Technical Note TE15
TextEdit: Advice & Descent

This technical note will point out some bugs (and possible workarounds), and other items of interest for the TextEdit programmer.

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TESelRect

Multiple line selections are often more complex shapes than simple rectangles. If this is the case, the `teSelRect` field of the `TERec` is set to the last (bottommost) rectangle in the selection. The `teHiHook` is called to invert each line of the selection.

The ROM limits the selection range (i.e. the lines that get set into `teSelRect`) to only those lines which will fit into the `viewRect`. This means that `teSelRect` will be left at the last visible line. (The old 64K ROMs made all the calls for the complete selection and just let clipping take care of the rest.)

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TEDoText

The parameters of this special hook into TextEdit need a little additional explanation. `D3` and `D4` are described on page 391 of *Inside Macintosh Volume I* as being the first and last characters to be redrawn. This is true but specific to the -1 "DoDraw" case. In fact, all the calls to `TEDoText` are interested in these first and last character positions. They determine the selection for a (1) highlight call, the caret position for a (-2) `DoCaret` call (where `D4` is ignored as it's assumed to equal `D3`), etc.

Note that the `DoCaret` (-2) call behaves differently than described in *Inside Macintosh* , as well. Good old page 391 says it sets up the pen position for caret drawing. Since an `InvertRect` call is used to draw the caret if you use the default `teCarHook`, the ROMs just set up `teSelRect`, they don't bother with the QuickDraw pen.

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TEScrpLength

Inside Macintosh describes `TEScrpLength` as a long integer; indeed, four bytes are reserved for this value with the intent of someday using that range of values. However, the ROMs use word operations in their accesses to `TEScrpLength` and make word calculations with it. This means that the high word of `TEScrpLength` is used for calculations. This is something to watch out for.

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CharWidth

Inside Macintosh says that `CharWidth` takes stylistic variations into account when determining the width of a character. In fact, for *italic* and *outlined* styles the extra width is not taken into account. TextEdit relies on `CharWidth` for positioning of the caret, etc. If you have chosen to use, for instance, italic style in your TE record you will find that as you type the caret actually overlaps the character to the left and so when the caret is erased some of that character will get erased, too. This is somewhat disconcerting to the user but the program will still function correctly.

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Clikloops

If you add your own click loop and try to do something like update scroll bars you may run into trouble. Before your routine gets called, TextEdit will have set clipping down to just the `viewRect`. You will have to save away the old clipping region, set it out to sufficient size (-32767, -32767, 32767, 32767 is probably OK), do your drawing, then restore TextEdit's clipping area so that it can function properly.

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References

TextEdit

M.TE.TEScrollBug

M.TE.EOLAmbiguity

M.TE.TextEditBugs

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