Organizations have access to more data about their operations, customers and market than ever before, but most are unable to take full advantage of this information because problems and opportunities manifest themselves as patterns of discrete events, making it difficult to detect them, let alone understand or address them. To fully leverage the wealth of data at their disposal, organizations need to be able to identify the cause and likely impact of events and patterns of events, prioritize developing situations and respond to those that represent the most potential harm or benefit.

TIBCO BusinessEvents™ software helps organizations identify and address developing situations and trends by correlating massive volumes of data about discrete events and applying predefined rules to identify situations that require a response. BusinessEvents is then able to adapt running processes, initiate new processes and notify people when human intervention is necessary.

**AT A GLANCE**

**TIBCO BusinessEvents** is complex event processing (CEP) software that enables organizations to identify meaningful patterns among the countless events that occur across their business. By doing so the software helps organizations recognize and proactively address problems and opportunities sooner than would otherwise be possible.

**BENEFITS**

- Accelerates response to threats and opportunities by automatically identifying obscure but important relationships between seemingly unrelated events before they result in situations that impact customer experience or the bottom line.
- Improves resource allocation and problem resolution by helping organizations prioritize situations that require the most urgent attention based on a sophisticated analysis of likely outcome and secondary or indirect impacts.
- Applications include service assurance, fraud detection, logistics, compliance and security, among others.

**RECOGNITION**

- Bloor Research 2007 Gold Award Winner
- Intelligent Enterprise 2006 Readers' Choice Award for “Best CEP”
Modeling the Concepts of Events

BusinessEvents lets users construct UML-based models for describing applications, services and servers on which those applications and services are deployed. These models define the causal and temporal relationships between assets. By employing these models, the software can identify exceptional patterns, likely impacts and expected outcomes. For example, the concept model below describes causal relationships between event sources.

Modeling and Managing the States of Events

A UML-based “state model” describes how applications and services interact as part of activities and processes.

- Used for describing tasks, sequences of tasks (processes), and expected outcomes or “states” of tasks and processes.
- A state machine captures and stores in an in-memory database the status of events relative to causes, roles and expected behavior for instant correlation against other events. Data can persist for any length of time depending on how long an event is relevant.

The example below shows a state model for processing an order.

Application of Rules

The key to successful CEP is defining and applying rules that dictate the flow of information and responses as events play out in the context of the conceptual and state models described above.

- Rules editor lets IT staff define static and dynamic relationships among events within their enterprise and across their extended value chain.
- Users can specify the event or chain of events they want to monitor, the condition at which a particular event is important and the action to be taken when the condition is met.
- Rules can filter, correlate and aggregate events by applying constraints and threshold boundaries.
- Rules engine is based on industry-standard RETE protocol for familiarity and stability, but has been recompiled and tuned to support simultaneous application of thousands of rules to millions of events.

Flexible Event Capture Service

BusinessEvents leverages TIBCO’s legacy of leadership and expertise in developing software that supports event-driven architecture, a requirement for real-time business.

- Can capture and process events from within other vendors’ implementations of JMS, and other integration platforms including IBM’s MQSeries messaging software.
- Organizations can implement BusinessEvents in a non-invasive “layer and learn” manner to start measuring operational performance without defining models or changing the way users interact with applications.