

Mobile User Service Environment

An Architecture for Service Provisioning in Future Networks

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1. Introduction

Today we experience fast changes of our private and professional environments. Recent years have shown a high request for mobile communication technologies in the professional as well as in the private life. Information exchange between any places in the world has become a substantial part of our working environment.

Looking at the current world of the Internet and the possibilities of the new emerging network technologies we are finding a new picture in the business interaction between users, the network operators and 3rd party providers for value-added services. The user searching for new services on one side and the provider of those on the other side are the driving forces in the future market for a world of new and exciting services and applications on the Internet. Today, searching through the variety of services and provisioning to the costumers are unsatisfied for user and service providers.

On the other hand, development and installation of new network technologies are combined with high costs for network operator and equipment vendors. In addition, a highly heterogeneous environment will be provided which leads to open platforms and decomposes the application development from the underlying techniques.

Struggling for a well-defined new interaction between operators, service providers and users a *service-provisioning platform* as a new infrastructure could provide a significant advantage. It works as a global mediator between these three business partners with benefits for all of them. The operator as the possible holder of such a platform enters a new field of business relationships to users and service providers. He provides the user with the unique possibility to create his own personal environment and access it from anywhere and anytime he likes. He even is able to use it as a one-stop-shop in his search for new and exciting services and applications for his professional and private needs.

Otherwise, the operator in his new role as a service manager permits service providers to be concentrated on service creation and offer them the possibility to advertise their services to potential costumers and manage them including secure service downloading and charging.

In this paper, we present the *Mobile User Service Environment* (MUSE) as such a flexible service-provisioning platform that manages the provisioning of personalized, dynamically combinable complex services in a mobile environment. Next sections of this paper present the new challenges in service management and afterwards show the technical overview of the MUSE architecture. Describing our architecture we will mainly focus on the service concept and its composition technique. The last section shows conclusions for our future work.