Identification

cdread7: A Spliceable Outer Module to convert 7-punch card images into linear binary data
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Purpose

This section describes a spliceable I/O-System outer module which converts 7-punch card images into linear binary data. The card image format is the CTSS 7-punch format.

Usage

The segment cdread7 uses the standard I/O-System outer calls attach, detach, and read (see Sections BF.1.00 for explanations and declarations). The user must first attach some 7-punch source such as the card-reader DIM or a file. Then cdread7 is attached by the following call.

```
call attach(ioname1, "cdread7", ioname2, mode, status);
```

ioname1 is the ioname on which read calls to cdread7 are to be issued. The type is "cdread7". ioname2 is the ioname that cdread7 is to read from. mode is ignored. status is described in BF.1.07. At attach time cdread7 issues a setsize call on ioname2 to set the element size to 972 bits (each card image occupies 26 2/3 words out of 27 words).

The following call is made to read an entire 7-punch deck.

```
call read(ioname1, wksp, offset, n, nt, status);
```

wksp is a pointer to the caller's workspace. offset is an offset in 36-bit elements (words) in the workspace and indicates where in the workspace the returned data is to be stored. n is the maximum number of elements (words) that cdread7 will attempt to transmit. nt is returned and is the actual number transmitted. See BF.1.07 for a description of status. Upon receipt of a read call cdread7 will read card images from ioname2 until an entire 7-punch deck has been converted, until n elements have been transmitted, or until a fatal error has occurred. The fatal errors are: (1) a card is not in 7-punch format; (2) a checksum error has been found;
(3) a card sequence error has been found; or (4) the 7-punch source has returned error status. In the first three cases the first word of status is returned nonzero. In the last case the status returned by the 7-punch source is returned as status. In all cases an error comment is written on user_output. If any valid data was transmitted prior to detecting an error, the proper count is returned in nt.

If a complete 7-punch deck is not read with a single read call because of error or because of n being too small, the remainder of the deck cannot ordinarily be read by a subsequent read call. In case of error, the error condition must first be corrected. In all cases, the 7-punch source must be backspaced to the beginning of the deck (i.e. to the card with sequence number zero).

The following call is used to detach cdread7.

call detach(ioname1, ioname2, mode, status);

The instance of cdread7 corresponding to ioname1 detaches itself, and returns status indicating the detachment. No calls are made on ioname2. mode is ignored.