Seamless Context-Aware Services in Converged Mobile- and Enterprise-Networks

Trend Report 2005/2006

CENTER FOR DIGITAL TECHNOLOGY & MANAGEMENT

CDTM

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The Center for Digital Technology and Management (CDTM) is a joint institution of the Technische Universität München (TUM) and the Ludwig-Maximilians-Universität München (LMU). This report was created by the CDTM students and is one element of a comprehensive research project, sponsored by Siemens Enterprise Communications GmbH & Co. KG. The CDTM is part of the Elitenetzwerk Bayern.

Preface

Mobile- and Enterprise Services and their convergence are becoming of increased importance in the near future. They will undoubtly achieve higher performance and user acceptance as available bandwidths increase (e.g. UMTS, HSDPA, WiMAX, DSL, Cable etc.) and (mobile) device technology achieves better I/O performance and power management.

Context-based services are the next evolutionary step concerning location-based services, nowadays primarily offered by mobile operators or existing as standalone GPS-receiver-based solutions. The new kind of services rely on special information derived from basic sensors and network technology (e.g. location, temperature, luminance, active/idle/offline state of devices) or even presence information such as connection flight time of arrival, traffic jam, meeting date etc. A lot of research has been done to develop context-aware services autonomously capturing the context/state of a person, object or general situation. These are however far from being realized due to the exponential growth in complexity of such services as the amount of context information used increases hence being far from market applicability.

This trend report tries to focus on currently available location- and potential "simple" context-services to be seamlessly available in both "fixed-line" enterprise and mobile networks, building upon existing application frameworks and architectures making use of readily and easily available context information derived from sensor and other network interfaces. Apart from their technical feasibility, potential application scenarios and corresponding business models, hence market applicability and window of opportunity are pointed out in this CDTM trend report.

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Building on the strengths of two prestigious universities, CDTM provides highly qualified and ambitious students with an excellent academic education in the field of technology and management.
As a research institution, CDTM closely cooperates with the industry, concentrating on the TIME-sector (Telecommunication, Information Technology, Media, Entertainment).

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