

Massachusetts Institute of Technology  
Instrumentation Laboratory  
Cambridge, Massachusetts

COLOSSUS Memo # 230

TO: Distribution  
FROM: P. Rye  
DATE: 10 November, 1969  
SUBJECT: Revisions 73,74, and 75 of COMANCHE

Development of COLOSSUS 2E has begun with these revisions. They include the following changes:

~~(1)~~ P17 and P77 were deleted. This involved deletion of the TPI Search LOG section, deletion of entries in the V37 tables, deletion of erasables reserved for P17 in EBANK 5, and making N72, formerly used for P17, into a spare. (PCR 916)

~~(2)~~ All downlists were changed so that words 64 and 65 now contain OPTION1, OPTION2, and TET instead of AK's and RCSFLAGS. The subset CMPOWE06 was changed to include OPTION1, OPTION2, and TET in order to accomplish this with minimum coding impact. (PCR 921)

~~(3)~~ Alarm Code 407 was deleted from the list of alarms in the Assembly and Operation section. This should have been done in COLOSSUS 2D, since PCR 963 obsoletes this alarm code. ✓ *ART37*

~~(4)~~ Coding was changed in P40 and P41 so that CLOKTASK is initiated at the beginning of both programs to make TFI available. This was accomplished by use of the subroutine COMPTGO. NVWORD1 remains at zero until the time when CLOKTASK was formerly started; setting the appropriate verb-noun value into NVWORD1 starts the CLOCKJOB display at that time. (PCR 872.1)

~~(5)~~ Coding and V37 entries for P31 were deleted. In connection with this, the coding for P30 was reorganized so that subroutines



formerly used in common with P31 are now in-line for greater efficiency. (PCR 917)

~~(6)~~ Stroke test was deleted. Extended verb 68 is now a spare. Logic in the TVC DAP and DAP restarts which had to do with the stroke test was also deleted, as were the erasables in EBANK6 which were reserved for the stroke test. (PCR 822)

NA (7) Updated program descriptions were added for P40, P41, P47, and S40.1.

NA (8) The clearing of RENDWFLG in P23 was moved to the pointing vector routine POINTEX so that it will be accomplished at the beginning of the program. (COM 31, PCR 974) *Roy*

done NA (9) The entrance SOLPOS was deleted from the Lunar - Solar Ephemerides routines since it was unused and room was needed in its bank, Bank 26. (ACB 101)

~~(10)~~ The order of the variables in unswitched erasable (EBANKs 0,1, and 2) was changed to prepare for the use of erasable programs for prelaunch performance tests. The new configuration is needed to avoid conflicts with the new programs which will be loaded into erasable memory via a K-start tape. (PCR 857)

~~(11)~~ R64 was changed so that the rotation about YCDU will be independent of XCDU. A new erasable, MNSNTHDX, was defined in EBANK 6 which is used as temporary storage for R64. In order to make room for the additional coding required, the interpretive subroutine DISPTARG was moved from Bank 27 to Bank 30, freeing 16 lines in Bank 27. (PCR 867)

~~(12)~~ AZO was deleted from erasable and was defined as a fixed constant with a value of 2DEC .7739887606. (PCR 821.1)

Changes to COLOSSUS GSOP:

Section 2 should reflect the change described in (2) above.

Section 3 should reflect the change described in (6) and (11) above.

Section 4 should reflect the changes described in (1), (3), (4), (5), (6), (8), and (11) above.

Section 5 should reflect the changes described in (1), (5), (8), and (12) above.

COLOSSUS testing procedures:

- (A) The erasable changes described in (10) and (12) require changes in INSERTS and initializations used for digital simulations, as well as changes in K-start tapes and hybrid decks.
- (B) Since the physical ordering in unswitched E-memory has changed, EDIT runs may need to be modified for dump purposes.
- (C) Downlink edits for the hybrid and digital simulators should be modified to reflect (2) above.

Known Anomalies as of COMANCHE Revision 75:

COM 32.