Docket #: S04-076

Logical Spreadsheets

This invention describes a new type of spreadsheet that instead of using arithmetic to relate data entries uses logical relationships. This fundamentally changes how the spreadsheet works and increases the user's ability to manipulate and extrapolate scenarios. The functional improvement can be applied in both direction (from A to B and from B to A) as well as for non-numerical data. These spreadsheets maintain the characteristic simplicity of current spreadsheets, so adoption would be simple.

Applications

- Managing, editing and manipulating numerical and **symbolic data**
- **Design programs**, particularly for system configurations (including customer designed cars or computers)
- **Smart forms** capable of checking that entered data is within correct parameters and formatting. An HTML front end can be used for the logical spreadsheet to put the form online
- Manipulating and organizing more complex data sets
- **Interactive documents** capable of evaluating data and changes in circumstances and providing feedback to the user
- **Simulations** where the user can experiment by varying inputs or setup variables, which will cause the effects of the changes to propagate through the spreadsheet to give the resulting outcome or situation

Advantages

- Adds significant **capabilities** and **power** compared to standard spreadsheets while maintaining the **ease of use** spreadsheets are known for
- Allows **value propagation in multiple directions** through the spreadsheet, unlike the unidirectional value propagation in standard spreadsheets

- Allows the specification of **many to many constraints**, rather than the simple function constraints in traditional spreadsheets
- Permits manipulation of non-numeric data
- Provides easier data entry and checking
- Makes data analysis tasks easier and less time consuming

Publications

- Logic Group Publication

Patents

- Published Application: 20060048044
- Issued: 7,707,486 (USA)

Innovators

- Michael Genesereth
- Michael Kassoff
- Nathaniel Love

Licensing Contact

Imelda Oropeza

Senior Licensing Manager, Physical Sciences

Email