

## Chapter 38

# How to Design a Virtualized Platform?

### A Socio–Technical Study about the Current Practices of Teleworking

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#### ABSTRACT

*In this chapter, the authors present the project “WITE 2.0.” This project is at the crossroads of various issues related to mobility (Urry, 2007) and use of Information and Communication Technologies. WITE 2.0 is a part of the designing process of a collaborative communication tool: “a virtualized and unified platform.” The authors define scenarios of teleworking practices, “equipped” by ICTs, and use these scenarios to better specify the platform. The project started at the end of 2010 and continued for a period of 18 months. The analysis is based on several complementary methodologies: a qualitative study (47 semi-structured interviews) and an experimentation of the platform. They present the main results of the interview survey through the following themes: remote management, skills, articulation of private and professional spheres, and the maturity of technologies. The authors also describe how these elements help the understanding of the evolution of workers’ practices.*

#### INTRODUCTION

The project WITE 2.0 (Work IT Easy) is a research and innovation program supported by public funds as well as being a multi-partner project (academic and industrial actors).

The aim of this project is to create a virtual platform. This platform represents a unified work environment, based on virtualization, instant communication and system interoperability. Furthermore, it allows individuals to work anywhere (and possibly at anytime).

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## ***How to Design a Virtualized Platform?***

The platform is a software solution that centralizes the access to a set of functionalities, originally offered by several applications: this being the principle of unified communications. Unified Communications (UC) is the integration of real-time communication services such as instant messaging (chat), presence information, telephony (including IP telephony), video conferencing, data sharing (including Web connected electronic whiteboards aka IWB's or Interactive White Boards), call control and speech recognition with non-real-time communication services such as unified messaging (integrated voicemail, e-mail, SMS, and fax).

This platform is accessible from any connected terminal, either fixed or mobile (desktop, laptop, tablet, smartphone, etc.). The WITE 2.0 platform will provide a wide range of communication tools that can be activated on demand in different situations, and depending on user needs (VoIP, discussion groups, instant messaging, email, etc.).

The project has four main stages, divided into several subsections each. It is supported by a socio-technical analysis. Telecom ParisTech has assumed leadership in the scientific study of the needs and uses by administrating semi-structured interviews with individuals regularly working "remotely." We wanted to better characterize these work situations: at home, on the premises of the employer but in geographically dispersed locations: in telecentres/co-working spaces/business centers, with geo-distributed teams working together.

## **DESCRIPTION OF THE WITE 2.0 PROJECT**

### **The Project Issues**

Mobility at work is spreading in the context of the mobility paradigm evolution (Thomsin, 2002). The project WITE 2.0 intends to address the urgent need for solutions in the field of remote collaborative work. These needs include ways of collaborating, communicating and socializing, as well as accessing these features regardless of location, and from any workstation. It will provide a unified interface integrating all features, and have a wide range of communication tools selectable on demand.

### **The Project Phases**

The WITE2.0 project is divided into four major phases. The first concerns the study of employee needs and uses, for remote collaborative work. In order to capture the needs and uses, we conducted a qualitative study based on 47 semi-structured interviews. The object of this phase was to highlight the varying kinds of remote collaboration in order to make recommendations related to the design of the platform. The results are published in the report "Work, socialize and collaborate remotely" (Fernandez *et al.*, 2011). The main results of this report focus on ways of socializing in a teleworking context, the question of remote management, and on the technical skills needed for the use of ICT. The recommendations focus on the access to digital resources, business information systems, and on issues related to security.

The second phase of the project focuses on the technology. It is divided into two parts. The first part consists of the writing of functional and technical specifications of the WITE2.0 platform. This document contains descriptions of service needs, and a comparison of various existing virtualization solutions. We have noticed that, since the launch of the WITE 2.0 project, some other virtualization solutions have

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