Building the Event Driven Web
Agenda

- The Event Driven Web
- Paving the Road to the Event Driven Web
- Example of an Event Driven Mashup
- Where We Want to Be
Building the case for the Event Driven Web

- Proliferation of data sources
- Lack of time to process all available information
- How can we filter for the important information?
The Web Components of Event Processing

- **Event Notification**
  - Flight arrived, blog entry posted, profile updated . . .

- **Stream Processing**
  - Finding the needles in the Twitter/Facebook haystacks

- **Complex Event Processing**
  - Context-aware alerts: time, location, mindset
Use case: flight status information

- Many airlines only offer flight status by request

- User options
  - Call at strategic times (i.e. before leaving for airport)
  - Check online repeatedly
  - Just show up and cross your fingers

- What should things be like?
Someone is on the right track . . .
Everything can be even simpler, eventually

- 923 available APIs and counting
  - Amazon, Yahoo!, Google, Flickr, Amazon, iLike

- Platforms to analyze user context available
  - Facebook, OpenSocial, Google Calendar

- Services to analyze content available

- Applications to deliver content available
Paving the Road to the Event Web

- **Web of open, extensible systems**
  - Open APIs, platforms, event types

- **Component architecture**
  - Components help sense, enrich, filter, or distribute events
  - Type and location agnostic
  - Connected by local ESBs

- **Libraries of available components**
  - Enable easy application prototyping
Modular Components Enable Mashups

A New System

Processor Components

Sensor Components

Responder Components

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Distributed Component Architecture

- Web Service
- Physical System
- Process
- Serialization/Deserialization
- Data Transformer
- Enterprise Service Bus
- Local ESB
- Feds

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Local ESB Facilitations Communication

- Local ESB creates queues and connects them to components.
- Multi-threaded sensor
- Multi-threaded processing component
- Multi-threaded responder
- Shared input/output queue

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Single Process Feds Example


News Sensor

Spinn3r

Calais

Spotlight

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Single Process Feds Example

- Spinn3r
- Event Engine
- Calais
- News Sensor
- Blog Sensor
- Event Engine Responder
- RDF Parser
- Local ESB
- Metadata Retrieval
- Spotlight

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Detecting Events: Political Scandals

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Our Component Library

Sensor
- RDF
- Blog
- SixApart
- Spotlight
- Facebook

Processor
- Delicious
- Technorati
- Calais
- Digg
- Reddit

Responder
- Database
- Event Engine
- Email
- Mobile Phone
- iPod

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Where Can This Go?

- Enable consumer creation of event driven systems
- Mashup creators only get us part way there
- Popularity of mashups demonstrates the desire
Where We Want to Be

- Personal Broker
  - Personal event processing network for individuals
  - Receives events from the Internet and other Personal Brokers
  - Distributes events to user’s devices in a configurable, learning manner that takes advantage of all aspects of a user’s context

- Enables a global nervous system

- Responds to a web of events
Holistic Event Processing?

Event Sources: Facebook, Google News, Flickr, United, Digg, Craigslist, Amazon

Event Sinks: GPS, Computer, Phone, Car, TV, iPod, Email

Personal Event Broker

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Questions