

Various OLAP Technologies and their Impact on Decision Making

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Abstract: *This paper provides an overview of Data warehousing, Data Mining, OLAP, OLTP technologies, exploring the features, applications and the architecture of Data Warehousing. The data warehouse supports on-line analytical processing (OLAP), the functional and performance requirements of which are quite different from those of the on-line transaction processing (OLTP) applications traditionally supported by the operational databases. Data warehouses provide on-line analytical processing (OLAP) tools for the interactive analysis of multidimensional data of varied granularities, which facilitates effective data mining. Data warehousing and on-line analytical processing (OLAP) are essential elements of decision support, which has increasingly become a focus of the database industry. OLTP is customer-oriented and is used for transaction and query processing by clerks, clients and information technology professionals. An OLAP system is market-oriented and is used for data analysis by knowledge workers, including managers, executives and analysts. Data warehousing and OLAP have emerged as leading technologies that facilitate data storage, organization and then, significant retrieval. Decision support places some rather different requirements on database technology compared to traditional on-line transaction processing applications considering various security mechanisms in IoT based smart environments.*

Keywords: Data Warehousing, ETL, OLAP, OLTP, Data Mining, Decision Making and Decision Support, Knowledge Management

