Chapter 102

Software Engineering and New Emerging Technologies:
The Involvement of Users for Development Applications for Tablets

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ABSTRACT

This chapter presents an approach to the role of software engineering in developing solutions for new mobile technologies, like tablets. It discusses the importance of the new standards brought by emerging technologies such as engineering and how software must adapt to this new reality in order to identify the needs of data, information, integration, shares, and other issues that will contribute to the life cycle of these solutions. The chapter also discusses the contribution of users in the development process and improve these solutions. The research method is the case study conducted in industrial companies that use a digital catalog solution and sales force automation for tablets. This chapter presents a new approach based on commercial tablets which is supported by a platform of software and services called commercially Nimiam (www.nimiam.com.br).

INTRODUCTION

In the current globalization and competitive scenario, now-a-days the organizational structures in manufacturing companies are objects of big changes, aiming to become closer to the customer needs and even to expand its services offers, whether these services are connected to tangible goods or not. In such state of affairs, new available technologies appear as a partner for the offer of products and services, whether for manufacturing industries that add services to products or simply for services companies.

With the advent of tablets, specifically the iPad Apple, there is a creation of a new category of intermediate mobile devices from notebooks to smartphones. Sato (2011) comments that these new portable devices with touch screens make the connectivity and access easier to multimedia content, like: videos, photos, text, email, etc., thus transforming the way we deal with and seek information. In this context,

software solutions available for computers and notebooks have to be rethought and redesigned to utilize the full potential of tablets. According to an article by Gartner (2012), tablets feature a wide variety of business opportunities and a new design paradigm that requires new policies, technologies and skills.

As per the research carried out by Strategy and Analytics (2012), the global market for tablets reached 25 million units in the second quarter of 2012. Apple increased its shares holding to 68 percent, reaching its highest level in nearly two years. The Microsoft tablets remained a niche solution, but future may see changes with the attention focused on the upcoming release of Windows 8.

In a world of stiff competition, commoditization and constant search for new and contemporary brands tend to create associations related to cutting edge innovation. The advertising aesthetics constantly seek to associate their brands atmosphere to modernity that involves tablets, especially the iPad by Sato (2011). In this time of rapid changes in social practices, political and economic environment, technology plays a key role to create new opportunities and ways of doing business.

A customer is getting less and less of time at the moment of buying a product. In other words, customer has limited time at the time of making purchase. That is why the information of products and comparison between companies must be shown with agility and must also create curiosity and enchantment. Currently many salesmen, even with the use of traditional solutions of Sales Force Automation (SFA), still take orders manually in front of a client and type it later on the computer system. Motivated by these phenomenon and ideas, a full commercial software platform is created which is based on tablets (called Nimiam) and presented in this chapter.

The chapter aims to present a new commercial approach based on new technologies demonstrating its contribution to the innovation process for sales and marketing and also for providing allied services to the products offered by companies manufacturing goods.

After the bibliographic research of the most important themes connected to the subject, that is: services characteristics, innovation, the contribution of information technology, the following research questions are addressed, which will be the key to the development of this research based chapter.

- What is Nimiam solution?
- How to identify the importance of software engineering in developing solutions for new technologies and identify the need and contribution of users in the development process and improve these solutions?

The research is carried out considering two companies, one from the Brazilian footwear market and the other from Brazilian linen market, and has the aim of analysing the use of emergent technologies; that is tablets, with the innovative approach of sales and marketing to offer new services. In the case studies, a solution named 'Nimiam' of digital catalogues will be presented and its effect on strength of sales through tablets will be analyzed.

BACKGROUND

Software Engineering and Mobile Application Development

A software engineering as a process by which an individual or team organizes and manages the creation of a software-intensive system, from concept through one or more formal releases (Wasserman, 2010).

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