

**No Man is an Island (Even in the Virtual World):
TheOnline_Communities Project**

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RESUMO

This article is based on the results of various research projects on the use of Information and Communication Technologies (ICT) to reduce the digital divide in poor neighborhoods at Nomads.usp Research Center (Center for Studies on Interactive Living, www.eesc.usp.br/nomads). Among them is the Online_Communities project, which has been financed by the São Paulo State Research Funding Agency - FAPESP since 2004 involving four research groups from both the Architecture and Computer Science departments at the University of São Paulo and various public and non-governmental organizations. The Online_Communities project proposes a diversified approach in order to cover the different aspects of the conception and implementation of a specific geographical complex communication system in a mixed reality scenario. It includes its network, the requalification of a local telecenter, meta-recycling activities, setting-up a graphic interface and presenting some workshops.

No Man is an Island (Even in the Virtual World): The Online_Communities Project

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This article is based on the results of various research projects on the use of Information and Communication Technologies (ICT) to reduce the digital divide in poor neighborhoods at Nomads.usp Research Center (Center for Studies on Interactive Living, www.eesc.usp.br/nomads). Among them is the Online_Communities project, which has been financed by the São Paulo State Research Funding Agency - FAPESP since 2004 involving four research groups from both the Architecture and Computer Science departments at the University of São Paulo and various public and non-governmental organizations. The Online_Communities project proposes a diversified approach in order to cover the different aspects of the conception and implementation of a specific geographical complex communication system in a mixed reality scenario. It includes its network, the requalification of a local telecenter, meta-recycling activities, setting-up a graphic interface and presenting some workshops.

Keywords: Public policies; Brazil; digital divide; collaborative network; interface.

“Dwelling is not sleeping on an immobile bed, but to live in a familiar environment. Home is not a fixed place, but the point of support trustworthy.” Villem Flusser

Information is what changes us

“The world is in trouble and society’s institutions seem less and less able to cope with the problems. Increasing complexity means more variety and increasing uncertainty.” These are words written by Stafford Beer (1975) in the 1970s. Today, a growing complexity together with a generalized mistrust of governmental institutions to solve problems and to

improve life conditions is at the forefront in countries such as Brazil. Its society is largely affected by both poverty and imbalanced urban development, and the quality of life is related to conditions as fundamental as food supply, public security issues, health assistance, to name but a few. However, experiences show that the expected external government intervention in these cases does not bring about the necessary changes to break established dysfunctional



Figure 1
Aerial view of the Cidade Tiradentes neighborhood

structures. Furthermore, we believe that the access to information and engaging in conversation as a result of a better organization of activities and opportunities should integrate the part of basic supplies.

Nomads.usp interests in mixed reality spatialities cover five scales concerning processes of living: of environments only existing within digital media, of the extended body with computerized devices, of everyday objects and pieces of furniture with integrated media, of buildings treated as electronic interfaces, and finally of the computerization of urban fragments. In relation to the latter, the inclusion of geographically situated communities in mediated communication processes, as in the case of Online_Communities project, could help the local population to become organized in order to solve

problems in common. They could also discover new levels of sociability maybe hidden in the physical world. Between the electronic agora and the urban art media work, collaborative interfaces would propose nuances and levels of complexity for the city's concreteness.

In order to formulate public policies to improve the quality of life of a community living in very poor conditions, a district of São Paulo city of a "large-scale peculiar 'imbalanced' urban development" (Price, 1984) was chosen. Some initial questions which motivated the researchers to integrate the multidisciplinary project team were "how do we promote access and circulation of information?", "how do we transform this into knowledge enabling people to act inside an

unequal situation?” and “how do we design tools for acting actively?”. There is surely a high degree of risky decision making by proposing the use of information and communication technologies in a public policies project for social inclusion. As Niklas Luhmann (2007) explains: such projects need constantly updating and checking, related to invention and economic as well as human knowledge limitations.

The Online_Communities project does not preview building construction or urban physical interventions, but it proposes a diversified approach in order to cover the different aspects of the conception and the implementation of a complex communication system in a mixed reality scenario. This includes its network, the requalification of the telecentre, meta-recycling activities, setting up a graphic interface and presenting some workshops. Technological solutions have thus been proposed in order to create a virtual collaborative network, as well as to support interaction towards encouraging users to participate. The system is designed to be open and self-sufficient, independent from its designer team and able to evolve, to be “a self-organized system that must be always alive and without finalizing, since conclusion is another name for death” (Beer, 1975).

Furthermore, the project is exploring ways to put in relation remote and presential communication in order to foster mutual enrichment between virtual and concrete worlds. The aim of the project is to stimulate dialogue and debates, to broaden social interaction and to encourage economic and cultural activities by adding a virtual instance to the community's everyday life. It also intends to evaluate the effects of technological mediation of social relationships, both inside and outside the community, within the physical urban space and in inner space dwellings as well.

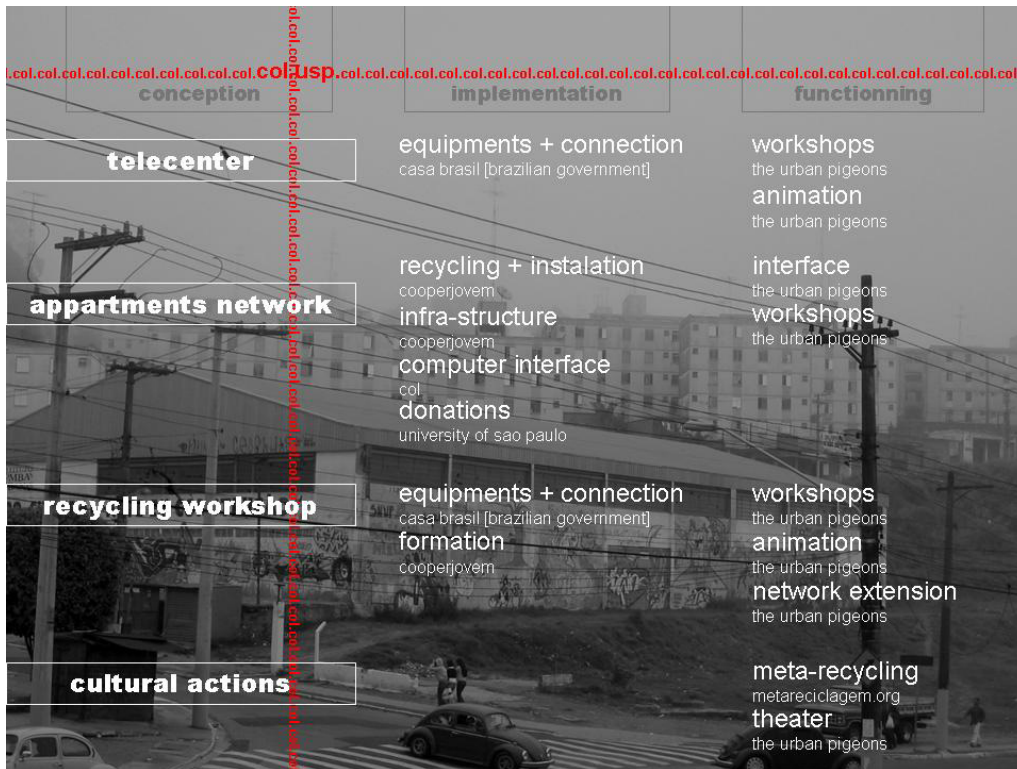
For a detailed description of the project, please see Tramontano, M. and Santos, D. M. (2005), presented at eCAADe'05 in Lisbon. The project website is www.eesc.usp.br/nomads/col/.

Online_communities, re:viewwed

The two initial public government partners, the São Paulo Metropolitan Housing Company and the e-Gov Division were of little help for our proposal because of political discrepancy and priorities. Today our main partner is an NGO called The Urban Pigeons Institute, founded by the theatre director, Lino Rojas in 2002. Since then its mission has been (in the words of its coordinators) “to stimulate activities in the social, artistic, educational, environmental and health prevention fields, together with low income communities, constructing the strength of local cultural identity and the understanding of the people about their needs and potentialities, to promote the growth of their human capacities and to solve common problems in a collective way.” (Nomads.usp, 2005)

There are many convergence points concerning the interests and objectives between the Institute and the Online_Communities project. First and foremost, both are researching a place to create strategies for social inclusion which not only focus on professional capacity, but also generate knowledge and income concerning the integrity of the people and their consciousness as citizens of a wider collective. Their physical space houses a new telecenter, conceived as a place to organize and capacitate its users for collective creativity. It will integrate the server of the project's network, which will connect it with its district neighbors, and then with the community as a whole, its institutions and organizations, but also with the city, the country and the world. The team also recruited the CooperJovem and Metareciclagem.org groups which are specialists in recycling obsolete computerized equipment in order to create new ones. They are responsible for organizing workshops and professional ability in terms of the use and conception of open source software and putting together meta-recycled computers. This is a way of qualifying the local youngsters to include them in the process, as well as helping to make the network grow and giving support to the community.

Figure 2
General scheme of Online
communities project [COL]



The concern for low-cost and low-tech made us prefer meta-recycled computers, assembled from obsolete computers donated by the University of São Paulo.

We are currently testing the collaborative interface from the inhabitants' homes co-operating with them, providing a meta-recycled computer and a commercial internet connection to be used until the end of the project. The so-called intervention group spans almost a hundred apartments. At the same time, we are planning various activities with the Urban Pigeons Institute and the inhabitants of the specific neighborhood to encourage the latter to use computers and understand the network as a meeting place for communication, education, and exchanging information as well as knowledge in a

decentralized and recursive way. The hopes are that this initiative will not stop by the end of our research contract, but that it will survive through its users, and will be a potential place to include a growing number of people.

The questions of viability, recursivity and decentralization in relation to technological choices, infra-structure and the virtual network are central issues to ensure that the inhabitants from this poor district participate.

Preliminary conclusions of the project point out three aspects: 1. The network must be designed as a very flexible structure which can be both altered and filled with personal or collective-created content. The use of free, open source software makes it possible to undertake such changes in collective

workshops, and moreover it helps to develop professional abilities in computer programming; 2. For the inhabitants, putting their own content online has a double aim: to transform users' activities with media into a very personal experience which will become part of their narratives and to foster their critical view about the information they generally encounter on the net; and 3. Equipment production, repairing and updating can be done by recycling obsolete computers, also called meta-recycling, discarded by private companies and governmental departments. In our case, similarly to the activities of software programming, recycling can produce knowledge and bring funds to the community. As additional results, it will make the users more familiar to the universe of computers by gathering people in technical workshops.

In order to stress the cultural aspect of these actions, it is favourable to have a local organization such as the Urban Pigeons Institute which is already established in the neighborhood to play the role of a centralizing agent, housing the workshops physically and organizing collective activities. Non-governmental organizations, community centers or public telecenters can not only add new organized activities to their schedule, but they can also enrich the already planned events by computerization. The expected results are: 1. to adjust computerization to the community's practices and needs, and not the contrary; 2. to stimulate a new sociability among residents of a specific urban fragment, and also between them and internet users in general; and 3. to induce a change in individuals' behaviors by encouraging them to participate in the life of the community, by the recognition of oneself as a member of a collective body, and by the understanding that this collectivity is a part of the whole society.

From interaction to organization

Recently, various virtual communities have emerged on the Internet putting individuals in contact around the world, in sites such as Orkut and LinkedIn. The users of these sites often identify themselves by their

geographic locations, unlike instant communication programs such as messenger or chats online. Manuel Castells (2003) invites us to think of the role and the influence of media as organizers of whole societies. He mentions studies showing that remote meetings supported by such sites are often followed by personal relationships also in concrete space. Not planned by interface designers, such consequences are supposed to be very welcome in western urban societies with ever increasing individualism. However, their influence in social life is still to be measured, even though in small geographic-based urban communities with access to the Internet in different countries, little influence in local situations has been noted. The communication processes proposed by these sites seem to remain limited to the virtual world and associated to the individual use of computers. It reinforces individualistic practices.

The Online_Communities project, on the other hand, is exploring ways to put remote and presential communication in contact in order to foster mutual enrichment between virtual and concrete worlds. The heart of the project is its computational interface (designed by Nomads.usp) aiming to connect its geographical specific located users by promoting identification and proximity in a society *a priori* disfunctional. We agree with Otto Roessler (1998) who says that "the world is pure interface" and "the now is pure interface". Interface is thus considered as a medium between the visible and invisible, impermanent and mutable. In our case, the access to its relational contents is made through a starry sky, where each star represents a different content, and small squares on the bottom symbolize the neighborhood apartments and their users. They can be recognized by others who have similar interests which are represented by the stars, inviting users to interact and exchange knowledge.

The interface has been constructed from an open source pattern based on a Java-based toolkit to build interactive information visualization applications. It proposes a very easy navigation by clicking on stars/contents or squares/users or on the button to search

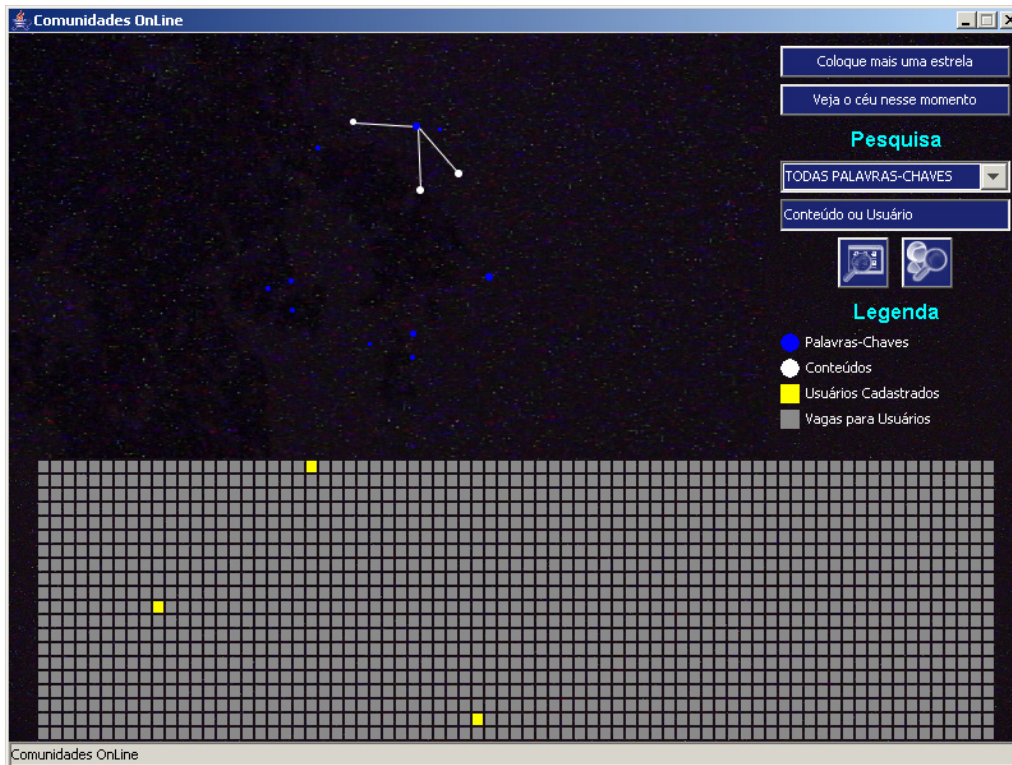


Figure 3
Applet view of the Online
Communities' graphic
interface

for contents using keywords. There is also a possibility to add contents by clicking on the button “add a star to the sky”. The reloading function is possible by clicking on the button “see the sky at this moment”: in this case, new information will be searched for in the database, showing graphically both recent online users and new data posted by other users in the meanwhile.

Added to the possibility of inserting contents from home, using the local network, the interface is planned to be also used in collective workshops that will take place in the telecenter. There will be discussion and reflection sessions on selected community issues, aiming at educating participants to use some programs. For instance, in one workshop, participants are supposed to reflect about their neighborhood,

then go for a walk together in the neighborhood and take pictures with a digital camera. Back at the telecenter, they will download pictures on computers, and then they will edit them and place them on the project's interface as new contents – or new stars. They will be invited to write a few words on their images putting this text online as well. These actions have an aim to enable users: 1. to know how a digital camera works; 2. to download and edit images on the computer, then post them online; 3. to know how to use the text editor and digitalization by writing a small text. But most of all, the main aims of all workshops are: 1. to foster a good relation between every user, information and communication technologies, bringing about pleasant memories, and 2. to stimulate personal narratives including the experience of

using ICT. These two aims refer to various authors having written on the importance of the quality of users' experiences concerning daily objects, and the inclusion of these experiences as part of their personal narratives (Benjamin, 1987; Csikszentmihalyi, 1991; Dewey, 1949).

As workshops are seen as an important medium for improving communication to be extended in the community's concrete world, so are the computer recycling sessions. Fostering presential activities among the network's participants is essential in this neighborhood where the fear of becoming a victim widens the gap between neighbours and changes their view on the district's common places.

As Stafford Beer (1975) states, information can be what changes us, if it is understood as a new fact which is so significant that forces an organization of a society to rethink its current course of action. From this point of view, the Online_Communities project proposes the increase of networked individuals, (as defined by Castells (2001)) who are invited to construct a hybrid place of communication together within the Cidade Tiradentes district. They are no longer condemned to be isolated island-like in the huge ocean of the Internet, but citizens deciding the ways forward of their community together.

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