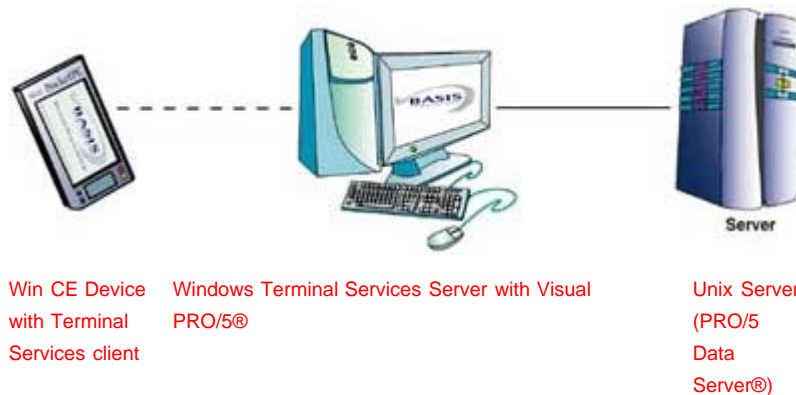# Going Mobile With Microsoft Terminal Services

By Greg Grisham

One of the goals of the BASIS Advantage is to address various possibilities that will "spruce up" a legacy system. Character applications are among those areas that could quickly and easily be spruced up. There is a wealth of robust character applications within our Customer base. While these applications have performed and continue to perform flawlessly, quite often it is necessary to apply newer technology, such as wireless, to extend the functionality of the application. There are a number of industries that can benefit from wireless technology. And because a variety of handheld Windows CE devices supporting PCMCIA network cards have become quite affordable, these industries can begin to reap the benefits of wireless today. It is no longer a stretch to imagine warehouse workers that are able to communicate wirelessly with their inventory system. A warehouse manager can walk around the warehouse, or even off of the premises, and remain connected to the master inventory system. The same is true for doctors, therapists, auto dealers, etc. The list of how many businesses could benefit from mobile connectivity, without having to lug a laptop around in order to achieve it, is endless.

| Win CE Device with Terminal Services client | Windows Terminal Services Server with Visual PRO/5® | Unix Server (PRO/5 Data Server®) |

The following are several issues to address when dealing with mobile technology and the applications in this environment:

Cost of the Unit
Laptops have had wireless network cards for years, but the cost of the laptop unit itself is generally prohibitive, when trying to deploy to a large audience. Furthermore, laptops, while portable, are generally not convenient. Imagine a physical therapist trying to find a place to lay down her laptop in a gym. History has proven that laptops don't bounce well when dropped. This makes them expensive to deploy and support.

Client Security
When addressing mobile technology, the ultimate goal is really mobile access. As a rule, you would not want the unit to "walk away" because of the obvious asset loss, but you absolutely cannot afford for the data to walk away. This is particularly true when dealing with personal financial or health information. Consequently, the system design must support mobile access with the appropriate amount of available security with regard to access to the server. Putting sensitive data on a mobile device is unacceptable.

Application Interface
While the application interface is often overlooked, it is probably the greatest challenge for the developer. The screen dimensions are a significant issue. The data entry requirements are monumental. This is

where a well-designed grid application can really shine. Grids can deliver the greatest amount of data in the tightest amount of screen real estate. Furthermore, grids support data management like columnar sorting, font control, and cell data entry. All of these issues make mobile technology attractive, yet challenging.

What BASIS's Customers should find equally exciting is how easy it is to deliver this technology to their existing application, quickly, with minimal effort.

You may have seen the demo depicted in this article at one of our presentations. This picture shows a COMPAQ iPAQ operating as a MS Terminal Service client. As a client, it can execute applications on the server. In this case, we have put Visual PRO/5® on the server along with the File Maintenance Utility (FMU). The application shown is a quick screen generated using the FMU. We like to demonstrate that the functionality took less than an hour to achieve and only a few lines of code to execute. To replicate this demonstration, you would do the following:

iPAQ operating as MS Terminal Service client.*

1. Go into the FMU main screen and create a grid for the data you want to access remotely. If data entry is necessary, make certain to utilize the Validation Program generation. Be attentive to the number of columns and the grid dimensions you select.
2. From the Visual PRO/5 prompt, create your program to access your grid. The complete program looks something like this:

```
0010 CALL "fmr::run_mode",0,"\caritdms\parts.tbl",0,1,VALUE$,ERRMSG$,ROW_DA
0010:TA$[ALL],"Parts Lookup","",0,0,0,0,"Getting Data",10,10
0020 EXIT
```

*The specific options are detailed in the FMU.DOC on the Advantage magazine CD.

3. Set up the user account on the MS Terminal Services server so that it executes the program above upon login.

At this point, you are ready to go.literally! The system can be maintained and modified from any system that has access to the server (e.g. dial-in support access).

Now, that 20-year-old character application has graphical, mobile connectivity. Who knows? It may be just a matter of time before all it takes is voice recognition to activate it!