

Enabling Technologies for Mobile 2.0

Christian S. Jensen

Abstract

The Internet has recovered from the dot-com crash of the early 2000's and now features an abundance of new, innovative technologies and services. We are also witnessing the rapid emergence of a communication and computing infrastructure that encompasses millions of people with mobile devices, such as mobile phones, with Internet connectivity. This infrastructure will enable the Internet to go mobile. Indications are that the mobile Internet will be “bigger” than the conventional Internet.

This talk describes the background, status, and aspirations of an ongoing research project called Streamspin that is concerned with data management aspects of innovative mobile Internet services, including push-based and context-aware services. The project envisions websites that enable users to easily create and share services, and that support the delivery of services to millions of concurrent users. Put briefly, the project aims to develop technology that enables sites that are for mobile services what YouTube is for video.

In addition, the talk briefly covers two geo-context services that are being integrated into the system. The first aims to enable users to build services that rely on the tracking of the continuously changing positions of populations of mobile-service users. The second aims to extend the geo-context of a user to include not only the user's current location, but also the user's (anticipated) destination and route towards that destination.

About the speaker

Dr Christian S. Jensen is Professor of Computer Science at Aalborg University, Denmark. He conducts research in the field of data management with a particular focus on temporal and spatial data management. With his colleagues, he has attracted many research grants and has authored or co-authored over 150 scientific papers. He received Ib Henriksen's Research Award 2001 mainly for his research in temporal data management and Telenor's Nordic Research Award 2002 for his research in mobile services.

He is member of the editorial boards of several top-rated scientific journals, including ACM Transactions on Database Systems and IEEE Transactions on Data and Knowledge Engineering. He has chaired the program committee of several international conferences, including the International Conference on Very Large Databases in 2005 and the International Conference on Mobile Data Management in 2007. He is a member of the Danish Academy of Technical Sciences and he serves in the Board of Trustees of the EDBT Endowment and the VLDB Endowment, which promote research in the field of data management. He also serves on the boards of directors and advisors for several companies and he serves regularly as a consultant.