

Data Webhouse for Monitoring the Use of Enterprise Information System

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Abstract—Enterprise information system represents the most popular base in data generation and aggregation. Decision making depends on data generated by institutions. Webhouse can monitor the movement of stored data. Access to the optimal decision-based webhouse is remotely handled via the Internet. Healthcare enterprises are among the most important institutions that handle data for making informed decisions. This study presents the most optimal and simplest approaches for handling and controlling data from institutions. This study proposes an algorithm for entering, cleaning and purifying data for webhouse (called Web extraction-transformation-loading). It suggests an algorithm (called Web fragmentation) to easily and simply display data across the Web and build a receipt. Moreover, this study proposes an algorithm (called Web OLAP) for analysing stored data to arrive at a correct decision by constructing a query on the basis of the options determined by an organisation. The individual outputs of the proposed algorithms provide services to the beneficiary. The recommended system is used to call the last analysis of the queried data and the resulting decisions. The methods used in this study yield excellent results in terms of data recall and performance. The performance of the user leads to good results in appropriate decision making.

Keywords—Webhouse, Web ETL, Web Fragmentation, Web OLAP, Healthcare Enterprise Information System.

I. INTRODUCTION

Webhouse describes a new pattern of data warehouse, which compiles data from the Web and displays a great source of information for integrating data from numerous sources. In the case of the Web, the large volume of data creates new challenges due to the growing number of users and the heterogeneity requirements caused by the variety of data, the frequency of changes on data and the lack of control over the sources. Moreover, the main difficulty in this range is the manner in which data can be merged heterogeneously and safely in the webhouse when most or some data sources

evaluation of the proposed system and its comparison with previous works.

II. WEBHOUSE DEFINITION

A web-enabled data warehouse uses the Web for information delivery and collaboration among users[4]. The transformation of a data warehouse into a Web-enabled data warehouse initially entails bringing the data warehouse to the Web and then bringing the Web to the data warehouse [5][6].

Data webhouse (DWB) has the following components:

- 1- Web marts: Web marts are separately designed for a particular department. They are subsets of webhouse and contain data that satisfy the needs of a particular department.
- 2- Data repository: Data repository is a storehouse where all the necessary information regarding extracted data is stored.
- 3- Meta data manager: Meta data are data about data. A meta data manager supports the maintenance and handles data management and manipulation of meta data repository.
- 4- Web manager: Web managers supervise websites that are selected as information sources for a webhouse. They decide whether data sources should be added or removed and monitors the performance of view managers [7].

The DWB architecture is built by linking the components with one another.

- A fully distributed system is designed from the beginning.
- The system must be Web-enabled, not a client/server system, which indicates a top-to-bottom redesign [8].
- Textual, numeric, graphic, photographic, audio and video data streams must be equally handled because the Web already supports this mix of media.
- Atomic-level behaviour data must be supported to at least the terabyte level in many data marts, especially those

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