Implemented Features

- All arithmetic operators (including ** and /).
- All trigonometric/arithmetic functions.
- Bit(x) where x > 16

Like (note that this does not transfer class i.e. based, static defined)

Refer (but only for last item of a structure)

dcl buf BASED (p)

(since buf can be used to mean p := buf)

ALLOCATE and FREE

OPTIONS (CONSTANT) to place initialized, static variables in procedure block

SELECT

UNTIL

! LEAVE [the group name]

BUILTIN

(Not required)

ENTRY (i.e. multiple entry points)

ON CONDITION (name). dcl name condition = SIGNAL condition(name)

UNSPEC
Implemented features p2

Do group index may be of types other than hia :tpt

e.g., Do text = 'start' repeat (next) until (next = 'end')

Scalar promotion i.e. d = 0 where d is an array

# and $ are allowed in variable names, both internal and external,
even as the starting character

= is allowed within identifiers (internal and external). However,
it must NOT be the first character.

DEFINE

e.g., dcl x char(6) var;

dcl y(6) char(1) defined(x); (y(6)) = 0

also allows dcl x char(6) var;

dcl y(6) bit(8) defined(x);

after which, y(6) = string length y(6). y(6) = character as bits

OPTIONS (CHARACTER) on dcl statement (i.e. can call character)

19.3 additions (and new discoveries)

OPTIONS (NOEXEC) an entry declaration prevents sending extra arguments

Some new features have been implemented

- PBCS command line option

- Structure assignments work for similar structures. This includes variables,
  bound arrays passed to subroutine (the compiler does no bound checking).
Unimplemented features:

\( \mathcal{E}(x) \) varying

Picture variables

Array as entry variable (e.g., routine(s); procedure)

Identifier > 32 characters. They are truncated to 32 characters and a Level 1 message (Warning) is issued.

Note: This limit does not apply to the total string in a level declaration, only to the individual parts between successive \( \text{SET} \) statements.

\( \text{EVERY} \) limit in functions do not exist (1973 addenda)

OPTIONS (Save (on) (no) (gate) (shortcut) on print statement

multiple assignment, e.g. \( a, b, c = 0 \)
14 addition

**Implemented Features p3**

| SIZE | Returns the half-word size of its argument (bin (3))
| MAXLENGTH | Returns the max length storable in argument

**CFP**
Accesses the condition frame pointer on a phi-type on-unit.

**INCLUDE**
search rules used for include files

To include- cond appears mean "include if not already included" to avoid generating circular bit by recursion.

**Options (Gate, Save, Stackstate)**
- Inhibit, Enable, Notify, wait
- Phi condition defined (except area)

Conditional compilation governed by

```c
% if (bit1);
{

gen
else if (bit1);
{

gen
else
{

gen
% end;
```

**OPTIONS (NOCOPY)**

**OPTIONS (GATE)** (Does it produce correct code, though??)

To pass a structure to SPH it is possible to use:

del proc-name entry (! like structure, - - - )