



Lucida Insight™ Technical Overview

LUCIDA BACKGROUND

Lucida develops simple yet powerful software solutions for the real-time aggregation and Web delivery of business-critical information to fully empower your best business decisions.

Headquartered in California's Silicon Valley, Lucida is a spinout from Fujitsu, Ltd.---the first spinout outside of Japan in Fujitsu history. Lucida was formed in November 2000 from Fujitsu's core telecommunications software development team, and is led by Yasufumi Toyoshima and other experienced industry executives who form the management team.

LUCIDA INSIGHT

Lucida's flagship product, Lucida Insight™, combines the familiar Excel spreadsheet with the Web and supercharges it with real-time insight by extracting business-critical data from across corporate and external data-source boundaries and securely delivering real-time, Web-based spreadsheets to fully empower your best business decisions. Executive dashboards, Asset Management, Strategic Planning, and Business Analysis are just a few examples of the many business functions Lucida Insight™ empowers.

Value Proposition

Lucida Insight™ leverages your current IT investment, as well as your extended enterprise and supply chain infrastructure, to optimize business performance by delivering the right information to the right decision maker at the right time, and by serving as a proactive early warning system for opportunities and threats to the business.

Benefits

- **Decrease Costs:**
 - Detect unusual behavior in real-time to better predict outcomes and prevent losses
 - Reduce IT expenses by empowering business users to create and modify their own business activity monitoring dashboards
 - Leverage, not replace, your existing systems, including ERP, CRM, SCM and data warehouses
 - Improve productivity by automating manual, on-going tasks and accomplishing more in less time
 - Spend less time with software tailoring and maintenance due to the use of open and industry standard components and protocols: XML, J2EE, SQL, SOAP, JBoss, PostgreSQL, Apache, JDBC.

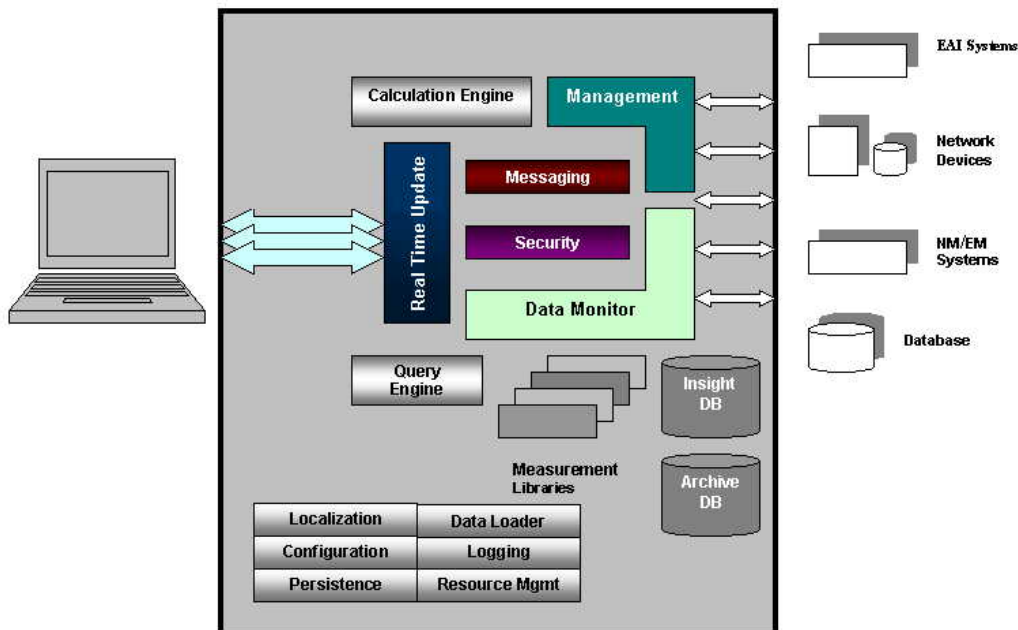
- **Increase Revenue:**
 - Create new revenue models, such as history-based, event-driven, and opportunity based pricing models
 - Offer new, more individualized services based on more timely customer information

- **Speed Decision Making & Optimize Your Business Performance:**
 - Optimize business processes and speed decision making by automatically routing alerts and action items to other employees and systems
 - Decision makers can define their own exception-based alert thresholds to instantly notify them of opportunities and threats to their business.
 - Faster response to business events and exceptions as they occur helps you exploit marketing opportunities for pricing, customer interaction, cross-selling, and retention.

LUCIDA INSIGHT TECHNICAL OVERVIEW

- Lucida Insight™ is a multi-tiered, client-server architecture, comprising a full set of business activity monitoring and information delivery functions. The product is built using open and industry standard components and protocols—XML, J2EE, SQL, HTTP/HTML, SOAP, JBoss, PostgreSQL, Apache, JDBC—for lower cost and ease of installation, integration, customization, and maintenance.

Product Architecture



- **Platform Overview:**

The Insight platform comprises a scaleable, reliable, high performance client-server architecture to deliver data from various data sources in real-time. The core of the Insight platform includes the following components:

- **Insight Client**

The Insight Client is thin and lightweight, leveraging the most popular desktop application, Microsoft Excel spreadsheet. The spreadsheet runs within a standard web browser and can pull data from various data sources in real-time according to user-defined data collection schedules. Users can use standard Excel formulas to manipulate this real-time data and save their spreadsheets on the server or on their workstation as an Excel file. Clients can also specify actions to be taken when a particular data change or event occurs. These actions can vary from sending e-mail to initiating complex workflow processes. Also the users can create their own charts using standard Excel charts components available through the Insight Client.

- **Insight Server**

The core of the Insight platform is a high performance, distributed, multi-threaded server, which can pull data from various data sources, from real-time networks to Enterprise Information Systems, and directly update interested clients. Clients can subscribe to changes in these data points, and the server will update the Insight Client whenever the data changes.

Server security provides user authentication, role-based authorization and digital encryption of any data transfer.

The server also provides the ability to monitor user subscriptions, even if the user is not currently logged into the system, as well as the ability to process those subscriptions for various actions, including business activity alerts.

- **Insight Data Collector**

The data connectors provide connectivity to various data sources and to the Insight Server. These data sources include real-time networks, database systems, and other enterprise information systems. Clients can use these data connectors to specify the source of their data. Once the clients subscribe to the data they want using these data connectors, the Insight Live Update component will update the Insight Client whenever the subscribed data changes. The data connectors are implemented using the Data Collector framework.

- **Insight Scheduler**

Insight provides a framework to measure various characteristics of the enterprise. The measurement framework can be used to schedule measurements on assets. The user can implement a particular calculation on a measurement and schedule it using this framework. The measurement framework also supports aggregations, distributed schedulers, etc.

- **Insight Real Time Update**

Insight can update the Insight client whenever the subscribed data changes. Insight maintains a persistent secure connection between the client and the server so whenever a data change occurs, the server will send the update using this channel. The Insight client will then process this new data and update the appropriate data point (e.g., spreadsheet cell value) on the client.

- **Insight Query Engine**

The Insight Query Engine provides a sophisticated query generation tool. This query generation tool works with the subscription mechanism to identify the database related data sources the user is interested in. The user provides only high-level logical information, in their own particular terminology (e.g., The sales person may use their terms to refer to the same data source). The Query Engine then maps this subscription information onto physical tables, views and columns and generates dynamic queries.

- **Data Loader**

Data Loader is used to load data into the Insight database.

- **User Administration Module**

The User Administration Module allows the user to control various assets under the management of Lucida Insight, as opposed to monitoring the measurements. The security feature defines the user profile and permissions; actions an individual user is allowed, or not allowed, to do. Depending on the user's security permissions, the user can perform various operations on these assets. For example:

1. User Administration allows a user with administrative privileges, to add, modify, and delete users and user's profiles.
2. Server Management manages Insight Servers, including startup, shutdown, etc.
3. Schedule Management defines various measurement schedules.
4. Database Management is used for database management.

- **Other Platform Components**

The Insight Platform contains several other components which can be used to customize and extend it. Some of these components are:

1. **Localization:** Insight provides “out-of-the-box” support for English, Japanese and Chinese. This support includes a localized user interface and database. Other languages can be easily added using the Insight Localization Framework.
2. **Persistence:** Insight provides a database independent persistence layer to interact with underlying databases. The User can change the database without making any changes to the Insight Platform.
3. **Logging:** Insight provides an extensive logging mechanism to audit and track system activities.
4. **Resource Management:** The Insight Platform provides efficient management of system resources, such as database connections, threads, files, etc., to maximize performance and scalability.

Platform Requirements

	Hardware	Software
Server	Sun UltraSPARC 300 MHz (1-2 CPU)	Solaris8
		Windows NT 4.0
		Windows 2000
		Windows XP
Client	PC Pentium III 400 MHz (1-2 CPU)	Linux
		Win 2000/XP/CE + Internet
		Explorer 5.5 + Microsoft
		Office 2000 Web component