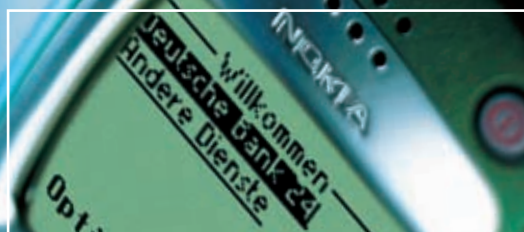


Nokia Wireless Application Protocol technology enables highly secured mobile transactions for Deutsche Bank



As the biggest bank in the euro zone, with more than 800,000 online-banking customers of Deutsche Bank 24 and another 50,000 Private Banking users being on-line, Deutsche Bank has responded to the explosion of WAP-based services by starting a pilot implementation in September 1999. The scheme enables selected customers to access mobile brokerage services with a WAP-enabled terminal. At the heart of these services is the Nokia WAP solution based on the Nokia Activ Server. In accordance with worldwide security standards, the solution is highly secure and implements Wireless Transport Layer Security (WTLS). The close co-operation between Nokia and Deutsche Bank made it possible to develop and deploy the WAP service within just a few months.

Deutsche Bank puts money on the move with WAP-based mobile banking and brokerage services

With over EUR 925 billion in assets as of June 30, 2000 and more than 93,000 employees, Deutsche Bank offers its clients unparalleled financial services in more than 60 countries throughout the world. It ranks among the leaders in asset management, capital markets, corporate finance, custody, cash management and private

banking. Deutsche Bank is divided into five major business divisions: Global Corporates and Institutions, Global Technology and Services, Asset Management, Corporates and Real Estate and Private and Retail Banking. The keys to the Bank's success remain constant: customer focus, the spirit of innovation, a broad range of product skills combined with technological power and financial strength delivered by highly skilled professionals. Deutsche Bank has committed itself to expanding its e-commerce offerings with their global-e initiative which co-ordinates e-commerce efforts across all business divisions.



New dimension of banking applications

Deutsche Bank identified and acknowledged the opportunities of Wireless Application Protocol (WAP) at an early phase. After an extensive evaluation, Deutsche Bank chose Nokia as its partner in enabling mobile banking. Dr. Robert Buchholz, WAP Project

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Manager of GTS/TEC-The Advanced Technology Group at Deutsche Bank: "Together with Nokia, Deutsche Bank succeeded in developing a reliable end-to-end WAP solution. This solution is compatible with future mobile banking offerings and ensures security of the highest level for on-line transactions."

Nokia supplied Deutsche Bank with the Nokia Activ Server and consulting services. Common goals and good co-operation between the two companies made it possible to develop and implement the WAP service within a few months offering selected Deutsche Bank and Deutsche Bank 24 customers access to mobile brokerage services with a WAP-enabled terminal.

Nokia provides end-to-end security

Deutsche Bank's WAP service primarily supports brokerage functionality, such as securities trading, price quotes and portfolio information. Therefore data security was of utmost importance. "One of the major reasons for our decision to co-operate with Nokia was that they were the only company able to provide the end-to-end security layer in place", explained Dr. Buchholz.

The Nokia security solution, including both WTLS and SSL support, provides end-to-end encryption from the mobile phone to Deutsche Bank's data center, to prevent eavesdropping and tampering. In addition, the solution includes WAP server authentication to prevent spoofing and misrepresentation. The solution guarantees that there are no points in the transaction where unsecured data transfer could take place. The data sent from a mobile terminal is decoded by the Nokia Activ Server, and any attempt to change or affect the sensitive customer information either "over the air" or on the server, will be immediately denied.

Deutsche Bank 
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Fulfilling everyday banking needs and more

By operating their own WAP servers in-house, Deutsche Bank can allow its customers to access services regardless of their mobile network provider. Moreover, this means that customers supply confidential information direct to the bank without involving a third party. Authentication of the server is provided by a certificate issued by TC Trustcenter, an independent certificate authority in Germany.

A further advantage of deploying WAP servers in-house is that Deutsche Bank can effectively prepare themselves for further development of WAP technology. "Deutsche Bank can smoothly transition to future upgrades of WAP", noted Dr. Buchholz.

Deutsche Bank emphasizes that WAP is very much a turnkey tool for everyday life enabling people to purchase stocks when having lunch in the park or perhaps to transfer funds while riding the bus home. "Wherever you are - in London, Paris or Sydney - you can get up-to-second information about the current development of your stock portfolio and can act immediately", Dr. Buchholz said.

In order to serve their customers most effectively, Deutsche Bank has also integrated features that make the use of WAP even simpler and more familiar. In addition to banking and brokerage, these include bookmarking, search engine and news services provided by third parties.

Nokia helps customers to leverage services and revenue growth in the fast-growing mobile environment

WAP-based technology enables the design of advanced, interactive and real-time mobile services such as mobile banking and Internet-based news services which can be used in digital mobile phones or other mobile devices. The WAP specification allows solutions from multiple suppliers to perform consistently and reliably for the end-user.

The Nokia Activ Server is the world's most recognized WAP platform targeted for the corporate market and transforms a static website into a powerful, real-time business and marketing tool. It connects WAP-enabled mobile handsets to content and services hosted by Internet or Intranet servers securely and cost-effectively. These may include e-mail, schedules, directories, contact databases as well as business specific applications.



To find out more about how WAP can help your business visit:
www.nokia/corporate/wap

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