February 4, 1957

TO   : STRETCH COMMITTEE

FROM   : Cherry and Worlton

SUBJECT : Job Orders

SYMBOL : T-1

PURPOSE

Because of the addressing possibilities on STRETCH, it would appear feasable
to request "Repeat" type orders which would do a limited "Job". The
following report investigates some "Jobs" which can be specified by two
addresses and a count. These orders tend to minimize memory conflicts.

ASSUMPTIONS

1. Addresses:

T	X	B

2. X to specify an index register of the form:

N	n	Δ	nΔ

3. B to specify either FWA_1 or its location.

4. T to specify either FWA_2 or its location.

Job #1: MOVE

Move N words from FWA_1 to FWA_2; the spacing and the number of words
to be specified by the index register.

Job #2: SUM

Form the sum: $\displaystyle\sum_{i=1}^{N} A_i \text{ (op) } B_i$, where:

a) A is a vector located at FWA_1;

b) B is a vector located at FWA_2;

c) the length of the vector and spacing of the elements are specified
in the index register.

d) (op) can be any of the arithmetic operations.

Job #3:   Vector Operations

Perform the operation:

$$A_1 \; \boxed{op} \; B_i \longrightarrow A_i \text{ (or } B_i, \text{ as specified), where}$$

the same assumptions are made here as in SUM.

Job #4:   Scalar operation on Vectors

Perform the operation:

$$A_1 \; \boxed{op} \; B \longrightarrow A_i, \text{ where the same assumptions are}$$

made as in SUM, except that B is a scalar. In addition to the four
arithmetic operations, COMPARE would be useful here. Using this, one
could match a given value with its corresponding table entry.