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Warnings & Limitations

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Another Hangup

In the last issue, you were warned that repetition of a `\let` statement can cause `TEX` to hang. It has been pointed out that `\ifx` can be used to detect recursion (provided you are using a recent enough version of `TEX`; see the errata list, extensions since June 30, 1981).

Another way to make `TEX` hang is to set to a negative value one of `TEX`'s integer parameters that is expecting a positive value. For example, `\chpar3` and `\chpar13` (which will become `\penpen`, `\dhp` and `\adjpen` in `TEX82`) have caused the SAIL version of `TEX` to loop at the Math Society (we are still running with a version of March 1981). This will probably be trapped in `TEX82`, but I didn't see it described in the differences list.

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In the last issue of TUGboat (Volume 2, No. 3) Michael Plass described macros for producing syntax diagrams. The package includes macros for automatically allocating box and counter numbers, much as Patrick Milligan's `\DefineFont` macro (TUGboat, Volume 2, No. 2) assigns font codes. Mike's allocation macros are

```
\def\Alloc#1#2{\def#2{#1}}
\def\AllocBox
{\def\AllocBox{\def\AllocBox{\def\AllocBox
{\def\AllocBox{\def\AllocBox{\def\AllocBox
{\def\AllocBox{\def\AllocBox{\def\AllocBox
{\Overflow
}\Alloc9}\Alloc8}\Alloc7}\Alloc6}\Alloc5
}\Alloc4}\Alloc3}\Alloc2}\Alloc1}
\def\AllocCtr
{\def\AllocCtr{\def\AllocCtr
{\def\AllocCtr{\def\AllocCtr
{\Overflow}\Alloc8}\Alloc7}\Alloc6}\Alloc5}
```

An example of using these macros to select a counter number is

```
\AllocCtr\counternumber
\setcount\counternumber 0
```

The first time `\AllocCtr` is called, it executes the second `\def\AllocCtr` (thus redefining itself to be the text beginning with the third `\def\AllocCtr` and ending with `Alloc 6`) and calls `Alloc` with a first parameter of 5. The second time it is called, it redefines itself removing another nested definition and passing the value 6 to `Alloc`. Similarly, `\AllocBox` successively returns the digits 1 through 9.

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TUGBOAT MACRO INDEX

The following list catalogues macros that have appeared in TUGboat. Entries are listed by volume, number, and page as well as author's name. Items that could not be categorized by an obvious headword have been listed under "miscellaneous". Many items refer to parts of large macro packages; users of other packages may find them valuable models for macros of their own.

Readers' comments on the format as well as the contents of this index are welcome.

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