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COMPUTER BITS

Notes on Using Your System as a Secretary

By Carl Warren

OCCASIONALLY, when I'm on the road at article deadline time, I have sent material directly to the office via computer link. I use an Otrona Attache portable computer with Metalogic's Whizlink communication package and a Hayes Microcomputer Smartmodem for this purpose.

At the home end, I've implemented the Hayes 1200-baud Smartmodem with Ward Christenson's computer bulletin board system (CBBS™), as well as his public domain BYE program.

Although the CBBS can be used by anyone, I've modified it for private use and added a mailbox function in concert with the Hayes modem. With Ward's help (and a very large phone bill), I've been able to implement several functions. I can call in to either upload or download items, leave a message to my secretary coupled to an alarm function (the system beeps until she answers it or I command it off), or leave a special system message.

This last function, the system message, currently relies on the system clock (which, unfortunately, is thrown off by disk accesses) to perform date/time tasks. (Eventually I plan to add the Hayes Stack Chronometer). This unique system message permits the entering of a date, time, and phone number to call. At the specified time, the number is dialed and sign-in is established. After the transfer is completed, the system signs off.

Even though this mailbox function may seem trivial in concept, we found that we had to take into account a number of things that might go wrong. Besides power

outages and glitches, you need to know that you do, in fact, have a valid carrier and have connected. The Hayes modem handles this. Next, you must be able to determine that you have achieved a valid sign-on and have proper communication. The modem can't perform this function, so we had to look further.

In designing the mailbox, we found that Ward had provided all the CP/M system level handlers to move messages. What was missing, however, was the handling mechanism for the mailbox functions. Since we needed reasonable speed and ease of programming, we turned to the command language in Ashton Tate's dBase II management system.

Essentially we had to perform string comparisons to make sure the functions were valid. We also had to manipulate files that could be text, data, or command structures. Since CBBS allows the creation of message files that are handled by the structure in a way similar to that of dBase II all we needed to add in CBBS code was a call to dBase II letting it manipulate all the message files.

Rather than allow CBBS to create the file—which it can do—we always default to dBase II. The message files are defined as:

CODE 3,C (3 ASCII characters long)
PHONE 15,C (Up to 15 ASCII characters)
CONTENTS 200,C (Up to 200 characters)

System displays this as:

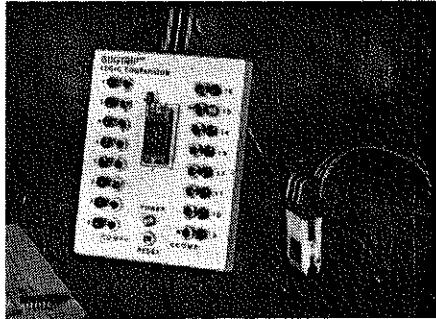
CODE: PHONE:

Total message is 200 characters

To further simplify the message system, a Control-Q displays a list of codes and phone numbers (we allow up to ten). In this mode, all we do is enter the desired code (I'll explain this shortly) and the phone number. The system automatically fills in the correct information. An enhancement I plan later is a switch that calls a file for the message. This will permit messages of greater than 200 characters.

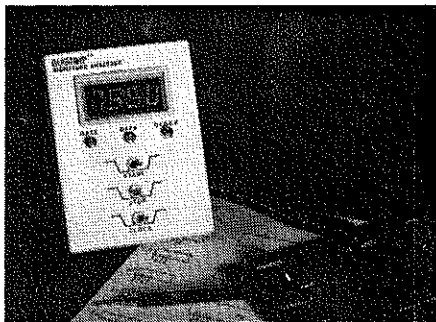
The code that I mentioned is a

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unique indicator directly related to what I want to do. The code is made up of three characters.

The first (leftmost) character is either a D or an F. D is for dial from the date and time in the first line of the message. An F uses a special call file for the date and time. The second and third characters set up the attributes of the transfer:

- CS—call and send only;
- CD—call and send then delete;
- CM—call, send, and look for messages.

The latter function only works with similar systems that are expecting a message query.

One of the features of the Whizlink communication program is its ability to reduce the size of a file by 40% using a compression system, which speeds communications. We found that we could use the compression file from Whizlink in concert with our modified CBBS. (Currently, we have only tested this in a local loop and not on the operating CBBS so we aren't sure we have all the links properly implemented.)

Unfortunately, we don't have room in the magazine to publish the code we created; but we can make it available via the COMPUTER & ELECTRONICS Bulletin Board found on CompuServe. When on CompuServe, type GO PEM-450 and look in the access file (function XA).

If you want to duplicate the procedures described here, you'll need to contact Ward Christenson (via CompuServe's bulletin board) for the CBBS package and purchase a Hayes Smartmodem. There are other intelligent modems available, but the Hayes system is the only one we have used. In addition, we have our system on a Zenith Z89 with a Magnolia disk controller and a combination of 8" and 5 1/4" drives.

Unfortunately, the BIOS (basic input/output system) implemented by Magnolia differs enough from the Zenith version to require a re-definition of the location of the TPA (transient program area) in CBBS.

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