Identification

How to Create and Use a Compiler which has been Described
in TMGL
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Purpose

This section describes the means by which a TMGL program
is transformed into a compiler running under CTSS. The
use of the resulting compiler is also described.

Creating a TMGL-described Compiler

Suppose you have written a TMGL program which describes
a compiler for the FRED language. Here is how to make
up a FRED compiler:

1.   Type your program into CTSS. Call this ASCII file
      FRED TMGL.

2.   Link to the TMGL compiler, TMGL SAVED, in T269 CMFL01.

3.   Compile FRED TMGL by typing

              r   tmgl   fred

This will cause two files to be produced, FRED BCD and
FRED BSA.

4.   FRED BCD is a slightly non-canonical ASCII (i.e., it
      may include both tab and delete characters) file
      containing line-numbered source listings and a cross-
      referenced symbol table. It is probably quite long,
      and it probably should be RQASCIed.

5.   FRED BSA is a slightly non-canonical ASCII version
      of a BEFAP version of the driving tables you want.
      Link to AS6 SAVED in T269 CMFL01 and type

              r   as6   fred   bsa   fred   fap

              befap   fred

6.   Now you have your driving tables, FRED BSS, and you
     need only combine them with TMG SAVED, the TMG interpreter.
     Link to the interpreter in T269 CMFL01 and type

          restor tmg

          use fred

          save fred

7.   FRED SAVED is your new FRED compiler.

Summary of Links Required to Create Compiler

TMGL	SAVED	T269	CMFL01
AS6	SAVED		
TMG	SAVED		
ASCII	RQUEST	M1416	2962

Summary of Commands Required to Create Compiler

```
eda  fred  tmgl
r   tmgl  fred
rqasci  fred  bcd
r  as6  fred  bsa  fred  fap
befap  fred
restor  tmg
use  fred
save  fred
```


Summary of Garbage Files Produced Along the Way to Compiler

fred bss (not necessarily garbage - fewer tracks to keep
               this than FRED SAVED)
fred symtb
fred fap
fred bsa

Using a TMGL-described Compiler

Suppose you want to use your FRED compiler to compile
a program named SAM which you have written in the FRED
language. Here is how to get your program SAM compiled:

1.   Type your program in to CTSS. Call this ASCII file
      SAM FRED.

2.   Utilize your compiler by typing

            r   fred   sam

This will cause two files to be produced, SAM BCD and
SAM BSA.

3.   SAM BCD is the slightly non-canonical ASCII listing
      file produced by your compiler.

4.   SAM BSA is the slightly non-canonical ASCII file
      which is the primary output of your compiler.