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Converting a Q&A Database to Sesame



ALEC MULVEY

As we get ever closer to release of the new Q&A-compatible database manager from Lantica Software, we'll continue to bring you tips and articles to help you better plan your migration.



LAST month, I showed you several of the new layout elements that you will be able to use on your *Sesame* forms—things like checkboxes, radio buttons and combo boxes. (“Introducing New Form Elements in *Sesame*.”) This month I’ll introduce you to the process of converting a Q&A database to *Sesame*, then manipulating it once you’ve done so. The database I’ll use for this exercise will perhaps be a familiar one: T.J. Shuflin’s QAINDEX database. It’s a topic and keyword index to all the articles, QuickTips, @Helps, letters and announcements published in *The Quick Answer* since its first June 1990 issue. The Q&A 4.0 version of QAINDEX.DTF can be downloaded at www.qaug.com. The Q&A 5.0 version can be downloaded from the Free Downloads page at www.quickanswer.com.

Figure 1 shows a record from QAINDEX.DTF.

To convert the database to *Sesame*, you would first perform any preliminaries such as making a backup of it and running Recover on it to ensure it is in good shape. There will likely be some additional checks and even alterations you may need to perform first. You will then simply select *Import Q&A* on *Sesame*’s Main menu and point to the Q&A database. *Sesame* will import the database and then show it to you. Figure 2 on page 3 shows what the converted database will look like initially.

As you can see, it looks pretty much the same. The form colors used in the Q&A database are retained in *Sesame* along with the graphical line draw.

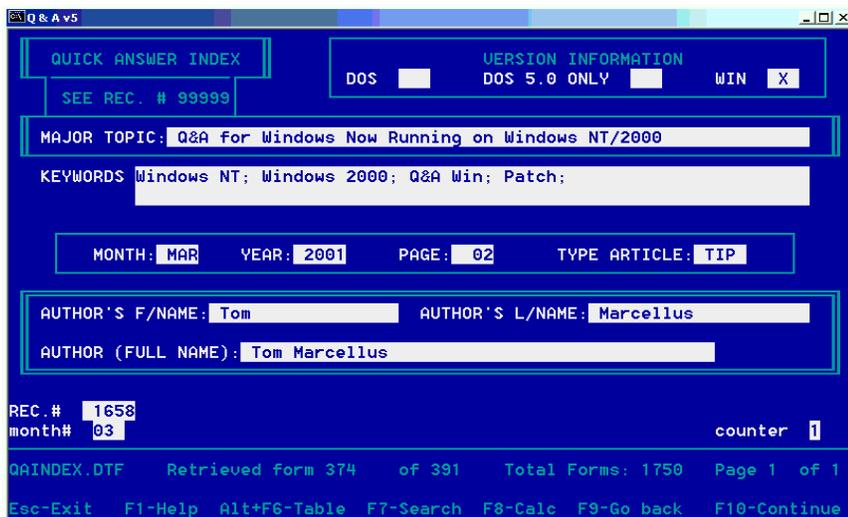


Figure 1. The original Q&A database.

The Quick Answer

The Do-It-Yourself Guide to Q&A

May 2002

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In *Sesame*, however, Q&A line draw characters become a single “object.” You can keep it as is and you can even change its color, but you might want to replace it with proper lines and boxes from *Sesame*’s own palette of graphical layout elements, as they are much more versatile.

Notice that the screen font is monospaced or fixed-pitch. This is to retain the appearance of your Q&A for DOS database form to the extent possible. (The font is one that can be

Continues on page 3

Letters

My Q&A Data on the Web

Your latest "Q&A On the Web" article (March 2002 issue) was great. However, I had to make one change to get the technique to work on my Web site.

Following what I thought were your directions, I created a folder in my www.newyork-data.com Web named *txtfiles*, uploaded *products.txt* and *products.asp* into it, then tried going to www.newyork-data.com/txtfiles/products.asp. I got a "permissions"-related error message when I hit the *products.asp* page. I then moved *products.asp* from the *txtfiles* folder into the root folder with all my regular Web pages and tried [newyork-data.com/products.asp](http://www.newyork-data.com/products.asp). This time it worked. Maybe you should have mentioned that? Maybe I should have known it? Do ASP files have to be in the root folder? Or in a different folder than the text files?

—John Horn

Normally, you would not want to store your ASP files in the same folder as your text files. How come? It's all about permissions. On a Web server, you can set permissions on your Web folders so that certain things can be done on the files in it and certain other things cannot be done on its files. You'd typically want to store your text files (which are actually data files because you're using them that way) in a folder that has

Win XP, Lesspace, and Screen Size

I run Q&A 5.0 for DOS on a Gateway computer with a Pentium 4 processor and Windows XP (Home edition).

Putting STARTQA.BAT in my *qados50* directory made it easier to set up the batch file for Lesspace. Simple me: I had downloaded Lesspace into the "My Documents" folder where the batch file couldn't find it.

My next problem was the Q&A window size, which was very small. After going through your Setup Guide several times, there were only hints of such a problem. Finally, I stumbled on a checkbox in Properties/Compatibility—"Run this program in compatibility mode"—and was able

read/write permissions—but not necessarily browse permissions—enabled. This way, the scripts in your ASP page can read and write to those text (data) files, but the text files themselves aren't browseable.

*By the same token, you don't want to store your ASP files in a folder where there's a possibility they could be overwritten or changed, so you put these in your root folder which has **browse** permissions but no write permissions. I should have mentioned this in the article.*

—Ed.

to choose "Windows 98," in which Q&A had always run well before. The sizing according to font size kicked in, and I think I am out of the woods. A nice 10 x 18 font causes my Q&A window to fill the top half of the screen, which I like. Thanks for your help.

—Peter Scott

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Quick Tip

Programming Y/N Fields

Be careful with a field whose Format Spec is set to "Y" for "Yes/No" entries—programming statements for this field may not execute. Consider the following to control data entry in field #5:

```
IF #5 <> "Y" AND #5 <> "N" THEN #5 = ""
```

In this case, field #5 needs to be formatted as "text." If it's

formatted for "Yes/No" entries and a value other than "Y" or "N" is entered, Q&A will ignore the programmed restriction and instead display the message: "This doesn't look like a yes/no value. Please verify." From here, simply pressing Tab or Enter will erase the message, allow the incorrect entry to stay put, and advance to the next field!

—Jon McLaughlin

Converting... cont'd from page 1

found on any PC.) Keep in mind that *Sesame* is a cross-platform product (available in Linux/Unix versions as well as a Windows version), so the Lantica developments team can't assume that "Arial" or your favourite Windows TrueType font will be available on every system. The font, the layout of the fields, the line-draw, the form color—all these things you are likely to want to change, and I'll show you how easy it is to do this.

I do stress, though, that you need change nothing following the import. The database will be fully functional (within any limitations of the conversion) just as it is.

Post-conversion

At this stage you have a single database named "QAINDEX" in a *Sesame* application that is also named "QAINDEX." You can optionally change the name of either one, or both. You can also convert other Q&A databases and merge them into one application, so they are contained in a single *Sesame* file with DB filename extension. This isn't the place to get into *Sesame* applications and how they differ from individual Q&A databases.

After conversion, you'll also have just one *Sesame* form corresponding to the Q&A form. You can then, of course, create additional forms, including forms with subforms showing data from multiple records in another database in your application, such as an invoice with line items. But for this article I'm going to just show you how to edit the single form you are presented with on importing the database from Q&A.

Using Sesame's Form Designer

To make changes to the form you need to open *Sesame's* Form Designer. This can actually be run as a separate application, or you can access it from *Sesame*. Either way, you will make your design changes from a screen that will look like the one shown in Figure 3.

Notice the following:

- The "Keywords" field is currently selected. It has a differently-colored highlight (which you probably can't make out in this publication) and a sizing handle at bottom right.
- In the "Tools" area to the left of the form, the top area is for adding new layout elements called *controls*. The one underneath is a multi-function tabbed dialog which allows you to do the following:

- Change the color of anything on the form.
- Change the font attributes and alignment of fields, labels and fixed text.
- Change the appearance of layout elements (sunken, raised, rounded corners, etc.) and where field labels appear relative to the fields themselves.
- Align layout elements, change spacing, and generally make groups of form elements consistent and tidy. (There are some really great toys here which you'll love. I look forward to describing them to you in detail soon!)
- Control local and global formats, such as for dates and currency.
- Miscellaneous options such as changing the names and labels of form elements, fixing which field in the database a form element, such as a checkbox, is

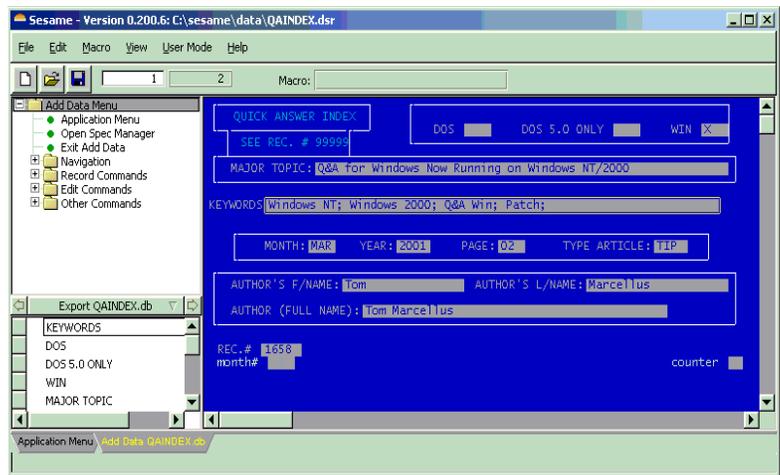


Figure 2. The freshly imported database in *Sesame*.

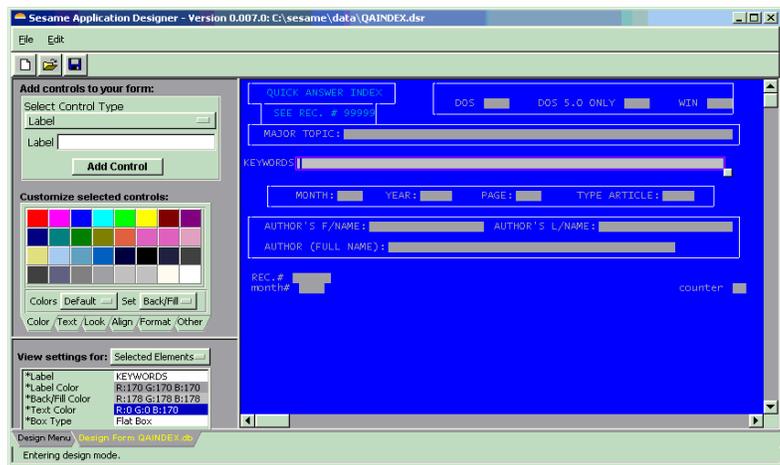


Figure 3. The *Sesame* Form Designer Screen.

“bound” to, setting initial values, making form elements read-only, and much more.

Suppose you want to change the form background color. Easy. All you need to do is to click on the form background, then click on the “Set” button under the color palette so it reads “Back/Fill” rather than the default “Label.” You can then click on the color you want. The form background instantly changes to that color. Not content with the choice of only 36 colors? No problem. You can change the color palette from “Default” to “Fancy” and you’ll get another 36. Still not satisfied? Then change the color palette to “Custom” (as shown in Figure 4) and you’ll get sliders for Red, Green, and Blue along with a preview box to see how good (or awful) the color combination you’re “dialling up” is.

Avoiding the “rainbow” effect

So you now have 16 million colors to choose from. This could be a problem if you want to achieve consistency across fields. There is a ready solution, though. You can make use of a fourth color palette named “Form.” On it you see just the colors already used on the form, so it’s easy to pick out the same color again. Furthermore, if you click on anything, *Sesame* will show you its “properties” in the lowest of the panes in the Tools area. (See Figure 5.) This shows the RGB values of anything selected. So if all else fails you can always select the same numerical color values again.

It takes only a minute to set the form background color to, say, light gray, and then set all the field labels to blue. (See Figure 6.) You do this by dragging with the mouse to define a rectangle that wholly or partly encompasses all the layout elements (fields and labels)

that you want to change. The technique is called “rubberbanding” as it is like stretching a rubber band with the index finger and thumb of both hands to surround and select the elements. The selected elements can now have any appropriate

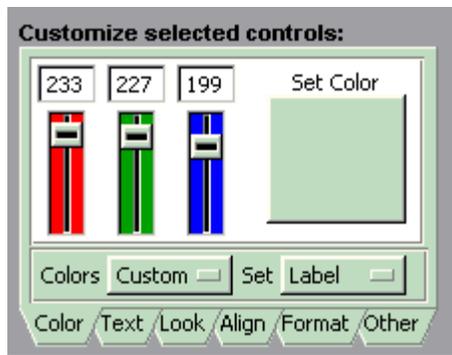


Figure 4. The custom color screen.

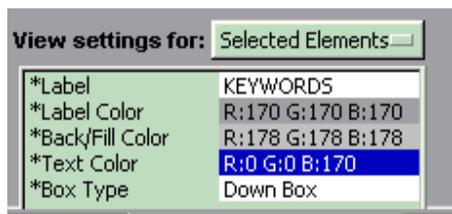


Figure 5. Color settings for the “Keywords” field.

enhancements or changes applied to them in one go. So you can see it’s extremely quick and easy to alter the colors of the form.

Assigning fonts

Fonts can likewise be changed on a “group” basis. The static text (“Quick Answer Index” and “See Rec. # 99999”) can be selected together or individually and quickly reformatted.

With a series of changes, the QAINDEX form now looks like the one shown in Figure 6.

Lines, boxes and field colors

Now, about those Q&A lines. You can right-click on them and delete them. (See Figure 7.) Then you can add a box, format it as you like—make it a purple raised box with rounded corners if you want!—and position it optimally.

I haven’t mentioned setting the foreground color (text color) of the fields. Well, this is done similarly, but you might be wondering how you get to see what it looks like as you experiment with different settings. Although the form in the Designer shows and stores no data, you can type anything you like into the fields and it will stay there during your design session. So you can see how a field or group of fields will look when assigned a foreground color, font and font size. You can select any font available on your computer for any element that contains text. All fields can be the same, you can format your fields in groups, or you can make every single one different. It’s up to you. If you’ve managed to create garish-looking forms in Q&A, wait until you see what you can do in *Sesame*! Figure 8 on page 12 shows the revised QAINDEX form, rather conservatively modified.

Where to go from here? Well, you could replace those

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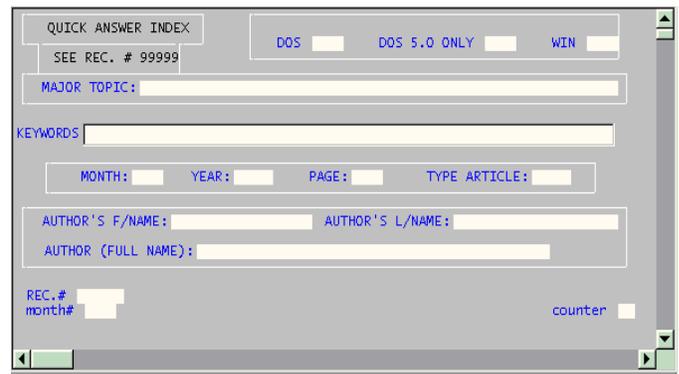


Figure 6. After changing colors of the form, fields and static text.

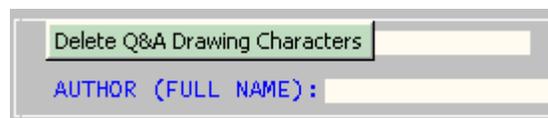


Figure 7. Deleting Q&A line draw

Put Your Q&A Data On Your Web Site, Part 5

TOM MARCELLUS



In this series, we look at five 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, which in turn depends on the kind of Web page you need.

Here, in a nutshell, are the five methods:

1. Turning 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 produces a Web-ready page for any record in a database. Programming in the database outputs the record's data to an 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 product.

In the February issue, I covered method #3, Q&A reports designed to output HTML-formatted Web pages. This method yields a Web page that includes data from some or all of the records in a database in an output format that's commonly called an "HTML table"—a spreadsheet-like format with rows and columns.

In the March issue, we looked at method #2, turning Q&A documents into ready-made Web pages.

Last month, I covered method #4—Exporting then

Next month we'll look at ways to *collect* data on your Web Site and get it from there into your office database

uploading your Q&A data to your Web server in plain ASCII text files that are parsed (divided up) and displayed in HTML tables by "server-side" programming.

If you haven't read these earlier installments, you should do so before proceeding. They cover some of the basic HTML (Hypertext Markup Language) tags you need to create Web pages out of anything from Q&A.

Serving up your Q&A data

In this fifth and final installment in the series, we'll take up technique #5—placing an actual Q&A database on your Web server with the ability to select (in a browser) which records and fields to see, and have the results displayed in tables, records, reports or other formats.

This is the most sophisticated of the techniques and requires the most initial setup work. But from there on it's the easiest to maintain because all you have to do is upload a copy of your database to the Web server whenever you want. (See page 10 in last month's issue for ideas on automating this task.) The updated data in the database is then immediately available for viewing by visitors to your Web site. This method lets visitors *select* (or lets you control) the information they view.

You need four components to take advantage of this "Q&A-database-on-your-Web-server" option:

1. The database itself (both the .dtf and .idx files).
2. A Web form where visitors, using their browser, can enter their search criteria (the equivalent of a Q&A Retrieve Spec).
3. A program such as a PERL script to receive the search criteria from the Web form and format it for use by DTFDATA. (You can download a PERL kit from www.activestate.com.) And the same or a second script (or an Active Server Page or the like) to read in DTFDATA's output file and parse it for display on the Web page.
4. DTFDATA to extract the selected data from the database

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Q&A DOS Sluggish in Windows XP

I have read that Q&A for DOS runs fine in Windows XP, but I am experiencing what appears to be some “sluggish” performance when running Q&A 5.0 on my new XP computer. It has all of the memory settings correct but it still appears to be somewhat slower than it was on my old computer which was actually a slower machine. I often have to do procedures that require complex mass updates and import/exports. These are really slow. Is there any way to speed it up?

Barbara

I’ve said that Q&A runs perfectly in Windows XP and Windows 2000, but you have hit the three features (mass update, export, and import) that are actually slower than they were on a Windows 9x machine. They were not speed demons in that O/S either, but you could make them run faster by simply holding down the Alt or Ctrl key on the computer during these operations. However, in Windows 2000 and XP, this “magic speed up” key does not work. So, how do you recover the speed? Actually, you have three options.

1. In the properties of the Q&A shortcut, go to the Misc tab and set the Idle Sensitivity to the extreme left (low). It must be “pegged” to the left side! This will speed Q&A up significantly (five to seven times faster) *but* it will have a severe effect on any other program you run while Q&A is still open. In fact, for those of us that run Q&A for DOS in a window in order to take advantage of multi-tasking, this is a poor way to go. For those who run only Q&A, it is the best way to go.
2. For those using Windows XP (this does not work in Windows 2000) who are energetic and can’t sit still while waiting for a long operation to finish, put that energy to use and just move your mouse around *within* the Q&A window. You will find that Q&A operations speed up by about 700%. For short, infrequent

operations, this is a good trick and replaces the old “speed up” key we used in Windows 9x.

3. My favorite method of speeding up Q&A is to simply flip it into a *full-screen* mode for the slower operations. Q&A, in Windows 2000 and XP will run 700% faster in these O/S’s in full screen vs. windowed mode. And, it is easy to do. Start Q&A in a window. Begin your heavy-duty operation and press *Alt-Enter*. Q&A will switch from a window to full screen and will be flying! If you need to get back to the desktop, just press the *windows* key (that little Microsoft key on the lower left of the keyboard) and Q&A will be minimized and you will be at the desktop. When the operation is done, press *Alt-Enter* again, and Q&A will be back in a window. This method is the one I use the most since it is simple, quick, and allows me to do some other things while Q&A does its thing.

‘Insufficient Memory’ Messages

When trying to do a mail-merge with Q&A 5.0 in Windows XP on a Novell network, I will sometimes get the message that there is “insufficient memory” to complete my request. This does not happen on my Windows 98 machines running the same merge operation. I have set all of the memory settings in accordance with what I have read in past @Helps. Since the message only appears sometimes, it seems that I must be really close in my needs. Is there any way to squeeze out a few more K?

Christopher

As you know, Q&A for DOS runs in conventional (low, first 640K) memory and requires that that memory be maximized. One of the issues you are having is that XP on a Novell network loads an IPX/SPX network driver that takes some of the critical low memory and provides no way to reclaim it. The only option is to minimize the



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.

amount of memory that Q&A is using in its operations.

I have it on good authority that unloading the Q&A macros (*Shift-F2*), not having any default fonts assigned, and only having one printer installed (of the five Q&A allows) will allow Q&A to internally assign the maximum amount of memory to its operations. There is no place to check this availability other than seeing that Q&A has the memory to do things it could not do before.

Percentage Tracking Report

I have a need to track how my employees are doing in their work assignments and to compare them to one another during performance reviews. They are assigned various numbers of jobs according to their skills but they are each expected to complete the same percentage of their assignments in a given number of days. I would like a simple report that shows what percentage of their work is finished each day. Each job has its own record, the name of the person assigned, and the number of days to complete. What I need is something like this for each employee:

Day	% Total Completed
1	0.80
2	3.20
3	8.80
4	20.00
5	20.80
6	21.60
7	8.00
8	8.00
9	4.80
10	2.40
11	0.80
13	0.80
=====	
Total:	100.00

I can get a cross-tab report which gives me total numbers of jobs, but not percentages. I have tried lots of things in columnar reports but cannot get a percentage value. Any help?

Melissa

This is really not difficult. What you need is something to count in each record. In this case you can just count the name of the task since it appears in each record.

In your Columnar Report Column/Sort Spec, set the Number of Days to complete as 30,AS,I and the Task Title as 40,I. Then, fill out the Derived Column screen like this:

Heading: Delayed Days
Formula No. 4 #30
Column/Sort Spec: 100,I

Heading: Days
Formula No. 5 @txt(#30<>#100,#30)
Column/Sort Spec: 31

Heading: No Tasks
Formula No. 2 @txt(#30<>#100,@count(#40,#30))
Column/Sort Spec: 50,F(N0),T,I

Heading: % Total
Formula No. 3 @txt(#30<>#100,(#50*100)/@count(#40))
Column/Sort Spec: 60,F(N2),T

The first regular column (30) sorts the jobs by the number of days it took to complete. The first derived column provides a comparison value of this and a printing control.

The second derived column prints the number of days to complete just once for each completion value. (It also stops the line break between values.)

The third derived column gives a count of all the jobs completed in a given number of days by counting how many Tasks there were for each value of number of days to complete. And, the last derived column calculates what percent the total tasks were of all the tasks and prints only one value for each number of days completed and totals the percentage so that you can make sure it is correct. I would make sure to include a Retrieve Spec that ensures that you are only including jobs with a number in the days to complete. There is exactly what you asked for.

Since this report requires multiple passes through the database, it is a good place to use the speedup tips mentioned earlier if you are running in Windows 2000 or XP and the database is large.

Printing Problems Revisited

It just happened today! I'm just wondering if unknowingly we got hit by a "virus" that affects our Q&A 4.0 DOS printing? When I try to print, it causes my computer to freeze. So I have to restart it. This is also true of all other stand-alone computers we have that try to print from Q&A. Any solution or advice?

Vir

It's hard to tell what happened "today." It does indicate that something was changed—new printer, update loaded, O/S change or the like. We keep getting this question so it bears repeating. Remember, many things can change the way a printer reacts to a DOS print job in Windows. The best advice is to:

In Windows, go to Start, Run, Settings, Printers. Right-click on the printer and select properties. Go to the Details page. Select Port Settings and change the settings to *not* "Spool MS-DOS jobs" and to *not* "Check Port Settings."

This has been covered before in *The Quick Answer* articles. Give it a try and let us know.

(PS: Vir later reported that this solved the problem.)

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Q&A on Your Web. . . cont'd from page 5

and send it to an output file. (Visit www.johntdow.com for more information on DTFDATA. You can download a demo version of DTFDATA that includes demonstration databases. Both DTFDATA and PERL can be run on a desktop Windows PC for testing purposes.)

The two “iffy” elements in the mix are that your Web server must support PERL *and* allow a command line executable such as DTFDATA to run. If you don’t own your own server, check with your hosting company.

The two big advantages of this approach are it’s ease of maintainability (you simply copy the database up to your Web server) and how it gives site visitors a way to see only the data they want (or are permitted) to see.

Actually, selected data display can also be done with the technique I covered last month: Q&A export files uploaded to your Web server—a technique that doesn’t require DTFDATA. Using a Web search form along with PERL or Active Server Pages (ASP), you can handily extract selected data from a delimited text file and display it on a Web page. With either technique, you can require a password from the visitor and limit what they can view based on it. You could make clients enter their password before viewing only *their* data, even though the data file on the Web server contains the information for all clients.

For several years, www.quickanswer.com has used PERL and DTFDATA to display data from an actual Q&A database. T.J. Shuflin’s *Quick Answer Index Database* (from the home page, click on the *TJ’s Index Database* link in the left-hand panel) contains a record for every article, QuickTip and @Help published in *The Quick Answer* since it’s inception. The application lets you fill out a Web form that looks similar to a Q&A “Retrieve Spec,” submit it, and view a results page that shows a listing—along with a brief synopsis—of all the articles that matched your search criteria. You can search by keyword, title (or part of title), author name, year(s) of publication, and so forth, and get the kinds of results you’d get if you were searching the database using Q&A itself.

Sample Database for use with
ORDERS.HTM Web form and ORDERS.PL PERL Script.
See The Quick Answer, April 2002 issue.

Company: PCTA
Contact: Bill Halpern
Order No: A-3454
Item: Pencils
Order Date: 12-13-2000
Qty Ordered: 223
Amount: \$123.50
Status: Amended

ORDERS.DTF Retrieved form 2 of -- Total Forms: 10 Page 1 of 1
Esc-Exit F1-Help Alt+F6-Table F7-Search F8-Calc F9-Go back F10-Continue

Figure 1. A record from ORDERS.DTF

A sample application

Let’s take a look at a simple Q&A database, Web form and PERL script so you can see how these elements work together with DTFDATA to form a complete interactive Web application. The elements (included in this month’s download file) are:

ORDERS.DTF
ORDERS.HTM
ORDERS.PL & ORDERS2.PL

ORDERS.DTF is a simple Q&A database containing customer order information. A sample record is shown in Figure 1.

ORDERS.HTM is the Web form you use to enter your search parameters. In the form shown in Figure 2, the search is on “hammer.” (begins with “hammer”). This will display all the “Hammer Data” records. If you look closely at the form, you’ll see a brief description of the various Q&A-like criteria by which you can search ORDERS.DTF—*exact match, greater than, greater than or equal to, lesser than, lesser than or equal to, begins with, and contains*. All are supported by DTFDATA.

ORDERS.PL (see Listing 1 on page 9) is the PERL script which is the target of the form submission. (Open ORDERS.HTM in Q&A Write and you’ll see the `<form method="GET" action="http://desktop/conf/cgi-bin/orders.pl">` HTML tag.) In other words, when you click the Submit button, the forms’s field names and values are sent to ORDERS.PL, which processes these incoming variables and creates a parameters file for DTFDATA. It then runs DTFDATA to extract the data, then passes control to ORDERS2.PL (see Listing 2 on page 10) to process the DTFDATA output file and display the results. I’ve used two scripts instead of one because it makes the two parts of the overall process easier to deal with and the scripts a bit easier to digest.

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Test Form for ORDERS.DTF - Microsoft Internet Explorer

Address: http://desktop/conf/orders.htm

Search Form for
ORDERS.DTF

Company	<input type="text" value="hammer."/>
Order Date	<input type="text"/>
Amount	<input type="text"/>

Available Search Parameters

PCTA	= PCTA (exact match)
R.	Begins with R
..book..	Contains book
>	Greater than
>=	Greater than or Equal to
<	Lesser than
<=	Lesser than or Equal to

Specify dates in Q&A's
2000/01/15 format

Include two decimal places for
Amount search

Done Local intranet

Figure 2. The Web form (ORDERS.HTM) functions as a “Retrieve Spec” where you select which database records to view.

Listing 1. The ORDERS.PL PERL script takes the form variables, formats them into a parameters file for DTFDATA, runs DTFDATA, then calls ORDERS2.PL to process the output and display the results.

```

### Sample script to extract and display
### selected data from ORDERS.DTF.
### Get the environment variables, i.e.
### The values from the ORDERS.HTM form fields.
### Uses the GET method (specified in the form).

$temp=$ENV{'QUERY_STRING'};
@pairs=split(/&/,$temp);
foreach $item(@pairs) {
($key,$content)=split (/=/,$item,2);
$content=~tr/+// ;
$content=~ s/%(..)/pack("c",hex($1))/ge;
$fields{$key}=$content;
}

### Initialize variables from ORDER.HTM form.
### For each field that contains a restriction,
### Parse it via Parseval subroutine & use
### returned value to build $selectall variable
### for ORDERS.QAX file that DTFDATA will use to
### extract the selected data from ORDERS.DTF

$company=$fields{'Company'};
if ($company) {
&Parseval($company, "Company");
$selectall = $selectall."&".$$val;
if (substr($selectall, 0, 1) eq "&")
{ $selectall = substr($selectall, 1) }
}

$orderdate=$fields{'OrderDate'};
if ($orderdate) {
&Parseval($orderdate, "Order Date");
$selectall = $selectall."&".$$val;
if (substr($selectall, 0, 1) eq "&")
{ $selectall = substr($selectall, 1) }
}

$amount=$fields{'Amount'};
if ($amount) {
&Parseval($amount, "Amount");
$selectall = $selectall."&".$$val;
if (substr($selectall, 0, 1) eq "&")
{ $selectall = substr($selectall, 1) }
}

sub Parseval {

### You are now in the subroutine.
### $_[0] is the querystring variable.
### $_[1] is the Q&A database field name.
### Subroutine parses querystring variables
### You've got 7 parameter possibilities:
### (1) Greater than or equal to (>=);
### (2) Greater than (>);
### (3) Less than or equal to (<=);
### (4) Less than (<);
### (5) Contains (..b..);
### (6) Begins with (b..);
### (7) Exact match

### Handles >=value parameter
if (substr($_[0], 0, 2) eq ">=")
{ $val = "''.$_[1].''.">=".\\".substr($_[0], 2,
length($_[0]))."\\" }

### Handles >value parameter
elsif (substr($_[0], 0, 1) eq ">")
{ $val = "''.$_[1].''.">.\\".substr($_[0], 1,
length($_[0]))."\\" }

### Handles <=value parameter
elsif (substr($_[0], 0, 2) eq "<=")
{ $val = "''.$_[1].''."<=".\\".substr($_[0], 2,
length($_[0]))."\\" }

### Handles <value parameter
elsif (substr($_[0], 0, 1) eq "<")
{ $val = "''.$_[1].''."<.\\".substr($_[0], 1,
length($_[0]))."\\" }

### Handles '..value..' parameter
elsif (substr($_[0], 0, 2) eq ".." && substr($_[0],
length($_[0]) -2) eq "..")
{ $val = "''.$_[1].''."&c\\.\".substr($_[0], 2,
length($_[0]) -4).\\" }

### Handles value.. parameter
elsif (substr($_[0], length($_[0]) -2) eq "..")
{ $val =
"''.$_[1].''.">=".\\".substr($_[0],0,length($_[0]) -
2).\\"."&''.$_[1].''."<=".\\".substr($_[0],0,length($_[0])
-2)."Z"."\\" }

else { $val = "''.$_[1].''."&=".\\".$_[0]."\\" }

$val
}

### End Subroutine

### Create QAX file for DTFDATA #####
### Specify physical path to read/write directory

open (QAX,
">c:\\webshare\\wwwroot\\conf\\temp\\orders.qax");

print QAX "SELECT=".$selectall."\n";
print QAX "SORT=16\n";
print QAX "FORMAT=Q&A\n";
print QAX "Company\n";
print QAX "Contact\n";
print QAX "Order No\n";
print QAX "Order Date\n";
print QAX "Qty Ordered\n";
print QAX "Amount\n";
print QAX "Item\n";
print QAX "Status";
close (QAX);

### Run DTFDATA #####
### Specify full server path for all parameters

system("c:\\webshare\\wwwroot\\conf\\cgi-bin\\dtfdata
c:\\webshare\\wwwroot\\conf\\cgi-bin\\orders
c:\\webshare\\wwwroot\\conf\\temp\\orders.qax
c:\\webshare\\wwwroot\\conf\\temp\\orders.txt");

### DTFDATA has completed its work.
### Now parse the data from the text file and
### generate the answer page in a table format.
### Call ORDERS2.PL to do that.

print "Location: http://desktop/conf/cgi-bin/
orders2.pl?Company=$company&OrderDate=$OrderDate&
Amount=$amount\n\n";
exit(0)

```

Listing 2. The ORDERS2.PL PERL script. It reads-in and parses the output file generated by DTFDATA and displays the results in a Web table.

```
### This script called by ORDERS.PL.
### ORDERS.PL read in the search parameters from
### ORDERS.HTM, converted them for use by DTFDATA,
### ran DTFDATA, then passed control here
### to read-in and parse DTFDATA's output file
### and print the results table.
### Change the paths to reflect your actual paths.

$temp=$ENV{'QUERY_STRING'};
@pairs=split(/&/,$temp);
foreach $item(@pairs) {
($key,$content)=split(/=/,$item,2);
$content=~tr/+/ /;
$content=~ s/%(..)/pack("c",hex($1))/ge;
$fields{$key}=$content;
}

$company=$fields{'Company'};
$orderdate=$fields{'OrderDate'};
$amount=$fields{'Amount'};

print "Content-type: text/html\n\n";

print <<TABLEHEADER;
<head><title>ORDERS Search Results</title></head>
<body>
<p><a href="http://desktop/conf/orders.htm">
Back to Form</a></p>
<p><b>ORDERS.DTF Search Response</b></p>
<p><em>Your ORDERS Search Criteria...</em></p>
<p>Company: <b>$company</b><br>
Order Date: <b>$orderdate</b><br>
Amount: <b>$amount</b></small></p>
<div align="center">
<table border="1" cellpadding="4" cellspacing="2">
<tr>
<td><b>Company</b></td>
<td><b>Contact</b></td>
<td><b>Order No</b></td>
<td><b>Order Date</b></td>
<td><b>Qty</b></td>
<td><b>Amount</b></td>
<td><b>Item</b></td>
<td><b>Status</b></td>
</tr>
TABLEHEADER

open (TXT2,
"c:\\webshare\\wwwroot\\conf\\temp\\orders.txt");

while (defined($line=<TXT2)) {
($company,$contact,$orderno,$orderdate,$qtyordered,
$amount,$item,$status)=split(/"/,$line);
print "<tr>";
$company=substr($company,1);
### Remove beginning quote mark
print "<td>$company</td>";
print "<td>$contact</td>";
print "<td>$orderno</td>";
print "<td>$orderdate</td>";
print "<td>$qtyordered</td>";
print "<td>$amount</td>";
print "<td>$item</td>";
$status=substr($status,0,length($status)-2);
### Remove ending quote mark
print "<td>$status</td>";
print "</tr>\n";
}
close (TXT2);
print "</div></table>";
print "<p>Table Done</p>";
print "</body></html>";
exit(0)
```

Don't wonder why you can't go directly from the Web form to DTFDATA (bypassing the PERL script). DTFDATA wouldn't know what to do with such information. It needs a specially-formatted parameters file to tell it which records and fields to extract from a database, and the ORDERS.PL script creates that file for DTFDATA. Taken together, the two scripts perform the following actions:

1. ORDERS.PL receives the field names and field values from the ORDERS.HTM Web form;
2. It formats those parameters into a parameters file that DTFDATA can use and saves the file to disk;
3. It then runs DTFDATA, telling it which database to search, which parameters file to use, and the location of the output file to create as it extracts the selected records and fields. ORDERS.PL then passes control to ORDERS2.PL to handle the output to the Web page.
4. ORDERS2.PL reads in the output file generated by DTFDATA, parses it into meaningful data, and displays the data in a Web page table.

As you can see, PERL has little in common with Q&A's programming language. If you're serious about building a Web application utilizing PERL, buy a good book on PERL and use the index to look up the function names and other syntax elements.

In any Web application requiring DTFDATA, I would probably choose PERL to handle the Web form data, create the DTFDATA parameters file, and run DTFDATA. I would not, however, automatically reach for PERL to then parse DTFDATA's output file for display on the Web page. If the server supported ASP, I would be inclined to use that tool as its Basic-like language is easier to deal with.

What about *updating* a database?

Although you can't *add* new records to a Q&A database residing on a Web server—you need Q&A to do that, and

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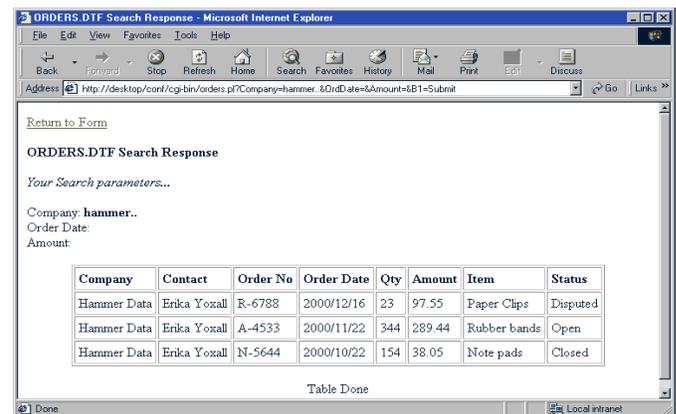


Figure 3. ORDERS2.PL displays the results page in the browser.

Windows 2000/XP Command Line Errors

We use a Q&A 5.0 database that contains the following @Shell program:

```
<#10:IF Send ="Y" Then #10=@Shell("CScript  
C:\Script\faxwhfc.exe " + Fax)
```

It works, but first we always get this error message:

```
16 - Bit MS-DOS - System  
NTVDM - System error
```

And we must click on *Ignore*. What's wrong here?

Dr. Belhareth

The error message indicates that you are using an NT based operating system (Windows NT, 2000, or XP) and Q&A for DOS. The NTVDM error refers to an internal Windows error in the NT Virtual DOS Machine (thus the NTVDM acronym). NT based systems do not understand how to run a DOS *executable* program *from* a DOS window without loading a second command processor. However, it does recognize a *batch* file called from a DOS window and automatically starts that second processor for it.

What you need to do is have the Shell command call a batch file where the batch file contains the path and the commands. Try...

```
@Shell("fax.bat" +Fax)
```

...where Fax.Bat is in the Q&A program directory and contains the lines:

```
CD\XXX  
REM XXX is the directory where CScript resides  
CScript C:\Script\faxwhfc.exe %1  
REM %1 is the parameter in the fax field  
CD\QA5  
REM The Q&A program files directory  
exit  
REM Closes the batch file
```

Q&A Windows/DOS and Faxing

We have several clients looking to fax a report as well as print it. Do you know of a "down and dirty" fax application that works with Q&A 5.0?

Dennis

There are a lot of ways that this can be done: Merge documents that are scanned; export and import into Word; finding and installing an old Satisfaction Modem, and so forth. However, the easiest and most direct way is to run a companion copy of Q&A for Windows along with your Q&A for DOS. Then, anything you can open or print—

records, reports, merge documents, etc.—can be sent directly to your computer's fax printer (a Winfax printer, for example).

The setup is simple and easy. Install Q&A for Windows, run the Q&A 5.0 update to it and you are off and running. Since you would be doing all of your data work and manipulation in the Q&A for DOS, you would not have to worry about the hard drive size limitations with Q&A for Windows.

I use Q&A for Windows for this and other fancy printing jobs all the time. Remember, if you are running on a standalone computer, make sure to set your databases to *Allow* instead of *Automatic* in the security section of the database design so that both copies can access the same database at the same time.

Q&A for Windows 4.01 vs. 4.06 Incompatibilities

I have been using Q&A for Windows along with Q&A for DOS 4.0 for quite a few years. In order to get some of the additional features, I recently upgraded my DOS version from 4.0 to 5.0. At the same time, I did the upgrade to make Q&A for Windows compatible with it and it is now version 4.06. Everything was fine. All my old databases automatically upgraded and worked. However, when I design a *new* database, Q&A can't find any records in my old databases when my XLookup statements execute. What is going on here?

Kenny

Thanks to John Dow for his help on this one. You have found a little known bug in Q&A 5.0's upgrade to Q&A Windows. If you had designed all of your databases in *either* Q&A 5.0 or 4.0, you wouldn't have experienced this problem. However, mixing databases designed in *both* versions causes all sorts of problems.

Your solution is to redesign any *new* databases in Q&A 4.0, then upgrade it to 5.0—or redesign all of your old databases in Q&A 5.0. It's easier than you think. All that is required is that the original design be *started* in the appropriate version. Then it is truly upgradeable and can be completed.

So, let's look at your new database. Start a new design in Q&A 4.0 with only one field. Then open it in 5.0 and finish the design or cut and paste the fields from your competed 5.0 design into the upgraded database. It will retain the 4.0 characteristics it needs to be compatible with Q&A for Windows 4.06 as well as any *old*, upgraded databases. Or, go the other way. Start a design in Q&A 5.0 and cut and paste the field designs from the 4.0 database into the 5.0 design.

The key is *consistency*. They all need to have been *started* in the same version.

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Converting. . . cont'd from page 4

first three fields with checkboxes very easily, and set up combo boxes for many of the fields (Month, Year, Article Type, even Author). I'll cover this in a future article.

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Figure 8. After a few simple changes.

Q&A on Your Web. . . cont'd from page 10

you can't run Q&A on a Web server—DTFDATA *can*, in a limited way, “post” data to (update) a Q&A database on a Web server. For this, you need to add a “character padding” field to the database that compensates for the increase and decrease in the volume of data in the record, because you don't have Q&A to constantly adjust the file's dynamics based on changes in that volume. This works for relatively small posted values, such as a quantities or amounts. There's information in DTFDATA's documentation on how to make use of this posting capability— and it does work in a Web application.

The PERLMAKR database

This month's download file includes a copy of PERLMAKR.DTF, a Q&A 4.0 database I designed to help in the process of creating a custom Web-ready PERL Script and corresponding HTML search form. You type in your Q&A database's field names and corresponding Web form field names, fill in a few other fields, and you can then generate your script and/or Web form and take it from there. Read the database's **Help Notes** field to find out what to expect from the database and how to use it.

Tom Marcellus is Editor of *The Quick Answer*

Quick Tip

Quick Copy, Delete, or Move



In Q&A Write for DOS (4.0 or 5.0), when you use one of the block operation function keys, such as F3-Delete, or F5-Copy (or F11 Copy to clipboard in Q&A 5.0 only), Q&A displays a message such as: “Use the arrow keys to select the text you want to copy, then press F10” (where “copy” might be “delete”, “move”, etc).

Instead of holding down the arrow key to select the block of text, you can quickly move to the next incidence of any character

by pressing that character's key. To select to the end of the sentence, press the period key. To select to the end of the one after that, press it again.

Similarly, to get to the end of the paragraph, press the Enter key. To get to the next “d”, press the “d” key. It's very quick, and also accurate, in highlighting the exact block of text you want to do something with.

Gordon Meigs, PCTA

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