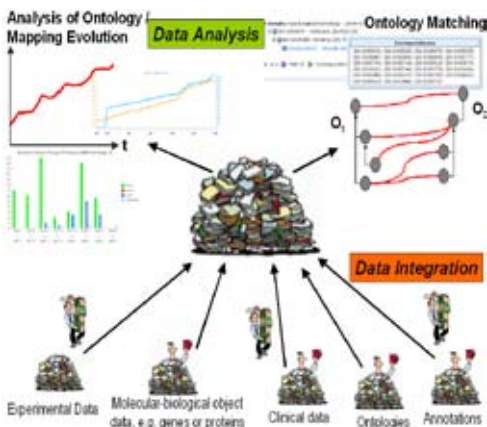


KEYWORDS

- » Databases
- » Data Integration
- » Data Analysis
- » Ontology Management



BIOINFORMATICS: DATABASES, DATA INTEGRATION, DATA ANALYSIS

Prof. Dr. Erhard Rahm and his research group focus on advanced methods for data management, integration and analysis of molecular-biological data. They, particularly, have developed comprehensive data warehouse solutions to support microarray-based expression analysis and are able to correlate the data with publicly available annotations and clinical data.

To integrate annotation data from heterogeneous and public web sources, several new integration approaches were designed and investigated. Recent work focuses on the management and analysis of ontology versions and related mappings, especially from the life science domain. Such mappings annotate biological objects, e. g. proteins, by using ontologies (annotation mappings) and represent semantic relationships between different ontologies (ontology mappings) as well.

Particularly, the group works on techniques and algorithms to generate ontology mappings and to evaluate their quality. In an example scenario, they generated mappings between the three sub ontologies of the popular Gene Ontology, i.e., Molecular Functions, Biological Processes, and Cellular Components. The investigations are carried out at the Interdisciplinary Centre for Bioinformatics (www.izbi.de) in cooperation with a variety of local and external project partners.

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