

# *Extending the Life of Your Applications: PRO/5 Enhancements*

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You've asked for socket capability and more foreign language support and we're delivering them to you in our Feature Release 2.20 of PRO/5® and Visual PRO/5®. We've also significantly improved Print Preview and encryption, and created another licensing method for you: phone registration.

## *Now You Can Use Sockets*

Release 2.20 enables communications directly with other machines via TCP or UDP sockets in both Visual PRO/5 and PRO/5. Client/server applications, mail service and other similar network applications are now possible.

Our socket implementation provides a reliable, ordered-stream connection (that is, a TCP/IP socket connection). The host and port number of the destination are specified when the socket is created. The connection is reliable because the transport layer (the TCP protocol layer) acknowledges the receipt of sent data. If one end of the connection does not receive an acknowledgment within a reasonable period of time, the other end sends the unacknowledged data again. Once you have written data into a socket, you can assume that the data will get to the other side. The reliable stream connections provided by sockets are well suited for interactive applications.

However, because the data are a stream, write boundaries are not preserved. This means that if you write 200 characters, the receiving end can read all 200 characters at once. But it might get the first 10 characters one time and the next 190 the next time data are received from the socket. In any case, the receiver cannot tell where each group of data was written.

### **WHAT IS A SOCKET?**

**A socket is a piece of software that connects an application to a network protocol. In UNIX for example, a program can send and receive TCP/IP messages by opening a socket and reading and writing data to and from the socket. This simplifies program development because the programmer need only worry about manipulating the socket and can rely on the operating system to actually transport messages across the network correctly. Suppose a manufacturer uses applications written in PRO/5 to control different processes. A variety of machines in the factory are in turn controlled by a variety of applications. Without sockets, commands from the BBx® application are sent to the machines in the form of files. With sockets, these processes can receive commands directly from the BBx application.**

## *More Foreign Language Support*

BASIS software installation and license registration and Print Preview for Visual PRO/5 are all now available in a variety of foreign languages.

When the software is installed, a dialog box is displayed that allows you to choose a language that can be used for the remainder of the installation and product licensing. BASIS supports Dutch, English, French, German, Italian, Spanish and Swedish. If the computer is configured in the Regional Settings of the Microsoft Windows Control Panel to use one of the languages BASIS supports, the BASIS Print Preview and license installation programs will automatically display in that language. This will require no extra work for the user or developer. All menu items, toolbar buttons and dialog boxes will be in this language. English is the default language and therefore is used if the computer is configured for a language that we don't currently support.

### **Improved Print Preview**

Print Preview has been enhanced to give you further control over printing, more ability to zoom in and out of the preview page, and better keyboard navigation. Feature release 2.20 is fully compatible with Windows 95 and 98, and Windows NT 3.51 and Windows NT 4.0.

When you select the **Print** toolbar button or menu item, the print dialog box automatically comes up. The dialog box will allow you to select a printer and print a range of pages or a whole report. A report is entered into the print queue as a single print job, making it easier to cancel a print job if necessary.

View options have been further enhanced. The Print Preview screen matches the appearance of the printout. You can change views from a drop-down list on the toolbar and view a page in preset increments from 25% to 200% of the actual size. Preview text is now more readable at smaller sizes. You can also turn off the toolbar and status bar to increase the size of the window.

Keyboard navigation is also improved. The **Page Up/Down** keys scroll the current page. **Home** and **End** go to the top and bottom of the current page. **Ctrl** and **Page Up/Down** go to previous and next pages. **Ctrl** and **Home/End** go to the first and last pages of your document.

The SYSPRINT device in Visual PRO/5 has a new **PRINTER= mode** option that allows a specific Windows printer to be opened or selected in the setup dialog box instead of the Windows default printer. This option can be used in an OPEN verb or in an alias line in **config.bbx**.

### **Security**

Release 2.20 includes important features that improve the security of data and processes created with BASIS software.

The PRO/5 Data Server® for Windows NT now supports user authentication with a new user definable data block (UDDB). Before Release 2.20, all users connecting to a PRO/5 Data Server for NT had the same permissions as the user who started the Data Server. It is now possible to configure permissions for users on a per-connection basis.

The UDDB contains a simple string to allow user identification, password and domain information to be verified before a user is able to access the PRO/5 Data Server.

In addition, Release 2.20 has strengthened the SAVEP function's algorithm for Visual PRO/5 and PRO/5 to offer better encryption. The developer's programs will be better protected than ever. Note that saving a program using SAVEP in 2.20 will make that

program unusable in a older revision of Visual PRO/5 and PRO/5. A SETOPTS bit can be set to revert to previous SAVEP behavior if required.

### **Telephone Registration**

Both Windows and UNIX users may now use a touch-tone telephone to register their software licenses. The BASIS Licensing program for Windows and the installation scripts for UNIX contain instructions on how to use the 24-hour-a-day phone registration method. The phone system is an interactive voice system. Callers are prompted in the language of their choice, Dutch, English, French, German, Italian, Spanish, or Swedish, to enter their licensing information. The system repeats the entered information and requests verification after each entry. Callers then receive their license via fax.

Registering through the Web or by e-mail will still be the fastest and most accurate methods of registering licenses, followed by the phone registration method and fax method, respectively.

***This TechCon99 session will be presented by two BASIS software engineers, Jim Douglas and Brian Hipple. Jim Douglas has 15 years of experience in Business Basic software development and support. For 13 of those years, he has been specifically working with BBx®. Jim holds a Diploma of Technology in Computer Systems from the British Columbia Institute of Technology. Brian Hipple joined BASIS in 1998 as a Software Engineer. He has over 10 years of experience in software development, focusing in object oriented design and programming. Brian holds a B.A. in Business Computer Systems from New Mexico State University.***