3/12/70

new ers facility (version 3)  (I prefer this)  (involves no changes to existing code)

Creation of new capability types

uses 1 new ers type  "capability creating authorization"
2 new operations

Operations

1) Create a "capability creating authorization".

retuns a capability of the new type. The data word contains the bit pattern of the next available type field, the next available type field is stepped forward.

2) Create a capability

IP1 must be a capability of type = "capability creating authorization"

IP2 a data word

returns a capability of type field given by data word of IP2

option bit is all on

data word = IP2

arguments for 3rd version

easiest to implement (no change to previous code; our facility must
at least contain either a generation procedure
for new type fields or a check procedure to
make sure properlib is used and no conflict
with EES system types)
new ecs facility (version 1 - control by d.04 system)

creation of new capability types:

1. a class code with permanent part = 0
   temporary part = 0

   will be created during initialization and placed in master c-list
   all subsequent new class codes will be created with permanent part > 0

2. create a capability of special type
   IP1 must be a capability for a class code
   with permanent part 0. (let the temporary part be 1)
   then
   IP2 must be a data word

   the ecs system will return a capability of the (i+1)st type beyond
   the last used ecs system type, option bits will be all 1's and
   the data word of the capability will be IP2

(?) 3. create "capability creation" authorization

   IP1 as in 2

   the ecs system will return a capability of a "capability creation" type
   the bottom bits of the data word of the returned capability will be
   the type field of the (i+1)st type beyond the last used ecs system type.

note: each capability takes a while to create. (have to consult d.04)
new eis facility (version 2)

creation of new capability types

A) all class codes issued by eis system have permanent part > 0

b) 2 operations

1) create "capability creating" authorization.

returns a class code with permanent part 0

fixed temporary part equal to the bit pattern of

next available type field.

2) create capability

IP1 must be a class code with permanent part 0

IP2 a data word

returns a capability with type field as given in temporary part of class code

option bits all on

data word = IP2