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Topic (i): New theories and emerging methods

**THE DETERMINATION OF INTERVALS OF SUPPRESSED CELLS
IN AN n -DIMENSIONAL TABLE**

Contributed Paper

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The Determination of Intervals of Suppressed Cells in an n -dimensional Table

We consider statistical tables with sensitive cells. These cells are suppressed, either primary or secondary. The difference between them is well known but insignificant for the attacker problem. It is only important to the attacker to know which cells are suppressed cells. The solution of the attacker problem will be found by the means of linear programming. The suppressed cells are not included in the published table. In the model of linear programming one equation, dependent on these variables, belongs to each total or subtotal of the table. Hence we have objective functions twice as variables (primary and secondary suppressed cells). This demonstrates the possibility - but the high efforts too - to solve the attacker problem by linear programming.

The first reflection to make the problem easier was to solve it with parameters, belonging to the **primary** suppressed cells. But it is impossible to define these primary suppressed cells. Therefore we solve the problem in two steps: At first we find a solution of the system of linear equations. This solution delivers a system dependent on only as much variables as primary suppressed cells exist. The second step is to solve the remaining system by the means of linear programming. We receive intervals of the remaining variables and determine with them the intervals of all variables (primary and secondary suppressed cells) of the original system.