

The TeleCommuter

A modem program for the 90's

By
Ron Gilbert
with Doug Crockford

If computers are so good at doing repetitive, mundane tasks, why do so many PC programs, from word processors to databases, force the user to remember strange key commands and boring sequences to get things done? One of the worst offenders in this area are modem programs. There has yet to be a modem program that doesn't require its user to remember a multitude of arcane phrases like "stop bits", "parity" and "baud rate." Not only is the user supposed learn what these mean, but every time the program is used a guessing game begins as to what the computer on the other end of the line is using for its "stop bits" and "parity." These are all tasks that computers do best: Figuring out strange protocols and setting bit speeds. So why is it that the computer is do it?

Today's modem programs are written by programmers for programmers. As other forms of software such as word processors and databases moved in to the realm of normal users, modem programs stayed behind. They still require users to be concerned with issues that are at the lowest level of the hardware. Can you imagine a word processor that required its user to specify what sectors on the disk the file needed to be stored on? If this is so unimaginable, why is it that the public stands for dealing with clocking out "stop bits" at an "even parity"? The answer is they don't. Most people that use computers don't use a modem program because they are so complex and uninviting.

The biggest problem with today's modem programs is that they try to do everything with everybody. There are no less than ten different modem transfer protocols for transferring files, and each modem program on the market will support all of these and more. This may seem like a good idea, but the problem lies in that each user must agree on what protocol to use. Each protocol has advantages for certain situations. It is up to the user to decide which one best fits the files he or she is trying to transfer. After the users have agreed on the protocol, the two users must start transferring the files at the same time. If one is faster than the others, the the machines will get out of sync, and in some situations, the users will be forced to hang up and redial. Again, these are a mundane task that the computer should be doing for the user.

The only way to relieve computer users from these hassles is to create a new modem program that does not use the standard protocols or files transfer procedures, but creates a new, easy to use and fully automated system. The disadvantage of this is that our modem program will not be compatible with anyone else's. It can't be, because both users must have the same program running on both machines. Once our program has recognized its partner, they do all the deciding about "stop bits" and "baud rate". The user is never ask to set any modem parameters or transfer protocols.

Once the two programs have connected, both users are presented with a list of files and a directory tree for both machines. Transferring files is as easy as dragging a name from one window to the next. There is no limit to how many files can be copied. It is even possible for both user to be coping to and from each other machines simultaneously. The user will never be concerned with who is transferring first, because they can happen at the same time. In addition to transferring files both ways, the two users can "chat" with each other by typing on the keyboard while the computer are transferring files.

This program is not for programmers logging onto bulletin boards to get the latest software, it is designed specifically for the growing number of people that are working at home. With commutes getting longer and more parents wanting spend time with their children yet continue to work, more and more people will decide to have a computer at home and transfer documents to back to the office. As this number of people grows, there is going to be a big demand for easy to use modem programs that a person only versed in Microsoft Word will be able to understand and use. Marketed correctly, this program can hit just that market, and hit it big.

Features:

The following is a list of a few of the features that will be in the TeleCommuter. It is by no means a complete list or a in depth description.

Directory Protection

Each user can set is directories up to have one of 4 types of protection.

- 1) Open. An open directory can be written to and read from with no restrictions.
- 2) Read Only. With a Read only directory, the other user can see and transfer files from your machine to his or hers. They can not transfer files into these directories.
- 3) Write Only. With a Write Only directory, the other user can transfer files to this directory, but can not read files out of it, or see what files

are in it. This is useful for a place that many people can drop files with out worrying about them seeing what else is in there.

- 4) Locked. A locked directory is neither read or write accessible to the other person. In addition, it doesn't even show up on the others user machine. They will have no idea the directory even exists.

Password

Each user can set the system up so a password is needed to gain access. This will be particularly useful if a machine is set up as an unattended spooler for employees to call and drop off work. Each user will be able to have a different password, therefor making it easy to lock one person from the system without changing the password.

Electronic Mail

The system will be set up with a simple form of electronic mail. Users will be able to send mail to other users. When the recipient logs on, they will be told of mail waiting to be read.

Phone Book

The system will have a simple phone book that is used to store the phone numbers of people that are frequently called. The book will store 10 or 25 numbers that can be called up at the beginning of the program. When the user starts up the TeleCommuter they are given only two choices: 'call a number' or 'wait for a call'. If they choose 'wait for a call', the modem will be put into auto answer. Of course, keeping with he philosophy of the product, there will be no mention of the word 'auto answer'

Paranoid mode

Included in the system will be a option called paranoid mode. When the system is in this mode, no file transfers to or from the home machine can be made with out asking permission first. This mode might be used if you don't know the person you are connected to and don't want to worry about other files being taken. This might also be a quick alternative to protecting directory you don't want accessible. This mode will also be silent to the other party. They will have no way of knowing that you are confirming everything being taken off or put on to your machine. Trust is important in business relationship.

Special files

Special files, such as ones used by The TeleCommuter and MS-DOS can not be transferred. This will protect users from getting Trojan Horse type programs and viruses from other people. Special concern needs to be taken with the TeleCommuter files, because sending a new password file over would essentially leave someone's machine wide open. This also true of COMMAND.COM. The TeleCommuter will in no way touch this file. We may also want to build some other safeguards into the system to prevent viruses from spreading. As of now, I don't know what they might be.