TO   : STRETCH Committee   January 29, 1957

FROM   : Cherry and Worlton

SUBJECT: A General Set of Logical Commands for STRETCH

SYMBOL : T-1

PURPOSE

The following report presents a set of logical commands, based on
a generalization of extract type operations.

GENERAL DESCRIPTION

The orders postulated here always have three addresses:

   A, the address of an extractor;

   B, the address of the primary operand, which remains unchanged;

   C, the address of the secondary operand and the result.

The $c(A)$ specify the bits with which $c(B)$ operate on $c(C)$.
Furthermore, one may specify shifts, which are applied to the
extracted $c(B)$ before the operation on $c(C)$.

OPERATIONS

   1. Replacement, in which the remaining bits are undisturbed.

   2. Load, in which the word is set to zero before replacement.

   3. AND

   4. OR

   5. Compare

   6. Complement

   7. Add

   8. Subtract

SOME SUBSETS

The most general set of commands may be given the notation (ABCs).
In case it is necessary to accept a less general set of commands,
the following seem useful.

> (ABUs): in which the universal register, U, replaces one of
> the operands. In this case it is necessary to specify
> the location of the result in the operation. For
> example one would have both "AND to Accumulator"
> and "AND to Storage".

> (ABC-): no shifting, both operands addressable.

> (ABU-): no shifting, universal register as one operand.