

Objectives of P1118: Bluetooth access, a promising Access Technology to Ubiquitous Computing Services

Josef Noll

Telenor

Phone: +47 9083 8066 / e-mail: josef.noll@telenor.com

Abstract

The EURESCOM P1118 project was set up in January 2001 to develop, implement and demonstrate Bluetooth Access as a technology to ubiquitous computing services. A Bluetooth access will provide the customer with a flexible access, supporting voice and multimedia services. Authentication is one key issue in the project, as it will allow a secure access and opens for personalised services.

Each user will in the close future have devices like mobile phones, PDA, Laptop, Camera, which form his Personal Access Network (PAN). Bluetooth is the major enabler for interconnecting the personal devices and for communicating in a Ubiquitous Computing environment. On the way from mobile telephony to broadband wireless communications beyond 3G, Bluetooth will enable a personalised access, and will enable the *Personal Service Society*. Today's customers have the chance to find almost all the information they require, but they must know where to search or which services they have to select. This *Networking Society* is of limited use for the customers, as they get overloaded with useless information when searching for relevant services. The new *Personal Service Society* has to provide the customers with information related to his wishes, his role, his communities, or in general terms his preferences.

The ability to provide personalised services is essential if operators want to keep their customers and increase the revenues by value-added-services. These services have to be provided across various access networks. A new thesis is introduced through the project, the thesis of the *Open Access*. Each access point is treated to be open and access is provided based on appropriate authentication.

Table 1 - Public Access, extended to the open private access

| | | |
|---------|------------------------|--|
| Private | Private visited | Temporary visitor to your home |
| | Open Privat | Everybody who is in range can use the access |
| | General Private Access | Priority for permanent residents of house |

The project has identified four categories of places where Bluetooth Access may be used: Private (at home – see table 1), Semi-private (e.g. in a hotel, club, with access for a limited group), Corporate (access at a company's premises) and Public (access in a public place). An open access at all these places will be of benefit for both fixed network and mobile network operators. Fixed network operators will see a better usage of their network, as they can provide high data rate services at potentially lower prices compared to the mobile network. Mobile operators will profit from the open access, as the mobile phone will be the tool to authenticate the user to the network. This authentication will allow an access to 3G services even at places without 3G coverage, and opens for value-added-services.

Major working areas of the project are the authentication based on the SIM-card of the mobile phone, the spread of authentication information amongst the elements of the PAN, and the use of IPsec/Radius for corporate access. Examples demonstrating the achievements in these areas are given by project participants during the workshop.

