CoDe Modeling of Graph Composition for Data Warehouse Report Visualization

Abstract:

The visualization of information contained in reports is an important aspect of human-computer interaction, for both the accuracy and the complexity of relationships between data must be preserved. A greater attention has been paid to individual report visualization through different types of standard graphs (Histograms, Pies, etc.). However, this kind of representation provides separate information items and gives no support to visualize their relationships which are extremely important for most decision processes. This paper presents a design methodology exploiting the visual language CoDe based on a logic paradigm. CoDe allows to organize the visualization through the CoDe model which graphically represents relationships between information items and can be considered a conceptual map of the view. The proposed design methodology is composed of four phases: the CoDe Modeling and OLAP Operation pattern definition phases define the CoDe model and underlying metadata information, the OLAP Operation phase physically extracts data from a data warehouse and the Report Visualization phase generates the final visualization. Moreover, a case study on real data is provided.