

## LazyView™ Database Aggregation

Modern businesses frequently have to deal with islands of information residing in different database applications which are often geo-geographically dispersed. For example, disparate aspects of customer data may be held in an accounting system, a CRM system and a sales order processing system. Or a company may find that it can only obtain a global view of its sales pipeline by aggregating data from databases running in New York, London and Tokyo.

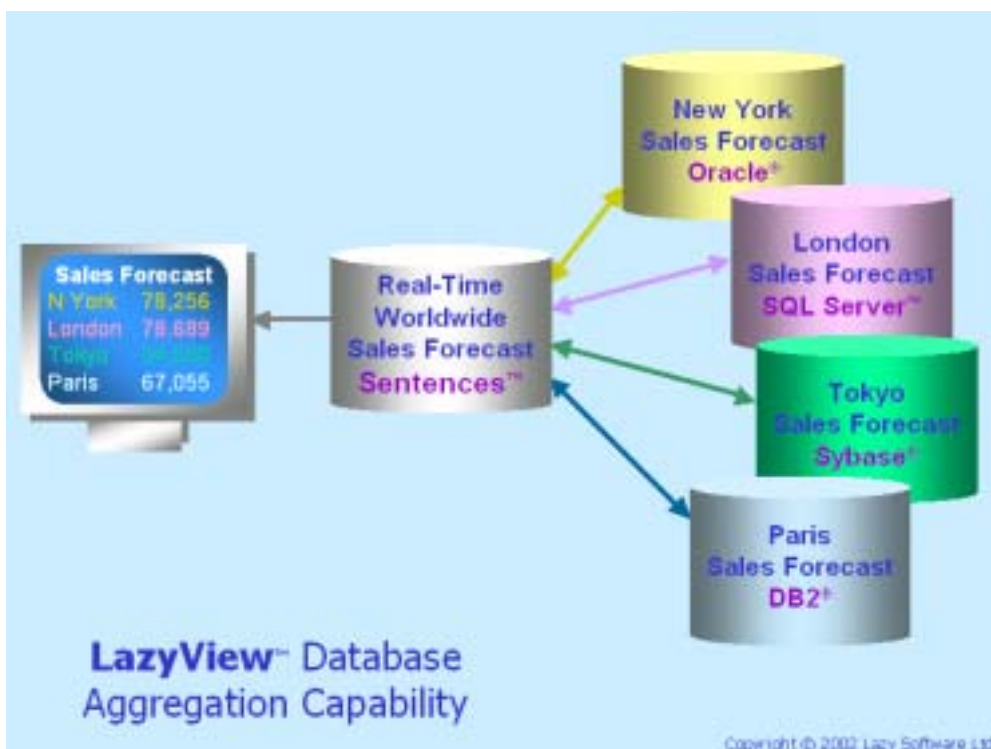
**Sentences™** is Lazysoft's innovative multi-user, web-enabled database management system, based on the Associative Model of Data.

**LazyView™** extends the capability of Sentences with real time aggregation of data drawn simultaneously from Oracle®, DB2®, SQL Server™ and other relational databases.

**LazyView** gives users the unique ability to integrate information from multiple, disparate relational databases quickly and easily without moving data, and without costly data warehousing and migration tools.

Here are some examples of where this capability can add value:

- for a single 360° view of everything that is known about customers
- for an aggregated view of assets and asset utilisation across all locations
- for financial consolidation and compliance across geographically dispersed subsidiaries
- to compare raw material prices and availability from multiple suppliers
- to correlate two companies' customer bases on the way to a merger or acquisition
- to correlate data across several software packages
- as a rapid, low-cost alternative to full a data warehousing project



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In addition, **Sentences'** native ability to read and write XML also enables it to integrate relational data with data from non-relational and web-based sources.

Once data from multiple target databases is aggregated using LazyView, the full range of Sentences' native capabilities include:

- Multi-user, web-based data access and maintenance
- Instant, 360° view of any item in the database, showing all of its associations with other data items
- Sophisticated associative query capability, with automated XML and XSL output and presentation
- Instant search and selection on any attribute
- Instant data change and capture capability through "omnicompetent" dataforms
- User interface options include Sentences DE (Deployment Environment), embedded Java applets and dynamic HTML

Sentences has a naturally distributed structure that makes it an ideal base for the LazyView functionality. A Sentences database comprises any number of individual chapters, each of which is a single file that may reside on any server. A chapter may contain data, or schema, or both.

## Augmenting and Overriding Data

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Using LazyView, data drawn from relational databases may be augmented or overridden locally by the addition of new data that is then stored in an ordinary Sentences chapter.

For example, when using LazyView to consolidate a global sales pipeline from regional data, it would be possible to record global budgets and forecasts locally in the Sentences database, and also to override local forecasts to construct "what if" scenarios. Similarly, when pooling customer data from several sources, it would be possible to maintain a list of customer relationship managers centrally in Sentences and assign to them responsibility for individual customers.

## Semantic Capabilities

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When combining and correlating databases using LazyView, the unique capabilities that Sentences owes to its associative architecture become very powerful.

- **Table Equivalence** is the ability to declare that two tables both refer to the same or a similar thing in the real world. The table called "Client" in Database A is equivalent to the table called "Customer " in Database B. This sets the scene for other important capabilities.
- **Row Equivalence** provides a similar capability at row level. The Client called "IBM" in Database A is the same real-world entity as the Customer called "International Business Machines" in Database B.
- **Column Equivalence** may be used to assert that the column called "Credit limit" in Database A's Client table is equivalent to the column called "Maximum balance" in Database B's Customer table.
- **Attribute Supersedence.** If attributes conflict, attribute supersedence may be used to say that "International Business Machines' \$100,000 Maximum balance is superseded by IBM's \$250,000 Credit limit. Henceforth, only the Credit limit of \$250,000 will be visible.