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# Edit Your Picklists On-the-Fly

TOM MARCELLUS

Application in  
ONLINE Edition



Do your Userselect lists require frequent changes? Here's how to keep them current without breaking your data entry stride.

ONE of the problems with Userselect lists is that it takes a trip to the Program Spec to update them. You're sailing along in your data entry when suddenly you've got an exception—some item that *should* be on the list but isn't. Do you interrupt what you're doing to update the list, or manually type in the exception and make a mental note to update the list later? Neither is necessary when you can modify your picklists on-the-fly.

I like to keep picklists whose items change from time to time in an external database rather than hardcoding them into the data entry database. This way, I can add items to or remove items from the list by editing the pertinent record or, better yet, simply by making the change while using the list during data entry. I'll show you how you can have the same options and convenience.

First, let's take a look at the database where the picklist items are stored. We'll call this one Pickext.dtf (short for *Picklist External Database*). All you need are two fields, **Picklist Name** and **Picklist Items**.

Make the Picklist Name field 16 characters or less and Speedy. Make the Picklist Items field large enough to accommodate all the list items without having to expand the field. (This isn't required, it just makes it easier to see all the items at a glance.)

Next, add a record to Pickext.dtf. Let's suppose this is a picklist of shipping methods. In the Picklist Name field, type *Ship Methods*, and in the Picklist Items field type the following:

```
UPS 2nd Day;UPS 3-Day;Fed-X;Our Truck;US Mail Express;US Mail Air;  
US Mail Priority;UPS Standard;DHL;Will Call
```

At this point, the list might be missing some items and include an item or two you might not need, but you'll be able to take care of that later—*on-the-fly*—as you'll see.

Now for the data entry database where you'll actually *use* the picklist. (We'll call it Pick.dtf.) Let's suppose you already have a **Ship Via** field in Pick.dtf. Add one more field in an out-of-the-way place named **List Items**. Make List Items 19 characters. You don't need a field label for List Items, and by coloring it the same as the form color, you can keep it invisible until you need to call it into action to add a new list item.

Add the following programs to Ship Via and List Temp in Pick.dtf:

## Ship Via

```
< List Temp = @Xlookup("Pickext", "Ship Methods", "Picklist Name","Picklist  
Items") + ";-Edit List-";
```

```
Userselect(List Temp, Ship Via);
```

```
If @Instr(Ship Via, "Edit List") then {
```

```
List Temp = @Replace(List Temp, "-Edit List-", "-Add Item-;-Remove Item-");  
Userselect(List Temp, Ship Via);
```

```
If @Instr(Ship Via, "Remove Item") then {  
List Temp = @Replace(List Temp, "-Add Item-;-Remove Item-", "-Remove which  
one?-");  
Userselect(List Temp, Ship Via);
```

# The Quick Answer

The Do-It-Yourself Guide to Q&A

January 1999

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MARBLE  
PUBLICATIONS

```
If @Instr(List Temp, Ship Via) then  
List Temp = @Replace(List Temp, Ship  
Via +";", "");  
List Temp = @Replace(List Temp,";-  
Remove which one?-","");  
Clear(Ship Via);  
XPost("Pickext", "Ship methods",  
"Picklist Name", List Temp, "Picklist  
Items");  
@Msg("Item removed. Revised list now  
displayed"); Goto Ship Via }
```

```
Else If @Instr(Ship Via, "Add Item")  
then {  
@Msg("Type item to add, then press  
Enter");  
Clear(List Temp); Goto List Temp }  
Else { Clear(List Temp); CNext }
```

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# Help Ensure Q&A's Future

**M**ARBLE Publications (*The Quick Answer's* publisher) and Professional Computer Technology Associates (PCTA, William Halpern and Gordon Meigs) have formally approached Symantec with a proposal regarding Q&A.

In light of Symantec's declining interest in the Q&A product line (and concerns that they might one day drop it altogether), we've proposed to form a joint venture (Marble Publications and PCTA) to produce, distribute and support Q&A and ancillary products in North America.

In essence, the agreement would relieve Symantec of the burden of providing technical support (now marginal at best) for a product line it's no longer developing, while paying the company a negotiated license fee for the rights to produce, sell and *fully* support Q&A.

If you would like the Q&A product line to continue to be made available and *professionally* supported, please write to Symantec and let them know. Mention "the Q&A proposal from Marble Publications" and request that it be given earnest consideration. Write to:

**Gordon Eubanks, President and CEO  
Symantec Corporation  
10201 Torre Ave., Cupertino, CA 95014**

You can email Gordon Eubanks at [geubanks@symantec.com](mailto:geubanks@symantec.com), but a letter normally has greater impact.

# The Quick Answer™

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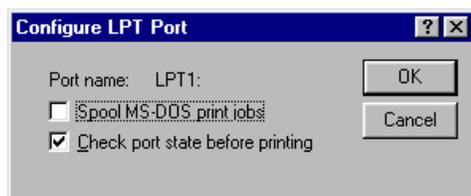
## Quick Tip Get Faster Printing DOS

By default, Windows 95/98 *spools* printing. This means that when Windows receives a print job from an application, it places the job in a queue on the hard drive and then feeds it to the printer. The advantage of spooling is that it enables the program to offload the print job to Windows, which frees up the computer while Windows prints the job in the background. In practice, this is a benefit only with very large print jobs consisting of dozens of pages or with printers having little memory.

One result of spooling is a delay of perhaps 30 seconds or more before your printer fires up and starts printing. If you'd like your printer to start printing immediately, you can turn off spooling for Q&A and other DOS print jobs:

1. Click the Start button and select Settings / Printers.

2. Highlight your printer. (It doesn't matter if you have several printers installed; this change will affect all of them regardless of the one you select.)
3. Right-click on the printer and choose *Properties*.
4. Click on the *Details* tab.
5. Click on the *Port Settings* button.
6. Uncheck *Spool MS-DOS Print Jobs* (see Figure 1) then Click OK.



**Figure 1.** Unchecking *Spool MS-DOS Print Jobs* will give you faster Q&A printing for all but the largest print jobs.

Printing will now start the moment you hit F10 in Q&A. If you want Windows to spool Q&A print jobs again, just reverse the process. There's no need to reboot for the change to take effect.

**ALEC MULVEY**

# LaserJet 6 'Junk Page' Mystery Solved

ALEC MULVEY



Does your LaserJet spit out an extra page at the end of your Q&A print jobs? Here's why—and what you can do about it. **DOS**

**A** NUMBER of *Quick Answer* readers with HP LaserJet 6 printers have reported a maddening problem when printing from Q&A 4.0 or 5.0 for DOS—an extra page is printed at the end of each print job. Typically, the extra page is blank except for a few cryptic characters such as (10U, 0b3T, or the like).

Since I have a LaserJet 6 and was experiencing the problem, I decided to look into it. I discovered what causes it and what can be done to prevent that extra page from printing.

The problem lies with HP's *Toolbox* utility for Windows 95/98, a startup program that keeps tabs on the printer and provides a way to change printer settings.

If you see the printer icon in your system tray at the far right end of your Windows 95/98 taskbar, the *Toolbox* is in memory (See Figure 1.) It's installed by default when you install the software that comes with the printer, though there's an option to install just a printer driver without the *Toolbox*.

The *Toolbox* isn't designed for use with DOS programs. Here's what Hewlett Packard says about it:

*The HP PCL Status Window and the HP LaserJet Toolbox are TSR (Terminate and Stay Ready) programs. They are constantly running in the background querying the printer's parallel port to verify and report the printer status back to Windows. They require a direct connection from the PC to the printer. Because of this requirement, they are not supported when using a switchbox or a network, when shelling out to DOS applications, when using a tape backup or software key, or when using any device that interrupts the direct connection of the PC to the printer. If attempting to use the HP PCL Status Window or the HP LaserJet Toolbox in any of those situations, you may encounter garbled text or errors when printing to LPT1. It is recommended that the HP PCL Status Window and the HP LaserJet Toolbox be disabled or turned off.*

But what can you do about it?



**Figure 1.** The green printer icon in the Windows system tray indicates the *Toolbox* utility is in memory.

## Temporary fix

If you right-click on the printer icon in your system tray, you'll see the option, *Remove from taskbar*. This removes the icon, but the underlying program, *Hppropty.exe*, is still in memory. You can remove it from memory for the current Windows session by pressing Ctrl-Alt-Delete, highlighting *hppropty* on the Close Program menu and clicking *End Task*. (See Figure 2.)

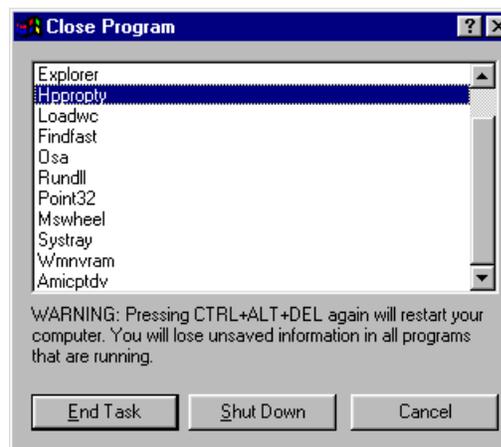
This isn't a permanent solution, though, because the offending utility will be back in memory the next time you start your computer. However, it might be the preferred solution if you like keeping the utility "alive" and only occasionally print in Q&A.

(Incidentally, when making my enquiries, it was suggested to me that simply deleting the *Hppropty.exe* file would solve the problem. For me, it didn't—I still got an extra page with the letter "H" on it. I would be interested in hearing from others who have tried this.)

## Permanent fix

The permanent solution is to prevent *Hppropty* from getting loaded at all. You have two options here. The first is to Uninstall the HP Printing System using the deinstaller found under Start / HP Laserjet, then reinstalling the software using the *Custom Install* option and unchecking *Toolbox*. The quicker, but more risky option involves editing the Windows Registry.

**Warning:** Editing the Windows Registry can be hazardous to your computer's health. There's no



**Figure 2.** Ending Task on *Hppropty*.

confirmation prompt when you make a change (accidental or intentional) to the Registry, and no undo feature. Any error you make could potentially stop your computer from working properly. So don't undertake this unless you know what you're doing:

1. To open the Registry for editing, click the Start button, choose *Run*, type in *regedit*, and click OK.
2. Using the left hand window pane, navigate to the following Registry folder:

```
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
```

Here, you'll find the entry for Hppropty. (See Figure 3.)

3. Double-click on *HP LaserJet ToolBox* to display the Edit String dialog box shown in Figure 4.
4. Press Delete to clear the "Value data" field.
5. Click OK.

The data column for *HP LaserJet ToolBox* key will now show a set of double quotes (""), indicating it's empty. Immediately close the Registry editor. (You'll receive no prompt to confirm.) Now, the next time you boot your computer, the Toolbox won't load, and you'll be spared the extra page when printing from Q&A DOS.

If you have a new computer, or if you've upgraded to Windows 98, it could be that you don't have the HP Printing System (and therefore the HP printer driver) installed at all. I just bought a new Windows 98 PC and the moment I turned it on with my HP LaserJet 6P connected, Windows "found new hardware" and installed the drivers for it. This was Windows' own HP6P driver – surely it would cure the problem? Far from it. The same fault was apparent, but this time with no printer icon, no status messages and no Hppropty – so no remedy! The solution was to delete the printer from Windows (Start / Settings / Printers, right-click on the printer, and choose

Delete), then use the disks or CD that came with your printer to install the HP drivers. Choose *Custom Install*, and you can opt not to install the Toolbox.

To summarize:

- The HP Toolbox utility causes the extra page problem, specifically its Hppropty.exe TSR program.
- The Toolbox is installed by default.
- You can choose Custom Install and *not* install the Toolbox.
- Don't use the Windows HP LaserJet 6 driver, use the HP one.
- Just deleting Hppropty.exe doesn't appear to be a solution.

If you only occasionally print from Q&A, then you'll probably want to retain the benefits of the Toolbox but temporarily remove Hppropty from memory for Q&A printing as described earlier.

If you print from Q&A often, you'll probably want to disable the Toolbox permanently using either of the methods described earlier.

### Conclusion

Two-way communication between computer and printer can be quite useful. It's reassuring to have a little green icon on your taskbar telling you your printer is okay, and having the option of popup messages (or even sounds) to remind you, for example, to put paper into tray 2. But since this utility isn't meant for DOS printing, you'll have to make a choice between having it available for Windows printing or getting that "junk" page at the end of your Q&A print jobs.

Alec Mulvey owns Keyword Training & Consultancy based in Ascot, near London, England. Alec has been building Q&A applications and performing data recovery for nine years, and is the current president of the (Inter)National Q&A User Group. Keyword Training is also the UK distributor for the International English edition of Q&A (the "Definitive Edition" CD-ROM) and John Dow's Utilities. Fax +44-1344-884-111, email [alec@keywordtraining.com](mailto:alec@keywordtraining.com), [www.keywordtraining.com](http://www.keywordtraining.com).

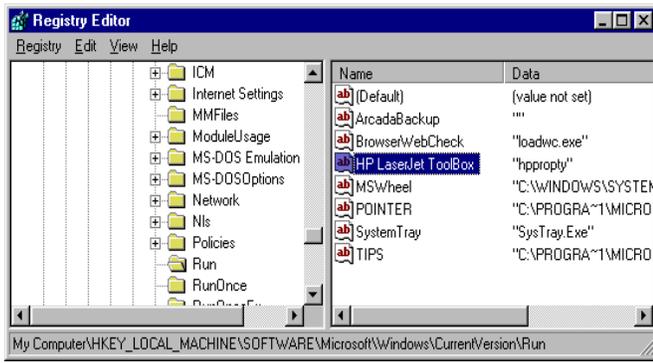


Figure 3. The HP LaserJet ToolBox's hppropty entry in the Windows Registry. (Notice the pathname at the bottom of the screen)

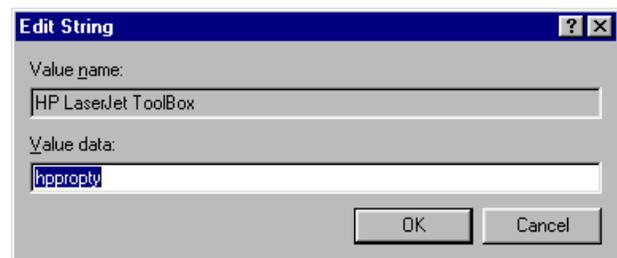


Figure 4. Removing the hppropty entry.

# Get If-Then Action in Report Derived Columns

MARK MYERS

Over the years we've covered a variety of ways to add conditional logic to derived columns. Here's a technique with broad applicability

**F**OR many Q&A report designers, the most conspicuously absent feature is support for If-Then conditionals in derived column formulas. This shortcoming might have forced you to add extra fields to your database or print two reports where otherwise one might have sufficed.

Suppose you have a billing database and want to print a report that lists and sums all invoices totaling less than five thousand dollars in one column and all invoices totaling five-thousand dollars or more in another column. Normally, you would have to add two fields to the database then run the If-Then statement in the field programming. Another option would be to run the same report twice, the first time retrieving only the less-than-\$5,000 invoices and the second time retrieving the remaining records.

On the other hand, if derived column specs supported If-Then statements, you could achieve the desired result by using the following formulas (where #1 is the invoice total):

1. If #1 < 5000 then #1 else 0
2. If #1 >= 5000 then #1 else 0

Fortunately, there's a relatively simple technique for achieving the same result without the use of If-Then statements. But before demonstrating it, I'd like to briefly discuss the theory behind the technique so that you won't limit yourself only to the examples and techniques I'll show.

At the machine level, the result of a test for truth or falsehood (the "If") must be reported as a 1 or 0 (zero). Convention provides that 1 is returned to represent true and 0 to represent false. If you've ever used an argument like (#1<5000) as a derived column formula, you've seen that it will return either "T" or "F".

However, if you use the result of the argument in a mathematical/numerical context, Q&A gives you access to the machine level result (the 1 or the 0). As a result, you can change statements 1 and 2 to the following:

3. (#1 < 5000) \* #1
4. (#1 >= 5000) \* #1

Reread these equations if necessary to convince yourself that they return the desired results when a 1 or 0 is returned as a result of the arguments within the parentheses. Note that you can pass any argument using this technique. For instance, if you wished to have three derived columns rather than two, your second one might have been:

5. (#1 >= 5000 AND #1 < 10000) \* #1

You can even use a series of these statements in one formula to achieve conditional results. Suppose you need to produce a weekly estimate of profit based on the assumption that invoices totaling less than \$5,000 provide a profit margin of 43%, invoices in the \$5,000-\$9,999 range provide a margin of 44% and those greater than \$9,999 give a margin of 45%. This is easily done:

6. (#1<5000)\*#1\*0.43+(#1>=5000 AND #1<10000)\*#1\*0.44+(#1>=10000)\*#1\*0.45

You can also use the numerical result of the argument to build a value to pass to a function. For instance, the following derived column spec (where #1 is the invoice date) will print "Overdue" for invoices sent out over thirty days ago:

7. @Left("Overdue", (#1 < @Date - 30) \*7)

Another use of this technique is to build counts by field rather than by record. For example, suppose that from a customer service database you wished to count the number of trouble tickets opened and closed by each customer service rep in the past thirty days.

You can print both of these counts in one report by using the technique described above and printing totals only. To do so, create one derived column for each count you wish to make and simply return the numeric result of a test for truth in the general form below. (Note that this technique works with a null, or empty, Retrieve Spec.):

8. (#1 >= @Date - 30) \*1

Continues on page 11



EDITED BY GORDON MEIGS  
AND WILLIAM HALPERN



## Linespacing Too Tight

I use Q&A at home and at work, and print on HP DeskJet 660C and HP 670C printers. I have no problem printing Write documents. But when I print reports, all the report lines—including the column headings—are squished together. Using different Q&A drivers doesn't help. The "Basic Vanilla" driver seems to work, but it won't let me use a font to fit everything on the page. Any suggestions?

Bill Weiss via the Internet

The "squishing" effect you see is a result of too large a page length for your printer. If you have the page length set, say, to 66 lines when the default should be 61 or 62, Q&A will adjust the line spacing in order to print those additional lines on the page and the result will be too little (or no) "white space" between them. Try setting your page length (at the Define Page screen) to fewer lines. If you go too low, the line spacing will increase to the point where the report will look double-spaced.

## Copying Mailing Labels Between PCs

How do you copy Q&A 4.0 mailing labels from one computer to another? Recently, we used LapLink to transfer files between PCs, but the mailing label files didn't copy over.

Judy H. via the Internet

Here's how. On the original computer, copy the QALABEL.OVL file (about 100K) from the Q&A program files directory to a floppy disk. Then, on the new computer, copy the file into the Q&A program files directory. You'll now have the same labels that were on the old PC. If you still don't have the right labels, it means that the PC you copied from doesn't have them either. (Check it out.) Find a PC that *does* have the correct labels, and copy the QALABEL.OVL file from that PC to your new one, and you'll be in business.

## System Errors

We run Q&A 4.0 for DOS in Windows and have been experiencing frequent problems such as being locked out of

Q&A. The most recent error message we've seen is this one:

```
Problem - System Error, Please try again (C-2)
Press Esc to cancel
Ref #057D
```

We've also received this error message:

```
Problem C Tree: Lockhead (Already locked)
Press Enter to continue.
```

We've been told that the problem is the result of trying to run Q&A on too large a hard drive and that Lesspace.com can help. But we don't know whom to contact to get instructions on using this utility.

Katrina via the Internet

Q&A won't run on a 2G or larger hard drive partition. Lesspace.com fools the operating system into thinking a too large drive is actually smaller (so you don't have to partition it). See the August 1998 issue of *The Quick Answer* (page 10) for more on obtaining and using Lesspace.com (You can download it from the "Free Downloads" page at [www.quickanswer.com](http://www.quickanswer.com).)

Your 057D error message is a different story. It indicates the database's index file is corrupted. To fix it, make a backup copy of the database (press F5 at the List of Files screen) and remove all the Speedy field codes (at the Speed-Up Spec). Recover the database, then replace the Speedy fields codes. Q&A will recreate the index file, and the problem should disappear.

(You can download a list of Q&A error codes and what they mean from the "Freebies" page at [quickanswer.com](http://quickanswer.com).)

## XPosting on Networks



I've been a *Quick Answer* subscriber since 1996 and this is the first time I've submitted a question. Actually, I have two questions relating to Bill Halpern's article in the October 1998 issue, "XPosting on Networks." The article states that the corruption problem in the target database occurs when XPosting over a network to a database of more than one device generation. Question 1—Is it then true that XPost



# Stumped?

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

creates no problems if the database is of one generation?

**Question 2**—Below are the steps I'm aware of for making sure a database is all of one generation. Is the order of the steps correct, and should any other steps be included?

1. Recover the database.
2. Perform a null Mass Update on the database.
3. Resave all reports in the database.

I'm about to perform a major upgrade on a network heavily dependent on XPost, so this information is crucial.

Gloria J. Heidengren via the Internet

Let us clarify one thing: The article doesn't say that the database has to be of "one generation," it says that the database must be *generation one*.

A Q&A 5.0 database changes its generation each time you redesign it to delete a field, move a field in relation to the others on the form, or add one or more new fields to the design. Accordingly, an older database that has undergone many changes might be a generation 10 or 15 or even 34. However, the data might have been entered at various stages of the design changes, and you might have records of generations 1, 3, 7, 11, 17, and so forth. Some of your reports might be generation 3, 9, 12—or whatever. The Navigation Spec could be generation 7, your Print Specs could be generations 3, 6, or 9, and so on. Field Template, Restrict Values, and Initial Values Specs are also affected by generations. The procedure you mention will bring *reports* and *data* up to the latest generation, but won't correct the other problems. And it will *not* make any of the Specs, records, or reports *generation one*.

The way to make a database *generation one* is to resave *all* database design-related Specs (F10 through them), all reports, all Print Specs, and any other Specs on the Customize and Program menus. Then:

1. Copy the design to a new database filename (File / Copy / Copy Design Only).
2. Copy the records to the new database (File / Copy, Copy Selected Records).

3. Recover the new database.
4. Delete the old database (after testing the new copy).
5. Rename the new database to the old name.

### **A few precautions:**

- Always work with a *copy* of your database.
- When you copy a database design, the Sharing Mode in the copy reverts to *Automatic*. So if you need Sharing Mode set to *Allow*, go into design and reset it.
- On some Novel Networks, recovering a database on the network drive will crash the database and render it unusable. Always copy the database to a local drive and perform the recovery there. You can then copy it back to the network drive.

### **No 'Multi-User Version' of Q&A**

Can anyone tell me how to convert from the single-user version of Q&A 4.0 to the multi-user version? I don't want to lose data. We have both versions of Q&A, single- and multi-user. Both are installed on a PC but I don't have the original diskettes.

Ron Anderson via the Internet

All versions of Q&A are multi-user-ready. No "conversion" is required. Don't worry about differences between a multi-user network pack and a single-user version of the program. Q&A will automatically perform multi-user file- and record-locking on a database whether it's being accessed from a Network Pack-updated (shared) copy of Q&A or from individual single-user copies of Q&A. All the Network Pack does is allow multiple users to share the same Q&A program files. The databases themselves aren't affected by any of this.

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



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# More FORMagic Tricks

TOM MARCELLUS

This handy program contains unexpected features that can really extend what you can do with Q&A.

DOS

**L**AST month, we reviewed FORMagic, a DOS utility program that lets you merge print your Q&A data with scanned or user-designed business forms, and even include graphic images and letterhead in your Q&A print jobs. Since then, we heard from someone who uses FORMagic in an unconventional way, and we've even discovered a few new Q&A graphics-printing tricks ourselves, like these:

- Just as you can print merge documents containing variable text and data, you can print them with *variable* graphic images. (The graphic that prints depends on what's in a field in the merged database record.)
- You can print a linked graphic image right from a database record. (A field in the record specifies the image file to print.)
- You can do both the above without an HP LaserJet compatible printer (you can use any laser or inkjet printer), *and even without FORMagic itself!*

First, *Quick Answer* reader John Horn tells you how he exploits a hidden FORMagic feature to simplify his workday tasks. Then, I'll show you a few tricks (with and without FORMagic) you can perform to print image files from most anywhere in Q&A using most any printer.

## Using FORMagic's FMPRINT utility

For years I had tried unsuccessfully to find a way to use scanned images in Q&A. My luck changed when I found out about FORMagic at last September's Q&A Bash and Masters Seminar in Washington, D.C.

For most users, FORMagic's big strength is its ability to create and manage what are called printer *overlays* — form and image files you download to your printer to merge print with your Q&A data or documents. Tom Marcellus' review last month explained how these overlays are generated by FORMagic from .PRN files, the file format you get when you print anything to FILE from a Windows program. Though that capability is certainly useful, it's not the part of FORMagic I use.

I deal with full-page images that are actually scanned legal authorization forms signed by my clients. What's proven most valuable in my work is FORMagic's separate

FMPRINT utility. With FMPRINT, I don't have to create an overlay then download it to the printer. Instead, I can store the client's authorization form filename in his or her database record, and have programming call FMPRINT to print it as needed.

You can run FMPRINT with various switches from the DOS command line, from a batch file, or from within Q&A 5.0 using the @Shell command.

For example, the following DOS command entered in the FORMagic directory will print one copy of the image named *filename* to the printer on LPT1:

```
FMPRINT /N filename,LPT1,1
```

From a Q&A 5.0 database record, the following @Shell program will print the image whose filename appears in field #7:

```
#8 = @Shell("FMPRINT /N " + #7 + ",LPT1,1")
```

From a Q&A Write merge document, the following command will also print the image named in field #7:

```
*PG {@Shell("FMPRINT /N " + #7 + ",LPT1,1")}*
```

The only requirement is that the image file must be in the "print" or .PRN format — the format you get when you print something to FILE from a Windows program.

I own two inexpensive scanners, both of which came with software that lets me print directly to FILE. (In most Windows programs, you'll see a *Print to File* checkbox in the Print dialog box. Click on that checkbox, then click OK, and the program will prompt you for a filename.)

Here's where it gets interesting. Normally, after printing an image or form to FILE, you'd then have FORMagic convert it to an overlay you can download to the printer to print with your Q&A print jobs. But as I mentioned earlier, this isn't how I use FORMagic.

In my business, I file property tax appeals for property owners. Each year we file about 5,000 of these appeals for some 3,000 properties.

Long before finding out about FORMagic, I managed to duplicate the "official" State of New York forms required for these filings by "programming" a Q&A Write document with the appropriate HP PCL LaserJet escape commands. (See the October 1996 issue.) This document, when printed, is indistinguishable from the real thing. When I merge my Q&A data with it, I get completed forms ready to submit — except for one thing.

Until recently, I would merge-print a stack of four-page appeals, find each client's file folder, take out their signed authorization, photocopy it, then return the original to the folder.

But now, using FMPRINT, I can batch print the scanned image of each client's signed authorization (along with any other required scanned documents) and quickly collate it with the merge-printed appeal form.

To make this system work, I created a filenaming convention for what I call my *document images*. I start them with an exclamation point ("!") followed by the client ID number. The filename extensions I use are "P" for photo, "M" for map, "A" for authorization, "S" for a stipulation of settlement, and so on. Thus, a photo of client number 556677's property has the filename !556677.P.

The database contains a **Doc** field programmed so I can enter, for example, "PMA" in a client's record and press the F8-Calc key to have Q&A immediately print the client's document images with the P, M, and A filename extensions. I can enter an "A" to print just the authorization. Or, I can enter an asterisk ("\*") and Q&A will print *all* the document images for that client. Here's just a portion of the program. Field #66 is the Doc field, field #67 stores the @Shell return code, and field #46 contains the client's ID:

```
If @Instr(#66,"a") > 0 then #67 = @Shell
("c:\fmagic\fmprint /n c:\fmagic\!" + @str(#46) +
".a,lpt3,1");

If @Instr(#66,"p") > 0 then #67 = @Shell
("c:\fmagic\fmprint /n c:\fmagic\!" + @str(#46) +
".p,lpt3,1");
etc....
```

This calc-mode program lets me take advantage of Mass Update to print, for example, photos for any set of clients I choose. I simply place a "P" in their Doc field, and tell Q&A to sort them in the order I want. At the Update Spec, I press F8 for Programming Options and set Calculation Statements to "Yes." Q&A then runs through all the selected records and prints the "P" (photo) documents for them.

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## Other FORMagic tricks

As part of John's merge printing application, one last thing he wanted was to have the client's authorization automatically print as page 5 of the appeal form. The idea was to include on the last merge document page an @Shell command along these lines:

```
*PG {@Shell("c:\qa\fmprint /n c:\qa\!" + @str(ClientID) +
".A, lpt3,1")}
```

This, it was hoped, would print client 2345's four-page appeal, followed by the authorization form (filename !2345.A). Unfortunately, the technique was doomed because Q&A reads the entire document before sending any of it to the printer and immediately executes any programming statement it encounters. This means that the image is always the *first* rather than the last page to print, so it causes a collation problem.

And there was another problem. The combination of @Shell running FMPRINT in a Write document didn't work unless the other FORMagic files (not just FMPRINT) were in the Q&A subdirectory.

The following technique, which uses the DOS Copy Binary file command, solves this *second* problem. It prints the image (the .PRN filename in the **Image** field) first, then prints anything else starting on a new page:

```
<-*v1T
*PG {@Shell("copy /b c:\fmagic\" + Image + ".prn lpt1")}*
<-*v0T
```

The pair of "v" codes suppress the "0" @Shell return code. (The escape character, represented here by "<-" , is ASCII 27.) @Shell assumes the .PRN file is in the \fmagic directory and the printer (any laser or inkjet) is on LPT1.

Now there are at least two ways to work around *both* the above problems. The first, detailed below, requires overlay files instead of .PRN files. The second, which requires a supplementary database, is outlined in the sidebar, "Printing Variable Image Pages with Merge Documents" on the next page. (Note that I've tested these techniques on *small* merge printing jobs only.)

Suppose you want to include a variable image file (like the authorization form discussed earlier) as the last page of each merge document. First, you need to use FORMagic to generate overlays from the .PRN files you'll be using. Next, you'll need a batch file named FMAGIC.BAT, as follows, in your /QA subdirectory:

```
echo Downloading %1 Overlay to LPT1 printer
C:
cd \FMAGIC
FMDOWNLD %1 LPT1
```

All this batch file does is download the variable overlay file specified in the merged field. At this point, the image doesn't print.

The database needs a field (named **Image**, in this case) to store each client's overlay filename in FORMagic's FMDOWNLD format (no filename extension). The database also needs an **OL#** field to store the overlay

## Create Overlays from Your Existing Q&A Write Forms

If you've ever used Line Draw to create a form in a merge document, you probably found out that you were stuck printing your merge fields in monospace fonts like Courier or Line Printer. (Proportional fonts like Times or Univers cause the form to break up.) But if you print your form to FILE (to a LaserJet printer driver) and have FORMagic convert it to an overlay, you can then use proportional fonts in the merge document and the form will stay intact.

number. With these in place, on the last page of the merge document you can insert the following @Shell command and LaserJet escape codes:

```
<-*v1T
*PG {@Shell("c:\qa\fmagic.bat " + Image)}*
<-*v0T
<-&f*OL#*y3X
<-&f6X
```

As Q&A merges each document, the @Shell runs FMAGIC.BAT and passes to it (as replaceable parameter %1) the overlay filename from the merged record. The escape code above the @Shell hides its "0" return code by printing "solid white." The one after it reverts to black.

With the overlay now in the printer, the third escape code prints it. (Notice that the overlay number in the record's OL# field is merged *right into the escape code*.) The final escape code clears the overlay from printer memory in preparation for the next merge record with its own overlay file and number.

This way, the merge document prints *first*, followed by the overlay on the final page (though you could conceivably have the overlay print on *any* page).

Of course, why go to all the trouble of generating so many overlays unless you *have* to print using a merge document and *have* to print a *variable* image *after* each initial document page? (The ability to print simple .PRN files makes converting them to overlays and downloading them to the printer unnecessary. It also lets you use *any* laser or inkjet printer *without* FORMagic or FMPRINT.)

Normally, if you were just filling a single FORMagic form overlay with merged data, you'd simply insert the appropriate merge fields and overlay-calling escape code on the document page where you wanted the overlay and data to print.

## The FMPRINT liability

You can run into trouble trying to run FMPRINT from a regular database @Shell command. You might get an *Unauthorized for command line use* error message and the image won't print.

To work around it, I have @Shell call fmprint.bat, which physically changes to the \fmagic directory before invoking FMPRINT. Here's what fmprint.bat looks like:

```
d:
cd \fmagic
FMPRINT /N C:\QA\IMAGES\%1,LPT1,1
```

In this application, the database contains a Yes/No field named **Image**, indicating whether or not there's an associated image file for the record. In other words, if the Image field in record 12345 contains "Y," it means there's an image file named 12345.prn in the c:\qa\images\ subdirectory. Accordingly, the following manual calc program prints the record's image simply by pressing F8:

```
#500: If Image = "Y" then { Image =
@Shell("d:\qa\fmprint.bat " + @Str(Client ID) + ".prn")
Image = "Y" }
```

# Printing Variable Image Pages with Merge Documents

As in John's application, you might want to print merge documents for a selected group of clients in a way that prints their variable image page *after* each document. This way, when the merge printing is done, all the documents and image pages will be in perfect collation sequence.

One way to accomplish this is to print the merge document for the *first* client, print the .PRN image file for that client, print the merge document for the *second* client, followed by that one's .PRN file, and so on until all the merge documents and image pages for the selected clients have been printed. The trick is to automate the process.

The technique requires a one-record database that lets you choose (via an XUserselectR list) each client for whom you want to print a merge document and image file. As you select your clients by name or company, a program builds a delimited list of their Client ID's in a **List** field. The list might look like this after five clients have been selected:

```
List: BR8944;TM3498;JJ6755;CV1124;UP0065
```

Once you've selected your clients, your program grabs the first Client ID, copies it to the **Client** field, deletes it from the list, then runs a macro. At this point, the two fields look like this:

```
List: TM3498;JJ6755;CV1124;UP0065
Client: BR8944
```

The macro copies the Client field (BR8944) to the clipboard, saves and exits the record, and prints the merge document for the client by pasting the BR8994 into the Client ID field at the Retrieve Spec. The macro then returns to the database, where an @Shell command prints the client's image file by adding a .PRN extension to the Client ID. That's it for the first client.

The program and macro now repeat the process with the second client—in this case, TM3498—and so on until all the Client ID's have been processed. The simple condition your program tests for before rerunning the macro after each client is: *Does the Client field contain something?*

I put together a little Q&A 5.0 database that demonstrates the technique, and includes a delay timer that feeds the merge documents and image files to the printer at a rate it can handle. If you'd like a copy of the database, along with the macro that runs the procedure and a sample merge document, drop me an email at mailbox@quickanswer.com.

On the other hand, using the DOS Copy technique makes the batch file (along with FMPRINT, an HP LaserJet compatible printer, and FORMagic itself) unnecessary. The following program does the same thing as the previous one:

```
#500: If Image = "Y" then { Image =  
@Shell("Copy /b d:\qa\images\+ @Str(Client ID) + ".prn  
lpt1")  
Image = "Y" }
```

Many users held out great hopes for Q&A 5.0's new *Bitmap* field type. (See the October 1995 issue.) Though they liked the fact that graphic images could be *viewed* from database records, they quickly discovered there was no way to *print* them. If on-the-fly image *printing* is what you're really after (you're a real estate agent who needs to print scanned photos of properties for prospective clients), then this technique gives you the tools you need. You simply scan in the photo, print it to FILE right from your scanning software, specify in the pertinent database record that an associated image file exists, and have a little @Shell routine like the one above to print it on demand.

Most scanning programs let you *annotate* scanned images. So you could scan in a photo of a property, for example, add your text describing what the photo shows, then print it to FILE for use with Q&A.

Last month's issue tells how to obtain FORMagic.

Tom Marcellus is editor of *The Quick Answer*.

## Autoload Your Letterhead with @Shell

If you normally print single merge letters on your letterhead, you don't have to remember to download your letterhead overlay or go to the trouble of putting letterhead paper in your printer. Just include in your Q&A 5.0 merge document the commands that download and print the letterhead overlay then remove it from printer memory. A group of commands like the following anywhere in your merge document—in the footer, if you like—will do the trick:

```
<-*v1T  
*PG {@Shell("d:\qa\fmagic.bat MYLTRHD")}*  
<-*v0T <-&f1y3X <-&f6X
```

These commands (1) hide the @Shell "0" return code, (2) download the *MLTRHD* overlay (overlay #1) via the batch file shown earlier, (3) print the overlay with the letter, then (4) remove the overlay from the printer's memory.

Note that *fmdownload* can be case sensitive. If you receive an *Overlay not in file* error message from *fmdownload* when the overlay is obviously there, specify the overlay filename in all caps.

## A Budget Bitmap Viewer for Your Database

If you need to *view* rather than print images, you can use BITMAPEXE, a viewing utility that comes with Q&A 5.0. BITMAPEXE supports .PCX and .BMP image file formats. Your image files can be photos of employees, properties, products, technical drawings, scanned documents or the like. Run

BITMAPEXE from a database record by having a field for the image's path and filename and an @Shell program like this:

```
Field = @Shell("Bitmap " + Image)
```

If you make this a manual Calc program, you can press F8 to view the image, then press any key to return to the record.

## If-Then Reports. . .continued from page 5

The result is multiplied by 1 to explicitly ask Q&A for the numerical result. Omitting that part of the formula would result in Q&A returning a "T" or "F" rather than a 1 or 0.

Surprisingly, there is one additional set of results available to you when performing a test for truth. When you use the result as though it were a text value, Q&A returns either "Yes" or "No." This can be a little confusing because we've already seen that a standalone argument such as (#1 < 5000) will return "T" or "F." But if you change the formula to @Str(#1 < 5000) Q&A will return "Yes" or "No."

These are just a few of the ways in which you can take advantage of this technique. I've covered three primary uses. First, you can take advantage of the predictable results of multiplying by 1 or 0. You can also use the result of a test for truth to manipulate the value that's passed to a function such as @Left. Finally, you can use the basic form in combination with the option to print totals only to get simultaneous counts based on independent criteria. Applying these methods will allow you to create more powerful results by "tricking" derived column specs into performing conditionally.

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# Picklists. . .continued from page 1

## List Temp

```
> If not @Instr(List Temp, ";") then {
XPost("Pickext", "Ship methods", "Picklist Name",
@Xlookup("Pickext", "Ship Methods", "Picklist
Name","Picklist Items") + ";" + List Temp, "Picklist
Items");
@Msg("New item added. Revised list now displayed");
Clear(Ship Via, List Temp); Goto Ship Via
}
Else {
@Msg("Can't add an item containing a semicolon");
CHome }
}
```

## Program notes

Here's the action. When you move to the Ship Via field, the program looks up the Picklist Items from Pickext.dtf, places them temporarily in the List Temp field, adds the – *Edit List* – selection preceded by a semicolon, then displays the list. (Precede *Edit List* with ASCII 196 character – the long dash – to have it appear at the *end* of the list, or precede it with a regular dash to have it appear at the *beginning* of the list.)

You can now select a shipping method and continue on, or you can choose *Edit List*. If you choose *Edit List*, the picklist reappears, but this time with two additional selections, –*Add Item*– and –*Remove Item*–. (These items are

preceded with a normal dash to place them at the *beginning* of the list.) If you choose *Remove Item*, the list reappears, prompting you to select the item to remove. You simply click on an item to remove it, and the list reappears with that item gone.

If you choose *Add Item*, you're moved to the List Items field and prompted to enter the item to add to the list. When you do, the list is recompiled and the revised list appears for you to make your selection. You're now back at square one. You can either select a shipping method and move on, or continue to edit the list.

Each time you make a change to the list, the revised list is XPosted back to its source – the same Pickext.dtf record it came from.

Try it out. You forgot *UPS Next Day Air*. Add it to the list while you're working in Pick.dtf. Your driver skipped town yesterday in the company van. Go ahead and delete *Our Truck* as a shipping method.

Nifty, huh?

Get inventive. If the data entry database is shared, for example, arrange things so that all users can display the picklists but only some can edit certain ones.

Tom Marcellus is the editor of *The Quick Answer*.

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