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Creative Networks, in the Rearview Mirror of Eastern European History

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RASA SMITE **CREATIVE NETWORKS** IN THE REAR- VIEW MIRROR OF EASTERN EUROPEAN HISTORY

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ON
DEMAND**

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RASA SMITE
**CREATIVE
NETWORKS**
IN THE REAR-
VIEW MIRROR
OF EASTERN
EUROPEAN
HISTORY

Theory on Demand #11

Creative Networks, in the Rearview Mirror of Eastern European History

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Abstract

Creative Networks explores the dawn of the Internet culture in the age of network society from the perspective of Eastern Europe. From a theoretical angle the networks are introduced and interpreted as complex socio-technical systems. The author analyzes the development of these networked self-organized formations, starting off with 'virtual communities' of 'creative networks', which emerged during the early phase of the Internet, up to the phenomenon of today's on-line 'social networks'. Along with the translocal case studies of *Nettime*, *Syndicate*, *Faces* and *Xchange* networks (as well as with the other important facets of the 1990s network culture in Europe), the author also studies local community networking cases of alternative and digital culture that evolved around *E-Lab* in the 1990s in Latvia. By focusing primarily on the network culture of 1990s, this study reflects those changes in the social structure of today's society that are occurring under the process of socio-technical transformation.

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INTRODUCTION

Society can be viewed from different standpoints, using different approaches and building upon different concepts. *Network* is considered to be one of them. Network as a structure for characterizing society (for instance, trade networks, family trees) has been known for a very long time. This also applies to sociology, where *network* has been used as a metaphor for more than a century to reflect the complicated relations existing on many different levels between participants of the social system – personal, local, international and other. Still, only at the end of the 20th century and with new information and communication network technologies entering our lives (first and foremost, the Internet), not only has the concept of network gained a new meaning but also a somewhat dualistic nature. On one hand, network has 'materialized' in a form of global networks; on the other, it has become a 'virtual' social space. Hence today, networks have become sophisticated *socio-technical systems*. The complex relationships that emerge in the result of interaction between social action and information technologies are called *socio-technical formations*. Such formations are *network communities* which have emerged on the Internet in a process of self-organization and which have been chosen as the object of this study.

In my study, I have made a distinction between two types of network communities – *creative networks* and their communities that emerged mostly in the early stages of the Internet, namely, in the beginnings of the network culture when it was still a marginal, alternative phenomenon, and *social networks* that have emerged on today's *Web 2.0* social media platforms, that is, in a time when *networking* can already be considered part of popular culture. In this study, I have focused primarily on carrying out research on creative network cases, as well as providing comparison between those two – creative and social networks.

Network as a Fundamental Element of Society Today

In 1996, when Manuel Castells proposed the idea of 'network society'¹, a principally new type of modern society had risen where all the significant social functions and processes more and more started to organize around electronically processed information networks. Castells also states that 'the new information technology paradigm provides the material basis for its pervasive expansion throughout the entire social structure' (Castells 2000 [1996], 500) suggesting it to be the dominating factor far into the future as well. Network, as Castells emphasizes, has become a basic element of the modern society. Another important aspect along Castells's global construct of 'space of flows' is the global distribution of digital networks and public accessibility in the 1990s, which created a niche for new social activities that 'were self-organizing in various virtual communities by communicating via the Internet'.

1. The term 'network society' was introduced by Jan van Dijk in Dutch in his book 'De netwerkmaatschappij' (1991) ('The Network Society' 1999, 2006) and by Manuel Castells in English in his book 'The Rise of the Network Society', Vol. 1 'The Information Age' (1996).

Castells was among the first sociologists to consider that 'we must treat technology seriously' (Castells 2000, 4) and that technological revolution has to be regarded within that social context which it originated and developed from. Therefore his contribution in contextualizing the beginnings of network culture is indisputable. Still, it has been more than fifteen years already since the publication of his book 'The Rise of the Network Society' (1996), during which the Internet has experienced different stages. The early period – the first half of the 1990s – was marked by the utopian phase (which mostly manifested itself in the U.S.) during which the idea of Internet freedom influenced the emergence of countless *virtual communities* – as the American writer and critic Howard Rheingold calls them in his seminal book 'Virtual Communities' (1993). Privatization of the Internet and the emergence of the *World Wide Web* in the mid-1990s, when the Internet became widely accessible for public use, caused digital networks to embark on an even more rapid global expansion. At this time, a *critical discourse* of the Internet evolved in Europe and along came those virtual communities and translocal collaboration networks that saw their interest as related to the development of the Internet culture. Founders of these early networks and their most active participants were mostly artists and theorists along with other electronic activists; therefore I call them the *creative networks*.

At the turn of the century, the wave of Internet commercialization that tried to turn the Internet into a global market space seemed to pose a serious threat to the existence of virtual communities. However, it was the 'bubble' of e-commerce that suffered a defeat at the beginning of the 21st century when wireless networks and mobile devices entered the Internet communication system and when different networked forms of local communities started evolving more actively in the place of translocal communication networks. The aspect of local in global networks was accentuated even more by the very popular online platforms of social media (*Facebook*, *draugiem.lv*, etc.) at the second half of the 00s. With their arrival social networking has become a mass phenomenon and an undeniable trend in contemporary society.

The Social (In)visibility of Networks

The Internet has been publicly available for more than fifteen years and the history of virtual communities dates back just as many years, while today social networks enjoy exceptional popularity. However, the new *social dynamics* that has emerged in the digital network environment is still acknowledged to a very little extent. Despite the growing interest on behalf of researchers, an appropriate contextualization of the digital network social phenomenon still poses a challenge to both media and social theories.

One of the reasons is that for a long time, the aspect of technologies in sociological research has not been perceived as a 'serious' one. Of course, it is not really sensible to claim that the new social forms in digital networks have emerged only as a result of technological changes. Although society today cannot be viewed without regarding technologies created by society itself, the 'network logic' (on a technical level) is not always going to correspond with the 'social logic' (the social behaviour in these networks) and this must be taken into account.

Also, it is quite clear today that some of the ideas regarding technological determinism as promoted in the 1990s have suffered defeat. The decentralized structure of Internet networks did not manage to automatically make society less hierarchical, nor did society become more democratic by just using the Internet. It could even be suggested that the complexity of socio-technical relations is one of the main reasons why it is so difficult to subject the social meaning of digital networks to any conceptualization. Networks are not accidental formations but have a certain

structure. 'Networks are complex techno-social environments that defy simplistic reductions.' (Lovink, 2005, 11) Therefore, as sociologist Saskia Sassen believes, 'the challenge for sociology is not so much to deny the weight of technology, but rather to develop analytic categories that allow us to capture the complex imbrications of technology and society'. (Sassen 2002, 365)

It must be also pointed out that there is not enough awareness of what actually goes on in the practice of virtual communities. This especially refers to creative networks based on the 1990s network culture. The innovatory manifestations and communication forms of these early digital formations were overshadowed, first, by the e-commerce 'bubble' of the late 1990s and today – by the popularity of social networking sites. Nevertheless, the potential of the current social networks is much greater than it 'looks'. Therefore it is even more important to do elaborate research on the practice of 1990s network culture in order to translate its most successful experiences into today's situation of social networking.

The 'social invisibility' of creative networks is also reinforced by factors such as, for instance, virtuality (because the main activities of these communities take place mostly in the virtual space of digital networks) and their non-institutionalized forms and translocal character. Creative networks are self-organized structures that seek to discover new forms of social communication and interaction. Their structure is mostly heterogeneous and distributed globally, the ties connecting participants are weak, while capable of becoming active when necessary. It might be said that the field of activity for these communities – similar to the way of how Nicolas Bourriaud describes instances of contemporary art and culture – lies in the social 'space-in-between' (Bourriaud 2009 [2002], 16). For example, the early creative networks showed the possibilities to create communication forms based on a networking idea that is alternative to the existing system (e.g. the political and cultural situation in Eastern Europa of the 1990s), namely, outside the common 'zones of communication' of a society. At the same time, the omnipresence of social networks serves as evidence for the fact that socio-technical changes are relevant for the society at large. Although currently platforms of *Web 2.0* risk becoming the next 'bubble' of e-commerce in terms of ownership, social networks (as well as creative networks) on the user level are dislocated in the social 'space-in-between'². This is why the experience of these communities has not been evaluated properly, although their potential can be used not only in search for new forms of social organization but also in solving certain social problems. For example, using new technologies in a creative way can promote the integration of society – several local community network cases in Latvia prove this (*Open* and *E-Lab* in Riga in the 1990s and *K@2* in Karosta in the first mid-decade of the 21st century). However, this has not been advanced and supported any further. In order to help lessen the 'social invisibility' of these digital formations, it is necessary for researchers to seek other approaches in contextualizing the social phenomenon of digital networks, for example, those that would examine the research object from the 'inside'.

The Position of the Researcher – a View from the 'Inside'

My interest in network studies stems from more than fifteen years of practical experience in the field of network culture, beginning in the mid-1990s. I have taken an active part in establishing various early translocal collaboration networks together with their founders (Eric Kluitenberg,

2. The concept of a 'space-in-between' was used by Karl Marx in order to describe the societies in the market which are left outside the borders of the capitalist economy because they do not subject to the laws of profit (Burjo 2009, 16).

Andreas Broeckmann, Geert Lovink, Pit Schultz, Heath Bunting, Konrad Becker, Armin Medosch, Marko Peljhan, Diana McCarty, Honor Harger, Adam Hyde and many others) and other active participants, many of whom today are internationally recognized theorists, artists, curators and academic researchers. I myself am also an initiator and founder of several translocal creative networks and mailing lists: *Xchange* (founded in 1997) – for sound art and Internet radio experiments; *NICE* (1999) – for new media art in Baltic and Nordic region; *Locative Media* (2003) – for mobile media and location-based art; more recently *Renewable Network* (2009) – for fostering art and science collaboration, and encouraging other transdisciplinary practices in a quest for a sustainable future. I have also participated in establishing a local network of alternative contemporary and digital culture that originated in the second half of the 1990s in Riga around the electronic art laboratory *E-Lab*, founded together with colleagues Raitis Smits and Jaanis Garancs in 1996. Furthermore, the *E-Lab* network was used as basis for founding the centre for new media culture RIXC in 2000, which still works at providing contemporary culture and new technology art processes in Latvia today.

Despite many organizational activities, the primary focus in my work has been the creative process – together with colleagues from translocal networks and other artists from *E-Lab* and RIXC I have also worked at creating networked artworks and producing digital projects – for example, 'RT-32: Acoustic Space Laboratory' (2002) – a multimedia research on DVD; the video 'Skrunda Signal' (2007) – an artistic research on the ecological issues of electromagnetic radiation; 'Talk To Me / The Long Bean' (2011) – an online interface designed for talking to growing plants, and many more. Looking back at my creative work so far and through participating in numerous new media art and network culture events such as conferences, festivals, exhibitions, symposiums in Europe, Canada, Australia, as well as by implementing a significant number of art and culture projects in digital networks, and through participating in the founding and developing of several translocal and local collaboration networks, I have obtained a certain amount of experience and my own perspective on *networks*, and on creative and social processes within them. As I have recognized, experiencing networking from the 'inside' differs significantly from the way social and media theories and empirical research explain and analyze networks, where the researcher is situated 'outside' the experience. Therefore, in my studies on network culture I choose to adopt a perspective of looking 'from the inside'. However, in order to distance myself and to be able to reflect on my experience from standpoints as versatile as possible and despite the fact that my background stems from networking in art and culture, I did a sociological research on creative networks, focusing primarily on the social dimension.

The Theoretical Framework and Research Methodology

One of the main theoretical guidelines used in my research has been influenced by the Castells's concept of network society, which has been covered in the first book 'The Rise of the Network Society' (1996) of his well-known trilogy 'The Information Age'. Along the lines of Castells's global 'space of flows' construct, the study also incorporates the concept of a network as a rhizomatic, heterogeneous structure as put forward by Gilles Deleuze and Felix Guattari. Regarding contemporary theories, I have also looked at an *actor network theory*³ that suggests mapping relationships on a material level (between things) and a semiotic level (between concepts). The

3. The proponents of this theory, which is often considered a method, are the contemporary French social theorists and science philosophers Bruno Latour and Michel Callon and British sociologist John Law.

postmodern approach accentuates the significance of 'practice research' thus my work also has been influenced by Pierre Bourdieu and his approach to reflexive sociology. It emphasizes the fact that the social world is never only an object; it is also an active subject creating itself because 'the social world itself produces many of its own notions' (Bourdieu 2004 [1990], 183). In dealing with methodological issues and thinking which analytical categories to choose for the empirical research, the works of the contemporary researcher on sociology and globalization Saskia Sassen also influenced me⁴.

The theoretical approaches of my own contemporaries play a significant role in this research too. In this book I often refer to media theorist and network critic, once the founder of creative network community *Nettime* and currently the founder and the director of Institute of Network Cultures, Professor Geert Lovink and his critical network culture theories. Likewise, the attempts to contextualize the social dynamics of digital networks by the Dutch media theorist Eric Kluitenberg bear certain significance as well, so does the research on free and wireless network communities by Armin Medosch, the notion of 'flow-maps' by writer and political critic Brian Holmes, and the concept of 'organized networks' by Australian media theorist Ned Rossiter, and several others.

In this research I have also looked at a *network theory* that has originated from mathematics and computer sciences, because I was using social *network analysis* (SNA) as one of the methods for examining creative networks and their structures. This theory seeks to explore and analyze ties (connections) between actors instead of social groups or categories by using visually mathematical methods: mapping and analyzing. However, my intent of using SNA software in this research was to create maps that make the network community members and their activities more visible – through mapping projects and fields they relate.

The theoretical context and issues regarding the terminology are discussed in the first part of the book, in which the different interpretations of the term *network* as well as the reciprocal relations between the terms *network* and *community* are explained and analyzed. It serves as groundwork for the empirical research reflected in the second part of the book. With regards to methodology, I use case studies as the main research strategy. In general, I have examined and analyzed five translocal and two local creative network cases: *Nettime* – the origin of critical network culture and a mailing list for the Internet culture and critical discourse; *Faces* – a cyberfeminist community; *Syndicate* – a collaboration network for Eastern and Western European media art; 7-11 – a net.art mailing list and community; *Xchange* – a global creative Internet radio network, and *Open* and *E-Lab* – local community networks in Latvia.

These case studies use a combination of methods. In order to find out the meaning of the social action, aims and motivation of network participants, I used qualitative methods: interviews with creative network founders, the most active participants and experts. This is combined with quantitative data analysis, for example, with analyzing the dynamics of respective network mailing lists. Another method complementing my research consisted of the analysis of many documents, mainly using (publicly available) data from websites and mailing list archives as well as translocal and local network community publications issued in the 1990s. In order to accentuate the significance of some aspect or event and to characterize those basic tendencies that allowed creative network communities to arise and develop so rapidly, I have also used the approach of narrative sociology and personal reflections regarding those cases of networks where I myself have

4. For example, 'Towards a Sociology of Information Technology', 2002 and 'Electronic Markets and Activist Networks: the Weight of Social Logics in Digital Formations', 2005.

been involved. And finally, in order to 'show' the studied cases in a more visible way, I used social network analysis and performed creative network mapping to visualize the structure of these networks and the relations between their participants, projects and (thematic) fields of their activity.

Developing Perspective for the Network Communities Research

Building on Castells's concept of network as a fundamental element of today's society, I have suggested that an elaborate analysis of significant facets of the 1990s network culture is a way to help understand the new social morphologies of today's network society. Several facts back this statement up. Firstly, creative network communities are amongst the earliest digital formations – they emerged from complex relations that resulted from social action encountering digital network technologies. Due to this reason their most valuable experiences can be used in the studies and further development of social networks. Secondly, the creative explorations for new forms of social relations, communication and organization manifested itself particularly in this early stage of the Internet. As history shows, the most creative stage of a medium is its beginning – before all possibilities are mastered and the potential exhausted. There was a similar situation at the beginning of photography, radio and television. Therefore the creative approach of these formations is another aspect that may give an impulse to explore the potential of socio-technical relationships further. Thirdly, creative networks can be considered the founders of network culture and in a way the predecessors of social networks: as the field of activity for these early formations was primarily related to the development of the Internet and the World Wide Web itself, creative network communities can be considered as important contributors which at a certain extent have also influenced the transformation of the Internet into the social media space as it is today.

The book is based on my study of networks as socio-technical formations. It contextualizes and positions the place and role of creative networks as self-organizing formations in society. The intent of this study is to inquire the meaning of the social action of creative networks, the motivation of their founders and community members, the common fields of their activities and their joint aims. I have also made a comparison between creative networks and today's social networks in order to distinguish the most significant differences and to outline the future tendencies in the development of network culture. Thus I have developed a perspective which can be used for featuring those changes in the social structure of today's network society that are occurring under the influence of socio-technical transformation.

PART I

NETWORK THEORIES AND CONTEXT INTERPRETATIONS

'The network is a computer' (Corporation Sun Microsystem slogan, 1994)

'The network is people' (A paraphrased slogan of 'art server' Thing.net)

Network as a form of social organization has existed through different times and spaces. Every society consists of multilayered networks that intersect, overlap and interact in countless ways – on a physical and technical level (transport, telecommunication networks), social (families, local communities), political (national governments, political parties) and economical (financial, trade networks) and also on cultural, organizational and other levels. As Bruno Latour suggests, *'the word network is so ambiguous that we should have abandoned it long ago'* (Latour 2005, 129). However, it is being used as though it has a very clear meaning – while ignoring the fact that nowadays it contains two formerly separate interpretations. One of them concerns physical networks, namely, various technical networks: telecommunications, electric power distribution, water and utility systems, rail connections, computer networks and, of course, the Internet. The second one refers to the social level – when network is interpreted as an informal alliance of individuals (of people or members that belong to a community or an organization). It is also used, for instance, in sociology of organization, for analyzing the ties and structures that exist between organizations, markets and states. (Latour 2005, 129)

As a result of the rapid development of information technologies at the end of the 20th century both previously mentioned network types merged creating a new network phenomenon – a 'privileged mode of organization' (Latour 2005, 129). Since the development of the global computer network – the Internet, the word 'network' is often used as a synonym for such words as 'Internet' or 'computer network'. Therefore it is important to keep in mind that 'network' is a broader term than *technical networks* and that *social networks* also continue to exist, just like *socio-technical networks* that are hybrid combination of those two (Kluitenberg 2008, 306).

However, there is no doubt that historically developed networks have gained new resonance in the information age. Castells argues that today 'as an historical trend, dominant functions and processes in the Information Age are increasingly organized around networks'. He also suggests that 'networks constitute the new social morphology of our societies and that the diffusion of networking logic substantially modifies the operation and outcomes in processes of production, experience, power, and culture'. (Castells 2000, 500)

According to Castells, our society of the Information Age is a 'network society' – the new information technology paradigm ensures that the form of network is expanding throughout the entire social structure. 'Networks are appropriate instruments for a capitalist economy based on innovation, globalization, and decentralized concentration; for work, workers, and firms based on flexibility and adaptability; for a culture of a endless deconstruction and reconstruction; for a policy geared toward the instant processing of new values and public moods; and for social organization aiming at the supersession of space and the annihilation of time.' (Castells, 2000, 502)

Since the network has gained such an important place in contemporary society, I will first make an overview of network definitions and its contextual interpretations from the perspective of various sociologists and communication researchers.

Castells's 'Space of Flows' and Other 'Free-flowing' Network Concepts

Following the general network definition, *network is a set of interconnected nodes*. A node is a location of intersecting connections. The particular network specifically determines each particular node. Castells views networks as a global 'space of flows', within which nodes are, for example:

'stock exchange markets, and their ancillary advanced services centers in the network of global finance flows. They are national councils of ministers and European Commissioners in the political networks that govern the European Union. These are the coca fields and poppy fields, clandestine laboratories, secret landing strips, street gangs, and money laundering financial institutions, the network of drug traffic that penetrates economies, societies and states throughout the world. These are television systems, entertainment studios, computer graphics milieux, news teams, and mobile devices generating, transmitting and receiving signals in the global network of the new media at the roots of culture expression and public opinion in the Information Age.' (Castells 2000, 501)

Once recognized, any type of network can be analyzed by its topology, for example, by viewing the distance (the intensity of connections) between two nodes in a particular network or multiple networks. It is also possible to analyze processes – what or who is included or excluded from a network and in what way; how is the relational architecture between networks constituted; what changes occur under 'acceleration' brought about by information technologies. All in all these are the facets that 'configure dominant processes and functions in our societies' (Castells 2000, 501).

Castells's analysis of the network society is based on the information technology paradigm. The key aspect characterizing it is information. And as all systems using information technologies follow 'network logic', this influences very different processes and organizations. Thus the information technologies are merging with other systems and social systems creating a highly integrated global system – the 'spaces of flows'. (Ritzer 2008, 569; Holmes 2004, 73)

Undoubtedly, Castells's book 'The Rise of the Network Society' (1996) still is one of the most significant works written about society in the context of technologies – many critics agree to that. However, 'space of flows' offers rather a view 'from the top' which in opposition requires a view 'from the bottom', from an everyday Internet user's perspective and on a grassroots level, in order to better understand *the meaning of social action* and the reasons why people feel motivated to contribute in developing their networks and communities over the Internet.

An opinion differing from Castells's global 'space of flows' is expressed by activist and academic Harry Cleaver – he offers a view from the 'bottom' instead of the 'top', namely, from the territory of everyday experience:

'As a metaphor for thinking about the ceaseless movement that forms the political life and historical trajectory of those resisting and sometimes escaping the institutions of capitalism, I

have come to prefer that of water, of the hydrosphere [...] At some points water does freeze, crystallizing into rigidity, but mostly it melts again, undoing one molecular form to return to a process of dynamic self-organizing [...]. Thus too with 'civil society.' (Cleaver 1999)

The two mentioned perspectives – Castells's 'space of flows' and Cleaver's 'water metaphor' are compared by Brian Holmes in his text 'Flowmaps; The Imaginaries of Global Integration'. He describes them as opposites of global integration emphasizing a certain antagonism, namely, the conflicting field of culture and politics. At the same time both concepts share the association of flow relatable to computer communications. Here he speaks of the zone of overlapping where notions of today's world meet and part. The imaginary 'space of flows-maps' reflect and actively influence the developments of the globally integrated society. (Holmes 2004, 73)

These two views are opposites, yet they share a common notion of 'flows' by referring to digital networks. Therefore both of them together create the perspective through which we can understand better our network societies and the social dynamics they create within the digitally networked media space.

Actor-Network Theory

The French sociologist Bruno Latour and his contemporaries propose a considerably more radical network concept in their Actor-Network Theory (abbreviated as ANT). According to Latour, 'network is a concept, not a thing out there'. (Latour 2005, 131) Latour raises an extreme contrast: 'it is either a society or a network' (Latour 2005, 131). By challenging the conventional notions of society in social sciences, Latour invites to reconsider the terms 'social' and 'society'. He points out two different approaches in sociology. One is the following: that there exists a social 'context' in which non-social activities take place. The second is opposite: it claims that society is far from being the context 'in which' everything is framed, and that it should rather be construed as one of the many connecting elements. Latour thinks that resemblance between those two approaches is much greater than it seems. He proposes to revise the definition of sociology – to view it as 'the tracing of associations' instead of 'the science of the social'. It is very remarkable that both terms share the same Latin root – *socius*. In this case, 'the meaning of the adjective, "social" does not designate a thing amongst other things anymore, like a black sheep among other white sheep, but a *type of connection* between things that are not themselves social' (Latour 2005, 5).

Such an approach in sociology resembling 'a narrative or a description or a proposition where all the actors *do something* and don't just sit there' (Latour 2005, 128) Latour calls a good ANT account. According to this theory, network 'is a tool to help describe something, not what is being described'. This allows to apply network evaluation to a subject which does not contain a form of a network in any way, for instance, 'a symphony, a piece of legislation, a rock from the moon, an engraving. Conversely, you may well write about technical networks – television, e-mails, satellites, salesforce – without at any point providing an actor-network account.' (Latour 2005, 131)

Despite the fact that Actor-Network Theory as a term was introduced by its proponents back in 1985 already, that is back in the day when there was neither the Internet, nor network associations with terrorist groups, Actor-Network has made the concept of network even more ambiguous. At one point Latour introduced his interpretation of the word 'network' as an innovation in order for it to stand out amongst such terms as 'society', 'institution', 'culture' and 'sphere', amongst others often considered as facts or real things. Despite the transformations that have occurred over the years Latour eventually decided to keep the term 'network' in his theoretical arsenal, by

expressing it the following way: '[a network is] a point-to-point connection [...] being established which is physically traceable and thus can be recorded empirically.' But he also features that 'a network is not made of nylon thread, words or any durable substance but is the trace left behind by some moving agent.' (Latour 2005, 132) By looking at network in such a conceptual way the significance is ascribed only to the motion – to the path the object of the research has left behind. Actor-Network Theory has been also described as a 'materialistic semiotic' approach because it simultaneously maps relations on a material level (between things) and on a semiotic level (between concepts). This theory is more often considered as a method instead of theory. It is also a relatively new theory, which is based on structuralism and post-structuralism (Ritzer 2008, 644). British sociologist John Law, another key proponent of this theory, describes as follows: '[Actor-Network Theory] is a relational and process-oriented sociology that treats agents, organizations, and devices as interactive effects' (Law 1992, 389).

The new aspect this theory introduced was that material objects are also considered as a network if they exist in relation to other objects. Actor-Network Theory also echoes the *post-social* ideas. This means that social relations gain new forms in today's society as a result of the growing tendency for humans 'to communicate' with objects – technologies, consumer goods, knowledge objects and likewise (Ritzer 2008, 649). Internet relationships provide one of the most characteristic examples of post-social environment, where absolutely all communication is mediated by keyboard and computer screen or mobile device. In other words, no matter what kind of relationships emerge on the Internet, they emerge within the mediated space of technologies.

The Rhizomatic Network Conceptions

Another 'free-flowing' concept which interprets the network as a map instead of 'tracing footprints', in a similar manner as Brian Holmes does, is introduced by Gilles Deleuze and Félix Guattari in their work 'A Thousand Plateaus' (1987). Deleuze and Guattari compare the construction of network with a rhizomatic structure, explaining that a *Rhizome* 'is a map and not a tracing. Make a map, not tracing. The orchid does not reproduce the tracing of a wasp; it forms a map with the wasp, in a *Rhizome*. What distinguishes the map from the tracing is that it is entirely oriented toward an experimentation in contact with the real' (Deleuze, Guattari, 1987).

Deleuze and Guattari stress the importance of preserving heterogeneity contrasting it to 'state apparatuses' which they compare with homogenous and totalitarian structures. *Rhizome* structure is often compared to, for example, Internet hypertexts. The rhizomatic network concept being a horizontal and heterogeneous structure therefore has even a greater significance in conceptualizing network culture. This was in particular used in the early Internet art (net.art) phase – for example, one of the first creative networks and art servers (based in U.S.) uses the name '*Rhizome*' in its title (<http://rhizome.org>). *Rhizome* network also today has one of the most active Internet artists' communities; it runs the ArtBase – the largest collection of net.art works, which is located in the New Museum, New York.

Communication researchers (Bogard, De Landa, Poster, and others) and those sociologists who recognize the value of postmodernist theories in attempts to comprehend the computer-mediated communication environments have also used the *Rhizome* concept.

Mobile Network Paradigm and New Network Theories

Mobile technologies were introduced in the beginning of the 1990s, but it took a few years before cell-phones became not only the new cult object but also a good of prime necessity. At the beginning of the 21st the century digital networks mostly developed and expanded in the direction of mobile technologies. Mobile communication industries believe that the network paradigm is currently changing and that mobile devices provide the key access to the electronic information domain. This suggests a shift from the Internet paradigm with its egalitarian and participatory ideas to a much more closely controlled mobile paradigm (Medosch 2004, 16).

It is difficult to judge whether mobile technologies are in fact creating a new paradigm, however it cannot be denied that they introduce even greater complexity in terms of socio-technical structures. Initially, the Internet gave way to the dominant idea of virtual communities in the boundless cyberspace, whereas with the development of mobile communications the interest has once again turned to processes in the physical space. A new significance is attributed to location – positioning or location awareness, mapping and other similar functions. The effect of simultaneity that already was strong with the Internet is now becoming even more intense – social activities within the mobile networks take place at the same time in wireless networks, physical space and the Internet. In such hybrid space communication media overlaps with the social and political functions of the space and the physical space itself. Thus the mobile communication paradigm interacts and emerges with the Internet paradigm instead of substituting it, which creates a new turn in the future development of the information technology paradigm.

Following an interest in the impact of mobile network paradigm on network theories, a broad international conference on 'New Network Theory'⁵ took place in June 2007, organized by Geert Lovink, network critic and director of the Institute of Network Cultures, with the participation of interdisciplinary research and theorist groups who have been studying the digital network mediated space and its social dynamics since the beginnings of the Internet. The conference aimed at encouraging to rethink network theory 'in a time when the object of study has shifted from the virtual community and the space of flows to the smart mob' and to contribute towards defining a new contemporary network theory, a theory that 'that suits and reflects the changes to the objects of study that come to define our understandings of network culture – a post-Castellsian network theory, if you will, that takes technical media seriously.' (New Network Theory 2008) The notion that networks are not random but have underlying structures has been a key insight for most of critical Internet scholars. Yet, the main purpose of the conference was to discuss what could be specific contributions that network researchers and practitioners can make in opening up network thought with a renewed emphasis on technical media and social software.

The Usage of 'Network' as a Term

Since the end of the 20th century the term 'network' has been used widely in relation to computer-based technical infrastructures. However, nowadays this tendency has already shifted – since 2004 when Web 2.0 entered the stage with social media platforms such as blogs and social

5. The conference was organized by Geert Lovink (Institute of Network Cultures/University of Amsterdam), Sabine Niederer (Institute of Network Cultures), Richard Rogers (University of Amsterdam, Govcom.org) Jan Simons (University of Amsterdam) in collaboration with Eloë Kingma (Amsterdam School of Cultural Analysis). All conference papers are available online: <http://www.networkcultures.org/networktheory/> (last accessed April 12, 2012).

network environments, the term 'network' has once again become more associated with social networks. At the same time, the term 'network' is still applied to other technical and social infrastructures as well. We should be aware that society is made up of various types of networks – technical, social and cultural, as well as hybrid combinations of those. Therefore, it should be important to make a distinction between these types of networks, accordingly using different terminology when referring to them. For example, as Dutch media theorist Eric Kluitenberg suggests, the term 'digital network' can be used in specific cases, namely, in relation to the computer-based networks, while more general term 'network' could be used in relation to social phenomena and social practice (Kluitenberg 2008, 306).

Regarding the term 'creative networks' used in the title of this book, I have introduced it in order to separate the early (collaboration) networks from today's social network communities. I have used creative networks in order to indicate those *socio-technical formations*⁶ that emerged at the beginnings of the Internet (during the mid-1990s) in a process of self-organization and whose founders and members were mostly creative people (artists⁷, media theorists, electronic activists⁸, programmers and hackers⁹). In turn, although the term 'social networks' is universal and may be related to any time period or any human network, I use it in this work to refer to those social network communities developed within the online social media platforms of the so-called Web 2.0 (e.g. Facebook, draugiem.lv, Twitter and others).

Although it is not easy to appropriate these divisions precisely and consistently in all cases and the simple term 'network' is still sometimes used as a synonym for both the Internet (sometimes also in this work) and social networks just as for other types of networks, I do however agree with Kluitenberg that it is important to refer to the technical networks as 'digital networks' (in the case of the Internet) and networks based on human relations or hybrid networks (human + technology) as social networks or simply 'networks'. In short, looking back on the citations quoted at the beginning of the chapter, I agree with the metaphor put forward by *The Thing* that 'network' is primarily people and not computers. Or, in the words of community sociologist Barry Wellman: 'after all, a computer network is a community network when it connects friends, relatives, neighbors and workmates' (Wellman 2002, 153).

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6. Socio-technical formations – complex relations that are formed by transforming social action into digital networks, as a result creating networked connections with specific qualities possible only in such combination. Examples of such types of formations are network communities, electronic activism and others. This term is often used by contemporary network researchers and sociologists, for instance, Saskia Sassen (together with Robert Latham she also calls them 'digital formations'). For the explanation of the term I refer to Karl Marx, namely, to his concept of 'social formations' which on a large part is used as a synonym of 'society' in an institutionalized production context, and associated with Louis Althusser who used 'social formations' to identify the complex relations between economy, politics and ideology (Marshall).
 7. Here I mean the so-called new media artists who in their creative work use new technologies as the primary means of expression in creating new specific medial art forms (virtual realities, internet / net.art, CD-ROM, programming art, responsive environments, and so on).
 8. Saskia Sassen refers to electronic activists as those social activists that mainly use the platforms of electronic media in their work for organizing the social struggle (for example, blog sites).
 9. During the early stages of the Internet the socially more active programmers and computer experts called themselves hackers who orientated their work towards developing benefits of Internet and computer-based environments, for instance, free platforms (Linux), free programme developing and distributing, creating social media platforms, and the like.

Conclusions

Network as a form of social organization is a phenomenon with a rather long history, nevertheless the meaning of the term has changed along the emergence of the Internet and this has happened mostly due to the convergence of two types of networks – technical and social. Therefore Manuel Castells's idea of 'network society' and his concept of network as a global 'space of flows' are the theoretical base for my research on creative network communities. In order to give deeper insight into the social dimension of networks (what people actually do on the 'net') it is also important to complement Castells's view with, for instance, 'free-flowing' and everyday-perspective-based network concepts as well as notions by Deleuze and Guattari on heterogeneous '*Rhizome*' structures. On another hand, a view of the Actor-Network Theory helps to see the potential of this approach in further studies on different socio-technical formations (for example, for studying today's social networks). Concluding, it has to be mentioned that the mobile technology paradigm at the beginning of the 21st century has become a challenge in creating new (post-Castellsian) network theories and adapting previous (including 'classical') theories.

Basically, in this work the following suggested interpretations of the term 'network' is used: *digital networks* – mainly concern Internet and other information technology based networks; *creative networks* – concern collaboration networks that mostly emerged during the early stages of the Internet (which could also be called Web 1.0); *social networks* – concern networks based on today's popular social media platforms (or the so-called Web 2.0); and finally, *networks* – concern general, mainly social networks but also suggest different usages of hybrid network combinations (for instance, mobile + Internet + social network).

BASIC PRINCIPLES OF NETWORKS

The main idea of any network can be expressed through its fundamental principle – *interconnectedness*; it is incorporated in the basic definition of a network as a set of interconnected nodes. This fundamental principle can be equally attributed to technical, social and hybrid networks or in fact any other form of network. The interconnectedness is also the basis for all the other significant network principles that in a way are intertwining and referencing it.

The other principle – *openness* – is more specific. In a formal sense, it may also concern any type of network while in social practice the principle of openness could be realized for the first time at its utmost on the Internet, which provided unconstrained and free accessibility due to its decentralized globally spread technical infrastructure.

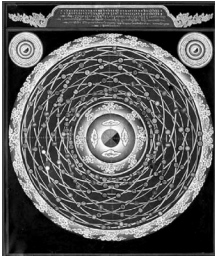
The third principle – *simultaneity* – is unique; it pervades spaces networked online with new social dynamics. Regardless of the fact that this principle is encountered already in 'old media' (printed press, radio and TV as well as in telecommunication networks), with the emergence of the Internet it obtains new social relevance. Simultaneity ensures our presence in the digitally networked space of online media – to be present and experiencing events in real-time and by any distance.

Interconnectedness

Interconnectedness is a lot more than just the basic principle of digital networks. In a philosophical context it can be viewed as a fundamental system. It has already been reflected in one of the ancient cosmologies, namely, it is the *Indra's net* metaphor described in the Buddhist sutra 'Avatamsaka Sutra'. Indra's net is made up of infinite twine of fibre that stretches across the universe. The horizontal fibres stretch through space, the vertical – through time. Each node has an individual and each individual is like a crystal pearl in a node – it reflects the light of other beads in the net at the same time receiving the light from the whole Universe (Imants Silins 1999, 80). Latvian physicist and science philosopher Edgars Imants Silins considers Indra's net as a perfect representation of Einstein's spacetime. British philosopher Alan Watts¹⁰ has described Indra's net in a more figurative manner: 'Imagine a multidimensional spider's web in the early morning covered with dewdrops. And every dewdrop contains the reflection of all the other dewdrops. And, in each reflected dewdrop, the reflections of all the other dew drops in that reflection. And so ad infinitum. That is the Buddhist conception of the universe in an image' (Watts).

Indra's net represents the principle of interconnectedness in the greatest sense as it lies at the basis of this ancient holistic worldview. Each individual entity (a bead, a drop of dew) exists in this net as a reflection of all other entities and at the same time each entity exists individually, but their meaning is to support all others. Each one individually and all together they exist in a state of interconnectedness.

10. Alan Wilson Watts, 1915 – 1973 – British philosopher, researcher of Eastern philosophical teachings.



Indra's net. Buddhist mandala, depicts the universe. Dharmapala thangu center (<http://www2.bremen.de/info/nepal/Inhalt-e.htm>)

Interconnectedness can be viewed as a universal principle; the ancient beliefs of many nations testify this. Latvian folk songs are also amongst those that suggest the principle of interconnectedness in a figurative way and Latvian ancient cosmology likewise is saturated with the notion of interconnectedness that exists between things:

Full was Mara's little room
 Filled with many tiny cradles
 Nursing one of little cradles
 Made all others sway along
 (Latvju Dainas)

In Buddhist texts the principle of interconnectedness is expressed as follows: 'As a net is made up by a series of knots, so everything in this world is connected by a series of knots. If anyone thinks that the mesh of a net is an independent, isolated thing, he is mistaken.' (The Teaching of Buddha 1966, 42)

Indra's net relates to the conceptual framework of modern quantum physics and the view held by Danish physicist Niels Bohr¹¹ that 'Isolated material particles are abstractions, their properties being definable and observable only through their interaction with other systems' (Bohr 1934). The methodology of natural sciences usually is not considered to be appropriate in sociology, likewise many digital network researchers believe that general network theories are not applicable in explaining, for instance, the specific social phenomena that have emerged only within the environments of digital networks ('Does it satisfy to know that molecules and DNA patterns also network?' (Lovink 2005, 18). However, given a certain situation, I do consider that nowadays it is possible to view the network society and its phenomena in comparison to other network systems (e.g. quantum physics or fractal geometry). It may be possible to compare, for example, counter-cultures on a micro-level and corporate network flows on a macro-level by using a 'scaling' approach (as in the case of fractals). In sociological research scaling is encountered in social network analysis, which is based on *network theory* that uses mathematical graphs in visualizing different social relations. This method makes it possible to map and to analyze both micro-level social networks and macro-structures (states, corporations).

The traditional sociology, resting on facts of reality, mainly views its research objects as isolated,

11. Niels Bohr (1885 – 1962), Danish physicist.

detaching them from subjects (who create the object) and from context (in which the particular research object emerged). However, several contemporary sociologists – for example, Giddens and Bourdieu – have attempted to join the two. From my point of view, in sociological studies of digital networks it is important to use an approach that chooses interconnectedness as the point of departure, first defying the context in which the research object is positioned. Only then the analysis of research object activities can be performed. This attitude is somewhat related to Actor-Network Theory which focuses on tracing relations between actors who may be not only humans but also objects. Anything can be an actor – the only requirement is to be in action – and in this case the *social* is the active event, relations or the ties themselves.

Although today postmodern theories are dominant, the holistic and philosophical approach (for instance, the metaphor of Indra's net) has been and still is very crucial for contemporary sociology to create different notions of society. During the time period from Kont to Luhman the concept of society as a totality and unity has experienced many changes.¹ The idea that society creates an organic whole ... ruled the minds of French school founders; it was made more precise along functionalism and experienced changes when Parson compared society to a self-regulating system during the 1950s' (Lyotard 2008, 28, 29). The problem of such 'traditional' theory lies in the desire for 'a unified and totalized truth that can be subjected easily to the unifying and totalized practice of system leaders' and in the simplified opportunity for 'programming the social totality' (Lyotard 2008, 31). Therefore the notion of society as a unified 'totality' where the individual serves the role of a 'small screw in the bigger mechanism', which either 'provides contribution for maintenance (or development) of the system or becomes dysfunctional' (Parson 1957, 46-47), is contradictory to the metaphor of Indra's net and its unity of interconnected individuals where each and everyone exists in a unified network in order to provide support for the others. Although such examples are rare to come by it is important to mention the work of American professor Douglas Hofstadter¹² 'Gödel, Escher, Bach: An Eternal Golden Braid' (1979) where he uses Indra's net as a metaphor for the complex interconnected networks which are created by relations between objects in different systems. Therefore, he deals with social networks, the interaction of particles and symbols that signify ideas in human minds or in smart computer systems.

The metaphor of Indra's net is based on the idea of the 'great light' of Absolute Being that illuminates every bead of the net, however it may seem overly idealized in order to be attributed to the globalized network of society today. Perhaps at the same time, in today's network society being also the *information society* 'information' is that very 'light' that we 'reflect'. Viewing interconnections in such a way may thus broaden the social space of thinking which requires new ideas and approaches, for instance, in dealing with the world's increasing sustainability problem (economic crisis, climate change, energy crisis, and so on). According to Parson, this state of crisis could be better described as a 'dysfunction of (the system of) globalism' instead of a crisis with variations of 'local system dysfunctions' resulting from this crisis (Lyotard 2008, 29, 31). However this system – be it functioning or dysfunctioning – can experience interconnectedness as reality instead of a metaphor. The idea of each individual as 'independent' is prevalently seen as pure abstraction both in Indra's net and Latvian folk song as well as in quantum physics, because in today's world which is saturated with globalization processes we are all mutually connected as unified 'chains of beads' or Castells's 'flows'.

12. Douglas Richard Hofstadter (born 1945) – American professor, studied mathematics and physics, has written a lot about cognitivist problems.

Interconnectedness is a very significant network principle; nevertheless it is too general in order to describe the specific questions that social networks based in digital media raise.

Openness and decentralized access

Openness is the next network principle. In a way it's provided by the principle of interconnectedness – this is easily observable in technical networks, for instance the Internet, which is a decentralized, open structure for anyone to join (with a computer, that 'speaks' the same language). However, this applies to any other network as well. 'Networks are open structures, able to expand without limits, integrating new nodes as long as they are able to communicate within the network, namely, as long as they share the same communication codes (for example, values or performance goals). (Castells 2000, 501)

At the same time openness is also a category of the conceptual and ideological kind – an example here is George Soros and his institutions promoting the concept of 'open society'¹³ during the 1990s and introduced it into post-socialist countries. After the fall of the Berlin Wall and during the early stages of the Internet this concept, expressed in a more informal and slightly different manner, prevailed in the most creative and self-organized part of society. 'open minds', 'open spaces', 'open zone' and similar slogans were the mottos of the new subcultures, early digital communities and of titles of several new media art and culture events. openness was a global code of subculture; it was used both in Western and in Eastern Europe. One of the most visible alternative culture projects in Riga (in 1995) was even simply entitled 'Open'. Obviously, it was in English, because the English language symbolized also the openness of borders and thus – freedom. The extended use of English was a specific episode characteristic to the early stages of the 'information age'. On one hand, it was related to the technical possibilities the Internet had to offer. The first websites in Latvia were often available in English only because the Latvian supported HTML codes had not been invented yet. The electronic mail messages also did not feature Latvian lengthening or softening marks (this problem has not been fully solved even yet). Due to the equally unresolved Russian font problem the language in e-mail communication between the young Russian and Latvian subculture members was often English. There was yet another side to the story – new media and network culture introduced its own language, a string of new terms and concepts which required time to adapt into the Latvian language and environment (networks, DJs, parties, jam sessions, amongst others), furthermore this problem continues to exist even today.

Not only was it English slang, English language in general had become a global code of communication also in Eastern Europe. Just as the Internet it served as a medium for introducing contemporary art tendencies and forms of new subcultures in Latvia during the mid-1990s. These aspects not only indicated the beginning of a new alternative and digital culture but it also 'constituted signs of a new sensibility that is in part bearing testimony to a society in fundamental change' (Kluitenberg 1999, 52). *E-Lab* (The Electronic Art Laboratory) began its work in this young and energetic grass-roots cultural environment in Riga, in 1996. English as the communication language and the openness principle of network structure, namely, a free access to the global network – the Internet (which was a relatively inexpensive opportunity within the context of the 1990s) – were the two main conditions for overcoming the post-Soviet isolation: 'In the year

13. The concept of 'open society' was first elaborated by French philosopher Henri Bergson and developed later on by Austrian and British philosopher Karl Popper.

that followed, the tiny *E-Lab* organisation, with practically no budget, somehow managed to move into the heart of an international network of artists, theorists, and organisers, all equally eager to explore the new digital frontier' (Kluitenberg 1999, 52).

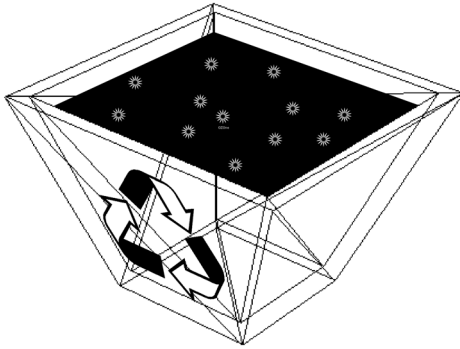


Illustration by Martins Ratniks, article by Eric Kluitenberg – 'The Sovereign Experience of Media,' published in NU magazine, 1999.

Although it is not possible to assert that the decentralization and openness of new media technology has made our societies more open, one can agree with Castells that 'a network-based social structure is a highly dynamic, open system' (Castells 2000, 501). Thus the new socio-technical formations that develop simultaneously on different levels of the network – in technical networks (by using the Internet infrastructure) and on a social level (by self-organizing in communities and collaboration networks) – are amongst the most open and dynamic social structures in contemporary society today.

Simultaneity, Real-time and the Effect of Presence

Simultaneity, the third principle of networks, is the most specific feature of online digitally networked environments. Saskia Sassen has elaborately studied simultaneity, along with two other important properties of digital networks (interconnectivity and decentralized access/distributed outcomes) – as one of the most important information technology network principles. She compares two very different digital formations – the global market for capital and electronic media activist networks, both are part of global dynamics. She argues that in the case of global capital market the simultaneity entails an effect of extraordinary multiplication. This can be illustrated by an example that shows how many bank transaction operations can be performed simultaneously at the same time all over the world. In the case of global electronic activist networks a simultaneous decentralized access may help local actors to organize their activities which are not necessary global at all times, but which in their communication are using globally distributed networks. Accordingly to Sassen, these 'alternative' networks are counter-geographies of globalization as they are in a way influenced by economic globalization yet are not part of its formal apparatus. Simultaneity along with decentralized access allows electronic activists to format a cross-border public sphere, which does not require (and this is important) the administration of a global institution; they may even bypass central power authorities and (even more importantly) organizations with limited resources and, for instance, lacking the possibility to travel, eventually may become 'a part of the global struggles and global publics' (Sassen 2005, 2006).

The possibility to experience events and participate in local and global actions simultaneously in real-time to such great extent is opened up by online media. Real-time experience can also be provided by radio and television, however these media never actually insure our presence within them. This sometimes takes place in a reduced form such as live telephone calls in a TV studio. It is different in the case of the Internet because it is an online medium in its essence, in addition, individual uses of its specific real-time communication programs reinforces the effect of simultaneity and creates a new form of social communication as presence – to organize, to participate, to experience or to be present at events, even several events simultaneously – in real-time and from a distance. 'Presence in the mediated environment of digital networks is probably one of the most complex phenomena of the new types of social interaction that have emerged in these environments' (Kluitenberg 2000, 4). During the most rapid phase of the Internet development – at the end of the 1990s – there were several attempts to introduce terms and explanations of notions in relation to the social dynamics of the networked communication space. One of the most notable attempts in this field is an essay by Dutch media theorist Eric Kluitenberg, 'Media without an Audience' (2000). The author uses the context of media and social theory to look at a string of alternative socio-technical formations described as the alternative media – intimate, socialised, sovereign, private, phatic and other type of media with an intent to contextualize the new forms of social interaction within the global environment of digital networks. Kluitenberg suggests that 'the traditional media theory is not able to contextualise these social dynamics as it remains stuck on a meta-level discourse of media and power structures (Virilio), hyper-reality (Baudrillard) or on a retrograde analysis of media structures deeply rooted in the functionality and structural characteristics of broadcast media (McLuhan). Attempts to come to terms with networked communication environments from the field of social theory, are generally shallow, ill-informed about actual practices, and sometimes too straightforwardly biased.' (Kluitenberg 2000, 4) Kluitenberg grounds his critique on the fact that different theories which place network at the center of their attention are actually capable of explaining social relationships and analyzing the mutual relations, however 'they do not tell us much of what makes presence in the networks so specific' (Kluitenberg 2000, 4). For a better understanding of the social dimension of the Internet, it is most important to be aware that the Internet – despite the fact that nowadays it is a medium for masses – is not really an extension or a continuation of the transmitting mass media (television or radio that are based on a one-sided transmission model: one transmitter – many passive receivers). First and foremost the Internet is a social space and being a medium it has succeeded to embody the famous radio theory of 1932 by Bertolt Brecht in which he interpreted radio as an ideal reciprocal medium of communication where the radio transmission receiver can also become a creator (Brecht 1932, 15). The early ideas of cyberutopians echo this ideal; for instance, the renowned work 'The Virtual Community' (1993) by Howard Rheingold. Another example of this social interaction are mailing lists with a possibility to send and receive messages reciprocally based on e-mail communication. Mailing lists are easy to create and the sent message is simultaneously spread-out to a large number of addressees – subscribers of the mailing list. Every subscriber to the mailing list has a possibility to react to the received message instantly by replying to the sender personally or by making it 'public' via the mailing list. Within the 1990s network culture and new media art practice mailing lists have played a special role – they have sometimes been used to establish and develop translocal networks as, for example, in the case of the exchange (a creative Internet radio network initiated by Riga based *E-Lab*) – introduced in this book. However, most often mailing lists of the 1990s network culture were created in order

to provide a new translocal network (which was established before during face-to-face meetings) with further development and communication possibilities for its community. The cases in which meetings and public events in the real space were organized before the mailing list was set up include, for instance, *Nettime* – a mailing list for critical Internet culture; *Spectre* (formerly known as *Syndicate*) – a channel for information exchange and communication devoted to media art in 'deep' Europe; NICE – a media culture network in the Baltic Sea and the North-East European region, and others.

As it has turned out today, some private media have been especially successful in creating the environment of online social communication: formerly the GeoCities initiative (which was a platform for publishing personal homepages) in the 1990s, now – *Facebook*, *Flickr*, *YouTube*, etc. which are available to every Internet user worldwide for publishing their personal content online. These popular social media platforms of today do not deal with the communication of a meaningful message at all (which differentiates them from mailing list-based creative network communities), and their aim is neither to become entertainment industries nor e-commerce enterprises. This is the reason for their successful existence: they are not interested in turning the social activity network directly into a 'product' and they are not afraid to become a medium that is based on a simplistic message such as 'here I am' (by publishing, for example, personal photos on the Internet). Thus the phenomenon of today's popular online social media can be regarded as a new type of environment where people create their presences without the desire or goal to give a certain message.

The *Xchange* Internet radio network community created presence as a unique social value in the 1990s by experimenting with early streaming media technologies and collective broadcasting possibilities. During its weekly sessions with the highest activity from 1998 to 1999, *E-Lab* via the *Xchange* mailing list invited network participants – artists, community radio activists and other 'creative broadcasters' from all over the globe – to join this collaborative experiment by contributing their live audio stream in this 'acoustic cyberspace' mix. At times when the participants managed to coordinate everyone and to connect to a unified sound loop between transmitters in Riga, Berlin, London, Banff, Sydney and Ljubljana this process could go on for hours and the audible end result could be the looping noise of cyberspace while the real achievement was the feeling of gratification for each of the active participants alongside the sense of presence gained through this socially dynamic process. In the example of the *Xchange* community (which is analyzed in more detail in Part II) the effect of presence was provided by simultaneity – the chance for participants to connect, to create, to exchange sound streams all at the same time.

Conclusions

Looking at the main principles of network it is possible to conclude that simultaneity along with the principles of interconnectedness and openness (and decentralized access) is a combination that makes the process of self-organization in digital network environments possible as a result of which new socio-technical formations such as network communities are created. Among these principles especially the third one – simultaneity – is the one making our presence and social interaction in the electronic communication media environment that much more special.

NETWORK TOPOLOGY

The social processes in digital online environments are closely related to the technological context. In the case of digital networks the 'social architecture' cannot be viewed apart from its technical design. Very often technologies in sociological studies are viewed as isolated from the research object. As Sassen suggests, in such cases 'there is nearly nothing to do with it, it is ready made, out there, there are no new terrains to be explored'. According to Sassen, the problem lies in the fact that the social sciences usually do not investigate the technologies from the 'inside', hence her aim is to discuss the issue how to insert this new object or new sphere into social science. By looking from the inside of electronic space and embracing this kind of perspective Sassen aims to comprehend the way in which social logics may deform or change the result through practice and how the results would differ from a case where technologies are studied by themselves only ('from the outside'). And vice versa – as the founders of digital networks, computer scientists were the ones who initially played the main role within them resulting in a situation where theories seen as 'network theories' mainly concerned the computerized network infrastructure along mathematical graph drawings and their analysis. (Sassen 2006)

Nevertheless, during the last decade the situation has changed. The number of Internet users and information technology employees has grown to an extent that is bringing the issue of both culture and socio-economics to the foreground. 'Different fields of knowledge, from human computer interaction to usability and new media studies, have all in their own ways proclaimed the coming of the cultural turn.' (Lovink 2005, 5) This means that nowadays, the advancement of digital networks does not depend on scientists or engineers only; it is rather a complicated process of interrelations taking place within the social sphere.

Network topology has an important role in studying the complexity of network community and culture. It refers to the physical distribution of digital networks (the technical level) and at the same time to the organizational model (the social level). In order to analyze the level of 'content' (the information to be found on the network) it is important to understand who is providing this information and for what purpose. In other words, as writer and media artist Armin Medosch suggests, to understand the forces that have an effect on the content it is necessary to study the political and economic levels more closely (Medosch 2004, 14).

Before diving into a more complex analysis of the social level we must first turn to the multi-layered structure of the Internet itself, the physical (technical) level of the network, and its political-economic context.

The Technical Level: Internet – the Network of Networks

The beginnings of electronic information technology in both science and production can be traced back even before World War I – here it is necessary to mention the Bell telephone (1876), Marconi radio (1898), De Forest's radio lamp (1906). However, World War II and particularly the years after was a time of important development in electronic technology. Yet, it was only during the 1970s that a new paradigm emerged as a result of the convergence between the three main

spheres of technology – microelectronics, computers and telecommunications – and that the new and extensive spread of technologies begun. As a result of this convergence a new sphere of interactive communication emerged, which led to the creation of the Internet, 'perhaps the most revolutionary technological medium of the information age' (Castells 2000, 45).

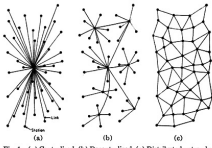


Fig. 1—(a) Centralized, (b) Decentralized, (c) Distributed network. Graphic image of networks: Paul Baran, RAND Corporation, brought forth the idea of a decentralized network in 1964.

According to one of the definitions, the Internet is the *network of networks*. Its technical structure can be described not only as decentralized, but as multi-layered too. On the primary level the network is constituted by computer communication – by two or more interconnected computers. The next level is network interconnection – this level provides the possibility to interconnect some small local and regional, private and academic (for instance, within universities or enterprises) networks and to communicate with other networks on a state-level or on an international scale. This type of network structure which can be described as distributed (discrete) and decentralized was simple and therefore unique, because all other communication media until that time – for instance, telecommunications, radio, and television – were constructed on much more centralized principles.

Paradoxically enough, an open, decentralized and potentially democratic medium such as the Internet has a military origin worth to be explored, since the historical context may help to provide a closer insight into more hidden layers of the network and to understand the new information technology paradigm to a greater extent.

The story of how the Internet originated has different versions. The most dominant version suggests that the Internet was created as a 'product' of the Cold War. For instance, the historian and political scientist Richard Barbrook looks at the history of the Internet in the context of the political processes analyses of the 1960s, the competitive relationships between the two ruling world forces – the U.S. and the USSR – as one of the major factors in computerization and the advancement of information technologies (Barbrook 2007, 20-23, 144-152, 164-165). However, there are also other versions supporting the idea that despite the fact of receiving financial support from the military the Internet was created in order to provide a more efficient exchange of computer resources (Hauben & Hauben 1995). Yet, these versions are rather complementary than contradictory.

The beginnings of the Internet can be found in 1960s America. The leading U.S. scientists at *RAND Corporation*¹⁴ were given a government assignment to solve a strategic problem – to create an indestructible, state controlled network for U.S. authorities to communicate in post nuclear war conditions. After extended research and under military secrecy the *RAND* scientist group

14. The RAND Corporation (Research And Development) is a global nonprofit think tank corporation founded with the aim to perform research and to develop products for U.S. military needs.

came up with an idea: the network would not have any kind of centralized control. The construction principles would be very simple. Each connection node would have an equal role and a right to create, resend and receive messages. The messages would be divided into data packets¹⁵, and each batch would be sent out to a different address and from a different node. Each batch would travel the network independently and its specific route would not be of any importance. The only important thing would be the end result. It even wouldn't matter if the largest network nodes were destroyed because the packets could 'wander virtually' between the remaining nodes. This system of indirect message distribution may seem chaotic at first (in comparison with, for instance, telephone communication) however it would be surprisingly lasting. This network could be damaged only if all other nodes, even the tiniest ones, would be destroyed. (Sterling 1993)

Scientists from the Agency of the United States Department of Defense *ARPA*¹⁶ had been working ever since the 1960s on the idea of a decentralized, indirect packet distribution network in America. At the end of the 1960s *ARPA*, in collaboration with other scientific laboratories, created *ARPANET* – the first data packet transmission network, the predecessor of the Internet. The first *ARPANET* connection was created from four points in 1969 – from Stanford Research Institute's Augmentation Research Center, University of Utah's Computer Science Department and University of California, Los Angeles and University of California, Santa Barbara. Even back then the tendency for such a decentralized network to expand rapidly was quite apparent – from four connection points in 1969 it grew to more than 100 points in 1974 and over 200 points in 1981¹⁷. A conceptually new turn in computer science was marked by Dr Licklider, a researcher from the *ARPA* agency, who in his search for new ideas in computer network development suggested a vision of an intergalactic network where computers would help humans to communicate and to 'connect people' (Licklider, Taylor 1968). Initially Licklider had envisioned the network as a resource distributing system for connecting human communities by way of interactivity and being online. This basic vision was shared by all scientists who created *ARPANET* – as affirmed by computer specialist and researcher Michael Hauben who expressed the idea that Internet despite being financed by military funds has nevertheless been a result of progress in computer science instead of being designed for military purposes only. After completing *ARPANET* computer scientists came to realize that the specific function of providing people with communication possibilities has been the most valuable accomplishment of *ARPANET* (Hauben & Hauben 1995). Nonetheless, such retrospection on the historical origins of the Internet – of how the 'network of networks' was initially created following the idea of network communities – not only for connecting computers but equally people as well – may help to gain a better comprehension of the social phenomenon of today's digital networks.

15. Data packet network – network communication method which divides data stream into parts called packets and sends them out into the network. Data packet network is opposite to the central telephone technology model.

16. *ARPA* (DARPA; The Defense Advanced Research Projects Agency) is an agency of the U.S. Defense Department which was established in 1958 as a reply to the Earth satellite launched by the Soviet Union. The task of *ARPA* was to provide the technological progress in the U.S. in order to take a head start on its enemy, the U.S.S.R.

17. According to several Internet resources, for example, <http://www.netvalley.com/intval1.html>

During the 1970s the first standardized *TCP/IP* protocol¹⁸ was introduced, which is still being used today, and *ARPANET* managed to establish connections over the Atlantic Ocean. During the 1980s the computer network we all know as the Internet nowadays, had become accessible also outside university laboratory walls, although it did not gain much attention from the general public up until the early 1990s.

*CERN*¹⁹ invented and introduced the visual interface *WWW*²⁰ based on the conception of hyper-texts²¹ with the initial aim to provide information exchange and publishing possibilities amongst researchers. In 1993 *CERN* announced that *WWW* would become freely accessible to all of society. After developing the first 'trustworthy' Internet browser with a visual interface, *Netscape*, the Internet set out on its unprecedented rapid development. This way 'the universality of digital language and the pure networking logic of the communication system created the technological conditions for horizontal, global communication' (Castells 2000, 45).

Ever since its beginnings the Internet was called the 'global network', although it lives up to its title only just recently. In the 1990s the dominant centers were mainly the developed Western countries, especially the U.S. and Western Europe whereas for many other world countries, for instance Nepal, other technical revolutions such as 'the electrification' were more urgent than the revolutionizing information technologies (Dixit 2000). During the last few years Asia has experienced rapid Internet development, no doubt connected with the rapid economical growth in this part of the world.

This situation in Eastern Europe is not so 'dramatic' in this sense – the Internet is available for about 40% of households²². However, the development of information technology isn't a priority of Eastern European countries either, as they are still stuck with their own discourses that are dealing rather with the past (such as post-soviet consequences, national heritage and other local, country-specific problems), and are less focused on future development. Although there are some promising cases based on private initiatives. For instance, *Skype* software was developed by Estonians, whereas Latvia has its own social medium *Draugiem.lv* that is much more popular than Facebook, yet Eastern Europe today remains at the margins of the global integration.

If we keep looking at network topology – the way nodes (in the globally networked society) are connected, which are the centers and which the 'peripheries' and where they all are located, as well as what belongs to whom we arrive at the next network layer: the level of political economy.

The Level of Political Economy and 'New Economy'

Although the origins of the Internet can be traced back to the RAND corporation and ARPA agency of the U.S. Defence Department in particular, the creation and development of the In-

18. TCP/IP combined two protocols: Transmission Control Protocol (TCP) and the Internet Protocol (IP), creating a standard which provided a possibility for computers and networks to 'talk' in one language thus connecting computer networks and creating a united structure – the Internet.

19. CERN (The European Organization for Nuclear Research; Organisation Européenne pour la Recherche Nucléaire) is known as the world's largest elementary particle physics laboratory, located in Geneva and founded in 1954.

20. WWW (The World Wide Web) or simply Web is an Internet service enabling the publishing of a web page on the Internet. Web is a set of interconnected hyperlinks available on the Internet.

21. Hypertext is a form of text hyperlinked with other texts in the global Internet network.

22. According to the latest figures from Euromonitor International (<http://www.euromonitor.com/>).

ternet during the last three decades of the twentieth century 'resulted from a unique blending of military strategy, big science cooperation, technological entrepreneurship, and counterculture innovation' (Castells 2000, 45). Therefore the Internet, having undergone a development of more than thirty years, has also witnessed differing political and economical influences. The issue of ownership is one of the most important components in the multi-layered model of digital network communications, as these issues refer 'to the physical layer (who owns the machines and cables), the logic layer (... the intellectual property rights concerning programs and standards which facilitate communication) and the application and content layer (who owns the channel? who owns the content?)' (Medosch 2004, 14).

When recalling the beginning of the Internet, an important fact is that its predecessor, the *ARPANET* network, was commissioned by the U.S. government's Department of Defense. Although as mentioned previously some of the computer scientists see just as much importance in creating a human communication network as making a global computer interconnection, the *ARPA* agency had a greater interest in technological research projects than in a publicly accessible decentralized network. During the development of the Internet it became more and more difficult to distinguish military influenced research from scientific studies and personal communication. Because of this in 1993 *MILNET* – the special military research network – separated from *ARPANET* while in the following years the remaining network became the global Internet, connecting *ARPANET* gateways with outer networks in North America, Europe and Australia. The original developers lost their interest in the further progress of the 'network of networks' and *ARPANET* was officially closed down in 1990. Most of the university computers that were connected to *ARPA-INTERNET* network got reconnected to the more recent *NSFNET* – a part of the National Science Foundation Network, which the U.S. government financed up until mid-1990s. From 1990 up to 1994 *NSF* was planning to pass *NSFNET* over to private industries educating private companies. Network access points and a commercial base network or a backbone were created to support this idea, in order to continue providing the Internet on a top level. In 1995 *NSF* was officially closed down suggesting an end for publicly funded computer infrastructure (Castells 2000; Sterling 1993; Hauben & Hauben 1995).

The beginning of Internet privatization was also a time of opening gateways and the Internet went from being administrated by universities and the government to being publicly accessible. 1995 and 1996 were the first phase of the rapid Internet development²³ – anyone with a computer, modem and telephone could join the global network, using a dial-up connection. During the second half of the 1990s the wireless technologies had become more popular in Latvia than the dial-up. Due to a *Lattelekom* monopoly the dial-up as an option was very expensive while private companies were not allowed to do any cabling in the ground; the reason why emerging Internet services and technology companies had to seek other, wireless solutions. Also our first 'reliable' Internet connection at *E-Lab* in Riga in 1997 was a point-to-point microwave radio link, developed by Latvian company *SAF Tehnika*.

In the second half of 1990s the global commercialization wave hit the Internet, and 'the Golden Age of the Internet' (Schultz, Lovink 1996, 5) – the brief period when there was nobody actually planning the Internet and it simply grew out of socially dynamic communication – was short lived. 'Public Internet facilities (in both the real and virtual senses) that are not structured for commer-

23. According to Internet World Stats. Usage and Population Statistics. <http://www.internetworldstats.com/emarketing.htm> (viewed on 02.06.2010).

cial use, or regulated to exclude dangerous content, have been marginalised, or even ceased to exist. Public funding has dried up and as an effect the Net has been conceptually 'cleansed,' making way for business. Governments who have once funded basic research into computer network standards, are now merely interested in content regulation and rush to put together legislation for e-commerce.' (Lovink, Kluitenberg 2000).

At the end of the 1990s the introduction of Internet in Western countries was over and the Internet was already commercialized, functioning as a base for commerce and business. 'Communication has turned into a residual of e-commerce, with the fate of virtual communities as a sad example' (Lovink, Kluitenberg 2000). Hence, at the turn of the 21st century the wave of e-commerce overshadowed social activities and communication on the Internet and back then it seemed that the future of the Internet was to follow a very unmistakable goal – to transform it into a global market space, with no room left for self-organizing initiatives. It could be observed how computer networks changed both the stock market and the economy in general and Internet itself turned into a massive corporate entity. 'The Internet and the economy are becoming inseparable'. Geert Lovink and Eric Kluitenberg attempted to draw more public attention to the so-called 'new economy'²⁴ and to political and economical issues of the Internet by organizing the conference *Tulipomania* in Amsterdam in 2000. However, the ideology of the new economy and the fast-growing interdependence of the financial market as well as the information and communication technology sectors almost gained no attention from society and mass media, although the value of information technologies in the stock market was unreasonably high and capitalism was promising unrealistic wealth to anyone who was willing to step into e-business. It became clear that the course for the Internet would be set by finance experts instead of the technology developers, yet there was the question of how long would this raise of the new economy last. (Lovink, Kluitenberg, 2000).

Briefly before the millennium there was a phenomenon called 'the dot-com bubble'²⁵ – the prices in Internet sector reached their highest peak. In January of 2000 two mega-corporations merged – AOL who owned the largest technical Internet infrastructure in the U.S. and TimeWarner – the biggest U.S. entertainment industry. This industry merger on such a mega-level marked another radical turn in the dot-com era and in Internet development all together, namely, the technical infrastructure providers also became content suppliers. The first drop in stock prices on NASDAQ²⁶ – the significant stock market of the new economy – begun a month later and by March the same year the dot-com bubble had burst and almost during a day's time the shares reached zero value. The new e-commerce companies were left with two options – either to go bankrupt or to be sold to larger corporations and thus to support the 'old economy' (Lovink, Kluitenberg 2000).

Neither the dot-com bubble nor its consequences could be observed directly in Eastern Europe, however it did leave some traces. There was a similar phenomenon in the tendencies of the new economy in Latvia, for example, the case of the ISP company *Parks*. Founded in 1996, *Parks* was one of the first small-scale independent Internet service provider companies (also providing

24. New Economy – economy that expanded in the developed countries as a result of globalization and on the basis on information technologies.

25. *The 'dot-com bubble'* – a speculatively inflated finance bubble in relation to new information technologies from 1995 to 2001.

26. NASDAQ (National Association of Securities Dealers Automated Quotations) is a stock market in the U.S. specializing in the electronic market.

Internet connection to *E-Lab*, which we founded the same year). In 1998 *Parks* teamed up with another ISP – *LvNet Port* – and created a company on the level of the Baltic States called *Delfi*, which became a portal. Not only did it provide technical support but also it supplied content for the Internet. In 1999 *Delfi* joined forces with the IT company *MicroLink* but in 2005 Lattelekom purchased *MicroLink*²⁷. The fact that the 'winner' in the IT and telecommunication market is a privileged company with a long-term monopoly shows that the global economy, accordingly to Castells, is 'politically constituted'. 'Once the global economy has been constituted, it is a fundamental feature of the new economy' (Castells 2000, 147).

The new economy originated during the late 1990s in the U.S. and other developed countries in specific areas of industry, mainly in information technologies and in finance, marking a transition from an industrial/manufacturing-based economy to an economy based in service sector assets. The term 'new economy' is often associated with the already mentioned dot-com bubble and due to the fact that it was based on speculations there are critics who regard the new economy as a simple fraud. For example, the social critic Tomas Frank writes: 'We did not vote for Bill Gates; we did not just come together one day and agree that we should use his operating system' (Frank 2000; Lovink 2002, 360). Society (or at least some part of it) in the Western countries possibly has a better-informed outlook on this situation whereas in Eastern Europe nobody ever seems to raise the question of why I should buy (or use a cracked version of) the *Microsoft* operating system if it is just as well possible to use *Linux*, which as an open operating system has taken off the heavy burden of commercialization from personal computers. In order to understand this situation it must be added that the global economy, which experienced a high growth due to the increasing use of new information and communication technologies, did not emerge as a result of market development process but instead in a process of interaction between market, government and finance institutions, all operating in the name of market interests (Castells 2000, 135). Nor technologies nor business alone could create the global economy. The global economy would not have been possible without deregulation, privatization and liberalization politics, worked out and put to practice by governments in many countries around the globe. This was the way the 'triumph of market over governments' was manifested (Castells 2000, 147).

The commercialization wave of late 1990s destroyed many visions of the Internet as an open space for social interaction and artistic expressions and meanwhile the collapse of the new economy at the very beginning of the 21st century put an end to the utopia that saw the Internet as a suitable space for the free market ideology. However, it was not long before the 'next generation mobile phones have triggered a resurgence of commercial boosterist utopianism, with the 'e' replaced with an 'm' – from e- to m-commerce' (Medosch 2004, 14). The industry has always had a great interest in mobile phone technologies, however some time had to pass 'for the mobile phone to become the world's most cherished icon of consumer capitalism' (Medosch 2004, 14) in the late 1990s. Hence, the new speculative boom of mobile commerce (m-commerce) is based not only on economy but also on the hope that the progress of mobile communications will display something far greater – the transition to the mobile network paradigm. 'Mobile devices are said to be about to become our main way of accessing electronic communication networks. This would imply a shift away from the Internet paradigm and its egalitarian and participatory ideas, towards a much more tightly controlled mobile paradigm, which is based on proprietary control of

27. Please see <http://www.lattelecom.technology.lv/category.asp?catID=1646&ID=10627>.

a centralised network topology' (Medosch 2004, 14).

If m-commerce turns out to be successful, the counter-culture intervention would still be possible even in such a 'paradigm of controlled mobility'. An example of this is 'the free network movement' whose task it is to create alternative wireless network connections by using custom-built antennas and other personal infrastructures as well as free software applications in order to bypass centralized structures (for instance, the mobile communication service providers). Similarly, the mobile paradigm can become the facilitator for new forms of social interaction or even a new 'instrument' for artistic experiments (in fact, as such it is being used already for more than decade). However, it already failed to turn social activities into financial figures in the case of the Internet: 'Culture does not equal leisure that locals and tourists 'consume' but is a strategic asset ... Culture Inc. is not working.' (Lovink 2005, 4) Especially it refers to Internet culture and its social dynamics. What is so specific about digital networks that make almost everyone willing to be online? And what is the meaning of the 'social' in relation to these networked environments? How do networks integrate themselves into the social sphere? How does society conceptualize technology? In short, after looking at network basics – the technical level and the level of political economy of networks – we arrive at the most complex layer of the networks – the social level.

The Social Level

'After discovery and colonization, what remains is the socialization of the cyberspace'
(Lovink 2002, 2).

Despite the endured 'dot-com bubble' and other waves and tides of global commercialization the Internet today is primarily a place for social communication instead of a ubiquitous e-market. Although the Internet has now changed – from the 1990s 'global village' it has turned into a communication medium for the masses, where the 'masses' are stepping onto the stage with its own needs, desires and taste – it has still not become one of the elitist (one-sided) transmitting mass media channels. Neither has the Internet become an orderly and easy-to-use information search catalogue and many will just have to accept this. 'The social dynamics that develop within networks is not "garbage" but essence' (Lovink 2005). The number of Internet users after the second decade of the Internet era is now close to two billion – the latest statistics suggest 1.802.330.457²⁸ users and it still continues to grow, becoming the largest social space in the history of society.

Why did the Internet develop so unexpectedly at such rates during the mid-1990s and why were people so eager to go online? First, it was simply because the Internet in the early 1990s was associated with freedom. 'The Internet is a rare example of a true, modern, functional anarchy. There is no "Internet Inc." – the American futurologist Bruce Sterling admitted (Sterling 1993). Network principles such as openness and decentralized access are the main factors that provide access to the network to anyone who is willing to receive it. 'In principle, any node can speak as a peer to any other node, as long as it obeys the rules of the TCP/IP protocols, which are strictly technical, not social or political.' (Sterling 1993). Also, everyone that connects to the network is responsible for their own computer, its technical condition and access to the Internet. There is no command one must follow in creating the Internet network or its content, there are no binding

28. According to *Internet Usage and World Population Statistics* <http://www.internetworldstats.com/stats.htm> (viewed on 02.06.2010).

instructions – everything is in your own hands. The ‘freedom’ of the Internet is not metaphysical or something to be explained in the context of political philosophy, it is rather pragmatic as ‘a hacker type of freedom – the freedom to access the communication networks under a minimum of restrictions, empowering individuals and communities to make the best use of those networks as they see fit’ (Medosch 2004, 14-15).

Before getting its negative connotations hacker culture was a progressive intellectual movement, emerged in States during the 1970s and working parallel to the attempts of the Pentagon and the hard science to develop a universal computer network with public accessibility. After the forthcoming computer network was made available for ‘acceptable use’ one of the most significant hacker achievements was the invention of the modem to transfer data via the telephone (Castells 2000, 49).

During the 1990s technically wise hackers were the most competent part of the ‘network society’ and the most socially active, because they often initiated mailing list based interest groups and collaboration networks together with artists and theorists. The special achievement which hacker culture accomplished in the name of Internet freedom and public interest is *Linux*, the operating system for personal computers, and other free open source software.

After activists started interpreting the new *wifi* communication possibilities by creating configurations of the previously mentioned ‘free networks’, the idea of freedom from the early Internet phase was carried further to the wireless networks at the beginning of the 21st century. ‘Free networks are an engineer’s utopia minced with ideas that could be described as the Internet egalitarianism (a set of values and ideals derived from earlier versions of a pre-privatization Internet arcadia) and information ethics (based on ‘hacker ethics’ wherein hacker is a positive term, someone who actively engages with digital technology on the bases of do-it-yourself philosophy)’ (Medosch 2004, 14). Therefore network countercultures play their equal part both historically and today along the two other dominating Internet development and influence models: the former state ownership model and the private-corporate model which still continues to develop.

Today it has become clear that cyberspace is not independent and that freedom can only be thought of in the context of the early cyber-utopianism. One of the keenest early cyber-utopians J.P. Barlow compares cyberspace with traditional meeting places – squares, theatre, and cafés. Simply ‘socializing’ as a form of mutual communication is indeed often encountered in digital network environments. Kluitenberg has called these forms of communication ‘phatic media’ (Kluitenberg 2000, 11). An example of this might be turning on the simple *Skype* chat program next to other tasks performed on the computer. Although during the day we might look only once whether someone has greeted us in order to return the greeting, a habit such as this points to how valuable *social presence* is to us within the environments of digital networks.

However, most often social communication in the network is about exchanging information. Already back in *ARPANET*-times the main function at first was for scientists to exchange study reports from a great distance, the desire to communicate soon turned the computer network into a ‘specific, high-speed, state subsidized electronic male office’. Not long after the main data transfer in *ARPANET* network consisted of message exchange and personal correspondence instead of using computers from a distance. People were excited by the possibilities in personal communication and virtual communities and not just in exchanging data from afar. Soon *ARPANET* servers provided the first mailing list services that sent out an identical message to a large number of subscribers. ‘Interestingly, one of the first really big mailing lists was ‘*SF-LOVERS*,’ for science fiction fans. Discussing science fiction on the network was not work-related

and was frowned upon by many *ARPANET* computer administrators, but this didn't stop it from happening'. (Sterling, 1993)

During the mid-1990s free communication in Eastern Europe and especially in post-Soviet countries such as Latvia, seemed like a utopian dream. We didn't have a 1960s Western Civil Rights movement experience here or any other expressions of freedom in relation to the public domain, public space and public (community) media. I myself encountered Internet for the first time in 1995 during the conference *Interstanding*²⁹ in Tallinn where I not only used the Internet for the first time ever but got introduced to the ideas of emerging network culture, new media centers and Internet art initiatives. After this conference we came up with the idea together with Raitis Šmits (another participant of the conference in Tallinn) to create an independent new media artist organization, *E-Lab* in Riga. In order to make this happen we started to communicate with Internet artists and theorists we met at the Tallinn conference, including Geert Lovink (network critic and founder of *Nettime*), Richard Barbrook (historian, political science researcher and coordinator for the Hypermedia Research Center at Westminster's Media School), Alexei Shulgin (Moscow based net.art artist), and others. In January 1996 when we launched *E-Lab*, we had neither our own computer nor an Internet connection, so we used the personal e-mail of a faculty member in the Department of Communication Studies at the University of Latvia in order to keep in touch with our new acquaintances in other countries. We experienced the meaning of 'being connected'. It was a huge difference from the isolation, the information vacuum and lack of communication experienced earlier during the Soviet times. When in mid-1996 we finally got our own independent Internet connection, each *E-Lab* member got a personal e-mail address and the *freedom to communicate* with like-minded creative people on an international (translocal) level; the utopia became reality. In a short period during the second half of the 1990s we managed to initiate and to implement countless communication, social, cooperation and art projects and other activities on the Internet and in relation to it. Almost all *E-Lab* activities took place simultaneously on a local and global level, becoming a part of the new network culture in the making³⁰.

If at first the new, unexplored and potentially self-made territory of the Internet was the object of interest of hackers, next in line were the creative people. Writers and journalists could work with hypertexts to try out new forms of writing, the open and critically thinking theorists and writers found Internet to be a place where they could publish freely. Even a greater number of possibilities to use the Internet opened up to artists. On one hand, the network was an alternative environment for the official art system, which was influenced by political motives, the environment of institutional art or simply curator notions on art and artists. The network motivated even professionals and already established artists to give it a try and start up something new. Alexei Shulgin³¹ one of the net.art pioneers had once been a photographer. He created his first website in 1994. It was a Russian art online photo gallery including works by young and progressive artists. For Shulgin his work motivation was explicitly political – this way he positioned himself against the 'existing art curating practice which was not objective when it came to the question of including or excluding an artist in the scene' (Baumgaertel 2001). The motivation to establish the *E-Lab*

29. The *Interstanding* conference 'Understanding Interactivity' took place November, 1995 in Tallinn. It was the first and biggest conference in the Baltics of this kind. <http://www.interstanding.ee/i1/i1.html> (viewed on 02.06.2010).

30. For more on local culture networks please see the 3rd part, 'Research'.

31. <http://easylife.org> – web page of the Russian net.art artist Alaksei Shulgin (viewed on 02.06.2010).

center was somewhat similar because Raitis Smits and I back then were the younger generation artists, interested in creating art by using different media and technologies (an interest that we did not really share with anyone else in the Latvian art scene). It was interesting for us to communicate and to find new art forms that would be based on collaboration. This however did not go with the politics and the exhibition curating practice of the then influential institution – the Soros Center for Contemporary Art. Regarding the Internet, artists were more eager to explore the possibilities of the new cyberspace than to get into political battles; this included 'messing around' with the computer itself and the material of network technologies – bits, bytes, code, programming errors and other potential forms of 'information aesthetization'. Artists like JODI³², Vuc Cosic³³, Heath Bunting³⁴, *E-Lab* (Raitis Smits, Rasa Smite, Jaanis Garancs), Alexei Shulgin, Olia Lialina and other initiators of the so-called 'net.art' movement where the ones who during the second half of the 1990s explored a lot of the possibilities and limitations of the new medium keeping pace with hackers.

However, artists were not the only ones who showed some activity. Anyone who wanted to experiment with data and to express him or herself artistically (ASCII³⁵ graphics, .gif animations, later Flash, games, and so on) were free to do so online if only they had a computer, access and the necessary technical skills. Because of the online anonymity and egalitarianism it was sometimes difficult to tell between amateur web pages and experiments of professional artists. Thus not only creative networks that were developed by artists and theorists characterize the early stages of the Internet, the creative efforts of individual users do so as well.

At the same time, for other users such as academic researchers and journalists the Internet is associated with extra possibilities to publish and to step outside the realm of books and magazines. However, the Internet should not be viewed in an overly simplified manner, as Lovink states, adding that 'the Internet is not just used for self-promotion. It wasn't even primarily designed for that task' (Lovink 2005, 11). The Internet in its initial design supported such main functions: electronic mail communication, discussion groups, the use of distantly located computers and file transfer. Later on each of these functions developed as a result of new technical solutions and social communication, and because of the interaction of these two factors. Internet services are used in multiple ways: for communication and information exchange (e-mail and mailing lists which are based on electronic mail communication); IRC chat, Skype and the like which uses real time communication possibilities; to access information resources and publications (home-pages, websites, file servers, and so on), to create real time audio and video, for teleconferences, distance education; and along the arrival of *Web 2.0* for writing blogs, for collaborating on wiki environments as well as for online social media which offer technical platforms for people to create their own social networks (*Facebook*, *Draugiem.lv*, and others). By combining the differ-

32. <http://jodi.org> – web page of the Dutch net.art artist couple Jodi (viewed on 02.06.2010).

33. <http://www.ljudmila.org/~vuk/> – web page of the Slovenian net.art artist Vuk Cosoc (viewed on 02.06.2010).

34. <http://irrational.org/cgi-bin/cv2/temp.pl> – web page of the British net.art artist Heath Bunting (viewed on 02.06.2010).

35. ASCII - American Standard Code for Information Interchange is a set of characters and code based on the Latin alphabet used in modern English and other Western European languages. Most widely used on computers and other communication devices for representing text and for controlling devices working with text. ASCII defines a 7 bit code and features 95 representative symbols (32 – 126). From: <http://lv.wikipedia.org/wiki/ASCII> (viewed on 02.06.2010).

ent Internet services and functions each network community is able to choose the most suitable means of communication.

Hence, it is important to be aware of that 'there is a Net beyond the obligatory homepage and weblog' and that there are individuals behind the network who most often are connected to each other with rather weak ties which can be activated when necessary (Lovink 2005, 11). Lovink also argues that the network does not exist without a society and no network is 100% virtual – it is dependent on the monetary economy. Yet, it is also necessary to examine the idea of 'free cooperation' that emerged along with the rise of creative network communities in the early stage of the Internet, in order to understand 'how can we find independence and enhance freedom in the context of networked collaboration'. (Lovink 2005, 12)

The free online publishing, which became popular after the arrival of *Web 2.0* blogging systems, provided an opportunity to social activists also to freely express their opinion to create it and to perfect it. 'Cyberspace is, perhaps ironically, a far more concrete space for social struggles than that of the national political system' (Sassen 2002, 382). As Sassen states, in the space of electronic media 'non-formal political actors can be part of the political scene in a way that is much more difficult in national institutional channels' (Sassen 2002, 382). However in national systems which are based on voting and which have numerous formal and legal conditions, the informal political actors usually remain invisible. Broad and versatile political activities and struggles may take place and spread across the cyberspace, and also new political subjects may emerge who are not subjected to formal procedures. (Sassen 2002, 382)

Thus the internet still is a free medium where it is possible to express both individual political thought (for example, <http://freedom.lv> – an individually designed blog on freedom issues in Latvia with a history of many years already) and the opinion of a group or a community with shared interests; it is a place for informal political campaigns which would not have been possible before, technically nor ideologically. As one of such precedents could be mentioned the campaign called *Glaab valsti!* ('*Save the country!*')³⁶, which took place in Latvia shortly after the crises of 2008 due to the change of government. It was a private initiative for an alternative voting campaign where anyone could vote or run for candidacy ('Who would you like to see in the 10th Latvian Republic parliament and government?').

Another example of a global electronic activity is *Indymedia* (Independent Media Center)³⁷ – a collective of independent media organizations and hundreds of individual journalist which offer grassroots, non-corporate news, describing themselves as 'a more radical, more precise and faster way for democratic media to uncover the truth'. *Indymedia* was created in 1999 in order to reflect on events in relation to protests against the World Trading Organization in Seattle. Currently local centers of Indymedia are working in many countries and on all continents; there are more than sixty centers in Europe, however there are very few in Eastern Europe and none in Latvia. The examples mentioned here highlight the fact that 'Individuals and groups which have historically been excluded from formal political systems and whose struggles can be partly enacted outside those systems, can find in cyberspace an enabling environment both for their emergence as non-formal political actors and for their struggles' (Sassen 2002, 18).

36. <http://glabvalsti.lv> web page for the campaign 'Save the Country' (currently not available). On March 8, 2009 the list included 900 candidates, with 5 up to 9448 votes.

37. <http://www.indymedia.org/en/index.shtml> – Indymedia official web page (viewed on 02.06.2010).

Conclusions

Nowadays, networks have become complicated socio-technical systems, developed as a result of the technical medium facing the social action of users within these networks. In order to understand the social phenomenon of digital networks it is not sufficient to analyze the social relations of Internet users in a social network platform only. The task of 'network sociology' is to consider this field of study in a broader and more elaborate manner, interpreting social relations in the context of different network structure levels. It is the interaction between all of these levels – the technical, economical, political and social – that creates a specific set of conditions as a result of which certain social processes take place in the digital network environments.

THE 'SOCIAL LOGIC' OF NETWORKS

Contemporary sociologists (Castells, Sassen, and others) frequently use the term 'network logic' in the context of digital networks. Mostly, it is being associated with the use of another term – 'social logic' – often they are used as opposing, however. First, as a reminder, logic is the philosophical study of reasoning thus it is related to the discipline of critical thinking (this also concerns network logic and social logic). The term 'network logic' can be related to such notions, concepts, processes and influences that are directly tied to the technical structure of networks (e.g., computer network architecture and applications determined by computer engineers), whereas 'social logic' refers to a set of notions related to processes of social action and influences (as a result of which, for instance, an application designed by computer engineers can be modified by users). This chapter focuses on examining the reciprocal relationships of the both 'logics'. In this context I will also provide insight into the conceptual dimension of digital networks, namely, into ways of how the notion of *cyberspace* is interpreted by network artists and activists, manifesting what happens when social conditions encounter technical conditions.

The Issue of Technological Determinism

Today it has become quite clear that many ideas and utopias of the 1990s technological determinism have failed. The decentralized digital network structure did not automatically make the model of society less hierarchical; neither did the society become more democratic because of using the Internet. Obviously, 'social logic' not always goes hand in hand with 'network logic'; the 'social logic' has possibilities and limitations that, as it turns out, are not so easy to change even with the help of openness or principles of decentralization of a technically equipped structure.

On one hand, 'the information technology revolution, because of its pervasiveness throughout the whole realm of human activity, will be ... the entry point in analyzing the complexity of the new economy, society and culture in the making'; on the other, 'this does not imply that new social forms and processes emerge as a consequence of technological change' (Castells 2000, 5). Although today's society cannot be viewed apart from technologies created by it, it is necessary to understand that the interrelations of 'network logic' and 'social logic' do not always create a foreseeable end result. This means that technologies do not determine the society, they rather 'encompass' society 'in themselves'. However, society does not determine technological innovation either, although it makes use of this innovation (Castells 2000, 5; Braudel 1967; Kranzberg 1992, 63-65). 'Nor does society script the course of technological change, since many factors, including individual inventiveness and entrepreneurialism, intervene in the process of scientific discovery, technological innovation, and social applications, so that the final outcome depends on a complex pattern of interaction.' (Castells 2000, 5)

Many notable authors have studied this dialectic relationship between society and technologies, for instance, the French historian Fernand Braudel. Meanwhile others believe that the dilemma of technological determinism does not exist: due to the fact that technology *is* society and therefore society cannot be represented without its technological instruments (Castells 2000, 5; Bijker

et al. 1987). During the 1970s the new information technology paradigm emerged mainly in the Western society. It was very intensive in the U.S. where it influenced American society by changing its communication culture as well as its lifestyle. However, also the USSR, the most important enemy of the U.S., drew much attention to new technologies – and even managed to surpass the U.S. by launching the first artificial satellite to orbit the earth in 1957. As for the use of technologies there were considerable differences between both countries: progress of electronic technology in the U.S. occurred alongside the advancing freedom movement: individual innovation and entrepreneurship on one side, and on the other the development of the global capitalist market. The situation in the former USSR during the 1970s and 1980s was different – household appliances were a commodity in short supply, the most significant scientists and innovators worked mainly for the military, the future vision of electronic technologies was based around the 'cybernetics' concept, which was compassed in a centralized way and developed within academic institutions closed off and isolated from society. Possibly, the lack of society's participation in the development of new technologies is one of the reasons behind the reserved attitude towards new communication technologies in many Eastern European countries, despite the fact that both mobile phones and the Internet are being used quite actively. This shows that the issue of technological determinism has mostly prevailed societies in Western countries, while in Eastern Europe it is possible to talk rather about determinism of political economy, which in a sense discredits the possibility of social changes in society that could occur as a result of modern information and communication technologies. Hence, this shows that the mutual relationship between new technologies and society are in fact very complicated, especially when viewed in the context of political systems.

The Conceptual Space of Digital Networks

The resulting interaction between 'social logic' and digital networks can also be viewed from another perspective: as a new type of social dynamic in the virtual cyberspace. Particularly in its early period the Internet was called the 'global village', a term associated mostly with Marshall McLuhan, who 'predicted' a worldwide expansion of electric technology thirty years before the Internet (McLuhan 1964). However, globalization and digital networks do not only offer new possibilities of translocal communication, but also provide preconditions for creating a new type of space. The Internet has also been associated with another term – 'cyberspace' – which was coined by William Gibson (Gibson 1982), and however often criticized (including by Gibson himself), it has been widely used, especially when referring to social and creative processes that take place neither in real physical locations, nor with technological means (computers, phones), but *within* the 'virtual space' which occurs as a result of communication events, yet (somewhere) *beyond* the media technologies which are used to facilitate these processes. During the mid-1990s this space of networked electronic media (i.e. the Internet) could be compared to a newly discovered territory with still unmarked boundaries and possibilities for realizing many new ideas and utopias. Next to hackers, the depths of cyberspace have been explored mostly by artists who have always looked for ways to conceptualize their space of imagination or thoughts, not only in the case of electronic media space but also at different times in the history of art.

The vision of the virtual world has inspired artists more than once in their search for new forms of expression in 20th century art. Similar to this is the suprematic non-object space envisioned by Kazimir Malevich and other early 20th century avant-garde artists. Here art is nothing but a creative process free of practicalities and utilitarian use. The 1960s and 1970s conceptual art

continues to investigate the meaning of art by radically re-evaluating definitions in relation to the objects, materials and techniques of art. During the 1980s because of the emerging computerization the 'visible reality started to disappear within the abstract space created by communication technologies and media' (Baumgärtel 2001, 18) and an even more absolute 'dematerialization of art object' begun to take place (Lippard 1997). The postmodern philosopher Jean-François Lyotard describes this conceptual virtual space and the processes that take place within it as 'immaterial'. Meanwhile, one of the telecommunication art pioneers Robert Adrian X explains that in his opinion 'an electronic space is very easy to imagine once you have grasped the idea of a conceptual space for art works'. He also adds that while conducting artistic experiments with early computers at the end of the 1970s, he was most inspired by the possibility to be able to 'enter this vast area which we now think of as cyberspace' and by the sense of presence and associations with trespassing a new territory (Baumgärtel 2001, 27).

The term 'electronic media space' does not signify the Internet only. It refers to a much wider spectrum of activities – from creating artworks on the Internet to experiments in other electronic communication networks (wireless *wifi*, mobile telephony, GPS, satellites, digital radio, cable networks etc.) and hybrid space (where the space of virtual media overlap with the physical reality in nature or the urban environment). New media artists work in the network as 'analysts and critics, are creating a fluid field where reflection and awareness about global or local issues can be raised by developing tactical gestures, networked projects and own contexts for their work' – as explained by the Slovenian art curator Natasha Petresin. She also notes that they are 'conceptually and distribution-wise still quite distinct from the business of contemporary visual arts.' (Petresin 2003, 152) The collective way of working of new media artists, in a way inherited from the early 20th century avant-garde, contains the potential of interdisciplinary cooperation. Many new media art projects are being implemented in collaboration with other artists or members of different fields – scientists, technology specialists, programmers and others. Such interdisciplinary cooperation not only is characteristic to new media artist collectives but to digital network culture at large. For instance, creative network activities and projects are often initiated in collaboration with hackers and programmers. Through collaboration with the open source and free software movement, new media artists are mercilessly confronting 'the "madness of ownership" – that traditional fortress with the stiff borders between us and them, the access and the offline communities, the powerful and the neocolonised. [...] Reciprocal file-, database- and software sharing is challenging the still prevailing notions of art creation as a process of inspiration. Thus created networks and platforms generate a context specific for a work or project, outside the art market and artistic channels of distribution. (Petresin 2003, 152)

A conceptual outlook on cyberspace, an elaborate understanding of technological issues regarding the new network media, specific social dynamics created in the process of social communication – creative expression is a set of conditions that defines the way new media artists and activist communities interpret the network, use it and work within it, which makes these creative network communities differ from the majority of the Web 2.0 social networking site users.

Digital Network and Social Process Interaction

Saskia Sassen analyzes the interrelations between social processes and information technologies from a sociological perspective. In accordance with Robert Latham she states that interactions between digital technology and social logics can produce a third condition that is a mix of both. When this mixed domain gets structured in electronic space we call it a digital formation'

(Latham, Sassen 2005). A following question arises: how does the 'social logic' work within these mixed socio-technical formations, how does it effect the technologies and vice versa and what impact do technologies have on the social development?

The socio-technical formations are complex relations that emerge in the interaction between social action and information technologies. They may or may not be related to digital networks. As a result new structures and forms of social activities arise (for instance, network communities, electronic activism) with specific characteristics possible only in such combination³⁸. In cases where the socio-technical formations are related to digital networks, Sassen and Latham propose to call them digital formations. Not only do those include the electronic activist communities, mailing list based creative network communities, today's social networks but also, for instance, the global capital market.

In order to deal with the question of interaction between technologies and social logic Sassen has compared two radically different digital formations – the global capital market³⁹ and global electronic activist networks⁴⁰. This way Sassen tries to comprehend the transformative capacity and boundaries of new technologies and to show how this socio-technical interaction may provide completely different outcomes in different cases. Sassen suggests the following: by comparing the outcomes in the case of the financial market (for instance, in the years 1960, 1970, 1980, 2000 and 2005) it is clear that only the numbers and scale are changing while the market itself has not become more democratic. However, regarding electronic activists and cases where their activities cannot be estimated in comparable figures, it is difficult to evaluate whether the outcome is more or less democratic. Sassen's study proves that technologies alone do not suffice in foreseeing the end result – although technical conditions and basic principles of digital networks in both cases are one and the same, the outcome is constituted by motivations coming from variable spheres and connections of various technical and social logics. 'The divergence is evident in the fact that the same technical properties produced greater concentration of power in the case of the capital market and greater distribution of power in the second case.' In Sassen's interpretation this difference signalizes that each case is influenced by a social logic of its own (Sassen 2005, 2006).

In Sassen's example the most significant thing is that there are no preferences: nor technological determinism, nor social determinism is favoured, which for its part does not acknowledge the influence of technologies. However, this is not a completely neutral position either, namely, the notion that society and technologies are mutually neutral. Not only by stressing the significance of interaction (between the social logic and technologies) but also by noticing the fact that new digital formations emerge as a result of socio-technical transformations and that each activity of a formation may provide different results, Sassen has managed to take a valuable step towards a sociology of information technologies and digital networks. According to Sassen, a line of influential contemporary sociologists and media critics (for instance, Latour 1991; Lovink, Riemens 2002; MacKenzie, Wajcman 1999) explains it in the following way: 'digital networks are embed-

38. For an explanation of terms I refer to Marx's concept of 'social formations', which largely is synonymous to 'community' in a context of institutionalized production and to Althusser who used 'social formations' as a more concrete designation for the complex relations between economy, politics and ideology. [Marshall].

39. Which use information network technologies in an intensive and very effective way.

40. Socially political activists who use digital networks as their primary platform and field of battles.

ded in both the technical features and standards of the hardware and software, and in actual societal structures and power dynamics' (Sassen 2002, 366).

Conclusions

Looking at the interaction between 'social logic' and digital networks it is possible to conclude that processes and influences are not determined in one way or another – nor does social action define the development of technologies nor do technologies determine the growth of society. In a way, Sassen's research proves this – she shows that two cases of *digital formations* can lead to different outcomes. This in turn means that it is important to look for another dimension, which would explain better the mixed sphere or the 'third state' in which the new socio-technical formations or 'digital formations' operate. By investigating the idea of a conceptual space of digital networks or virtual cyberspace, it is possible to conclude that such comprehension of the electronic media space may help to explain not only the meaning of network community's social action, but also the new social dynamics and other phenomena of online social communication.

NETWORK COMMUNITY: TERMINOLOGY ISSUES

'A community without a network does not exist' (Kluitenberg 2008, 306).

In Western societies, 'communities' traditionally have been defined as groups of interacting individuals that may also be organized around common values and usually residing in a particular geographic location. With the development of the Internet the geographical condition has lost its relevance with regard to the concept of community, because the boundless digital space offers people the possibility to create 'virtual communities'.

In this study on early network culture I use the term 'network communities' despite the fact that the term 'community' may seem controversial today and has different associations in Western and Eastern (Post-Soviet) European societies. Furthermore, the meaning of a term 'community' in Western societies also has changed over the time. Community sociologist Barry Wellman and his associates argue that it is not useful today to think about communities as group-like neighborhoods and that the network understanding of communities in modern times becomes much more relevant (Wellman, Boase, Chen 2002). Wellman also states that the debate about the impact of technology on community is going on since the Industrial revolution and 'part of this debate has been the realization that community is better conceptualized as a social network' (Wellman, Boase, Chen 2002). Hence, the general term 'network' even better than the term 'community' refers to socio-technical formations that have developed as a result of complex interactions between social action and technical properties of digital networks. On the other hand, as 'network' nowadays can be nearly anything, and it still refers also to technical infrastructure as well as different hybrid structures and organizational systems, I consider the term 'network communities' more appropriate when referring to self-organizing digital formations (such as 1990s creative networks or today's social networks).

In this study I also don't use the term 'online communities' (Hampton, Wellman etc. 2002; 2003), when referring to creative network communities. Instead, I sometimes have used the term 'virtual communities' as it is a more conceptual category (less defined by technical means), and it may refer to both online and offline communities, as well as to hybrid combination of those two. For example, although creative network communities use online tools (e.g. mailing lists) it has been also of importance for them to organize activities in offline spaces (at least at their early or most active stages). Thus both, formal network gatherings (such as conferences) as well as informal meetings (joint dinners, personal conversations) that have been hosted during the festivals and other smaller events of emerging new media culture in cities across Europe since the 1990s, were a key factor that strengthened the communities of these collaboration networks.

Translocal Network Communities and Local Community Networks

The ways in which global digital network technologies opened up new possibilities and conditions for creating communities has been introduced by the American writer Howard Rheingold in his work 'The Virtual Community' (1993). Rheingold distinguishes two types of virtual communities in

terms of their geographical placement. *Translocal communities* form themselves around a shared interest, subject or theme; they are completely decentralized and can be spread out all over the world. As these communities most often are 'debating societies' and use the simplest electronic communication options (for example, mailing lists) their members may be located almost any place in the world, given that there is an available Internet connection. Digital network technologies may also be used in the context of geographically localized communities – Rheingold has called this phenomenon *community networking* (Kluitenberg 2008, 307).

During the mid-1990s, when the global distribution and open accessibility of the Internet provided a translocal level for everyday communication, the virtual communities and early collaboration networks emerged mainly with the intent to take a full advantage of this possibility. Translocal communication provided by the Internet was inexpensive and relatively easy to access, and it could be considered almost revolutionary in Eastern Europe, including Latvia, where during the 1990s, the recovery from the fall of the Soviet system was still to come. Back then, translocal cooperation networks was the main medium for creative and socially active people to express themselves and to overcome difficulties caused by the local 'dysfunction' of the economical and political system. Thus, already at beginning of the Internet, translocal networks with their activities proved that these processes do not at all imply the triumph of globalization over the local or of virtuality over the real, but rather the exact opposite – that translocal networks could be used as support for revitalizing the local cultural and social life.

According to Sassen, in times when the term 'local' starts losing its place in the space of global dynamics and global actors, it is especially important to acknowledge the possibilities of new digital technologies for supporting local communities and alliances that have a set location. Such socio-technical formations or 'alternative networks' that are deeply embedded in the superior dynamics constituted by globalization, but which are nevertheless not a part of the formal apparatus (for instance, of the global market), is conceptualized by Sassen as 'the counter-geographies of globalization'. It is important to understand the difference, as Sassen argues – this approach does not suggest taking a cosmopolitan path towards the global, but to merely view the 'global' as a space in which to distribute, to communicate and to multiply the 'local' (Sassen 2002, 380). From this perspective, digital networks do not only provide new possibilities on a translocal level, but they also hold a potential for developing and strengthening local community networking as well as possibilities to extend the field of local communication or social activism on local, translocal and global levels.

Creative Network Communities

Another significant classification of communities – in terms of social relations – can be encountered in sociologists' works at the turn of the 20th century, for example, Tönnies, Durkheim and Weber. German sociologist Ferdinand Tönnies counter-states two distinguished social relations – *Gemeinschaft* (mainly characterized by emotional ties such as family) and *Gesellschaft* (communities based on a more rational and goal-orientated foundation for actual particular social interests, as in urban culture, for instance). *Gemeinschaft* in Tönnies opinion dominated mainly the traditional societies whereas *Gesellschaft* dominated modern societies (Tönnies [1887] 2001). Also Emile Durkheim introduces two types of social groups: the 'mechanical solidarity' of traditional societies and the 'organic solidarity' of modern societies (Durkheim [1893] 1997). In turn, Max Weber in describing the two main modes of social relationships called them 'communal' (based on a subjectively felt unity) and 'rational' (based on relations of rationally motivated in-

terests) (Weber 2004, 271-272). A similar distinction can also be applied to virtual communities –the creative network communities may feature rational relationships (as their common goal usually is rationally motivated, for example, to foster collaboration between Eastern and Western European media artists, as it was in a case of the Syndicate network), whereas today's social network communities can be associated more often with 'communal' relationships (as they are based on subjectively motivated social ties such as for example exist among classmates, friends, relatives).

By the mid-1990s, during its early stages, the Internet was used by quite specific groups of people since it took a certain amount of effort to get connected to it and to participate actively – to explore the social communication possibilities of the new global medium, to create and to publish self-made websites, to initiate and to participate in creating virtual communities with shared interests. A characteristic trait of the early translocal cooperation networks was that they were created by the most active and creative part of society at that time – artists and theorists, media activists and independent journalists in collaboration with programmers and hackers, getting the alternatively thinking younger generation involved as well. Due to this and in order to specify the object of this study and to separate it from today's social networks created on the basis of Web 2.0, I have given the early network communities the term *creative network communities*. Moreover, despite the fact that the term 'creative' today has been 'occupied' by creative industry trend, I decided to use it for describing these type of communities. First of all because 'creativity' was a key approach in both exploring and conceptualizing the realm of the cyberspace, and in creating new social dynamics and experimenting with new forms of social organization based on networked communications.

The characteristics of creative network communities are the search for new paths and a high level of enthusiasm. During the initial stages of the Internet they were undergoing the process of 'self-organization' within the space mediated by digital network creating, replenishing and 'culturizing' this new found territory, thus making it possible to *recognize* it as a common ground for social communication and creative expression. Hence, such communities are characterized by the fact that their field of interest is related to a scope of *self-actualized* problematic issues in relation to new technologies and digital networks, their development and the impact of new technology on society and culture, politics and economy, art and the social sphere.

Considering that the rise of creative network communities is in a large part associated with the early stages of the Internet, they are discernible by the choice to use the Web 1.0 'product' – mailing lists – as a platform for their social organization. However, creative communities possess a high level of self-initiative, their participants feel motivated to experiment with creating new forms of cooperation and communication. In terms of structure, the important *nodes* of creative networks are local organizations such as (new) media art and culture centers as well as individual artists, theorists and activists. The most significant *meeting* places for creative network participants are festivals for new media culture and electronic art. Independent technical platforms such as 'art servers' are considered to be their *virtual home*. The ties between participants in creative networks may be rather weak since they are mostly translocal, however these network participants are brought together by a shared field of interest and a common goal (related to developing the field of digital network culture) as well as a shared history of activities (meetings on festivals, carrying out shared art and culture projects and the like), which makes it easy to activate those ties when necessary.

Hence, it shows that the network culture of the 1990s that rapidly developed itself into socially active, innovative and dynamic field, also contributed in shaping the Web towards social media, and thus can be considered as a predecessor of today's *social networks*.

Social Networks

Nowadays, when the Internet has become a mass phenomenon, and especially since the emergence of so-called Web 2.0⁴¹ and social media the notion of 'social networks' has gained a specific meaning, becoming indisputably one of the most popular new social occurrences of the 21st century.

The most characteristic feature of social network communities is that unlike creative network communities they mostly emerge in an already *recognized* environment, namely, on the social media platforms of Web 2.0. Though social networks have to do with a more recent Internet period – from the first decade of the 21st century up to nowadays – the Web 2.0 is however no technological novelty of the Internet. Web 2.0 is associated with the Internet applications that facilitate participatory information sharing and interactive publishing on the World Wide Web. Unlike Web 1.0, where it was necessary to obtain a certain knowledge of programming language (for instance, HTML at least to some extent) or of some software in order to create and to publish personal web pages, Web 2.0 offers regular users the possibility to utilize easy to use user interfaces on the Internet browser itself and to publish their own 'content' online, for example, photos (with the help of Flickr), videos (on YouTube or Vimeo), textual information (via blogs, wiki's or another platforms) and to exchange this 'content' or to create interest communities around it. Such publication platforms are also called *social media* – this term indicates textual, image, video and/or sound exchange and communication on the Internet, which in contrast to the monologue of traditional transmitting media (TV and radio) offers a social dialogue. To an even greater extent the social media functions are provided by the popular online social network services (for instance, Facebook, Draugiem.lv, Twitter) that serve as instruments for creating social networks, for maintaining relationships and for communication with friends, relatives and colleagues.

Social media platforms have made human online communication more rapid and simple. Working with these online environments requires a minimal level of technical knowledge, which gives the possibility to use relatively advanced functions, for instance, uploading video files on the Internet, building a web page or creating a personal profile. As a result of this a large part of society is nowadays taking an active part within the social media platforms, shaping their own social networks and special interest communities. At the same time this is also reducing the active features of the Internet to a very limited amount of functions designed for social media platform users and developed by social media service owners instead of the users themselves. Since the most active part today takes place in the 'social layer' mainly, namely, on the 'surface' of the digital networks, it distances society from the technical context as well as from political economy issues of the networks – which both are 'layers' of the same importance in the network society. Furthermore, the fact that a very large part of society is involved in online social networking today, means that social network communities are less specific (compared to early network communities), and their aims and motivations of their social action also are much more general. Although social net-

41. It is to believe that the term Web 2.0 was introduced in year 2004, when San Francisco (U.S.) hosted the first conference entitled 'Web 2.0' which was devoted to Internet economy and business innovation on the Internet and in mobile communications. See: <http://conferences.oreillynet.com/web2con/>.

working sites also make it possible to create small-scale and specific interest communities, the dominating motivation today remains the creation of 'social presence' with the main message 'I am here'. Critical thinking (for example, discussions on the future of online social media, its socio-economical effects, ownership and authorship issues etc.) has not completely lost its relevance, however it does not really function within these environments.

Still, the potential of online social media lies in another aspect as already mentioned before. They provide the possibility to communicate in a fast and simple way and they can serve as instruments for organizing social and political activities and campaigns, which can be specially effective if Internet is combined with mobile media.

As far as the structure of social network community ties is concerned; this can vary to a great extent. The ties between social network participants can be local and quite close; as these networks most often are created by friends, acquaintances, relatives, colleagues or classmates, they are based on a sense of emotional belonging. However, social network communities may as well be translocal and their ties are often weak or temporary, especially if they have been created with the intent to chat or to follow someone (for example, Twitter) or to travel (Couchsurfing).

The social networking today has reached large a popularity on a global scale and it has left an undeniable influence on the development of Internet culture. Today network culture is not a marginal phenomenon anymore – since the masses have entered the cyberspace, we can rather speak about popular culture. This situation has also left an influence on the terminology – although the term 'social networks' can be attributed to any type of human network, during the age of Web 2.0 it is being associated with social networking of online environments. Therefore in this study I have used the term 'social networks' in order to name those digital formations that has emerged within the Web 2.0 platforms, as well as to differentiate them from the creative networks.

Conclusion

In network culture studies, I consider it necessary to develop analytical categories, which would be common for studying and comparing both creative and social networks. We can distinguish two different but equally important perspectives, from which to look at the digital network communities: one is characterized by *geographical distribution* and the other by the *nature of social relations*.

As to communities that can be analyzed by their geographical distribution, in this study I use the two opposing terms *translocal network communities* and *local community networks*, whereas the terms *creative network communities* and *social networks* are the division based on the nature of social relations, specifics and intent around which the particular communities organize themselves. Thus on one side this allows to outline the analytical categories and on the other it indicates the shape and borderlines of a very recent research territory of the history of the Internet culture, and allows to look at different lines of development between how network communities evolved during the 1990s and how this is occurring nowadays – ever since the first decade of the 21st century.

NETWORK MAPPING - THE ISSUE OF METHODOLOGY

Due to the fact that nowadays networks have become socio-technical structures of high complexity, the issue of the most suitable methods in network studies has become more important also. In order to contextualize the social phenomenon of digital networks in the most appropriate way, it is important to use a trans-disciplinary approach and combinations of methods. In my research case studies form the basis. In total, the research focused on five translocal (*Net-time*, *Syndicate*, *Faces*, *7-11*, *Xchange*) and two local (*Open* and *E-Lab*) creative network cases, employing mainly qualitative methods – interviews with founders and participants of respective networks. Interviews were combined with quantitative data analysis (for instance, analysis of the dynamics of creative network mailing lists) and document analysis (research of numerous Internet sites, publications and other textual materials related to the 1990s network culture). In some cases I have also used an approach of narrative inquiry in order to highlight some of the most significant aspects of the early network culture, and to reflect upon the meaning of the social and creative actions that happened within the networks where I myself have been involved. In order to view the studied cases from yet another angle, I also 'mapped' the studied networks by using social network analysis (SNA). The 'network mapping' was not only another (quantitative) method used to analyze the structure of these networks. This term also metaphorically features my perspective on network community studies – the attempts to make more 'visible' the developments and other important facets of the 1990s network culture that have in some ways made an impact on Web development in the direction of social media.

Why a Map? The Networked 'Invisibility' and Social Network Analysis

This research aims to increase the visibility of those social communication processes, which took place within the digital network space during the 1990s, and as a result of which creative network communities emerged. The 'invisibility' of these new socio-technical formations is still an issue when it comes to researching and analyzing their social impact. 'Visibility – the ability to see, or get to know of, other people – is an essential precondition for social actions and the types of visibility produced shape the social actions possible.' (Stalder 2011, 21) Regarding Web 2.0 social networking communities, 'social invisibility' is not always a crucial issue, unless their aim is related to socio-political activism or political campaigns. Today the online social media have not only turned into a new type of mass media, but also threaten to be the next Internet business 'bubble'. The question then rises what sort of 'visibility' we should talk about⁴² in the case of social networks. In the case of the appreciation of creative networks this 'networked invisibility' has been overly disturbing, which is the reason why many ideas and facets around the development

42. For instance, Felix Stalder in his article 'Politics of Network Visibility' divides two modes of visibility – the horizontal and the vertical, analyzing the social dynamics these modes create (see Stalder 2011, 21).

of the 1990s network culture have remained unexplored. The new social dynamics, the quest for new forms of social (self) organization and the innovative activities of the creative network communities were first over-shadowed by the global wave of e-commerce and the Internet business bubble⁴³ during the late 1990s, and now by the omnipresence of social networks stemming from *Web 2.0* social media platforms.

Following the notion of networks as a socio-technical formation where the members have shared aims and are motivated to collaborate following common interests, this study focuses on describing and analyzing the meaning of social action in the investigated network communities as well as on understanding the motivations of the participants. However, I have also provided attempts to map these networks considering that network visualizations can also contribute in 'making more visible' some of the important facets of early network culture. Such an integration of social network analysis into qualitative research may seem contradictory in a way, at least in the opinion of network analysts who do not consider the revealing of individual motives the primary focus (Wellman 1983, 163), but instead it shows the objective systems in which the members of community are connected with and tied to each other (Mizruchi, 1994). I nonetheless suggest that combining these contrasting approaches may help to overcome the 'invisibility' of the important developments of early network communities and to reveal also several other motives. For example, in some cases social network analysis shows the weak points of the creative network structure – often they are based only on a single individual, the initiator and founder that endangers the structure to function for only as long as the key person is motivated in sustaining the network. Yet in other cases the analysis of social ties instead of motives can help to highlight the role of other participants in maintaining the network structure, differing from the view from the 'inside'. In other words, those who uphold the network sometimes may not be the most active and 'visible' partakers in the discussions. In any case, a 'map of a network' is a visually demonstrative instrument, another approach for turning 'poorly visible' translocal formations (for instance, network communities) into more visible ones, thus making it possible not only to analyze their 'internal' structure, but also to 'position' them in a wider context of today's network society.

'Network analysts start with the simple, but powerful, notion that the primary business of sociologists is to study social structure'. (Wellman 1983, 156) I would like to emphasize one particular trait of this type of network theory: it is broadly orientated, from analyzing microstructures to macrostructures. The actors of a network theory may be people or groups, corporations and societies (Wellman and Wortlet, 1990). However, this theory attempts to shift the focus in sociological research from social groups and social categories to a research that is concentrated on the *ties* between actors (Ritzer 2008, 434). 'It shifts attention away from seeing the world as composed of egalitarian, voluntarily chosen, two-person ties and concentrates instead on seeing it as composed of asymmetric ties bound up in hierarchical structures' (Wellman 1983, 157). Network theory is still quite a new field with a tendency to develop – also increasingly more researchers from the field of contemporary sociology are focusing on network studies. Furthermore, we can say that 'social mapping' and visualizing information is currently becoming a new trend in network research.

The origins of social network analysis can already be found in the work of Tönnies, Durkheim and Weber. At the beginning of the 20th century Georg Simmel was one of the first sociologists

43. The so-called 'dotcom mania' and its collapse was addressed in the third section, 'Network Topology'.

who started to investigate social relations and social interaction as networks instead of simple groups. During the 1930s Jacob L. Moreno started applying quantitative methods in social network studies, laying the grounds for sociometry. However, it was only during the 1950-1960s that a systematic approach to network analysis started to take place in Great Britain. During the 1960-1970s the interest of researchers turned to social network analysis and this approach was developed in universities across the U.S., Canada and other countries. One of the largest research groups was formed around Harrison White and his students at Harvard University. Amongst them were Mark Granovetter and Barry Wellman who developed and promoted social network analysis (Freeman, 2006; Granovetter 2007, 1-8; Wellman 1988, 19-61). According to social network theory, social networks are structures made up of nodes (individuals or organizations) tied to each other by a certain type of interdependency (common values, beliefs, ideas, friendship and others). Social network analysis views social relations as nodes and ties. At times the network structures that can be made visible by graphs are very complex, although research in this field shows that social networks may work on different levels. For example, they can help institutions to improve by analyzing and changing their organizational structure, or help individuals achieve his or her goals. Instead of investigating separate network nodes, social network analysis has a tendency to focus mainly on the structure of ties and on the ways this structure influences people and their relationships.

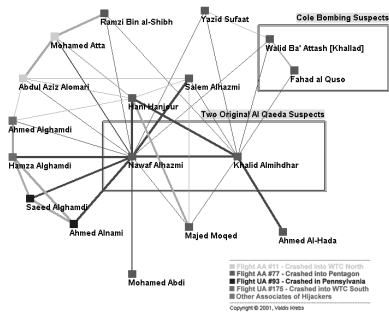
Also according to the most simplistic network definition a social network is a map, which displays and examines connections between nodes. The researcher Richard Rogers has even stated that 'maps organize networks'. Namely, we can speak of a 'network only when there exists a representation of it in a form of a map (or to use the specific terminology – in a form of a graph)'. Historically, social networks have been related to the organized crime and nowadays to terrorists, 'old boys' in business or 'grey cardinals' in politics connected to stock board members or state leaders with ties invisible to others. By visualizing these relations a network can be created that was not there before or which was not recognizable or 'readable'. Thus social network mapping may at times be provocative – by following ties that the involved nodes would appreciate to see in a unified map. Rogers argues that the mapping of social networks reveals commitments to an outlook that may be called a techno-epistemology – this means that acquiring knowledge of the 'visible' and making particular claims is possible only with the help of some particular technological apparatus. (Rogers 2004, 64-65)

What and How to Map? 'Instruments' and Methods for Network Visualization

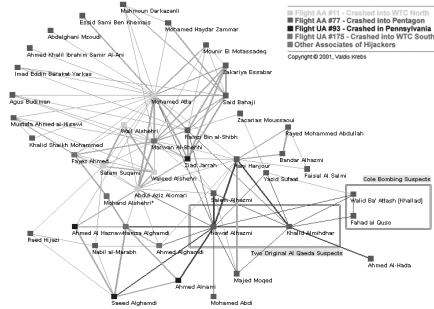
Today social network analysts are using specially developed computer software products as 'instruments' for analyzing social network structures in order to depict their nodes (agents, actors) and their different aspects (relationships, connections, ties). They make research on networks possible, even for those of greater measures such as the Internet, the spread of epidemiologic diseases, multinational corporations, online social networks etc. Network researcher Valdis Krebs is one of the specialists in this field; he has developed software called *InFlow* for analyzing networks. One of Krebs's most significant research projects is 'Mapping Networks of Terrorist Cells' which uses data from publicly available resources. Based on these data he has created a conspirative map of the *Al Qaeda* network (2001). One of the more recent projects by Krebs is mapping the social corruption networks of the U.S. government (2010).



Map 1. Two known suspects, (the 1st level), January 2000



Map 2. All suspects of the terrorist network (the 2nd level)



Map 3. All suspects of the terrorist network (the 3rd level), depending on the level of suspicion
Valdis Krebs. Mapping Networks of Terrorist Cells. 2001

Together with the Institute of Mathematics and Computer Science at the University of Latvia, Valdis Krebs has developed new SNA software similar to *InFlow*⁴⁴, only increased in dynamics. With the help of this SNA software and Krebs' consultations I have created maps for the early creative networks in the framework of my own research. Before undertaking the mapping of creative networks I first had to answer two important questions: what to map and how to map. The question of 'what to map' surfaced because in order to discover the meaning of the network's social action representing only the ties between the participants could be insufficient. In the case of creative networks this is related not so much to sustaining the community itself but rather to organizing the field; whereas the corresponding field is closely connected with the development of the network culture itself. Regarding the second question of 'how to map', the most important thing was to choose the method for collecting data. I must admit that although I have more or

44. See: <http://orgnet.com/inflow3.html>.

less participated in all the networks I am researching, gathering data was not such an easy task. As the early creative network communities were involved in shaping the Web and all organized events and communication processes revolved around the Internet, all traces of their activities – even from the earliest periods – can be found online. At the same time, a large quantity of information from the earliest periods of the Internet culture is unfortunately lost. One of the reasons is partly connected with the 'invisibility' of creative networks; the result often was a disinterest and unresponsiveness from the side of funding institutions for digital culture projects. Due to this reason many innovative projects (including attempts to develop independent infrastructures, for example, the alternative domain name system 'name space', an initiative by media artist Paul Garrin) discontinued their activities. A less frequent reason is hacker attacks as a result of which huge data archives can be deleted (for instance, the shared streaming audio content server initiative *orang.orang.org* ceased to exist due to this particular reason). Likewise, not only social network sites but also other less expensive and easy-to-use Web services (commercial server services, blogs, Website development and publishing tools with Web interface etc.) have replaced the infrastructures built commonly by the earlier creative networks, for instance, independent servers (the so-called 'art servers'). Thus, on one side, 'the content' of the virtual communities today is not their property anymore as it depends on the private owners of the particular online service. On the other side, considering that nowadays people from any field of interest leave their traces in social media platforms willingly – publishing both professional and personal information – broader possibilities of 'tracing' and analyzing their social ties on different levels open up. Initially, I used participant lists of the most significant events (meetings in real life – festivals, conferences, exhibitions and others) of the most active period in a particular network as the output data. However, there was a certain problem I had to face – by drawing ties from one person to another and by trying to follow who knows who (or once knew or was introduced to or invited to join), the map I made turned out quite centralized – for example, within *Nettime* network everyone surely knows Geert Lovink! At first, the results seemed unsatisfactory – I obtained a rather centralized map not presenting the decentralized structure of these networks, namely, the fact that almost everyone knew each other in these networks. Still, there were a few but nonetheless significant conclusions I was able to come to. For instance, I concluded that creative networks are explicitly based around 'key persons' – founders, initiators or mailing list moderators and that this may hold a risk for the sustainability of these networks. This also helped to gain more understanding of cases in which networks got closed down (for instance *Syndicate*), stopped working actively or later were reinvigorated again (*Xchange*).

However, this result did not explain the interrelations and social ties between the rest of the participants so I started collecting available data on the Internet according to the following principles: 1) which events (festivals, exhibitions, activities) gathered which people together; 2) which articles mention which people together; 3) which people have written and published which articles together; 4) what (art, cultural, socio-political or culture-political) projects which people have carried out together; 5) in which mailing lists, forums, discussions which people have debated etc. The obtained data was compared with information I got from interviews and documents – publications of the 1990s, network sites, articles and books written by creative network participants. I have to note once more that this method was convenient in exploring the cases of translocal creative networks especially – as their participants were individuals whose work and field of interest were directly related to the Internet – new media artists, media theorists, organizers of digital culture events, electronic activists amongst others, whose names were easy to trace online. In

short, these networks lacking 'social visibility' instead obtain another one: 'online visibility'. In other cases it was necessary to apply slightly different principles – I came across this when mapping local community cases, as their members had broader and diverse interests related to contemporary (urban, club, digital etc.) cultures and less of a focus on Internet media. Accordingly in local cases it was more sufficient to use: 1) information from the interviews; 2) information from the 1990s publications (newspapers, articles, books); 3) information from the Internet – including but to a smaller extent, from the very few websites of the 1990s, because all other search results showed more recent entries only (mainly from social networking sites).

This method – gaining information from publicly accessible resources – was chosen according to the advice of network researcher Valdis Krebs, who uses similar methods in his research. It is based on the renowned research 'Finding Social Groups: A Meta-Analysis of the Southern Women Data' by Linton C. Freeman where the author performs research on female social networks (using interviews, newspaper information, personal conversations etc.) as well as meta-research investigating ways in which other sociologists have performed similar research by using different methods (Freeman 2003, 39 – 97). Freeman had concluded that the results were remarkably similar and that this method (acquiring information from publicly accessible resources) is reliable. Although this method was effective enough, I had to confront some ethical issues – practically everyone within these networks 'knows everyone else', they all are creative people and personalities who wish that their contribution in the 'creative network' development is appreciated. However, often enough they do not wish to be 'recognized' within their 'social network'. Making 'social' ties more visible could make it more apparent why some people know the one better than the other (for example, what role do family ties or partner relationships have) or why they have collaborated on a project (for example, in one of culturally or political importance). However, such an 'internal' look on social ties doesn't satisfy as it doesn't bring us closer to the aim – such a 'map' of creative networks would make sense only if it succeeded in revealing the meaning of social action and would make achievements of this network more visible. Then it would provide the possibility to view and evaluate them on a broader scale of network society and network culture. Therefore my third attempt, I believe, finally was a success – building upon the ideas of 'Actor-Network Theory' (where it is possible not only to map humans but also objects in action) I started to develop maps on three levels that not only mapped people – the participants of creative networks – but also the projects (which may be any kind – events, art works, collaborative projects, artistic initiatives etc.) these participants have initiated, created and developed, as well as fields of their activities (the innovative and objective contribution that creative network communities have made in the advancement of the network culture field).

The Qualitative Research and Other Applied Methods

Mapping provides greater visibility to creative networks – it shows their structures of ties and different types of connections – whereas qualitative research (mainly interviews) serves as the main method for investigating participant motivation and the meaning of their social action of the investigated cases of creative networks, as well as for inquiring other questions further on in this study.

The translocal creative network case studies were selected, on one hand, to include the most significant translocal collaboration networks that emerged in the early stages of the Internet during the mid-1990s and that played a key role in the development of network culture, and on the other hand, to reflect upon the variety of creative communities' fields of interest and activity. Altogether,

this research includes five translocal cases: 1) *Nettime* – a network that initiated and developed the critical discourse of Internet culture; 2) *Faces* – dedicated to the issues of cyberfeminism; 3) *Syndicate* (later on – *Spectre*) – worked on building a common platform for media art across Eastern and Western Europe; 4) *7-11* – a net.art community; 5) *Xchange* – a global network for creative Internet radio initiatives. From January 2009 to March 2010 I have interviewed the founders of the respective networks: Geert Lovink, Pit Schultz, Andreas Broeckmann, Heath Bunting, Kathy Rae Huffman as well as experts Armin Medosch and John Thackara. Interviews covered several blocks of questions: 1) motivation – what was the internal (personal) motivation and how it was influenced by (outer) circumstances (the economical and political situation, etc.); 2) terminology – how do founders and members themselves define the particular 'socio-technical formation' – is it a community, a network or 'just' a mailing list; 3) sustainability – what are the main aspects that ensure the sustainability of networks; 4) a comparison between the early creative networks and today's *social networks* – the similarities and differences (according to the experience of respondents).

In one of the translocal community cases, namely, the cyberfeminist network mailing list *Faces*, an e-questionnaire was used in order to find out the 'insiders' opinion of what the community members (in this case female members) think of their community. I chose this community because the participants show a greater responsiveness in comparison to other lists. The selection of respondents was random – out of those who volunteered to respond I know only few personally. The e-questionnaire also included questions about personal motivations to join this community; about the importance of this community; about the 'network or community' terminology, and about aspects that provide a sense of community. During the time period from February 26, 2010 (when a message was sent out on *Faces* with a request to reply) up to March 3, 2010 I received 13 responses from about 300 mailing list members (they were sent in by *Alexandra Weltz, Marlena Corcoran, Ana Carvalho, Brigitte Neufeldt, Manu Luksch, maria ptqk, Alla Mitrofanova, Eva Ursprung, Anja Westerfrölke, one anonymous Face, Nina Czegledy, Melinda Rackham, Helen Varley Jamieson*).

Regarding local community networks the selection of the case studies was made so as to include the main tendencies of the early alternative and digital culture during the mid- and late 1990s Latvia. Two local community networks were analyzed: *Open* – a contemporary culture project which generated an alternative culture network in Riga during the mid-1990s; and *E-Lab* – one of the first nongovernmental culture organizations in post-Soviet Latvia and the first electronic art laboratory to give way to the local digital culture network in Riga during the second half of the 1990s. The respondents were the most active and creative people of the younger generation of that time, so not only their contribution to revitalizing the social life of Riga city culture could be introduced; they were also themselves the founders or active participants of some new organization or informal group. I took eight interviews from January 2010 to April 2010. Amongst the interviewees were Kaspars Vanags – art historian, the initiator of *Open* – a hybrid project of contemporary culture and techno music events; Sergejs Timofejevs – a poet and the founder of *Orbita* project for young generation Russian poets and writers; Normunds Kozlovs – sociologist, an active participant of one of the first social activist NGOs in Latvia – *Baltic International Centre for Human Education 'Cooperation for Peace'* – who also collaborated with the independent and non-commercial music group association *Tornis* and with the non-commercial culture development project *NEKAC* in Kuldiga; Kristine Briede – the founder of the independent film and TV producer group *Locomotive* and the independent creative integration project *K@2 Culture* and

Information Center in Liepaja Karosta (which she founded together with Carl Bjorsmark); Martins Kibers – the initiator and founder of the new club music project *Casablanca 2000*; Jaanis Garancs – multimedia artist and the founder of the first electronic art laboratory *E-Lab* in Riga (together with Raitis Smits and myself), *E-Lab* is also the creator of the Internet radio project *Ozone* and the global creative Internet radio network *Xchange*, apart from the groups mentioned previously, and *E-Lab* had close collaborations with the independent electronic music group and music label *SSS (Sloka Sound System) / Elast* and with the Russian and Latvian DJ group and multi-media project *Varka Crew*; Alise Tifentale – journalist and art historian, one of the founders of *E-Lab*, she also collaborated with many other 1990s contemporary art projects (for instance, club *Slepenais eksperiments*, etc.) and did reports on them for the first independent Latvian television – *RBS*; and at last but not least – Pauls Bankovskis – writer and journalist, who was one of the first to take interest in new media; he wrote articles on it and collaborated with *E-Lab*. The blocks of questions covered in the interviews with local 'networkers' were similar to those of the translocal network interviews and their task was to inquire about: 1) the motivation (personal and influenced by outer circumstances), goals and leading ideas; 2) the most characteristic traits of the local culture environment of the 1990s (in comparison to nowadays); 3) the way in which the social network of the 1990s alternative culture emerged; 4) similarities and differences between the early Internet culture and today's social networks.

Next to network mapping and interviews I used other methods in the case studies also – both quantitative (analysis of mailing list dynamics), and qualitative (the research approach of narrative sociology). In performing the analysis of the creative network mailing list dynamics I collected data from the publicly available online archives of the time period beginning with the founding of the respective networks (the mid-1990s) up until nowadays (the end of 2009). The acquired data was used to draw tables representing the dynamics of the network. This way it was possible to both study the activity of the mailing list (the number of published messages during a year/a month) and to compare it with the increase or the decrease in the number of mailing list members during the same time period. The quantitative data was compared with the information from the interviews, thus analyzing to what extent the objective data corresponds with the subjective opinion of participants with regards to the most dynamic period of the network.

The research approach of narrative sociology has been used in order to add a more vigorous experience to the case studies – the personal reflections of the author, descriptions of the most significant main events, expressive quotations from interviews etc. 'Literary sociology brings richer experiences to the forefront which can also be viewed as social signs that may indicate characteristics of a particular society or an age' (Tisenkopfs 2008, 178). At the same time these are not merely descriptions of what took place where and when; these descriptions are used as signs that explain meaning and describe tendencies at the root of the emergence and the development of creative network communities.

Conclusions

As 'social invisibility' is quite an important issue in network culture studies, it is necessary to use a combination of methods that allows viewing and analyzing the object of the study (i.e. network communities) from diverse viewpoints, thus helping to position it within a broader context of network society and network culture. Through the use 'network mapping' along with cases studies that were based on combining different methods – qualitative (interviews) and quantitative (the analysis of mailing list dynamics, analysis of social networks) methods as well as the 'language'

of narrative sociology (descriptions, personal reflections etc.) – the empirical research is facilitated with a set of comprehensive methods. Hence, on one hand 'network mapping' makes 'more visible' the ties that interconnect people involved in these networks and their initiated projects, and shows relations to a number of new fields (e.g. cyberfeminism, internet radio, streaming media etc.) that have emerged as a result of social and creative action by these creative network communities. Yet, on the other hand the case studies provide better understanding, description and analyses of the meaning of the social action and motivation by network participants, just as about their shared aims, guiding ideas and other featuring facets behind the creative network communities.

PART II

TRANSLOCAL CREATIVE NETWORKS AND THE RISE OF THE NETWORK CULTURE

When during the early 1990s the Internet finally became publicly available and started developing rapidly it had just left the sealed walls of university laboratories. Still, it already had to face a contradictory situation. On one hand, it encountered a paradoxical reaction of the 'old media', criticizing the Internet as it were to achieve a strategic overturn. On the other, the minds of some Internet users were prevailed by utopian euphoria as if the Internet was the true promise of freedom. While the business world considered possibilities of turning the Internet into a new space for the global market, intellectuals and the cultural and artistic elite simply thought it was a dumpster resulting from an uncontrolled permissiveness. In short, 'despite that fact that universal access to the nets has hardly been realized, we have already landed in the age of disappointments, cynicism and decadence for the few. Internet's Golden Age is over, before it even began' (Schultz, Lovink 1996, 5). This was the context that set the path for a constructive development in Europe, which founders Geert Lovink and Pit Schulz called *the critical discourse of the Net*. This new movement obtained the title *Nettime* and it formed the conceptual base upon which the network culture with its diverse creative communities emerged, evolved and developed during the following years. However, the development of creative network communities was not preconditioned by a pessimistic scenario. The early and mid-1990s was a time when former political systems dissolved in the Eastern Europe and borders opened up towards the West. It also coincided with the emergence of new global communication technologies in both parts of Europe – East and West. The previous political system in Eastern European countries was no longer functioning, and the emptiness followed by its fall together with the openness of digital network technologies formed favorable conditions for developing new forms in practically all fields. For example, in the field of social relations and social organization it made possible the development of both translocal collaboration networks and local communities, as well as the establishment of new non-governmental organizations (NGOs). In the field of art and culture it open up possibilities to experiment with new forms of creative expression in digital media and on a global level. The decentralized access to digital networks facilitated a 'bottom-up' activity and finally diverse forms of networked social organization became possible also in Eastern Europe – collaboration networks, local and translocal communities independent from state institutions could be established. But the specific principles of digital networks, namely, the simultaneity and the effect of presence made these new structures of network societies particularly dynamic.

Today the Internet has been publicly available for more than 15 years and the social networks have become a mass phenomenon. However, their social 'visibility' is still a topic of discussion. The new forms of social interaction and social organization which have emerged in the environ-

ments of digital networks are still not 'embedded' enough in the formal structures of globalized society due to their virtuality, non-institutionalized forms, translocal nature and other reasons. In order to gain a more elaborate outlook and to highlight the importance of creative networks in contributing to new social morphologies of today's society, I did a study on translocal creative networks that played a specific role in the development of network culture during the 1990s. In this chapter I will look at few of them: *Nettime* – that introduced and developed the discourse of critical Internet culture; *Faces* – that addressed the issues of cyberfeminism; *Syndicate* (which later on became *Spectre*) – that aimed at establishing a joint platform for media art in Eastern and Western Europe; and last but not least – *7-11* – net.artists community.

Net.Time – the Nettime Mailing List and the Critical Discourse of the 'Net'

During the Venice biennale in the late spring of 1995, ZK⁴⁵ organized the first larger meeting with international activists, artists, organizers, theoreticians and writers interested in the 'Net'. This meeting with the title <net.time> featured a discussion on 'the city metaphor versus the life metaphor, the labyrinths of real and virtual worlds, wandering web-sites, the city-state, a critique of the political agenda that would come to be called the Californian Ideology and the perennial question of art. *Nettime* became a reality at this meeting.' (*Nettime* 1999, 16) During the next few years this was followed by a string of events 'dedicated to network culture and politics' in Budapest, Madrid, New York, Ljubljana, as well as countless railway stations in between cities – any place *Nettime* participants had a chance to get together. Lovink has elaborately described the history of *Nettime* in his book 'Dark Fiber' (2002) in which he reflects on the ideas, circumstances and specific context of the rise of critical Internet culture. It also explains well enough the motivations of *Nettime* founders. Therefore in this case study I focus on rather specific and less studied aspects of *Nettime*, for example, community issues, the question of sustainability, forms of social organization, and the Eastern European perspective.

What exactly is *Nettime*? '*Nettime* has been widely recognized as one of the leading forums for the discussion and practice of innovative Internet culture and Internet-based art. Its aim has been to bring together different disciplines and practices such as electronic arts, computer science, media theory, IT journalism, and media activism' (Lovink 2002, 68). Being asked whether *Nettime* is a network, a community or a mailing list 'only', Geert Lovink replies: 'That changed over time. It was very much a movement in its early days. Then it became a scene and very briefly, around May 1997, even a group-like thing, but that didn't last long and then it fell apart, step-by-step. ... Slowly it turned into a loose collection of mailing lists.' (Lovink 2010)

'May of 1997' refers to the *Nettime* conference which was held in Ljubljana, gathering around 120 network members of *Nettime* (back then there were 400 *Nettime* mailing list subscribers) from Western and Eastern Europe as well as other regions. The conference took place in the media laboratory *Ljudmila* that was established with the support of the George Soros Foundation. At this meeting the *Nettime* group discussed topics such as net.art, Eastern Europe, the political economy of the 'Net', outlining the field for discussions which went on for a couple of years on the *Nettime* mailing list. (Lovink 2002)

Despite the number of participants being slightly over a hundred this was that rare moment of togetherness, where the opinions and ideas were exchanged on a very personal level and the

45. ZK or MZK – Medien Zentralkomitee, a group formed by Geert Lovink and Pit Schultz, later to be renamed as *Nettime*.

Nettime network could be regarded as a community or, as Lovink prefers to describe it, 'a group-like thing' despite the fact it was explicitly heterogeneous.

My own experience can also characterize the extent to which this meeting was important for us, artists from the Eastern Europe. There was a huge urge to get to the epicenter of this new movement, which after the fall of the Berlin Wall developed into a whole new global culture. Particularly important for us was that this emerging 'Net culture' was formed in the process of self-organization and around information exchange and communication, which were exactly the things we lacked most in the former Soviet Union. Our first electronic art laboratory *E-Lab* was founded by Raitis Smits, Jaaanis Garancs and me in Riga under a similar slogan: 'art plus communication'. Nevertheless, it was still difficult for us to get to the 'hot spots' of the emerging network culture in order to participate in all the countless but important events and meetings, because back then there were only a few countries that did not require visas – amongst the first was Poland, followed by Hungary and Czech Republic slightly later.

Hence, tremendous enthusiasm and serious motivation were needed to get to the *Nettime* meeting in Ljubljana. And we had that. First, we had to send our passports to Stockholm where it took two weeks to prepare the Slovenian visa. We couldn't afford to buy the airline tickets. However, it was a real 'puzzle' to travel to Ljubljana by land. First stop was Prague. A bus went there, but the trip took more than 30 hours. Nevertheless it was possible to get to the capital of the Czech Republic via Lithuania and Poland with no visa. After visiting some friends for a couple of days I went to the Prague train station trying to figure out how to get to Ljubljana. Traveling the shortest way through Vienna was not an option since I had no Austrian visa. The other possibility was to travel through Hungary or via Zagreb. Even though I was suspicious I chose the second option. Unfortunately Zagreb turned out to be in Croatia, which meant that I was not allowed to cross the border. At midnight I got set-down at the Hungarian-Croatian border station where I spent several hours refusing kind offers from local men to get a drink at the station buffet. For the remaining trip it was crucial to be able to read the map right. I took a train that went in the opposite direction back to Budapest and went a few stops until I got off nearest to the Slovenian border. There was a small town, of which I do not remember the name anymore, from where a local bus took me almost to the Hungarian-Slovenian border post. It was early morning when I stepped outside at a beautiful cornfield and was on my way to the border. I had a 6 kilometer walk ahead of me when a lonesome Russian merchant was kind enough to take me to the border post with his red, old Russian Lada car – as it turned out he had no Slovenian visa and was now driving around waiting for his colleagues to return from Slovenia. The border-guards gave me a strange look as I continued my walk to Maribor for my bus to Ljubljana.

A few days later Raitis Smits embarked on a similar trip, only he took a train through Poland – from Warsaw and Krakow to Budapest. From Budapest his bus arrived at the same town next to the cornfield but he got there only around evening time and he had to spend the night on that same bench at Maribor bus station in order to catch the first train to Ljubljana. I do not even remember how we got back, because it was not important anymore, what was important was to get there – where something new and significant was finally starting to happen.



Nettime meeting and conference 'Beauty and the East' in Ljubljana, 1997. On the left: Critical Art Ensemble, Patrice Riemens, Inke Arns, Josephine Bosma – Ljubljana. On the right: Konrad Becker and Peter Lamborn Wilson – Nettime field trip to Piran.



Nettime meeting and conference 'Beauty and the East' in Ljubljana, 1997. On the left: Marleen Stikker, Geert Lovink, Richard Barbrook, Josephine Bosma – Nettime field trip to Piran. On the right: Raitis Smits, Rasa Smite, Pit Schultz – dinner in Ljubljana. Photos from: <http://future-nonstop.org/> (A Living Archive for Digital Culture in Theory and Practice. Project by t0.)

I have referred to my own personal experience here in order to reflect on the significant difference between the way networks were created back then and today, and also what the motivation was to join back then and now. Nowadays, networking happens in a completely different environment – the Internet has been publicly accessible for more than 15 years and anyone can create a profile in a setting that is already prepared, within the possibilities offered by social media platforms (*Draugiem.lv*, *Facebook*, etc.). Whereas back in the mid-1990s in the beginnings of the Internet, in order to take part in translocal collaboration networks, it was crucially important to overcome other kinds of borders, including technical, physical (geographical), psychological as well political, cultural, and others.

Regarding technological aspects not only a computer and access to the Internet were required; an entirely new set of knowledge was needed for creating websites, and especially for setting up and maintaining your own Web, mail or live streaming servers as a network community. The Internet was a worldwide novelty, thus acquiring skills to use this new information and communication technology was relevant for both Western and Eastern European participants, whereas the mobility problem was more of an issue in Eastern Europe. Particularly, artists from post-Soviet countries were facing this problem due to the visa regime still existing in the 1990s and to high airline ticket prices. Overcoming boundaries was not only an issue of 'geo-politics' but it also referred to barriers such as language (English language skills were very poor for many Eastern European citizens), social communication (at first, it was psychologically difficult for post-Soviet artists to approach the new 'gurus' of Internet culture) and, obviously, there were differences in the 20th century cultural experiences that existed between the Eastern and Western creative

professionals and activists. Yet, these boundaries were not an obstacle for the most eager Eastern European artists to become actively involved in the new collaboration networks already during the beginning stages of network culture.

The *Nettime* meeting in Ljubljana was also one of the rare attempts to turn *Nettime* into something more than a mailing list. Although *Nettime* organized an even larger 'real' event after the Ljubljana meeting in Kassel for the whole summer (100 days) during Documenta X with the title 'Hybrid Workspace', it failed to create a similar feeling of 'togetherness' as on the Ljubljana conference. Hence, the Ljubljana meeting can be considered the high point of *Nettime* in terms of community creation, also one of the reasons this event had such a long-lasting resonance afterwards. 'The Ljubljana meeting had a long echo on the list. In terms of content and new connections the meeting had proved successful' (Lovink 2002, 97).

The inquiry shows that *Nettime* founders Geert Lovink and Pit Schultz express different opinions of what the terms 'a network' and 'a community' mean. As Lovink states, 'I personally do not like the term community because of its religious connotation, it suggests unity and harmony, which, back then, wasn't the aim. ... I doubt if *Nettime* ever was a network in the way we use the term right now. For sure it's a loose connection of people that share a common history' (Lovink 2010). Schultz thinks to speak of community the communication should take place in real time and space. According to Schultz, community starts when people get to meet each other: 'I totally believe out of all what can be community, it is when involved is human interaction, which can't be mediated. ... What is happening between people in terms of exchange, is body and language, which is so rich, it can't be replaced with computer and internet ... Community, I would say is substantially to do with what we call meet-space these days, it deals with time and space and necessity to interact – in real space. I don't want to become too esoteric, but there is difference what people feel when they are together in real space. May be there will be technologies in future, who can replace that, but definitely not now' (Schultz 2009). Nevertheless, it may be observed that the main aim of *Nettime* was not related to 'community creation', but rather towards 'organizing the field', which in principle is characteristic to all creative networks. *Nettime's* field is related to the development of critical Internet culture.

As to the structure of *Nettime*, it is decentralized, yet it has its centers and peripheries. As the *Nettime* founders themselves state – the network of *Nettime* has not abolished the unequal structure of the global information flow and neither has it been able to do that. Most of *Nettime's* subscribers are from Europe. In the U.S. *Nettime* is mostly influential on the East coast, in New York. There are many network activists and artists from Australia and Asia that have showed an active interest in *Nettime* and also it has subscribers from Japan, Taiwan, India and even China. Hence, the *Nettime* founders believe that it is a platform that aims to overcome the imperialistic past of the global media vector architecture (Schultz, Lovink 1996, 5; *Nettime* 1999, 19).

In order to make the rising network culture also accessible to those who are not online or who prefer the printed media, *Nettime* used to issue a series of publications. From 1995 to 1997 ZK activists and *Nettime* issued three 'ZKP' ('ZK Proceedings') editions which were made into 150 Xerox photocopies. In 1997 'ZKP4' was issued as a newspaper in 10.000 copies in relation to the *Nettime* conference and meeting in Ljubljana. In 1999 *Nettime* published 'ZKP5' – a book of 550 pages with the title 'ReadMe! ASCII Culture and the Revenge of Knowledge!' (informally also called 'The *Nettime* Bible') featuring articles, collections of the most interesting text flows from *Nettime* and its neighboring mailing lists as well as reviews of other network culture processes and events from 1995 to 1998.

After the Ljubljana meeting and 'Hybrid Workspace' in Kassel in 1997, the *Nettime* 'community' gradually fell apart. Although many important events were organized during more recent years, for instance, the *Temporary Media Lab* (TEMP) project coordinated by Geert Lovink in the Kiasma museum, Helsinki (1999), they were not directly related to *Nettime* anymore. During the second half of the 1990s Pit Schultz focused on exploring his idea of non-mediated communication by turning his interest from mailing list communication to radio. First he was enthusiastic about Internet streaming media possibilities – he organized the first larger creative Internet radio 'broadcasters' meeting *Trimmdich*, Berlin *Net.radio days* (1998) and initiated the project *Klubradio* (1999). Later on Schultz continued to develop the local 'audio content producers' community around FM radio, which despite different hold-ups continues transmissions in Berlin radio waves today as the artist radio station *reboot.fm*.

Since the turn of the century *Nettime* continued its work only as a mailing list, in fact a set of lists also operating in other versions and languages. The number of subscribers doubled each year and continued to grow from few tens of people (back in 1995) to 2.500 (in 2000), currently (in 2011) the number of subscribers has not changed a lot: 2.534 subscribers receive regular postings and 1.345 are subscribed for digest posts⁴⁶.

The question whether *Nettime* is or is not a community is disputable however, it cannot be disclaimed that *Nettime* managed to create a new movement with its own meaning and significance. Furthermore, it was a joint effort of the mailing list members who were motivated to contribute their knowledge, ideas and discussions about the meaningful development of this new critical discourse of the Internet. That, if you like, does treat digital network technology seriously by exploring the ways cyberspace can be 'inhabited' and how to work creatively within it. 'It's a collective subjectivity with no fixed identity, made up of the people who come and go from the *Nettime* list, who contribute more or less to its characteristic ideas and expressions' (*Nettime* 1999, 17). Expressions and thoughts on the *Nettime* mailing list are versatile, dialectic and often opposing but all in all they create the new critical discourse of the network and the new media theories; it is an *Open* space for exchanging and forwarding thoughts (Schultz, Lovink 1996, 5).

In terms of content, the *Nettime* mailing list has always preferred discussions with the tendency to reduce the number of announcements. Lovink states that 'people do not like mixed lists and tend to respond less. Many have the feeling that if a list carries a lot of announcements the community is dead. This is not proven to be false but if people have that feeling then it may as well be true. This is all very subjective. For some announcements are very useful.' (Lovink 2010) Other mailing lists are trying to balance out between both – discussions and announcements, being more or less successful. In 2005 a separate mailing list – *Nettime-ann* (*Nettime* announcements) was made for sending-in announcements only. As the *Nettime* activity during the 1990s continued to increase rapidly, in order to organize the number of sent messages *Nettime* chose to put constraints to the 'Open space for thought exchange' by using the tactics of moderating. *Nettime* managed to limit the number of messages per day, so as not to become a spam list and thus maintaining its subscribers. However, it lost the versatility of postings – many did not send in their thoughts or announcements anymore, knowing that the messages were filtered and that they may not be re-published on the mailing list. Most of the artists left *Nettime*, thus manifesting their discontentment with its changing course and they created their own 'net.art' mailing list with

46. Data taken on March 31, 2011, received via e-mail from current *Nettime* moderator Felix Stalder.

the title 7-11. Others turned to other mailing lists where the content was not filtered with their interest and active participation. In 1998 such mailing lists as *Xchange* – for Internet radio experiments; *Faces* – for women in new media; and *Syndicate* – for media art in Europe were already actively operating parallel to *Nettime*.

Nettime decided that the list would be supervised by a group of moderators who would replace each other from time to time. However, this is not what happened. Lovink explains: 'This is what was agreed in 1998-2000: moderation would rotate in order to prevent happening what we see right now: the highjacking of a collective initiative by one or two people' (Lovink 2010). Although the number of *Nettime* participants is still very high, in particular on the discussion list (more than 2500 subscribers) and the activity in the mailing list since 2005 has not reduced (in terms of the published messages) still, according to Lovink, the mailing list can no longer be considered a 'live' forum: '*Nettime* has been more or less dead for a long, long time. Just compare it to the neighboring iDC list, which has de facto taken over the role of *Nettime* with pretty much the same people and topics' (Lovink 2010). *Nettime* just as any other online based networks has to face the same issue of sustainability: after the highly active and innovative beginning phase and the rapid development comes a downfall and the question emerges how to continue the work of the mailing list. After being asked about the most crucial issues networks would have to deal with in terms of sustainability, Lovink replies: 'The ability to grow, transform, and move on. This would also imply the art of disappearance'. Lovink believes that the problem of many network initiatives is that they tend to get sort of stuck – the number of incoming messages decreases, the discussions fade but moderators do not have the guts to stop what has been started. However, he also thinks that in an electronic environment such as the Internet this is not so important. 'A critical issue therefore would be: how to stop? We know how to initiate new projects, but no one advises us when it is time to leave the stage.' (Lovink 2010)

Today the discussion on whether *Nettime* is a community or not has lost its relevance. It is not important to return to the way of organizing events as back in 1996 or 1997 or to the earlier forms of (Xerox photocopied) publications either. *Nettime* remains 'only a mailing list', nevertheless it continues its work actively: still the amount of announcements is similar – on average 60-70 messages a month. Today there exist many other online means of social communication alongside mailing lists – blogs, wiki and the social network sites, which are even much more popular. However, these Web 2.0 based social media platforms have not managed to replace 'list culture'. Mailing list-based creative networks, including *Nettime*, continue to operate also today. Lovink argues that 'social networking sites are not ideal community tools, and do not constitute counter public spheres. They are good to expand your social horizon but not if you want to organize a field.' As he explains, they are good for promotion or some types of (social, political) campaigns but 'they are less suitable as mediators between the real and the virtual. That's what lists do best: they are bridges between events and the net.' (Lovink, 2010)

Although *Nettime* is not the main channel for discussions on networked culture and politics anymore (as there are other mailing lists which discusses these issues more actively), it nevertheless was (and to a certain extent still is) the heart of the early network culture. Since the 1990s other 'neighboring' mailing lists continue to grow and evolve around *Nettime*, including *Faces* – a cyberfeminist community, which I will look at next.

Faces – the Cyberfeminist Community and the Issue of Women’s ‘Cybervisibility’

Nettime’s open structure encouraged participation and a variety of voices and expressions, however it lacked women’s participation in its discussions. ‘The male culture of scientific, business, and military based structures and biases built into communications technology is daunting and alien to many people from different cultural, racial, and class sectors.’ (*Nettime* 1999, 21) Even smart women with good education and good English writing skills found *Nettime* a difficult forum ‘to crack’. Yet *Nettime* put an effort into including and addressing cyberfeminist issues. (*Nettime* 1999, 21)

Saskia Sassen claims that women’s ‘cyberpresence’ and ‘cyberopportunities’ is still a crucial issue today. More and more women are nevertheless using the Internet both on a more advanced level (programming) and in their business and political struggles, as Sassen argues, the lack of female representation on the Internet is still significant. In order to make female cyberpresence and sociopolitical visibility a reality, according to Sassen, it is necessary to use the potential of cyberspace so as to transform the local conditions and institutions where women play the main role (household, school, local community), adding a global (transnational) dimension. Namely, the technical connectedness may be used for creating new ties, allowing women to express themselves and ‘to pursue projects not easily accommodated in their local, often limiting and oppressive, situation’. (Sassen 2002, 379)

Thinking about how to make women’s cyberpresence more visible, some of the most active female media artists gradually came up with the idea to create their own forum that would provide the possibility to express yourself more freely, more personally and with less focus than on *Nettime*. In Berlin in the beginning of 1997 artist Cornelia Sollfrank together with other women from the field of new technology and art created the first cyberfeminist cooperation platform and mailing list *OBN – Old Boys Network* (no longer existent). Another cyberfeminist project, *Faces*, emerged later the same year, for which the idea was put forward by curators, artists and activists Kathy Rae Huffman and Eva Wohlgemuth in the beginning of 1997. ‘It started over a conversation that took place at a dinner party [in Vienna]. ... We were hosting dinners and discussing Internet and technology in general with women curators, artists, etc. in several cities’ (Huffman 2010). Soon after Huffman together with Vali Djordjevic and Diana McCarty created *Faces*, a mailing list for international ‘cyberfeminism’. ‘The first group of twelve women were from the dinner party. We used majordomo software, and it was free and pretty simple. Word got out that there was a new mailing list for women, and we started to get more and more requests from women to join. Eva and I did a number of special events, internationally, where we presented this concept’ (Huffman 2010).

The term cyberfeminism was first used by a female artist group from Australia, *VNS Matrix* (also involved with the *Faces* mailing list), in their ‘Cyberfeminist Manifesto for the 21st Century’ (1991). Although it is possible to relate cyberfeminism to all kinds of feminist theories and practical applications (from political technoart and sci-fi to game design and activism) it was less associated with the traditional discourse of feminism in the case of *OBN* and *Faces*. Such mailing list based communities were more of a platform using the cyberfeminism concept in order to create a common ground for women working in new media – both those who were not interested in feminism at all and those who were dedicated feminists. The chart below presents some of the cyberfeminist theses or, more precisely, ‘antitheses’ of what cyberfeminism ‘is not’.

- 74. Cyberfeminism is not Nettime.
- 79. Cyberfeminism is not science fiction.
- 81. Cyberfeminism is not an empty space.
- 83. Cyberfeminism is not about boring toys for boring boys.
- 90. Cyberfeminism is not nice.
- 92. Cyberfeminism is not something lady like.
- 95. Cyberfeminism is not mythical.
- 96. Cyberfeminism is not from outer space.

A few examples from the cyberfeminist manifesto '100 Antithesis: What cyberfeminism is not'. *Old Boys Network*⁴⁷

It was decided that men would not be allowed to subscribe to this mailing list. Huffman explains: 'We decided it had to be only women, otherwise we would have another *Nettime* (with ranting men – smart but ranting nonetheless). We wanted something that would connect women, not to give them a platform to intimidate others' (Huffman 2010). Hence, *Faces* can also be viewed as a case where digital networks are used to facilitate new social ties between women of different professions, who under other circumstances would not have the motivation to create a network of shared communication. The list includes women who are interested in exploring new media – artists, programmers, DJ's, curators, activists, theorists, researchers, academics and others. In 1997 approximately thirty women were subscribed to *Faces*, during the next years the number of subscribers grew rapidly and currently the *Faces* list has around 300 women subscribed from many European countries, as well as from the U.S., Canada, Australia, and other countries.

What distinguished cyberfeminist events from other creative network gatherings was the fact that their meetings in the physical space – conferences, symposiums, workshops – were turned into events with specific attention on 'socializing' alongside presentations and discussions. One of the first major cyberfeminist gatherings was the symposium 'The First Cyberfeminism International'⁴⁸ in Kassel, held as a part of the *Hybrid Workspace* event in the framework of *Documenta X* in 1997. Preparing meals and sharing soup was just as important as discussing Internet development, video or sound editing tools and this is common for all cyberfeminist meetings. Cornelia Sollfrank, founder of *OBN*, organized this symposium. About forty female participants gathered: new media activists and artists, among them the initiators of *Faces*, who 'opened up the *Faces* mailing list to that event, as it [the list] was in place and working ... it set the tone for the list that developed after that' (Huffman 2010).

The case of *Faces*⁴⁹ shows how the use of new communication technologies opens up new possibilities for women to communicate, express themselves and work creatively within the translocal space of digital networks. Today, as a result of ubiquitous social networking on Web 2.0 platforms the online communication has become simpler and women cyberpresence has increased, although *Facebook* has not replaced *Faces* yet. As Huffman considers, in order to sustain a network or even more – a community it is necessary to know the participants, who they are and

47. <http://www.obn.org/cfundef/100antitheses.html> (Viewed on 02.06.2010).

48. <http://www.obn.org/kassel/index.html>.

49. <http://faces-l.net> – mailing list dedicated to issues of 'women in new media' and 'gender, technologies and art'.

what matters to them: 'First of all, *Faces* is still small enough to know most of the women on the list. You can't say that about Facebook ... although I have more fb friends than are subscribed to *Faces*, for example. I find that fb is very easy to use, but it's becoming very annoying, with so many changes, and always these alerts and ads. *Faces* has none of that, it's available as a daily mail. I think *Faces* is much more personal, and even if one doesn't post, one feels a loyalty to the idea of it, the tradition of it, and the potential for it to bring new information and ideas between women.' (Huffman 2010) I can only agree to that. This is one of the few mailing lists where the atmosphere has always been welcoming and friendly. I participated in the first cyberfeminist symposium in Kassel in 1997 and I was also subscribed to the list for a short period in the 1990s. Recently when carrying out this research I re-subscribed myself again, and I have to admit that the atmosphere has not changed that much during all these years. Reflecting upon the reasons that make this mailing list sustainable it seems as though it is the merit of the list founders themselves. Their ability to take care of the community can be compared to that of a hostess caring for her guests.

I must acknowledge that for someone like me who grew up within the Soviet regime, where gender equality was rather exaggerated and thus the gender issue never actually was an issue, at first it seemed overwhelming to combine the 'serious' like professional work with the 'trivial' elements of the household. My confusion was also caused by another reason. In the Soviet art – both in painting and sculpture as in contemporary expressions of the transitional period – male artists have always worked alongside a very strong line of female artists. Thus in the art field the false gender equality was manifested, whereas it was quite the opposite in the cultural institutions where female workers prevailed, which again was typical for an underpaid profession. Here we can notice a contradiction – despite the fact that women rights is just as important a topic in Eastern Europe as in the Western world, in Latvia and similarly in other post-Soviet regions the general public still views feminism with a rather negative or ironic attitude. The reasons behind such an attitude are quite unclear; most likely people themselves would not be able to explain it. Often feminism is considered either some sort of Western oddity or it is being confused with the Soviet 'legacy', in which positive achievements in woman rights (benefits for young mothers) are associated with the social system of the state instead of being considered as the outcome of women's own struggle for their rights. Another reason might be the low trust levels considering the government and the reigning economical inequality, due to which gender equality projects in Latvia are still considered less important (Spolitis 2005). In my opinion, other reasons are the low social activity among citizens themselves and the lack of self-initiative, caused by the Soviet system of central authority where there were minimal possibilities for self-organization and the forming of movements or independent formations. Even in Latvian contemporary art there have been very few projects addressing the women factor, for example, '*LN Project of the Women League*' (1999) and the Soros Contemporary Art Center's exhibition '*The Sixth Element (What do women carry in their purses?)*' (2002), where we – some female artists from RIXC (the former *E-Lab* group) participated in the exhibition with women Internet radio project '*Radio Spidola*⁵⁰, for which the idea emerged in a close association with cyberfeminism movement. In the beginning when I was invited to participate in the cyberfeminist symposium in Kassel my attitude was also rather reserved. My Soviet experience was not an obstacle in perceiving global

50. <http://www.rixc.lv/spidola/>.

ideas (for instance, the concept of a critical network discourse), however it was difficult to appreciate adequately new technologies from the humane point of view of every-day-life (for instance, what could preparing a meal have in common with net.art?). Still, witnessing such free navigation across different topics allowed me to become more open myself. I never built up the courage to participate in the *Nettime* discussions (I just posted some announcements very rarely) but the responsiveness of the *Faces* participants encouraged me. Maybe increasing the visibility of the participation of women in digital technology application, development and referencing, will make the perception of technologies and their usage more versatile and humane.

Following Huffman's suggestion I sent out a few questions to the *Faces* mailing list in order to get the 'insiders' point of view. What do *Faces* women themselves think of this mailing list based community; whether or not *Faces* is a community; and what are the most important aspects that provide the sense of community. The responsiveness turned out to be quite good which, I must admit, was what I was hoping for. In a few days time I received replies from thirteen women – only four of whom I knew personally. Others were either interested in my research or just wanted to help out approving that '*Faces help Faces*' (Corcoran 2010).

As I found out, respondents had subscribed to the *Faces* mailing list at very different times – from the very beginning (e.g. in 1997) to years later (e.g. in 2005, and even later). My intent was also to find out their motivation for joining the list. Most of the 'cyberfeminists' are media artists or researchers, therefore I asked what role *Faces* plays in both their personal lives and creative work and what, in their opinion, is the contribution of *Faces* mailing list for the advancement of new media art field. The respondents shared almost the same opinion on the significance of *Faces*. Almost all participants admitted that this mailing list and community is important to them on a personal level while the contribution on the level of their professional work is providing more visibility for women in new media arts. However, the meaning of their social action within this mailing list varies for different *Faces* participants due to the diversity of their purpose: 'Many women lurk and don't contribute much (like me for example), while others find it their lifeline to information.' (Huffman 2010)

Austrian artist Manu Luksch, who resides and works in London, has been subscribed to the mailing list from its very beginning: 'Initially I didn't expect the experience on *Faces* to be much different from lists I was subscribed to at the time, e.g. *Nettime*, *Syndicate*, and I was definitely not motivated to join through the 'female only' promise. However, I felt immediately that the tone was really different from the other lists. Less competitive, less rushed, overall really friendly, supportive. ... I remember joining discussions on *Faces* but on no other list'. Maria Ptqk from Spain, interested in research on creative community, subscribed to the mailing list five years ago: 'I guess the biggest value is on the personal level, in the sense that it provides me with the feeling of being part of a community, even if we don't know each other.' Some participants express opposite opinions, for example Anna Karvalho who joined the mailing list in 2005. She is doing research on creative networks and joined in order to find out more about other women who make new media art: 'Other people may have a different perspective. To me it hasn't been so important. Perhaps because I also do not participate that much, I may have the shy kind of personality.' Although personal opinions may differ, one must agree with Alla Mitrofanova from Saint Petersburg who participated in the mailing list from the day it was founded: '[*Faces*] is a very important episode of the early network culture.'

As the participants who joined *Faces* did so at different times and due to different motivations and interests, they also have different notions regarding community and aspects that define it. 'To

me it is a mailing list which provides community and the notion of there still being women around who are concerned about feminist issues and art' (Alexandra Weltz); 'network AND community. Wherever you go, there will be a member of *Faces* to welcome you' (Eva Ursprung); 'In addition to the mailing lists, many informal face-to-face meetings, dinners etc., have been organized at various conferences. The exchange and atmosphere is really great at these events and re-enforces the mailing list communication. ... In my opinion these and other features contribute to the "community" environment' (Nina Czegledy); '///mailing list and a community. ['Community feeling' aspects include:] ///the meetings in person: with different '*Faces*' members during events like media festivals (ars electronica, transmediale), ///the reference when I talk about it' (Anja Westerfrölke); 'Network/community. It is a meeting place for like-minded people, for sharing and exchanging and supporting one another' (Helen Varley Jamueson).

After doing the inquiry on *Faces* it is possible to conclude that, first, *Faces* may be considered in terms of all three notions – it is a mailing list, but it is also a network and a community. Regarding the community aspect and the reason behind the sense of community in *Faces*, most respondents in a way agree with Pit Schultz (but are not so radical – as that community can only exist in real space); they suggest that meetings in real space are necessary for an (online) community to exist. Respondents also think that the responsive and supportive environment of *Faces* determines the atmosphere and plays a great part – it creates a sense of solidarity instead of self-representation and competition characteristic to other mailing lists. And last but not least, the *Faces* mailing list has managed to balance out its content, 'the mix of media art, theory discussion and domestic announcements (i.e. friendly meetings in other cities when traveling, etc.)' (Melinda Rackham). Furthermore, there is no duality between discussions and announcements, which is a crucial issue on other lists.

More than that, I would like to argue that equally important to all of the above mentioned 'community' aspects, is the successfully executed responsibilities of hosting by founders and administrators McCarty, Djordjevic and especially Huffman. The implicit duty of taking care of everybody within the *Faces* community is the main reason for providing sustainability of the *Faces* network. As a result *Faces* has undergone the least changes in more than ten years in comparison to other creative networks. Perhaps, the discussions today are less dynamic and the number of sent in announcements is notably smaller than during the early years of this mailing list, however, the responsiveness has remained the same, as Huffman concludes: 'I think it is basically the same, sharing, caring, and collaborative environment it once was.'

Syndicate – Collaboration Network for Eastern and Western European Media Art

Another important *Nettime* 'neighbour' was the *Syndicate* network and mailing list, which after the fall of the Berlin Wall aimed at fostering the cooperation between the Eastern and Western European media art and digital culture scenes. The *Nettime* mailing list was more engaged in theoretical discussions, whereas *Syndicate* was an invaluable source of information for artists working and experimenting in practice with new media technologies. It was in a way a 'window' into a realm of new possibilities, especially for those from Eastern Europe and for those who were interested in establishing new connections between Eastern and Western European artists. In terms of art practice, translocal networking was a novelty not only in Eastern Europe but in Western Europe as well, where contemporary art life in the 1990s was organized mainly by curators and art galleries and relationships between artists were more competitive than focused on partnership. During the mid-1990s the ground was well prepared; both European sides and not only

the Eastern part felt it necessary to exchange information and were ready for communication. *Syndicate* founder Andreas Broeckmann explains his motivation and how the idea of creating a cooperation network between the Eastern and the Western parts of Europe emerged: 'I was in London at that time, (I had to finish my PhD) when the Berlin wall fell down. I had a feeling that something very important had happened; I was very sure that now many new things were possible. But in the West not so many people paid attention to that. However, art and culture people already were opening up their interest towards the East' (Broeckmann 2009).

By the beginning of the 1990s the practice of networking in Eastern Europe had been already initiated on an institutional level by Soros's *Open Society* institutions. Although George Soros himself regards networking as *not-working* (Lovink, 2005), networks established by Soros's institutions, for example, the Soros Contemporary Arts Center network, were among the first international culture exchange and cooperation networks in Eastern Europe. Yet, these networks developed under the influence of Soros's policy with strictly set spheres of interest and organized by elitist institutions, whereas the *Syndicate* network was a self-organized formation. Furthermore, the *Syndicate* network not only included artists from Eastern Europe, but also brought together on more equal terms both Eastern and Western European artists, art collectives and organizations. Hence, everyone who was interested in translocal cooperation and shared the same aim, namely, to develop the emerging field of electronic networked media art, could join this network. In the 1994 alongside the contemporary art programs, Soros launched the Internet Program with the support of which a number of new media culture and electronic art laboratories were founded in Eastern European countries. For example, the support of Soros's Open Society Foundation helped establishing C3⁵¹ media center in Budapest, the media laboratory *Ljudmila*⁵² in Ljubljana and others. In other Soros Contemporary Arts Centers, for instance in Skopje (Macedonia), new media art was included in the general field of work and the centers were very active participants in the *Syndicate* network. In others, like the *E-media* center in Estonia, the new structures were organized under universities; while in Latvia the *E-Lab* was a self-initiative and the first independent non-governmental artist organization in this Post-Soviet country. During the mid-1990s Soros Foundation was either the main or only available funding source where independent initiatives and individual artists in Eastern European countries could apply for grants covering traveling as well as project implementation costs. (For example, the national art and culture fund Cultural Endowment Foundation was established in Estonia already in 1994, whereas in Latvia only in 1998). Therefore the impact of Soros's institutions on cultural processes and networking was strong in 1990s, which also can be observed indirectly even in the establishment of such a self-organized network as *Syndicate*.

A very important feature of the 1990s networking culture is that participation was possible only among people who were online, as Broeckmann explains: 'So it was a very particular group of people that could be involved. And this grew of course, but it meant that people like you, and us, we could say – ok, we go online, but it also means that we deal with technological determinism, and anti-social techno-logic. So these were people who wanted to discover how these technologies can allow to communicate.' (Broeckmann 2009)

Just as *Nettime* and *Faces*, *Syndicate* also began with real life meetings. The first important *Syndicate* meeting was the so-called *V2_East Syndicate Documentation Meeting* (the full title:

51. <http://www.c3.hu> – Center for Culture and Communication in Budapest, founded in 1996.

52. <http://ljudmila.org> – Ljudmila, media arts center in Ljubljana, founded in 1997.

The Electronic Alternative – Media Art in Eastern Europe, V2_East Meeting on Archives and Documentation) that took place in Rotterdam in September 1996. It gathered around thirty media artists, curators and network activists from thirteen different Eastern and Western European countries. This meeting was organized by V2_ in Rotterdam – which was one of the first Western European art organizations that invited Eastern European artists to participate in an electronic art festival (in this case *DEAF'96* festival).

We embarked on a journey again, of course, with the support of the Soros Foundation, only this time there were three of us from *E-Lab* – Raitis Smits, Jaanis Garancs and myself – so we used the small travel grant to rent an old *Ford*. We got past the borders quite successfully. In Poland the police stopped us several times (we paid them the Soros dollars in cash for exceeding the speed limit). At one point, we even got stopped by the military police (at least we left them no money, whereas on another trip to *WRO* festival in Wroclaw where we went in an even larger group, our colleagues at the Warsaw station had to pay racketeers 'per diem' with dollars granted by Soros). After having travelled about 2000 kilometers we arrived in Rotterdam by midnight. We constantly kept driving around the station to find an entry into the one-way street where Broeckmann lived, who had kindly offered us and other Eastern Europeans to stay at his place. At one point some Rasta man started following us in his car, offering us weed. Although we woke him up in the middle of the night and he met us face-to-face for first time it was a very warm welcome. That was characteristic to the early creative networks – people had a feeling they already knew each other, although they had either met online only or just a few times before.

The *V2_East Syndicate* symposium was the first meeting that gathered new media artists and emerging initiatives from different Eastern European countries. For example, Slovenian video artist and curator Marina Grzinic introduced the situation of media art in Slovenia, while the curator of the independent *Galeria 21*, Irina Aktuganova, illustrated the media art life of Saint Petersburg during the past decade. Video and media artist Ando Keskyła, who was the founder of the *E-media* center and later also the rector of Tallinn Art Academy, talked about the emerging media art projects in Estonia. The media art curator and director of *MUU* Media center Tapio Makela from Helsinki, viewed the practice of cooperation projects and provided a theoretical insight into media art history. Ryszard W. Kluszczyński, media art curator from the contemporary arts center *Ujazdowski Castle*, gave an overview of the media art developments in Poland – from experimental cinema to interactive and multimedia projects. Likewise, Melentie Pandilovski from Skopje contemporary arts centre in Macedonia, Martin Sperka from Bratislava Art Academy in Slovakia, artists Raitis Šmits, Jānis Garančs and me from *E-Lab* in Riga, Latvia amongst others, introduced the situation concerning media arts in their home countries.

The *Syndicate* mailing list was created as an outcome of this meeting and it was initially hosted on the *Ars Electronica* server in Linz. Being asked whether mailing lists help people to meet and to create their communities, Broeckmann replied that in his opinion, 'that's the other way around!' Namely, it was similar to *Nettime* – for *Syndicate* the 'real' meetings also came first and only afterwards a mailing list was created. Yet Broeckmann adds that access to the Internet, of course, played a role: 'if there wouldn't be email, we wouldn't be able to do it [to organize such meetings], because it was only possible among people who were online in 1996,' adding that: 'first was the meeting of people. And I always say that network is not the mailing list, but the people are the network.' In clarifying what network and what a mailing list is, Broeckmann explains his position: 'For me the network is a description about structure. Community is the unit or coherence there is and based on personal relations. Network can be everything. But a network of people can be

community, however often it is not' (Broeckmann 2009).

Broeckmann describes the field of the *Syndicate* activities plain and simple: 'Syndicate initiatives are determined by three main modes of work – *information exchange*, organizing the cooperation network and project initiation' (Broeckmann 1996). Information exchange was basically the main function. Initially, the *Syndicate* mailing list was the major information source for European media art, regularly publishing the daily and the monthly news issue *Syndicate Newsletter*, prepared by list administrator Broeckmann. It combined all the sent-in announcements, news and an event calendar of media art events, festivals, projects and calls for artist residencies, competitions, art-work submissions for festivals and so on around Europe and the world. Although the discussion-respecting participants objected that *Syndicate* is a mailing list for announcement distributing only, for most of the artists, theorists and festival organizers it was as significant as 'bread with butter'⁵³. For instance, self-initiatives of young local artist such as *E-Lab* in Riga, *Galeria 21* in Saint Petersburg and others could by using *Syndicate* mailing list find associates on an international level much more easily, with whom to carry out cooperation projects and to develop the field of new media art and culture on both local as well an international level. But more importantly, *Syndicate* and other translocal new media culture networks served as a support and a kind of political backing for the development of these young initiatives of the 1990s, which had to introduce themselves not within translocal collaboration networks, but also prove themselves locally both in terms of funding the necessary equipment and in order to bring in new the media art field into the scenes of contemporary art and traditional culture.

Initially, *organizing the collaboration network* and *project initiation* played an equally important role as information exchange. After the meeting of September 1996 in Rotterdam, the first edition of *Syndicate* publications was issued. In the spring of 1997 a meeting held in Liverpool at the *Videopositive* festival, organized by Iliana Nedkova, and in the summer of 1997 it was the *Deep Europe Meeting* in Kassel during the *Hybrid Workspace*, where Luchezan Boyadiev put forward the idea of 'deep Europe'. Some other meetings including a gathering in Tirana in 1998 followed. As Broeckmann recalls during the interview, these meetings were organized until April 1999, when the *Syndicate* event in Budapest took place: 'The Budapest meeting was originally supposed to be planned for Belgrade, but then the war started and we decided to meet anyway, and close enough to Serbia so that people from the region could participate. Several people from Belgrade came to Budapest: Gordana Novakovic was there as a refugee, while Katerina Zivanovic came specially for the meeting – and went back to Belgrade afterwards, despite the on going bombing. There was a very intense discussion on the *Syndicate* mailing list at the time, and that it was possible at all was due to the fact that many people on the list knew each other personally. It was thus possible to communicate in an atmosphere of friendship and mutual trust. In a somewhat exaggerated way, some of us thought afterwards that the whole purpose of the *Syndicate* networking effort of the previous years was to have an open communication channel during these difficult weeks.' (Broeckmann 2009)

Afterwards it seemed irrelevant to organize meetings and this was justified during the summer of 2001 when three significant events served as the turning point for the history of *Syndicate*, as Broeckmann highlights. First was the meeting in Bulgaria, which was intended as a *Syndicate* event but did not gather many of its members. People started believing that the mailing list built

53. From a message by Annick Bureau on *Spectre* mailing list, view <http://coredump.buug.de/pipermail/Spectre/2001-August/000005.html>.

the network and not the meetings. Second was the spam mail campaign on the mailing list by the aggressive artist Netochka Nezvanova. Around that time automatic filtering technologies started entering mailing list culture. As soon as the messages were blocked by filters, people spent less time following what went on the list and did not protest against the spam. The highly professionally organized exhibition of young Albanian artists marked the third event, which indicated that there were no relevant differences between Eastern and Western Europe anymore.

Although the *Syndicate* mailing list still grew rapidly (in 1999 it had around 700 interested subscribers and their number continued growing), these three reasons together led the founders to the decision to discontinue *Syndicate's* work. A new mailing list, *Spectre*, was created in its place – again from the beginning. But unlike its predecessor, *Spectre* is a mailing list only. Broeckmann explains the difference: 'In the *Syndicate* days, in people's minds it was clear who is on the list. Fifty, sixty people, of who at least five knew each other personally, some of them knew even more than thirty others personally. For newcomers (of the *Syndicate* list), they had a feeling that there is a spirit. Also they realised that there are these meetings during which people talk, and after meetings exchange information. Such personal communication was important also for those who didn't attend these meetings, and it also differed from *Nettime*. *Nettime* had only one or two initial meetings, but they never had an intimate feeling there.' (Broeckmann 2009) The case of closing down *Syndicate* shows how fragile collaboration networks can be, that they are not immune to inner disagreements and attacks and that eventually such personal conflicts may tear the structure of a network apart.

In August 2001 the newly operating mailing list *Spectre* maintained a similar circle of subscribers. Also, the topic was similar – media art and culture – only this time in 'deep' Europe (deciding that it wasn't necessary to highlight the context of Eastern Europe in any special way as it was back in 1996). *Syndicate*, the previous mailing list, was moved to the server of the Oslo media arts center *Atelier Nord*⁵⁴ and continued its work administrated by other people.

Among media art mailing lists based outside Europe I also would like to mention here the art server *Rhizome*⁵⁵, established by a media artist group from New York in 1996. Currently, *Rhizome* is an extensive community of young media artists that has grown since its beginnings. Nowadays it involves artists, curators, writers, programmers, students, educational staff and new media professionals from 75 countries and five continents. Since 2003 the *Rhizome* initiative has moved to New York's New Museum where it continues to grow and to sustain the community of net. art artists, discussion forums and net.art archive. Slightly more recent is the *Empyre* mailing list in Australia, founded in 2002 and focusing on new media art practice from the perspective of professionals – curators, critics, philosophers, and others. There are many other local mailing lists in other languages instead of English (for instance, *Rezone* in Latvian often republishes relevant announcements from its translocal neighbour the *Spectre*).

Although being 'only a mailing list' nowadays, *Spectre* continues to be the virtual platform for European media art, which not only publishes almost all of the latest information in the field but also can be considered as a media art 'source' from where information 'flows' further to other translocal and local networks and communities.

54. <http://anart.no>.

55. <http://www.Rhizome.org>.

7-11 – Net.Art Mailing List

7-11 was a mailing list for net.art initiatives that existed for a short period (in 1998) and focused less on announcements or discussions on art but more on creating and distributing it. 7-11 as agreed by Heath Bunting, one of its key founders, was all of the following, mentioned in the interview: a network for net.art, a mailing list for the net.artist community, a net.art project and subversive action. '7-11 was many things to many people, a shared space where people felt free to experiment' (Bunting 2010).

An important role in the development of network culture was assigned to those active artists who chose Internet and computers, bits and bites, new media and communication as the material for expressing their creative ideas in an aesthetic, artistic form. 'The thing that separates art on the Internet from a simple artistic online presentation (publicity) is its self-referentiality, the fact that it is dealing with the specific features of the net' (Baumgaertel 2001, 14). So-called net.artists explore the Internet as the medium and the material of their work. Not only is their work presented online, it can also be the art of desktop, Internet browser, software or programming. It can often be subversive and may be hacker art or art referencing hacker ethics. Net.artists also used ASCII graphic drawings frequently which can be inserted easily into an e-mail text.

7-11 was established in 1998 as a mailing list opposed to the Internet's critical discourse platform – *Nettime* – which preferred serious discussions. The moderators of *Nettime* did not tolerate the outrageous campaigns of net.artists who instead of serious discussions sent in incomprehensible decorative or conceptual strains of text or self-propaganda, like announcements of their latest net.art works. The debating participants often had a hard time understanding that the 'bread and the butter' for artists is often an artwork or the process of creating art instead of thoughts formulated in a written form, thus such campaigns caused *Nettime* to start 'filtering' the messages. Being asked what the motivation was to initiate the 7-11 project, Bunting replied that it was exactly that: 'being thrown off Nettime was the reason for setting up 7-11 with Jodi and Vuk [Cosic]. The breaking of 7'11 was the reason to start 'american express' [an other net.artist mailing list]. Also it was always intended that 7-11 would be temporary and be replaced quite soon. This was to keep people from forming little kingdoms like *Nettime*'.

7-11 was created as a net.art campaign for net.art and net.art only, where artists could express themselves freely and speak up occasionally by sending out different kinds of messages in a free form, in sign or *ASCII* graphics as well as information on their personal net.art projects or other net.art works and events.

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ASCII graphics sent to the 7-11 mailing list (from the 7-11 archive).

Although *7-11* didn't exist long and served no other purpose than to be a net.art campaign⁵⁶, it has left permanent traces in net.art history. Bunting thinks that 'free spaces are important, but generally they need to be temporary to keep them fresh and free from control' (Bunting 2010). Considering the situation today, it is hard to imagine such creative and artistically experimental avant-garde cooperation projects as *7-11* being possible on *Facebook* or any other similar platform, where the means of expression are restricted by the platform creators. In the early days of network communities artists or community members themselves created these online collaboration platforms. Bunting argues that in '90's platforms were often owned by the people using them e.g. Irrational, Ljudmila, *Nettime*. Now these platforms are owned by security services or capitalists. In the 90's, the social space was the primary product, now it is the personal space people are on *Facebook* to promote themselves mainly. In the 90's, people were promoting the group'. Hence *7-11* was a remarkable precedent where art that is often considered as an autonomous field became 'communicable' via the Internet by creating a new social dynamics.

Conclusions

The conclusion drawn from evaluating the studied cases in general is that the early creative networks can be consequently regarded as the founders of network culture and that their creative approach to social communication managed to create a new type of social dynamics, thus having a significant impact on creating new social morphologies of today's network society.

By analyzing each individual case I have come to the conclusion that *Nettime* is undoubtedly the 'heart' of early network culture around which other mailing list based network communities grew and evolved during the 1990s, including *Syndicate*, *Faces*, *7-11* and others.

Another significant trait of creative networks is their field of activity, which is always defined clearly with explicit aims and domains. Also, their aims are related to the development of a certain aspect of the digital network culture. For instance, *Nettime* is dedicated to foster the development of critical Internet culture, while *Faces* seeks to promote the 'cybervisibility' of women working in the field of new media. *Syndicate* deals with the issue of overcoming the gap between Eastern and Western European media art and artists, and last but not least, *7-11* aims at exploring new forms for self-expression within the online space. All studied cases have in common the fact that despite the periods of highs and lows of these communities, the mailing list has always been the central form of organizing their field.

Regarding the meaning of the social action of creative network participants I came to the conclusion that the emergence of creative networks was influenced by two facets, internal and external, yet both to the same degree. The first is motivation, which is related to the personal motives, ideas and interests of the individual, especially the founder, as well as his or her ability to motivate and to involve other participants in the network. The second refers to the set of facts, which includes conditions and outer circumstances independent of the individual, for example, the political situation after the fall of the Berlin Wall, the new possibilities for translocal networking and social communication brought by communication technologies etc. Both these facets together formed a specific and responsive environment that provided possibilities to join these networks for all those who were interested and had access to the Internet, had a similar motivation and shared a common aim.

56. <http://www.irrational.org/7-11/>.

THE SOCIAL ORGANIZATION FORMS OF CREATIVE NETWORKS

The mailing list undoubtedly is the main form of social organization for creative networks – lists used to be and still are the main platform to facilitate and sustain the every-day activities of these translocal communities. Yet for the rise and development of these network communities the meetings in real life during the festivals, conferences, exhibition and other events, which have been and still are organized for the advancement of the media art and network culture field, played a particularly important role, as observed in the previous chapter. Alongside communication in the translocal space of digital networks, the 1990s also witnessed the launch of many new local organizations such as new media centers and electronic art laboratories that functioned as 'nodes' of local support within translocal creative networks. The new media centers have always played a significant role in maintaining communication of translocal networks and communities, by organizing the necessary meetings in real life during festivals and other events organized by these centers. Likewise, media centers with their independent infrastructure, for instance, servers and services, secured the different functions of creative networks (e.g. hosting the mailing lists and their archives, and collaborative project websites, which was crucially important in the 1990s). Thus, in a way local media centers functioned as nodes for the translocal creative networks that linked-up the virtual with the real and the local with the translocal.

Festivals – the Meeting Places for Creative Network Communities

In the second half of the 1990s the meetings of the emerging network culture were held at every new media art and contemporary culture event in various cities in Eastern and Western Europe as well as in the U.S., Canada, and Australia. Next to regular media art forums already founded in 1980s such as the *Ars Electronica*⁵⁷ festival in Linz, *Transmediale*⁵⁸ festival in Berlin, *DEAF*⁵⁹ (*Dutch Electronic Art Festival*) in Rotterdam, *WRO*⁶⁰ festival in Wrocław, and others, more and more new events came up during the 1990s: the *ISEA*⁶¹ *International Symposium for Electronic Arts*, the tactical media conference series *Next 5 Minutes* in Amsterdam, *Interstanding*⁶² conference series in Tallinn, *Art+Communication*⁶³ festival in Riga, and also later, for example,

57. <http://www.aec.at> (Ars Electronica festival started in 1979).

58. <http://www.transmediale.de> (Transmediale was founded in 1988).

59. <http://www.v2.nl/events/deaf> (started in 1987, was renamed as DEAF in 1984).

60. <http://www.wrocenter.pl/en/biennale-wro/> (WRO festival was founded in 1989).

61. <http://www.isea-web.org> (ISEA was founded in 1990 in the Netherlands).

62. <http://www.interstanding.ee> (Interstanding conference series started in 1995).

63. <http://rixc.lv/info/festival.html> (Art+Communication was launched in 1996).

the *Pixelache*⁶⁴ festival in Helsinki and many other events and projects held both regularly and short-term. On the one hand, the festivals were the largest public manifestation of emerging field of new media art and network culture, and their programmes included conferences, exhibitions, performances, workshops, and other forms of public events. On the other hand, such festivals were rather specific for new media culture – festivals usually are short-term gatherings (not more than a couple of days up to one week maximum), and they take place in different places all around the world, bringing together diverse groups of international participants. Thus the festival in terms of its form of activities suits best when it comes to representing such a dynamic field as network culture, and also for hosting the meetings of creative network participants. Nevertheless, that doesn't necessarily mean that these meetings ought to be formal, specifically organized and included in the programme (as it was often viewed back in the 1990s, for example, in the case of *Syndicate*, who specifically organized their launch meeting during the DEAF festival). Informal meetings also serve well for strengthening network communities. This is best observed in the *Faces* community, where women participants are using their mailing list for letting each other know who is going to which festival (or other similar event), expressing their interest to meet with other 'Faces' there and coordinating one meeting or another. It can be, for example, a joint dinner combined with professional work meetings for planning future projects and activities, hosted alongside with discussions and informal talks. As the festivals seldom are virtual (there have been just very few attempts to organize online festivals, one of such examples is the recently organized *Electrosmog*⁶⁵ festival), these translocal gatherings usually take place in a physical location, which means that there are local hosts who are taking care of the organization of these events. It also means that the festivals are not only meeting places, but also important moments where virtual translocal networks are manifested through their local nodes – media centers.

64. Although *Pixelache* did not start in the 1990s – it was first held in Helsinki in 2002 – the festival is worth mentioning. Not only because its ideas are rooted in the creative network culture of the 1990s (the founder is Juha Huuskonen, who worked before at *Katastro.fi* and was an active participant in the international networks), also it is a unique case because it has developed into a network of festivals. Different *Pixelache* festivals under other similar titles have taken place and continue taking place around the Nordic countries, as well as in Europe and other regions. See: <http://www.pixelache.ac>.

65. <http://www.electrosmogfestival.net/> (Electrosmog online festival, 2010).



The second festival 'Art+Communication' had the title 'Xchange on-air session' in Riga, 1997. Above: illustration from the first edition of the international issue 'Acoustic Space. Xchange, Net audio issue', 1998 (56 pages) issued by E-Lab. Festival design and illustration by: Martins Ratniks.

Media Centers – The Nodes of Network Culture

The existence of the creative networks would hardly be possible without its relevant nodes – local new media culture centers and electronic art laboratories. In the 1990s, one after the other started appearing around Eastern and Western Europe on the new wave of cultural NGOs. Mostly, media centers functioned as a support mechanism for creative networks in developing the field – by organizing new media art and culture festivals of larger and smaller scale, workshops, symposiums, exhibitions, etc.; by implementing collaborative projects of digital culture and media art and by initiating creative and innovative social activities. Similarly, media centers delivered the support (both in their every-day communication, in meetings and in organizing other events as well as in carrying out joint projects) by providing an infrastructure for creative networks – servers and services, computers and Internet access, laboratories for producing artwork and premises for organizing events.

Thus on the one hand, being mostly virtual the translocal collaboration networks still require 'real' resources and an infrastructure to support their virtual activities – for example, to maintain and administrate their mailing lists, to organize network community meetings during their festivals, and the like. On the other hand, local organizations need these cooperation networks, even more so if they are translocal, as Saskia Sassen explains: 'Cyberspace makes it possible for even small and resource-poor NGOs to connect with other such NGOs and engage in global social efforts' (Sassen 2002, 380).

This was a very important aspect in Eastern Europe where establishing (and more importantly sustaining) media centers could not be possible without translocal contacts and partner-organizations based in the wealthier Western European countries. For example, the NICE network is such a case that shows how more possibilities can emerge if local initiatives start networking by expanding their activities to a regional and broader European level. In 1999, the most active cooperation network participants from the Baltic Sea region gathered during the TEMP (Temporary Media Lab) event in Kiasma, Helsinki, to discuss cooperation strategies in this region, which is rather small geographically, but diverse in terms of political and economical conditions as it includes both the wealthy Nordic countries and the Post-Soviet Baltic countries, which in the 1990s were still very poor. As a result of this meeting the translocal creative network *NICE (Network Interface for Cultural Exchange)* was launched with the aim to support the development of emerging media art centers in Baltic-Nordic region. NICE included the E-media center in Tallinn falling under the Art Academy, the independent artist foundation in Riga *E-Lab*, the *Jutempus* artist initiative in Vilnius, *CRAC (Creative Room for Art and Computing)* in Stockholm, *Atelier Nord* in Oslo, *BEK* in Bergen, *M-Cult* and *Katastro.fi* in Helsinki and others, also involving individual new media artists. At times, such partnerships resulted in a financial benefit, like when the European Union program *Culture 2000* supported the long-term cooperation project '*RAM – Re-approaching New Media*'.

But there are other, smaller-scale mutual support possibilities. For example, more frequent support for maintaining translocal networks was given in terms of technical resources, which could be mutually provided by media centers and individuals that were involved within such networks. For instance, the *Xchange* Internet radio community was supported by Riga based *E-Lab*, who hosted and administrated its mailing list on its own server, and organized collaborative Internet audio streaming sessions. At the same time, *E-Lab's* own streaming activities and *Xchange's* collaborative experiments in the beginning (1997-1998) were supported by the independent ISP server *xs4all.nl* in Amsterdam and for many years by the *RIS (Radio International Stadt, later called Orang.org)* server in Berlin, which provided playing option for *RealAudio*⁶⁶ files.

On an everyday basis local media centers most often are using mailing list based translocal networks as information channels, to distribute announcements about their forthcoming festivals and other events, calls for submissions, etc. However, these networks also contain potential of 'tactical media'⁶⁷ and they can be and have been used sometimes in a case of urgency, for example, by responding to community participants' request for help during social, cultural or political struggles. In 2002, there was an incident when the Latvian Ministry of Culture decided to confiscate the computer hardware of the Center for new media culture RIXC⁶⁸, which was purchased with the art project competition grant of European Cultural Month a year earlier. While auditing the ministry realized that such a purchase was not allowed, although no one was certain for sure. RIXC was a non-commercial new media center and at that time had just one Internet server (which today hosts the large archive of early internet culture 'objects' – *Xchange* network mailing list messages, countless 'real audio' files, Latvian internet art works, numerous websites of digital art and culture projects, etc.) and one computer (out of the three that were available at

66. *Real Audio* – the first technology for audio archiving and publishing and later on for broadcasting (since 1995).

67. Tactical media concern socially or politically active tactical activity by using the media

68. RIXC was founded in 2000 on the basis of the earlier (1996) founded *E-Lab* center in Riga.

the center) that was purchased with the grant from the ministry. This equipment to us was the same as 'bread with butter' to the hungry. We sent out a request on several mailing lists including *Nettime*, *Syndicate* and *Xchange* asking to support RIXC by faxing support letters directly to the ministry explaining how important computer technologies (especially the server) are to media culture organizations, and how important such media centers are for the development of trans-local network culture. Help was received immediately. In a few days time the ministry received more than forty fax letters as a result of which the issue was resolved in a more simple way. RIXC computers were given auditing numbers of the Ministry of Culture and the equipment stayed at RIXC's laboratory.

Such an example of tactical media is an evidence of how the social ties that can be very weak in such networks even 'to a point where they almost fall apart' (Lovink 2005), can be activated swiftly and mobilized to support a social or political struggle. This is an example where the support of a translocal network community helps a small-scale local cultural organization to win a battle against state institutions that perhaps would have been lost without such support.

Furthermore, important is that the support is mutual – translocal networks may function as support platform for local centers, and vice versa, local centers are often facilitators for network activities.

Art Servers – The Virtual Home of Network Communities

In order for creative networks to become more sustainable and to be transformed into 'organized networks'⁶⁹ (Rossiter 2006), the issue of technical infrastructure is especially important. Lovink notes that it is a strategic necessity of network communities 'to keep their virtual home in order' (Lovink 2005, 23) by using non-commercial ISPs (Internet service providers) within limits, by providing maintenance to their servers, etc. However, creative networks in terms of their infrastructure (especially in the beginning) may also at times be 'parasitic'. As they are both virtual and self-organized (and usually they are not institutionalized) they often have no server of their own because there is no place to host it. Sometimes however, they find some volunteering artist or a programmer who provides a mailing list service on his own personal 'art server' or experimental server. The creative network communities are usually quite 'modest' and the only thing they really need is the mailing list service and a website, thus sometimes they are being housed on media centers with more resources or centers where the more active participants of the particular mailing list or network are involved. Nowadays the communities can go through less trouble as for their social organization, since they can choose from different free blog, forum, mailing list and other services on the Internet. Today Internet communities can also use the existing social media platforms for organizing their networks and this is already being done. However these platforms – as Lovink suggests – are more suitable for promotion and 'they are good to expand your social horizon but not if you want to organize a field' (Lovink 2010).

69. According to Ned Rossiter 'organized networks' are potentially new institutions that can be contrasted to 'networked organizations' (universities, corporations, governments even contemporary art organizations). They are self-organized initiatives (networks, network communities) and they have the potential to become a new type of organized structure. (Rossiter 2006).

optimistic comments from the practitioners, ... a while ago it was more the other way around.⁷⁰ Although operating only shortly, art servers already faced many different problems. In 1998 the bubble of the 'new economy' continued to grow and was bursting already. The 'new economy' dominated the discussions of both the media and the general public. Everyone feared that all attention would be focused on these preposterous things while network art and culture 'green-houses' would be left unnoticed and suffer an exhaustion of resources. Thus one of the motivations for organizing the *ASU* art server symposium was the necessity to gather people and 'to discuss strategies for making those projects sustainable, maybe even outside the regular streams of funding, through self-motivated initiatives and mutual support.' (Medosch 2010)

By the year 2000 the bubble of the 'new economy' had burst quite already. It caused a lot of resonance in society and mass media, and although indirectly, it managed to leave a severe effect on the further development of network culture. First, the network culture got 'pushed' far outside the focus of society, and second, according to Medosch, it was a mistake to associate the crash of 'new economy' with 'network culture' (Medosch 2010).

Despite the aims and discussions brought forward on the *ASU* conference about how to make these network culture infrastructure projects sustainable, unfortunately a large part of art servers could not solve the problems that easily and in comparison to 1998 only half of the twenty network culture servers of *ASU* participants continue to operate actively today.



Symposium Art Servers Unlimited in London, 1998. Illustration from the second issue of 'Acoustic Space. Net audio issue Nr.2', 1999 (p. 16-17). From the left: Josephine Berry, Micz Floor, Mongrel, Borut Savski, Marko Peljhan, Heath Bunting.

At the moment the situation has slightly changed. Although today network experts Geert Lovink and Armin Medosch emphasize the fact that it is still important to networks and their communities to maintain their own infrastructure, it is often more convenient to use professional services of websites, blogs, mailing lists, etc. 'They can provide both backup and continuous updates for server programs not to let hackers get in by using some software failure. Nowadays this is done by a computerized system' (Garancs 2010). Multimedia artist Jaanis Garancs has administrated

70. Art Servers Unlimited synopsis: <http://asu.sil.at>.

the servers of both our media centers *E-Lab* (*rE-Lab.net*) and RIXC (*rixc.lv*) and maintained his own personal server (*x-i.net*). He has been building 'art servers' since 1997 and uses them for his own creative experiments and for publishing his own website and those of other individual artists. Let us look at the RIXC center in Riga as an example. In the course of time, it has been possible to follow a few turns in RIXC's infrastructural development. In 1997 (when we still worked as *E-Lab*) the first server was installed and administrated by Jaanis Garancs. The server provided *E-Lab* community members with e-mail addresses, mailing list services, the possibility to publish personal websites, a broadcasting server, data basis, etc., in short, all that is necessary for communicating, expressing and working creatively on the Internet. In the course of time, the commercial services developed more professionally and had much more resources to handle the relentless hacker attacks and the continuous reinstalling of the servers that was required by the software updates. In 2001, the RIXC center had still few servers (for experiments) but around the middle of the first decade of the new millennium RIXC's main server was passed on to a commercial Internet service company. Individual international projects and e-mail services are located on virtual servers (*servage.net*) abroad and it is possible that in a near future almost all content of the RIXC.LV server will be moved there as well, because experience learns that this solution would be both safer and financially more beneficial. Because 'they own huge cluster servers that replace one another if one falls out of order another one takes its place. We have access and we can work independently on it and configure it the way we need but all basic things are nevertheless provided. I do not really have to take care of any security related issues there; if something breaks down they fix it soon on their own' (Garancs 2010). Either way Jaanis Garancs believes that nowadays this is a much more convenient option than to return to the 1990s praxis of art server administration: 'It is difficult and expensive to maintain all this in one organization, therefore economically it is better to purchase these services from a professional provider' (Garancs 2010). However, this tendency does not mean that all art server administrators think this way. Depending on the possibilities, resources and finances, some media centers still try to create and to maintain their infrastructures – their virtual homes – at their own effort.

Conclusions

This chapter draws several conclusions concerning the social organization forms of creative networks. First, the existence of translocal networks and creative communities relies a lot on local media centers, because they function as nodes and in a way also as a base for the translocal network culture – their resources are used to support translocal networks and activities of their communities. Second, festivals serve as the main venues in real space for creative network community meetings; they provide the possibility for creative networks to develop and strengthen their communities. Third, one must consider the most suitable solutions for the community at a point in time in relation to the 'virtual home' of creative networks, namely, the maintenance of their technical infrastructure – to what extent to maintain their own 'art servers' and to what extent use the professional providers of commercial services.

In the case of creative networks these three elements together – media centers, festivals, infrastructure, 'on top' of which there are mailing lists – are the cornerstone which founded, evolved and developed the early network culture with its creative communities. Although the aims and activities of creative networks in time may have changed and other issues may become more relevant (for example, sustainability), still today creative networks use mailing list (as a main channel for communication and information exchange). Together with the other three main forms of social

organizations (festivals, media centers and independent technical solutions) these are the facets that separates creative networks from today's social networks. Such a network organization also contains the potential for creative networks to transform from self-organized communities into a new type of institution: *organized networks*.

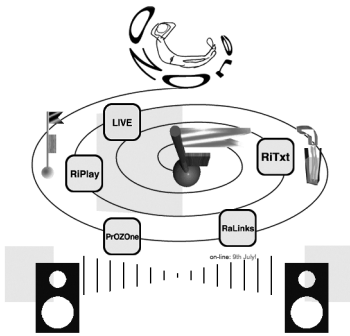
LOCAL COMMUNITY NETWORKS IN THE BEGINNINGS OF THE INTERNET IN LATVIA

The previous chapters described how public accessibility of global information and communication technologies created preconditions for the development of *translocal* networks during the 1990s, as well as the ways in which these networks were self-organized and evolved. Digital networks have played a significant role also in the development of local community networking – in creating new connections, in providing more dynamic ways for communicating and organizing activities on a local level – in our home cities, countries and regions. 'Because the network is global does not mean that it all has to happen at the global level', says Saskia Sassen, 'this is not the cosmopolitan route to the global. This is about the global as a multiplication of the local' (Sassen 2002, 381). Seen from this perspective, globalization and digital networks do not imply the disappearance of the local; they can provide extensive possibilities for local community networks to arise and to operate on different scales – global, translocal, and local.

The first signs of new forms of contemporary art and subculture in Latvia arose during the mid-1990s under the influence of globalization and they were adapted to different local contexts. The 'live' formations of young artists, musicians, DJs, club event organizers, fashion designers, poets and other young creative people manifested as a hybrid of techno music culture and experimental art. One of the first of such initiatives of contemporary alternative culture was the project *Open* that not only organized extensive events in Riga but also worked actively on acquainting the public and event organizers with journalists who covered these events in press and media. Although *Open* events involved a large number of participants and visitors they were not yet the commercial 'rave parties' that became popular in Latvia later, in the late 1990s. These events could not be simply considered as 'subcultures' or 'techno parties', instead – as was suggested by Kluitenberg – 'they constitute new signs of new sensibility that is in part bearing testimony to a society in fundamental change' (Kluitenberg 1999, 52).

On one hand, these activities of a new alternative culture was an impulse that facilitated the recovery of social life and the rise of creative local communities in post-Soviet Riga; on the other, soon enough they filled the 'emptiness' in the local culture scene which occurred after the fall of the Soviet system, as official cultural institutions were not capable of making changes in a quick and flexible manner. Meanwhile, in the mid-1990s Internet was introduced also in Latvia and it was accessible not only in the universities but for individual people as well, especially for those who worked in private institutions that were faster and more flexible to get online. Consequently, the young creative minds were most interested and among the first to turn to the Internet. Inspired by the possibilities of digital networks, a group of young artists (including myself) established *E-Lab* – the first electronic art laboratory in Riga in 1996 – that in a short time became one of the most active participants of translocal networks, with its creative explorations in the virtual space of the Internet. Inspired by the networking ideas of the Internet, *E-Lab* artists tried to adapt them to the local conditions. By continuing what was already started by *Open*, namely, establishing new connections between creative professionals (both Latvian and Russian) and the

alternative youth, *E-Lab* became the 'connector-node' for the local community network of digital and alternative culture, which at the end of the 1990s started evolving rapidly and expanded not only in Riga but also in other places across Latvia. This chapter 'maps' and analyzes the development of the 1990s alternative and digital culture in Latvia by focusing on the most significant participants of this local creative network, by reflecting on the local circumstances and motivations from back then, and by comparing the situation of alternative and digital culture networking in the 1990s and nowadays.



E-Lab's Internet radio OZONE, the first interface. Designed by Toms Vitins, 1996.

Open and the Beginnings of Alternative Contemporary Culture in Riga in the mid-1990s

Before *E-Lab* was founded, the *Open* project and large scale techno music events that were combined with contemporary art exhibitions held at former factories and warehouses, were the first and most 'visible' currents of the new influences of global culture in Riga and Latvia in the mid-1990s. These events were curated by key founders of the *Open* initiative – Kaspars Vanags and Ilze Black, who not only introduced the new techno culture in Latvia but who were also 'connectors' that spread the ideas of 'openness' and created new connections among the most active and creative people of that time. After having been abroad for several years Vanags returned to Riga in 1995 and as he puts it – for him it was simply interesting here: 'I think I was looking for my own crowd or environment to fit in and to be in my element. While searching this I somehow stirred it all up, maybe even unintentionally' (Vanags 2011). Vanags set up the *Open* initiative together with art theorist Ilze Black who, according to Kaspars, is a true 'connector'. She possesses an unusual trait: 'Ilze is interested in people. She is able to communicate with true interest' (Vanags 2010).

The early 1990s was a time when the 'emptiness', left after the fall of the Soviet system, could be felt both in culture and in social life, as Sergejs Timofejevs describes the situation. Sergejs is Russian poet and cultural journalist based in Riga, and he was also among the most active contributors of the 1990s contemporary and digital culture network. 'Society changed quickly and we started everything from the beginning. That's why this new culture took its place. For us the Soviet culture was gone forever and the emptiness which had appeared could be filled quite easily' (Timofejevs 2010).

However, *Open* did not grow out of an empty space. Underground movements started appearing around Riga ever since the beginning of the 1990s, among them the music bands around the

*Tornis*⁷¹ initiative. The first movements of socio-political activism also emerged around the same time, for example an organization funded by the Swedish government with a branch office in Latvia called 'Baltic center – Peace Quest'⁷². The key member of the Baltic Center was the young sociologist and philosopher Normunds Kozlovs. 'At first, I got involved because I met people from Sweden who worked here as volunteers and they told me: 'Come and join us!' ... They had an interest in fields like environmental protection, human rights, disarmament and different campaigns for peace' (Kozlovs 2011). Sweden financed the network of the Peace Quest organization – the first nongovernmental organizations and their network in the Baltic Sea region, including Russia. As Kozlovs recalls, there were many organizations involved, starting with those monitoring the state's purchase of arms to those that followed the green and alternative ('Tolstoyan') pedagogy. 'Yet, I was aspired to the anarchistic wing, for example, to such a radical organization as *Eco-Defence* in Kaliningrad which organized straight-forward campaigns and turned the attention to radioactive waste transit, climbed up ships, etc. Still the initial interest came from being in the underground scene of the music and the bands of *Tornis*' (Kozlovs 2011). Normunds Kozlovs and the Baltic Center cooperated extensively with both *Open* and *E-Lab* thus introducing more diversity in the local community network of the 1990s. As a result, the 'new culture' network in Latvia was self-organized not only around new technologies or global subcultures (VJs, DJs, techno clubs), but it attracted and integrated with its openness other social and cultural fields where the 'emptiness' could be felt. And this was a challenge for the young artists and activists at that time – to fill this 'empty space' of art and culture with activities that were exploring new forms not only in their own field, but also in social organization and communication. Hence, I would like to argue that the development of such a dynamic local culture scene in the case of Latvia during the 1990s was influenced by the notion of the decentralized structure of digital networks as well as by other network principles, namely interconnectedness – which refers to 'networking', establishing new connections and 'maintaining' them – and openness – which refers not only to (Internet) accessibility issues but also to opening up boundaries and fostering interdisciplinary cooperation and socially dynamic communication.

The situation of that time and the motivation to participate in building the local network is described by film producer Kristine Briede: 'The environment of the new 1990s culture was quite enthusiastic and intense – many old foundations and systems fell apart (not only in the culture) and you could feel a breath of beautiful fresh air that motivated to work, discover and create. Enthusiasm, new possibilities of expression, forms and inspiration were flowing out of every corner. Possibly, this is how every new generation of a raising decade feels but I will not hesitate to say that we were extremely 'hungry' and the 1990s was a very special time in our latitudes both historically and geopolitically, as well as socially and culturally' (Briede 2010).

In the beginning of the 1990s the notable Soviet movie industry also got closed down. Its technology was out-dated and too expensive for individual moviemakers. This 'emptiness' facilitated the search for new forms of creative expression and the emergence of a new field. In 1995 Kristine

71. *Tornis* was created in Riga in 1991 as a rehearsal space for underground bands. Quickly it grew into a kind of a center for hanging out and recording underground music. *Tornis* also organized concerts, festivals and issued its own press. In 1998 a corresponding nongovernmental organization was founded which ended its work only recently.

72. The Baltic international humanitarian education center 'Peace Quest', founded in 1991, worked actively until the late 1990s and currently no longer exists.

Briede together with Swedish moviemaker Carl Björnsmark, who was based in Latvia that time, founded the film studio *Locomotive*⁷³ with an aim to produce documentaries, TV shows and to master the new digital technologies. 'The interest about new technologies and 'gadgets' arose because, first, they were introduced onto the market and we could not get far with the old ones. The old movie industry had collapsed; it was difficult for the newcomers to enter the remaining structures because there was no place to enter. There was no money for the cinema ... therefore we had to look for less expensive means of expression – video, the Internet, digital photography, cooperation, barter, etc.' (Briede 2010). The focus of *Locomotive*'s interests was to document the so-called 'everyday man' and the present time. I mention the 'emptiness' here quite a lot, referring mainly to the 'dysfunctionality' of the official system with its representative institutions. But on the other hand, this was a 'time of change' that resulted in favorable conditions for the 'everyday man' to become more creative and socially visible than ever before, or after. 'Back then we really wanted to document the changes of the present time because it was remarkably interesting and unique. Also, no one was producing newsreel anymore, in fact, there were very few who were filming at all' (Briede 2010). In the mid-1990s *Locomotive* with the support of the Swedish Institute and TV3⁷⁴ produced TV series (seventeen programs in total) with the 'everyday man' as the main topic. The Swedes financed the project to promote social integration which back then upset some of the representatives of the recently founded ministries (for instance, the Ministry of Education), which were rather nationally oriented. Nonetheless, these programs helped Kristine and Carl to meet many interesting, creative and active people and thus to contribute to the enhancement of the local community network. For example, ambient and electronic musician Uģis Vitins, who was good friend of *E-Lab*, introduced them to Sergejs Timofejevs (and later on to other members from *Orbita*, a Russian poet group) and to Iveta and Edgars Svetins, traditional folklore activists who are considered to be something like Latvian 'shamans'. Owing to these TV programs they also found Javier, a Mexican residing in Latvia in the wilderness of the village of Keipene. Javier was a cook and an artist who became a member of *Locomotive* and later on of the K@2⁷⁵ center in Liepāja Karosta. They also 'found' the German poet Matthias Knoll who lived in Riga, and through him they were introduced to the creative house 'Undine' in Jūrmala. Another significant 'social networker' and 'connector' was the cultural attaché of the Swedish Embassy Mats Sylwan who preferred the 'high arts' but acknowledged the new, the seeking and the 'untamed' also. Sylwan used to meet representatives from this 'new culture' and underground scene gladly and even invited them at his home, participated and sometimes also initiated interesting culture collaboration projects. It was probably following Sylwan's advice that Kristine introduced herself to Normunds Kozlovs (and later to his wife Ilva Skulte). And it was during a documentary seminar organized in collaboration with the Swedes that *Locomotive* came to Karosta, a former military port in Liepāja city for the first time in 1997. Kristine mentions another important branch of her social network – it was the so-called Grants's group⁷⁶ of young photographers. This group worked in one of the so-called creative technical centers in Riga that used to be part of the former Soviet culture and

73. The first name of *Locomotive* – *Locomotive Film & Television*, later changed to *Locomotive International*.

74. TV3 is a Swedish commercial TV station that in the end of 1990s started broadcasting in Latvia as an independent national TV channel.

75. K@2 – Center of Culture and Information in Karosta, Liepāja founded together by Kristine Briede and Carl Björnsmark in 2000 (operated until 2007).

76. Andrejs Grants, Latvian photographer.

Kristine had taken a cinema class there during her school years (Briede 2010).

Although Kristine and Carl were more focused on working in cinema and TV and less interested in the new 'techno culture', they were always captivated by art and the new creative processes. Kaspars Vanags was Kristine's childhood friend and in the early 1990s not long before the first *Open* events, they got in touch again. 'Together with Carl we met Kaspars shortly before the *Open* event in Riga Old town on Miesnieku street. He was upset that LNT was charging him 800 lats⁷⁷ for doing a report on this *Open* thing and we said (well actually Carl suggested) that we would like to do it for free' (Briede 2010). In cooperation with TV3, who provided camera and editing equipment in exchange for producing programs, *Locomotive* did the first program on *Open* under the name of 'Tussofka'. During the next *Open* event 'Biosports', Vanags invited Kristine and Carl to participate themselves and to exhibit their series of photo artwork.

Kaspars Vanags was an excellent 'connector' and this way he met many of the then young journalists and as a result, the activities of *Open* were covered in the press and almost all the key media channels interested in culture. The first *Open* events such as '*Open*' (1995) on Miesnieku street at an empty three-story warehouse and 'Biosports' (1996) on Lacplesa street at the former perfume factory and a five-story building 'Dzintars' suggested a new current in Latvian culture, in terms of both content – innovative and highly qualitative works by young artists (installations combined with alternative fashion show, DJs and techno music) and scope (each of these events had a couple of thousand visitors). It's confusing to call it 'subculture' especially in today's sense, according to art theorist Alise Tifentale, because 'even our major art journal 'Studija' did an article on *Open* so, I think, you couldn't call it a subculture anymore. This was [the expression of culture] that filled the 'empty space' [in Latvian culture]' (Tifentale 2010). Alise, who at the time was studying journalism at University of Latvia and later took part in founding *E-Lab*, was producing TV shows about alternative contemporary art called 'Raada Alise' (Alise shows) on one of the first independent TV channels, RBS. RBS TV aired Alise's reports on the *Open* events and she did many articles on *Open* and *E-Lab* events later on as well.

Alise Tifentale prepared the regular reports on RBS TV in collaboration with another then contemporary art activity center – the club 'Slepenais eksperiments' ('Secret Experiment') which was the idea of architect Aigars Sparaans. This was not a nightclub for simply having a drink; it was also a novel venue in Riga for art exhibitions, performances, and concerts. For many years Latvian curator Inga Steimane worked there, organizing exhibition series of emerging contemporary artists. This place was similar to what 'Spikeri' in Riga is nowadays – it hosted different events and was a place for meeting people quite fast and easily. While doing TV reports on these exhibitions Alise established her own social network, which later on helped her to introduce and to involve creative people from different fields in *E-Lab*. In 'Slepenais eksperiments' Alise met Jaanis Garancs who had a particular interest and good technical knowledge about the Internet. She helped to 'connect' Jaanis with Raitis Smits and me – at that time we had an idea to create an electronic art center, and this is how *E-Lab*: the got established. In 'Slepenais eksperiments' Alise also met other active members of *E-Lab* – artist Arvids Alksnis, the today well-known photographer Arnis Balcus and many others (Tifentale 2010).

Given the development of the alternative culture network in Latvia during the 1990s, another perspective reveals a new aspect – this was one of the precedents in Latvia's culture and society

77. 800 LVL (lats) = about 1126 EUR.

where young creative Russian and Latvian culture members were working together in a shared environment and within a collaborative network. One example is the DJ and multimedia art project Varka Crew, which focused on drum'n'bass music and carried out creative multimedia projects on the Internet, participated in numerous events organized by *E-Lab* and also in events of *E-Lab's* Internet radio *Ozone*. Varka Crew was a collaboration of two Russians: DJ Kone (who was previously involved with underground music in groups related to Tornis) and Viktors a.k.a. dr. Ups who was a sort of director of the group and two Latvians, DJ Gints and Martins Rubenis, a DJ and Latvian luger, who won a bronze medal in the 2006 Winter Olympics.

A special role in developing the alternative culture network and integrating Russian culture in Latvia is given to the Russian poet and journalist Sergejs Timofejevs. Sergejs met Kaspars Vanags at the first *Open* event that took place in Riga Old town. Sergejs came as a journalist as back then he worked for the Russian media and covered culture events. They became friends instantly and Sergejs helped preparing and distributing information already during the first *Open* events. At that time Sergejs and many other young Russian writers in Latvia faced the difficulty of getting published and distributing their work, like poems and articles. They were interested especially in publishing their own press in Latvia that could have both Russian and Latvian audiences. In the second half of the 1990s Sergejs together with his contemporaries established *Orbita*, a group for young Russian poets and writers. Next to writing poetry Sergejs was always keen on new electronic and DJ music as well as Internet and multimedia art, seeking new forms of 'presenting' poetry in a more contemporary context. By all means, it was techno music and *Open* events that had a long-lasting effect on the new creative Latvian and Russian generation and the communication between them: '*Open*, especially the larger events, was a place where people were establishing contacts quite actively. Both Latvians and Russians were unified through the new [techno and DJs] music, which was completely different from the rock music scene because rock music deals with the language' (Interview, Timofejevs 2010). Although underground rock music could in a way be considered a subculture influenced by globalization and despite the fact that the early 1990s independent rock music movement Tornis featured also Russian musicians, Sergejs points out that Latvians were used to listen to mainly Latvian rock musicians while Russians listened to Russian musicians. He adds that these two environments were isolated even when people were thinking of the same values, namely, of rock music as such. 'Anyhow, the new electronic music was not associated with any language, not even English, it was more about the sound itself and the effect of sound on people and the mind. This, maybe, made it more easy for people to feel some solidarity through their interest in new music, new networks, and new possibilities in life' (Timofejevs 2010).

These 'new' things around which the alternative culture of the 1990s self-organized in Latvia were possible not only because the urban social and culture life experienced the 'emptiness' mentioned before, but also because there was a general instability in the state system. It was a time when organizing a large-scale event at some old warehouse or a factory like *Open* did not require agreements with the city council, neither with the police nor the fire brigades. *Open* curators just needed to find an empty space in Riga (real space this time) and a month later an event with half a hundred participants – artists, musicians, fashion designers – and several thousand visitors could happen. It was just 'weeks after the event that the police and the firemen suddenly noticed there was something going on, searched the place trying to find something – but it was long over' (Vanags 2010). Today, something like this is hardly possible. It is difficult to imagine that new alternative expressions that are self-organized 'bottom-up' and that do not work within an

institutionalized framework, could be capable of tearing down the boundaries between the official culture and subcultures, between alternative and mainstream art. Today, as Vanags observes, the self-organized forms or the 'underwater social currents' in Latvia are not that easy to see. *Open* can't be considered an underground movement, but it did not identify itself with the mainstream either, it tried to communicate with a very unspecified and versatile audience, mainly, the younger generation. Today such forms of communication as the large *Open* events do not occur in Latvia anymore. *Open* was a unique attempt to present the progressive non-commercial culture to wider masses, to address a greater number of people: 'We had the aim to fill-up these four or five stories of the factories with people' (Vanags 2010). Regarding the personal motivation to organize such ambitious projects Kaspars explains: 'I think it was rather a 'drive' instead of a motivation. One can say that it was the twenty-year-old's willingness to be active. There was a chance to do it and to do it in quite noticeable forms' (Vanags 2010). Kristine Briede from *Locomotive* associates this 'drive' with the feeling of freedom and opening borders (political, geographical, mental): 'The motivation was well... to get off the chain, an interest in and a possible (as well as a real) connection to the outer world, to the world, to the melting pot' (Briede 2010). Alongside their personal motivation Vanags and Briede also mention the 'favorable' external circumstances created by the 'emptiness' in the cultural and social life of the city due to the dysfunctionality of the post-Soviet state system. Briede: 'The self-organizing, and that's a fact, happens within a certain chaos and with a lot of unclaimed land. When a way to make things work is necessary but available and successfully working structures are actually lacking' (Briede 2010). Vanags: 'The system of the state was entirely a work in progress and this could be taken advantage of. The creation of those autonomous zones and utopias was still possible because the system had not taken over the whole territory yet' (Vanags 2010). And again, Briede: 'In my case it was also the unbelievably exciting sense of a country that was your own and the fact that the responsibility for it (also for the freedom) depended on me' (Briede 2010).

Hence, the young generation during the mid-1990s in Latvia managed not only to establish very rapidly their own creative network communities in the local environment, but also to find a new socially dynamic field within which they were free to work, to express themselves and which could be developed in the process of self-organization: 'The institutionalized environment as well as the promise of mainstream consumer society did not add up to our maximalist expectations of life, so we created our own alternative zone as a result' (Vanags 2010). When the whole set of external conditions – including the 'emptiness' resulting from the dysfunctionality due to the change of the political system, opening borders towards the West, the influence of global subcultures and its adaption into the local culture, etc. – encountered the Internet with its unexplored boundaries of virtual cyberspace and ideas of freedom, the utopia of establishing alternative zones and autonomous spaces could be realized with an even faster speed. This was the context within which the *E-Lab*, electronic arts laboratory started operating in Riga in the second half of the 1990s.

enhancing the understanding of the new (interactive) ways of communication and information exchange
 availability of free, creative, individual, multiformal usage of the Internet
 creation of a 'social media+art space': promotion of the development of an Open society

E-L@b = CONNECTIVITY

for:

many media art institutions in Latvia - Sounds Open Systems, Multimedia Center - Riga, Latvian Academy of Arts, Latvian Academy of Culture, Latvian Artists' Union, Club Secret Experiment
 the closest international collaboration: V2_East Syndicate, SCAN, Moskow WWWart center, CINE FANTOM, etc.

E-L@b = FREE SPACE

for:

electronic and interactive art projects, exhibitions in new media - conferences and e-arts events
 providing artists with a possibility of carrying out e-art projects, free access to Internet

E-L@b = OPEN MINDS

to:

clearing of the confusion and the misleading 'precaution' among people in front of the realities of technology & information society - Internet, Interactivity, Virtual Reality, etc.
 comprehensive information about new media usage - way of appropriating future technologies as a tool for the building of an open community, based on the essential human values - individuality and creativity⁷⁹

To better understand the motives that evoked the decisions to create such 'alternative zones' in the 1990s and in determining why such a creative and innovatively networked structure as *E-Lab* was founded, it is necessary to analyze how the personal (inner) motivations related to the situation (outer circumstances) of that time.

First, Raitis Smits and I both graduated from the Latvian Academy of Arts in 1993. We were highly interested in working in the contemporary arts field though our education in art history ended at the end of the 19th century... We didn't have any knowledge of the context of the 20th century modern and postmodern art. We were lucky to get introduced to Jaanis Garancs, who had gone to study media art at Royal Swedish Academy of Arts in order to acquire the rare and valuable knowledge of computers and new media. I had already started to experiment with video

79. E-lab's Manifesto, 1996: <http://www.parks.lv/home/e-lab> (Viewed on 9.05.2010).

art and computers back in Latvia. Since no one in Art Academy supported such activities I either did it completely on my own or there were a few guest-lecturers that came here. I knew that other countries had festivals and I figured: why not develop a community also here in Latvia, and what happened was I met [Raitis and Rasa] via e-mail, I think it was Alise [Tifentale] who introduced us' (Garancs 2010).

Second, the ideals of our generation did not fit the most progressive structures of the time, the policy of the Soros Center for Contemporary Art, which was based on the praxis of curated art. Curators were those who decided which artists and when would or would not participate in the relevant exhibitions. This, of course, outraged the active young artists and motivated them to create their own environments that would be based on the ideas of network – on openness, free access and establishing new connections. Accordingly Kaspars Vanags describes the situation: 'To a certain extent we were maximalists and none of the education standards corresponded to our maximalism, not even the available literature in libraries. We simply felt disappointed with the official culture institutions and their way of doing things. As a result, we felt sceptical and cynical towards anyone who without any doubt dived straight into building up the capitalism' (Vanags 2010).

And third, being taken over by our idealism and the possibilities provided by the new digital networks, we rejected completely any ideas which might be related to commercialism and devoted all our time to the development of the new network culture only. Thus, the motivation behind creating *E-Lab* was influenced by the dissatisfaction with the governing cultural institutions of that time, and by the lack of education and knowledge of contemporary art and, to tell the truth, of almost the entire 20th century Western culture, art, philosophy, etc. Also, in the secluded Soviet system we had never experienced independent media (for example, free or community radio). Altogether, this served as a drive to plunge into the expansive cyberspace of the Internet with enormous energy and enthusiasm – in the mid-1990s the information exchange, communication, the freedom of self-expression provided by the Internet became available to such an extent for the very first time after the fall of the Soviet state. By using the Internet *E-Lab* could create its own 'alternative zones' locally and collaborative platforms translocally. Initially, the *translocal* collaboration networks were of a particular importance – they were the primary connection channel through which it was possible to overcome the isolation of the post-Soviet years, as 'visa requirements, slow trains, dangerous bus routes and very expensive flight tickets made it very difficult for young people in the Baltic states to connect to the rest of Europe' (Kluitenberg 1999, 52).

At the beginning of 1996 *E-Lab* commenced its work as an independent self-organized structure – a small room was rented at the Artist Union building and the first computers were purchased with the competition grant provided by the Soros foundation Internet program. The new artists could now work for 24 hours a day, 7 days a week. For us who were 'hungry' for free communication with the like-minded on an international scale, the Internet was more than just a new medium, platform or a material for creating art. The Internet was a completely new and undiscovered space in which to realize those ideals and utopias that were not possible in real life and in the system of the early 1990s society and art. This was exactly how we saw it – the work of *E-Lab* was directed very purposefully, the intention was to discover, explore and create open and autonomous spaces in the new medium, Internet. Yet, this was not an end in itself or an artistic conception. The Internet was used first and foremost to 'experience' it – to exchange information, to communicate and to explore the new territory together with colleagues and to fill the self-created space in the global network with content – art, sound, radio, texts... These creative aspirations in new media

were started as a counteraction to the domineering and violent policy of mass media. Fascinated with ideas of freedom *E-Lab* did not want to become an entity of a particularly associable field nor some artistic, social or political movement. The work of *E-Lab* was based only on ideas of the network. For example, the potential of new technologies was used not only to develop international but also interdisciplinary communication. Collective projects were carried out not only in collaboration between artists but also musicians, journalists, writers, subculture activists, etc. Although initially *E-Lab* devoted a lot of time and focus to processes in the virtual space (the Internet) and in translocal collaboration networks, its mission was also to transform and adapt the idea of 'networked communication' in a local context. In time, *E-Lab* became the main 'connecting-node' within the local network, the basis for a socially active environment of alternative contemporary art and digital culture in Riga and Latvia through the process of self-organization. The same year *E-Lab* was founded, we organized the first international festival for new media culture 'Art+Communication'⁸⁰ in Riga. The festival focused mostly on international topics, which at times seemed foreign to the local situation. That was why *E-Lab* in between the festivals turned its attention to the local aspects of the new (global) digital culture. One of the first events organized by *E-Lab* contributing to the development of the local digital culture network were the weekly meetings held in 1997 with the title '*Open Zone* seminars'⁸¹. Every Thursday night a particular topic was chosen related to new technology culture. Multimedia artist Jaanis Garancs discussed the questions what is *new* and what is *media* while writer Pauls Bankovskis addressed the idea of the *new universalism* and *old boys*. At the time Pauls worked for the most popular daily newspaper 'Diena', where he got introduced to e-mail and other possibilities coming from Internet. 'Suddenly it turned out that one of the *Apple* computers had a slightly better browser and that all the colorless web pages were actually in color and often filled with pictures that were moving and flickering, which at that time seemed completely fascinating. And obviously that was enough to gain interest about [the Web] and to try and understand how it is built and accomplished' (Bankovskis 2010).

80. The Festival Art+Communication later became an annual event and still takes place today, organized by RIXC (created on the basis of *E-Lab* in 2000).

81. Information on *Open Zone* is available on the first home page of *E-Lab*, which was located on *parks.lv* server (<http://www.parks.lv/home/e-lab/events/hot.html>).



At Electronic Art Laboratory's E-Lab's space in the Artist Union building on 11. Novembra krastmala in 1997. It also housed the sound studio of brothers Vitins: Elast / Sloka Sound System. From the left: Rasa Smite, Raitis Smits, Martins Ratniks, Dzintars Liicis, Martins Taurins, Ugis Vitins.

Journalist Alise Tifentale examined various social issues brought by the communication age, curator Kaspars Vanags introduced ideas and projects behind *Open* and video artist Valdis Poikans the activities of electronic coffee houses. Other relevant topics were addressed, for instance, online pornography – the event '*Hardcore Night*', apart from Alise's and our readings on cybersex, featured a presentation on the 'samizdat' (DIY publication) of porno-magazine '*PLOP*' illustrated by artists Raids Kalnins and Gints Gabrans. In turn, poet Sergejs Timofejevs did a poetry reading of *poetry in context* and commented on '*Novije trajektoriji*'⁸² (New Trajectories) – traveling skydivers from Moscow who had come to Riga to jump off the 211m Riga TV and Radio tower. Musicians Ugis Vitins and Toms Vitins did live electronic music jam sessions where every *E-Lab* participant and guest could participate. The live music session recordings were the basis for the collectively established Internet radio *Ozone*, starting in March of 1997. *Open Zone* seminars also featured *E-Lab's* foreign colleagues from translocal collaboration networks: Alexei Shulgin from Moscow (it was him who first 'dropped' the idea of Internet radio) and media theorist Eric Kluitenberg (as an expert he has given an enormous contribution to *E-Lab's* conceptual advancement during different periods of its development). For circulating information about *Open Zone* seminars and later also about other events we most often used our own 'new' media: *E-Lab's* local mailing list *Rezone* (its announcements were sent out to several hundreds of subscribers), *E-Lab's* web site on the Internet, A4 sized posters (put up at the Latvian Artist Union building on 11 Novembra krastmala and at the Arts Academy), flyers (handed out in club events) and simply through social (mouth-to-mouth) communication.

These events continued the work already initiated by *Open* on establishing connections and creating a social communication network between members of the young creative generation in Riga. At the same time, the intent of *E-Lab* was not to gather participants in order to become larger in terms of its size as an organization. Instead, *E-Lab* always encouraged and supported other creative people to make their own small (legally founded) structures; be it cultural organi-

82. http://www.parks.lv/home/E-Lab/~tim/tim_text.html.

zations or artist groups or expressions of the emerging sub-cultures. 'I think it is difficult to call it a subculture because it expanded as this new, cool and modern thing. It happened on a fast pace because there was nothing standing against it as a reactionary force, I mean, as the real culture. Also, what happened quite fast was that all these things and projects by *E-Lab* were soon acknowledged by all state institutions that this is all good and should be supported' (Tifentale 2010). Hence, *E-Lab* aimed at escaping 'institutionalization' in its own structure by replacing it with an independent and flexible small-scale organization that collaborates with other similar organizations, groups and individuals, in order to develop a diverse interest community of the digital culture network in Latvia.

E-Lab's Art Server – A Social Media for Art and Communication

In order for 'alternative zones' (for instance, in the case of digital culture networks) to be sustainable, it is important to address the issue of infrastructure as before in the chapter on art servers. For media centers and laboratories this meant providing computers, powerful Internet access and a server, whereas for virtual communities and especially creative networks (both local and trans-local) in the 1990s it was the server that provided Internet services such as mailing lists, e-mail service, web page hosting, Internet broadcasting possibilities and so on. Today, there are many different services and social platforms on the Internet and this issue has lost its relevance. However, there is still a difference whether a network community uses its own media or uses *Facebook* or other *Web 2.0* social network platforms. They are limited in the sense that community members have never been involved in the conceptual and technical development of these platforms and are not those who determine their content, since it is placed on servers owned by companies. A server is not only the 'virtual home' (Lovink 2005) of the creative network but also a social medium. If it is independent the community members have the final say and the control over their own content, design, structure, functions, and any other services they prefer to use.

E-Lab's own Web server (re-lab.net) as a socially independent medium was described and conceptualized as the 'sovereign experience of media' by Eric Kluitenberg in this way: 'The highest aim of media for the sake of nothing else is to escape determinism. Therefore it is very hard (if not impossible) to define them. ... One of the most remarkable examples of this type of media is the re-lab net art server, which is maintained by the *E-Lab* artist organization in Riga. ... The kind of media activity that the re-lab net server carries is highly self-sufficient. It does not refer to anything beyond or outside of itself in any significant way. Neither does it refer to some 'unrepresentable' otherness. It simply exists' (Kluitenberg 1999, 50). However, alongside its artistic experiments in creating 'open and undefined spaces', the *E-Lab* server also functioned as social medium with the aim to provide support for communication and activities of local (and translocal) creative network communities.

As stated earlier, one of the most important functions of such a network 'art server' in the 1990s was to run *mailing lists*. Similar to translocal collaboration networks that used mailing lists as their main information exchange and communication channel, mailing lists can also play a significant role in creating and sustaining local community networks. For instance, the *Rezone* mailing list (set up by *E-Lab* in 1997) operates in Latvia, which is important to local cultural community. Next to local announcements about art and culture events, *Rezone* also regularly re-publishes important information (e.g. an on-going event calendar, calls for participation in festivals, conferences, exhibitions, study programs at universities, etc.) from its translocal 'neighbors', other creative network mailing lists. Today, *Rezone* continues to function, it has about 400 subscribers

and the activity of the mailing list during eleven years has remained the same at around ten announcements a month. 'Rezone unites different people. Maybe the number of subscribers has slightly dropped today but it still receives quite a lot of messages which makes it one of the most active mailing lists in Latvia' (Garancs 2010).

Concerning the technical infrastructure, 'the virtual home' of *E-Lab* has changed in time along the development of the Internet. In 1996 the *ISP Parks* server hosted it, where at the end of a very long domain address (for instance, <http://www.parks.lv/home>.) our user account .../*E-Lab* was attached. This was where we placed our first website.⁸³ 'But then we noticed that others had neat home pages with a shorter domain name which was their own. Commercial companies charged quite a lot for that. Then we figured out that it would actually be much more beneficial to create and to host our own server' (Garancs 2010). Jaanis Garancs installed the first server in 1997 on a very simple personal computer (*E-Lab* owned only two computers at that time). This was possible also because a new Internet communication line was installed in the room of *E-Lab*, which used a point-to-point microwave radio link that had a constant powerful connection, instead of the very little traffic capacity of the dial-up. Nevertheless, it was quite expensive especially to use servers because we had to pay per each incoming MB. This happened to be a huge problem later on when we started experimenting with online broadcasting – the size of streamed sound files was considerably larger than simple web sites, which consisted of text and images only. In addition, at that time Latvia had very little capacity for data traffic connections with the outside world. Jaanis Garancs, who studied at the Royal Swedish Academy of Arts, which then had one of the most powerful Internet connections in Europe, created the so-called 'mirror server'. It duplicated several functions to make the 'work' of *E-Lab* server in Riga easier – it provided mailing list service, broadcasting function, hosted web sites and home pages and the like, and made the content of the *E-Lab* art server easier to use for foreign Internet users. Now the *E-Lab* server could also provide its own domain name system and the long addresses were no longer necessary. Instead it was possible to use, for instance, <http://re-lab.lv> and we could make our own e-mail addresses such as name@re-lab.lv, with a reference to the 'virtual home' instead of the commercial service provider.

However, the most important function of independent art servers was to create content. On one hand, these servers gave support to creative individuals and collectives by hosting and sustaining their home pages and creative project web sites. On the other, their creative online expressions were also a contribution of content for the server. The Riga server re-lab.net (and re-lab.lv) hosted web sites of local communities and of individual home pages of *E-Lab* artists and projects. In turn the server administrated by Garancs in Stockholm, x-i.net, hosted homepages and art projects by other international artists: 'There were Swedish artists as well as a few Latvians and Brits. The server needed occasional improvements and so I had calculated approximately how much it would cost me and then from all available sources from both *E-Lab* and these few artists I simply bought the few missing necessary components – extra disc, larger memory and so on. When everyone came together it was more beneficial and cheaper and we had better control over our own content' (Garancs 2010).

Servers in Riga and Stockholm were mutually backed up, which made it possible for the *E-Lab* art server network to provide support for creating both local and translocal communities. Being con-

83. The web page still exists and operates: <http://www.parks.lv/home/E-Lab> (Viewed on: 12.05.2010).

nected in this kind of network and also being one of the nodes of the translocal creative network, *E-Lab* could also use infrastructures that belonged to other partners in a moment of necessity. This was very important at the beginning of *E-Lab*, for example in 1996 and 1997 when it had no servers and we had just a weak dial-up Internet connection. Meanwhile there were virtual resources available from translocal network participants – artist, programmer and media center servers as well as independent. Also private ISP companies (for example, *Parks.lv*, *xs4all.nl*) in case of need shared their server space, offering free of charge access to different Internet services in the name of a simple idea and considering the rise of the new free medium.

Throughout time, the situation has changed and as the chapter on art servers, media centers and network communities concludes, it is not so advantageous today to sustain individual independent servers because the costs of Internet services offered by commercial companies are less than those to sustain individual servers. There are entire server clusters available from commercial companies to which the individual user can be no competitor. They produce copies automatically, provide the work of backup servers if the main server falls out and they are capable of securing themselves against hackers, spam and technical damage. 'In short, the standard things are better kept elsewhere instead of your own server. Regarding mailing lists there are several free services out there now, for instance, *Google Groups*. They do not have their own domain but this is not that important today anymore' (Garancs 2010).

If we compare the creative network art servers to social network platforms used nowadays then, as already mentioned before, the main disadvantage is that the user has no control over the content. However, there are several advantages too. 'A huge difference is that somebody can create his own web page there and it does not require that many programming skills. One can, for example, put up an image of some popular portal or take some videos from *YouTube* and embed them in the personal page or take a quotation or the latest news from another partner portal. Earlier, you had to be a programmer to do that. Now any person can create things that are even better or at least – on a new level' (Garancs 2010).

Hence, the *Web 2.0* media platforms have made it more simple and convenient to publish online. At the same time the experience of *Web 1.0* creative network community in maintaining art server infrastructures makes one think of such questions as, for instance, to what extent we, the Internet users, have our say over the content we publish for example on *Facebook*. As technologies develop the winners are not only users, the control of over content we create has become more 'convenient' and foreseeable for centers of authority. It is so much more difficult to silence socially or politically 'undesirable' content on independent servers than on social network sites. Therefore the issue of technical infrastructure is still important to network communities, since it is and remains their 'virtual home'. Despite the fact that *E-Lab* (today RIXC) uses commercial services it also still houses its 'experimental' art servers which in a case of necessity can be used independently from political and economical centers of authority.

E-Lab's Internet Radio Ozone – Data Can Be Located Anywhere

Another specific social media function provided by the independent servers of creative networks was the possibilities to broadcast online and to archive Internet broadcast sessions. When during the mid-1990s the first possibility of streaming real-time sound on the Internet became available (e.g. *Real Audio*) all that was needed for initiating one's own Internet radio project was a computer, an Internet connection, an idea and the willingness to make it work. Under the slogan 'data can be located anywhere' *E-Lab* created the Internet radio *Ozone* which started its work in

the spring of 1997. It was a 'real' networked radio: web sites with *Ozone* interface were located on parks.lv server there in Latvia while all the sound files were kept on *RIS (Radio internationale Stadt / orang.org)* server in Berlin or on *xs4all.nl (Access for All!)* server in Amsterdam. For *E-Lab* artists this was a great opportunity – given the limited financial and technical resources – to use technical equipment already connected to the Internet in other places around Europe. In turn, *E-Lab* supplied original content to the *RIS* server in Berlin, which was specially designed by Berlin based programmer Thomax Kaulmann as a support platform for sound art, independent radio and musicians producing alternative electronic music⁸⁴ free of copyright.

The day after the opening event of *Ozone* we received a call from a member of the National Radio and Television Board. Most likely it was because of an article about the event that journalist and musician Peteris Puritis had published in the newspaper 'Diena'. To his question how many listeners the station had, I gladly replied that when we used *xs4all.nl* in Amsterdam only 25 people could connect simultaneously, but with access to the server in Berlin it would possibly support up to 400 connections at the same time. During the next forty minutes I spent my time trying to refute illegal broadcasting accusations. As it turned out, according to the Law on Radio and TV of the Republic of Latvia a broadcasting permit is not necessary, if the total number of customers (connections) does not exceed 25. And it did not matter that the broadcasting happened through servers in Berlin and Amsterdam, as the board member stated; if our physical bodies were located in Latvia we were subject to the Latvian law on broadcasting. Of course, the law did not specifically refer to 'Internet radio' at that time, yet theoretically it could be included in the side note 'and other electronic mass media'. Luckily, the authorities did not take the issue of radio *Ozone* any further and we could continue the experiments of streaming sound online.

Access to file uploading servers in Berlin and Amsterdam was a huge support, however, this did not provide live broadcasting possibilities. Therefore Internet radio *Ozone* worked as a real-time playback sound archive in the beginning. Initially, we published archives with recordings from live jam sessions, done together with musicians Ugis and Toms Vitins in the *Ozone* studio at *E-Lab*, inviting other musicians, singers, percussionists, artists and DJs to 'jam' together as well. Recording and publishing archives was a characteristic trait of early Internet radio. In the 1990s in Latvia just as in some other Eastern European countries, almost the only way to provide access to the content of sound art and music of independent producers was to publish it on the Internet. Therefore, the first *Ozone* web site published ambient music by the brothers Vitins, *Locomotive* ambient sound recordings 'Through India, 1996', sessions by *Varka Crew* and other DJs, work of the sound art piece 'entrance01' by Peteris Kimelis and experimental music of the Basque group *Fin de Siecle*, who visited Riga.

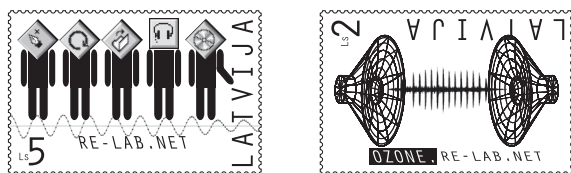
The archiving did not loose its significance later on when *E-Lab* turned more towards live streaming. *Ozone* radio programs were streamed once a week on Tuesdays, but the recorded file had more listeners until the next broadcast than the real-time broadcasted program itself. The content of *Ozone* Internet radio nights was very diverse: from poetry and literary readings (which were organized by *Orbita*, a Russian poet group in Latvia, DJ Dr. Ups from *Varka Crew* and Vlads Jakovlevs), interviews (e.g. interviews Kaspars Vanags held with Sergejs Timofejevs, Normunds Kozlovs and *E-Lab* interviews with Kristine Briede and Carl Bjorsmark from the film studio *Locomotive*), to lectures and conference recordings (e.g. from 'Art+Communication' festival events). Radio

84. <http://organg.organg.org>.

Ozone did quite successful streamings from clubs, among which were many events from club 'Pulkvedim neviens neraksta' (Nobody Writes to Colonel) (e.g. the *Casablanca 2000* New years party in 1998, the D.U.M.B. night event of the Dutch VJ and hardcore techno musician collective, *Sentimental Beatz*, a live jam session of Latvian musicians at the opening of 'Art+Communication '98' which was later released on audiotape – to name just a few). Frequent guests in the *Ozone* studio were Latvian musicians and DJs from *Varka Crew*, *AG & Raitis*, *Casablanca 2000*, *Gosh*, *Zagga*, *DJ Bongo*, *andrews.lv*, *Clausthorne*, *Egons Up tis*, *bio.codes* and many others. However, more often *Ozone* had live music sessions (organized by Vitins), sound and video broadcasting experiments, for example, web-tv (Peteris Kimelis), micro-video (Martins Ratniks), 'freestyle' DJing, VJing and sound recording mixes (from surroundings, cityscapes, old records, events, etc.) which were made by *E-Lab* members and guests.

Internet radio was an international medium as well, and therefore also the best format for transforming communication with guests. For example, in 1999 after giving a guest-lecture, Geert Lovink made a EuroWar mix '99 programme in Riga, mixing some audiotapes he had bought at the tunnel of the Central Market in Riga with euro-trash music records he had brought from the Balkans recently. *Ozone* was often invited to prepare special streaming programmes for re-broadcastings at other Internet and FM stations throughout the Europe. Such collaboration developed with *Radio FRO* in Linz, *Radio 90* in Banff (Canada), *Kunstradio* in Vienna and other radio stations. Programmes were specially produced for participation in different festivals of the 1990s (*Comm_X_change* in Switzerland, *Ars Electronica* in Linz, *Next Five Minutes* in Amsterdam, etc.) – both onsite and online. Ambient sound recordings from events were interpreted as audio-collage reports that were broadcasted during *Ozone* live radio sessions. The number of listeners was not relevant – the radio studio could have considerably more people on site than on the Internet at the moment of broadcasting. Neither was the broadcasted content important. What was important was the very process of streaming itself. 'Out there on the Net they found freedom to be left alone, to experiment with the new medium, connect it to local radio, pick up sounds in techno clubs and tiny studios, send soundscapes out into the cyber-plains' (Lovink 2004, 231).

On the Internet, the sound art looked for a way to exist 'beyond any representational paradoxes' (Schultz 1996). One of *Nettime*'s founders, Pit Schultz, who participated in the first *E-Lab* 'Art+Communication' conference in Riga in November 1996, proposed the idea that 'the most important things are not representable, they exist only in the process of becoming' (Schultz 1996). Similar to the *E-Lab* server and its net art experiments, radio *Ozone* attempted to justify this idea in its entirety by choosing sound – the least representable medium – as a priority in cyberspace explorations and process (instead of produced art work), as the form for artistic expression. Owing to technical features, such as live broadcast archiving that allows making snapshots of the realtime process, the sound art has been collected on the *E-Lab* server for a decade, constituting a very 're-presentable' archive today. Although parts of the files are lost (in 2001 hackers broke into the server in Berlin (RIS/orang.org) and erased its entire content which was in part also the content of *E-Lab*), there is a valuable *E-Lab* and RIXC Internet radio archive of recordings and archived *Ozone* sessions and broadcasts of events back from 1997 still available online today. The *Ozone* archive stores around 300 files of *Real Audio*, *Real Media* and other formats, in total five hundred hours or twenty 24h sessions of audio material.

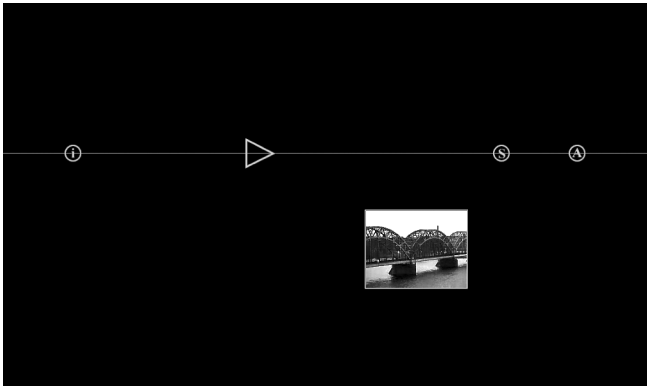


Stickers with the Internet web site addresses of Electronic Art Laboratory E-Lab and Riga Internet radio Ozone. Designed by: Martins Ratniks, 1998.

Next to the option of publishing material online, *E-Lab* also supported the idea of distributing free non-commercial audio recordings. In the summer of 1997, musicians Ugis and Toms Vitins teamed-up with Martins Taurins and created the label *Sloka Sound System* (later: *Elast*), which was open for anyone who wanted to make music. Their first recording was the electronic ambient music audiotape 'Digidambam', produced with the support of *E-Lab*, self-released in 200 copies and distributed mostly for free in Latvia as well as abroad on media art festivals. In order to emphasize the idea of *100% non-commercial work* and freedom of (self) publishing in new media, a home page on the Internet was developed, inviting visitors to make their own 'Digidambam' audiotape, to record the *Real Audio* files available for downloading and to print-out a JPEG image as the album cover⁸⁵. *E-Lab* also co-produced other releases – the audiotape '*Sentimental Beatz*' (a recording of a live jam session during opening of the second 'Art+Communication' festival at club 'Pulkvedis' in 1997) and the CD '*Elast garsa*' (Taste of *Elast*) (*ELAST* being the next label *V ti i* founded) and the audiotape '*Toxicity*' (with the electronic music of Egons Upitis) and others. The idea of alternative distributing was also applied in the case of the '*Acoustic Space*' journal issued by *E-Lab* and published in English and Latvian since 1998. The front cover of the second edition (in 1999) included a small 'pocket' inside for CDs and an advert text 'The CD and the on-line distribution project of audio content is still open. If you wish to distribute your own produced sound and radio art, noise and electronic music, DJ mixes together with this edition of '*Acoustic Space*' please submit CDs of your "productions" in 1 up to 100 copies' (*Acoustic Space* 2003). The distribution aspect has always been problematic for digital productions (CD, DVD, CD-ROM) of independent musicians and artists and the same can be said for alternative culture publications. *E-Lab* offered the following solution: the thousand copies of the journal were distributed together with different CDs of sound art, DJ and electronic music which were handed in by artists and musicians from the *Xchange* network from various countries. For instance, sound artist Zina Kaye from Australia submitted three audio art projects (together 99 CDs), net.artists JODI sent a CD-ROM with their art project 'OSS' (in one hundred units). The magazine also included Latvian 'productions': the remaining discs of 'Taste of *Elast*', and *Gosh* music 'Gosh: Seaweed', *Alexandroid* 'The Composition: When Your Girlfriend Is Sick', *Varka Crew* DJ mix especially produced for *Acoustic Space* magazine, music by *Gas of Latvia* and others, each in no more than a few copies. In a couple of year's time all thousand copies of the magazine were distributed and each one of them featured original content produced by different artists or musicians enclosed on CDs. 'It is quite uninteresting to do live broadcasts from the radio studio all the time, it really reminds you of conventional radio' (Smits 2000) as we agreed soon enough. Of course, there were also

85. <http://www.rE-Lab.net/sss>.

more exciting programs where we used recordings from an amusement park, toy store or exhibition opening. Then we came up with the idea to try and do live broadcasts from events at different venues. The only thing required to make this possible was a telephone line at the venue. *E-Lab*'s first laptop which got equipped with both a server and software for live online audio broadcasting was used for doing transmissions from clubs, events, concerts, conferences. At times we encountered some technical difficulties and even mishaps – once, after doing broadcasting for several hours from club 'Pulkvedis' we learned that instead of music there had been only noise. This however did not keep us from further experiments with 'mobile broadcast' and *E-Lab* continued broadcasting from all over with true enthusiasm (Smits 2000). Also, all events organized by *E-Lab* regardless of their locations have always had live streams online, beginning with the second 'Art+Communication' festival with the title '*Xchange* on-air session' in November 1997. During the *Net.radio days* 'Trimm Dich'⁸⁶ – the first international summit for creative Internet radio initiatives in Berlin, June, 1998 – *E-Lab*'s laptop with its mobile *Real* server saved more than one event when the computers set-up for broadcasting failed.



Riga Internet radio Ozone. Interface design by: Raitis Smits, 1998.

Another mobile broadcasting experiment, where we used mobile communication for the first time, was held on a special art-train heading from Riga to Ventspils (about 200 km) during the annual project 'Ventspils Tranzits Terminals', organized in 1998 by the Riga Soros Contemporary art center. We mainly broadcasted audio material of the local railway radio-transmission project 'Kit-Kat' (by Peteris Kimelis, Kaspars Vanags and Sergejs Timofejevs). Together with ambient noises and conversations with the train-exhibition artists, I was transmitting it via mobile phone while walking along the coaches of the train. Raitis Smits, who was staying at *E-Lab*'s studio in Riga, picked up my mobile phone 'stream' from the train, remixed it and sent it further out into the cyberspace. A mobile phone antenna was installed on the top of the train (meanwhile the mobile telecommunications company that financed this experiment tested the mobile communications on the route); however, the connection got disrupted frequently. Needless to say the sound quality was very poor, but this did not matter, what mattered was to transmit.

86. <http://www.art-bag.org/convextv/pro/trimmdich/> (Viewed on: 2.06.2010).

Regardless of the unique social dynamics the 1990s creative network communities managed to create with their collaborative broadcasting experiments, the streaming media did not become the social communication platform for network communities. Today, streaming media are mainly used as the online channel for broadcasting mass media using commercial software. Despite the fact that there still are free versions of streaming software (including open source) they lack the simple and convenient use that social network platforms nowadays have. Hence, Internet radio can be referred to as a social medium mainly during its early period and in the context of the rise of creative networks, whereas nowadays the social media of Web 2.0 continue to improve the publishing possibilities and other ways of (primarily textual) communication. In short, online broadcasting media (Internet radio, Web TV) still contain a considerable potential for social interaction. If the experience of early communities could be adopted and put into practice, it could provide a new dynamics also for the future development of *Web 2.0* communities. It is also important to be aware of the potential of streaming media in terms of the fact that collaborative online streaming experiments of the Internet radio *Ozone* organized by *E-Lab* were the driving forces. Due to this nearly a year after *E-Lab* was founded, 'the tiny *E-Lab* organization, with practically no budget, somehow managed to move into the heart of an international network of artists, theorists, and organizers, all equally eager to explore the new digital frontier' (Kluitenberg 1999, 52).

Conclusions

By looking at the situation in Latvia during the second half of the 1990s and by analyzing the new self-organized tendencies such as the development of alternative and digital culture environments and networks, it is possible to conclude that the Internet has had significant influence on these processes. This is not in terms of technological determinism, although as this part of the study shows, the openness and decentralization principles of network structure did influence the social organization processes in the case of local communities. The collision between the idea of openness of the Internet and the specific post-Soviet circumstances in Latvia (the dysfunctioning of state system, the 'emptiness' in the local culture scene) and the personal motivations of the young generation (dissatisfaction with the leading local culture and art educational institutions – both the old ones (Ministry of Culture, the Culture department of Riga City Council, Art Academy) and the new (Soros Contemporary Arts Center)), created a situation which facilitated the processes of self-organization, set the meaning of social action and the motives of developing local creative networks in Latvia in the mid-1990s.

Regarding the terms 'local' and 'community'; if they are being used in the age of global digital networks and even more – in relation to creative and social networks – one may agree with Saskia Sassen that globalization does not stand for the disappearance of the local, instead it contains the potential for expanding the field of activity for local communities onto a translocal level. When analyzing the case of the *E-Lab* network, one can see that the global communication technologies and the translocal cooperation networks were the support without which the new generation in Latvia could not have been able to create such a powerful 'alternative reality', which in a few years time turned from subculture into an officially recognized contemporary culture, still is having resonance in the local culture of Latvia up to this day.

By looking at forms of social organization, the conclusion is that they are much alike in both the local community networks and in translocal creative networks. There are, of course, differences, but these are very subtle. For instance, the real life meetings may be more frequent and may differ in terms of the scale – not only huge international festivals but also, for example, lectures,

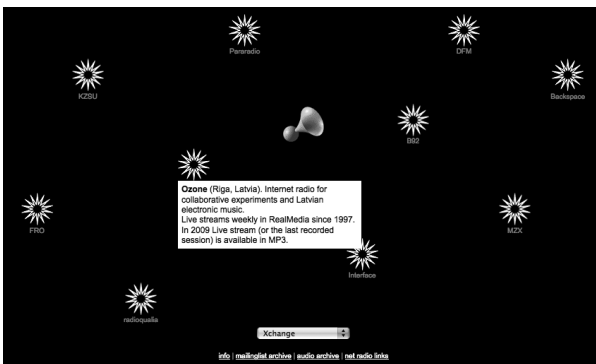
club events, collaborative sessions of broadcasting and making music. The greatest difference is the field of activity in case of the local and the translocal creative networks. The local creative communities (at least in the case of Latvia) are characterized by greater interdisciplinarity – they focus not only on electronic media and digital networks but also on the synthesis of multiple fields, for example, poetry and multimedia, the new theatre, contemporary art, club culture and, of course, Internet and electronic art.

Comparing the creative networks of *E-Lab* with today's social networks, one may conclude that the possibility to be able to work in the network in a simpler manner, is sufficient for 'socializing', for representing oneself (in a manner of 'here I am'), for communicating in a faster and more convenient way, for creating personal social networks and so on, but it does not provide enough motivation for the process of establishing and developing new creative communities. Due to the fact that today social networks in Latvia are a thriving phenomenon and the number of people registered on *draugiem.lv* is greater than the total number of residents in Latvia and because the 'emptiness' in the culture is not there anymore, today the 'alternative zones' are hidden deep down underground, subcultures are more secluded and self-organized activities of the new generation are considerably less visible than during the 1990s.

GLOBAL NETWORK AS AN EXTENSION OF A LOCAL COMMUNITY - THE CASE OF XCHANGE

DATA can be LOCATED ANYWHERE. Broadcasting from Riga (Parks.LV), Berlin (Radio International Stadt server), Amsterdam (XS4ALL.nl), and coming up soon – from SOMEWHERE else. CONNECTION in progress. We invite you to JOIN in – to interconnect in the Internet radio NETWORK. (Xchange Compilation)⁸⁷

Following up on the 'acoustic space' explorations initiated by *Ozone* Internet radio, *E-Lab* set out on a quest for new forms of translocal communication, and in 1997 launched the creative Internet radio project *Xchange*. It united more than half a hundred creative small-scale initiatives not only from Europe, but also from other locations around the world that were interested in online streaming possibilities. As the participants of the network were dispersed globally, *Xchange* can be regarded as an example of a translocal creative network, similar to *Nettime* and *Syndicate*. At the same time, due to the fact that the core of *Xchange* was the *E-Lab* Internet radio *Ozone* with artists and musicians broadcasting from Riga, *Xchange* may just as well be considered as a global extension of the local *E-Lab* community network. In yet another perspective, *Xchange* can be viewed as a case of 'counter-geography' in virtual space – due to the decentralized character of digital networks it was not important anymore from which location an artists was coming (at least not in the early period of the Internet). The networking activity could be just as good from the periphery as from a metropolis. In other words, the possibility of becoming 'the epicenter' with the most 'visible' participants was open to artists geographically located at more remote areas, outside the officially acknowledged dominating centers of conventional art institution authorities.



Xchange network web site. Designed by Raitis Smits, 1998. <http://xchange.rE-Lab.net>

87. From the idea of the *Xchange* compilation project, July-October, 1997.

The Internet was a new medium and a new soil for creative expressions for the artist who was curious about digital networks and processes in contemporary art regardless of the country of origin. It was a whole new situation – Eastern European artists were now able to participate in the rise of a new art 'genre' instead of only imitating Western artistic ideas, as often observed in Latvian contemporary art of the early 1990s. With the Internet this was quite the opposite. After the fall of the Berlin Wall those Eastern European artists, who felt the most 'hungry' for information and communication, landed in the vanguard of the new net art movement, at times not even being aware of it. The creative Internet radio network *Xchange* was one of such cases – the 'headquarters' of the network located in Riga, on former Soviet territory, while the most active and significant support nodes of the network were stationed in Ljubljana and Budapest as well as London and Berlin, and also Banff in Canada and Sydney in Australia provided a lot of significant contribution.

The Pre-History of Xchange – the Creative Internet Radio Network

The *Xchange* network was launched on the basis of *E-Lab's* earlier project called '*Xchange Compilations*' that aimed at 'linking audio content on the net'⁸⁸ and was created by emerging Internet broadcasters, thus capturing an acoustic 'snapshot' of the 'Net' of that time. We sent out an announcement call on the translocal mailing lists (*Nettime*, *Syndicate*) inviting participants to submit their audio files in *Real Audio* format, hyperlinks to them (if they were hosting their files on their own servers) or URL addresses of their live streams. It resulted in doing monthly online sound compilations that were published on the Internet. Following the idea of '*free flowing concept – free building content – free floating location*' four *Xchange* compilations came out in the summer and autumn of 1997⁸⁹. Each of them was located on a different server in a different European city, and each was related to a particular new media culture event, with fitting design – the website of each 'compilation' was designed in the same visual style and colours as the website of the respective event during which the concrete compilation was presented.

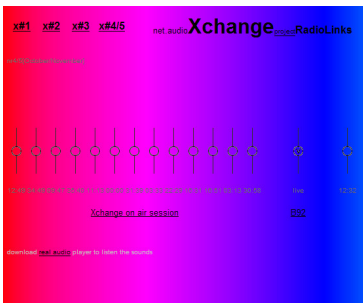
The first compilation in July 1997 was placed on the parks.lv server in Riga, the 'hometown' of *Xchange*, and it featured more than seventy audio files and links to live streams submitted by 22 Internet radio initiatives – sound artists (Peteris Kimelis, Petri Kuljuntausta), radio art projects (*Kunstradio*, *Radio LADA*), electronic and independent musicians (*Gosh*, *Fin de Siecle*), creative Internet radio initiatives (*Radio Ozone*, *Pararadio*, *Backspace*, *FirstFloor Radio*, *Convex TV*, *Radio Internationale Stadt*, *ArtDirt*), poets and activist writers (Merilene M. Murphy, Sergejs Timofejevs), FM radio stations broadcasting also online (*FRO*), DJ music broadcast stations (*Interface*) and others.

The succeeding compilation (in August 1997) was put on the RIS server RIS.de (later on renamed as *orang.org*) in Berlin because it provided free publishing services for creative Internet radio, sound art and electronic music initiatives, and soon enough it became one of the most important nodes in the *Xchange* network. The second compilation featured most of the projects mentioned before and some new ones (*XLR*, *The Thing*, *Radio Helsinki*). It also included sound

88. From: Xchange Internet Radio Workshop Series materials <http://re-Lab.net/netradio/workshop01/06/index.html>.

89. Project's website: <http://ozone.re-lab.net/Xchange/> (Viewed on 02.06.2010); information on the project and an invitation to participate published on Nettime: <http://www.nettime.org/Lists-Archives/nettime-I-9706/msg00097.html> (Viewed on 05.06.2011).

recordings from the summer's most relevant network culture and new media art events – Internet radio experiment broadcasts from the creative media art workshop *Polar Circuit* (which took place in Tornio, Finnish Lapland) and radio programmes from the media laboratory project *Hybrid Workspace* (the project was carried out as part of *Documenta X* in Kassel, Germany). The third compilation in September 1997 was published on the *Ars Electronica Center* server *AEC.at* in Linz in relation to the *Ars Electronica* festival where we – Raitis Smits and myself – together with other Internet artists were invited to participate in the net art group project 'Remote C'. The compilation series was finished off with the October/November edition of 1997 on the server of media center *V2_ (V2.nl)* in Rotterdam and it was presented on the conference '*From Practice to Policy*' dedicated to new media culture policy. These editions gathered even more new participants and new content (*Junglejuice, Radio TNC, Pseudo, Luxus content, KZSU Stanford, etc.*).



Xchange Compilations, 1997. Collaborative net art project initiated by Rasa Smite and Raitis Smits / E-Lab.

Step by step, through its *Xchange* Compilation project, *E-Lab* created a base for a new translocal creative network community of 'creative audio content providers', whose interests included live audio broadcasts, radio art experiments, production of alternative radio shows and the development of socially dynamic communication within the space of electronic networked media. In December 1997 *E-Lab* launched the *Xchange* mailing list, open 'for alternative, non-commercial online broadcasters and individual audio content contributors' with the aim to establish 'a creative net.audio network community'⁹⁰. The main function of *Xchange* was to exchange information – who would be broadcasting when and what, to spread new creative Internet radio site addresses amongst network participants and to provide a platform for collaborative broadcast experiments on the Internet, to announce and to coordinate the collaborative Internet radio sessions.

In the 1990s, the Internet in terms of its visual capacity was greatly limited due to low bit rate. Also its source material – information bits and bites – was more suitable for a textual instead of a visual mode of expression. Conceivably, that was one of the reasons why sound entered *E-Lab*'s sphere of interests. Also – artistically speaking it was one of the most abstract forms of expression, but from a social perspective – one of the most common communication forms. With the *Xchange* project *E-Lab* attempted to use sound to construe and define new outlooks for investigating the acoustic dimensions of digital networks. The conceptual guidelines of *Xchange* were based on the idea of an 'acoustic cyberspace', which was introduced to

90. <http://xchange.re-lab.net> – information on project Xchange (Viewed on 02.06.2010).

us by the American writer Erik Davis at a conference during the second international festival 'Art+Communication: *Xchange On-Air Session*' organized by *E-Lab* in Riga, 1997. This festival was in particular devoted to Internet broadcasting – for the first time all events and lectures from the festival were streamed online and in real-time, marking the dawn of the *Xchange* network era. These sound recordings are still available online in the archives of radio *Ozone*⁹¹.

In his lecture 'Acoustic Cyberspace' Davis talked about 'some abstract ideas, some images, some open-ended notions about acoustic space' (Davis 1998, 22). He was especially interested in the relationship between sound and environments, and his attempt was to 'get at some of the deeper issues about sound and the ways it constructs subjectivities and can act as a kind of a map' (Davis 1998, 22). Davis also introduced concepts of Marshall McLuhan who draws a line between the visual and the acoustic space. McLuhan also uses the notion of 'visual space' as a way to describe how Western subjectivity has been organized on a technical basis since the Renaissance. McLuhan contrasts this construction of visual space, and the subjectivity associated with it, with what he calls the 'acoustic space'. Acoustic space, accordingly to McLuhan, is the space we hear rather than the space we see, and electronic media are submerging us in this acoustic environment, with its own language of affect and subjectivity (Davis 1998, 22). Davis argued that 'music and sound are tremendously powerful forces for organizing affect; ... an incredibly productive language, one capable to overcome the linear grids implied by the text' (Davis 1998, 24). Davis's conceptual vision on electronic (acoustic) space corresponded with our notion about and experience with artistic exploration processes within online spaces, and so Davis's idea of the 'acoustic cyberspace' became the conceptual guideline for the early development of the *Xchange* network.

Collaborative Streaming and Social Dynamics of the 'Acoustic Cyberspace'

On December 2nd, 1997 the *Xchange* network and mailing list was launched by sending out the first message to the first subscribers – those sound artists and creative online radio initiatives that were willing to cooperate and to participate in creating a shared platform for information exchange and communication. We celebrated the birth of *Xchange* with the first *Ozone* live Internet radio streaming session from Riga. During the next weekly *Ozone* programmes we sent out the URL address of the live *Ozone* stream on the *Xchange* mailing list and we also invited other network participants to meet on the IRC chat channel, not only to listen to our session but also to join us with their 'live signal' for a collaborative networked streaming session.

The first who suggested to 'connect to' *Ozone* sessions (where we basically played a set of experimental mixes of different sounds and recordings) was the new media artist laboratory Backspace in London. This developed into the idea of an *Xchange* live networked loop, created by participants who received each other's signal and streamed it back online. Anything could be used as the source for the sound – from regular radio and tape-recorder to scratching a microphone. We soon realized, that even with no new sounds added the loop continued running without breaking off. The loop went on echoing itself due to the feedback mechanism. The circulating sound within the loop repeated itself, creating multiple sound layers, with each loop becoming more and more dense and loud. After a while, it was not possible to recognize the original input sound, and the streaming loop had completely turned into a multi-layered noise. This feedback mechanism was

91. <http://ozone.re-lab.net/archive.html>.

a specific feature of *Real Audio* technology: even in real-time the listener received the signal with several seconds delay. During the first of these experiments, net radio artists at Backspace received the signal transmitted by *Ozone*, and they channelled the sound through their mixer and server sent and it back online. Returning several seconds later, the signal created this echo effect. The process of sending the same signal back and forth created layers of sound, leading to an illusion of a deep, multi-dimensional space. This was the first time we experienced what Davis described as the 'acoustic cyberspace' to a convincing extent.

During the following year *Xchange* carried on with similar experiments, organizing collaborative streaming sessions with the title *X-Open Channel* where up to seven participants from different countries created loops. The more participants got involved in making the loop, the more difficult it became. It was difficult even in terms of the timing as the interested participants were from different time zones – from Europe, Canada and Australia. In a loop it is difficult to understand what is being transmitted and by whom as the signal very soon turns into noise. However, this was what captivated all the participants even more. Sometimes, we even succeeded to create something similar to a sound piece. But also when the loop did not resemble a composition at all, its circulation in the virtually physical layer (namely, on servers distributed geographically) and the echo effect on its return, always created an illusion of encountering other worlds, other dimensions we wanted to cross.

Xchange had become 'a global network of audionauts festively exploring virtual frontiers' (Lovink 2004, 230). These collective sessions were not limited to sound loops on the Internet. They gradually transformed into real-life meetings for network audio stream providers (net.artists, musicians, DJs, community radios and electronic activists, etc.), and this manifested into 'net.radio nights'. These live jam sessions of several hours long featured several dozens of onsite and even more online participants. These sessions had become an integral part of many translocal network culture conferences and new media art festivals in the late 1990s. *Xchange* net.radio nights brought an *Open* zone in these festivals where any onsite or online participant was welcome to contribute his or her own sound material. Adam Hyde, one of the most active *Xchange* members states that 'ownership [in these collective sessions] was impossible to maintain and hence forgotten. Participation became the goal. The sharing of transmissions was more exciting than the simultaneous reception of the same transmission' (Hyde 2007). Net.radio night events were also the point where *Xchange* network participants met for informal discussions, both onsite, online and on the *IRC* chat channel. Hence the *Xchange* net.radio nights not only provided the real presence but also the 'virtual' – Internet was a medium that connected real events with remote places, providing the possibility to join in the collaborative event also for those who were not able to attend.

The content of these artistic online streaming events was not that important, the important thing was to do the streaming. The broadcasted signal could have been music, news, reports, interviews, poetry, literary readings, performances, sound art or audio experiments. Also, the quality of the signal did not matter – the transmissions were done in *Real Audio* / *Real Media* format, which compressed the sound to an extent where it became completely transformed – it turned really noisy – however, it was possible to transmit and to receive it using a relatively poor Internet connection. 'Freed from the demands of usefulness, quality becomes an irrelevant criterion for these media signals. The signals exist, how they are interpreted, what the framework and the demands are projected upon them, is not a consideration in the process of their production. The signals can be beautiful and clear, or amateurish and oblique' (Kluitenberg 2000, 7). Of importance was

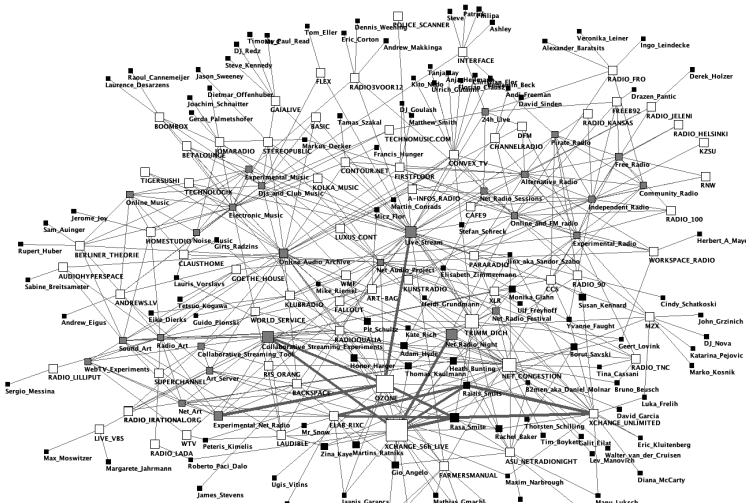
the fact that the sound was self-produced. As participation was the main thing (the goal itself), the *Xchange* network community with its streaming jam sessions where the participants experimented with the most specific principle of digital networks – simultaneity – succeeded to establish networked communication of a whole new quality – it created a new kind of social dynamics within the virtual presence. Kluitenberg argues that the presence is one of the most complex phenomena of social interaction having emerged in the networked space (Kluitenberg 2000, 8). In his turn, Andreas Broeckmann contrasts the potential of new media to the 'stupefying machinery' (Guattari) of mass media, and refers to *Xchange* as a distributed group, a 'connective', adding that *Xchange* is 'possibly the most evocative [example] in relation to Guattari's notions of the polyvocality and heterogenesis that new media technology can trigger.' (Broeckmann, 1999, 86) Presumably, the reason for awarding *Xchange*'s Internet radio network project with the *PRIX Ars Electronica* in 1998 was the heterogeneous structure combined with the new concepts and ideas of openness and participation, and its quest for new artistic expressions and forms for networked communication and social interaction. On this account *E-Lab* was invited to participate at the *Ars Electronica* festival in 1998, with the project '56 h Live. Acoustic Space'. This was the first and largest onsite meeting for *Xchange* network participants, manifested in a 56 hour long continuous experimental live audio streaming from Linz, Austria. Around 25 onsite and even more online participants – sound artists, musicians, DJs, community radio and network activists from three different continents – joined once more for a collaborative streaming session sending signals into the vastness of acoustic cyberspace.

Mapping the Xchange Network and Mailing List Dynamics

The second half of the 1990s was that brief period in the history of Internet when artistic experiments and the search for innovative forms of online communication had such a fast pace that practice outran theory. Creative communities with their innovations (including *Xchange* with its collaborative broadcasting communication experiments) were a step ahead of the commercial industries. However, the new forms of social interaction and the creative content both evolved mainly within the boundaries of the virtual communities themselves, remaining invisible to the large part of society that did not use the Internet and if it did, it did so to a minimal extent and for different purposes (surfing and reading). The lack of information about the real activities within the practice of network communities is one of the reasons why the social dynamics of the 1990s network culture still isn't studied a lot. Despite the fact that some of the early notions of digital networks as a social medium have been realized within today's social network platforms, the creative network experience nevertheless contains much more potential in the further development of network culture. The 'network mapping' and analysis of mailing list dynamics in the case of *Xchange* performed here, provides more visibility to the heterogeneous structure, multifold forms of expressions and creative content of creative networks.

Creative networks in particular try to develop different forms of collective activities, but also they are composed of independent nodes – individuals or separate smaller collectives. As shown by social network analysis, the main purpose of which is to evaluate the location of actors within the studied network, there is always one (or more) central nodes (for example, the founder of the network or the mailing list moderators), which is connected with closer ties to other central nodes (e.g. other most active participants) on the first levels and with weaker ties to other nodes (other participants) on next levels. When the central node (or nodes) is found, we can get insight into the roles and groupings of the network participants. We can 'recognize' the connectors, experts,

leaders, bridges and isolates, who is in the core and who in the periphery of the network (Krebs). In the *Xchange* network during the period from 1998 to 2000, the most active period for this network, the central node was its initiator and founder: Internet radio *Ozone*, created by *E-Lab* and with its geographical location in Riga. The most active network participants in the *Xchange* collaborative streaming sessions, contributing their own live stream on a regular basis were artists from media laboratory Backspace in London, radio initiatives *CCS* and *Radio 90* from Banff Art Center in Canada, sound art project and website for Australasia audio culture *l'audible*, the creative new media group *House of Laudanum* from Sydney, radio artists' group *r a d i o q u a l i a* from New Zealand (back then it did broadcasts from Adelaide in Australia), the collective for artistic radio experiments *MZX* ('Ministry of Experiments') from Ljubljana in Slovenia, experimental radio and Internet online streaming project *XLR* (eXtended Live Radio) which did broadcasts both from Berlin and Ljubljana, the art server initiative for the support of creative Internet audio content *RIS* (*Radio Internationale Stadt*), and later *orang.org* (*Open Radio Archive Network Group*) from Berlin, the art server initiative *mur.at* (Graz, Austria), and the Internet radio programme *Pararadio* from Budapest, Hungary which was devoted to 'new technologies, new culture, new lifestyle'.



Map of creative Internet radio network *Xchange* showing Internet radio projects, their key participants and diversity in activity fields and forms, 1996-2000. Data obtained from *Xchange* website <http://xchange.rE-Lab.net> (Viewed on 02.06.2010)

It is difficult to draw a strict line on the *Xchange* map between the active and less active network participants. Important contributions (in terms of quality) in different stages of the network were also provided by other *Xchange* participants, who published announcements about their broadcasts on the mailing lists and at times took part in net.radio nights and collaborative sessions organized by *Xchange*. These are artists from the media laboratory *Ljudmila*, radio amateurs and programmers from Ljubljana; 'live radio' and multimedia community project *DFM* and other pirate and independent radio journalists and electronic media activists from Amsterdam, radio art programme *Kunstradio* which has been doing FM radio broadcasts for more than twenty years

on ORF1 radio channel in Vienna, free FM radio FRK from Kassel in Germany; artist and electronic musician group Farmersmanual and FirstFloor Radio from Vienna, later FirstFloor Eastend also from Vancouver and Montreal in Canada; the online programme on sound art in the Internet AudioHyperspace, Internet radio collective convex tv and club live broadcasting project Klubradio from Berlin; contour.net creative streaming media initiative from Leipzig; radio art project Radio Lada from Rimini Italy; project Polymorphous Radio from Tokyo, Japan as well as individual artists, independent journalists and electronic activists.

A specific level on the *Xchange* map also consists of short-term radio projects and events – Workspace Radio in Kassel (1997), Net.radio Workshops Tornio in Finnish Lapland (1997, 1998), *Net.radio Days* in Berlin (1998), Comm_X_change in Basel (1998), Net.congestion festival in Amsterdam (2000), Art+Communication festival editions: *Xchange* On-Air Session (1997) and *Xchange* Unlimited (1998) in Riga.

Likewise the local *Xchange* network branch in Latvia holds its own special place, and it is composed of *Orbita*, Andrews.lv, Varka Crew, Casablanca 2000 and other local contemporary culture communities, DJ groups and music labels from Riga, as Daba from Ventspils that prepared radio programmes – poetry readings, DJ mixes and electronic music that were often played at *Xchange* online sessions and events. Further levels feature the early portals and websites with alternative ambient electronic and DJ music from other countries – Interface and Gaialive from London, Basic from Geneva, Betalounge from San Francisco, technomusic.com from Paris and the independent Internet radio station Radio Jeleni from Prague, among others. And even further FM radios that were amongst the first to start broadcasting online, for instance, independent radio station B92 from Belgrade, Community Radio (Radio Netherlands Worldwide) from Europe and Stanford University radio KZSU from the U.S., which are related to *Xchange* only because a few of the founders are subscribed to *Xchange* mailing list.

Another level of *Xchange* community participant map is comprised of individuals who work within the collectives mentioned above and who have been involved in different *Xchange* processes with various levels of activity. Some have been more involved with creative and technical solutions for *Xchange* loops and other experiments and have been present at almost all the collaborative sessions. Others have only played their music from time to time, mixing diverse sound sources and creating unique soundscapes, while for others it has been more important to find a theoretical basis than to participate in the artistic sound experiments and to discuss the future development of Internet radio both in live broadcasting and mailing list communication. The networked broadcasting and the dynamic communication of *Xchange* would not have been possible without the active participation of many exceptional people who have facilitated the creation and development of the *Xchange* network during the different stages of the Internet. For instance, net artist Rachel Baker prepared special newscasts for the X-Open Channel collaborative broadcasting sessions entitled 'PPP News' (Personalised Persuasive Propaganda), which were streamed along DJ music with the assistance of Giovanni D'Angelo from Backspace in London. The most noteworthy contribution by net artist Heath Bunting (who is also the initiator and administrator of the independent art server irrational.org and the key founder of Radio 90 in Canada and other streaming media projects) was the development of the online software The World Service⁹² – a tool for Internet radio producers to announce their broadcasting addresses and schedule, and

92. http://www.irational.org/radio/world_service/.

Jinx and B2men, Herbert A. Mayer from Kassel Free Radio, Micz Flor and Martin Conrads from Convex.tv in Berlin, Derek Holzer from Radio Jeleni, Matthew Smith from FirstFloor Radio in Austria and Canada, radio and performance artist Tetsuo Kogawa from Polymorphous radio and others. Original sound art pieces for online broadcasting were also sent in by JODI, Peteris Kime-lis, Martins Ratniks, and musicians Ugis and Toms Vitins participated with their own stream too.

Xchange had the largest number of subscribers – around 500 – during its most active period from years 1998 to 2000. Needless to say, *Xchange* participants all were contributing intensively in shaping the Web – as they were Internet radio pioneers who not only endeavoured to explore the vast cyberspace (as it was in 1990s) but also to participate in turning it into a socially dynamic environment and to fill it with self-produced sound content. However, after the turn of the century, the interest in collaborative Internet radio events grew smaller. This was first and foremost due to the fact that the main initiator of the network – *E-Lab* – did not wish to deal with the new Internet streaming media 'discourse', where technical limitations and commercialization dictated by the industry had started to dominate. In terms of technology, online broadcasting requires three basic elements. The first one is in the competence of the broadcaster (sender) – the *encoder* that helps to compress the broadcasted sound material (for example, in Real Media .rm or mp3 format) so that it can be streamed online. The second is a server providing access to these transmitted sound signals for the listener. The server can either be owned by the 'sender' or by commercial or non-commercial service providers. The third element is on the part of the user – you need a player or software for playing the streamed signal and to access the streamed content. In the mid-1990s creative broadcasters used the Real Media software package (and RM streaming format), because at that time it was simple and convenient to install and use both the server and the encoder. For instance, in the 1990s one could install Real Media server software on any computer, even on the same one that had the encoder used for streaming. Initially, freeware versions of Real Media streaming software sets were available, providing access to sound content even to several hundred listeners, given the necessary Internet access. In time, Real Media became more and more complex, capacious and eventually it developed in a commercial direction allowing access to the freeware version to very few listeners only. In parallel to Real Media the mp3 format also expanded during the 1990s. It compressed sound in a more 'intelligent' way so the sound quality was much higher, which was especially important in music. In turn, the size of Real Media files was smaller than mp3 and it was possible to listen to them even at greatest compression and by using a modem; this was important in experimental streaming sessions and online loops, where the sound quality was of secondary importance. Mp3 served as a basis on which free streaming software begun to develop, less convenient to use, but developing an alternative streaming space against the wave of commercialization that dominated the Internet at the turn of the century. Some of the former *Xchange* participants like Adam Hyde initiated the '*Open Source Streaming Alliance*'. As for *E-Lab*, we turned our interest to other networked forms of art. For instance, we started to experiment with emerging mobile communication technology, this time exploring another space – cellspace. And we also were collaborating with radio astronomers, radio amateurs and other *Xchange* artists who were interested in using satellite and radio astronomy technology for artistic and civilian use – now exploring the vast spaces of the universe. At about the same time (in 2000) we established a new organization on the basis of *E-Lab*: RIXC, the Center for New Media Culture in Riga, which takes care of hosting and administration of the *Xchange* mailing list up to today.

In 2009 the *Xchange* mailing list still had relatively many participants (329 subscribers) but the network activity on the list was minimal – no more than five messages a month were published. In 2010 we decided to close the mailing list down and to turn *Xchange* into a website for the project archive (<http://xchange.rE-Lab.net>). We also published the complete archive of the *Xchange* mailing list (1997 – 2009) and a selection of *Xchange Open Channel* collaborative streaming session audio recordings. We also plan to add articles and publications on *Xchange* network activities to the archive. However, *Xchange* was not closed, we simply forgot to do it technically. Recently (in 2012) RIXC decided to reinvigorate the NICE mailing list – a channel for Baltic Nordic media art – and at about the same time I received an email from radio performance artist Tetsuo Kogawa from Tokyo with the request to re-subscribe him to the *Xchange* list with new a email address, because – as he wrote – ‘*Xchange is an important medium for us*’. This made me think about reinvigorating *Xchange* list as well, so we did, and even if it could never repeat anything similar to past times in terms of community building and novel experiments in the field of streaming media, it still can function as an announcement list for ‘online audio culture’.

The *Xchange* network project didn't come to an end, but today it is possible to look at it from a distance in time although it does not subject to contextualization that easily, just as other early Internet culture activities. On one side, *Xchange* claims to be an avant-garde net.art project. From the perspective of art, network radio experiments could be considered a continuation of the 1970s tradition, where sound became an element of the fine arts (Baumgartels 2001, 26). As an art project, since 2009 *Xchange* is a part of the collection of the forthcoming Latvian Contemporary Art Museum. But on the other side, the scale and different forms of expression many times exceed the boundaries of merely a net art project, more so, these boundaries are ‘vague’ – they overlap other spheres, for instance, social communication. The networked art is communicating in the space of electronic media, seeking not only new forms of creative expression but also attributing a social dimension to them. In the past, the artist was often regarded as an outsider, while today new media artists and artist communities that use the new technologies in order to explore the possibilities and limitations of the cyberspace, do not work isolated from society anymore. More than that, artists are among those who by using their creative approach are capable of changing the ways many new technologies are being perceived, often being of military origin and thus having a contradictory image; artists are capable of ‘humanizing’ these technologies and making them more accessible to society. This crashes the myth of art as autonomous sphere standing outside societal developments. In evaluating the developments of the 1990s network culture, Marko Peljhan states: ‘Our media culture has developed tremendously in the last years. From a small ‘enclosed world’ it definitely has become a transcultural global movement in this time, with its own reflection mechanisms and structures. This can be clearly seen in many ‘institutions’ that this world developed, mailing lists like “*Nettime*”, “*Xchange*”, etc.’ (Peljhan 2001) *Xchange* developed on the basis of a small local ‘minor media’ initiative – the *Ozone* Internet radio project by *E-Lab* which was looking to establish connections with other similar small-scale networked sound initiatives around the world. Hence on the one hand, the *Xchange* can be considered as ‘an example of Eastern European new media culture initiative’ (Hyde 2007). On the other hand it was rapidly growing into a network of a global scale, therefore during the Golden Age of the Internet radio (end of the 1990s) Riga as a location of *Xchange* origin, the reason German journalist Frank Fremerey described it as the ‘epicenter’ of the global Internet radio, and Eric Kluitenberg as ‘something of the World Capital of net radio’ (Kluitenberg 1999, 52).

Conclusions

By looking at the global Internet radio network *Xchange* as an extension of *E-Lab*'s local community network, it is possible to conclude that in the age of digital networks smaller scale initiatives may use their creative ideas and innovative forms of activity often at marginal locations to gain a significant resonance on a global scale, which in practice would not be possible under other circumstances (without the Internet).

Also, digital networks open up new possibilities in organizing the social relations between local community networks across distant places of the world. For example, in the case of *Xchange*, electronic musicians from Riga and Latvia found out that they shared similar interests with Australian sound artists and Native American musicians just as with radio community activists in Canada.

The aim that all *Xchange* participants shared was similar to other creative network cases – to explore the potentialities of digital networks in social communication, to organize the field and to use them for creative self-expression. The difference in the case of *Xchange* was that instead of focusing on discussions, this community carried out its collaborative activities within the 'depth' of the digital networks, exploring cyberspace from the 'inside', by using realtime-streaming sound as a tool. This way *Xchange* was an innovator not only in terms of creating new social dynamics but also in searching for creative and social forms of interactivity that are based on acoustic means of expression instead of visual or textual ones.

To compare the case of *Xchange* with today's social networks is a fairly difficult task because, for example, *Xchange* most likely would not ever merge with the environment like Facebook. It was important for the *Xchange* community to create its own environment, to experiment with radically new possibilities that the Internet streaming technologies had to offer at that time and to create its own – *autonomous* – space. Meanwhile, the services in today's social media environments are ready-to-use and pre-prepared, and there are no new territories to explore. However, social media platforms are easy to use and in the case of *Xchange* they would have been useful for securing communication in an operative way, which was necessary for coordinating the live streaming events. Also, they are especially convenient for promoting events – for distributing information inside and out of the community. However, the possibility of organizing the field are limited within these platforms – even today they do not provide streaming possibilities, and this makes communication on Web 2.0 platforms rather simplified. The Internet with its social media platforms are being named Web 2.0, although they offer no technological innovations compared to the so-called Web 1.0. Therefore in terms of creativity and innovation, the experiments with collaborative streaming of the *Xchange* network still hold potential for the development of networked communication in the future.

It might be concluded that digital networks with their decentralized and distributed structure created the preconditions the small artist community *E-Lab* from Riga needed to organize their radio *Ozone* events and to find other similar local 'small scale' network audio initiatives, both from Latvia as well as other places in the world, in order to create a network project of a global scale as *Xchange* was. *Xchange* can be also considered as an avant-garde net art project, and as an example of radical sovereign media. However, more than that – a whole new domain opened up and was filled with the audio content by the *Xchange* creative net.radio community, exploring the new digital frontiers.

FROM VIRTUAL TO LOCATIVE AND HYBRID MEDIA COMMUNITIES

Around the turn of the century, network culture took a new turn – the first and the most intensive period of creative networks had come to an end. As mentioned before, one of the reasons for this was the rapid development of Internet in the late 1990s towards commercialization, and the burst of the dot.com bubble. As a consequence, the most significant accomplishments of the 1990s network culture were being overlooked and the issue of the future existence of the 'virtual community' became relevant. Nevertheless, most of the 1990s creative network mailing lists continued their work, while some of the active network participants started looking for other directions in networked communication developments, becoming explorers of new fields once again. For instance, the core group of *Xchange* artists continued their 'acoustic space' explorations in 'outer space' by experimenting with satellite technologies and radio astronomy facilities. Other new tendencies in digital network development at the beginning of the 21st century concerned mobile communication, the emergence of GPS (Global Positioning Systems) technologies and wireless networks.

As my study mainly focuses on the development of the 1990s Internet culture and creative networks, in this section I will give just a brief insight into more recent explorations by artists and creative communities. For the most part, I will look at how introducing mobile technologies, especially GPS, which are designed for positioning, mapping and navigation in real space – raises a new the interest in locality (in terms of location), and how, by combining the Internet and mobile networks, virtual and locative technologies, artists once more manage to come up with novel ideas for creative network projects. This section looks at the beginning of locative media development also because the emergence of new mapping technologies such as GPS has once again whirled the interest in mapping as a method for visualizing data, including analyzing social networks, which is an important part of my study as well.

And last but not least, following how creative networks have developed up until nowadays, I also will outline current tendencies in using different 'hybrid' network technologies, seeking new approaches and fields of exploration that address the issues of 'techno-ecologies' and sustainability.

Acoustic Space Lab and Collaborative Experiments in Outer Space

In 2000, *E-Lab* started to develop a new local cooperation platform in Riga around its recently established Centre for New Media Culture, RIXC. The new center was continuing *E-Lab's* work in an international context, yet it was founded with the aim to contribute primarily to the advancement of the electronic media art and network culture field on a local level. RIXC commenced its work by creating a new public venue for digital culture events in Riga, RIXC Media Space, located at the outbuilding of the Latvian Artists Union Building on 11. Novembra krastmala street. The RIXC Media Space was renovated using interdisciplinary cooperation tactics based on the experience gained in translocal networking during the 1990s. In 2002, RIXC organized an inter-

national symposium⁹³, where architects and new media artists worked together on planning RIXC Media Space functions and working out a future development plan. In 2003, the collaboration between architects and media artists manifested itself in the international 'Art+Communication' festival edition with the title 'Media Architecture'.

In parallel, Internet radio *Ozone* and the *Xchange* mailing list continued their work, and RIXC artists still maintained an interest in experiments of 'acoustic space'. But there was no intent to reduce it to 'streaming' media⁹⁴ only; therefore in August 2001 RIXC organized an international Acoustic Space Symposium⁹⁵ in the former Soviet military center 'Zvjozdochka' (Little Star) in Irbene near Ventspils, on the site of VIRAC⁹⁶ radio telescope RT-32. Around thirty artists, radio amateurs and community radio activists from the global *Xchange* community met up in the forests of Latvia in order to explore radio astronomy, satellite scanning technology and technical possibilities for radio amateur for artistic expressions and social communication. Formerly used to spy on satellite transmissions between Europe and North America by the KGB, the antenna was abandoned and nearly destroyed when the Russian Army withdrew in 1994. The dish was successfully repaired by the VIRAC (Ventspils International Radio Astronomy Center) radio astronomers. During the symposium, an international team of sound artists, Internet and community radio activists, and radio amateurs, in cooperation with VIRAC scientists, explored the possibilities of the antenna. The participants included international artists' groups and individuals from the *Xchange* network: Derek Holzer (Amsterdam, Netherlands and U.S.), Adam Hyde and Honor Harger / r a d i o q u a l i a (London, U.K. and Adelaide, Australia), Marko Peljhan, Aljosa Abrahamsberg and Borja Jelic / Projekt Atol (Ljubljana, Slovenia), Zina Key and Mr. Snow / L'audible (Sydney, Australia), Radio90 (Banff, Canada), Rasa Smite and Raitis Smits / RIXC (Riga, Latvia) and others.



Acoustic Space Lab symposium in Irbene Radio telescope in Latvia, 2001

The participants used the dish in three main ways. First, the dish was explored in an acoustic fashion. Its groans, buzzes, and sirens were recorded, and the dish itself was used as a massive parabolic microphone to scan the surrounding environment. Second, the dish was used in its 'original' fashion. Satellites from the INMARSAT network were located and snooped on. Analogue mobile phones, ship-to-shore communications, air traffic control signals, and data packet transmissions were monitored and recorded. And third, the dish was used in its 'retrofitted' fash-

93. <http://rixc.lv/architecture>.

94. Streaming media – the name which denotes Internet streaming technologies since the late 1990s.

95. <http://acoustic.space.re-lab.net>.

96. VIRAC – Ventspils International Radio Astronomy Center.

ion. Jupiter, Venus, and (most successfully) the Sun were located and scanned using precise radio astronomy equipment operating in the 12 GHz range. The recorded data was immediately processed by participating artists in a temporary lab space and uploaded to the server for later processing and to be made available to other artists via the Internet. The *Open Source Sampling* project, initiated by Derek Holzer, invited sound and video artists to reinterpret the symposium material available on the Internet and 'to add their own thematically related material to the mix.' It was a great chance for artists to access and work with this big antenna. But most important was that 'this "old and heavy" technology – the big dish, with its secret past, its specific location in such a remote place, and its previously unexploited potential for civilian use – succeeded in facilitating the common ground for collaboration among artists, scientists, and radio activists' (Smite, Smits 2004, 498-499).

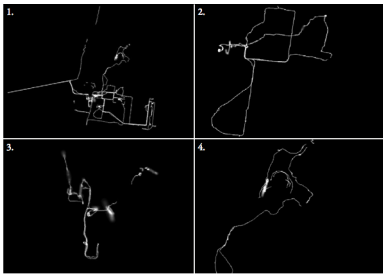
Locative Media Network and the Collaborative Mapping Project 'Milk'

In 2003, the networked communication experiments of RIXC shifted from the 'outer space' to the 'cell-space' of mobile technologies. Although mobile telecommunication technologies emerged along with the Internet already in the early 1990s, it took some years 'for the mobile phone to become the world's most cherished icon of consumer capitalism' (Medosch 2004, 14). After the year 2000, when the U.S. government withdrew the ban on civil use of the GPS⁹⁷ – the Global Positioning System satellite technology that allowed determining location with the better precision of circa 1 meter (instead of the former 100 meter) – and with the increasing popularity of mobile technologies, the contours of the next information technology paradigm started to be outlined. If the 1990s with the development of the Internet were dominated by the vision of a boundless world beyond any geographical placement, the new mobile technology paradigm meant the return to real space, accentuating the meaning of the location. On one hand, GPS is yet another technology of military origin, which is intended, first, as a navigational tool to track geographical space and thus usable for control and centralized surveillance. The control over society with the help of GPS can be carried out in different ways – starting with German autobahns where GPS is used to keep track on trucks paying their taxes (Schneider 2004, 92) to future visions about implanting microchips (with identity data) with GPS in human bodies. However, in order not to get stuck in another conspiracy theory of techno-utopian surveillance machines, creative people in the beginning of the 21st century – similar to the situation of the Internet in the 1990s – tried to use this new technology of military origin for artistic and civilian purposes. In terms of how GPS has been used by artists in its beginnings, I will introduce and analyze two early avant-garde creative cartography projects, both from Latvia: the Locative Media Network (2003) and the collaborative mapping project *Milk* (2004-2005).

In 2003 RIXC and Marc Tuters, a young researcher from Canada organized the first international Locative Media symposium in Karosta (Warport), another USSR military site in Liepāja. An international group of media artists, network researchers and young programmers met in order to experiment with GPS technologies, to learn about the possibilities of 'mobile geography' and to discuss how wireless networks change our perception of space, time and social organization. We had met Marc Tuters, who helped organize the Locative Media symposium, not long before the event, when he was visiting Riga. During the discussions in RIXC about emerging mapping and

97. GPS, the satellite navigation system, maintained by the United States Department of Defense, is fully operational since 1994.

positioning, wireless and mobile technologies and their potential in artistic, all of us initiators of the symposium – Marc Tuters and his colleague Karlis Kalnins, Raitis Smits and myself – arrived at the term 'locative media' together. The symposium in Karosta was the first event under this title and the first venue where the term was used in relation to creative practices associated with mobile, wireless and locative (GPS) technologies. The symposium featured participants such as 'next generation' programmers Jo Walsh, Ben Russel, Karlis Kalnins, Janis Putrams, sound artists Honor Harger and Adam Hyde, researchers Andrew Paterson, Marc Tuters, film maker Pete Gomes, artists Pall Thayer, Raitis Smits, Signe Pucena and myself among many others. The symposium took place at the 'home' of RIXC friends, K@2, the Center for Culture and Information, run by filmmakers Kristine Briede and Carl Bjorsmark. The K@2 center was located in the Admiral's Building at the very center of Karosta, close to the sea. Some of the participants used GPS tools and self-programmed applications with GPS data visualization software, in order to create 'socio-geographical' maps of communities residing in Karosta. For example, the daily routes of Karosta inhabitants were tracked very attentively – these were the so-called 'elephant tracks', namely, the crisscross networks of footpaths in the rigor settings of the military base's network structure (Tuters 2004, 94-95). The Locative Media network and mailing list was launched as an outcome of the symposium, marking a new stage in creative network development. Locative media and wireless network communities still use the Internet but in other ways – building the semantic web, for example, *Friends of Friends Network*, geo-annotating data like nowadays in *Google Maps* or setting up their own free wireless networks. Already about ten years ago the 'next generation' creative communities explored possibilities of combining the Internet with GPS, small-range local wireless networks (*wifi*), handheld PCs and mobile telecommunications data transfers (GPRS). In this way the meaning of the 'local' acquired relevance once again, and digital networks in the beginning of the 21st century gained a 'hybrid' form, opening pathways for seeking again new forms of creative expression and social interaction.

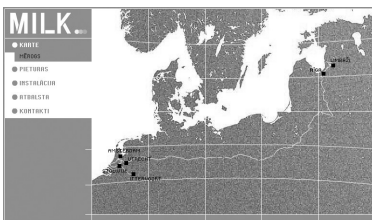


The social-geographical maps of Karosta residents. The routes used often are marked in a whiter shade, depicting intensity, which when increased becomes red. Maps have been produced using GPS and KeyWorx – a realtime data visualization software developed by Waag Society (the Netherlands). Maps designed by Locative Media Symposium participants, 2003.

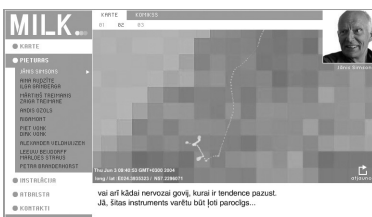
Map 1 – Topography of Karosta center; Map 2 – Routes of Karosta parish around the cathedral; Map 3 – The morning route of Latvian Army located at Karosta; Map 4 – The favorite routes of Karosta residents leading to a lake.

The opinion that GPS is another new 'gadget' that has little to do with something humane, motivated art theorist Ieva Auzina from RIXC, one of the participants of the Locative Media Sym-

posium, to search for alternative uses for GPS mapping technology that would turn this military technology into a more humane instrument for social communication. In collaboration with the Dutch artist Esther Polak, Ieva Auzina initiated the creative mapping project 'Milk'⁹⁸, which was produced in collaboration with RIXC. The idea of *Milk* was suggested at the Locative Media Symposium in 2003 when authors of the project decided to visit the deeply rural area in Latgale in the Eastern part of Latvia instead of going to the former military setting of Karosta. While staying with families in the countryside, Ieva and Esther used GPS tools to record the daily life in the country. In the evening this was displayed on a computer – people themselves could see how they had spent their day and what routes they had taken. At times they realized that they just went around and around, all day long... Eventually, milk was chosen as the main research object. The artists 'followed' a milk truck with the help of GPS tools – starting early morning when it collects milk from the farms up to transporting it to the milk plant. Later on, after finding a connection between Latvian milk producers and Dutch cheese merchants, the project was continued in the Vidzeme region. In explaining the idea of the project, the authors write: 'The MilkLine is one of the countless movements of the international food trade, in this case milk, produced by Latvian farmers, made into cheese by a local factory with the help of an Italian expert, transported to the Netherlands, stored in a charming Dutch cheese warehouse to ripen, sold at the Utrecht market and finally eaten by Dutch citizens.' (Auzina, Polak 2004). The Milk project reveals the complexity of today's networked society – it takes place on multiple parallel layers. The Milk project deals with the local producer in a global market and next to that it can be considered as an 'ethnographic studies, which uses mapping in order to reveal the involved agents in all their depth' (Tuters 2004, 94). But more than that *Milk* is a successful attempt to humanize technologies.

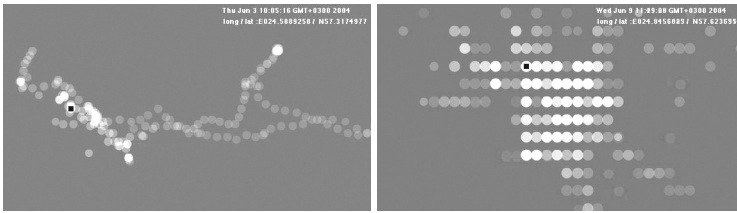


The route of milk from Latvia to the Netherlands. Cooperational cartography project 'Piens / Milk' (Ieva Auzina, Esther Polak, RIXC 2004 – 2005) (<http://milkproject.net>).



Janis Simons, a farmer from Vidridži testing the GPS device. Cooperational cartography project 'Piens / Milk' (Ieva Auzina, Esther Polak, RIXC 2004-2005) (<http://milkproject.net>).

98. <http://milkproject.net>.



Map 1 (left): Jaanis Simsons, a farmer from Vidriži, about his daily activities: 'Each morning I walk a beat around my farm. This morning I checked the beaver traps. I would like to use GPS in order to see what my workers are doing. Because there is this thing with tractor drivers... they wonder off and afterwards they do not know where they were or what they did...' (June 3, 2004)

Map2 (right): Ilga Grinberga and Aina Rudzate, two sisters, who manage a farm in Vidzeme, about their daily activities: 'We are on the move all day long... from the kitchen to the cattle shed, from the shed to the barn, then again back to the kitchen...'; 'Yes, and then to the well to pump some water'; 'These are the traces of Ilga. She gets up very early and comes to have breakfast later. She also prepares the food for the calves. She comes and goes all day long'; 'What we have at the end is a pretty nice drawing.' (June 6, 2004)

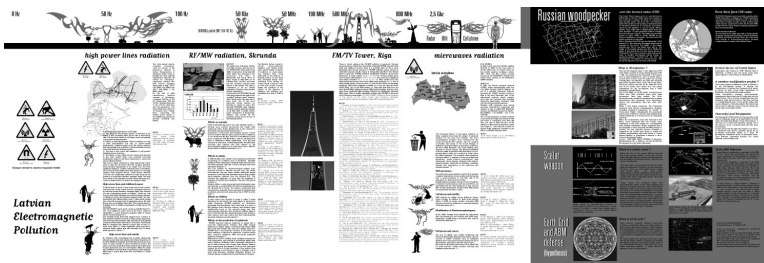
Maps of 'Milk' participants. The data visualization software 'MilkMachine2004' developed by Markus The (The Netherlands). (Ieva Auzina, Esther Polak, RIXC, 2004)

Nevertheless, the most valuable contribution of the Milk project is revealed in the social interaction which occurs on several parallel levels between completely different social groups – Latvian farmers and artists, milk producers in Latvia and cheese merchants in Holland, between Milk exhibition visitors and project 'heroes' (the farmers), between data visualization software developers and its users – the farmers, artists, milk-truck drivers... Altogether, a structure of these social ties makes up a multi-layered network map. If, according to the Actor Network Theory, this network would include such elements as, for instance, milk canes that get poured into the milk-truck every morning, or cows that are milked each morning, or the truck that transports the cheese to Holland once a week and other 'things' in addition to people, it would produce a social map of the Milk project that would reflect the multiple traces of this project in the most precise way. Nevertheless, Milk was highly appreciated – in 2005 it received the Golden Nica in PRIX Ars Electronica. The project is yet another case which demonstrates that a creative use of digital (this time – mobile) technologies on the one hand can communicate local values in a global context, and on the other can develop and organize diverse social relationships on different levels between people from different social groups.

Hybrid Media Networks and Artist Communities in the Quest for a Sustainable Future

In the beginning of the 21st century, with the emergence of mobile networks, the idea of virtuality started losing its significance and new types of socio-technical formations – other networks of hybrid forms started to appear. Initially, these were locative media and wireless network communities using Internet in combination with mobile and locative technologies. Shortly after, in the middle of the first decade of the 21st century, when the Internet started recovering after the commercialization failure and developed in the direction of social media, the popularity of Web

2.0 social network platforms started to increase which, again, were mainly based on the Internet. Still, the situation today differs from the 1990s – social network communities use the Internet not only on stationary or portable computers but also on mobile phones and wifi networks. As a result, the forms of social interaction become even more versatile and complicated. Furthermore, other issues have gained significance on a global scale, for instance, those of ecology and sustainability, also in relation to modern technology and science. This was what motivated RIXC to organize the large-scale international media art exhibition *Waves* in Riga in 2006, which tried to make the invisible properties of digital technologies more clear by putting forward the idea of electromagnetic waves as a medium and material in arts⁹⁹. *Waves* was based on an original idea and concept developed by Armin Medosch. His proposal was to set up a large-scale, international exhibition that looks at the phenomenon of electromagnetic waves as the principle material and the medium of media art, and 'waves' as a universal principle. Armin Medosch in collaboration with Raitis Smits and myself curated the exhibition that took place in Arsenal, the Exhibition Hall of the Latvian National Museum of Arts, featuring forty artworks produced by more than seventy artists who were 'challenging conventional knowledge about and perception of waves' (Medosch, 2006).



Spectral Ecology. A Map of Electromagnetic Pollution in Latvia. Collaboration project between artist collectives SIC (France) and RIXC (Latvia), 2007.

By maintaining such a perspective RIXC artists carried out the project 'Spectral Ecology' a year later, which addressed ecological issues in relation to the ever-increasing pollution of the electromagnetic spectrum. A part of the project was a social and ecological investigation into the effects of electromagnetic radiation on living nature and the environment, carried out by interviewing scientists that had studied the effects of the Skrunda radar. Together with the French artist collectives SIC (Spectral Investigations Collective) and Bureau d'Etudes who are experts in social and political network mapping, and Latvian scientists who study the effects of mobile and other electromagnetic device radiation on humans, a map of electromagnetic pollution in Latvia was made. Altogether, the study manifested itself in the 2007 'Art+Communication' festival edition, which featured a joint exhibition by RIXC and SIC artists called 'Spectral Ecology' at RIXC Media Space in Riga. A newspaper was issued under the same title – a special of 'Kult ras Forums' as well as a video produced with the title 'Skrunda Signal'¹⁰⁰. The closing event of the festival was

99. A large-scale international new media exhibition 'Waves' took place in Riga, 2006 and in Dortmund, 2008 <http://rixc.lv/06> (Viewed on 13.05.2010).

100. http://www.rixc.lv/projects/skrunda_signal/ (Viewed on 13.05.2009).

the international conference 'Espionage Technologies and Art', held at Liepaja Karosta. The next year, 2008, the study and the cooperation between artists and scientists was continued, resulting in another large-scale international exhibition called 'Spectropia'¹⁰¹ and a scientific collection of articles 'Acoustic Space Nr 7: Spectropia' dedicated to scientific and artistic explorations in the electromagnetic spectrum.

In the following years RIXC continued solving social and ecological issues related to technologies, which lead to a new field of interests, sustainability, where another new translocal creative network was initiated and developed: Renewable¹⁰². The 1990s network culture focused all the attention to information, however the issue of energy gradually gained equal significance. Energy and information were already the topics of the 20th century, but it seems as if they are becoming even more important in the 21st century. Participants of the Renewable network discuss, view, address and interpret in an artistic way such issues as the relations between information and energy, peer-to-peer networks, collaborations between artists and scientists in the quest for alternative energy, etc. All this makes much sense since working with computers and other electronic media technologies, requires everyone, including media artists and researchers likewise, to use electricity. The result of the ever-new information and communication technology development is an increasing consumption of energy, a growing density of electromagnetic emissions in our environment and pollution of nature caused by outdated devices. Therefore new media artists, who once were among the first to use information technologies in a creative way, nowadays want to view these technologies in a broader sense – in the context of a sustainable in society. The Renewable network was developed in 2009 as a result of several events organized by RIXC. In the summer of 2009, RIXC organized a symposium in artist residency center Serde in the city of Aizpute: 'Art and Renewable Technologies'¹⁰³ gathering around thirty participants from multiple fields – artists, architects, computer engineers, theorists, patricians, new scientists and researchers, in order to share ideas and research results in relation to renewable energy resources, alternative and ecological uses of information technologies and other issues connected to sustainability. The Renewable mailing list was launched in relation to the symposium, which makes it one of those creative network cases where meetings in real life precede virtual communication on mailing lists and carry out new cooperation projects. In autumn 2009, RIXC gathered the participants of the Renewable network once more for an onsite meeting at the festival 'Art+Communication' which was dedicated to the theme of 'Energy'¹⁰⁴. Scientific and artistic, utopian and critical ideas in relation to Earth's energy in the future were presented at the festival exhibition, while the conference was looking for overlapping fields between art and science. In order to develop models of sustainable translocal collaboration structures for the new Renewable network, RIXC invited the participants of the new network to take part in the seminar 'Organized Networks'¹⁰⁵ at the end of 2009. Conceptually, it was based on the idea put forward by Australian media theorist Ned Rossiter, to view networks as new types of institutions. The seminar also analyzed the experience of Renewable network participants in organizing translocal and local networks on a practical level, so as to have a fundament for discovering those aspects that are at the basis of network

101. Project 'Spectropia' (2008) <http://rixc.lv/08> (Viewed on 13.05.2009).

102. Renewable Network i san abbreviation from Network for Art and Renewable Energy Technologies.

103. <http://renewable.rixc.lv>.

104. <http://rixc.lv/09>.

105. <http://orgnet.rixc.lv>.

all their indirect, implicit aims' (Lovink 2010). I think that in the case of creative networks both emphases are equally important – network participants must be aware that the sustainability of a certain network depends on their contribution and interest as well as that this interest may fade out and therefore sustainability for networks means the ability to transform – to change aims and even fields of activity, in order to continue its work, to grow and to develop.

Conclusions

Looking at the development of network culture in the age of post-cyberculture, it can be concluded that the discussed locative media cases as well as the newest tendencies of today's creative networks show that though becoming hybrid (combining the Internet with mobile devices, GPS, wifi, peer-to-peer networks, etc.) digital networks provide again new possibilities in developing even more complicated forms of social interaction. Mobile communication and wireless network technologies hold the potential to create peer-to-peer networks, that is, connections without a central node, where all nodes equally distribute the responsibility for sending or receiving data. Such peer-to-peer network structures are used, for example, by free wireless network as well as peer-to-peer network activists, who believe that this structure holds the potential to influence economic and social structures in the future. The set of hybrid network instruments, in terms of technology, has become more versatile, because the communication takes place not only online with the help of a computer but also on mobile devices and wireless networks. On the one side, this opens up new possibilities of social communication for the technically educated society. But on the other side, the great diversity of technical possibilities limits the openness and involvement of other participants (who are less acquainted to technology and prefer other platforms or instruments).

When turning to motivations and common goals of creative network participants, they too have become more versatile. Similar to the early period of cyberculture, both goals and fields of activity can still be connected with the search for new forms of social communication and exploring the creative potential of the respective medium (for example, in wireless networks, in using GPS). Still, there is a growing tendency to bring forward and to address other globally significant issues (for example, climate change, alternative energy, electromagnetic pollution), to establish creative networks which are hybrid in terms of both form and content (for example, GPS and mobile communications, art and renewable energy), as well as to study and to analyze the praxis of the early network culture and to combine it with theory in order to make the influence and the role of socio-technical formations in society more visible.

In addressing the issue of network sustainability, the one certain thing is that sustainability should not be a goal in itself. For networks sustainability means the ability to transform, therefore it is no less important for the network participants to understand that the ability of a certain network to grow and to develop depends on their own motivation and ability to change it, and just as well be able to change the goals and fields of interest together with other network participants.

FINAL CONCLUSIONS

The final section lists conclusions in relation to the theoretical context in which network is viewed as a basic structural element of society. The conclusions also reflect results of the empirical study on creative network communities as new socio-technical formations, as well as explain the meaning of social action and outline the most significant tendencies in the course of network culture development.

The theoretical part started off with tracing the changes that have concerned the concept of network through time. Network as a form of social organization has existed in different times and in different societies yet, along with the emergence of the Internet in the 1990s, the concept changed its meaning. The term *network* is now more often used to refer to the technical infrastructures that are based in global computer networks. Meanwhile, there are also the *social networks*, but the situation has changed in a sense that they are beginning to emerge within the communication environment mediated by the Internet. In short, during the late 20th century, the merging of the two types of networks – the technical and the social – has resulted in a new network concept and a new mode of network. The complex relationships that have resulted from the interaction between social processes ('social logic') and digital network technologies ('network logic') are called *socio-technical formations*. *Virtual communities* belonged to the very first formations of this kind that emerged already in the beginnings of the 1990s and developed within the Internet in the processes of self-organization. Also the *translocal collaboration networks* can be mentioned, that developed on the second half of the 1990s, or like I describe them, the *creative networks* that have been viewed extensively in this study.

A radically opposite example of using digital network possibilities is the global finance market, which is one of the most 'visible' and efficient socio-technical formations in terms of quantity. The innovation of early virtual formations, the newly created social dynamics and other 'qualitative' achievements that contained potential for exploring the Internet, were overshadowed by the wave of e-commerce that dominated the Internet in the late 1990s and tended to turn it into a global virtual marketplace. After the burst of the commercial Internet bubble at the turn of the 21st century and with the development of Web 2.0 social networking platforms, not only did the Internet become a medium for masses, it also turned into the largest social space in the history of mankind. This indicated that not only is *network* the dominating form of social organization of today's translocal corporations or national governments, but it also proved that *online networking* on the self-organization level and on different scales is not a marginal phenomenon anymore as it was during the early stages of the Internet. Currently, networking has become a common tool of daily social communication for the majority of society. This affirms the viewpoint expressed by Castells that network is a fundamental element of today's society and that forms of networking, which are disseminating throughout the entire social structure under the influence of the information technology paradigm, will be also a dominating factor far into the future on all its levels. The conclusion regarding network structure is that *interconnectedness*, the basic principle of all networks, together with *openness*, *decentralized structure* and *free access*, also characteristic to

networked structures (namely, to the Internet), and especially in the combination with the principle of *simultaneity*, which can be encountered only in the online environments of digital networks, is a combination that is setting the preconditions for the development of new self-organized formations such as *networks* and their *communities*. Studying *networks* as complex socio-technical systems shows that in order to analyze and explain the new social dynamics as well as other forms of social action in digital networks, the social phenomenon can not be viewed apart from the technologies in which it is 'embedded'. This phenomenon must be viewed as the outcome of the interaction between all the significant network levels – the technical, political economy and the social. A phenomenon of such complexity also calls for new approaches in research and recognizing new research theories. It also shows the necessity for new analytical categories, which would allow to perform sociological research of anew quality in digital network environments. By using this kind of perspective it is possible to conclude that network is a sort of *viewpoint* that can be applied when viewing today's society and analyzing its new social morphologies.

In attempts to clarify the terminology regarding the *network* concept I have concluded that it is important to distinguish between using this term in relation to technical and socio-technical structures as much as possible. I use the term *digital networks* to denote technical infrastructures of networks. This term can be used not only to refer to the Internet and other global computer networks but also to mobile telecommunications, wifi networks and other types of technical communication networks. In turn, I use the more general term *network* mostly in relation to socio-technical structures because today the term *virtual communities* is not the most appropriate word for designating such formations as translocal collaboration networks and local community networks that self-organize in the space of digital networks. In an even more specific sense and in order to classify types of socio-technical networks, I use the term *creative networks* in order to refer to networks that emerged in the early stages of the Internet, namely, at the second half of the 1990s during the Web 1.0 era. Their founders and participants belonged to quite a specific group in the society of that time – they were mostly creative people, artists and theorists, who had the motivation to start using the Internet in order to explore the possibilities of the new medium for creative self-expression and social communication and to use a creative approach in the search for new fields of activity and new forms of social organization (for instance, to set and maintain art servers as the common resource base for creative network communities, to experiment with Internet live broadcasting possibilities, to create communicative online art works that were even distributed on mailing lists as in the case of 7-11, by exchanging artistic ideas in ASCII format, to work together on developing open source software, social media platforms and work spaces, etc.). I also use the term *creative network* in order to divide the early networks and today's *social networks*. Social networks I call those networks that developed in the second half of the first decade of the 21st century on the basis of the social media platform Web 2.0, and that have become particularly popular nowadays. Today, members of social networks together are the widest masses of society that also tend to self-organize on their communities in the online environments of digital networks but they do this by using the already provided functions offered (blogs, social networking platforms, for example, *Facebook*, *Draugiem.lv* or the like).

When it comes to network communities, one of the earlier terms for designating them was *virtual community*, as introduced by Howard Rheingold. It was used (mostly in the U.S.) back in the beginnings of the Internet during the first half of the 1990s, which was a time of cyber-utopia that envisioned entirely virtual communication in the *global village*. However, my study explores a

slightly later period of the early Internet, namely, the second half of the 1990s when the critical discourse emerged in Europe (both in Eastern and Western Europe at the same time) and networks developed more as translocal collaboration platforms. Therefore it was relevant in my study to use other terms instead of virtual communities, namely, *translocal network communities* and *local community networks*, classifying communities according to their geographical distribution. In turn, the terms *creative network communities* and *social network communities* were basically used in this work in order to characterize communities according to their social relationships, the specifics and intent around which they were organized.

More than referring to theoretical interpretations of what a *network* and what a *community* is, my research is pointed at finding out how the creative network members themselves understand these terms. By collecting information from interviews and by analyzing the answers of the respondents, based on their own personal experience, I realized the most notable differences in their opinions regarding these terms. For instance, the term '*network*' is more related to the structure – *basically, anything can be a network*. This validates the idea that network is a set of interconnected nodes. The specific character of the network is determined by the particular character of the nodes – these may be people but just as well may not. For instance, in mapping creative networks, I considered not only people but also the fields of activities and projects of that network, which in case of creative networks reflects the meaning of the network better than a map showing only the social ties between people. Also, the intent (aims and motivations) according to which the network is created is important. Networks may have more concealed and less visible aims, however, creative networks the aim is often defined very clearly and meaningfully (for example, in the case of *Nettime* – to develop Internet culture and critical discourse). And finally, the most important aspect regarding creative network structure is that it is self-organized, dynamic and open. The replies of respondents were largely reflected the opinion that *the term 'communities' is related to a more personal level of relationship between network participants*. At the same time, answers varied between very radical opinions (that it is possible to talk about communities only in those cases where non-mediated communication exists as well) to even an opinion expressing that it is not possible for the network to aim at community at all and that the term *community* is associated with some unrealistic harmony. But more often respondents expressed the idea that in creating and strengthening a community (especially mailing list based communities in the case of creative networks), meetings in real space play an important role. The empirical research showed this: in networks where such meetings were arranged (regardless if they were formal like conferences or informal like a joint dinner) the participants believed that their 'formation' is rather a *community* than a *network*. Whereas in those cases or during periods when real meetings were not being organized anymore, the participants mostly admitted that their cooperation platform is rather a *network*, associating it with a less personal level of relationships or weaker ties between participants of the respective field.

In interviewing the participants of creative networks my aim was to discover *the meaning of social action* of these networks and the *motivation* of their participants. I concluded that creating, self-organizing and developing creative networks is determined by the integration of two various factors – the objective (outer conditions) and the subjective (personal motivations). On one side, *the situation* (the outer conditions) has to be 'ripe'. Concerning the emergence of creative networks (during the mid-1990s) there are several factors that point to this. First, it is the political situation – the time after the fall of the Berlin Wall when borders were opened towards the West and finally became possible to realize translocal cooperation between Eastern and Western countries and

to transform global contemporary ideas in local environments. Second, the translocal cooperation became possible with the help of the new communication technologies (the Internet). Third, Eastern Europe experienced a slight increase in economic growth – in order to participate in translocal cooperation network activities and to create individual local structures (media centers), you needed resources for traveling and a technical infrastructure (even if this meant just access to the Internet). In the 1990s, the Soros Open Society Foundation was the first one to support such activities. On the other side, *there has to be an initiator* (with a personal motivation) and some close-standing, like-minded people that make up the core of the network and have the motivation to create one in the first place. These are 'key people' in the network: they are capable of understanding and addressing the current situation and accordingly to work on a common goal. Also, the initiator or someone out of the key group has to put forward a goal – a local or global idea or shared issue. And one of the key people has to feel the responsibility to take up the role of a 'connector' – he or she has to be able to find like-minded people and to get them involved on an accordingly local, translocal or global level.

The attempts to understand the meaning of social action and its explanations are found throughout the entire book, but there are few more significant factors and motivations that I would like to include in this final section. The meaning of a creative network's social action is closely linked to the goal of the network itself. *The goals of creative networks are meaningful, clearly definable and related to the activity field of the according network.* For example, the goal of the *Nettime* network is related to the development of network culture and critical Internet discourse; *Faces* seeks to promote the visibility of women in the field of media art specifically and on the Internet in general; *Syndicate* attempted to create a cooperation platform between Eastern and Western European artists and media art organizations; *7-11* was a free space for net.art experiments; *Xchange* was an experimental and collaboration platform for exploring borders of 'acoustic cyberspace'. Hence, the meaning of social action in translocal network cases is connected to the aim and the field of activity, whereas in cases of local community networks, the aims are more closely tied to the personal motivation of the founders and the specific outer (yet local) circumstances. For example, the founder of *Open* had the intent to 'create an environment which would be interesting [for himself]', therefore the *Open* initiators in the mid-1990s created new hybrid forms of contemporary culture, a mix of contemporary art, techno music, fashion show, DJ music, poetry readings, etc. thus filling an 'empty space' in culture and social life after the collapse of the Soviet system in Latvia. The motivation to create the *E-Lab* network was more radical – to resist the existing art system. We truly wanted to create an 'alternative reality' and 'autonomous spaces' where all we would do would be to experiment in the space of the new digital networks outside the borders of the then ruling (Soros Contemporary Art Center) or dysfunctioning (art 'bastions' of the earlier days, the Art Academy and the Artist Union) institutions. The avant-gardist aim of the new movement was equally important – to be able to work with the new Internet culture and the translocal networks of media art and to use this experience in creating an alternative and digital culture environment in Latvia. Hence, when personal motivations were transforming into meaningful goals and the outer circumstances were 'favorable' (the political situation, emergence of new information technologies, available grants for artists by the Soros Foundation and other), *E-Lab* finally could develop a new field of activity (digital culture) and experiment with new forms of social interaction and artistic expression (for instance, collaborative online streaming) alongside innovative network projects (such as Internet radio *Ozone*, the global Internet radio network *Xchange*).

In order to achieve their goals, creative networks devote special attention to forms of social organization, which in the case of creative networks are quite specific and depend on the development of the field and are linked to all the different levels of the networked structure (the socio-technical, politically economical, translocal/local, etc.). As already mentioned, the principal form of social organization for creative networks are the *mailing lists*. They provide the every-day communication and a regular exchange of information between the participants. Mailing lists are also a platform to discuss on-going network culture and media art events as well as the development of the field in general. An important form of social organization for creative networks are *local media centers* that operate as nodes in creative translocal networks and a base of resources that supports these networks (for instance, with technical infrastructure – servers and services, human resources to administrate them; to organize meetings and events, etc. for community members). New media culture and electronic art *festivals* must be mentioned here as well – they provide regular real-life meeting opportunities for creative network participants, and are important for strengthening the community (as concluded already before). Likewise, *the technical infrastructure* has always been important for creative networks – maintaining their own servers and providing the necessary services, because this is *the virtual home* of creative networks.

In analyzing the fields of activity and forms of social communication of network communities I also compared creative networks with today's social networks. As a result, I traced some significant differences. When comparing Web 1.0 and Web 2.0 networks, one of the most visible differences seems to be the technical platforms. In the 1990s, they were owned by the networks and communities themselves. They were created based on non-commercial and utopian visions that saw digital networks as a space for free information exchange, a new type of social interaction and creative self-expression. Nowadays Web 2.0 platforms are created and maintained by corporate businesses with commercial aims outside the horizon of the communities that use these platforms. As mentioned before, for creative networks the field of activity is clearly defined and they have a meaningful goal that, again, is connected with establishing and developing the field of activity of these networks. Furthermore, in most cases of creative networks, they start off first with onsite meetings, followed by developing an online communication platform afterwards (for example, a mailing list). As for the social network – it is governed by another principle. On social network sites, mostly the ties between people are established either by 'following' people with similar interests or by keeping in touch with old acquaintances. Creative networks still use mailing lists for organizing their field of activity and for their daily communication (not only in the earlier period but today also). Nowadays, the social network platforms are often used by creative network participants also, however, as experts admit, mailing lists are more suitable *for organizing the field and establishing ties between the real and the virtual*, because as Lovink asserts, they are *'the bridges that gap the networks and the events'*. In turn, social networks (*Facebook*, *Draugiem.lv*) are suitable for 'expanding your social horizon' (Lovink 2010) – for instance, for social communication on a personal level, as well as for self-promotion. Nevertheless, experts find them less suitable for organizing a shared field. This is due to the fact that communication is possible only via personal profiles or by following published messages (Twitter). Of course, this is not conclusive, because new features are added constantly. Blogs, wiki and other network content management systems for example, are platforms that make the development of collaborative

research possible (for example, The Next Layer¹⁰⁷). Likewise, social networks may successfully serve as a communication platform for organizing social aid and support campaigns, for instance, mobile device users can use the quick and easy communication possibilities to organize political struggle.

In order to analyze the structure of creative networks and to make creative network participants and their contribution to network culture development more 'visible', I applied a 'mapping' approach by using social network analysis (SNA). First, I had to deal with difficulties that come with mapping networks where almost everyone knows each other and everyone definitely knows 'the key people'. At first, I captured either star-type maps or incomprehensible 'tangles'. However, I could draw some conclusions from these maps also – for instance, that creative networks are greatly based on their initiators or founders (one main person and some associates). On one side, this poses a threat for the sustainability of the network due to the 'centrality' of this one person – if for some reason he or she stops taking care of the community, the activity of network participants (for instance, on the mailing list) might decrease, the ties between participants can become weaker and the network may soon fall apart. On the other side, because almost all participants are mostly mutually acquainted and 'share a common history', they are capable of forming their own clusters after the initial network breaks down. They can change the goal and the field of the activity and continue cooperating in a different combination of nodes. The case of the creative Internet radio network *Xchange* serves as an example. When its initiator *E-Lab* discontinued developing the network, it started to fall apart. But then other clusters with other goals started to become active, *E-Lab* established the new local media center RIXC and initiated a project called 'Acoustic Space Laboratory' in collaboration with scientists from Ventspils International Radio Astronomy Center (VIRAC) and the most active *Xchange* network participants, *radioqalia* (New Zealand/Europe) House of Laudanum / *l'audible* (Australia), Clausthorne (Latvia) and others. At the same time, another cluster, activated by Adam Hyde from *radioqalia*, turned into the project Open Source Streaming Alliance created by former *Xchange* participants – sound artists and programmers with an interest in developing free, open source Internet streaming software. Yet, when recently (in 2012) we reinvigorated *Xchange* mailing list, we changed its goal, replacing the previous one of 'acoustic cyberspace explorations' with the new one 'to maintain information exchange about audio culture, radio and sound art'.

The second source used to make maps of creative social networks, was data available online. The work of creative networks is largely related to the Internet and takes place on it, therefore most significant information regarding the activities of these communities since the mid-1990s can be found on the Internet (nearly all mailing list archives, event websites, live streaming archives, etc.). By using the materials online, I was able to retrieve information about the relations between participants according to the following parameters: which events featured what particular members; what articles have they produced together; which articles or publications feature their names together; what collaborations have they organized, etc. Although such types of maps were good for tracing who were the most 'visible' in the virtual space of the Internet, this however did not reflect the participant's role in the network (for example, who is the 'connector', the most active

107. <http://thenextlayer.org/> – The Next Layer is a cooperational environment that combines methodologies of open source, experimental and artistic pedagogy. Created by Armin Medosch in 2007, it uses the Drupal content management system for online publishing.

participant, etc.). This also did not determine the specific character of these networks. Therefore I made my third attempt – following the ideas of ‘Actor Network Theory’ (which states that it is crucially important to map not only people but also phenomena and things in action) I started developing maps on three levels, mapped not only *people* – creative network participants – but also *projects* (these could be emerging organizations, artworks or other type of creative initiatives) these people could be associated with, as well as *thematic fields* (which is the innovative and objective contribution made by creative network communities in the development of network culture). These maps have less of an analytical significance, still they serve as a better interface for the network culture, providing more ‘visibility’ to the creative network fields of activity, innovative projects and the people who carry them out and create this network – which was one of the goals of this study.

In the empirical research the creative network cases were viewed from different perspectives and with the intent to analyze the potential of digital networks both in translocal cooperation and in creating local communities. A specific emphasis was put on exploring the potential of global communication from a local perspective, therefore the final section features also several conclusions regarding the raise of the local digital network communities in Latvia. By analyzing such new self-organizing tendencies as the development of an alternative and digital culture environment in Latvia during the mid and late 1990s, one may conclude that the Internet had a particular influence on these processes (both directly and indirectly). When the concept of Internet openness encountered the specific post-Soviet circumstances in Latvia (the dysfunctioning state system, the ‘void’ in the culture) and by referencing the personal motivations of the younger generation (the discontent with both the ‘old’ and the new leading local culture institutions and education) a situation had developed that stimulated young people to self-organize, that provided a meaning for social action and motives for establishing creative networks in Latvia during the mid-1990s. In turn, the translocal cooperation networks were the main support for the new generation in Latvia and other Eastern European countries to create and develop new directions in culture that in a few years time became an officially acknowledged contemporary culture and still resonates the local cultural scene even today.

By comparing the early creative networks (for instance, the ones that emerged around *Open* and *E-Lab*) and today’s social networks, we can conclude that the possibility to work on the network in a more simple way – as provided by Web 2.0 platforms – is not a sufficient motivation for new alternative cultures to emerge. Social network platforms are simply convenient to communicate and to make individual social networks more easily and rapidly. Furthermore, joining social networks is a very common thing in Latvia these days – the number of registered users on *Draugiem.lv* even exceeds the total number of citizens in Latvia. The conclusion is that either social networks do not encourage discursive thinking or the transformation of collective ideas into some new and contemporary movement, or by being quite a new mass phenomenon, it overshadows the search for new, alternative theories. However, the situation has changed also. Today, there is no more ‘void’ in the culture, as it was in the 1990s. The dysfunctioning former institutions today are back on track and working, and the alternative cultures of the 1990s have gained an officially recognized status. All these circumstances have generated a situation where the new ‘alternative zones’ communicate less with the ‘mainstream’. They are way more underground and the subcultures are more reticent. The self-organized activities of the creative new generation

(even if they often use social networks) are even less visible than they were during the 1990s. Anyhow, both the local cases of the early creative networks and today's online social networks do speak for one thing: it can be easily agreed with Saskia Sassen that globalization does not mean the disappearance of the local, rather it contains the potential for expanding the fields of activity of local communities on different levels – on local, translocal, as well as global. Likewise, digital networks open up more possibilities for organizing social relationships between local community networks in different parts of the world. By analyzing fields of activity of network community on a local, translocal and global level, a new tendency appears – it becomes clear that digital network environments do not move towards globalization only (as it seemed at the end of the 1990s). Today, mobile technologies, social networks and other media of 'local significance' display a new insight, namely, that the local can operate successfully on a global network, and can use these advantages, by expanding its activities when necessary to a translocal or global level. This way, small and marginal locations with their creative ideas or socially active forms of activities can gain notable resonance on a global scale, which under other circumstances (without the Internet) would not be possible.

The final part of the empirical research gives an insight into the latest tendencies in the development of creative networks, showing that by becoming hybrid (for example, combining the Internet with mobile devices and GPS allows to overlap functions of the virtual and the real space) digital networks provide conditions for constantly creating new social morphologies, hence making the social phenomenon in digital network environments even more complicated. One example may be the network structure – mobile wireless technology makes it possible to create peer-to-peer networks, being connections with no central node, where all the nodes are nevertheless equally important and where they all take on the task of sending-out and receiving data, etc. Such peer-to-peer network structures are used, for example, by wireless network communities and socio-political activists (e.g. in organizing flash mob campaigns). Peer-to-peer structures possess a more or less equally distributed responsibility between their nodes, therefore their potential of sustainability is greater than, for instance, in centralized and even decentralized network structures. That is why today when sustainability issues have gained importance in almost all the fields of society, peer-to-peer structures contain the future potential to transform economic (for example, in energy industry) and social structures (for instance, creative industries and other types of labour based on individualization). Similarly, the common aims and motivation of creative network participants have become more versatile as well. As in the early period of cyberculture, both the aims and the fields of activity can be still related to the search for new forms of social communication and the exploration of creative potential in a specific media (for instance, in wireless networks, in using GPS). Still, it is possible to witness a rising tendency to bring forward and to address other globally significant issues (climate change, alternative energy, electromagnetic pollution, etc.), and to establish creative networks which are hybrid both in terms of form and content (for example, GPS and mobile communication, art and renewable energy). Therefore, it is possible to conclude that today the field of activity of creative networks is not related exclusively to information technology anymore but also to energy infrastructures and to other domains of society. This brings forward a new trend – to address and to solve sustainability issues, both by referring them to networks themselves as well as to the development of society in general.

Several conclusions can be drawn regarding the sustainability of networks themselves. First, networks are largely dependent on their key people – the founder or ‘director’ (in mailing list based networks this can be the mailing list moderator or administrator). For the network to be sustainable, it requires a ‘director’ that instead of pushing around his employees could be compared to a host that takes good care of his guests. Furthermore, the ‘host’ of a virtual community does not necessarily have to be one of its key persons. At the same time, some less obvious features are equally important in addressing specific issues related to the function of the network: how to deal with periods of development and change in the network, how to maintain openness and flexibility, how to make sure that the communication in the network is lively and dynamic. The most important aspects in supporting the development of a network are common interests and a unifying goal that exist along ‘the diversity of opinions and languages’ (referring to Heath Bunting). In other words (referring to John Tackara), there must be ‘a common and meaningful goal in order to collaborate’. When thinking about sustainability in the case of creative networks, where the goal usually is meaningful, the attention should be turned more towards the organization of social relationships within the community (for instance, one should not forget the importance of real-life meetings). Considering social networks it must be noted that although creativity as an approach is not a guarantee for a sustainable development of the network communities, it can help in developing more meaningful aims for the social networks, making cooperation also more meaningful. But altogether – in the case of both creative and social networks – it is possible to say (referring to Ned Rossiter and Geert Lovink) that *the sustainability of networks means the ability to change* – to change goals and even fields of activity in order to continue on, to grow and to develop.

In general, it is possible to conclude that in the process of socio-technical transformations the structure of network societies today – along with mobile communication, wireless communications and popularity of social networks – becomes more and more complex. In order to reveal the social dimension and structure of such complex networked system, it is important to study the social phenomenon in relation to the technological, political and economical context in which it is embedded. The theoretical part of my study which is performed in such a context and seeks to reveal not only the reciprocal relations between the complex social actions and technologies but also the influences of political economy, in order to lay bare the very basis of the network society and thus to make this complexity more ‘transparent’. The findings of the theoretical research in combination with results of the empirical study related to such aspects of *creative networks* as the field of activity, forms of social organization as well as their other processes and influences, altogether constitute a representation of new social morphologies in today’s society. Furthermore, the early creative networks can, in a way, be regarded as predecessors of a phenomenon that is so popular these days – the social networks. Thus it is also possible to maintain that a more elaborate analysis of significant developments of early network culture may serve as a reference object with the help of which those changes in the social structure of society that today take place under the influence of the socio-technical transformations can be explained.

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Creative Networks, in the Rearview Mirror of Eastern European History

Creative Networks explores the dawn of the Internet culture in the age of network society from the perspective of Eastern Europe. From a theoretical angle the networks are introduced and interpreted as complex socio-technical systems. The author analyzes the development of these networked self-organized formations starting off with 'virtual communities' of 'creative networks', which emerged during the early phase of the Internet, up to the phenomena of today's online 'social networks'. Along with the translocal case studies of Nettime, Syndicate, Faces and Xchange networks (as well as with the other important facets of the 1990s network culture in Europe), the author studies also local community networking case of alternative and digital culture that evolved around E-Lab in the 1990s in Latvia. By focusing primarily on the network culture of 1990s, this study reflects those changes in the social structure of today's society that are occurring under the process of socio-technical transformation.

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