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THE CONCEPT OF NETWORK SOCIETY IN THE POLICY OF EUROPEAN UNION

Abstract. The creation of network society occupies an important place in the policy of the European Union. It is the main objective to use new digital technology in order to raise the competitiveness of economy while preserving European cultural and social values. The implementation of the European model of network society requires adequate policy, which is incorporated in the Union documents. The use of the latest digital technology allows each member of the European Union to participate in the process of globalization.

Network Society is a manifestation of Information Society, whose central value is information and knowledge obtained via modern communication channels, particularly the Internet. Member countries of the European Union strive to gain unconstrained access to various organizations and social groups with means of the Internet. One of the consequences of the European integration is the development of the European ICT¹ implementation strategy. This strategy is aimed at creation of common spaces for information and communication in the context of new global phenomena and processes.

Key words: Network Society, network logic, network state, implementation of Information Technologies in the European Union.

1. THEORY OF NETWORK SOCIETY

The term of network society was coined by Manuel Castells in 1996. He presented this concept in his fundamental monographic paper, *The Information Age: Economy, Society and Culture*, in its first volume: *The Rise of Network Society*. It is one of the most popular theories concerning role of information and use of modern ICTs in the contemporary world. As an expert of the European Commission, Castells had huge influence on the formation of the strategy of implementation of Information Technologies in the European Union.

Due to the nature of information society, it is network functioning of social, economic and cultural structure; Manuel Castells named modern information societies *the network societies*, to denote the processes and phenomena that

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¹ ICT – informations and communications technology, Oxford Dictionaries Online, http://www.oxforddictionaries.com/view/entry/m_en_gb0398080#m_en_gb0398080

accompany the implementation of Information Technologies and creation of network communication structures.

Network society is patterned on the Internet network and network connections between the respective subjects. Also, it is a global community, which is under way of intensive development due to the interdependency of intercontinental connections. According to Darin Barney, one of the characteristic features of those societies is presence of sophisticated digital technologies, which reproduce and institutionalize communication in the network, contributing to the creation of new forms of social organization. These technologies “*forms the basic infrastructure mediating an increasing array of social, political and economic practices*” (Barney D. [2008], p. 37). This community forms a kind of apparatus that functions thanks to new digital technologies and is based on mutual network of social relations. The creation of network society is a result of new revolution in Information Technologies, phenomena that is called *information age* by Manuel Castells.

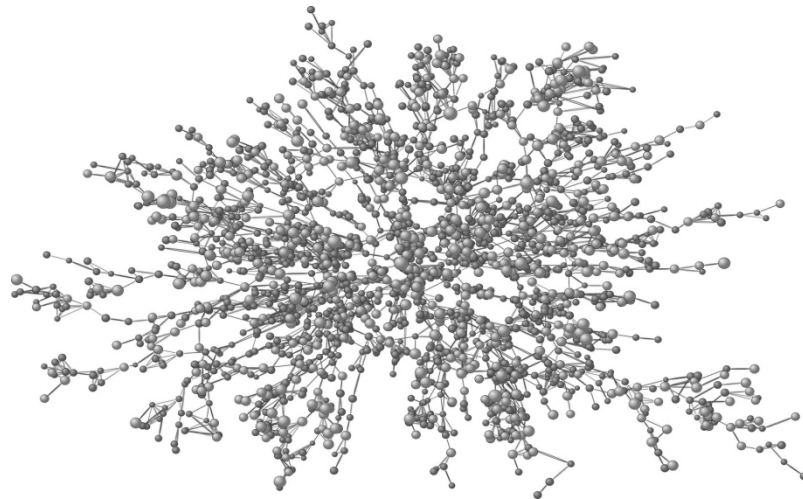
According to Viviane Reding, the European Union Commissioner for Information Society and Media, we are witnessing the new generation of ICTs, which will completely change our lives. At the moment, the world has become a global village (McLuhan), where the inter-human contacts are of increasingly virtual nature, while national culture is being replaced with global culture. Social structure has altered, shaped by the new lifestyle that manifests itself through new work methods, free time activities, new understanding of the concept of love and family.

Manuel Castells’ concept of network society attempts to make a complete analysis of the changes occurring in the modern world. The source of these changes is digital technology and media convergence. Castells, who is an inquiring analyst of the influence of Information Technologies on social structures, formulates a modern model of society, whose material and organizational basis is network, particularly the Internet. In his book, *Connected Intelligence: The Arrival of the Web Society*, Derrick de Kerckhove, a researcher in modern Communication Technologies, highlights power and potency of the Internet as the greatest information media. He points out the intensive development of new technological tools to be the main reason behind the creation of network society, for having the power of making thoughts reality (Kerckhove D, [2001], p. 199).

2. NETWORK LOGIC

The key concept of the theory of new society is the category of a network, understood as a set of interconnected nodes (Castells M. [2007], p. 468). According to Manuel Castells, nodes are comprised of, amongst others, stock exchange, television systems, institutions, electronic devices and, primarily, hu-

mans. This classification also includes national ministers' councils and the European commission's belonging to the political network governing the European Union. Network nodes are interconnected by ties, which either cross, overlap or permeate each other. Darin Barney distinguishes three elements of a network: nodes, ties and flows. For him, a node is a distinct point connected to at least one other point. The ties connect one node to another, while flows are what pass between and through nodes along ties (Barney D. [2008], p. 37). In turn, a network exists when many nodes are linked to other nodes by ties that cross each other or connect other nodes. The picture below illustrates an exemplary visualization of social network.



Picture: Social Network Maps

Source: <http://www.visualcomplexity.com/vc/index.cfm?domain=Social%20Networks>

Distance, intensity and frequency of interaction between distinct points are shorter and more intensive if both points are nodes of the same network. Manuela Castells defines this distance as pertaining not only to physical, but also to social, economic, political and cultural domain, depending on dominant values of a given network.

Networks can be either centralized, decentralized or distributed. They have a capacity of dispersing themselves, replacing the old structures. Also, they may be hierarchical, horizontal, bounded or boundless, interactive or non-interactive, intensive or expansive. According to Castells, a network is a highly dynamic, open structure capable of “*unlimited dispersion*” (Castells M. [2007], p. 468) and receptive to innovations.

Networks have changed completely the image of contemporary societies, affecting all the domains of our life. Barry Wellman, who investigates the Internet and social networks among others, presents a view conforming with Manuel Castells' theory. He claims that "*complex social networks have always existed, but recent technological developments have afforded their emergence as a dominant form of social organization*" (Castells M. [2003], p. 151).

Despite the fact that social networks have existed for a long time now, they gained new meaning thanks to modern Information Technologies, particularly the Internet, which permeates the whole social structure. As Manuel Castells notes: "*networks constitute the new social morphology of our societies, and the diffusion of networking logic substantially modifies the operation and outcomes in processes of production, experience, power and culture. While the networking form of social organization has existed in other times and spaces, the new information technology paradigm provides the material basis for its pervasive expansion throughout the entire social structure*" (Castells M. [2007], p. 467). The dominant network in the contemporary society is the Internet, which forms a new type of power, codified in the information codes and symbols, expressing their identity through network. Precisely, codes and symbols constitute the logic of network society. Network logic can be implemented in any process or organization thanks to new Information Technologies.

Technological networks, particularly the Internet, have become instrument supporting contemporary economic and social networks, making "*urban and rural communities come closer, generating welfare, sharing knowledge (...) and helping out each human being*" (eEurope [2000]). The creation of new network society based on modern ICTs (*Information and Communication Technologies*) raises the need of the European society for change and adaptation to the requirements that new members of the European Union have to meet, confronted with global information development.

3. NETWORK STATES

Creation of the European network society requires from each member of the European Union implementation of technological innovations, as well as continuous development of science and programmes, which disseminate the knowledge on new social phenomena. Member countries need to create new methods of strategic economic and social systems management, as well as introduce new forms of political organization, called "*network state*" by Manuel Castells (Castells M. [1998], p. 311).

Political structure of the European Union is formed by national networks, and despite the differences in economic, cultural or social spheres, it has com-

mon network structures and decisive organs in the political affairs of European Union. This structure is shaped “*in form of European institutions network, national institutions and regions of various economic and military potential, of different cultures and extent of their impact on the Community*” (Doktorowicz K. [2005], p. 18). The aim of the Union policies is a creation of common structure on the whole continent, which will facilitate normalization, decentralization, regionalization and provide opportunities for economic growth and social unification. Execution of the Union strategy with regard to Information Technologies implementation has been subordinated to strategic national projects.

The European Union policies provided for transformation of a modern country, from a decentralized, class society to a decentralized and locally governed society, while respecting wide, global interdependencies. On the one hand, the development of new Information Technologies decentralizes societies and institutions in the EU countries, and on the other, it creates global ties and makes the countries of the Community dependent on each other.

The European Union creates a new, institutionalized system, called “*network states*”. Globalization of economic processes is based on network flow of information and capital, therefore the European Union countries strive to popularize information and communication networks, thereby diminishing control over the market by a country and creating the greater dependence of local markets with regard to global capital.

4. IMPLEMENTATION OF INFORMATION TECHNOLOGY IN THE EUROPEAN UNION

Development of network society, as a manifestation of Information Society, is one of the priorities of The European Union. A numerous documents, projects and reports have been published on the subject of development and use of the latest ICTs, which replace traditional forms of human interaction and increase economic competitiveness of the European Union countries in relation to the United States or Japan. To achieve a strong, competitive position in the sphere of IT on the world market, the European Community needs to increase the levels of computerization of the society and development of ICTs. The European Union continues the policy directed towards the optimum use of modern means of global communication, particularly the Internet. According to Ryszard Tadeusiewicz, the low level of expansion of the latest information technologies in the European societies is still noticeable in comparison with Japan or the United States, where this level is high (Tadeusiewicz R. [2002], p. 143). These issues, included in the Union documents, are noteworthy since they have direct influence on the shape of network society.

The first regulatory decisions concerning network society were included in Maastricht Treaty of 1992, which presents the concept of IT implementation in the European Union countries. The treaty highlights the necessity of creation of trans-European networks, particularly telecommunication networks and common policy in terms of technological normalization and popularization of network connections. The concept of creation of network social structure was quickly approved by member countries, thus responding to the challenges posed by development of the market offering new Information Technologies. Liberalization of telecommunication sector and subversion policy soon resulted in the creation of telecommunication infrastructure that would allow for creation of further communication networks in the whole European Union (Tadeusiewicz R. [2002], p. 163).

The vision of creation of a new society based on information was formulated in the document *Growth, Competitiveness, Employment: The Challenges and Ways Forward into the 21st Century*, also called a white paper, which was approved in 1993. The European Commission turned its attention towards the concept of network services, which constitute information basis of the new society and also form new social structures (*White Paper*, [1993]). Information and communication networks boosted the development of new services, such as telejobs, telemarketing, teleshopping, telemedicine or tele-education, which contributed towards many changes in work organization, employment, acquiring information and knowledge, free time activities. Access to these services, provided by network, is not limited by time or space. The authors of *White Paper* underline the positive aspects of the evolution of ICT networks, which increases the competitiveness of the European economy, creates new job opportunities and introduces new quality of life.

The European Union programme regarding the creation of global information society in Europe was included in 1994 in the document "*Report Europe and the Global Information Society. Recommendations to the European Council*", also called Bangemann's Report. It presented the changes occurring in the society under the influence of modern teleinformation technologies, particularly the Internet. Bangemann's Report, ushering us into the information age, begun the process of creation of network society in the European Union countries. It specifies a new type of society characterized by "*being prepared and able to use information systems, computerized and using telecommunication systems to send and process information remotely*" (*White Paper*, [1993]), a society with well developed Integrated Service Digital Network (ISDN), where access to information is unlimited. In general, the report indicates the need to prepare Europeans for new challenges, highlighting the role of education, the need for qualification improvement and supporting an individual's progress with regard to information (Wierzbowski J., [1999], p. 172). This document commenced debates on the

subject of information society, defined the actions that should be undertaken by governments of respective EU countries, pointed out new channels of development and described the challenges Europe needed to face.

Two more documents were published in the same year, both indicating the need for creation of a new society based on information. These were: *Europe's Way to the Information Society, An action plan* and *The Information Society in Europe: the first assessment since the Council Summit in Corfu*. They defined new political strategy for the EU countries, concerning the creation of information society.

In 1996 a green paper was published, *Living and Working In Information Society: People First*, which described the consequences of IT implementation and the influence of modern ICTs on social and economic life, whereby each and every citizen of the European Union is guaranteed equal access to the network (*Green Paper* [1996]). In line with "People First" motto, the green paper focused on social problems of the member countries. Implementation of Information Technologies was to bring about the creation of a society based on competitiveness, social solidarity, equal opportunities and cultural diversity. The European nature of information society created by the European Union was to be ensured by standardization policy that would uniform the whole Community and, in further perspective, the whole Europe (technical standards of ICTs: ISDN, ONP; mobile telephony; digital television; technical convergence) (*Standardization and the Global Information Society* [1996]).

The European information market became fully liberal after 1998, when the convergence of ICTs was carried out through the process of digitization. The European Union was then confronted with the need for creation of new regulatory law that would encompass all the networks and services of the new digital technology. Among the most important documents of the European Union concerning information society we also find „*e-Europa – An Information Society for All*” project from 1999, which provided the scheme of preparatory actions for Lisbon Strategy. Moreover, it defined a new model of society based on the latest Information Technologies thanks to the possibilities offered by “new economy” (*eEurope* [1999]). The European regulatory policies in this field comprised directives that defined the procedures of technological normalization and the telecommunication market liberalization, as well as preliminary legal constructs concerning electronic commerce, privacy policies and security in the Internet.

The turning point for the European Union policies concerning the implementation of Information Technologies was the endorsement of Lisbon Strategy in 2000, which included the European concept of creation of information society, addressing the goals of modern economy based on knowledge and economic coherence. Lisbon Strategy assumes that by 2010 the European Union will have reached the position of the greatest competitor in the world economy using the

latest inventions in the field of network technologies. However, the analyses approved by the European Council and the European Commission demonstrate that the United States and Japan are still the leaders in the latest Information Technologies and their optimal use. Therefore, new economy based on knowledge and information requires transformation of the whole European economic system, construction of infrastructure for distribution of knowledge, investments in human capital, strengthening the innovative policies and modernization of education systems (*Lisbon Strategy [2000]*). The transformation of the Union economy is coupled with new social model of investment into human capital and prevention against social isolation (*Social Trends [2000]*). One of the goals of Lisbon Strategy was ensuring common access to network technologies, particularly the Internet, and training the Europeans in their correct use, which may become useful at work, in business, study, and everyday life.

The European Commission presented two action plans for the years 2000-2002 (*eEurope- An Information Society for All*) and 2003-2005 (*Europe - An Information Society for All - Action Plan*). These documents aimed at rapid development of the latest technologies, including the Internet, and at enabling the Europeans to access the new generation of ICTs.

For the want of achieving the position of the greatest economic competitor in the world by 2010, the European Union approved in Gothenburg Summit 2001 a project of creation of information society. The Community turned their attention to the strategy for economic transformation using the latest ICTs and networks, so as to increase competitiveness while ensuring the policies of balance between the economic growth and European social values (*eEurope [2000]*). Another aim of this project was to ensure common access to all information services. Therefore, the European Union undertook the actions that would reduce the differences in terms of the Internet access among various member countries. The Union policies promoted the connection of every household to fast broadband services, formation of new business strategies for firms, and online public services. The broadband access to the Internet guaranteeing fast, cheap and continuous contact was, and still is, the main aim of the European IT implementation strategy.

The *eEurope* initiative, published in Lisbon in 2000, was to conclude the process of IT implementation in the European Union countries, which assumed the following goals:

- common access to the network by each and every household, school, enterprise, as well as by public sector
- IT skills training
- prevention against social isolation and supporting social unity
- creation of new education system based on information society (*The Information Society's [2000]*).

The European Union is well aware that Information Technologies are the driving force behind the growth, and condition the creation of a new society based on information. These presumptions were included in the *European Information Society 2010* programme, endorsed in the European Council summit in 2005, which was defined as a new Lisbon Strategy under the name *i2010*. The *European Information Society 2010* programme stands for social integration, better quality of public services and higher living standards achieved through the development of the latest ICTs. The strategic goals of *i2010* include, among others:

- an initiative concerning digital libraries, whose aim is facilitating the access to the European cultural and scientific heritage available in the Internet
- recommendations concerning digitization and publishing of the cultural heritage in the Internet, and protection of digital resources
- policy concerning the audiovisual sector and the media
- management of digital copyrights (DRM) (*Europe's Information Society*).

The *2010* project assumes the possibility of common, online access to the European cultural, audiovisual and scientific heritage.

New Information Technologies, permeating virtually every aspect of an individual's life, are not only a tool for acquiring knowledge or information, but also a decisive factor in the creation of new social processes, which lead to a number of vital changes. The impact of new digital technologies has not been overlooked in the European Union strategy. ICTs have become a competitive tool in the global information market. Communication networks play crucial role in shaping new information capitalism, in which the information functions within the framework of the interdependent network structures (Doktorowicz K. [2005], p. 11).

Network society is a dynamic structure, leading to creation of new social structures and new political strategies of the European Union countries. The dynamics of these changes depends on the rapid and functional nature of successive generations of ICTs, as the information is the driving force behind the contemporary global network technology.

The development of new information and communication technologies forces the European Union countries to change their policies concerning the creation of a new society based on information, because who has information has power. The European Union policies remains dependent on global processes induced by the international markets, especially the ICTs markets. New, liberal economy takes into account the network aspect of IT implementation and enables to create a new society while preserving the European identity and cultural values.

To achieve the position of the most competitive region in the world, the European Union needs to develop and implement advanced ICTs, as well as

carry out programmers supporting the policies concerning ICTs promotion. In order to carry out these, it is crucial to implement the strategies contained in the Union documents, so that the fastest and most efficient development of global information network is achieved. Likewise Europe, the US and Japan governments, and other countries, all seek to achieve these ends. It all comes down to the need of creation of a new, positive vision of the world in the presence of the changes occurring in the high technology markets.

5. CONCLUSIONS

The essence of the European Union policies in the field of creation of network society is the use of the latest ICTs and digital networks, in order to increase competitiveness while preserving the balance between economic growth and European values. The Union's actions directed toward creation of a global information society have yielded certain practical effects of political strategies. These actions contribute towards improvement of standard of life, economic growth and increase in competitiveness of the European countries with regard to world economy.

Creation of a society based on digital technologies and networks offers many opportunities for development and opens new virtual spaces. Nonetheless, we need to remember the negative effects of an optimistic vision of global network societies development, since *"Internet is so big, and growing so fast, that it cannot be ignored (...) since it has flaws (...) therefore, we in Europe should consider following the evolution of Internet closely, playing a more active role in the development of interlinkages"*(Bangemann Report [2005]).

The way in which we use new Information Technologies is only partially up to us, and partially it is determined by the nature of technology itself, as the structure of technology determines its use to large extent (K. Krzysztofek, M. Szczepański [2005], p. 225).

The European Union sought to protect Europe from negative effects of globalization when making decisions about IT development. Have the Community countries succeeded in it? We may say that not exactly. Optimistic vision of socio-technical world, where technology has subjugated culture, is dangerous, as it presents an idealistic society, free from wars, disputes, internal divisions and social inequalities, and also a community, where the Internet is source of knowledge and information.

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*Ewelina Wałaszek***KONCEPCJA SPOŁECZEŃSTWA SIECIOWEGO W POLITYCE
UNII EUROPEJSKIEJ**

*„Przed nami nowa generacja technologii informacyjno-komunikacyjnych (...),
które odmienią nasze życie, metody pracy oraz sposoby spędzania wolnego czasu”*
(Reding V. [2006])

Budowa społeczeństwa sieciowego zajmuje szczególne miejsce w polityce Unii Europejskiej. Podstawowym jej założeniem jest wykorzystanie nowoczesnych technologii informacyjnych w celu zwiększenia konkurencyjności na globalnym rynku informacji, zachowując kulturowe i społeczne wartości europejskie. Realizacja europejskiego modelu społeczeństwa sieciowego wymaga prowadzenia odpowiedniej polityki, która zawarta jest w dokumentach unijnych. Wykorzystanie najnowszych technologii teleinformatycznych pozwala poszczególnym członkom Unii Europejskiej włączyć się w proces globalizacji.

Społeczeństwo sieciowe jest przejawem społeczeństwa informacyjnego, gdzie wartością centralną jest informacja i wiedza, uzyskiwane za pośrednictwem nowoczesnych kanałów komunikacyjnych, szczególnie Internetu. Państwa członkowskie Unii Europejskiej dążą do uzyskania swobodnego dostępu do uczestnictwa w różnych organizacjach czy grupach społecznych za pomocą Internetu. Jedną z konsekwencji integracji europejskiej jest budowanie europejskiej strategii informatyzacji. Strategia ta ma na celu powstanie wspólnych europejskich przestrzeni informacyjno-komunikacyjnych w kontekście nowych zjawisk i procesów globalnych.

Słowa kluczowe: społeczeństwo sieciowe, logika sieci, państwa sieci, informatyzacja Unii Europejskiej.