3/12/70

done

new ecs facility (version 3) (I prefer This) (involves no changes to ex.sting code)

Creation of new capability types

uses 1 new ecs type ("capability creating authorization")
2 new operations

operations

1) Create a "capability creating authorization."

returns 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 IP1
option bits all on
data word = IP2

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arguments for 3rd version

easiest to implement (no change to previous codes, any facility must at least contain either a generation procedure for new type fields or a check procedure to make sure proper ribbon and no conflict with ECS system types)

Clean, no confusion with class codes for subprocesses etc.

new ecs facility (version 1 – control by disk 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

note: each capability takes a while to create. (have to count to it)

~~(or) 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.~~

new ecs facility (version 2)

creation of new capability types

A) all class codes issued by ecs 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 co
option bits all on
data word = IP2