

## **The description of the Computer Program “Matrix Method” (“Matrix Method of Decision-Making”)**

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The computer program is made up on the basis of the matrix method of decision making worked out by Vadim S. Golik.

***Purpose:*** to determine the rating of priority alternatives in accordance with selected criteria and limitations to the solution of a given problem.

***Field of application:*** economics, law, medicine, politics and others

***Functional potentialities of the program:***

- the creation of a new task: the program opens a window to which the name and description of the new task, the name of the file, and the description of limitations are entered; the number of criteria and alternatives is selected and their names are given. The new task is created by pressing “OK” (figure 1).

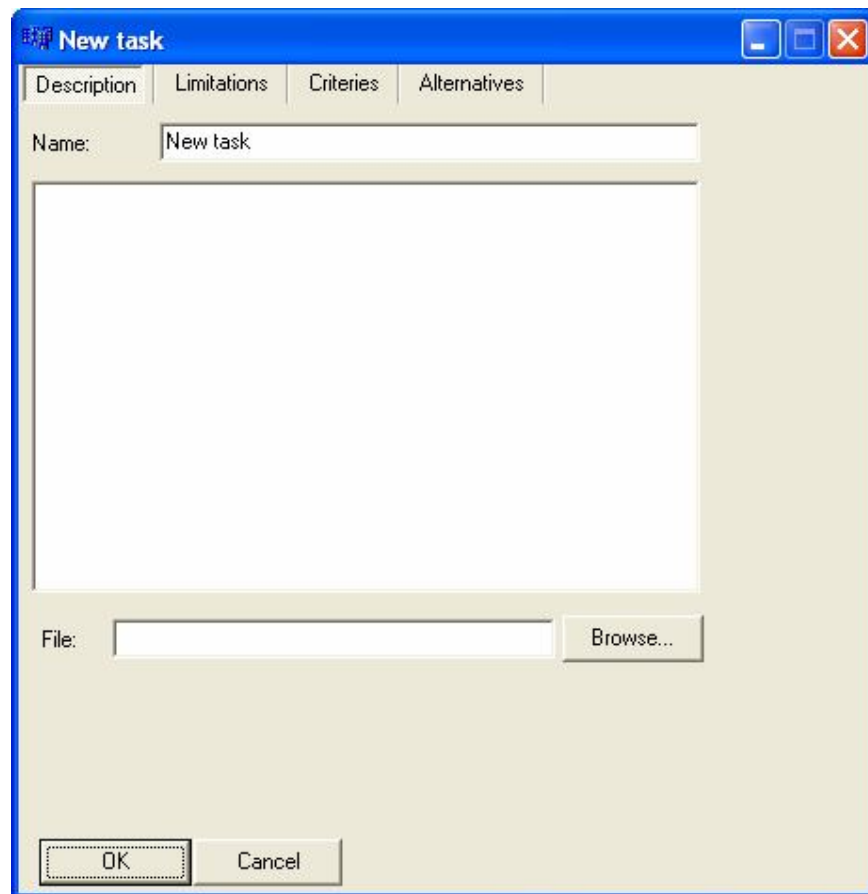


Figure 1 – *The creation of a new task*

- opening the created task;
- saving the task;
- saving the table in the HTML format;
- printing the results (button on the panel);
- cleaning the table (button on the panel);
- giving the help;
- opening the task in the form of an hierarchical structure: the name of the goal, the description of the task, the limitations to the task, the comparison of the criteria, the comparison of the alternatives on each criteria, the result (figure 2);

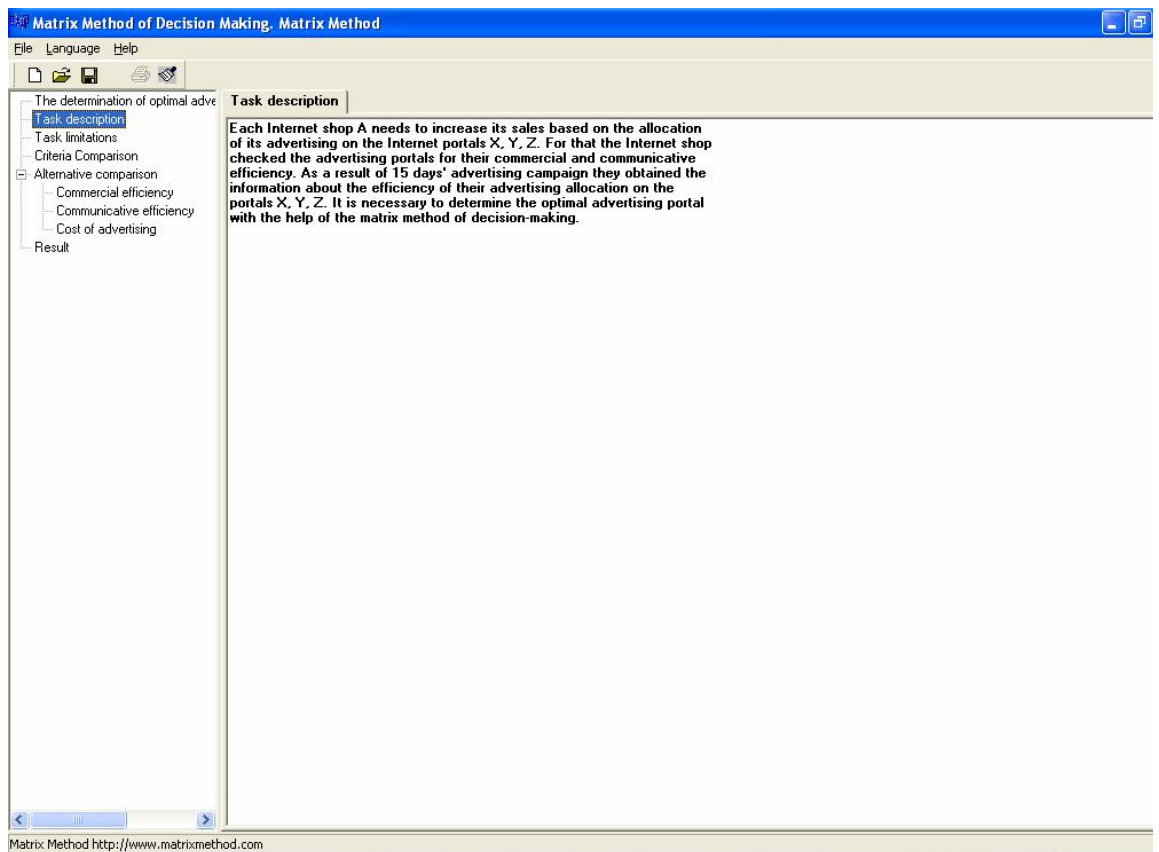


Figure 2 –Hierarchical structure

- comparing the criteria: the section of the program containing the table for comparing the criteria among them. The user can fill the table with the signs «+», «-», «=». The blank squares are highlighted and the automatic transfer to them is exercised. The program analyzes the input signs and automatically completes the other squares of the table in accordance with the rules of the matrix method (figure 3);

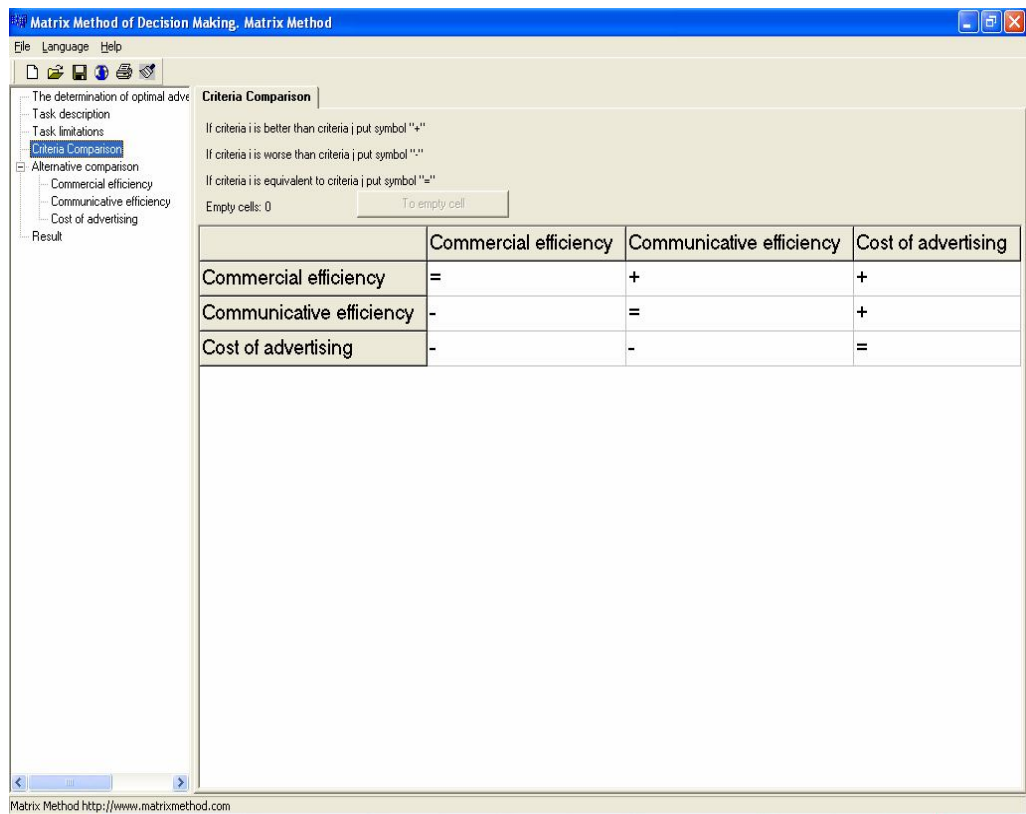


Figure 3 –The matrix of paired comparison of criteria

- comparing the alternatives: the program automatically creates the section with the table (the matrix of paired comparison of criteria) for each criteria. The table is completed in the same way as in comparing the criteria among them;
- printing and saving each table and the obtained results in the HTML are provided
- the “Result” section: it automatically creates the global matrix by means of which the user can visually determine priority alternatives (it combines the ratings of the criteria and alternatives obtained at the previous stages regulating the information of the matrices of paired comparisons ; it provides the table with the numerical rating of alternatives with the indication of their place in the global matrix on all criteria (figure 4);

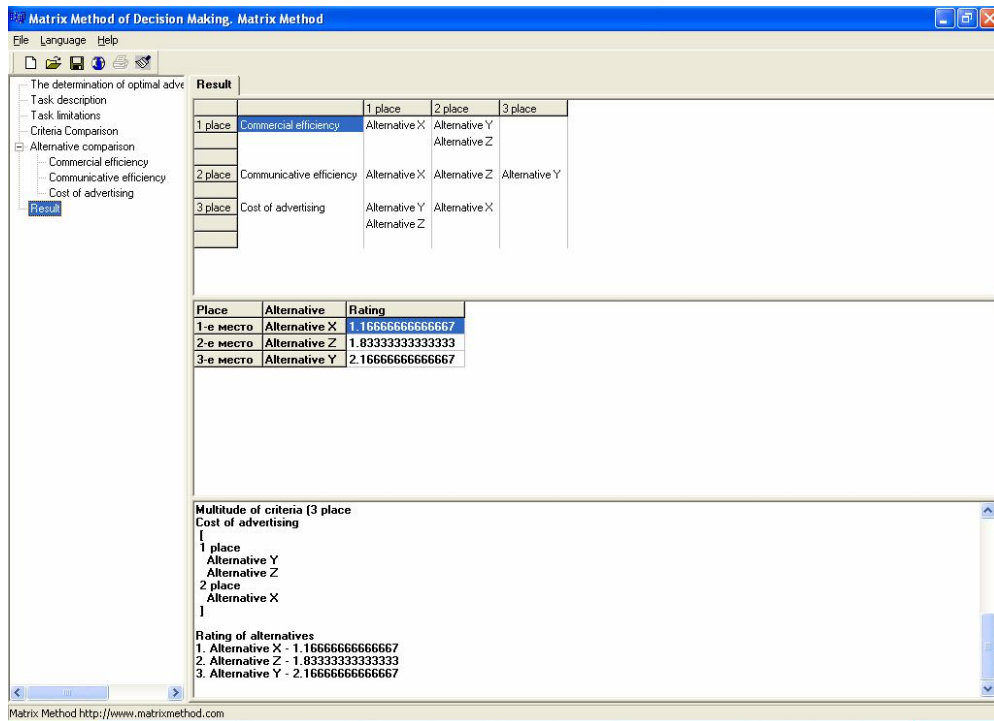


Рисунок Figure 4. – The “Result” Section

- the opportunity of printing the “Result” section and saving the obtained data in the HTML format and in the text file .txt.

*The list of files:*

Matrix\_noregistration.exe 1.06 MB

Help 148 KB

*Development environment:* C++ Builder 6.

*OS:* Windows 9x, Windows 2000, Windows XP.

*System requirements:* pentium 300 Mhz, 64 Mb RAM.