Visual Data Mining : the case of VITAMIN System and other software

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Data mining is an extension of Exploratory Data Analysis in the sense that both approaches have the same goal: the discovery of unknown structure in the data. The chief distinction resides in the size and dimensionality of the data sets, data mining involving much more massive data sets.

Never before data has been generated at such high volumes as it is today. **Visual data mining** is an approach to deal with this growing flood of data. The aim is to combine traditional data mining techniques with information visualization methods to utilize advantages of both approaches. The main advantage of visual data exploration is that the user is directly involved in the data mining process. The utilization of both automatic analysis methods and human perception promises more effective data exploration. Information visualization exploits the phenomenal abilities of human perception to identify structures by presenting data visually, allowing the user to explore the information space, to interact with the data and to draw conclusions.

The **VITAMIN System** (*Visual daTA MINing System*) is designed to help the user in the analysis process of large survey data and time series data. The software has been developed by ATKOSoft SA with the contribution of UNINA-DMS and ONS, in the framework of the Information Societies Technology (IST) granted by the European Commission.

This paper has been written in the context of the validation activities for the VITAMIN Software in the framework of the IST project. The first part is a quick description of the main functionalities in VITAMIN System, trying to stress the originality of this new approach. In the second part, we give a few examples of other software, the contents of which differ because either they address other kind of data, or they implement other kind of visualisation techniques.