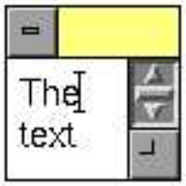
The outlir



This is TEX, a document compiler intended to produce typesetting of high quality. The PASCAL program that follows is the definition of TEX82, a standard version of TEX that is designed to be highly portable so that identical output will be obtainable on a great variety of computers.

The main purpose of the following program is to explain the algorithms of TEX as clearly as possible. As a result, the program will not necessarily be very efficient when a particular PASCAL compiler has translated it into a particular machine language. However, the program has been written so that it can be tuned to run efficiently in a wide variety of operating environments by making comparatively few changes. Such flexibility is possible because the documentation that follows is written in the WEB language, which is at a higher level than PASCAL; the preprocessing step that converts WEB to PASCAL is able to introduce most of the necessary refinements. Semi-automatic translation to other languages is also feasible, because the program below does not make extensive use of features that are peculiar to PASCAL.

A large piece of software like TEX has inherent complexity that cannot be reduced below a certain level of difficulty, although each individual part is fairly simple by itself. The WEB language is intended to make the algorithms as read-