entries will be handled in a sympathetic way.) Consequently, it's a good idea to sort out any invalid field entries in your databases now—before you get to the point where you're migrating them to *Sesame*. This is not onerous from a technical standpoint, but it might be from a business one.

Concludes on page 10

@Help

EDITED BY WILLIAM HALPERN

Print One Page of a Multipage Record

Is there any way to print *just* page 4 of a database record in Q&A 4.0 for DOS? We run Q&A in Windows, if that makes any difference.

There are a few ways to accomplish this. The first is the easiest. Press Page Down to move to the page (screen) you want to print, then press the *Prt Scr* key or press *Shift-Prt Scr*. This often works. If it doesn't, continue reading.

When the *Prt Scr* key doesn't work in a DOS program like Q&A, its shortcut (desktop icon) settings need to be changed. These settings are in checkboxes located on the *Misc* tab in the program's shortcut properties.

From your desktop, right-click your Q&A shortcut, then click *Properties*. On the *Misc* tab, clear the *PrtSc*, and *Alt+PrtSc* check boxes. Click Apply, then click OK.

To Use the *Print Screen* operation to direct output to the default printer, press and *release* the *Alt* key, then press the *Prt Scr* key. Do *not* press and hold *Alt* while pressing *Prt Scr* as this will direct the output to the Windows Clipboard instead of to the printer.

In some cases, the window content might not be sufficient to force the *Print Screen* operation to feed the page in the printer. Since there's no form-feed function connected with *Print Screen*, you may have to use the above key combination several times to get the page to print, or press the form feed button on the printer.

The second method is more involved and requires more keystrokes, but it will always work. Go to File / Print, and Design a Print Spec named *Page 4* that you can setup to always print just the fields on the fourth page. (You could optionally design and save a Print Spec for each page or combination of pages.) Then, instead of printing while viewing the database record, you would go to File / Print / Print Records, select your saved Print Spec, then use the Retrieve Spec to tell Q&A which record to print the single page for.

Using a Mouse in Q&A DOS in Windows 2000/XP

We've had no problems installing or using Q&A 5.0 in Windows 2000, but we can't use the mouse in Q&A anymore. Can you help?

Birgit

The solution is easy and it will work in Windows NT/2000/XP. Start Q&A so that it's running in a Window. Click on the icon on the left hand side of the Windows status bar (it looks like a little black "C:\".) A menu will drop down. Click on the *Properties* selection. Now click on the *Options* tab and uncheck (deselect) the *Quick Edit Mode* under Edit options. Click OK, and then click on "*Save properties for future Windows with the same title.*" Exit Q&A and restart it from the shortcut. Your mouse will now work. What you lose by doing this is the ability to just drag across text and then right-click to copy the selection in the Windows Clipboard. However, you can still do this by clicking on the same status bar icon and then selecting *Edit / Mark*. It's a few more keystrokes for copying and pasting to the Clipboard, but you retain both capabilities.

Resetting the Record Number or @Number

What's the best way to get the record number reset back to zero? My customer has about 6,000 records, but the numbering starts at 4,389. They don't want to go over 9,999 because it will make searching more difficult (having to type the longer numbers).

Andy

I'm not sure what you mean by *"record number."* If you're referring to the *Form Number* that Q&A displays at the bottom of the screen, there's nothing you can do to adjust that. But this number is also meaningless to a user and isn't searchable. If it's a number that the customer made as a *field* in the database, it could also have no real significance and should have no effect on sorting or searching speed. If it is such a field, and it increments the number automatically when you add a new record, it's being done by the *@Number* function—and this can be reset at any time. It's important, however, to make sure that you do not use any other numbers already in use in the database or your searches will be inaccurate. If you are just saying that it's easier to type "354" rather than "10354" well, okay, reset your record numbers—if they have no other significance.

To reset them all safely:

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.

1. Search the database and retrieve any record. Press Ctrl-F8, reset the @Number to 0 (zero) and press Enter.

2. Mass update *all* the records with the following statement in the record number field:

```
#1=@number
```

Press F-10 and select "No" (you do not want to have to confirm the update on each individual record).

Remember, This will *wipe out* all your old record numbers and assign new ones. Always make sure you backup the database before running a Mass Update.

Calculating Business Days vs. Calendar Days

I know that Q&A has some powerful date math capabilities, but they only work based on calendar days. I need to get reports to my management based on a count of the number of *business* days between two dates. By this I mean Monday through Friday only. (I'm not concerned about holidays.) I know Q&A can tell the day of the week, but I don't know how to use this in my reports. I will forever be in your debt if you can come up with a solution for me.

Sean

Since you will always owe us for this one, I'll tell you how to do it even though it's more involved than the usual @Help answer. You are correct—Q&A *can* determine what day of the week a date falls on. However, to perform such calculations on a date range in a report would be too cumbersome, if not impossible. The best way is to store the elapsed business days in the actual database records and then use just the results in the report. The issue here is that you have to make Q&A cycle through the dates, from the start date to the end date, and check each date as to its day of the week. If the day is a Saturday or Sunday, you want to reduce the date span value by one for each. A good way to cycle through a range is to use a repeating *Gosub* routine. But this raises another issue—a Q&A *Gosub* will iterate only 26 times. This means that you will have to use multiple *Gosub* fields—as many as are required for your typical date spans. I'll demonstrate with a routine that processes a date range of as many as 75 days.

You'll need the following fields in your database:

Fields	Field ID	Format
Starting Date	#53	Date
Ending Date	#54	Date
Elapsed Bus Days	#64	N0
Counter	#102	Text
End Date	#103	Date
Weekday Calc	#99	Date
Loop1	#105	Text
Loop2	#107	N0

The *Counter, End date, Weekday Calc, Loop1, and Loop2* fields are the calculation fields and can be put at the end of your database where they can be made Read-only and navigation restrictions can be used to keep users away from them.

In the *Ending Date* field place the programming statement:

```
>#54: If #54<>"" and #53<>"" then
{#102="1"; #107=""; #99=#53; #103=#54; gosub #99;
if #107>25 then gosub #105; if #107>50 then gosub
#107; #64=#102}
```

In the *Weekday Calc* field:

```
<#99: If #107 < "26" then{ #99=#99+1; if #99
<=#103 then {
If @dow$(#99) <> "Saturday" and @dow$(#99) <>
"Sunday" then {#102=#102+1}; #107=#107+1; gosub
#99}; return} else return
```

In the *Loop1* field:

```
<#105: If #107 < "51" then {#99=#99+1; if #99
<=#103 then {
If @dow$(#99) <> "Saturday" and @dow$(#99) <>
"Sunday" then {#102=#102+1};
#107=#107+1;gosub #105}; return} else return
```

In the *Loop2* field:

```
<#107:If #107 < "76" then {#99=#99+1; if #99 <=
#103 then {
If @dow$(#99) <> "Saturday" and @dow$(#99) <>
"Sunday" then {#102=#102+1};
#107=#107+1; gosub #107}; return} else return
```

I know it looks complicated, but it works quite well. The key is the looping counter that keeps track of how many *Gosubs* are being done and keeps you transferring to the next one. If you need more than 75 days, you have to add another *If* statement to the *Ending date* field and another loop field (each gets you an additional 25 days).

To make this easier, I've included a sample Q&A 5.0 database—*bus-days.dtf*—in this month's download file. It's already programmed, and it even shows you comparisons between business days only and calendar days calculations.

Now, about that debt ….

When Autocalc Won't

Am I nuts? I'm using Q&A 5.0 and am experiencing some weird problems. I have my database set with Autocalc On. When I select an item from an *Alt-F7* Restrict list in a field, the calculations work. In another field I use an *@Userselect* list. When I select an item from that list, Autocalc does *not* work and I have to press *F8* to execute the calculations. What's wrong here?

Jacob

You've just found one of the anomalies of *Autocalc*. It treats the *@Userselect* entry like it was put there by a programming calculation (which it was), and the *Alt-F7* entry like it was keyboard input. *Autocalc* cannot be fired

Concludes on page 12

Put Your Q&A Data On Your Web Site, Part 3

TOM MARCELLUS

DOS

In this series, we look at five different ways to get the data out of your databases and onto the World Wide Web where anyone anywhere can access it.

IN this five-part series we're looking at various methods or techniques you can use to get your Q&A data on a Web site. The method you choose depends on the kind of output you need from Q&A. The Q&A output you need depends on the kind of Web page you want to create or update.

Here, in a nutshell, are the five methods:

1. Turning individual Q&A database records into individual ready-made Web pages that you can add to your Web site.

2. Formatting Q&A documents as ready-made Web pages that you can put on your Web site.

3. Designing Q&A reports with HTML-formatted output that display your data in attractive, easy-to-read tables or spreadsheet-like formats on a Web site.

4. Exporting then uploading your data to your Web server in plain ASCII files that can be parsed (divided up) by programming on the server and displayed in informative tables.

5. Placing actual Q&A databases on your Web server with the ability to select (via a browser) which records and fields you want to see, and have the results displayed in tables, records, reports or other formats.

In Part 1 in the January 2002 issue, I covered method #1, a technique that automatically generates a Web page for any record in a database. That is, you pull up a Q&A database record, answer "Yes" to a prompt, and programming in the database outputs the record's data to a Web-ready HTML file you can upload to your Web site. This method is most suitable for, say, high-ticket products where you might want a separate Web page for each item.

Last month I covered method #3, Q&A reports designed to output HTML-formatted Web pages. This method, instead of giving you one Web page per database record, yields a Web page that includes data from some or all the records in a database, in an output format that's commonly called an "HTML table"—a spreadsheet-like format that displays your data in rows and columns.

If you haven't read these first two instalments, you might want to do so before proceeding.

This month, we'll look at method #2, formatting Q&A documents to turn them into ready-made Web pages.

Q&A documents as Web pages

This method involves using Q&A Write documents that are made Web-ready, often by a macro that adds the necessary HTML formatting tags to the beginning and end of the document. It's a somewhat deceptive method in that an "HTML-formatted" Q&A document can be a plain text document with the HTML tags alredy in it, a merge document with HTML tags, or a document that's created, say, by printing a report to a disk file, then running a macro to add the HTML tags.

Examples of this latter kind of "document" are *The Quick Answer* **Topic Index** pages at *www.quickanswer.com/indx1fra.htm*. Each of these pages (*AB*.htm, *CD*.htm, and so on) is actually a file containing the output from a Q&A report printed to DISK, opened by a macro which inserts the final HTML tags to turn it into a Web-ready page. (To view the HTML formatting, go to the Web page I just mentioned and click on *AB* in the top frame. Right-Click anywhere in the *bottom* frame and select *View Source*.) See the January 1998 *Quick Answer* article, "Index Reports Made Easy." See also, "We Use Q&A to Publish The Quick Answer Cumulative Index to Our Web Site" at *www.quickanswer.com/howwe.htm* for more on how to generate "index report" Web pages from Q&A.

Using this method, you would probably design a report that outputs the data in the general format in which you want it to appear on the Web page. You print the report to DISK to a file with an .htm extension, then run a macro that opens the file in Write, inserts the appropriate HTML tags, then resaves it. It's now Web-ready. The *AB.htm* file mentioned earlier is in this month's download file . Open it in Q&A Write to see how it's Web formatted.

The advantage of this technique over using the Report technique alone (covered last month) is that you don't build the HTML tags into the report design itself (using derived columns), so your reports can be more complex with more columns. All the HTML tags you need, including any navigation hyperlinks or image link tags, you can add to the file in Write (using a macro, preferably) *after* the report has been printed to DISK. You then have a Web-ready HTML page to upload to your Web server.

Creating a simple Web page in Q&A Write

Here's a little exercise that will show you how easy it is to create a Web page from a Q&A for DOS document. From the Q&A Main menu, select *Utiltities / Install Printer.* Make this one Printer D or E (where you have an empty slot), and set it to print to FILE. Select *Basic (Vanilla) / Non-laser Printer NG* at the top of the list of printers.

Next, select *Write / Type/Edit*, and type the following lines into the document:

```
<html><head>
<title>The Rain in Spain page</title>
</head>
<body>
<p>
<font face="verdana" size="3" color="red">
<b>
The rain in <a href="javascript:
alert('Spain')">?</a>
falls mainly on the plain.
</b>
</font>
</p>
</body></html>
```

There should be no hard carriage returns in the sentence that starts with *The rain...* and ends with *...plain.* (If Q&A simply wraps the line, that's okay.) When you're done, press F2 for the Print Options screen. Select the *Basic (Vanilla) / Non-laser Printer NG* you just installed to print to FILE, and press F10. Q&A will prompt you for filename. Type in *Spain.htm* and press Enter.

Now, start your browser. In the URL or address field, type in the DOS path to *Spain.htm* and press Enter. If you did everything right, the browser should display a line of red text, in Verdana, that reads:

```
The rain in ? falls mainly on the plain.
```

The question mark should be underlined (hyperlinked). Click on it, and a Javascript alert box should pop-up with the word "Spain" in it.

So why couldn't you have just typed the document and saved it to an ASCII file with Ctrl-F8, instead of having to install the *plain vanilla* printer and print to FILE. Well, you could have. But there are two reasons why this might not be such a good idea. First, when you save a Q&A document to ASCII, an oddball character is added to the end of the file that Windows programs don't know how to deal with. It will appear as a small box at the end of your Web page. Second, saving a document to an ASCII file strips out any headers or footers, which you might actually *want*, particularly when they contain HTML tags. If you recall last month's article, we used the Report header and footer lines for storing HTML formatting tags. Had we printed the report to DISK, we would have lost these tags and the report would have looked like hell in a browser.

If you don't need headers or footers and don't care about the little box at the bottom of your Web pages, then by all means print to DISK and save yourself a few steps.

Create a Web-ready pre-formatted report

Continuing with a second exercise, in Report, print a simple columnar report to DISK, assigning an *.htm* filename extension to it, then open the file in Write. Above where the report column headings begin, add a few blank lines and type in everything in the earlier example up to and including the ** ** tag. Below the report, type in everything from the ** ** tag to the ending **</html>** tag. Now, change the ** ** tag to **<pre>** (pre-formatted) and change the ** ** tag to **</pre>**. Resave the file with Ctrl-F8 and view it in your browser. The **<pre>** tag tells the browser to display what follows just it as is. Since a file printed to disk in Q&A contains no enhancements or fonts, the report should appear in the browser in a monospace font and the data in its columns should align just as they do when you print a report to *Screen* in Q&A.

Merge documents

You can design a merge document with all the HTML tags as fixed text and the merge fields between them. Remember, HTML tags disappear when viewing the document in a browser—they're replaced by the actual formatting for which they serve as placeholders. Here's a merge document containing **Name**, **Rank**, and **Serial Number** merge fields that specifies three font sizes. (This and the Q&A 5.0 database are in your download file):

```
<html>
<head><title>Test Merge Doc</title></head><body>

<p align="center"><font face="Verdana" size="5">
*Name*</font></p>

<p align="center"><font face="Verdana" size="4">
*Rank*</font></p>

<p align="center"><font face="Verdana" size="2">
*Serial Number*</font></p>
</body></html>
```

If you print this document to a file with an .htm extension as covered above, and select the *James Thornton* record at the Retrieve Spec when prompted by Q&A, the resulting file (page) will look like this in your browser.

Figure 1. A formatted Q&A merge document viewed in a browser.

Tom Marcellus is Editor of *The Quick Answer*

Data Typing... cont'd from page 5

How to find errant field values

There is one gloriously simple search pattern you can enter into a Retrieve Spec field to find all "incorrectly formatted" values (as the *Q&A Users Guide* misleadingly calls them) in that field. It's this:

```
/..
```

This search parameter (a forward slash followed by two periods) will find all occurrences of invalid data types in the field (in other words where, if manually entered, Q&A would have displayed a "This doesn't look like .." warning). You can likewise search for *valid* entries with:

```
..  (two periods)
```

If you find that there are quite a few such "bad" entries, then you might like to isolate just some of them to perform a Mass Update, for example, or to mass delete or export these records. To do this, you will need to isolate just some of the invalid entries at the Retrieve Spec. The problem is: you can't—you'll get a "Not a valid Retrieve Spec" error message, and this time you can't just press Enter and continue!

Help is at hand, though, with another, even more obscure search pattern. Suppose you found you had loads of records with bad dates in a Date field. Besides numerous other invalid dates, there are many where the date field contains just the year, such as 1993, 1997, 1999 or whatever. You decide that you will make these dates valid by entering a date of *January 1* in that year via a Mass Update. Here's the Retrieve Spec parameter you can use to find such records:

```
]199?
```

(That is: the right square bracket followed by *199?*). The right square bracket, when it's the first character in the search pattern, tells Q&A to perform a text search in a non-text field. For the Update Spec, you would might use programming like this (where field #10 is the field that contains the year):

```
#10 = "Jan 1 " + @Str(#10)
```

But you'd soon find that this doesn't work. Why not? Well, because you cannot perform string manipulation on a text value in a date field. So, what you need to do is this. First, back up your database! Then, change the date field to a text field at the Format Spec (File / Customize / Format Values). *Then* you can perform the Mass Update. (You can use the **]199..** syntax if you wish, but of course a normal text search will now work.) The Update Spec then becomes even simpler:

```
#10 = "Jan 1 " + #10
```

After that you can change your field back to a date field.

You can use wildcards with the "]" character. Suppose in a date field there are entries such as "See John" or "See Beth." You can find all of these by using the following search pattern parameter in the Retrieve Spec:

```
]see..
```

Conclusion

The time you spend making your database(s) well-disciplined will not be wasted. The conversion to *Sesame* will go more smoothly and, in the meantime, you'll get used to making and keeping your data clean and reliable.

It's likely to take you no more than an hour or so to find and correct the anomalies, if they are relatively few. What could take very much longer is if you have numerous invalid dates, numbers, and the like. This might have happened because data was imported, Mass Updated or inserted by regular programming without regard to what was actually going into the field or, as I have seen on more than one occasion, temporary data entry staff being brought in and spending weeks ignoring the frequent bright red Q&A warnings! In these cases, finding the faulty records might take only minutes, but formulating the business rules for how to handle the anomalies might take weeks!

Better start tomorrow!

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"we here u!" :-) —Winning Emails To Tech Support

We salute the compositionally-challenged writer(s) of the following Q&A-related email message(s) (recently received as shown) for their heroic efforts to communicate at any cost.

I'm running on windows 2000 and receive Q&A documents .DTF . What software do I need to open these files .

Sesame Seeds

Sesame Terminology

As you know, Q&A has a very simple data-related structure because it's basically a flat-file database manager. This means that the database stores all the information about a single category of entity (for example, customers, inventory items, sales orders, invoices, insurance policies, patients, or the like). This makes for a data structure comprised of the following elements:

Database: The top level file or container that stores all the information (data) on all the entities that fall within the category.

Record: The "subdivision" of the database that contains all the information about each individual entity in the database.

Form: The screen design that displays each record for data entry, searching and so foth, which is made up of all the individual pieces of the total information defining one of the items in the database (record).

Field: The individual "information blanks" in each form or record that store the pieces of data which, when taken as a whole, define a record. (For example. name, address, city, state, phone, title, and so forth).

You can, of course, tie several of these databases together with Lookup programming, custom menus, macros and so forth to create complete applications.

Because *Sesame* databases can be hierarchical in structure, the simple flat-file breakdown above no longer suffices to describe how the product can be made to work. An "information unit" in a *Sesame* system can hold more than just the data about a single entity, so we've had to define a new structural breakdown. *Sesame* will be able, in a single information unit structure, to store all the information about several related items such as customers, invoices, sales, and inventory. This will allow you to create an entire application contained in a single disk file. In light of this, we will be using a structure with the following breakdown and associated terminology:

Application: The top-level container of all facets of all of the data structures and information in the defined information unit. This is similar to using several databases in Q&A tied together by XLookup programming, custom menus, and macros.

Record Definition: The structure of the container that stores all the information about one or more of the items in the information unit and their relationships to each other. This will be similar to having one or more databases in Q&A. You might have separate Record Definitions for your customers and inventory which will be parts of your overall Sales Application.

Form: The screen design for the presentation (data entry, searching, and so forth) of the data in any of your Record Definitions. A record definition might have multiple form views which will allow you to look at different presentations of the same basic data in the application. The Form is like a combination of both the Database and the Form in Q&A.

Sub-Form: A sub-structure in Sesame that allows you to view more than one part of the information on a single screen. (For example. the main form might show the invoice, and the sub-form might show the details of the individual line items that make up that particular invoice. In Q&A, each of these would be a separate database).

Record: The container for all of the information about one of the items on a form or sub-form.

Field: The individual information blanks in each record that store the pieces of data (name, address, city, state, phone, title, and so forth) which, when taken in total, define that record .

While at first glance this new structure might look complex, the fact is that for simple flat-file *Sesame* applications, it is essentially the same structure as Q&A. That is, there will be a single Record Definition with a single Form composed of Records that are made up of Fields—altogether familiar territory.

—Bill Halpern, CEO, Lantica Software, LLC

New Field Formatting Options

Q&A allows you to set one date format and one currency format for the entire database. For *Sesame*, we've implemented a layered scheme for *Form Element* display formats. There are several places where you can set Form Element display formatting, depending on how specific you need to be:

System Defaults: If you do nothing, you get a default format (usually derived from your system and locale settings). All Form Elements will use the default.

Application Defaults: If you set Application defaults, all Form Elements in your application will use the Application settings instead of looking to the system.

Form Defaults: If you set Form Defaults, all Form Elements on that Form will use the Form settings.

Form Element Settings: If you set formatting options for a particular Form Element, *Sesame* will use them.

This scheme allows you, if you wish, to have each Money field on your form display with a different currency symbol and different number of decimal places. It allows you to have one Date field on your Form display in American format, while another shows a European date format. On the other hand, you can set nothing at all, and all your fields will display in a way appropriate to your locale.

—Erika Yoxall, Technical Coordinator, Lantica Software, LLC

@Help... cont'd from page 7

by programming! If it were, Q&A would go into an endless loop and never stop calculating. This also applies to values entered via *XLookup* or even *Lookup* statements. So, how to resolve the dilemma? In Q&A 5.0, no problem. Record or write the following macro:

```
<begdef><nokey><name>"Calc"<vidon><f8><enddef>
```

All it does is press F8. Then, at the end of any programming statement that changes values or does a Lookup or picks from a list, add:

```
; @Macro("calc")
```

This will be just like pressing the F8 key and all of your calculations will take place automatically and instantly. This won't work in Q&A 4.0 because you can't run macros from programming statements in that version.

By the way, if you want your *Alt-F7* lists to pop-up automatically in blank fields with restricted values, just record another macro:

```
<begdef><nokey><name>"List"<vidon><altf7><enddef>
```

And use an on-field-entry statement like:

```
<#10: If #10= " "  then @Macro("List")
```

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Instant Messaging... cont'd from page 4

and enhance CHECK's usability. With nothing more than a macro, for example, you could greatly simplify the task of sending messages from within Q&A. You could set things up so that when you moved to an empty text field and pressed, say, Alt-M, the macro would expand the field for you and pause while you typed out your message. When you pressed Enter to continue, the macro would do the rest of the work, including saving the message to the message file, deleting it from the field, closing the expanded field, and putting you right back where you started. You might even want to add a field to the end of your databases just for this purpose. Here's a little macro that will move to that last field from anywhere in the record (if not prevented by intervening *goto* commands) and perform all the above steps. You simply press Alt-M, type the text of your message, then press Enter to send it:

```
<begdef><altm><name>"<caps,>altm<caps.>"<vidon><end>
<end><end><f6><wait><enter><f2><dn><dn><dn><dn><end>
<f10>i<capsf4>f:\check\mail\message<enter>y<f3><end>
<end><end><f10><f6><home><home><home><enddef>
```

An executive at the company where CHECK was developed told me one of the ways he uses it. His assistant answers a phone call from a client, pulls up the client's record, and makes a selection from a pick-list. programming then assembles a message string that specifies (1) that it's a phone call, (2) from a client, and (3) the client's ID is "4555." A macro then saves the client's ID to a text file on the server and generates an instant message to Computer 1 (the executive), telling him:

```
On the phone is Client 4566
```

The executive has a copy of Q&A with an autostart macro. It opens the database, reads in the Client ID from the saved server file and displays the client's record. The executive can then inform himself on the client before deciding how to handle or direct the call with an instant message back to his assistant.

When you factor in the possibilities with macros and custom menus, Q&A 5.0 pick-lists and programming, the ways in which you could automate assembling the texts of various kinds of messages, who they're sent to, and then sending them, your imagination is the only limitation.

You can download a working copy of CHECK from the Free Downloads page at *www.quickanswer.com*. You won't get any documentation with it, but you should be able to set it up using just the information in this review. (It is *not* a complicated program.)

If you have specific issues with CHECK you need help with, you can contact Kees Steenbergen at steenber@tref.nl. If you decide to use CHECK on a regular basis, the right thing to do would be to contact him and arrange to send him a little something for his efforts. And $20 per user wouldn't be too much.

Tom Marcellus is Editor of The Quick Answer

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