Vodafone calls on IBM to streamline transaction processing.

A luxury item a few years ago, mobile phones now seem to be welded to the ears of everyone from business executives to teenagers. In the United Kingdom, the popularity boom is expected to result in mobile phone penetration of 60 percent to 80 percent of the marketplace by 2002. Projections call for 540 million subscribers worldwide in that year.

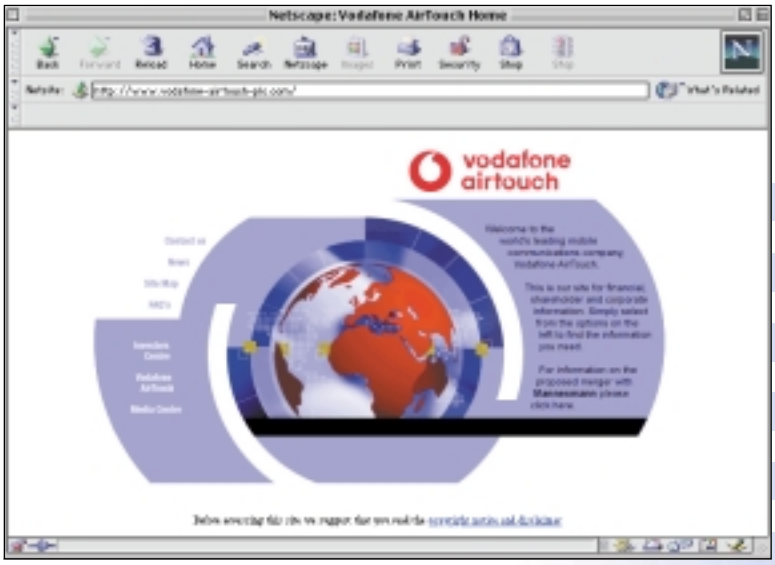
Application	Unibill: unified customer billing system
Business Benefits	Ability to process up to 24 million transactions per day; 100% availability during peak usage periods; integrated, scalable billing system; enhanced market responsiveness; improved customer service
Software	IBM WebSphere® Application Server, Enterprise Edition
Services	IBM Global Services

"The flexibility and scalability of WebSphere Application Server were instrumental in our design of a plug-and-play architecture that will allow us to add new functionality as our business grows."

–Hugh Fahy, Systems Manager, Vodafone

Such growth has helped mobile telecommunications giant Vodafone — in business since 1985 and the U.K.'s second-largest company — capture a 32 percent share of the U.K. mobile communications market. But along with an explosion of new customers and services came intense pressure on company billing systems — a real problem in an industry in which flexible and accurate billing is both a fundamental requirement and a competitive differentiator.

In 1996, Vodafone realized that only a consolidation of its multiple billing systems would allow it to keep pace with expanding business volumes. That's when Vodafone turned to IBM Global Services and IBM WebSphere Application Server, Enterprise Edition.



Vodafone used IBM WebSphere Application Server to design an accurate, flexible billing system for people on the move.

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The new solution, Unibill, unifies previous systems, leverages back-end legacy systems and makes realtime online billing information available to Vodafone's dealers. While originally designed to handle 12 million calls per peak day, Unibill and WebSphere Application Server regularly handle more than twice that number of calls during a single day.

Says Vodafone's Systems Manager Hugh Fahy about the company's challenge, "It was clear that we needed a system to accommodate usage growth and billing complexity as we increased the range of services available to customers. The flexibility and scalability of WebSphere Application Server were instrumental in our design of a plug-and-play architecture that will allow us to add new functionality as our business grows."

Streamlined transaction processing, satisfied customers

Built on a client-server architecture, Unibill replaces two legacy billing systems and several other internal applications. The first phase of the solution, Billing One, went into production last year after two years of design and performance testing. Constituting a middle layer between the mobile network and the billing domain, this phase cuts through complex mobile phone usage data, calculates the price of each call and creates an invoice line entry exactly as it should appear on the customer's bill. WebSphere Application Server manages the complex queuing of these transactions, enabling a quicker and more efficient transaction rate into Vodafone's database.

Unibill also assists with fraud control by spotting unusual usage patterns. And for Vodafone's business partners, the system offers realtime billing data over the Web. Rental customers can settle their bill at the return counter without needing to leave an "open" credit-card authorization. At the same time, dealers have the assurance that no outstanding and unbillable calls will trickle through at a later time.

The ideal solution for an unpredictable market

For mobile telephone providers, every call represents income — if it's accurately captured and billed. That makes the reliability and robustness of WebSphere Application Server vital to Unibill. First put to the test when Vodafone added 800,000 new customers in the 1998 holiday period, the system provided 100 percent availability.

The scalability of WebSphere Application Server also allows Unibill to retain a large contingency capability to accommodate future growth spurts. "Working in an industry where new business streams are regularly introduced, we need to be able to respond quickly to our customers' needs," says Fahy. "It was essential to build Unibill on a flexible, scalable middleware — and WebSphere Application Server was the right solution for the job."

This flexibility will soon allow the Billing Two and Billing Three phases of Unibill to offer near realtime transfer of call information to service and network providers. Transactional data will be collected to offer a picture of the application's performance, helping Vodafone staff spot opportunities for infrastructure improvement.

Other enhancements to leverage the transaction-handling capabilities of WebSphere Application Server are in the planning stages, too. "The mobile telecommunications market will continue to be unpredictable," notes Fahy. "With the help of WebSphere Application Server, Vodafone is readying itself for any eventuality."

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