

BALM-SETL NEWSLETTER NUMBER 78

9/21/72

BOB PAIGE

EXECUTING BALM AND SETLB AT NYU/COURANT

UNDER THE NEW BALM TRANSLATOR SYSTEM, NOW AVAILABLE FOR GENERAL USE, BALM SOURCE CAN BE TRANSLATED INTO 3600 OBJECT CODE BY AN ALREADY TRANSLATED BALM COMPILER. IN COMPARISON WITH THE BALM SIMULATOR SYSTEM, EXECUTION IS FASTER BY A FACTOR OF 10-20, BUT SPACE REQUIRED BY THE NEW SYSTEM IS ABOUT 30 PERCENT LARGER DUE TO CODE DATA OBJECTS OF APPROXIMATELY 5 TIMES THE OLD SIZE. CONSEQUENTLY, MINIMUM FIELD LENGTH SHOULD BE ABOUT 100000. EXCEPT FOR ITS ABSENCE OF ERROR RECOVERY, THE NEW SYSTEM REMAINS EXTERNALLY EQUIVALENT TO THE OLD.

A FAIRLY RELIABLE BALM TRANSLATOR SYSTEM EXISTS WITH A MACE I/O PACKAGE, THIS VERSION IS ABOUT 15 PERCENT FASTER THAN A FORTRAN I/O VERSION THAT LACKS THE EXPERIENCE OF LIVE RUNS BUT WHICH WILL ULTIMATELY BECOME THE STANDARD VERSION. USERS SHOULD BE WARNED THAT BALM SAVE FILES CREATED FROM THE MACE VERSION ARE NOT GUARANTEED TO RUN WITH THE FORTRAN VERSION AND VICE VERSA.

CONTROL CARDS NECESSARY FOR RUNNING BALM TRANSLATOR JOBS ARE AS FOLLOWS:

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YOURID,CM110000,T50,      YOURNAME
ATTACH,BLM4SVD,BALMTRANS SVD.
ATTACH,BALM4,BALMTRANS.
RFL,110000,              #RFL TO JOB CARD FL#
BALM4,
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7-8-9

BALM PROGRAM

6-7-8-9

THE BALM TRANSLATOR SYSTEM RESIDES ON PERMANENT FILE BALMTRANS(BALMTRANSF FOR THE FORTRAN VERSION), ACCESSES THE BALM SAVE FILE, BALMTRANS SVD(BALMTRANS SVD F FOR THE FORTRAN), AND CAN ACCEPT 2 FILE NAMES CORRESPONDING TO DEFAULT NAMES, INPUT AND OUTPUT, AS PARAMETERS AT LOAD TIME.

FROM THE BASIC BALM TRANSLATOR SYSTEM, BALM HAS BEEN EXTENDED TO BALMSETL, A FACTOR OF 7-10 TIMES IN SPEEDUP AND 30-40 PERCENT INCREASE IN FIELD LENGTH IS A RESULT OF EXECUTING 6600 MACHINE LANGUAGE INSTEAD OF INTERPRETING MBALM CODE. MINIMUM FIELD LENGTH SHOULD BE ABOUT 160000. AS IN THE BALM TRANSLATOR SYSTEM, THE NEW BALMSETL EXISTS IN BOTH MACE I/O AND FORTRAN

I/O FORMS. EXPERIENCE HAS PROVEN THE RELIABILITY OF THE MACE VERSION, BUT THE NEWER FORTRAN VERSION WILL BE THE ULTIMATE STANDARD.

JOB CONTROL FOR RUNNING SETLB PROGRAMS IS AS FOLLOWS:

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YOURID,CM160000,T50.      YOURNAME
ATTACH,SETLABS,SETLB.
LOADER=
RFL,66000.
SETLABS,
ATTACH,BALM4,BALMTRANS
ATTACH,BLM4SVD,SAVESETL.
RFL,160000.              *RFL TO JOB CARD FL*
BALM4,SETLOUT,
7-8-9
  SETLB PROGRAM
6-7-8-9
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THE SETLB SYSTEM CONSISTS OF TWO MAIN PROCESSORS.

- (1). THE SETLB TO BALMSETL TRANSLATOR AND
- (2). THE BALMSETL TRANSLATOR SYSTEM.

THE SETLB TRANSLATOR RESIDES ON THE FILE, SETLB, AND AT LOAD TIME IT CAN ACCEPT 3 FILE NAMES AS PARAMETERS CORRESPONDING TO DEFAULT NAMES, INPUT, OUTPUT, AND SETLOUT. THE BALM TRANSLATOR ACCESSES THE BALMSETL SAVE FILE, SAVESETL, (SAVESETLF FOR THE FORTRAN VERSION) AND TRANSLATES BALMSETL SOURCE INTO 6600 OBJECT CODE TO COMPLETE THE FINAL PHASE OF SETLB EXECUTION.

PROBLEMS OR QUESTIONS CONCERNING THE NEW SYSTEMS SHOULD BE PRESENTED TO STEPHANIE BROWN(RM 324, EXT. 7384) OR BOB PAIGE (RM 423, EXT. 7487).