

MPRO-02

10 December 1959
O'Hara/3267/bcp

MPRO-03

Additional Memories for HARVEST

1. MPRO-03 requests that two additional Two Microsecond Memory units be purchased for the HARVEST System. The Special Memory Features (existence, clear memory) are to be added to these memories.

2. The memories are to be modified to include the Features, installed, and tested, prior to delivery of the HARVEST System.

SAIL FINCUS
Chief, MPRO-03

cc: MPRO-1
MPRO-104
MPRO-2
MPRO-3 ←
MPRO-06
ANEQ-2

| | Act | Info |
|--------|-----|------|
| 11 Dec | | |
| 1 | SVC | |
| 2 | WE | |
| 3 | MM | |
| | | |
| | | |
| | | |
| | | |
| FILE | | |
| OTHER | | |
| | | |
| | | |

CONFIDENTIAL

MEMO FOR THE RECORD

10 December 1959
O'Hara/3267/vcp

SUBJECT: Additional Memories for HARVEST

1. O/M funds for the addition of memories to the HARVEST System have been programmed as follows:

| | | |
|-------|--|-----------|
| FY-60 | Two 2 Microsecond Memories (16,384 words each) @ 950,000 | 1,900,000 |
| FY-61 | Memory Features for the additional 2 Microsecond Memories | 159,245 |
| FY-62 | Two .75 Microsecond Memories (1024 words each) @ 1,000,000 | 2,000,000 |

2. The HARVEST System was designed on the basis of having four interleaved memories of each class. The HARVEST contract did not include the above items due to IBM's initial production facility limitations. The full effectiveness of the HARVEST System will not be reached until the additional memories are added.

3. The 2 Microsecond Memory is now a commercial item. IBM has stated they can produce these memories for addition to the HARVEST System prior to delivery. The initial technical evaluation and subsequent review of the HARVEST System has indicated the need for these additional 2 Microsecond Memories. They will improve the internal speed of the HARVEST Computer by approximately 20%. Although the above should suffice, their real justification lies in the fact that they are a programming necessity. The TRACTOR Tapes and the HARVEST Stream units require large blocks of data in order to process efficiently. The Supervisor Program will also require a large amount of memory space in order to execute the automatic system functions. Because of the above requirements on memory space, the initial 32,000 words would be inadequate for proper programming.

4. The .75 Microsecond Memories are still a research, or one of a kind, memory development. The funds for adding two additional memories are programmed in fiscal year 1962 in order to give us time to properly evaluate their reliability. The addition of these memories will improve the speed of Table Lookup operations 50%. The Table Lookup operation is a major part of some of NSA's large work factor problems.

SAIL PINCUS
Chief, MPRO-03

| | | |
|--------|-----------|------|
| 11 Dec | Act | Info |
| 1 | <i>Te</i> | |
| 2 | <i>W</i> | |
| 3 | <i>M</i> | |
| | | |
| | | |
| | | |
| | | |
| | FILE | |
| | OTHER | |
| | | |
| | | |
| | | |

cc: MPRO-1
 MPRO-104
 MPRO-2
 MPRO-3 ←
 MPRO-06
 MPRO-02
 ANHQ-2

CONFIDENTIAL

Declassified by D. Janosek,
Deputy Associate Director for Policy and Records
on 13 Oct 2010 and by MPB