Handling Multiple Shipping Addresses

TOM MARCELLUS

DOS WIN
Application in ONLINE Edition

If you've been typing in those shipping addresses when they differ from the billing address, you're working too hard. Let Q&A take care of it for you.

DURING the afternoon help sessions at last fall's Q&A User Group Bash in Washington, D.C., an attendee asked me an invoice-related question.

His customer database, in addition to storing the names of companies and their main addresses, also contains alternate shipping addresses. During invoicing, he enters the customer's account number, and XLookups retrieve the company name and main (billing) address into the Bill-To fields. At that point, he wants Q&A to ask him if the Ship-To address is the same as the Bill-To address and, if not, show him the alternate shipping addresses one at a time so he can select the right one.

If you have a similar need, I'll show you a programming technique that handles it for you. How you implement the feature depends on the version of Q&A you're using. First, I'll cover the basic database design, then show the programming for Q&A 5.0 and Q&A 4.0.

The databases

We're dealing with two databases here. Let's call them Customer.dtf and Invoice.dtf. (I've greatly simplified these databases for the sake of illustration.) Figure 1 shows a Customer.dtf record with three alternate shipping addresses, and Figure 2 shows a typical invoice during data entry.

The Customer database is the same for Q&A 4.0 and 5.0 and requires no programming. In the Invoice database for Q&A 4.0, though, you'll need to add two one-character labelless fields to the right of the Acct No field. Name the first one **ShipYN** at the Field Names Spec and make it a Yes/No field at the Format Spec. Name the second one **ShipWhere** and leave it as a text field. The Q&A 5.0 version of the Invoice database doesn't require these additional fields.

Figure 1. A simplified customer database with fields for three alternate shipping addresses.

Figure 2. A simplified invoice with separate Bill-To and Ship-To fields.

Q&A On the Web

Q&A's capabilities (and the ingenious ways users tap them) never cease to amaze us. Even today's Internet imposes no barrier that "The Little Database that Could" can't cheerfully plow through. Heck, we've even got folks producing entire Web site pages in the darned thing.

John Fulmer runs his county's Humane Society facility using Q&A to track the host of stray pets picked up each week. With little more than the flick of a switch, he publishes updated information daily on the lost critters to his Society's Web site. If you've ever worked in HTML (the Web's specialized language), you know that creating Web pages with complex tables is no easy task—worse if you have to update and republish them daily. But John managed to reduce the entire process to a Q&A macro. About all he has to do is keep the information in his databases current.

Q&A is on the Web in other ways, too. Now, at our own Web site (*www.quickanswer.com*) you can search **T.J. Shuflin's** *Quick Answer* Index Database by keyword to find that tip or article that answers your Q&A question. **John Dow's** DTFDATA utility powers the search, and we thank **Erika Yoxall** (*hammer@apk.net*) and **Mark Lasersohn** (*www.aztechdesign.com*) for their signal contributions to the project.
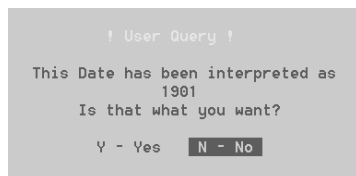
Quick Tip

Y2K Compliance Revisited

Application in ONLINE Edition

Q&A is Year-2000 (Y2K) compliant as long as you use one of the 13 four-digit-year date formats out of the 20 available date formats. (You choose your date format from the Global Format Options screen after creating or redesigning a database.) The two reasons why Q&A can't be "officially" called Y2K-compliant are because it gives you the option to choose one of the other seven date formats that truncate the year to two digits, and because it lets you enter a two-digit year even in a date field formatted for four-digit years.

Beginning on January 1, 2000, if your database is using date format 16 (mm-dd-yyyy) and you enter 3/3/00 in a date field, Q&A will incorrectly display and store the date as 03-03-1900. However, if you were to enter just 3/3 (leaving the year off), Q&A would display and store the date correctly as 03-03-2000. These simple facts prevent Symantec from stating that Q&A is Y2K-compliant.

Once you select a full four-digit year date format for a database, it's fixed for all time. The second problem is a matter of training and/or programming to prevent data entry errors. Any date field can be programmed to advise the careless user that a two-digit year has been entered. For example, in Q&A 5.0 you can display a warning box like this.

```
! User Query !

This Date has been interpreted as
          1901
     Is that what you want?

   Y - Yes      N - No
```

Additional programming can follow this warning to automatically move on (leave the date as is) or correct the date based on the user's response. My database that comes with the Online Edition demonstrates it.

Another approach involves using a program that *automatically* adds 100 years to any date entry that Q&A interprets as earlier than, say, 1950. (You choose the cutoff year.) This way, if a user enters 3/3/00, the date is automatically adjusted to 3/3/2000. (Not wise if you're tracking antique cars or peoples' birthdates, but handy in date-sensitive scenarios that span only recent years.) The QuickTip on page 2 of the December 1997 issue ("Enter 21st Century Dates the Easy Way") explains how to do it.

Bill Halpern, PCTA

Multiple Addresses. . .

Invoice programming in either version of Q&A assumes that the XLookups operate on a match between the **Acct No** field in the Invoice database and the **Account No** field in the Customer database. For your own application, substitute whatever field names and initial XLookup programming you need.

Q&A 5.0 programming

For the Q&A 5.0 Invoice database, we'll use pop-up @Askuser boxes to show each alternate shipping address and prompt for a Yes/No response. (In this program, the customer database is named Cust3.dtf.)

When you enter a valid customer account number, Q&A retrieves the customer's main address into the Bill-To fields and copies it to the Ship-To fields. A series of @Askuser boxes then appear, each with the next alternate shipping address, until you click "Yes" (or press "Y") to confirm the one you want. If you reject the last available shipping address, an @Msgbox tells you there are no other Ship-To addresses for the customer. Here's the program. It goes in the Acct No field:

```
> If @XLookup("Cust3", Acct No, "Account No", "Company")
= "" Then
{
@Msgbox("","Invalid Account Number","");
Goto Acct No };

If ShipName = "" then { XLookup("Cust3", Acct No,
"Account No", "Company", BillName, "Address", BillAdd1,
"CSZ", BillAdd2);
ShipName = BillName;
ShipAdd1 = BillAdd1;
ShipAdd2 = BillAdd2 };

If @Askuser("Is this the correct Shipping Address?",
ShipAdd1, ShipAdd2) Then goto Item1;

If @XLookup("Cust3",Acct No,"Account No","Address2")<>""
Then { If @Askuser("Is this the correct Shipping
Address?",@XLookup("Cust3", Acct No, "Account No",
"Address2"),@XLookup("Cust3", Acct No, "Account No",
"CSZ2")) Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address2");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
"CSZ2");
Goto Item1 } }
Else { @Msgbox("Sorry, no other Ship-to Addresses","on
file for this customer.",""); Goto ShipAdd1 } ;

If @XLookup("Cust3",Acct No,"Account No","Address3")<>""
Then { If @Askuser("Is this the correct Shipping
Address?",@XLookup("Cust3", Acct No, "Account No",
"Address3"),@XLookup("Cust3", Acct No, "Account No",
"CSZ3")) Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address3");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
"CSZ3");
Goto Item1 } }
Else { @Msgbox("Sorry, no other Ship-to Addresses","on
file for this customer.",""); Goto ShipAdd1 };

If @XLookup("Cust3",Acct No,"Account No","Address4")<>""
Then { If @Askuser("Is this the correct Shipping
Address?",@XLookup("Cust3", Acct No, "Account No",
"Address4"),@XLookup("Cust3", Acct No, "Account No",
"CSZ4")) Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address4");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
"CSZ4");
Goto Item1 } }
Else { @Msgbox("Sorry, no other Ship-to Addresses","on
file for this customer.",""); Goto ShipAdd1 };

@Msgbox("Sorry, no other Ship-to Addresses","on file for
this customer.",""); Goto ShipAdd1
```

Q&A 4.0 programming

Q&A 4.0 doesn't have the @Askuser and @Msgbox options, so we'll use @Msg messages to prompt for the correct shipping address.

On entry of a valid customer account number, the Bill-to and Ship-to fields are filled via XLookups, and a message prompts you to press "Y" or "N" to signify whether or not the displayed shipping address is correct. A "Y" entry accepts the Ship-To address as-is and moves the cursor to the first invoice item field. An "N" response (or pressing Enter without typing "Y" or "N") displays the next alternate shipping address and again prompts for a "Y" or "N." When there are no more alternate shipping addresses for the customer, a final @Msg tells you so. Here are the programs for the respective fields. (In these programs, the customer database is named Cust3.dtf):

Navigation Spec:
ShipYN field
```
< @Msg("Ship to this address? Enter 'Y' if Yes")
```

Program Spec:
Acct No field:
```
> If @XLookup("Cust3", Acct No, "Account No", "Company") =
"" Then
{
@Msg("Invalid Account Number");
Goto Acct No
};

If ShipName = "" then { XLookup("Cust3", Acct No, "Account
No", "Company", BillName, "Address", BillAdd1, "CSZ",
BillAdd2);
ShipName = BillName;
ShipAdd1 = BillAdd1;
ShipAdd2 = BillAdd2;
Goto ShipYN }
```

ShipYN field:
```
> If ShipYN = "Y" then {
Clear(ShipYN, ShipWhere); Goto Item1 };

If ShipYN = "N" and ShipWhere = "" Then {
If @XLookup("Cust3",Acct No,"Account No","Address2") <> ""
Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address2");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
"CSZ2");
Clear(ShipYN); ShipWhere = "1"; Goto ShipYN } }

Else if @Error Then { @Msg("Sorry, no other Ship-to
Addresses on file for this customer."); Clear(ShipYN,
ShipWhere); Goto ShipAdd1 } ;

If ShipYN = "N" and ShipWhere = "1" Then {
If @XLookup("Cust3", Acct No,"Account No","Address3")<>""
Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address3");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
```

Concludes on page 12

The Quick Answer ● March 1999   3

Multiple Addresses. . .continued from page 1

Invoice programming in either version of Q&A assumes that the XLookups operate on a match between the **Acct No** field in the Invoice database and the **Account No** field in the Customer database. For your own application, substitute whatever field names and initial XLookup programming you need.

Q&A 5.0 programming

For the Q&A 5.0 Invoice database, we'll use pop-up @Askuser boxes to show each alternate shipping address and prompt for a Yes/No response. (In this program, the customer database is named Cust3.dtf.)

When you enter a valid customer account number, Q&A retrieves the customer's main address into the Bill-To fields and copies it to the Ship-To fields. A series of @Askuser boxes then appear, each with the next alternate shipping address, until you click "Yes" (or press "Y") to confirm the one you want. If you reject the last available shipping address, an @Msgbox tells you there are no other Ship-To addresses for the customer. Here's the program. It goes in the Acct No field:

```
> If @XLookup("Cust3", Acct No, "Account No", "Company")
= "" Then
{
@Msgbox("","Invalid Account Number","");
Goto Acct No };

If ShipName = "" then { XLookup("Cust3", Acct No,
"Account No", "Company", BillName, "Address", BillAdd1,
"CSZ", BillAdd2);
ShipName = BillName;
ShipAdd1 = BillAdd1;
ShipAdd2 = BillAdd2 };

If @Askuser("Is this the correct Shipping Address?",
ShipAdd1, ShipAdd2) Then goto Item1;

If @XLookup("Cust3",Acct No,"Account No","Address2")<>""
Then { If @Askuser("Is this the correct Shipping
Address?",@XLookup("Cust3", Acct No, "Account No",
"Address2"),@XLookup("Cust3", Acct No, "Account No",
"CSZ2")) Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address2");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
"CSZ2");
Goto Item1 } }
Else { @Msgbox("Sorry, no other Ship-to Addresses","on
file for this customer.",""); Goto ShipAdd1 } ;

If @XLookup("Cust3",Acct No,"Account No","Address3")<>""
Then { If @Askuser("Is this the correct Shipping
Address?",@XLookup("Cust3", Acct No, "Account No",
"Address3"),@XLookup("Cust3", Acct No, "Account No",
"CSZ3")) Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address3");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
"CSZ3");
Goto Item1 } }
Else { @Msgbox("Sorry, no other Ship-to Addresses","on
file for this customer.",""); Goto ShipAdd1 };

If @XLookup("Cust3",Acct No,"Account No","Address4")<>""
Then { If @Askuser("Is this the correct Shipping
Address?",@XLookup("Cust3", Acct No, "Account No",
"Address4"),@XLookup("Cust3", Acct No, "Account No",
"CSZ4")) Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address4");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
"CSZ4");
Goto Item1 } }
Else { @Msgbox("Sorry, no other Ship-to Addresses","on
file for this customer.",""); Goto ShipAdd1 };

@Msgbox("Sorry, no other Ship-to Addresses","on file for
this customer.",""); Goto ShipAdd1
```

Q&A 4.0 programming

Q&A 4.0 doesn't have the @Askuser and @Msgbox options, so we'll use @Msg messages to prompt for the correct shipping address.

On entry of a valid customer account number, the Bill-to and Ship-to fields are filled via XLookups, and a message prompts you to press "Y" or "N" to signify whether or not the displayed shipping address is correct. A "Y" entry accepts the Ship-To address as-is and moves the cursor to the first invoice item field. An "N" response (or pressing Enter without typing "Y" or "N") displays the next alternate shipping address and again prompts for a "Y" or "N." When there are no more alternate shipping addresses for the customer, a final @Msg tells you so. Here are the programs for the respective fields. (In these programs, the customer database is named Cust3.dtf):

Navigation Spec:
ShipYN field
```
< @Msg("Ship to this address? Enter 'Y' if Yes")
```

Program Spec:
Acct No field:
```
> If @XLookup("Cust3", Acct No, "Account No", "Company") =
"" Then
{
@Msg("Invalid Account Number");
Goto Acct No
};

If ShipName = "" then { XLookup("Cust3", Acct No, "Account
No", "Company", BillName, "Address", BillAdd1, "CSZ",
BillAdd2);
ShipName = BillName;
ShipAdd1 = BillAdd1;
ShipAdd2 = BillAdd2;
Goto ShipYN }
```

ShipYN field:
```
> If ShipYN = "Y" then {
Clear(ShipYN, ShipWhere); Goto Item1 };

If ShipYN = "N" and ShipWhere = "" Then {
If @XLookup("Cust3",Acct No,"Account No","Address2") <> ""
Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address2");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
"CSZ2");
Clear(ShipYN); ShipWhere = "1"; Goto ShipYN } }

Else if @Error Then { @Msg("Sorry, no other Ship-to
Addresses on file for this customer."); Clear(ShipYN,
ShipWhere); Goto ShipAdd1 } ;

If ShipYN = "N" and ShipWhere = "1" Then {
If @XLookup("Cust3", Acct No,"Account No","Address3")<>""
Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address3");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
```

Concludes on page 12

The Quick Answer ● March 1999   3

Keeping a Web Site Up-to-Date with Q&A

JOHN K. FULMER

Need to publish changing database info to a Web site? Let Q&A do the grunt work.

DOS

OUR county Humane Society maintains a Web site at *www.cchspets.org*. One problem we were having was that five detailed tables on four Web pages (see Figure 1) had to be updated daily. All the information for the tables was in our Q&A databases, but it was proving far too cumbersome to manually edit the tables in an HTML or Web page editor. (HTML, or *Hypertext Markup Language*, is a special language that displays Web pages in a browser.) So I decided to see if I could automate the process in a way that would generate new Web pages identical to the original ones.

Plagiarizing the original Web pages

Since I wanted to duplicate the design of our original Web page tables, I started from there and worked backward. Using an HTML editor or browser, you can click *File / Save As* to save the HTML source code of any Web page.

Since HTML Web pages are just ASCII files, they can be displayed and manipulated in Q&A Write. I saved our four original Web pages to the same filenames in a folder named *Webpage*, and used that same folder to store subsequent files in the Web application (a total of 13 files consisting of five reports printed to disk, four joined Q&A documents, and four finished Web pages.)

By reviewing the original HTML pages, I located the repetitive codes (called *tags*) that define the table on each of the Web pages. I made copies of these portions for future reference and replaced this entire portion with a *Join* command in each of them. These joins insert the updated table data generated by a series of Q&A reports.

Each of our Web pages also contains the date and time it was last updated. We had been manually updating these as well. In place of these, I inserted *@Date(1)* and *@Time* in my documents and let Q&A time- and date-stamp each newly designed page. These merge documents print to disk to filenames such as CCSJOIN.DOC (Crawford County Strays Join) in the Webpage folder.

Listing 1 on the next page shows relevant portions of an HTML table on one of our Web pages with the date and time inserted as merge fields and the *Join* command used to join another document. The lines of text immediately preceding the *Join* control the table headings and column widths. More on these later.

Preparing the data

As I explain how we generate our Web pages in Q&A, keep in mind that I'm talking about how *we* do it for the Web pages *we* need. HTML tables are an ideal tool for presenting database information on the Web, but the kinds of tables you might need and the way in which you present your data in them will be very different.

For consistency, all our database text fields are formatted for uppercase text (TU). We needed to change this to save space in the Web tables and it posed a bit of a problem for two fields that contained free-form text.

The first of these was corrected by adding a read-only "mirror" field formatted for lowercase text (TL). A program simply copies the contents of the active field to this "mirror" field if the record has been changed. (*If @Modified Then "Mirror field"="Active field"*).

The second field posed several problems, and though unique to our situation, the technique I used to handle it might be of interest. It's an address field that contains the location where a stray animal was found. We needed to include the street name in the Web page table but not the street number, and at

Figure 1. This portion of the "Stray Dogs" Web page—one of five such HTML tables at the Web site—contains a description of each animal. All the data in these tables comes from Q&A databases, and the tables themselves are generated by Q&A as well.

the same time preserve ordinal-numbered street names such as 2nd Street and remove any remaining leading punctuation marks. I did this by adding a kind of "modified mirror" field formatted for initial caps (TI).

The address field's on-field-exit program sets the "modified mirror" field to the address field replacing the first occurrence of any ordinal-numbered street names with the text equivalent. A Gosub then transfers program control to the "modified mirror" field:

```
>#498: If @Modified Then
{#537=@Replfir(@Replfir(@Replfir(@Replfir(@Replfir(
@Replfir(@Replfir(@Replfir(@Replfir (@Replfir(@Replfir
(@Replfir(@Replfir(@Replfir(@Replfir(@Replfir
(#498,"16TH","Sixteenth"),"15TH","Fifteenth"),"14TH","Fourteenth"),
"13TH","Thirteenth"),"12TH","Twelfth"),"11TH","Eleventh"),
"10TH","Tenth"),"9TH","Ninth"),"8TH","Eighth"),"7TH","Seventh"),
"6TH","Sixth"),"5TH","Fifth"),"4TH","Fourth"),"3RD","Third"),
"2ND","Second"),"1ST","First"); Gosub #537}
```

The "modified mirror" field's on-field-entry program uses a series of @Asc *If* statements to test if the leftmost character is a number, pound sign, or the like. The *Then* part returns all but this first character and repeats the check on the next character. When the check no longer finds an unacceptable leading character, the *Else* portion returns program control to the address field:

```
<#537: If (@Asc(@Left(#537,1))>=48 And
@Asc(@Left(#537,1))<=57) Or
@Asc(@Left(#537,1))=171 Or @Asc(@Left(#537,1))=35 Or
@Asc(@Left(#537,1))=38 Or @Asc(@Left(#537,1))=44 Or
@Asc(@Left(#537,1))=45 Or @Asc(@Left(#537,1))=46 Or
@Asc(@Left(#537,1))=47 Then {#537=@Mid(#537,2,70); Goto
#537} Else Return
```

Generating the Web page tables

The key to the entire procedure is the Q&A report that generates the HTML code for the table (one report for each table). All the fields in the Column/Sort Spec are invisible. Derived columns assemble their contents along with the HTML tags. Here are the specs for one of the reports, followed by an explanation:

```
ID #: 25,AS,I
Date entered: 24,AS,I
(Unlabeled "Modified mirror" field)  21,I
Township/Boro/City: 18,I
Age Yrs: 12,I
Mos: 13,I
Wks: 14,I
Sex(M/F/N/S): 6,H(8:Sex),F(TR),I
Breed 1: 2,R,I
Breed 2: 3,R,I
BOther: 4,R,I
Color 1: 7,R,I
Color 2: 8,R,I
Color 3: 9,R,I
(Unlabeled "Mirror" field)  10,R,I

Heading: Spaces
Formula No. 1  @Text(80," ")
Column/Sort Spec: 26,I

Heading: !
Formula No. 2 "<TR>"+#26+#27+#26+#5+#26+#29+#26+#11+
#26+"<TD>"+#30+"</TD>"+ #26+"<TD>"+#32+#33+@Text(#18<>""
And @Mid(#21, @Instr(#21,"  ")+2,50)<>#18,"<BR CLEAR=
""ALL"">("+ @Xlu("LOOKUPS/TWPBORO",#18,"X#1","X#2")+")")
+"</TD>"+#26+#28
Column/Sort Spec: 100,HS(\ )
```

Heading: Breed
```
Formula No. 3 "<TD>"+@Xlookup("LOOKUPS/DOGSLU", #2,"X#1",
"X#2")+@Text(#3<>""," - ")+@Xlookup("LOOKUPS/DOGSLU",
#3,"X#1","X#2")+@Text(#4<>""," - ")+#4+"</TD>"
Column/Sort Spec: 5,I
```

Heading: Color
```
Formula No. 4 "<TD>"+@Xlookup("LOOKUPS/DOGCOLU",#7, "X#1",
"X#2")+@Text(#8<>"","  ")+@Xlookup("LOOKUPS/DOGCOLU", #8,
"X#1","X#2")+  @Text(#9<>"","  ")+@Xlookup( "LOOKUPS/
DOGCOLU",#9,"X#1","X#2")+@Text(#10<>"","  ")+#10+"</TD>"
Column/Sort Spec: 11,I
```

Heading: Reformatted admit date
```
Formula No. 5 "<TD>"+@Txt(#24<>"",@Int(@Md(@Txt(#24<>""
,#24),6,2)))+@Txt(#24<>"","/")+@Txt(#24<>"", @Int(@Rt(@Txt
(#24<>"",#24),2)))+@Txt(#24<>"","/")+@Txt(#24<>"",@Int
(@Md(@Txt(#24<>"",#24),3,2)))+"</TD>"
Column/Sort Spec: 27,I
```

Heading: Yrs
```
Formula No. 6 @Text(((#12*365)+(#13*30.5)+(#14*7)+(@Date-
#24))>=365, @Int(((#12*365)+(#13*30.5)+(#14*7)+(@Date-
#24))/365))
Column/Sort Spec: 15,R,F(N),I
```

Heading: Mos
```
Formula No. 7 @Text(((#12*365)+(#13*30.5)+(#14*7)+(@Date-
#24))>=91 And @Mod((#12*365)+(#13*30.5)+(#14*7)+(@Date-
#24),365)>30, @Int(((#12*365)+(#13*30.5)+(#14*7)+(@Date-
#24)-(#15*365))/30.5))
Column/Sort Spec: 16,R,F(N),I
```

Listing 1. Relevant portions of one of our HTML Web pages (still a Q&A Write ASCII document at this point) containing the HTML table construction, merge fields for date and time, and a *JOIN* command for the disk report containing the Q&A data for the table.

```
<HTML>
<HEAD>
<META NAME="GENERATOR" CONTENT="Adobe PageMill 2.0 Win">
<META HTTP-EQUIV="Content-Type" CONTENT="text/html;
charset=iso-8859-1">
<TITLE>CCHS Crawford County Stray Dogs</TITLE>
</HEAD>
<BODY BACKGROUND="pawz.jpg" BGCOLOR="#ffffff">
<P><CENTER><B><FONT SIZE=+4 FACE="Dauphin">CRAWFORD
COUNTY STRAYS</FONT></B></CENTER></P>
<P><CENTER><FONT COLOR="#0080ff" SIZE=+2>Updated on
*@date(1)*</FONT></CENTER></P>
<P><CENTER><FONT COLOR="#0000ff" FACE="Dauphin">( *@time*
)</FONT></CENTER></P>
.
.
.
<P><TABLE BORDER="1" CELLPADDING="0" WIDTH="100%"
HEIGHT="213" CELLSPACING=
"2">
<TR>

<TD WIDTH="10%" HEIGHT="44"><P><CENTER><FONT
COLOR="#0000ff">Date Admitted</FONT></CENTER></TD>

<TD WIDTH="20%"><P><CENTER><FONT COLOR="#0000ff">Breed</
FONT></CENTER></TD>
<TD WIDTH="9%"><P><CENTER><FONT COLOR="#0000ff">Sex</
FONT></CENTER></TD>
<TD WIDTH="24%"><P><CENTER><FONT COLOR="#0000ff">Color</
FONT></CENTER></TD>
<TD WIDTH="9%"><P><CENTER><FONT COLOR="#0000ff">Age</
FONT></CENTER></TD>
<TD WIDTH="22%"><P><CENTER><FONT COLOR="#0000ff">Where
Found</FONT></CENTER></TD>
<TD WIDTH="6%"><P><CENTER><FONT COLOR="#0000ff">Picture
#</FONT></CENTER></TD></TR>
*JOIN WEBPAGE/CCSHTML.TBL*
</TABLE>
</P>
.
.
.
</BODY>
</HTML>
```

@Help

**EDITED BY GORDON MEIGS
AND WILLIAM HALPERN**

Bothersome 'File In Use' Message `DOS` `WIN`

We have two computers, both run Q&A 4.0 for DOS, and both are protected by an uninterruptable power supply (UPS) and surge protector. Recently, our building suffered a power surge. The computer where the databases reside was running at the time. Now, any attempts to open one of the databases from the computer where it resides are greeted with the message, *File is in use by another application*, even though I can open and use the database just fine from the *other* computer. I checked the attributes on the file, and nothing is out of the ordinary. I'm stumped.

Rick Maile via the Internet

Here's the solution: From a DOS prompt, copy the database (both the .dtf and .idx files) to a local drive. On that local drive, recover that copy of the database. If the recovery is successful, and it should be if the file was not internally damaged, then follow these steps:

Test the copy to ensure all the records are there.

1. Delete or rename the original copy of the database on the network drive (renaming it is the safest approach as you can always delete it later) using sample commands like these:

```
REN Q:\data\filename.dtf q:\data\newname.dtf
REN Q:\data\filename.idx q:\data\newname.idx
```

2. Copy the new database back to the network drive (both the .dtf and .idx files), start Q&A, and everything should be fine.

Needs Special Export Date Format `DOS` `WIN`

Do you know of a way to make Q&A 4.0 export dates in a MMDDYYYY format, without slashes, periods or underscores?

J. Marks via the Internet

Q&A stores dates in the YYYY/MM/DD format. Armed with this knowledge, you can add a duplicate date field but format it for text rather than dates. If your actual date field is #10 and your duplicate text field is #20, a program like this in field #20 will do the trick:

```
#20: #20 = @Str(@Mid(#10, 6, 2)) + @Str(@Rt(#10, 2)) +
@Str(@Lt(#10, 4))
```

Make sure that automatic calculation is turned on (press Shift-F8 in any record), and your duplicate field will be filled with the stripped-down date format you want. You can then export these "dates" rather than the actual ones. (You can also use this program in a Mass Update to fill the duplicate date field in all the existing records.)

@Number on Peer-to-Peer Network `DOS` `WIN`

We just moved Q&A for DOS from a Windows 3.1 PC to a Windows 98 PC, and are now running it on two machines via a Windows 98 peer-to-peer network. We use the @Number Initial Value in an invoice number field so that Q&A supplies the next invoice number for each new record. When we're done invoicing for the day, the next invoice number appears in the blank record, but we don't save that record—we escape out of the database. The problem since we started using the network is that the next invoice number in sequence is no longer available when we begin the next invoicing session—Q&A skips it. So, we end up with missing invoice numbers. The same thing happens with our packing lists and customer numbers.

We've received suggestions and solutions like these:

1. Instead of using @Number as an Initial Value, program the database to return the next invoice number, like this:

    #10: #10 = 999999; #10=@XLookupR("Invoice", #10, "Invoice Number", "Invoice Number") + 1

2. Always save the last record with Shift-F10 instead of pressing F10 then escaping out of the database. The problem is getting everyone to do this at the end of *every* invoicing session.

3. On a standalone PC, you can escape out of an unsaved record, and Q&A will reuse the @Number Initial Value for that record the next time you add a record to the database. On a network, as soon as Q&A generates the next @Number, that number is no longer available, even if the user escapes out of that record. This is so that several users on a network can simultaneously add new records and be assured that they will get valid "new" values for @Number.

What's the real scoop?

Cheryl Lyon via the Internet

All the answers you received are correct, but the real reason behind *unused* @Numbers disappearing isn't addressed—and it's important! Using the programming method to look up the last used number and add 1 to it will work, as long as only *one* person is adding invoices during a given period of time. Two users adding invoices at the same time could get the *same* next invoice number (because Q&A is looking at the last *saved* invoice.) With @Number, Q&A checks it's own internal numbering system, not the last saved record, for the next unused number. Once that number is called—whether or not the record that called it is saved—Q&A considers that number *used*. This, to those who designed Q&A, was a better alternative than risking duplicate record numbers in shared databases.

One sure-fire way to avoid wasting @Numbers in a shared database is to have Q&A return the @Number only when you save the record. This is called an On-Record-Exit (ORE) program. You specify it by pressing F-8 at the Program Spec and typing in the ORE field ID number. If the ORE field were #300, the program to return the next invoice number to the **Invoice No** field would look something like this:

```
#300: If Invoice No = "" Then Invoice No = @Number
```

Since the @Number isn't triggered until the record is saved, you'll be able to Esc from the final (blank) invoice without wasting a number. The downside is that the user nevers sees the invoice number and it isn't available for use in programming until the record is saved.

A more suitable option might be to use a regular field program that returns the @Number invoice number only after an initial field or two have been filled, like this Cust ID on-field-exit program:

```
> If  Cust ID <> "" and Invoice No = "" Then Invoice No =
@Number
```

This option has the dual advantage of preventing skipped invoice numbers when escaping from blank records yet having the invoice number visible and available for use in programming (for XPosts, perhaps) almost immediately when adding new records to the database.

XLookups Not Working on Peer Network

XLookups and @XLookups don't seem to work since we moved everything from standalone Windows 95 PC's to a Windows 98 peer-to-peer network. Your advice would be appreciated.

Cheryl Lyon via the Internet

On a peer-to-peer network, you must set your databases' sharing mode to *Allow* or the XLookups won't be able to access them. To do this, select File / Design / Secure a file / Declare Sharing Mode. Change the mode from the default of *Automatic* to *Allow*, and do this for *all* your databases.

Either/Or Record Retrieval Program   DOS WIN

I have a saved *{@XLookup(...)}* retrieval expression. It looks in a *one-record* external database and gets the value from a field named *Project*. If Project contains a value, then all the records in the current database that contain that same value in the expression field are retrieved. This works fine and the way it should. But I have a special need. If the external Project field is empty, I want Q&A to then retrieve *all* the current database's records instead of just those where the target field is also blank. I'm hoping for a way to do this with a single Retrieve Spec expression. I'd rather not have to use multiple macros or run another copy of Q&A or make the user press any additional keys. I'm using Q&A 5.0.

Walt Strasser

Although the easiest answer is to just press F10 to retrieve all the records, we assume you'd rather have your macro, not the user, control the record retrieval. With a little Retrieve Spec programming magic, a small change in your external one-record database, and one possible drawback, you can do exactly what you want.

Let's call this one-record external database *Projects*. All it needs are two fields—one named **Match**, and one named **Project**. Match field is a Speedy text field, and the single record has a *1* in this field. The other field, Project, is where you'll put the unique name of the project you want to retrieve, or leave blank to retrieve all the records.

In the database where you store your multiple project records, add the following retrieve expression to the field that stores the project name. (Save the Spec by pressing Shift-F8 and assigning a name to it.):

```
#1: ={ @Instr(@XLu("Projects", 1," Match", "Project"),
#1) > 0 };
={ @Txt(@XLu("Projects", 1, "Match", "Project") = "", #1)
}
```

This is an either/or expression. The first line says: *Retrieve all the records in the current database whose Project field (#1) value matches the external database's Project field value.*

The semicolon after the first line makes the second line an "or." Line two says: *If the external database record's Project field is empty, get all the records in the current database*

where this Project field equals itself (all records).

The expression makes use of the @Instr function to check for the existence of the project name anywhere in the external field. This means that you could have multiple project names in the external record and retrieve all the matching records for a variety of different projects. The @Txt function returns true or false. So if the expression turns out to be true (the external field is blank), field #1 equals field #1, resulting in all the records being included in the retrieval.

There's one possible drawback to this: You can't have a record in your project records database (the one containing and running the expression) with a blank Project Name field because the @XLookup will return a value where blanks *will* match. The simple solution is to use a little programming to ensure that any empty Project Name field gets filled with "None," "Blank," "N/A" or whatever.

Database Corruption and Generations   DOS WIN

The database corruption article by Alec Mulvey in the November and December 1998 issues was a wake-up call for me. As far as I can tell, I don't have a corruption problem now, but per his warning I'm exposed to trouble. And I have a lot riding on my Q&A applications.

Long before I read Alec's article, I noted the comments in the Q&A for DOS *User Guide* (p. 3-87) regarding Copying Design Only as a way to improve overall performance. I found it worked okay on small databases (under about 250K) but not on larger files. I also found that the results varied and seemed unpredictable, with the following permutations:

1. Copy Design Only executes usually very fast, but the new database contains no programming or won't let you add new records.

2. System crashes. Sometimes wild graphics on the screen during this process. Everything restarts fine after this.

3. The message, *Your form design is being copied. This may take several minutes* appears. I've let the process run for up to eight hours without success, and had to power off the PC to escape from it.

I now understand about database "generations" and know that my databases have many generations. I've changed, added and moved fields many times. I have no current indication of any problems, but I am obviously very exposed and the shoe could drop at any time. I'm running Q&A 5.0 in Windows 95 on an IBM ThinkPad with a 266 Mhz MMX Pentium processor. It has 32M memory and a 3.2G hard drive. One particular database, Lease.dtf, is only 514K with 78 records and a seven-page form design. Programs include a number of XPosts and XLookups to other databases in the same directory. Other databases XPost to

Lease.dtf. I've made numerous design changes, including changing field data types.

I followed Alec's procedure carefully. Database Recovery reports all is okay but finishes very fast. I've resaved all of my Print and Mass Update Specs and report designs, performed the null Mass Updates Alec recommends, and removed and recreated the indexes. Just as before, I get varied but unsuccessful results.

Doug Gardner via the Internet

Q&A will copy the design of a database regardless of its size (which is determined by the number of records in it, not its design). What you're experiencing is corruption in the larger databases. Also, never, never copy the design or recover a database from a network workstation when the database resides on a server. Always copy the database to the local drive (you can use the F5 Copy command) and perform your maintenance there.

All three of the problems you mention indicate a damaged design or corrupted spec. What is happening is that Q&A is trying to copy the database's design, but is getting hung up at one of the points of corruption. Part of the design, perhaps the form design, was successfully copied, but anything after the corruption point was not. You could let the process run for eternity and Q&A couldn't finish. *No* successful copy design process should take more than a few minutes.

Your ThinkPad's processor isn't a problem. Processor speed isn't an issue until you cross the 233Mhz line with a *Pentium II* processor. Once you reach that point, you must apply the Speedfix patch. (You can download it from the freebies page at www.quickanswer.com.) However, the size of your hard drive is an issue. You can't run Q&A in a partition larger than 1.89G (the old DOS size limit). You can workaround this by using Partition Magic or the Lesspace.com TSR utility.

XPost is *extremely* sensitive to the "generation" problem and will crash databases that are not corruption free and generation one. Once a database has become corrupted, the corruption can't easily be cleared up. But the good news is that there are ways to redesign the database using existing tools and make it corruption-free. If you have an old, non-corrupt copy of the database, the solution is straightforward. If you don't, then you can use QEXTRACT (also available at www.quickanswer.com) to extract your records, programming, and form, then redesign the entire database from scratch. While this can be a tedious process, it *must* be done.

Y2K

5.0's Creators on Q&A and the Y2K Problem

Here, from the creators of Q&A 5.0 for DOS, is the lowdown on the Q&A Year-2000 issues you should know about and prepare now to tackle.

DOS WIN

These recommendations also apply to Q&A for Windows databases

I N-HOUSE research at PFP Software on Q&A 5.01 for DOS (tests performed on the German version) has revealed the following issues regarding Q&A and the year-2000 problem. These recommendations also apply to Q&A for Windows databases:

1. Q&A stores dates internally in the **yyyy/mm/dd** format (four-digit year, two-digit month, two-digit day of the month).

2. Date and time arithmetic in Q&A's programming language works correctly after 1999.

3. Dates entered into date fields work as expected as long as one of the "short" date formats (two-digit year) *is not* used. If, for example, you enter 01-01-02 in a date field (regardless of the separator character used), Q&A will always take this date as January 1, 1902. On the other hand, if you enter 01-01-2002 and the field is one of the "long" date formats (full four-digit year—see #5) then Q&A will treat the date as expected.

4. If a text field is converted to a date field, you must make sure that the field does not contain any dates in the short format in any record in the database. (See #3.)

5. For displaying date fields in a Q&A form, choose one of the following long formats at the Global Format Options screen. (This screen appears after designing/redesigning a database): 1, 2, 5, 6, 9, 10, 11, 12, 14, 16, 18, 19, or 20.

6. All date and time-handling in user-created programs should be updated to specify the long date format. It is the responsibility of the programmer to ensure correct program operation.

7. Year-2000 problems can arise due to the hardware or other software used. For example, some PC's can't work with a current date beyond 1999 because of a bug in the computer's BIOS.

8. Q&A correctly identifies the year 2000 as a leap year.

9. Print Preview for Crosstab reports grouped by date will display empty columns. Printing them to screen then printing to the printer will work as expected.

10. Q&A's List (File) Manager will display erroneous characters for file dates later than December 31, 1999. A patch to correct the problem is available from the Downloads page at our Web site at *www.thesite.de* and from other Q&A sites, including the Downloads page at *www.quickanswer.com.* (Download y2kfixeng.zip. It unzips to y2kfix.exe and a readme file).

The following procedure should be employed to update each Q&A database:

• Set the date and time formats in the database to one of the long formats.

• Resize date fields in main database forms as necessary to accommodate the longer date values.

• When adding or updating records, always enter dates with the full four-digit year.

• Update all Q&A programming to use the long date format in date and time arithmetic.

• Be careful when converting text fields to date or time fields, particularly with regard to programming and Mass Updates.

PFP Software has compiled these recommendations with great care. However, PFP Software cannot guarantee that they are correct and/or complete. In particular, PFP Software cannot be held responsible for *any* damages (including data loss) that might arise from the use of these recommendations.

© 1999 PFP Software GmbH

[Though the above recommendations stem from tests only on the German version of Q&A 5.01 for DOS, The Quick Answer *recommends (with the same disclaimer) that they be applied to databases in any version of Q&A. PFP Software specializes in Java programming and consulting. —Ed.]*

Web Tables. . .

Web Tables. . .

Web Tables. . .

Web Tables. . . continued from page 5

```
Heading: Wks
Formula No. 8 @Text(((#12*365)+(#13*30.5)+(#14*7)+(@Date-
#24))<183 And ((#12*365)+(#13*30.5)+(#14*7)+(@Date-#24)-
(#16*30.5))>=7,@Int(((#12*365)+(#13*30.5)+(#14*7)+(@Date-
#24)-(#15*365)-(#16*30.5))/7))
Column/Sort Spec: 17,R,F(N),I

Heading: Full Age
Formula No. 9 #15+@Text(#15=1," Yr")+@Text(#15>1," Yrs")
+@Text(#15<>""" And #16<>"",",<BR CLEAR=""ALL"">")+#16+
@Text(#16=1," Mo") + @Text(#16>1," Mos")+@Text(#16<>""
And #17<>"",",<BR CLEAR=""ALL"">")+#17+@Text(#17=1,"
Wk")+@Text(#17>1," Wks")
Column/Sort Spec: 30,I

Heading: Link from ID# to photo
Formula No. 10 "<TD><A HREF="""+#25+".jpg"">"+#25+"</A></
TD></TR>"
Column/Sort Spec: 28,I

Heading: Truncated sex value
Formula No. 11 "<TD>"+@Text(@Len(#6)<=6,#6)+@Text(#6=
"Neutered male", "Neutered")+@Text(#6="Spayed female",
"Spayed")+"</TD>"
Column/Sort Spec: 29,I

Heading: Amended Address, part 1
Formula No. 12 @Repllas(#21,"  ","|")
Column/Sort Spec: 31,I

Heading: Amended Address, part 2
Formula No. 13 @Left(#31,@Instr(#31,"|")-1)+"<BR CLEAR=
""ALL"">"+@Text(@Xlu("LOOKUPS/ZIPCODE",@Right(#31,@Len
(#31)-@Instr(#31,"|")),"X#2","X#2")<>"", @Xlu("LOOKUPS/
ZIPCODE",@Rt(#31,@Len(#31)-@Instr(#31,"|")),X#2","X#2"))
Column/Sort Spec: 32,I

Heading: Amended Address, part 3
Formula No. 14 @Text(@Xlu("LOOKUPS/ZIPCODE",@Right(#31,
@Len(#31)-@Instr(#31,"|")),"X#2","X#2")="", @Right(
#31,@Len(#31)-@Instr(#31,"|")))
Column/Sort Spec: 33,I
```

Derived Column #1 is used in the other columns to assemble the HTML code with appropriate line breaks.

Derived Column #2 assembles the smaller portions of HTML code generated by the other columns, and adds a few more pieces to it. It's the only *visible* column and has no heading or heading separator line. Its formula begins with *<TR>*, the HTML tag that starts a table row, then starts a new line and begins assembling data for the first record. I had to experiment to find out how to force line breaks in the table where needed. I found that inserting a *<BR CLEAR = "ALL">* tag did the trick.

The database stores a number of values in uppercase text that were originally looked-up from databases where they were in initial caps. Rather than using more "mirror" fields to return the data to initial caps, I use @XLookups in the Derived Columns to retrieve the data from those external databases in the initial caps format.

Midway through Derived Column #2, the free-form "modified mirror" address field is inserted (after some text juggling in columns #12, 13 and 14). We precede the city in this field with two spaces. The report looks for the text that follows this two-space break, and compares the city with the township/boro/city name in field #18. Only if these values are different does the report force a return and insert field #18 (via an @XLookup to restore the initial caps value) enclosed in parenthesis.

Columns #3 and #4 assemble field values, punctuation, and HTML tags. Column #5 reformats the date. Columns #6, #7 and #8 calculate the current age, transitioning from weeks to months to years. Column #9 assembles the age, using the appropriate singular or plural text, and forces any line breaks as needed. Column #10 assembles the HTML code reference to the photo associated with each animal. Column #11 abbreviates the sex values so they'll fit in the table column.

Columns #12, #13 and #14 were necessary because the programming was too lengthy to fit in one column. All they do are force a line break before the city name and restore its capitalization (even mid-name capitalization, such as in the city of McKean).

The report prints to disk with this Define Page:

```
Page width.: 240          Page length..: 1000
Left margin: 0            Right margin.: 240
Top margin.: 0           Bottom margin: 0
Characters per inch: 10
```

Putting it all together

The whole process of generating the updated Web pages is automated with a macro. (All we have to do is make sure the information in the databases is current.) The first thing the macro does is print the reports. (The *N<enter>* at the end of each report keeps the macro from going astray if no records are found). Each report prints to disk, overwriting the earlier file of the same name.

The macro then opens each of these newly created tables (ASCII documents) with the extension *.tbl,* deletes the three leading blank lines, then resaves them to the same name. It then opens each of the four Join documents and prints them to disk, giving them the same names as the Web pages they're replacing. Finally, the macro opens the four new Web pages, deletes the trailing ASCII character, and resaves them. Here's the macro:

```
<begdef><nokey><name>"Generate<sp>Web<sp>Page<sp>HTML<sp
><sp>code"<vidon><esc>Y<enter><esc><esc>R<enter>P<capsf4
><enter><sp>DOGS<f10>WEB<sp>PAGE<sp>HTML<sp>SOURCE<sp>-<
sp>CCS.HTML<f10><f10>N<enter><sp>WEBPAGE\ECSHTML.TBL<ent
er>Y<enter>P<enter>WEB<sp>PAGE<sp>HTML<sp>SOURCE<sp>-<sp
>CCS.HTML<f10><f10>N<enter>WEBPAGE\CCSHTML.TBL<sp><enter
>Y<enter>P<enter>WEB<sp>PAGE<sp>HTML<sp>SOURCE<sp>-<sp>E
TD.HTM<f10><sp><f10>N<enter>WEB<sp>PAGE\PETDHTML.TBL<ent
er>Y<enter>P<capsf4><enter>CATS<f10>WEB<sp>PAGE<sp>HTML<
sp>SOURCE<sp>-<sp>CCSC.HTM<f10><f10>N<sp><enter>WEBPAGE\
CCSCHTML.TBL<enter>Y<enter>P<enter>WEB<sp>PAGE<sp>HTML<s
p>SOURCE<sp>-<sp>PETC.HTM<f10><f10>N<enter>WEBPAGE\PETCH
TML.TBL<enter>Y<enter><esc>W<enter>G<sp><capsf4><enter>W
EBPAGE\<sp>ECSHTML.TBL<enter><enter><del><del><del><ctrl
f8><enter><esc>GCCSHTML.TBL<enter><enter><del><del><del>
<ctrlf8><enter><esc>GPETDHTML.TBL<enter><enter><del><del
><del><ctrlf8><enter><esc><sp>GCCSCHTML.TBL<enter><enter
><del><del><del><ctrlf8><enter><esc>GPETCHTML.TBL<enter>
<enter><del><del><del><ctrlf8><enter><sp><esc>GECSJOIN.D
OC<enter><f2><f10><enter>WEBPAGE\ECS.HTM<enter><sp>Y<ent
er><esc>GCCSJOIN.DOC<enter><f2><f10><enter>WEBPAGE\CCS.H
TM<enter>Y<enter><esc>GCCSCJOIN.DOC<enter><f2><f10><ente
r><sp>WEBPAGE\CCSC.HTM<enter>Y<enter><esc>GPETJOIN.DOC<e
nter><f2><f10><enter>WEBPAGE\PET.HTM<enter>Y<enter><esc>
GECS.HTM<enter><enter><end><end><end><lft><del><ctrlf8><
enter><esc>GCCS.HTM<enter><enter><end><end><end><lft><de
l><ctrlf8><enter><esc>GCCSC.HTM<enter><enter><end><end><
end><lft><del><ctrlf8><sp><enter><esc>GPET.HTM<enter><en
ter><end><end><end><sp><lft><del><ctrlf8><enter><esc><es
c><esc><enddef>
```

Finishing touches

Because DOS uses the *eight-dot-three* (8.3) filenaming convention, I had to use the *htm* filename extension for my Web pages and change my Web link references from *.html* to *.htm.* Additionally, Q&A saves files to all-uppercase filenames, while Web page authoring programs normally use lowercase. Since HTML references can be case-sensitive, I wrote the following Webcopy.bat batch file that changes the filenames to lowercase and copies them to the the workstation that uploads them to our Web server:

```
F:
CD\APPS\QA5\QAWRITE\WEBPAGE
COPY CCS.HTM C:\cchswe~1\ccs.htm
COPY ECS.HTM C:\cchswe~1\ecs.htm
COPY CCSC.HTM C:\cchswe~1\ccsc.htm
COPY PET.HTM C:\cchswe~1\pet.htm
```

While initially browsing my Q&A-generated Web tables, I saw that the column widths needed adjustment, so I changed the *<TD WIDTH = "XX%"* values that appear before the body of the table. This was a trial-and-error adjustment, and the total of all the values needed to equal 100%. When I was satisfied with the result, I simply changed the % values accordingly in my Join documents.

John Fulmer manages the Crawford County Humane Society's animal shelter in Meadville, Pennsylvania. hstearns@cchspets.org

Quick Tip Fax from Your Database with WinClip and WinFax

With WinClip for Q&A 5.0, you can compose your faxes in a database, and use Windows' built-in WordPad and Symantec's WinFax to send them by modem. It makes faxing a breeze, and you'll be able to search your faxes like any database records.

Start by creating a fax template in a WordPad document. (You should find WordPad in your Accessories group.) You can paste in your letterhead as a graphics file or create your fax header using fonted text. When you're done, save your template in Word 6.0 format to your Q&A program files directory.

Next, design a new database with fields named **Date**, **From**, **To**, **Re** and any others you might want. Add a Yes/No field named **FaxIt** after the others and, to its immediate right, add an invisible no-label field named **MakeFax**. (Both can be one-character wide.) Right below these, add a page-wide multiline field named **Message** where you'll type your fax message.

Make a copy of your WinClip macro. In the copy, change *the* *<altc>* to *<nokey>* and the name to *WinClip & Tab.* Insert *<tab>* before the *<enddef>*, then resave and reload the macro file.

Add the following programs to your **FaxIt** and **Message** fields, respectively (your paths might differ):

```
> If FaxIt = "Y" Then if
Date = "" or From = "" or To = "" or Message = ""
Then { @Msgbox("One or more important fields is
blank.","Please fix before faxing.","");
FaxIt = "N"; CHome };
If FaxIt = "Y" then {
MakeFax = @Month$(Date) + " " + @Str(@Dom(Date))
+ ", " + @Str(@Year(Date)) + "
" + "From:  " + From + "
" + "To:  " + To + "
" + "Re:  " + Re + "

" + Message;
@Macro("WinClip & Tab") }

< If FaxIt = "Y" and MakeFax <> "" Then {
FaxIt =
@Shell("C:\Progra~1\Access~1\wordpad.exe fax1.doc");
FaxIt = "N"; Clear(MakeFax) }
```

**WinClip** *is available from Marble Publications for $49*

Now, to send a fax, simply fill in the fields (Use Initial Values or XLookups), type your fax message, then enter *Y* in the **FaxIt** field. The programs will assemble the fax content in the MakeFax field, launch WinClip to copy that content to the Windows Clipboard, then start WordPad and open your fax template.

Click on WordPad's *Paste* icon to insert your Q&A fax content, then print to your WinFax printer. Don't save the changes to Fax1.doc; keep it as a template for future faxes.

Build on these basics to enhance look and functionality.
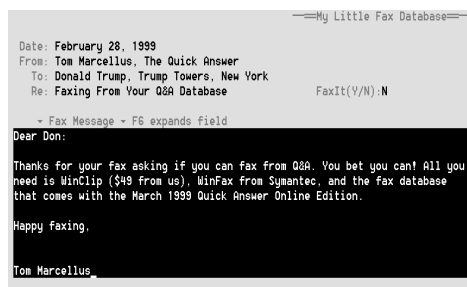
A record filled in and ready to fax. The database is fully searchable on any parameter, including words in the fax message.
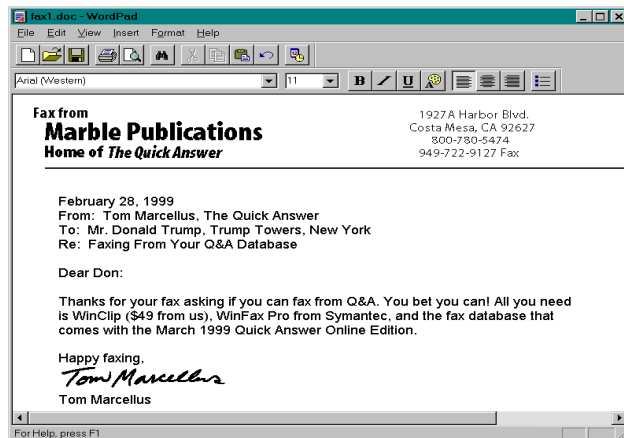
The fax in WordPad. The fax letterhead shown here took 10 minutes to create in Windows Paint and was pasted into the template.

Multiple Addresses...

```
"CSZ3");
Clear(ShipYN); ShipWhere = "2"; Goto ShipYN } }

Else if @Error Then { @Msg("Sorry, no other Ship-to
Addresses on file for this customer."); Clear(ShipYN,
ShipWhere); Goto ShipAdd1 } ;

If ShipYN = "N" and ShipWhere = "2" Then {
If @XLookup("Cust3",Acct No,"Account No","Address4")<>""
Then {
ShipAdd1 = @XLookup("Cust3", Acct No, "Account No",
"Address4");
ShipAdd2 = @XLookup("Cust3", Acct No, "Account No",
"CSZ4");
Clear(ShipYN); ShipWhere = "3"; Goto ShipYN } }

Else If @Error Then { @Msg("Sorry, no other Ship-to
Addresses on file for this customer."); Clear(ShipYN,
ShipWhere); Goto ShipAdd1 } ;

@Msg("Sorry, no other Ship-to Addresses on file for this
customer."); Clear(ShipYN, ShipWhere); Goto ShipAdd1
```

Final notes

To economize on programming, I could have used a Gosub routine instead of repeating the programming statements for each of the alternate shipping addresses. With only three alternate addresses, though, it hardly seemed worthwhile.

Ideally, you wouldn't store alternate shipping addresses in the main customer record. Instead, you'd have a separate database to store, for each customer, as many records as were required for that customer's alternate shipping addresses. You'd link the two databases on the customer account number plus, perhaps, an account number suffix to identify each unique shipping address. This way, you wouldn't run into trouble if you had some customers with a dozen or more alternate shipping addresses. For such a case, though, an altogether different approach to programming the invoice database would be in order. In Q&A 5.0, for example, you'd probably use XUserselectR to display a pick-list of alternate Ship-To street addresses which would be keyed to their corresponding cities, states, and ZIPcodes.

Tom Marcellus is the editor of The Quick Answer.

About the Online Edition Files

The download file for the Online Edition contains the Q&A 5.0 versions of the databases. If you're an Online Edition subscriber and would like the Q&A 4.0 versions sent to you by return email attachment, drop us a message at mailbox@quickanswer.com.