

3/12/70

~~with the~~ new ees facility

return authorization

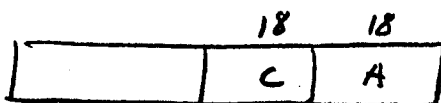
+ block data transfer during call

will permit the return of at most 1 block of data & 1 symbol object

### 1) format original call

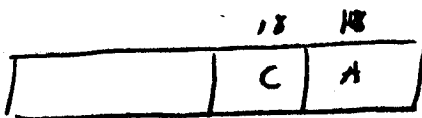
The 2 words immediately preceding the IPL list control the return authorization.

A) 1st word preceding IPL list controls data return



up to C words can be returned starting at address A.  
[If C=0 no words can be returned, hence a zero word refuses authorization]

B) 2nd word preceding IPL list controls object return

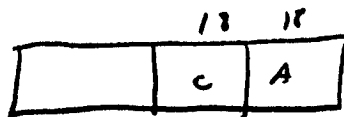


up to C objects can be returned starting at C list index A  
[as above, C=0 for no authorization]

2) new versions of return f F return

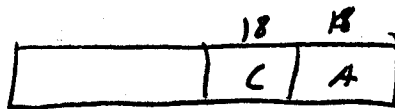
IP 1 & IP 2 will control data and object return  
we will also retain old versions of return f F return?

A) IP 1 controls data return



upto C words will be returned starting at address A

B) IP 2 controls object return



upto C objects will be returned starting at C list index A

3) Implementation of new forms of return & F return

If both counts are zero, no action

If either count is ~~zero~~<sup>non-zero</sup>, check for errors [c-list length and ~~field~~ field length errors]

If no errors, ~~move~~<sup>copy</sup> data and c-list entries to a buffer in BCS.

perform swap, back to calling sub process.

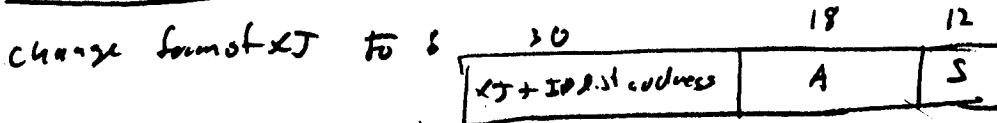
check its return control data, reducing counts to the minimum

of called and caller, now check for c-list length & field length

errors, if any, copy data and c-list entries to proper location.

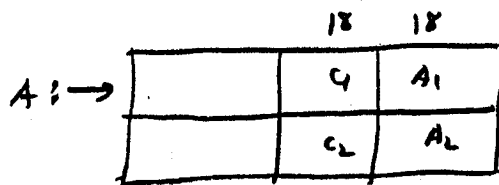
Now look for interrupt signals!

4) variation on original call



S will be skip field if no F return [most ~~of~~ call now use 0 or 1]

A address of a 2 word return control in form



A<sub>1</sub>, C<sub>1</sub> address & count of data return authorization

A<sub>2</sub>, C<sub>2</sub> address & count of object return authorization

if A = 0, no authorization, if (A) = 0 no data authorization  
 (A<sub>1</sub>) = 0 no object authorization

if frame C<sub>1</sub> = 0 will be treated as if C<sub>1</sub> = 0  
 no auth

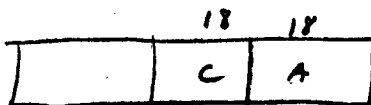
## addition

The ecs buffers can also be used to implement block data transfer during a call.

### need

1) new kind of parameter specification: ~~format length~~ "data block of length n"

2) ~~message~~ The IPL list entry will be a word as follows:



If  $C > n$ , error

else ~~ex~~ transfer C words from A to the parameter area in called ~~subprocess~~ subprocess (via ecs buffer, of course)

3) The next data word in parameter area of called subprocess will, of course, be n words beyond beginning of this block.

~~suggest parameter type be~~

~~'data block of length n to be transferred to location y in called subp'~~

~~the corresponding IPL list word in called subp is set to c of the IPL list entry~~

1/27/6 opr