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Identification

Additions and amendments to the BCPL run-time library,
BZ.6.02
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Purpose

This appendix describes the new version of the routine "Open" and describes new routines "Findadr", "BCPLaddr", and "MtoBstring". Routines "Save" and "Restore" have been deleted from the library.

Function "Open" (Global location: 6)

A new argument has been added to "Open". A complete description of the new "Open" is given here.

Usage:

```
f := Open (Ident, Mode, Type, Length)
```

Arguments:

Ident - An IO name, segment name, or pointer depending on Type (see below).

Mode - A BCPL string: "read" or "write". If the string is not "read" the file is taken to be an output file.

Type - A BCPL string:

A) Type = "segment"
In this case the argument Ident must be a BCPL string which is taken to be a segment name, or a path name and segment name if the character '>' is included in the string. Input or output will be to the named segment. If Mode = "write" and the segment does not exist it is created with default maximum length = 128000 words.

Example:
```
f := Open (">segment_library_1>qed.bcpl",
          "read", "segment")
```

B) Type = "segptr"
In this case the argument Ident must be a BCPL address and is taken to be the address to or from which I/O will be performed. (Normally this is the address of a segment).

C) Any other Type, or Type not supplied
In this case the argument Ident is an IO name which must previously have been attached. Input-output is through the file system.

Length - If Type = "segment" or Type = "segptr" then Length specifies the length, in bits, of the segment to/from which I/O is being done. If Mode = "read" then Length is taken as the actual length of the data segment. If Mode = "write" then Length is taken as the maximum permissible length of the data segment. The length recorded in the file system when the file is Close-d will be the actual length of the file as written. If Length is not supplied then if Type = "segptr" a default length of 128000 words is used. If Type = "segment" the actual length is determined from the file system.

Result: The file-identifier to be used in calls to Readch, Writech, and Close.

Function "Findadr"

This is a new version of the function "Getadr".

Usage:

```
A := Findadr (Seg,Entry).
```

Arguments:

Seg - A BCPL string which is the segment name.

Entry - A BCPL string which is the entry name. If Entry is not supplied, it is taken to be equal to Seg. If Entry is null, the address returned will be < Seg > | 0

Result: The BCPL address of < Seg > | [Entry]

Example:

A := Findadr ("bepl") puts the address of < bepl > | [bepl] into A

Routines "Save" and "Restore"

These two routines do not seem to be very useful and will not be implemented.

Function "MtoBstring" (Global location: 29)

This function converts a fixed or varying MULTICS string into the equivalent BCPL string.

Usage:

x := MtoBstring (m, v)

Arguments:

m - the BCPL address of the MULTICS string specifier. the string may be long varying, short varying, or nonvarying packed.

v - a vector into which the BCPL string will be placed. The entire string is copied into v.

Result:

x = v

Function "BCPLaddr" (Global location: 30)

This function converts an "ITS" pair into a BCPL address.

Usage:

A := BCPLaddr (ITS)

Argument:

ITS - the BCPL address of an ITS pair.

Result:

The BCPL address equivalent to the ITS pair.