

PEPPERDINE UNIVERSITY DATAWAREHOUSE

What is Datawarehouse?

According to Webopedia.com

"A collection of data designed to support management decision making. Datawarehouses contain a wide variety of data that present a coherent picture of business conditions at a single point in time.

Development of a data warehouse includes development of systems to extract data from operating systems plus installation of a warehouse database system that provides managers flexible access to the data.

The term data warehousing generally refers to combine many different databases across an entire enterprise."

http://www.webopedia.com/TERM/D/data_warehouse.html

According to Stanford University,

"A Data Warehouse is a repository of integrated information, available for queries and analysis. Data and information are extracted from heterogeneous sources as they are generated....This makes it much easier and more efficient to run queries over data that originally came from different sources."

<http://www.datawarehousing.com/whatis.asp>

Differences between Operational Data and Informational Data (Datawarehouse)

Operational data is the data you use to run your business. This data is what is typically stored, retrieved, and updated by your Online Transactional Processing (OLTP) system. Designed to perform operational tasks (write to file, delete from file, update file, etc). An OLTP system may be, for example, Student Information System, a Financial Records System, or an Human Resources System.

Operational data is typically stored in a relational database, but may be stored in legacy hierarchical or flat file formats as well. Some of the characteristics of operational data include:

- Updated often and through online transactions
- Non-historical data (not more than three to six months old)
- Optimized for transactional processing
- Highly normalized in the relational database for easy update, maintenance, and integrity

Informational data is typically stored in a format that makes analysis much easier. It is designed for informational purposes and analysis. Analysis can be in the form of decision support queries, report generation, executive information systems, and more in-depth statistical analysis.

Informational data is created from the wealth of operational data that exists in your business. Informational data is what makes up a Datawarehouse.

Informational data is typically:

- Summarized operational data
- De-normalized and replicated data
- Infrequently updated from the operational systems
- Optimized for decision support applications
- Read only (no updates allowed)
- Stored on separate systems to lessen impact on operational systems