TITLE: PROCSY - Purdue Remote Online Console SYstem

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INTRODUCTION

The PROCSY system is that part of the Purdue Mace operating system which provides input/output communication for remote batch sites, high-speed terminals, and teleprinter terminals. To the user, the PROCSY system appears to be simply a terminal logon procedure from which he may gain access to a number of sub-systems.

The purpose of this document is to explain how one logs on to the PROCSY system and to describe briefly the various subsystems available through PROCSY.

There are presently two types of remote terminals available for public usage in various locations throughout the campus. In the following sections where operation of the terminals depends on the type of terminal, a description will be given for each. The first type is the Teletype ASR-33 terminal (denoted by TTY). The second type is the NCR 260 terminal (denoted by NCR).

The normal PROCSY operating hours are from midnight to 2:00 a.m., 9:30 a.m. to 3:30 p.m., and 6:30 p.m. to midnight Monday through Friday except on Friday the last session extends from 6:30 p.m. to 11:00 p.m. On Saturday and Sunday the system is up from 9:30 a.m. to 3:30 p.m.

There are four remote terminals available for public use on the ground floor of the ENAD building, four others in room B5 of the Mathematical Sciences Building, and another in room 760 of the Krannert Building.

LOGGING ON

In order to use PROCSY, the user must obtain usage of a remote terminal connected to the PROCSY system. To access PROCSY from these terminals, the terminal must first be turned on. For the TTY terminals this is done simply by turning the dial in the lower right corner of the keyboard housing to the far-left position marked 'LINE'. For the NCR terminals, one must press the 'ON' button located on the right of the uppermost housing; the button will be lighted when the terminal is turned on. The user of an NCR terminal should also check to see that the three switches located above the keyboard are positioned as follows: the 'MODE' switch should be in the 'RMTE' position, the 'PARITY' switch in the 'NO' position, and the 'SPEED' switch in the '10 CPS' position.

After a terminal is turned on, the user must "log on" the PROCSY system by first typing a special pair of keys, namely, 'CTRL' and 'B'. This is done by first pressing the 'CTRL' key and while holding it down, pressing the 'B' key.

After perhaps a few seconds, PROCSY will respond by printing the terminal control block (TCB) number, time and date, and a request for the user's account number, as follows:

```
TCB L999 [time]  [date]
ACCOUNT?
```

If PROCSY does not respond in this manner, then either the system is down or the terminal is out of order.

In response to the account prompt, the user must type his computer account number followed by a "carriage return" (after every line typed, the user should type a "carriage return"). On the TTY terminals the carriage return key is marked 'RETURN'; on the NCR terminals it is marked 'CR'. PROCSY will respond by typing a request for the user identifier, as follows:

```
USER ID?
```

The user should type the three-character user id for the account he is using.

PROCSY will then request the user's account password by typing

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PASSWORD?
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In order to protect the user's password, on terminals capable of operating in full-duplex mode, any characters typed in response to the password prompt are not printed at the terminal.

PROCSY will then type out any current banner messages to inform users of news items of which they should be aware. After the messages are typed, the user will be asked what system he desires to use

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SYSTEM?
```

A list and brief description of the possible subsystems available in PROCSY is described later in the SUBSYSTEMS section of this document.

Let us now "watch" our good friend Jerry Jones log onto the PROCSY system. Jerry has account 12345 with user identifier ZZZ. He has set his account password to SMILE. The subsystem he wants to use is PIRATE. In the logon dialogue given below, the characters typed in by Jerry are underlined. His password is typed in this example as small characters to indicate that although he typed those characters, they were not printed by the terminal.

('CTRL'-'B')

TCB 151 15.41.11. 07/16/73.
ACCOUNT? 12345
USER ID? ZZZ
PASSWORD? smile
    (banner messages are displayed here)
SYSTEM? PIRATE
PIRATE VER. 2.26 06/25/73. 14.04.46.
+++

Since most PROCSY users want to use the PIRATE subsystem, just typing a
"carriage return" in response to the SYSTEM? prompt gives the user the PIRATE
system.

In response to any prompt, the user may alternatively enter responses to
that and one or more of the following prompts, separating them by slashes (/).
The following logon dialogue effectively is the same as that above but it is
somewhat faster:

('CTRL'-'B')

TCB 151 15.41.11. 07/16/73.
ACCOUNT? 12345/ZZZ/SMILE/PIRATE
    (banner messages are displayed here)
PIRATE VER. 2.26 06/25/73. 14.04.46.
+++

CORRECTING TYPING ERRORS

If a mistake is made while typing a PROCSY line, the special character '%'
may be typed to delete the previous character. If more than one character is
incorrect, more than one '%' may be typed. For example

ACCOUNT? 124%345,ZZZ/SMOLE%%%ILE/PIRATE

illustrates the "erasing" of a single character and a group of three characters.

In order to erase an entire line, a user on a TTY terminal should type the
'RUBOUT" key. Users on an NCR terminal should type the 'DEL' key located at
the left end of the top row of the keyboard. Note that this is done by typing
'SHIFT'-'←'.

SUBSYSTEMS

The various subsystems one may use are listed and briefly described below. For more complete information about them, the reader is referred to the stated PUCC documents.

System	Brief Description
PIRATE	PIRATE is the Purdue Interactive Remote Access Terminal Environment system. It provides the capabilities of file creation and editing, remote batch job submission and retrieval, and macro execution. Reference: LO-PIRATE.
ALFIE	ALFIE is the Algebraic Language For Interactive Environment. It is an interactive BASIC-like language. Reference: L2-ALFIE.
PED	PED is the Purdue Editor, an interactive text-editing system. Reference: LO-LERNPED.
MUTIL	MUTIL is the MESA utility package which provides file manipulation, positioning, copying, and large permanent file functions. Reference: VO-MUTIL.

TERMINAL AND TRANSMISSION DUPLEX MODES

A terminal may operate in either full or half duplex mode. Some terminals have a switch enabling the operator to determine in which mode the terminal is to operate. When a terminal operates in full duplex mode, depressing a character key transmits the character to the computer, but the character is not printed at the terminal. The terminal expects the computer to "echo" (transmit back to the terminal) the character it receives. This echoed character is then printed. When a terminal operates in half duplex mode, depressing a character key transmits the character to the computer and prints the character at the terminal — "echo" is not expected.

The terminal/computer transmission mode may be either full duplex mode or half duplex mode. In full duplex transmission mode, each character received by the computer is retransmitted back (echoed) to the terminal. In half duplex transmission mode, the characters received are not echoed.

Table I describes the effect of each of the four possible terminal mode/transmission mode combinations.

TRANSMISSION MODE

	Full Duplex	Half Duplex
	The computer echoes characters received.	The computer does not echo characters received.
TERMINAL — FULL DUPLEX: Character transmitted but not printed. Echo expected.	Terminal operates normally.*	No input characters are printed.
MODE — HALF DUPLEX: Character transmitted and printed.	Terminal will either double-print or garbage-print input characters.	Terminal operates normally.*

* It is best to operate a terminal in full duplex mode with full duplex transmission mode because the character printed is a copy of what the computer received thereby providing a double-check of the input characters.

Table I. Terminal Mode/Transmission Mode Interaction

In the PIRATE subsystem, one may toggle the transmission mode using an option of the QTYPE (QTY) operator. To toggle from full duplex transmission mode to half duplex transmission mode, one uses

    +++QTYPE,,HALF   or   +++QTY,,H

and to toggle from half duplex to full duplex transmission mode one uses

    +++QTYPE,,FULL   or   +++QTY,,F

TOGGLING TRANSMISSION MODE AT LOGON

To toggle the transmission mode during logon, one should type a 'CTRL'-'B' during or immediately after the terminal types the "TCB" and "ACCOUNT?" lines. The following message will then be typed:

```
CTRL-B HAS TOGGLED TRANSMISSION MODE TO HALF DUPLEX
TCB L999  [time]  [date]
ACCOUNT?
```

At this point, on terminals operating in full duplex terminal mode, all characters typed in by the user are transmitted to the computer but are not echoed to the terminal and are therefore not typed. This feature may be used to protect the user's account number, user-ID, and password from desiring, prying eyes.

After logging on, one may toggle the terminal mode back to full duplex mode by entering the PIRATE subsystem and typing

+++QTYPE,,FULL