

VirtCom - VIRTUAL COMMUNITY, THE CELL OF THE KNOWLEDGE BASED INFORMATION SOCIETY

Alexandru Botu
IPA SA, Bucharest, abotu@ipa.ro

Sanda Petrescu
IPA SA, Bucharest, sanda@ipa.ro

Adrian Badoiu
IPA SA, Bucharest, abadoiu@ipa.ro

ABSTRACT

The rapid development of the information and communication technology makes possible the existence of Virtual Communities, which have the power to determine decisively the behavior of the individuals and of the society in a whole in its main aspects. The technology , by itself, cannot bring the progress without a strong commitment of the citizens to knowledge, communication between the members of the society, continuos longlife learning.

In the largest sense, the concept of the Virtual Community defines a group of individuals associated in the cyberspace, focused on a certain topic.

One of the most important subjects which can gather around individuals is the process of continuous learning, a basic condition for the Information Society era.

The educational and training services the Virtual Community shall provide belong to all three levels of interaction: information, citizen to one institution relation, citizen to a chain of institution relation.

The paper focuses on the Virtual Community concept and particularly on the implementation of the services related to continuous education in the cyberspace.

1. INTRODUCTION

The term of "Information Society" depicts a moral and social normative vision based on an interactive flow of data, providing a model for an open society, governed by the principle of knowledge based development and equal access to information. This has the meaning that the Information Society is in the first place an ethical duty of people to exchange information, but in the same time a fundamental target for the state to facilitate this information exchange by providing an adequate infrastructure.

Inevitably, the traditional mechanisms of the society shall be forced to adjust in the aria of the public services under the continuous pressure both from the society members on one hand and of the technological achievements on the other hand. The

virtualization of the administrative processes must lead to the complete satisfaction of the processes requested by the citizens on a large scale of services.

The progress of Information and Communication technology promotes a free flow of information, an essential issue for building a democratic society.

As a consequence of the spreading of modern IT infrastructure is the coming out of new opportunities of communication and interconnection for the citizens and of the organizations in heterogeneous fields as economic, social, politic, professional etc. All these facts determine a radical exchange in citizens mentality and behavior , both at the individual and community level.

2. VIRTUAL COMMUNITY CONCEPT

In the largest sense, the term of *virtual community* defines a group of individuals who have associated in the virtual space around a certain topic.

The subject can be of any nature, general or very narrow. There are no limitations in the structure of the cybernetic communities, neither in the choose of the topic of interest, nor in the number, educational level, race, sex, religious belief or nationality of its members. The only accepted boundaries are those mutually agreed by the members of the group.

Some of the most pertinent definitions of the *virtual community*, are enumerated bellow:

"The virtual communities are groups of dispersed individuals which have associated in the cyberspace at their free initiative. They represent on-line associated individuals. These associations come out continuously, in all the domains, including daily life, markets, local communities, administrative services and they are distinctive by the degree of cohesion between the members of the group." [Yasuhiko Torii, President of Kyoto University].

"The *virtual community* is a concept which defines the assembly of a group of individuals in the virtual space and depicts a variety of electronic activities, including electronic collaboration, virtual networks, discussions on Web and electronic messages lists." [Victoria Bernal , "Building OnLine Communities" article -Community Building Project].

"We employ the term of *virtual community*, or cybernetic, referring at the social communities which have appeared as consequence of the existence of the virtual space. Basically, a *virtual community* is a group of individuals which attempt to reach a goal together and for this they action by the means of information technology". [Erik Stolterman, Per-Olof Agren, Anna Croon " Virtual Communities - why and how are they studied", Department of Informatics, Urmea University, Sweden].

"First of all, a *virtual community* is a social entity. It is a group of individuals which communicate between them by the means of a specific technology, in this case the technology of information and communication". [Schuler, 1996].

In our opinion and in the spirit of the VirtCom project, the *virtual community* is a component of the cybernetic space representing a group of people and/or of entities (organizations, institutions) bound by one or more common ideals, goals, interests and/or their affiliation to a real community, which can be the locality in which they actually live and who interact between them employing the means and methods of the information and communication technology.

3. VIRTUAL COMMUNITY - THE MODERN LINK BETWEEN CITIZENS AND THE LOCAL COMMUNITY LIFE

The coming out of the virtual communities at the level of the territorial entities is a conscious, well defined, focused process of translation in the virtual space of the activities carried on in a local community. This phenomenon is determined by: the citizens need to be well informed about all the aspects of the community life; the virtual space can give opportunities of rapid and at ease solutions for the community current problems; the existence a large range of facilities available to support the citizen in finding a job, initiating a business, for education and instruction; a good tool for local business men to advertise and promote their products, to cooperate, to set new deals; the local authorities need to inform the citizens about future development plans, to get population support for successful results; the general interest of the community to make itself known outside for investments, tourism, business; the need of communication between individuals belonging to the community on specific topics of interest.

An other wide-scale utilized concept is the concept of the *virtual city*, which is not totally identical with the concept of the *virtual community*, which implies elements of local sociology, affectivity and community spirituality, ethnic, religious and ethic specific values. There is not an universally accepted definition neither for the virtual city. One defines the virtual city as the sum of advanced technologies, methodologies of urban planning and of the management functions. The technologies include telecommunications, electronics, information technology, Geographic Information System (GIS), ecological technologies, the architectural planning etc.

The *virtual community*, belonging to a territorial-administrative entity, is characterized by distinctive features:

1. focalization on the local community problems;
2. the members of the *virtual community* can be known to each other;
3. the *virtual community* is open to every community member, without discrimination;
4. it doesn't require other technological means comparing to any other generic *virtual community*;
5. presents a high degree of interactivity and dynamism, represented through :
 - a. the possibility of access to the local institutions databases
 - b. the possibility of on-line completing of different forms and applications, electronic vote bulletins etc.;
6. implies the commitment of all the outstanding city entities such as local authorities, public services and utilities, business media, educational, medical, cultural, non governmental units, citizens;
7. requests a permanent maintenance and update, redimension and even redefinition of the relationships between all these entities for continuous improvement of the activity;
8. implies the existence of a set of regulations, based both on the local legislation and the European IT regulations;
9. strong protection of personal data through firewalls, electronic signatures, electronic certificates, access codes etc.

10. the necessity that the administration of the *virtual community* to be carried on by a non political entity as non-governmental organizations, foundations activating in the real local community;
11. the existence in the town of a public place of confluence between the virtual and real community.

4. PROJECT VirtCom

VirtCom is a project funded by the Ministry of Education and Research, having as objective the building up of an *virtual community* passing through the next steps:

1. the analysis of the necessity;
2. the analysis of the opportunity;
3. the analysis of the stage in the domain in Romania and abroad;
4. the analysis of the national and local legislative framework;
5. the analysis of the relations between institutions and between institutions and the citizens belonging to the local communities;
6. the analysis of the degree of coverage with information technology, telecommunication infrastructure, level of IT skills in a certain territorial units;
7. the selection of a set of functions to be implemented;
8. the definition of a set of regulations for the functioning of the *virtual community* to enhance the present legislation with elements of ethical code for the access to information and data management;
9. the determination of the telematic architecture, of the types of databases and software applications to be implemented;
10. the implementation of a pilot virtual community;
11. the analysis of the resulted pilot and of the necessary corrections, depending on the reactions of all implied factors;
12. the selection of an organization to exploit, maintain and develop the implemented *virtual community*;
13. the inclusion of the resulted *virtual city* in a regional or national network, in the future extensions.

The fundamental objective of the project is the redefinition and the simplification of the relationships between the citizen and the public institutions, the re-engineering of the administrative processes due to the building of a new electronic framework for the city activities and durable development of the localities.

5. EDUCATIONAL DOMAIN OF THE VirtCom PROJECT

In Table 1 is given the list of the economic, social and cultural domains to be integrated in the VirtCom project system. On the second position it is placed the Education, which is focused on two main goals: to provide the Internet connectivity for the educational units and to deliver services of interactive e-learning for continuos longlife learning, an imperative of the knowledge based future society.

Domain
1. Local public administration
2. Education
3. Culture
4. Public Health
5. Commerce
6. Tax collection
7. Bank system
8. Insurance system
9. Tourism
10. Agriculture
11. Industry
12. Legal system
13. Public utilities
14. Virtual community management system
15. Population evidence
16. Cadastral survey
17. GIS data servers
18. Entertainment
19. Public Cyber Center

Table 1. List of the economic, social and cultural domains to be integrated in the VirtCom project

The main objectives are the increase of the cultural and educational level of the citizens, to provide the technical background for the pupils and teachers to access the "digital international thesaurus", the achievement of a transparent information media related to the educational system of the community.

These objectives will be achieved by the implementation of a database containing the CVs of the teachers, the curricula of the schools, the creation of a Gallery of the personalities and of Honored Citizens, originating from the city.

The implementation of the educational domain of the Virtual City is conditioned by the development of the telecommunication infrastructure of the town, the existence of the Cybernetic Community Centers, informatic kiosks, home computers, the implementation of the meta database of the virtual community and the actual level of skills achieved by the city citizens in utilizing IT.

6. CONCLUSIONS.

The main objective of the VirtCom project is the definition of an concept, the implementation of an architecture of equipment and communication devices and of an integrated system of software programs and databases, to enable in a perspective of 3-5 years the transformation of several medium sized Romanian towns, selected as pilot cities, into communities where at least 80% of the public services will be delivered by electronic means. The project also aims to create an institutional framework to provide citizens a fair, efficient and operative relationship with the local authorities, with the utilities, with the business environment , the educational and cultural institutions.

The project will take into account all the legal issues related to the subject as electronic documents, electronic signature, personal data protection, the status of the institutions assigned as electronic signature certification authority. The project aims to ensure equal, discrimination free and progressive access to information, an essential condition for creating in Romania a progress, continuous education oriented mentality.

7. REFERENCES

- [1]D. Beckers, "Research on virtual communities: an empirical approach", University of Amsterdam, Department of Social Science Informatics, 2000.
- [2]"Toward a Society Built on Knowledge", *Canada's Business and Consumer Site*, <http://www.strategis.ic.gc.ca/SSG/ih01639e.html>
- [3]H. Rheingold, "The Virtual Community", <http://www.rheingold.com/vc/book>
- [4]Al.Botu, Fl. Udrescu, S. Petrescu, A.Badoiu "VirtCom - Comunitatea Virtuala, Celula de Baza a Societatii Informationale Bazata pe Cunoastere", Studiu tehnic si de fezabilitate, *INFOSOC*, Nov. 2001
- [5]P.Kollock, "Design Principles for Online Communities", University of California, (1997), <http://www.research.microsoft.com/vwg/papers/KollockPrincipals>
- [6]D. Silver, "Community Cyber Centers", *Atlanta Community Technology*; University of Georgetown, (2000),<http://www.glue.umd.edu/~dsilver/cct732/course.html>
- [7]J. A. Kim, "9 Timeless Principles for Building Community", (1998),
<http://www.webtechniques.com/archives/1998/01/kim>
- [8]European Commission, "Information and Communication Technologies and the Information Society Panel Report", Bruxelles, 1999.
- [9]V.Bernal, "Building Online Communities: Transforming Assumptions Into Success", Benton Foundation, 2001.
- [10] CITU "e-Government. A strategic Framework for Public Services in the Information Age", Cabinet Office, London, 2000