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 7punch 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 occured. 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.