Chapter XV
Walled City to Wireless City

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ABSTRACT

This chapter outlines the journey that the city of Londonderry (Derry), Northern Ireland, undertook when converting a traditional walled city to a technology-enhanced wireless city. The chapter presents an overview of the three project strands, namely wireless city (civic aspect), wireless walls (tourism aspect), and wireless campus (educational aspect), along with the contribution made by each partner organization. A detailed case study of the educational element is presented, employing a dual qualitative/quantitative research approach. The case study focuses on the experience of one academic member of staff in using the wireless initiative via Tablet PC and SMART classroom. Quantitative analysis to gain insight into usability of wireless networking services and wireless technologies is presented from both a staff and student viewpoint and finally conclusions are drawn on the overall project experience. The project successfully, completed in December 2006, has received a number of awards for its innovative approach.
INTRODUCTION

In August 2004 an exciting and innovative project, the Flagship Broadband Project was launched in Northern Ireland. The aim of this project, which attracted funding to the value of £1.38 million sponsored by the Department of Enterprise, Trade and Investment (DETI) Northern Ireland, under the EU Building Sustainable Prosperity Programme, was to create a wireless city in Londonderry (Derry), a city situated in the North West of Northern Ireland. The project entitled “Walled City to Wireless City” was an innovative partnership between three partners, namely Derry City Council, the Intelligent Systems Research Centre (ISRC), University of Ulster and the North West Institute of Further and Higher Education (NWIFHE). The aim of the Flagship project was to create an innovative ‘wireless city’ incorporating a range of civic, tourism and educational aspects. There were three aspects to the project, namely, wireless city (civic aspect), wireless walls (tourism aspect) and wireless campus (educational aspect). The project completed in December 2006. As the authors of this chapter are researchers within ISRC, the focus presented is from an educational perspective based on a case study of wireless campus implementation.

This chapter will commence by presenting an overview of the partners involved in the project (Section 2) and briefly detailing the contribution of each to the project (Section 3). The chapter continues by focusing on the educational aspect of the project by presenting a case study of wireless campus implementation. This case includes three distinct but complementary components, namely wireless networking services on and off campus, the piloting of a Tablet PC mandate initiative and the development of SMART classrooms. Practical application of educational tools to support the implementation is presented (Section 4). Research undertaken to assess the impact and success of this initiative is presented (Section 5) and conclusions are drawn on the overall experience (Section 6).

This project has been a very successful achievement for each of the partners involved, and has won a number of awards including the Best Wireless Project in the Communication in Business Awards 2005 and two categories (namely Education, sponsored by Hewlett Packard and Mobile Technology (WiFi), sponsored by BT) in the 2006 BT Goldeneye Awards.

PARTNERS

The Walled City to Wireless City Project works with its stakeholders to realise the full potential of Derry as a Regional City, driving forward economic change in the North West. To incorporate the various strands of the project (wireless city, walls and campus) three project partners were involved, these are outlined below:

Derry City Council

Realising Derry’s potential is the central aim of the Economic Development Strategy of Derry City Council. The Strategy identified that the City and its region require significant local and external intervention to build its physical, human and capital resources. The Council’s Economic Development Strategy identified twelve strategic priorities for intervention. These priorities underpin the development of all the sectors of the local economy. Addressing these priorities is essential to the development of Derry as the key strategic employment location of the North West and as the central focus of the North-West Development Corridor between Letterkenny and Coleraine. The Strategy also identified six “strategic development zones”, the functions of which underpin the City’s capability to drive forward economic change in the North West. This demonstrates that the Strategy is...
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