Connecting the real and the virtual world: a discussion on measuring digital cities impact

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Abstract

The *Gaia Digital* project is a three-year digital cities project within the *Portugal Digital* Initiative, a program related with the *Information Society operation program* framework. It provides a digital city counterpart for Vila Nova de Gaia, with around 288000 inhabitants, considering 2001 figures.

The *Gaia Digital* project is focused in offering an environment to involve as much as possible both the local population and other people interacting with Gaia related and/or based activities.

A central issue to the success of the project is bringing together people to use and adopt Gaia Digital features in their day to day life. This paper argues that the definition of social indicators of use and potential use for particular applications can take advantage of the social presence concept to both assess and measure impact. In particular, a number of issues concerning the strategy to how the real city can be connected with it virtual counterpart can be informed by social presence issues.

Introduction

A definition of what are digital cities may be difficult due to the lack of a common definition (Bastelaer and Lobet-Maris, 1999). However the same authors

advance that the term is used to "*qualify the rapid growth of information and communication technologies that is currently transforming advanced industrial cities as well as to designate on-line services - mostly services available through the World Wide Web - managed by municipal government, businesses, citizens or users and which either present local content or use the urban metaphor to facilitate user understanding*".

As introduced by Ishida, people spend their incomes within a close range from home, as the case of the US, where 80% of incomes are spent within 20 miles from home (Ishida, 2000). The same author defends that networks of people with the same problem are more valuable and that digital cities provide the infrastructure for networking local communities. Although this approach seems to consider physical proximity as the most important fact, one alternative opinion is given by Rheingold, who argues that communities tend to be thematic and surpass geographic restrictions (Rheingold, 1993).

Ishida compares different digital cities according to its goals, architecture, technology and organisation. It concludes that digital cities provide an opportunity to people to create a new information space for their everyday life (Ishida, 2000).

Gurstein defends that digital cities must provide resources to fulfil a number of requirements such as community Internet Access, community information, community service delivery on-line, community participation on-line, community e-commerce, community learning networks, community and regional planning, and telework (Gurstein, 1999). This author defends a strong sense of community within the digital cities context.

Overall, from a number of experiments as reported in the literature, it seems that digital cities can be considered as platforms to fostering the creation of community networks. Additionally, digital cities allow the development of new forms to local communities reinvent the day to day life in their own place, but connected within a global context where they now can interact, referred as the *glocalisation* phenomenon as presented by Bastelaer and Lobet-Maris (Bastelaer and Lobet-Maris, 1999).

The Gaia Digital project

Gaia Digital is a three-year digital cities project. Its main goal it to propose a digital mediation infrastructure to support information exchange that originates or has been conceived to be used in Vila Nova de Gaia. The digital mediation is made possible by the creation of an Internet space named Gaia Digital composed by a set of integrated digital structures. Each digital structure has its own identity and design and follows specific processes to promote both the information collection and its dissemination.

The project promotes the investment on people, actions and organisation skills:

- Eases and promotes citizen access as individuals and organisations or been local citizens or people on transit to information, goods and services from the Vila Nova de Gaia region. Gaia Digital acts as information intermediaries - *infomediaries* (Hagel and Armstrong, 1997);

- Promote the communication between local authorities and citizens. This will foster democracy and provides universal information access, that in turn, may increase citizens life quality by offering better services - a typical e-government concern (Gronlund, 2002);

- Foster the local economy by promoting the use of electronic commerce practises. In particular, allow the necessary conditions for a cultural and organisational revolution concerning processes and practises (Barnatt, 1997);

Final remarks

The Gaia Digital project follows the digital cities concept. Its main motivation is to propose a social approach to link the current physical place and its community with a digital counterpart and extend it to support the community interaction with also other people been in Vila Nova de Gaia or outside the city limits, offering a place where people can met together.

The Gaia Digital lemma is "*Digital Gaia, a cup of ideas*". This reinforces the role that innovation (both technology and its applications) and people participation

may have in all aspects of the Gaia Digital project. As proposed by Hagel and Armstrong, "*The members of a virtual community are its real creators*" (Hagel and Armstrong, 1997).

The Gaia Digital environment does not propose an alternative place or a digital place to be there, but an integrated and linked new medium to foster people interaction. Thus the social approach to the digital cities concept where technology follows information needs and information just exists to support people interaction. For instance a number of issues concerning the social presence concept (IJsselsteijn and Harper, 2001) need to be considered to inform both the design issues related with Gaia Digital applications (the virtual) and its overall strategy to involve the city (the real).

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