A partial multi-word facility is being implemented for the FORTRAN version of LITTLE; it will have the following specifications (unless objections are raised):

A. Restrictions:

    1.   Fields will not go over machine word boundaries.

    2.   Items will not be packed more then one in a machine word. Note however that many fields of a single item can be present within one word.

    3.   If a field extends(illegally for the present implementation)beyond a machine word the excess bits are obtained (circularly) from the right of the word, (eg.F.59,3,X results in three bit quantity with bit 59 the rightmost and 1 the leftmost.)

    4.   No checks will be made as to whether a field extends beyond a variable's size

B.   Properties:

    1.   Storage layout is as follows

bit position: 60 n... thru ...   59 n + 1
(in word loc-n + 1)

. . .

bit position 60 ...   thru ...   1
     loc

2.   If a long quantity is stored into a shorter one, the number of words necessary to fill the shorter one will be transfered starting with the word containing bit ‚1.

3.   If a shorter quantity is stored into a longer one, only the number of words of the shorter will be transfered.

4.   Multiword constants will now be handled (with the above restrictions) thereby doing away with their current restriction to subroutine parameters.

C.   Input - Output of multiword items will be handled as follows:

1.   An n-word single variable will act on READ and WRITE in the same way as an n element array.

2.   A n - word variable m-element array will act on READ and WRITE as an n * m element one dimensional array with each item in high to low bit order.