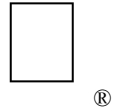


New Technical Notes

Macintosh



Developer Support

Script Manager's Pixel2Char Routine Text

M.TE.Pixel2Char

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Written by: Sue Bartalo

August 1989
June 1989

This Technical Note discusses the `Pixel2Char` routine provided by the Script Manager. **Changes since June 1989:** Clarified information, corrected minor errors, and replaced the illustration.

The `leftSide` flag in the `Pixel2Char` routine was inappropriately named, and it should now be called the `leadingEdge` flag. The reason for this change is that the value `Pixel2Char` returns indicates whether a mouse-down occurred on the leading edge of a character, which is not always the left side. (In Arabic or Hebrew, both of which are right-to-left scripts, the mouse-down occurs on the right side of the character.)

With this change, the interfaces also change. Following are both the old and new definitions in Pascal and C respectively:

Old Definition

```
FUNCTION Pixel2Char(textBuf: Ptr;textLen: INTEGER;slop: INTEGER;pixelWidth: INTEGER;  
    VAR leftSide: BOOLEAN): INTEGER;  
  
pascal short Pixel2Char(Ptr textBuf,short textLen,short slop,short pixelWidth,  
    Boolean *leftSide)
```

New Definition

```
FUNCTION Pixel2Char(textBuf: Ptr;textLen: INTEGER;slop: INTEGER;pixelWidth: INTEGER;  
    VAR leadingEdge: BOOLEAN): INTEGER;  
  
pascal short Pixel2Char(Ptr textBuf,short textLen,short slop,short pixelWidth,  
    Boolean *leadingEdge)
```

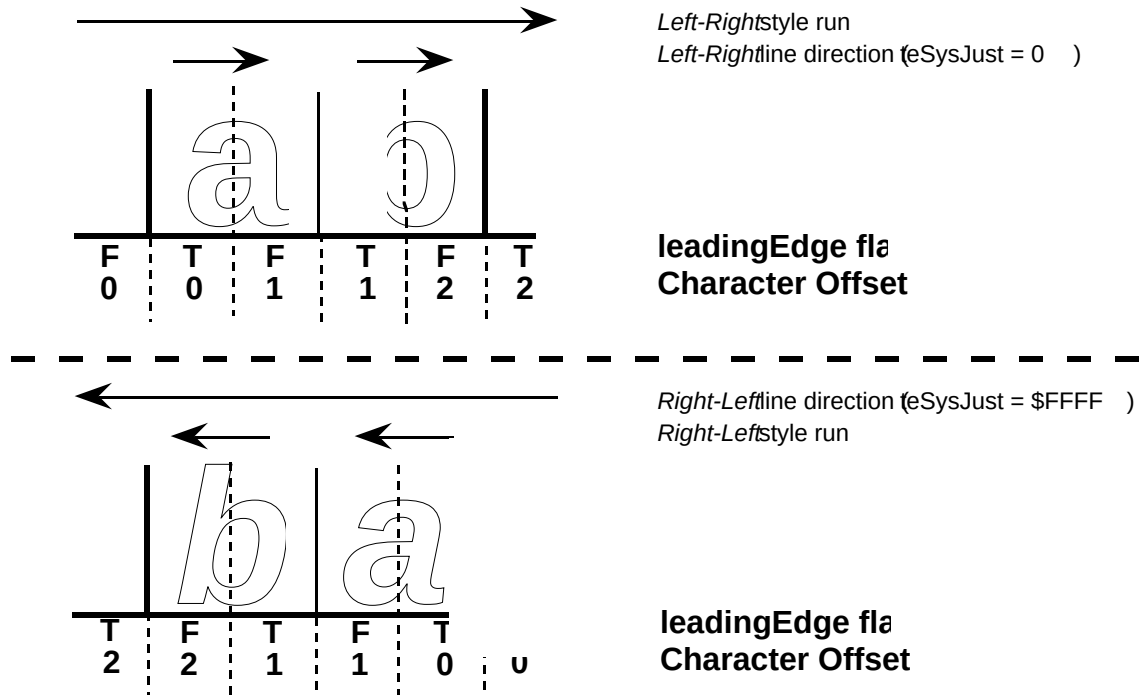
The value of the `leadingEdge` flag is `True` if a mouse-down occurs on the leading edge of the character in its direction (e.g., the left side for a left-to-right script (Roman) and the right side for a right-to-left one (Arabic or Hebrew)). Figure 1 illustrates these differences.

This Note describes the way script systems should work; however, in some systems, the values of `leadingEdge` and character offset are undefined when the `pixelWidth` is outside the boundaries of the text.

You define the start of a right-to-left line to be on the right and the end to be on the left; therefore, it follows that the start of a left-to-right line is on the left, while the end is on the right. The values at the **start** of a line should be `False` for `leadingEdge` and zero for

character offset. The values at the **end** are True for `leadingEdge` and the character offset is the total byte count of that line. You should check for these out-of-bounds conditions explicitly and perform the appropriate actions. This change will appear in the next version of the Script Manager documentation.

Character and Line Direction Equal



Character and Line Direction Unequal

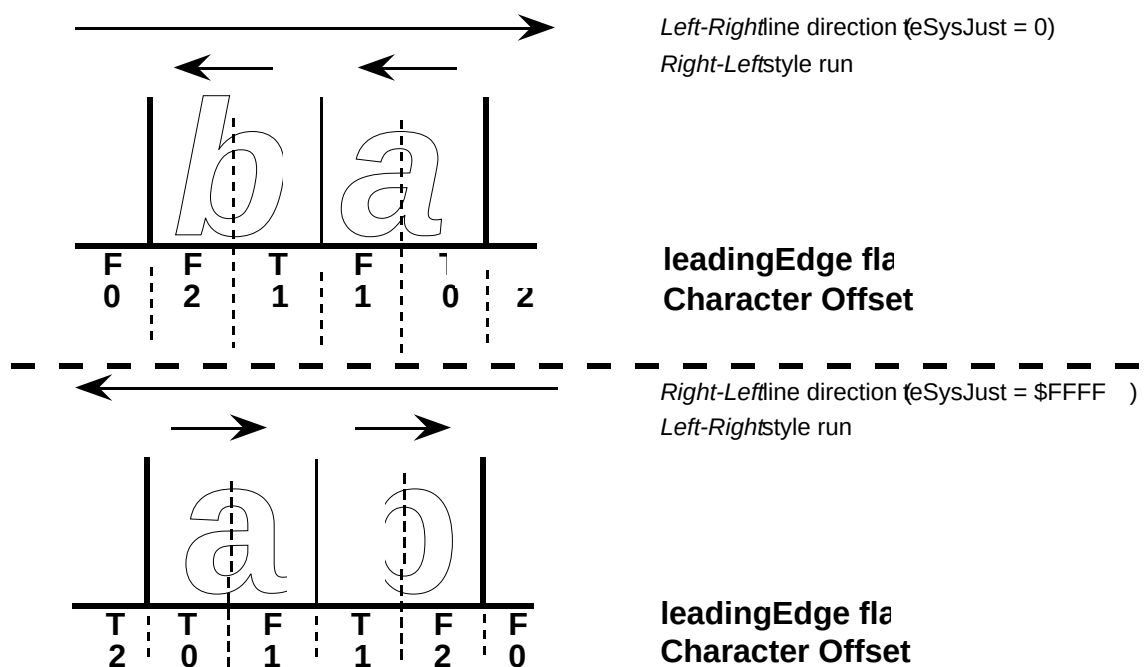


Figure 1—Pixel2Char leadingEdge Flag