DEFT Lib Object Librarian

Lib

1 Introduction

DEFT Lib is a program that creates and maintains libraries of object files. These object file libraries are then conditionally used by **DEFT Linker** when creating a binary load module file.

The purpose of linking with an object file library is to include only those portions of object code used by a given program. For example, if you have an object file created with one of the **DEFT** high level language compilers, then that particular program might not use strings or real arithmetic. When that object file is linked with the corresponding library, the object files for strings and real arithmetic will not be included in your final binary load module. However, object files for, say, I/O *would* be included.

DEFT Lib provides the following major features for library maintenance:

- Separate input and output libraries means that mistakes can be corrected by starting over.

- Object files can be added to a library in the form of library sections.

- **DEFT Lib** ensures that duplicately named sections are not added to the same library.

- Library sections can be deleted.

- Complete libraries can be merged together.

- A library can contain up to 50 sections.

2 Operation

Whenever you wish to create or update object libraries you can run DEFT Lib. The command *LOADM"LIB":EXEC* will load DEFT Lib from disk drive 0 and begin its execution. Once the program is loaded and the disk drive light has gone off, you may change diskettes if you wish.

DEFT Lib operates by reading in an old library file (if one exists) and copying it to a new library file. It is during the copy that the changes that you wish to make are actually performed. The old library file, is never modified by **DEFT Lib**. **DEFT Lib** operates in three phases.

During the first phase it prompts you for the old and new library files. It then prompts you for all the sections that you wish to delete from the old library as it is copied to the new library.

The second phase involves doing the actual copy and performing the requested deletes. It is during this phase that you will find out if any of the specified sections to be deleted were actually in the old library to begin with.

Once the copy is completed, the third phase will begin. **DEFT Lib** will prompt you for the names of the object files and object libraries that you wish to add to the new library. As you specify each name, **DEFT Lib** will make sure that it is not a duplicate and then add it to the new library, **DEFT Lib** will display each section name and ask if you want that section added to the new library. When duplicate section names are encountered, **DEFT Lib** will let you specify a new section name.

Following is a description of each prompt made by **DEFT Lib**.

2.1 OLD LIBRARY:

This is the name of an existing library file which is to be the primary source of information for creating the new library file. You do not have to enter an *old library* if you are creating a *new library* from scratch. The default file extension for this prompt is *LIB*.

2.2 NEW LIBRARY:

This is the name of the new library that **DEFT Lib** is going to create and which will contain the results of this update. You must enter a new library name and it must be different from the file name that you entered for *old library*. If you enter the same name as the *old*

library, you will destroy the old library file.

The default file extension for this prompt is *LIB*.

2.3 DELETE SECTION:

This is the name of a section in the old library that is not to be copied
to the new library. You will only get this prompt if you specified an
old library file name. After entering a section name (up to 8
characters), **DEFT Lib** will prompt you again for another section
not to copy. **DEFT Lib** will let you enter up to 50 sections in this
manner.

Once you have entered all the names that you wish not to appear in
the *new library*, enter a null section name (just depress the *ENTER*
key without entering any characters) to indicate that there are no
more section names to be deleted.

2.4 ADD OBJECT FILE:

After the copying is completed, **DEFT Lib** prompts you for any
object files that you would like to have added to the *new library*. At
this point, **DEFT Lib** has finished using the *old library* file and you
may remove the diskette containing it if you wish.

You may enter the name of either an object file, a library file or no
file at all. If no filename is entered, **DEFT Lib** closes the new
library and terminates execution. This is how you will tell **DEFT
Lib** that you have no more object files or libraries to add. The
default file extension is *OBJ*.

2.5 Adding an Object File

If you enter the name of an object file, **DEFT Lib** will open the file
and then prompt you for the name of the section to use in the library.
The prompt that you will get is:

SECTION NAME (nnnnnnnn):

The default section name is the name of the object file. This will be
used if you do not enter a section name. You may use the *CLEAR* key
to stop **DEFT Lib** from doing the add at this point if you wish. If the
section name used (either the default or the one that you specified) is
the same as one that is already in the new library, then you will
receive the following prompt:

**nnnnnnnn IS A DUPLICATE SECTION
NEW NAME:**

You can enter a different name or you may use the *CLEAR* key to abort the add.

Once the section is added (or the add operation is aborted) you will get the *ADD OBJECT FILE:* prompt again.

2.6 Adding a Library File

If you enter the name of a library file, **DEFT Lib** will open the file and begin reading each section of the specified library. For each section found, **DEFT Lib** will then prompt you for the name of the section to use in the *new library*. The prompt that you will get is:

SECTION NAME (nnnnnnnn):

The default section name is the name of the section in the library file that you are adding from. This will be used if you do not enter a section name. You may use the *CLEAR* key to stop **DEFT Lib** from doing the add at this point if you wish. If the section name used (either the default or the one that you specified) is the same as one that is already in the new library, then you will receive the following prompt:

**nnnnnnnn IS A DUPLICATE SECTION
NEW NAME:**

You can enter a different name or you may use the *CLEAR* key to abort the add for this particular section.

After each section is added (or the add operation is aborted) you will get the *SECTION NAME:* prompt until all the sections have been read from the library that you are adding from. Once all the sections have been read, you will get the *ADD OBJECT FILE:* prompt again.

3 Error Messages

3.1 FILE IS NOT OBJECT OR LIBRARY

The file specified to an *ADD OBJECT FILE:* prompt was not a legal object or library file. The file is ignored.

3.2 I/O ERROR ON NEW LIBRARY

An I/O error occurred while **DEFT Lib** was writing to the new library file. If this occurs, **DEFT Lib** terminates execution. This error may be due to a bad diskette or because the diskette is full.

3.3 I/O ERROR ON OBJ/LIB FILE

An I/O error occurred while **DEFT Lib** was reading from the object or library file specified to the *ADD OBJECT FILE:* prompt. If an add was in progress, then it was only partially completed.

3.4 I/O ERROR ON OLD LIBRARY

An I/O error occurred while **DEFT Lib** was reading from the old library file. If this occurs, **DEFT Lib** terminates execution.

3.5 OPEN ERROR: n

An I/O error occurred while **DEFT Lib** was openning the specified old library, new library or object file. **DEFT Lib** will prompt for another file name. The n is an error number with one of the following values:

- *-1, End of File* - You should not get this error number since an end of file is an expected occurrence for **DEFT Lib.**

- *-2, I/O Error* - This indicates that some hardware oriented problem occurred.

- *-3, File Not Found* - The file specified was not found.

- *-4, Illegal Operation* - This may occur if you try to read from the printer.

- *-5, Device Full* - There is no more space available on the specified device.