Technical Disclosure Commons

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Change of hierarchical structures within

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CHANGE OF HIERARCHICAL STRUCTURES WITHIN A SPREADSHEET PROGRAM

Technical task:

The task of the technical innovation is to be able to represent hierarchies differently in spreadsheet programs than before.

Initial situation:

A spreadsheet program (such as Microsoft Excel) works with two-dimensional tables that have rows and columns. The representation of hierarchical structures - in the graph theory of computer science called „tree" - can
pictorially presented in a two-dimensional table according to different patterns.
There is currently no program support for the conversion into other forms of representation of the hierarchy.
Each of the representation patterns shown in the pattern patterns 1-3
Hierarchy has its specific advantages.

The pattern 1 is suitable for the manual creation of a hierarchical structure.
The 2nd pattern is for the e.g. in Excel existing filter function suitable. With this, partial branches of the hierarchical tree can then be displayed in a stepwise filtered manner.
The third pattern is a compact representation of the hierarchy with the advantage of searching for or delimiting the structure entry via only one filter in a column.

Solution:

An additional functionality for the spreadsheet converts a hierarchy selected on the worksheet to other forms of representation in the hierarchy.

Here are the o.g. Representation patterns their use:
1. Hierarchy in columns
2. Hierarchy in columns with complete path specification for positioning in the graph
3. Hierarchy in a column with cell entries

Advantages:

- Hierarchy in columns, suitable for the manual creation of a hierarchical structure
- Hierarchy in full path columns for location in the graph suitable for e.g. Existing filter function in Excel. With this, partial branches of the hierarchical tree can be displayed in stages filtered in individual columns. For explanation, the following example (Fig. 4) is given. On the left is the unfiltered representation. Right is in the column with the headline
- Hierarchy in a column with cell entries, this representation of the hierarchy is compact and has the additional advantage of searching for or restricting the structure entry via only one filter of a column.
- An example is the spreadsheet Excel, which is very popular for the analysis of larger databases. If several hundred or many times hierarchical data are brought here for processing or processing, the conversion into the different representation patterns is a great advantage.

Possible application:

- Applicable in spreadsheet programs.

Stand der Technik

Darstellungsmuster 1: Hierarchie in Spalten

	A	B	C	D	E
1					
2					
3		Wurzel			
4			Knoten-1		
5				Blatt-1-1	
6				Blatt-1-2	
7			Knoten-2		
8				Blatt-2-1	
9			Knoten-3		
10				Knoten-3-1	
11					Blatt-3-1-1
12					Blatt-3-1-2
13			Blatt-4		
14					

Darstellungsmuster 2: Hierarchie in Spalten mit vollständiger Pfadangabe zur Verortung im Graph

	A	B	C	D	E
1					
2					
3		Wurzel			
4		Wurzel	Knoten-1		
5		Wurzel	Knoten-1	Blatt-1-1	
6		Wurzel	Knoten-1	Blatt-1-2	
7		Wurzel	Knoten-2		
8		Wurzel	Knoten-2	Blatt-2-1	
9		Wurzel	Knoten-3		
10		Wurzel	Knoten-3	Knoten-3-1	
11		Wurzel	Knoten-3	Knoten-3-1	Blatt-3-1-1
12		Wurzel	Knoten-3	Knoten-3-1	Blatt-3-1-2
13		Wurzel	Blatt-4		
14					

Stand der Technik/ Technische Neuerung

Darstellungsmuster 3: Hierarchie in einer Spalte mit Zelleinzüge

Abb. 4

Beispielablauf:

a) Markierung der hierarchischen Struktur auf einem Tabellenblatt

Technische Neuerung

b) Aufruf innerhalb Tool „AXCEL" mit der Tastenkombination STRG+d und Wahl der gewünschten Darstellungsform:
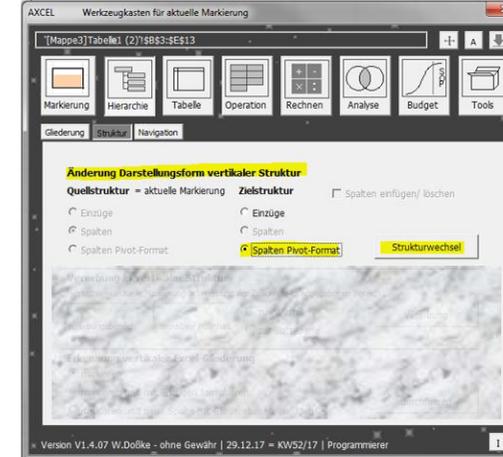
Mit der Wahl der Zielstruktur (Darstellungsmuster 1 = „Spalten", Muster 2 = „Spalten Pivot-Format", Muster 3 = „Einzüge") wird die Umwandlung mit der Programmschaltfläche „Strukturwechsel" durchgeführt.

c) Ergebnisdarstellung