
Abstract
RS: Radical solution
A radical solution to the problem of <managing and optimizing allocation of business resources> is described, based on <automation of calculations across a grid of cells>. In comparison with <existing approaches based on manual calculations> it offers <improved accuracy and speed>, which have been demonstrated in preliminary tests, but it leaves a number of side effects to be addressed including <limited support at present for some mathematical and other functions>. Strategies are suggested for addressing these side effects.

Why not ET?
It could also be reasonably argued that this paper is an “enhancement” rather than radical if it could be established that it extends an existing method in an incremental fashion. The main support for this line of reasoning is that spreadsheets had existed for a long time, and that Bricklin et al simply automated an existing paradigm. However, this argument overlooks the fact that the thing we call a “spreadsheet” now can do far more than calculate and cross-tabulate sums of columns (the traditional role of a spreadsheet), and VisiCalc embodied much of this power even from its inception; in the context of the time, Bricklin’s work represented a radical departure from the thinking of the time.

Why not RT?
A much stronger case could be made for classifying this as a “radical tool” rather than a “radical solution.” The reasoning is predicated on the general power described in the previous paragraph. One caution about creating a new RT category for VisiCalc, however, is that at the time, Bricklin and friends mainly emphasized VisiCalc’s utility for ledger (traditional spreadsheet) capabilities. They used it themselves for non-ledger tasks, but mainly marketed it for the specific problem of managing a ledger. So a good argument could be made for either an RS or RT classification.

Question - [Method/means of development]
<problem definition>
What is a better way of managing the allocation of business resources?

Results - [Tool / Notation]
<solution strategy>
A new way is based on automatically calculating grid cells linked by formulas.

Validation – [Experience]
<existing normal solutions>
The old way was to manually fill in a grid of cells (perhaps with the help of a TI calculator). [Other researchers in the 1960’s and 1970’s had proposed super-powerful approaches that required a great deal of mathematical expertise to utilize. They were not “normal” in the sense that industry had not adopted those approaches due to their heavyweight character.]

<advantages>
The new way offers improved accuracy and speed. Bricklin et al regularly demonstrated the tool on real problems, and they used it in their own company to manage the flow of money.

<list of side effects>
In the URL referenced above, and nearby pages, Bricklin mentions a number of functional limitations in the first VisiCalc versions. For example, he mentions that at one point in 1979, it lacked the ability to do division, and at another point it lacked output functions (to a printer or file, for instance). Even the first commercial release late in 1979 apparently lacked support for many transcendental functions.