HOW TO LOG IN AND OUT OF THE BCC 500 SYSTEM

An Explanation for Beginning Users

A session on the 500 system consists of the following elements:

- connecting your terminal to the system
- initiating a new process
- logging in (authenticating the user)
- doing the computation
- logging out (destroying temporary files & the process)
- disconnecting your terminal from the system

1.   Connecting a Terminal to the System

Connecting to the 500 is done just as it is for any Computing Center Service attached to PACX.   500 service through PACX will accommodate either 300 bps terminals or 110 bps terminals.   1200 bps terminals or higher cannot be accommodated. The terminal should be switched to "Full Duplex".

If dialing in on a phone line, you have a few seconds after modem handshake to hit a carriage return (CR) on your terminal. If you are using a terminal wired directly to PACX, turn on the terminal and switch it from "LOCAL" to "REMOTE". Then type a CR. In either case if you wait too long before hitting CR, PACX will ignore the terminal indef- initely. If the terminal comes in by phone PACX will hang up the line; you must re-dial to get connected. If the terminal is direct wired, you must switch back to "LOCAL", wait a few seconds, switch back to "REMOTE", and try again.

Assuming you haven't waited too long, PACX determines from your CR what your terminal's bit rate is and prints an asterisk on the terminal to let you know that all is yet OK. Then you type the service number (the computer you wish to use). The 500's number is Service 33 (you type just "33" and a CR). In full-duplex mode, no "33" will show on the terminal. PACX then finds an available line to the indicated system, if any, and returns either "SERVICE 33 START" or "SERVICE 33 UNAVAILABLE".

When you get the SERVICE START message, you know that connection to the computer system is now complete. Anything typed from this point on goes through PACX directly to the computer.

After getting connected, if you should get disconnected for any reason, you may reconnect in the manner just described.

2. Initiating a New Process

Assuming you have just connected to it, your next step is getting the 500 system to create a process for you. (A process is a collection of system resources which are scheduled and accounted for under some account number or user's name. It is the thing which "runs" on your behalf in the system.) The 500 is aware whenever PACX connects a user to it, but cannot yet know whether the new terminal is running at 300 or 110 bps. So, just as when you first connected to PACX, you must now let the 500 know the proper speed by typing a standard character. That character is a CONTROL-K. It is also used universally in the 500 system as the system interrupt character.

3. Logging Into the System

When the 500 has seen your CONTROL-K, it sets up to scan your terminal's input line and operate its output line at the correct rate, and then it creates your process. It does this in such a way that when the process first starts to run, it executes the LOGIN command. You will know when this has happened, because the system will type the following message on your terminal:

```
          WELCOME TO THE BCC 500 SYSTEM!
          VERSION U:A12M:E11
          WED  11 OCT 1978    10:59:51
          ENTER
```

At this point it is waiting for your user name. Each poten-
tial user of the system must obtain such a "name" (usually
it's your last name and maybe an initial) from the Computing
Center.   You type the name and a CR.   The 500 then asks for
a PASSWORD. Each user issued a user name is also given a
password chosen by that user. Your password may be of any
reasonable length (the longer the more secure -- but you
have to type it every time) and may contain letters, digits,
hyphens, and slashes. When you type the password it will
not appear on your terminal. This is because the 500 turns
off its "echos" during this time to prevent anyone from
seeing a password. The password is ended by a CR.

     Some users will be logged in at this point and are free
to compute. In the case of other users, the system will ask
for an ACCOUNT. If this happens in your case, you may type
anything you wish, terminated by CR.   What you type is
recorded in the accounting files. It is intended that what
you type be a person's name or initials. This permits a
number of individuals to use the same user name without
confusing accounting. The system makes no attempt to auth-
enticate the "account" name.

     If, for any reason, your terminal is disconnected from
PACX during the login scenario, the process thus created
(but not yet assigned to you since you haven't finished
logging in) will be destroyed and you will naturally repeat
your steps after reconnecting.

4.   Computing

     When LOGIN is complete, the system transfers the
process to the user's name and types a "@" character at the
left margin of the paper. This is known as a <u>herald</u> and
serves as a prompt character to keep you informed as to what
the computer is doing. In this case it is waiting for you
to type a command. The "@" sign in this context means, "I
am the system...speak to me in my language."   For those
logging in the first time, we suggest you first execute the
HELP command. That is, merely type the word "HELP" followed
by CR after the "@" sign.   This will initiate the HELP
subsystem. HELP retrieves and types short summaries of
system commands, languages, and utilities. It is not de-

signed to be a tutorial system, but it can serve a little in
this way, expecially for those who have used other systems.

If, for any reason, your terminal is disconnected from
PACX after you have logged in and are in the computing phase
of your session, your process will be suspended and held in
its current state.   No computation will be done in this
situation, but you will continue to be charged for connect
time since, after all, your process still occupies signifi-
cant system resources. If you want to stop computing and
leave the system the only correct thing to do is to log out.
We emphasize this because the HP and TSO systems log out
users automatically upon disconnect; many users have there-
fore gotten in the habit of just turning off their terminal
(or hanging up) when they want to go away. The 500 is
different from this because many disconnects (particularly
those on the telephone lines) are unintentional. If one
occurs in the middle of your BASIC computation, for example,
you can reconnect to the system and then reattach to your
detached process, which will then resume computing as if
nothing had happened.   The price for this feature is the
requirement that all users specifically log out!

How do you reattach to a detached process?   Simply go
through the LOGIN procedure again. When you have completed
it, the 500 will ask "DO YOU WISH TO RECONNECT TO DETACHED
PROCESS?"   Simply answer "YES" or "NO" and hit a CR. A new
process will be created or you will be reattached to the old
one, as you have directed. At present, no more than one
detached process at a time will be tolerated by the system
for each user.

5.   Logging Out

To log out of the system, you merely execute the LOGOUT
command.   The system will then give you some statistics
about your session. This information is also placed into an
accounting file for later processing. After the last line
of this printout, you are free to disconnect; or, if you
wish, you can hit another CONTROL-K and begin a new session.
You can disconnect prematurely without waiting for all the
accounting information.   However, you must be sure that the
system has had time to act on your LOGOUT command before you
do disconnect; otherwise your process will be detached, and
you will continue accumulating charges.   An indication of
when it's safe to disconnect is when the accounting informa-
tion begins to come out.

6. Disconnecting Your Terminal

This is the easiest step of all...you hang up the phone, turn off your terminal, and go away. If you are using a direct-wired terminal, put it in "LOCAL" instead of hanging up, and then turn it off.

Congratulations! You're now a BCC 500 expert!