To: PDP-1 Users (Dist. B)

From: John McCarthy and Roland Silver

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Subject: Colossal Typewriter Program (CT)

<u>Description</u>: The Colossal Typewriter program may be used for tape preparation and tape editing. It uses reader, punch, and typewriter under typewriter control.

- There is a buffer region in core, extending, at any moment, from location A to location B-1.
- 2. Text (sequence of concise characters) may be input to the buffer from the reader or the typewriter. Each input character is stored in location B, then B is stepped (increased by 1). But any character with a delete bit (7-hole) is ignored.
- 3. The contents of the buffer (A to B-1, inclusive) may be typed out.
- 4. The contents of the buffer may be punched out.
- 5. The buffer can be manipulated.

CT is controlled by characters typed in. It operates in two modes: Control Mode and Text Input Mode.

How is one to cause a symbol which is a control symbol to be typed into the buffer? One types the equivalence sign # (octal 40), followed by the symbol. Thus if a is any symbol (e.g., 'a', (61) or backspace (75) or '=' (40)itself), typing the equivalence sign followed by a enters a in the buffer.

Control characters in text mode:

Symbol	Octal	Function
	40	Quote. Next character typed is put in buffer.
Backspace	75	Delete. Removes last character in buffer from buffer.
1	21	Type-out. Types out contents of buffer.
	56	Go to control mode.

Any other character typed is merely entered into buffer.

Control characters in control mode: a designates an octal number, delimited by a space.

Symbol	Octal	<u>Function</u>
•	40	Quote. Next character typed is put in buffer.
٧	26	What? Types out A (location of beginning of buffer) and B (location of end of buffer plus one).
•	56	Go to text mode.
aα	61	Reset A to a.
ba	62	Reset B to a.
k	42	Kill. Reset B to A.
8	22	Step B (up one).
u	24	Unstep B (down one).
ra	51	Read a lines into buffer.
P	47	Punch out buffer. Then kill buffer.
1	21	Type out contents of buffer.

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Symbol	octal	Punction
0	20	Ditto, on typewriter 0.
1	01	Ditto, on typewriter 1.
g	67	Go to typewriter control program.

Any other character is ignored.

CT occupies memory locations 700-1620, including the Typewriter Control Program in 1201-1620. When the binary program is loaded into core, control is given to TYC at 1201. Type "k" to transfer control to CT in control mode. Initially, A = B = 2000.

RLS/cph