

COMPATIBILITY:

Tandy 100/102/200

IF.. THEN.. ELSE... in Super ROM's Lucid

They said it was impossible...
but Paul proved them wrong!

Here's a good SuperROM tip: SuperROM does not support IF ... THEN ... ELSE (IF) logic. Page 74 of the *Lucid* manual poses the following problem:

Suppose you need to calculate the price of a service that was priced at ten dollars per hour, but had a four-hour minimum.

The manual goes on to offer a solution that requires the use of a lookup table. This may be the only way to accomplish this task with the *Lucid* ROM, since it does not support logical operators, but with *Lucid* on the SuperROM the technique is quite different.

I've spent a fair amount of time learning the SuperROM and would like to report that I'm able to perform IF ... THEN ... ELSE decisions within a single cell of *Lucid*, without having to refer to any outside table.

This comes from the use of relational operators, which the *Lucid* manual does not discuss. The *Lucid Database* manual discusses (very) briefly the use of relational operators for criteria selection in the "report definition block" for output.

Relational operators can be used in any cell to obtain a TRUE (-1) or a FALSE (0) value, which when multiplied by -1 yield, some fantastic options. Please note these examples:

Assume:

A1 = number of hours worked
on a job.

Minimum charge is for 4 hours.

B1 = billable hours

The formula for cell B1 is:

$-(A1 \leq 4) * 4 - (A1 > 4) * A1$

The first - is equal to IF. The * is equal to THEN. Additional -'s are read as ELSE IF. So the above example is:

IF A1 <= 4 THEN 4 ELSE IF A1 > 4
THEN A1

If the first IF is false, the cell value will be zero unless an ELSE IF is included.

Now enter some data in cell A1 and watch the results. Cell B1 will display the number of hours billed. Multiply B1 by the hourly rate (\$10.00), and you get the amount billed.

Pretty POWERFUL indeed! This formula is the essence of the decision-making processes in some financial spreadsheets.

It can be used for tax calculations like this:

IF deductions > 3000 THEN display
deductions - 3000 ELSE display 0
(where cell A6 = total deductions):

NEW CELL formula:

$-(A6 > 3000) * (A6 - 3000)$

Or how about applying a five percent discount on total sales (cell A5) exceeding twenty dollars:

NEW CELL formula:

$+ A5 + (A5 > 20) * (.05 * A5)$

(Note: "NEW CELL" in the above examples is another cell, say, cell B1, where you want the result to be placed.)

I developed this aspect of SuperROM's use of relational operators in June 1986. I informed PCSG back then, hoping to find a way of enlightening other SuperROM users. I hope some of you *Portable 100* readers can make adequate use of this info, and I apologize for waiting so long to share this.

by Paul Globman

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