

As with the rest of FoxTalk, this column is entering an interesting time as we await the new version of FoxPro. On the one hand, we'd like to jump into Visual FoxPro with both feet and immerse ourselves exploring the new capabilities of this fascinating tool. On the other hand, we can't completely divorce ourselves from the past - we've got existing applications to maintain, we've got DOS applications that won't be able to be "facelifted" or rewritten for another six months, and the more conservative among us may want to take a "wait and see" attitude toward a ".0" release.

It's also been getting harder to find tools to write about - there aren't any Visual FoxPro-specific tools available yet (this column is being written during the first wave of the beta), but no one is investing a lot into developing or upgrading tools for FoxPro 2.6. However, this doesn't mean that this column will be empty for the next couple months. We'll still be on the lookout for "cool" 2.6-specific utilities, but there are also some categories of utilities that are, for the most part, version independent. This month's Cool Tool is one example.

As FoxPro has grown from a "toy database" used on single floppy drive PCs to the powerful tool we are using today (and tomorrow), the applications we develop become increasingly sophisticated. However, like the shoemaker's children who walk around barefoot, we're often bereft of tools to help us do our job better, and one task that seems to crop up more and more often is comparing two sets of data files.

It happens to us all: We ship a set of tables with an application, but then end up changing our copy of the tables - adding an index tag, modifying a column width, or perhaps even creating a brand new table. We're suddenly faced with comparing pages of the results of LIST STRUCTURE TO PRINT, and hoping that we've got sharp-enough eyes to spot the one little change on the 13th page. Oh joy.

Table Compare (TC) is another one of those "Oh, I can whip this thing up in an hour or two" utilities that came about as a result of the frustrations of keeping the structures of multiple copies of tables in sync. I had been poking around with this idea for a few months but wasn't able to bring the whole tool to closure. The comparison engine was fairly straightforward, but I couldn't quite get comfortable with an interface that provided the versatility I wanted without making it obnoxiously complex. This summer, with the advent of Steven Black's TABS driver for GENSCRNX, I had the answer to my interface problem, and TC was born.

Using Table Compare

As with all the utilities I write, running TC doesn't take a user manual or a long explanation. After making sure TC.APP is in your path, just DO TC from within FoxPro. You'll be presented with the main Table Compare screen - the Select Window. Even though this is a FoxPro/Windows 2.6 program, you'll see that TC depends on the interface paradigm of the mid-nineties - the tabbed dialog.

[SS: the main TC window with all five tabs.]

You'll notice that you have the capability to compare either a single table against another, or all the tables in one directory to those in another directory. The capability to compare a table or set of tables against their definitions in any of the popular data dictionaries - Codebook, FoxExpress, Stonefield, TRO, or XCatalog - is not enabled in this version. Once you've chosen what type of entity to compare, use the Select First and Select Second pushbuttons to pick the two entities to compare. Notice that you will be automatically prompted either for directories or tables as appropriate. Once you've selected both, use the Compare pushbutton to run the compare process.

There are three sets of comparisons made, and each of these is presented on a separate tab. Each tab contains a list box that displays TC's attempt to match the tables, fields, or index tags for each set of data. A set of text flags that point out the differences is displayed at the end of each line of matching data. The flags are useful for quickly locating the differences instead of having to minutely examine each row in the listbox.

The Directory tab presents a list of the tables in each of the selected directories. Tables in each directory are matched on name. Differences in file size, date, time, and number of records are noted. If you've selected two tables in the Select screen, this tab is rather uninteresting and you'll probably want to go straight to the Table tab, but if you're comparing two directories, you'll use this tab to select the two specific tables to compare. In order to do so, just double-click on the row and select either the Table or Index tab.

The Table tab presents a list of a fields in each table. The list is alphabetized so that the fields can be matched on name. Two structures are relationally identical if they contain the same fields - no matter in what order those fields are in, so we don't worry about the number of the field. The attributes of each field are listed and compared.

The Index tab presents a list of structural index tags for each table. The list again is alphabetized so that the tags can be matched on name. Unlike the Directory and Table tabs, this tab contains two long text boxes in the bottom of the dialog to display the entire index or filter expression for the selected index tag. Use the radio button in the lower right corner to switch between the two types of expressions.

The Convert pushbutton, like the Data Dictionary comparison functionality in the Select screen, is not enabled in this version. The pushbutton with the question mark in the upper right corner of each tab will bring up context sensitive help for that tab. And finally, for those who insist, the last tab presents Help.

In order to quit TC, use the Done pushbutton in the Select tab or press Escape.

The Enhancement Request List

TC is actually a work in progress - after the initial mistake of underestimating how long it was going to take to write it, I made a second mistake - asking others what they thought of it. And over the next six weeks, a 500 line program grew into 3000 due to a deluge of "It's a nice tool, but it would great if it would..." I can't imagine I'll ever ask anyone's opinion again. Seriously, there's still a long list of requested enhancements. Some of these - such as reducing the number of keystrokes required to reselect tables or directories, preventing the user from selecting the same item twice, providing enhanced file handling over LANs and WANs, as well as handling 3.0 data structures (Visual FoxPro will have NULLs) - will come with a 3.0 version of this tool. A TABS driver for FoxPro/DOS 2.6 is rumored to be out around the end of 1994, and when it appears, TC will be ported there.

Other enhancements, including comparisons against the various 2.6 data dictionaries, and a facility for converting the structure of one table to match the other, are considerably more complicated. As a result, there will eventually (perhaps even by the time you read this) be a "professional" version of TC commercially available that will include these features along with some other related tools.

Remember when I mentioned that this was one of those situations that is version independent? And you're saying to yourself, "Ha! Caught him! Once we have an active data dictionary that forces modifications to be made to the data structures through the data dictionary, this situation won't happen any more!" But that's not really the case. We can still have tables that don't belong to a data dictionary. What's to prevent us from having two different versions of the data dictionary - one at our development site, and another version at the site of the application? While we don't know until we've got some Visual Experience under our belt, at the time this article was written, it appears that this scenario is plausible.

Where to Find It

There's some good news and some bad news here. The bad news first? Well, remember that this version of TC has only been designed to run on FoxPro/Windows 2.6. TC checks the platform in case you forget, but this warning is to ward off any disappointment. As soon as TABS is out for DOS, I'll start to port it over for you diehard character-based fans. And because the underlying engine will be the foundation for a commercial product, the source isn't included. The good news, however, is that this version of TC is freeware. TC.APP is included on the disk (and is available up on CompuServe's FoxUser Forum, library 9, under the name of TCF01.ZIP) Use as you see fit with no payment required or requested. And despite the claim above, I am vitally interested in your comments and criticisms.