

Data Routing Rather than Databases: The Meaning of the Next Wave of the Web Revolution to Data Management

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Abstract

What is going to be as important in the next 20 years as relational databases were in the prior 20 years is the management of self-describing extensible messages. The net is undergoing a profound change as it moves from an entirely pull-oriented model into a push model. This latter model is far more biological in nature with an increasing amount of information flowing asynchronously through the system to form an InformationBus. The key challenges for the next 20 years will be storing, routing, querying, filtering, managing, and interacting with this bus in a manner that doesn't lead to total systems degradation. Predictive intelligent filtering and rules engines will become more important than querying.

Driving factors for this revolution will be the need for push for portable devices due to their poor latency and intermittent communication, an increasing demand for timely information on fully connected devices, a huge rise in application to application integration through asynchronous messaging based on web services and a concomitant requirement for an entirely new type of message broker, and an increasing desire for intelligent agents to cope with information overload as all information becomes available all the time. The key enabling technology will be XML messages and the various technologies that will develop for handling XML ranging from transformation to compression to indexing to storage to programming languages.

Biographical Sketch

As VP of Engineering for BEA's Framework Division, Adam Bosworth drives the strategic and technical directions for BEA's WebLogic Workshop, WebLogic Integration, and WebLogic Portal products. Before joining BEA, he co-founded Crossgain, a software development firm acquired by BEA in 2001. Adam Bosworth is widely recognized as a pioneer and key figure in the evolution of XML. Prior to Crossgain, he was a senior manager at Microsoft where he drove the company's entire XML program from 1997 through 1999. He was then named general manager of Microsoft's WebData organization, a team focused on refining the company's long-term XML strategy. While at Microsoft, he was also responsible for designing and delivering the Microsoft Access PC Database product, and he managed the development of the HTML engine used in Internet Explorer 4 and Internet Explorer 5.

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**Proceedings of the 28th VLDB Conference,
Hong Kong, China, 2002**