

User experience challenges of mobile office communication solutions

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(Until December, 2003)
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Abstract

Mobile office communication solutions are emerging. In many cases, these replace traditional, corporate PBX-based communication systems, characterized by convenience, excellent ergonomics, reliability and high complexity of voice communication facilities. Integrated mobile and IP-enabled solutions are assumed to converge fixed and mobile network services, improve corporate communication solutions by adding aspects of mobility, personalization, integration, and unified application access and cost control. This paper could not be completed on time. Therefore, during my presentation, I will examine if this is the case, considering key user communication requirements and suggest necessary improvements, based on end user feedback from early deployments of mobile office communication solutions during the last years.

Key words: Corporate telephony, mobile office, and communication solutions

1. Background and introduction

Telecommunications, converging with information processing, intersecting with mobility and Internet, is leading to the development of new, interactive applications and services, offering global access. Technological convergence and market pressure tend to make converged ICT applications unnecessarily complex and feature-rich.

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In my presentation, I will address both kinds of mainstream solutions:

- Operator-provided: a mobile national or wider area Virtual Private Network (VPN) in combination with corporate telephony services, applications and personal assistance services and
- More advanced Customer Premises Equipment (CPE) based solutions (where the mobile network is only used for access purposes), offering corporate telephony

features, one-number addressing, multi-modal unified communication applications, integrated mobile data applications and roaming.

Analysts claim that 40% of people with a business phone (an estimated 35 Europeans) will use mobile e-mail in 2008 – compared with less than 1% today. Enhanced services and applications such as unified communications, conferencing and business application integration are likely areas for market development.

Integration with the corporate PBX communication environment must add *real* values, such as increased simplicity and efficiency and avoid being perceived as a heavy, complex or unnecessary burden, resulting in under-usage. The cost control argument, valid for the customer, is not reason enough on the end user level.

Extension of feature reachability through new access technologies does not automatically guarantee success when migrated into a different user category, without adaptations to the (unavailable) proper conceptual model and suppression of well-known functionality (e.g., SMS).

2. Key issues

2.1 User requirements

It is almost impossible to offer a good user experience without developing and segmenting solutions with key user group characteristics in mind. Therefore, some important user segment attributes will be presented:

- Users of office desktop-level communication are mostly stationary white collar workers. They have easy access to required information and services needed during office hours (corresponding to work hours), directly accessing features and services through assigned feature keys. They are used to a highly qualitative, convenient and reliable experience.
- Mobile users require the convenience and efficiency of the above. However, when on the move, mobile users do and cannot focus on their device and communication per se, in the same way as when they are sitting in front of a desktop phone. Mobile users have less "mental bandwidth", capacity for absorbing and processing content, than stationary users since the interaction with the mobile phone often is reduced to a secondary task that must not interfere with their primary task (e.g., driving or walking). This means, mobile solutions must be *more* easy to use!
- Users of mobile terminals in a fixed office environment belong to a mixed scenario, combining strengths and limitations of both above scenarios. Most often, a hardware add-on is required as a minimum to provide ergonomic convenience. The overall user experience often depends on technical characteristics and personal beliefs.

As far as functionality is concerned, the mobile, stationary and mobile/stationary users have different needs and require segmented, tailored solutions.

2.2 Technological challenges

The main problems with today's mobile enterprise communication solutions are typically *not* within the user interface and interaction design of certain applications or features. The most serious problems depend typically on:

- The product concept definition level, including the solution baseline- both on system and functionality level- not user focused and too complex, reflecting heavy technical orientation and lack of understanding of the use situations and contexts of use;
- The quality of the technical implementation: must be provided beyond the level of user acceptance, for a satisfactory user experience.
- Miscellaneous areas with a strong impact on the user experience, such as:
 - Installation
 - Configuration
 - Support
 - User guidance and training

2.3 Mobile phone support

As of today, even entry-level enterprise voice mobility users experience severe usability difficulties on the basic access and interaction level. Known examples are the activation and use of service codes to be recalled and entered by heart, instead of directly accessed from a menu (difficult to provide on low-volume mobile handsets).

A recent trend defined by major operators and vendors is device user interface customisation and pre-configuration, achievable through a number of ways with a non-homogeneous set of strengths and weaknesses:

- SIM AT, a SIM card programming technology
- Native operative system programming
- On-line support through a WAP portal
- Skins
- JAVA uplets

References

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