INHERITANCE OF ATTRIBUTES IN A HIERARCHICAL

Daniel Hoppe
Bertrandt Ingenieurbüro GmbH

Follow this and additional works at: https://www.tdcommons.org/dpubs_series

Recommended Citation
Hoppe, Daniel, "INHERITANCE OF ATTRIBUTES IN A HIERARCHICAL", Technical Disclosure Commons, (April 09, 2018)
https://www.tdcommons.org/dpubs_series/1153

This work is licensed under a Creative Commons Attribution 4.0 License.
This Article is brought to you for free and open access by Technical Disclosure Commons. It has been accepted for inclusion in Defensive Publications Series by an authorized administrator of Technical Disclosure Commons.
INHERITANCE OF ATTRIBUTES IN A HIERARCHICAL STRUCTURE WITHIN A SPREADSHEET PROGRAM

Technical task:
The task of the technical innovation is to insert inheritable attributes in hierarchical structures within spreadsheets.

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 represented in a two-dimensional table according to different patterns (representation patterns 1-3).
Each of the representation patterns of a hierarchy has its specific advantages. Elements of the hierarchy can have additional information, also called attributes. In practice, the object is that an attribute, which is assigned to a structural element, inherit the elements of the subordinate structure in the hierarchy or, to pass on. The spreadsheet program Microsoft „Excel“ has no functionality for automatic inheritance. Therefore, this information must be inserted manually.

Solution:
An additional functionality for the spreadsheet program adds additional information to a hierarchy selected on the worksheet.
The representation of the hierarchy can have the variants described above:
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
An example can be seen in Fig. 4:
On the left is the attribute „visible“ for the structure element „node-3“. On the right, the attribute was inherited down the sub-branch of the hierarchical structure.
In Fig. 5 the attributes are inherited to the respective parent element. If an attribute already exists in the inheritance, the new attribute will be added with a delimiter. This is in the o.g. For example, the case and applies to inheritance to „root“ or „leaf“.
Another variant of the technical innovation is that the inheritance is based not on the content, but on another specific content, if an attribute exists, see Figure 6.

Advantages:
- Significant cost savings.
- Realizability even with extensive structures.
- Virtually no mistakes.

Possible application:
- Applicable in spreadsheet programs.
Die Idee zur automatischen Vererbung gilt auch für die Vererbung zur „Wurzel“. D.h., dass die Vererbung auch in der Gegenrichtung funktioniert.

Für den verebten Inhalt wurde das Zeichen „x“ gewählt. Sofern ein Attribut vorliegt, wird am das gewählte Zeichen „x“ vererbt.

Beispielablauf:

a) Markierung der hierarchischen Struktur auf einem Tabellenblatt

b) Aufruf innerhalb Tool „ACCEL“ mit der Tastenkombination STRG+d: Im Vererbungsbereich (o.e.) wählt man die Zellen, bei denen eine Vererbung stattfinden soll. In aufgeführtem Beispiel ist dies die gesamte Spalte „G“.

c) Ergebnisdarstellung: Die Vererbung wurde wunschgemäß vollzogen.