EVENT-DRIVEN BUSINESS INTELLIGENCE

WHEN TIMING IS EVERYTHING

A COGNOS WHITE PAPER

COGNOS®

THE NEXT LEVEL OF PERFORMANCE

Cognos Enterprise Business Intelligence for e-Business
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The key to maintaining and increasing competitiveness in today's high-speed market is time. Whatever the industry, companies know that their bottom line can depend on acting on information within minutes rather than hours or days. They also know that information can be both a blessing and a curse.

As companies accumulate more and more data, it takes more and more time for users to sift through it in order to find the information they need to take action. The time between an event and the resulting action must be compressed.

Event-driven business intelligence (BI) compresses this time gap by "pushing out" time-sensitive information to users (or "subscribers"), dramatically increasing the speed with which they can access such information.

Essentially, event-driven BI monitors three classes of events in operational and business intelligence content – notification, performance, and operational events – looking for key changes. Having detected changes, event-driven BI then notifies and alerts decision-makers, keeping them informed and up-to-the-minute. This personalized information can be pushed to decision-makers no matter where they are, enabling them to make timely and effective decisions.

This white paper will discuss event-driven business intelligence and how it extends the overall value of business intelligence solutions in managing business performance.

COMPETITION AND TIME

Event-driven BI addresses several organizational, cultural and technology shifts that have resulted in three key requirements:

- Organizations need to exploit information and technology to gain a time-based competitive advantage;
- Organizational change and restructuring has created a broader, more empowered base of decision-makers and process managers. Having the right information at the right time is a critical success factor for them;
- Information itself has three aspects to it – level of detail, time-criticality, and delivery mechanism. What, when, and how you receive information must be based on the individual's requirement for that information.

EVENT-DRIVEN BI AND THE CUTTING EDGE OF COMPETITION

Enterprises have looked to exploit technology to maximize competitive advantage in three distinct, though intricately overlapped, waves: through operational efficiency, decision support models and systems, and event-driven BI.

1st Wave – Operational Efficiency

For competitiveness and profitability, enterprises have used technology to reduce the cost of business processes and procedures, and to improve customer service. Innovative organizations have implemented such systems as workflow management, front office CRM, and ERP to accomplish these goals.

These systems generate and collect enormous amounts of data. In order to maximize operational efficiencies, organizations needed to use that data to gain insights into their business. This led directly to the 2nd wave, the beginnings of business intelligence.

2nd Wave – Decision Support Models and Systems

Businesses have always wanted to use technology to analyze, predict, and plan with clarity and insight. To this end, they have implemented business intelligence, data warehousing, advanced planning, and scheduling solutions.

However, business and the marketplace are dynamic. Currently, few organizations are agile enough to respond effectively to the transactional events altering the situation on a moment-by-moment basis. Hence, the need for event-driven business intelligence.

3rd Wave – Event-Driven BI

Effective corporate performance management (CPM) is the driving force behind the 3rd wave. Decision-makers must have a way to measure and manage their business processes. Key performance indicators (KPIs), scorecards, and dashboards give managers meaningful metrics to monitor the performance of these processes.

As the ability to adapt quickly to change becomes a fundamental requirement and as the time to react to business events is squeezed by competitive pressures, corporations are recognizing the crucial importance of event-driven BI as the next wave of innovation.

With event-driven BI, business can begin to manage its risks and opportunities as close to when the business events occur as possible.

Critical information has to find the decision-maker quickly, wherever he or she is located, so that further action can be taken in a timely manner. In this way, an enterprise can maximize its competitive advantage.

EVENT-DRIVEN BI AND THE WORK ENVIRONMENT

The second factor driving the adoption of event-driven business intelligence is the changing way in which we work and do business.

As the time between the occurrence of events and the need to take action is compressed, individuals must be able to react more quickly. Globalization, CRM, supply chain, reduced inventory holding, Just-In-Time manufacturing – all of these initiatives and processes compress business reaction time and demand that the people accountable for the activity, function or process have information at hand instantly in order to be effective.

Changing work styles and paradigms are driving the adoption of event-driven BI:

- Organizational structures move from hierarchical to flat;
- Work units evolve from functional departments to process teams;
- Responsibilities are increasing and cutting across functional boundaries;
- Broader swathes of people are empowered to manage business processes and to make managerial-type decisions.

The individual worker is forced to make decisions quickly and to share relevant information across departments that will impact the overall competitiveness of the business. This change is a crucial factor driving the adoption of event-driven business intelligence.

EVENT-DRIVEN BI AND INFORMATION TYPES

A third significant factor driving the adoption of event-driven BI is the worker's relationship to information.

Today's decision-makers are drowning in information. They want the right information, at the right time. And, when it comes to important information, they would like such information to find them. In general, the decision-maker seeks three types of data:

- Ongoing information – data that the business person wants to keep track of on a regular, on-going basis;
- Deep data – information that gives an in-depth view of the business or business process and which can be utilized to make insightful business decisions;
- Time-critical data – information that must be received quickly and on a need-to-know basis because it could have a critical impact on both foreseen and unforeseen risks and opportunities.

While all three layers of information are crucial to overall business success and ongoing competitiveness, time-critical data is quickly growing in importance.

As a result of this increased importance, Gartner has coined the term, BAM, or Business Activity Monitoring, to describe the information management layer needed to manage and control the Zero Latency Enterprise. The Zero Latency Enterprise, or Real Time Enterprise as it is sometimes known, refers to an enterprise in which data generated by activities taking place in one part of the organization is immediately made available to workers in any other part – wherever they are working. The Zero Latency Enterprise requires Zero Latent Management and BAM is the solution that provides management information in real or near real time.

Critical information is almost always time-sensitive. In diagram 1, we see that when an event occurs, the value of taking action against that event diminishes in time. The value of information is greatest if it can be used close to the event that generated it. Value is based on quality and timeliness of information, not quantity.

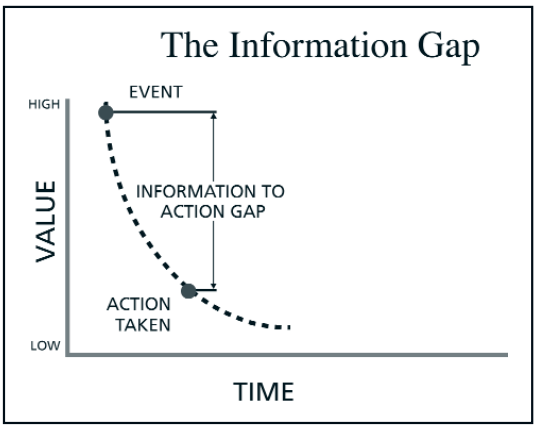


Diagram 1: The Information to Action Gap

There is a relationship and interdependency between deep data and time-critical data. Over time, multiple events, each generating single 'points' of data, are aggregated together where they provide valuable operational insights regarding the business (deep data).

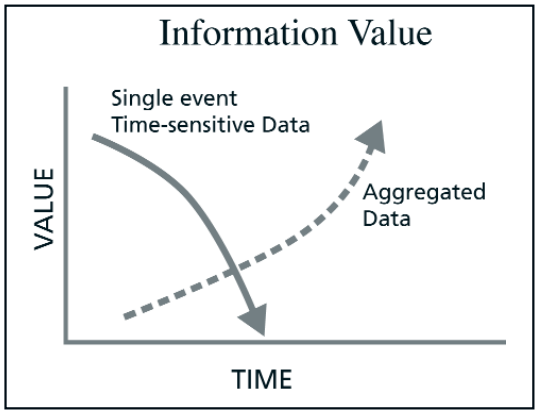


Diagram 2: The Information Value Lifecycle

When it comes to business intelligence, deep data and time-critical data are like yin and yang – they are essential to each other, and each achieves different objectives. Depending on the job at hand, information can be employed in a time-critical fashion or in a more analytic way. In other words, analytical and time-critical information are complementary. Both are fundamental to the success of the organization.

In practice, people use deep data to identify operational risks and opportunities in the business, which, if of significant importance, will be detected by operational events.

For example, analysis reports show that customers have a propensity to churn in certain circumstances (e.g., when they have logged a serious problem and are within a month of renewing their contract). If the organization's objective is to reduce customer churn, then they will look (within their operational systems) for 'high value' customers logging serious problems within a month of contract renewal. When they have identified these customers, they will make sure that a responsible person is alerted.

Enterprises that want to make their business more effective and competitive must begin to incorporate event-driven BI in their overall BI framework and move the time horizons or information latency to the ever shorter time periods of BAM.

Throughout the world, in every industry, enterprises – and most importantly individuals within those enterprises – want to keep their finger on the pulse of the business and the market.

They need quick access to the key performance indicators (KPI) that will assist decision-makers in the performance management of the business. But most importantly, they need instant access to the exceptional events, the irregularities, the palpitations of their business.

This is where event-driven BI, especially when integrated into an overall business intelligence framework, can deliver tremendous value to the user and the enterprise.

How does event-driven BI fit into my business and how might it improve the way that we work? Just by way of putting a concrete feel to these concepts, let us consider a hypothetical, yet real world scenario.

A REAL-WORLD SCENARIO IN THREE STAGES

Part One

A Customer Service manager working for a global corporation is traveling over the next couple of days on various client visits. While away, the manager needs to be kept informed of any important issues relating to his responsibilities.

There are certain reports he requires for client visits, which were not available prior to his departure. In particular, he needs the reports showing the level of incomplete orders for the customers he is visiting and the average order fulfillment period. These reports need to be up-to-date.

Just before leaving, the manager subscribes to a notification event for each of these reports. He sends notifications to both his cell phone and his email address–in the latter case, the reports will be attached. In this way, the manager will guarantee receiving the important report content before the meetings, without requiring any further action on his part (or anyone else's).

The same manager is currently using performance events, where crucial measures are monitored and any variances are immediately emailed to him. He knows that he will be informed of any issues as soon as the situation arises—and that the information-action-responsibility loop will be maintained.

In this case, the particular performance measures of interest to the manager relate to service level agreements (SLAs), which are in place with several of his large customers. Performance events have been set up to monitor the level of complete orders (fill rate) and order cycle times for these customers.

Part Two

While the manager is traveling, the reports become available, and he receives the notification message in his car. When he stops, he downloads the full reports and analyzes the details in preparation for the meeting. He then chooses to unsubscribe to the notification event for these reports.

After a successful meeting with a client, the manager discovers an alert message showing a variance in a performance measure. Recognizing the performance measure and seeing the actual and expected values of the measure from the alert message, he determines that there is no real cause for concern at this stage. By drilling down into the report (through the URL supplied as part of the message), he confirms this to be the case.

Part Three

For a particular customer, the manager's company has contracted to achieve an 80% complete order (fill rate) and that all orders will be fulfilled within five working days of order placement. Unfortunately for this customer, the business relationship has become strained.

On this occasion, when the manager receives an alert regarding the fill rate performance measure, he is more concerned. So much so that he feels it imperative to automatically (and remotely) manage certain operational actions being performed. However, before he does anything else, he calls the customer. He attempts to manage the situation the best he can in the circumstances, taking time to explain how he intends to expedite any new orders that might come in.

Having managed the relationship with the customer, he now needs to manage the operational issues internally within the organization to ensure that both the order-processing manager and the purchasing manager receive the information they need. Specifically, the manager has decided to give this customer priority on order fulfillment. Any orders received from this customer will be given priority allocation of available stock.

Since additional orders might require some human intervention, he actions his colleague to respond, should the situation arise. To do this, he uses an operational event, created remotely over the web via the BI tool. The operational event monitors time critical data, specifically any new order that contains back ordered lines coming in from that customer. Personalized alerts are generated to a number of appropriate people. The order-processing manager gets full details of the order and the relevant stock line. The customer services manager receives an alert with the stock line of concern and order value. The purchasing manager for this product line receives an alert highlighting the problems caused by this out-of-stock situation from an inventory perspective.

In this way, the manager can influence and maintain the relationship with the customer. At the same time, other business functions are kept aware of how their area of responsibility impacts other areas of the business.

THE POWER OF EVENT-DRIVEN BI TO MAXIMIZE COMPETITIVENESS

There are literally thousands of events that happen daily, in every aspect of any business. The key is to pinpoint which ones have repercussions for that business. Then, the business must gather the information quickly to take action in a timely manner.

To have maximum value, the information must be:

- Driven only by exceptional events, so the user is not overwhelmed with irrelevant data;
- Personalized to the decision-making needs of the individual recipient;
- Delivered within a timeframe in which its value can be fully realized;
- Complete with the essential attendant data (such as relevant reports and other rich content) that will be needed to instigate immediate action.

Time-critical data is crucial to bottom-line business values. For example, act efficiently, and you will retain a customer or take one from your competitor. Fail to act in time, and that customer is lost.

ESSENTIAL ATTRIBUTES OF EVENT–DRIVEN BI

Let us consider what an event-driven BI solution should provide.

Ability to Monitor and Detect Three Types of Events: Notification, Performance, Operational: Event driven BI must detect changes in three basic types of information: ongoing, deep, and time-critical. Decision-makers want to define the events to be monitored and allow others to access that information as well.

With event-driven BI, three types of events can be monitored:

- The immediate notification of the availability of ongoing information in the form of crucial reports, updated OLAP cubes, changed or modified queries – known as Notification Events
- The automatic detection of variances in business performance measures and metrics, or deep information – known as Performance Events
- The detection of operational business risks and opportunities, or time critical information – known as Operational Events.

Notification Events: Notification events are used to immediately notify decision-makers that important reports and analyses are available. The user is automatically informed of changes or availability, thus saving him or her the time needed to search for the information or check on status. This information is accessible on an as-needed or needed-at-once basis.

Example: A manager's service level agreement (SLA) report has just been issued for his customers and is now available. A notification event notifies him immediately, wherever he is located.

Performance Events: Performance events are used to look for variances in performance measures. These performance measures can be actual or based on forecasted information, for predictive advanced warning. They alert decision-makers with specific information regarding those performance measures, and with additional information (if required) to allow investigation, understanding, insight, and action for follow-up.

Example: Shipments to customers A and B have fallen below the agreed 'fill rate' in their respective service level agreements (SLA). The user has personalized her event-driven BI to inform her when this happens. Performance events detect this occurrence automatically and instantly deliver an email to the decision-maker informing her of this fact, together with the values of interest.

Operational Events: Operational events monitor and detect business risks and/or opportunities in the operational data as they occur. They generate time-critical, near-real-time data to empower decision-makers to act. Operational events play completely into the area of BAM or Business Activity Monitoring.

Example: The operational event alerts the decision-maker that customer A from above has just placed an order, which contains back-ordered quantities, which will effectively violate the terms of their SLA. Clearly, the subscriber will need to act immediately to correct the situation before the company incurs a financial penalty or loses the customer altogether.

In all cases, the user is able to respond immediately to time-sensitive information. The decision-maker is saved the time-consuming task of having to seek out information. He or she already has the information necessary when informed of the event.

Notification, performance, and operational events deliver time-critical information that is: totally event-driven; personalized to the decision-making needs of individual recipients; delivered within a critical business time frame; and complete with all the attendant knowledge necessary for immediate action.

Few organizations have an effective strategy for defining and communicating the risks and opportunities that can be derived from time-critical information. The competitive advantage that results from having such a strategy is a compelling argument for implementing event-driven BI today.

User-Authoring and Personalization of Event-Driven BI

Another attribute an organization should look for in an event-driven BI solution is the ability for the business user to author and personalize event-driven BI.

Because individual decision-makers can personalize their event-driven BI, they can ensure efficiency, rapid response, and, ultimately, a well-managed business in a world of too much information. After all, only they really know what is important to them and what is important today may not be important tomorrow.

The individual subscriber can be proactive in determining how much and what kind of information is to be pushed to him or her.

In personalizing the solution, the user decides what parameters will determine if the event has occurred, what the email message(s) content should be, as well as how and to whom the different messages will be delivered.

Once these decisions are set, the system will push the precisely defined information to the subscriber without the subscriber having to search for it. The decision-maker will receive reports as soon as they become available, or will receive alerts as guidelines are exceeded or opportunities arise. The right information is pushed to the right employee, in a timely fashion.

Setting it up should not require the assistance of an IT department. This saves the organization significant time and costs. Well-designed, event-driven BI should offer simple user-authoring for individual decision-makers and is considered a natural extension of the BI experience.

This approach combines pull and push technologies in a unique hybrid. Employing this tailored feed of critical business information will give users a distinct competitive advantage.

Delivery Capabilities of Event-Driven BI

Timely information on notification, performance, and operational events is sent via email to the subscriber (and other subscribers if required), to their desktop, pagers, mobile phones or other wireless devices, and includes all relevant information. In the case of wireless devices, the information sent is appropriate to limited display capabilities.

Subscribers can easily personalize where they wish messages to be delivered. In one centralized place they can set up and maintain delivery options, by time of day and circumstances, and modify where and to whom messages should be sent.

Increasingly, information workers are mobile and need to be constantly plugged in to the business and their areas of responsibility. The event, action, resolution loop need not be broken when a worker is out of the office. With event-driven BI, both the wired and wireless workforce can receive time-critical information wherever they are, on a need-to-know and a needed-at-once basis.

Additional Context and Rich Content Capabilities

An event-driven BI solution offers OLAP information, queries, and reports delivered as they are available. Because notification pushes the information availability via email, decision-makers do not have to be sought out by the user or anyone on the user's distribution list. The result is a fast, convenient, flexible, and simple approach to report and information dissemination.

A well-constructed alert message will contain all the information required to make the decision. Alerts generated from operational or performance events contain event-focused information and, optionally, URLs to additional reports, for further understanding.

This allows the decision-maker to grasp the context for an event immediately and to have, instantly at hand, relevant rich content that will allow him or her to drill down for more information, and to act quickly and appropriately.

Email alert messages must not degrade to email 'spam'. Control over message duplication is therefore crucial to any successful implementation. A user does not wish to be repeatedly told that Customer A has fallen below their 'fill rate' SLA, but would need to know that Customer A has fallen below their 'order time' SLA. These are high value information items; they should not be degraded by repetitions.

Guided Analysis and Event Management

Once an event is detected, an event-driven BI solution will assist the decision-maker in both making the right decision and moving the event to its resolution. A content-rich message should go a long way towards assisting the decision-maker but often the event needs to be understood in the context of other information available in the BI infrastructure. In BAM terminology, this is referred to as providing a 'data perspective' on the event. Guided analysis capabilities should be provided to allow the decision-maker to run highly filtered or focused reports and analysis directly from the email alert in order to explore around the event.

Having understood the issues and having made the decision, the information recipient, assisted by Event-Driven BI, can move the event forward, for example, by invoking other applications to post transactions or through some other action.

Integration of Event-Driven BI

Event-driven business intelligence should integrate with the existing BI environment of the enterprise. It should also ensure ease of use and fast applicability with no or very low user training, allowing the enterprise to leverage its existing technology and knowledge base, with little or no additional involvement from IT.

COGNOS NOTICECAST – EVENT-DRIVEN BI FOR THE ENTERPRISE

Cognos NoticeCast offers an enterprise solution for event-driven business intelligence that ensures business success. It offers all the capabilities and features of event-driven BI mentioned above, and more.

As part of the Cognos enterprise business intelligence solution, Cognos NoticeCast delivers the time-critical advantage organizations need to stay ahead of the competition and maximize profitability.

Cognos NoticeCast adds significantly to the Cognos business intelligence solution, increasing its breadth and depth.

Although Cognos NoticeCast can be used as a stand-alone solution, its mission-critical power and performance are greatly enhanced when used as part of Cognos' complete business intelligence solution.

COGNOS NOTICECAST – OVERVIEW

Cognos NoticeCast is the enterprise business event detection, alert, and notification component of the Cognos business intelligence framework that delivers personalized business information for time-critical decision-making. Cognos NoticeCast detects Notification, Performance, and Operational Events.

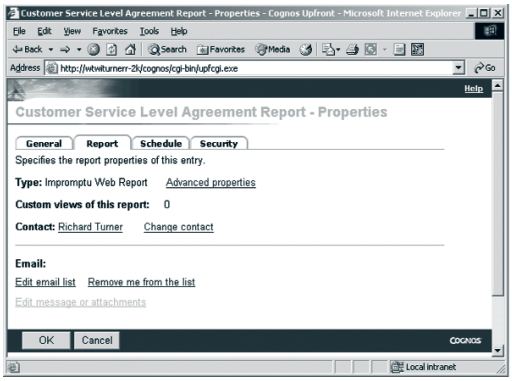
Cognos NoticeCast integrates with and enhances the following Cognos components:

- Cognos Access Manager (common security model)
- Cognos Upfront (Web portal)
- Cognos PowerPlay (OLAP reporting data source)
- Cognos Query (relational database query data source)
- Cognos Impromptu Web Reports (web delivery of Impromptu reports)

Notification Events – Immediate Awareness of New Reports and Analysis

Report consumers can decide which reports are of importance to them and have Cognos NoticeCast notify them when the report is available. Using the familiar Upfront environment, users can define notification events for reports of interest. For example, a manager might choose to add other colleagues to the delivery list. The Notification email message can contain a URL or reports that can be sent as an attachment. Either way, the subscriber has immediate and easy access to the report content. Through the use of subscriber delivery schedules, subscribers can determine which email address to use (and hence which email-compatible device) for a given time of the day, or while traveling, or on vacation.

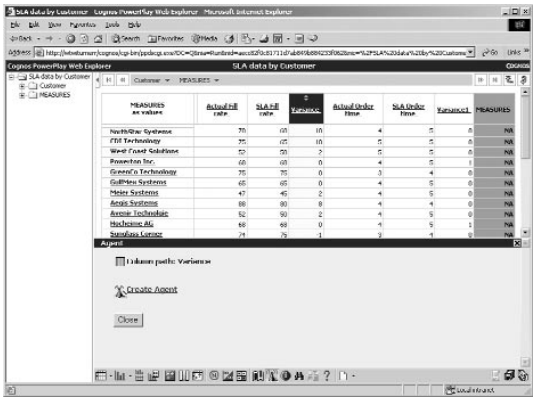
Similarly, Notification Events can be defined for OLAP cubes and queries.



The user can simply add or remove themselves from the Notification Event.

Performance Events – Detecting Variances in Business Performance Measures

People responsible for managing business performance measures can now monitor them automatically. Rather than manually inspecting measures, users can define thresholds at which the measures should be brought to their immediate attention. This can save hours of work. They can also take advantage of the forecasting capability of PowerPlay to define predictive events and therefore be informed of the possibility or likelihood of something happening in the future.



A user can establish an alert based on data found in a multi-dimensional report, in this case, Service Level Agreements. The user can be notified if a customer falls below the agreed threshold.

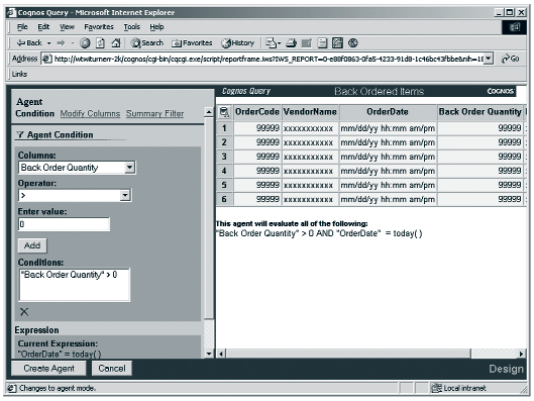
PowerPlay Web is used to author these performance events. Through a wizard, users can specify the row, column, or cell of interest and the condition under which they wish to receive the alert. They define the alert content, which measures and dimensions to include, and who is to receive the email. A URL to the full report can be provided should the values of the out-of-line measures need to be reviewed in context, or further investigated with guided analysis.

Different recipients may need different content depending upon their responsibility. Users can specify sophisticated non-duplication rules to ensure that only new values are brought to their attention. This avoids needless spamming and ensures that users value the information delivered through Cognos NoticeCast.

Performance Events can also be set on metrics held in Cognos Metrics Manager.

Operational Events – BAM – Detecting Business Risks and Opportunities in the Operational Data

Decision-makers now have a way of monitoring and managing situations that arise in the operational or transactional data. For example, having discovered the conditions under which a customer is likely to churn, it is now possible to manage the situation by detecting each and every occurrence of potential customer churn and to action someone to respond.



The user can define the condition for the event.

These operational events can be authored either using Cognos Query or through the Upfront SQL Agent Wizard. In either case, a wizard takes the author through the process of defining the alert, alert content, the values from the operational data to be included in the message, and the recipient(s).

Different recipients may need different content depending upon their responsibility and their need to respond to each situation.

Users can specify sophisticated non-duplication rules to ensure that only new situations are brought to their attention.

In some situations, the recipient of the alert message is only known when the event is detected. For example, a customer sales representative might need to be alerted, and his or her email address will be dependent upon the customer. Cognos NoticeCast provides a totally flexible solution.

Cognos NoticeCast will access query data sources, OLAP cubes through Cognos PowerPlay Web, and, through the Upfront SQL Agents, data stored in SQL databases. The NoticeCast Server running agents detects events. An agent is created for each event that users wish to detect.

Cognos NoticeCast and Access Manager

Cognos NoticeCast will conform to the Cognos security model – in particular, common sign-on, by which a user need logon only once, no matter what Cognos products are used. Each user's access permission is controlled by their membership in a user class as defined in Access Manager. When a user logs in to any Cognos product, their credentials are established and carried forward to any other Cognos product.

Cognos NoticeCast and PowerPlay

An OLAP cube, viewed from Upfront (PowerPlay Web), has a new 'Create alert' button on the toolbar, which a user will be able to click to start an agent wizard.

Cognos NoticeCast and Cognos Query

A query, viewed from Upfront, has a new 'create alert' button on the toolbar, which a user will be able to click to start an agent wizard.

Cognos NoticeCast and Upfront

Upfront is the "consumer UI" for Cognos NoticeCast. Alerts placed on OLAP cubes through PowerPlay and on queries appear as agent NewsItems within Upfront. It is here that Notification Events and SQL Agents are defined. These NewsItems may be edited, customized, copied, or moved to other NewsBoxes. A person able to access the NewsBox containing the agent item can subscribe to any agent published in this way.

In addition, it is possible to create "custom views" of an agent. A custom view allows a user to add a different message or distribution list to an existing agent.

Alert and Notification Messages

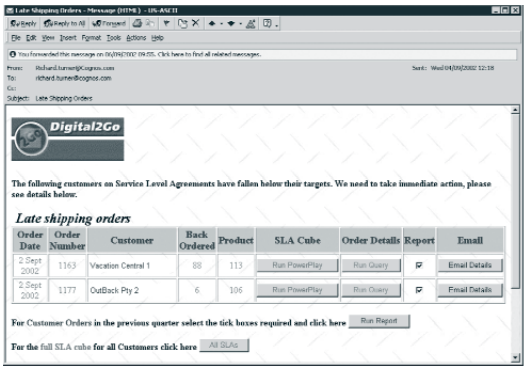
Agents deliver messages via SMTP email. Message recipients are selected from a drop-down list of users defined in Access Manager. E-mail addresses can also be typed in, to permit the sending of messages to 'non-Cognos' recipients or to recipient groups defined within the mail system.

A message is a combination of fixed text and variable information extracted from the underlying data source. Messages could also contain links to supporting BI information in the form of a URL to a relevant report, view or query.

Messages can be composed in plain text, suitable for certain mobile devices, or enhanced, using HTML .

Guided Analysis and Event Management

By exploiting HTML, we can embed the time-critical information concerning the event into a table together with a number of user-selectable buttons.



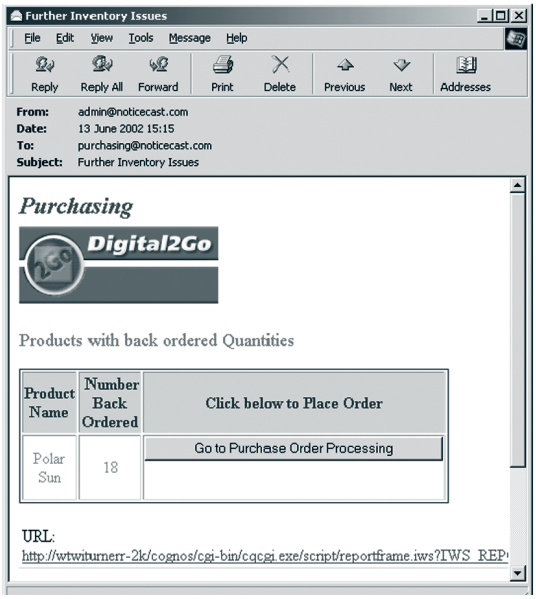
Selecting one of these buttons will typically result in the running of filtered queries, reports, and analysis. Typically they are filtered to select information specific to the event that has occurred, providing guided analysis to the data perspective around the event, thus assisting decision-making. In practice, almost any query, report, or analysis can be run, whether created in ReportNet, Impromptu Web Reports, Cognos Query or PowerPlay.

If the user clicks on a button in a line of the table, the query, the report, or analysis will be centred on the information in that line; other buttons, if selected, might produce reports or queries for groups of items. Thus, for Customer Vacation Central, for example, there is a late shipping order and we can see which product is causing the problem; by clicking on the appropriate button, the user can see performance against service level agreements for the customer or query the full details of the order.

This example also hints at how one can manage the event – clicking on the Email Details button opens up Create E-mail Dialogue, pre-populated with information provided by NoticeCast, ready for the user to type in comments they wish to make to the customer. It is also possible to link to other browser-based applications, for example, a purchase order query or purchase order entry system, to either let the user find out more or take action, depending on what is appropriate.

Custom Views

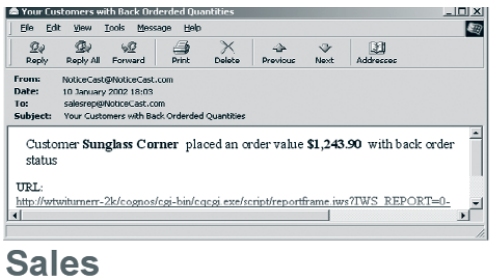
Custom views are, essentially, different messages sent by an agent, in order to satisfy the information needs of individual users. A user may create a custom view of an existing agent and create a different message and recipient list than the parent agent. The agent runs only once, no matter how many custom views of that agent there are.



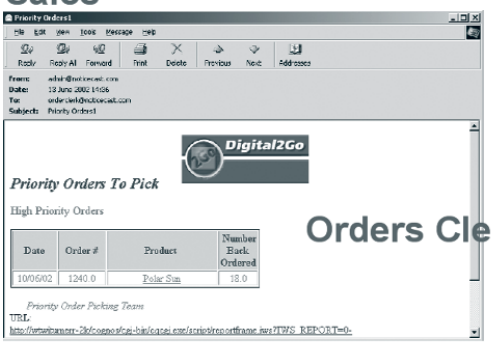
Different users have different information requirements.

Recipient Delivery Schedules

Users may have more than one e-mail address (a "work" address, a "mobile" address, and a "private" address, for example). The active times for each address can be set within the Upfront personalization page. Recipient delivery schedules make it easy to manage the regular daily work patterns. For those situations where a user has to rush out of the office, there is only one place the user needs to go to make one change. Similarly, if they want to transfer responsibility to another person while on vacation—they can simply redirect to that person (using their personalization). In this way, NoticeCast ensures that this high value, time-critical information reaches the right person wherever they are.



Sales



Orders Clerk

Suppression of Duplicate Messages

When a business event occurs, the triggering condition is likely to be 'true' for a period of time (until action is taken to correct the condition, in fact). It would be irritating if agents sent repetitive messages about the same event. There are, therefore, facilities to prevent the sending of duplicate messages.

NoticeCast SQL Agents Authored via Upfront

The Cognos NoticeCast server administration module is used to configure connections to an SQL database and to define a Data Source that identifies data items from within it. This Data Source is published to Upfront, where via the Agent Wizard, agents can be created. This wizard-driven capability is intended for power users.

The SQL Agent features additionally include:

- Dynamic addressing of messages
- Multiple tasks per agent
- Tasks include:
  - email message
  - write to database
  - run an executable
  - pass control to another agent

Customized SQL

The graphical UI allows a power user to extract data from SQL data sources; the UI generates the SQL statement necessary to retrieve the required data at runtime. A user can modify the SQL generated by the UI or may read in existing SQL statements from disk or from the clipboard.

Write to Database

One form of message is the writing of information from the alert directly into a SQL database. This capability can be used in a number of different ways, including managing the event, for example, by ordering inventory following an out-of-stock situation. This capability works well in combination with the executable and agent execution tasks where the SQL can be used to create temporary values picked up by each, passing results as parameters.

Dynamic Addressing of Messages

Sometimes, the recipient of a message is determined by the outcome of the rule. For example, an agent could send a message to all customers whose payments are 60 days overdue. The recipients are not known until the agent has completed the query. For cases like this, a message can be addressed dynamically – the address information being held as data available within the database accessed by the agent.

With dynamically addressed messages, Cognos NoticeCast creates a separate message for each addressee, containing their relevant related information.

Run an Executable

An executable, which runs on the same computer as the NoticeCast server, can be made to run. This executable runs as a service and so no user interface is available. But it can be put to good use to force IWR or Cognos ReportNet reports to run. If used in connection with the Write to database task passing a set of parameters, then the reports can be forced to run using the parameters as filter values. For example: produce a customer sales order history report for the sales rep advised of a new order.

Pass Control to Another Agent

Control can be passed to other agents, which then run according to their schedule. It is often very useful for the escalated agent to know the results of the previous agent run and again by use of the write to database capability and a temporary table this can be achieved.

CONCLUSION: KEYING IN ON SUCCESS

Timely, effective business intelligence is today a key contributor to competitiveness.

Event-driven BI delivers the next level of competitive edge. When the bottom line depends on what you do now as opposed to next week or next month, you need quick access to focused, accurate information. You have to know the transactional events that will trigger larger changes in your business, whether those changes lead to risks or opportunities.

By keying in on these trigger events, event-driven BI gives you exactly the information you need, when and where you need it. With event-driven BI as part of your overall business intelligence environment, you will be up-to-the-minute, informed, and ready for action.

ABOUT COGNOS

Cognos is the world leader in business intelligence (BI) and performance planning software for the enterprise. Our solutions let companies drive performance with enterprise planning and budgeting; monitor performance with enterprise scorecarding; and understand their performance with the reporting and analysis of Enterprise business intelligence. Cognos is the only company to support all of these key management activities as a complete solution from one vendor.

To help its customers maximize the value of their investment in Cognos software, the company offers award-winning support and services available around the world, through support centers located in North America, Europe and Asia/Pacific.

Founded in 1969, Cognos serves more than 22,000 customers around the world. Cognos solutions are also available from more than 3,000 worldwide partners and resellers.

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