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Recursive computations in spreadsheets.

Yang, Wei-Chi et al., Proceedings of the third Asian technology conference in mathematics. Springer, Singapore (ISBN 981-4021-15-6). 290-299 (1998).

In the paper two methods of implementation of recursive formulas in spreadsheets are presented. Both methods use (rectangular) fields of cells for their computations. The first method is “direct”: initial values (corresponding to trivial cases of recursion) are written in selected fields. Then, the recursive formula is spread to other(s). Finally, the formula is spread along a necessary large area – until the required result is reached. Second method allows to compute “recursive tables” – tables where the results of a two-argument recursive function is located on the intersection of the corresponding rows and columns. In this case each field in the area must contain the complete recursive formula. The computation is iterative – all values in the table are computed “simultaneously”. Actually, the number of iterations equals to the maximum depth of recursion. Examples of such computations as well as sufficient conditions for the success of the method will also be presented. (Authors’ abstract)

Classification: R20