

NETWORK OASIS: NEW PRACTICES FOR EMERGENT COLLABORATIVE WORKING ENVIRONMENTS

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In this paper authors describe the development of an emergent collaborative working environment - netWork Oasis - and the practical findings discovered during the Oasis development process. The findings of the project indicate strongly that there is a need for further research and development of tools, practices and methods in the field of collaborative networked organisations (CNO). The main findings: Network Incubation and Serendipity Management, are described, while they are some of the missing elements in traditional theories of Virtual Organisation Breeding Environments and Professional Virtual Communities.

1. INTRODUCTION

In this paper we concentrate on the netWork Oasis as a practical example of emergent collaborative working environment. netWork Oasis is a development project of Joensuu Science Park, Finland. The objective is to design and construct a hybrid space into the premises of Joensuu Science Park in order to support and increase the productivity of modern knowledge worker.

The structures and hierarchies emerging within netWork Oasis are not controlled by any external force, but appear as a result of interactions between Oasis members. The behavior and characteristics of the emergent systems are complex and hardly predictable, but may give unexpected valuable results, which might be seen as demonstrations of serendipity concept. To support the value of serendipitous discoveries we develop network incubation and principles of serendipity management. Some of the most important, as facilitation, motivation and trust management, are described in this paper.

2. BUSINESS ECOSYSTEMS: OASIS CASE

The term “business ecosystem” refers to an environment, which functions like nature. In fact, the business field can be described through actions and functions occurring in nature. Business and markets evolve and change all the time and companies have to keep up and cope with the changing environment. Like in nature,

it requires clever moves and rapid adaptation. It means that the strongest may not survive, but the most adaptable will.

Business Ecosystem concept was introduced by James F. Moore in 1993 (Moore 1993): “organisms of the business world” – interacting organizations and individuals, who produce goods and services for the members of the ecosystem. The roles and capabilities of the members may change with the time. But the function of ecosystem leader is valued by the community members and enables to move towards shared visions.

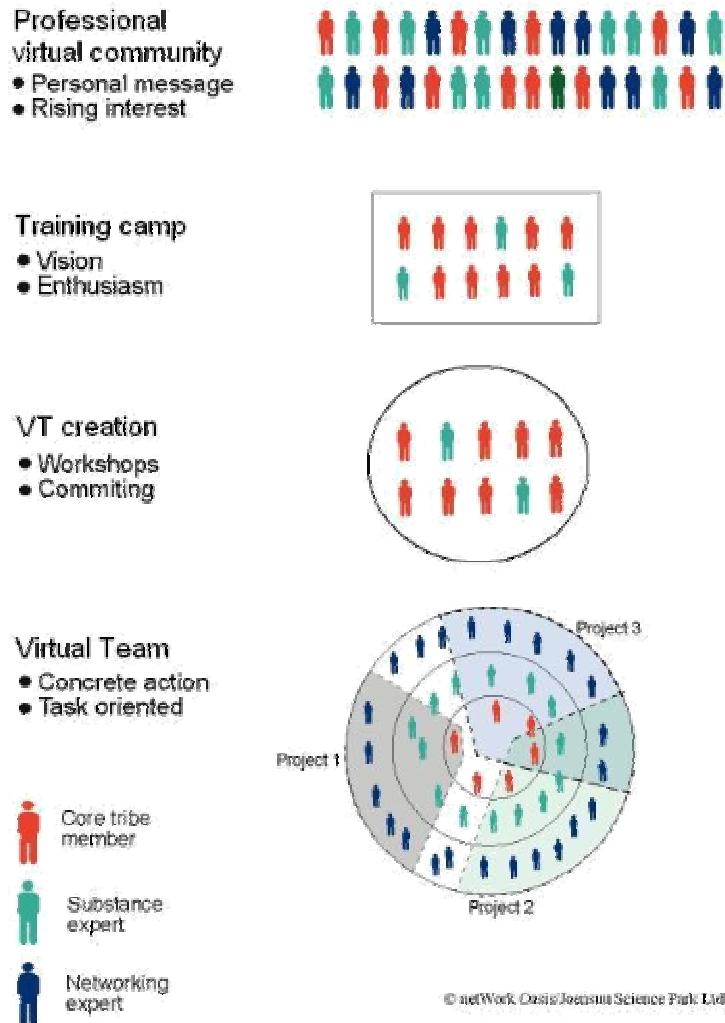


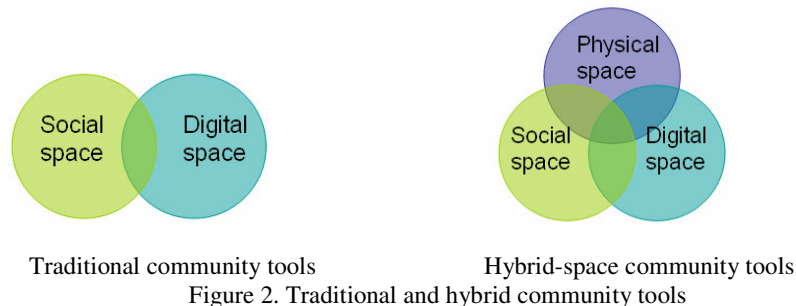
Figure 1. Oasis Way of creating Virtual Teams from PVCs

netWork Oasis project as a business ecosystem started to function from the Kick-off meeting on February 2004 (Figure 1). It was organized by inviting possibly

interested people through the personal networks of core tribe members. More than 40 people were participating to the Kick-off meeting. The idea was to have professionals with their ideas, but CVs were not allowed. Instead of CVs members had to use mottos to describe themselves. The interactions during the Kick-off and Training Camp were facilitated: everyone had to have a conversation with a number of other members, whom s/he hasn't met before. For example, even the seats for the dinner were distributed through some kind of a lottery. The vision was given on the Kick-off meeting on the previous night and the number of ideas produced during the Training Camp was numerous. The goal was to collect those ideas and get the main directions for further development. Initially, all ideas were divided into three main categories: Interior, Instruments and Interactions.

During the following months several workshops were organized, where the whole netWork Oasis Concept was developed in details. New members were introduced through the invitations as it was from the very beginning. Term "Oasis Way of Working" was used already on the second Oasis workshop, thus the Oasis culture started to develop. On that step Oasis Way of Working included 24/7 availability of the environment; mixture of work, learn and play; then serendipity from nature and strangers was added. At some point the necessity of socially rich environment and diversity at all levels was clear, but at the same time the family friendliness was important for Oasis members. The concepts of Oasis Tribe and Oasis Warriors were born. The values proclaimed by Tribe members are: Sustainability, Diversity, Individuality, Trust & respect, Co-discovery, and Wellbeing.

As a testing environment for Oasis Way of Working, FlexLab was opened on Autumn 2004. Virtual environment (Oasis Garden) is used for collaboration between the workshops and functions as a knowledge database. Currently several projects are going on in the virtual environment: Interior design, FlexLab Concept, selling the Concept, GLOW and some others as well. GLOW-subproject is devoted to the development of hybrid space tools. It is based on personal user profiles and combines three dimensions: real, virtual and social.



Traditional community tools like bullet-boards, e-mail, instant messaging programs and conference tools concentrate only on connecting people (social space) through digital media like the Internet. Some community members may work daily in the same premises or at least they meet face-to-face every now and then. Still, the physical element is missing in the community tools. We think that the physical space is essential part in modern communities and it has to be integrated and supported

(Figure 2). We call this combination of social-, digital- and physical space as hybrid space. To create and to support this kind of hybrid space in netWork Oasis we have created a tool called GLOW. We suppose that digital space (like Oasis Garden) provides means for asynchronous collaboration mostly, while hybrid space enables synchronous interaction.

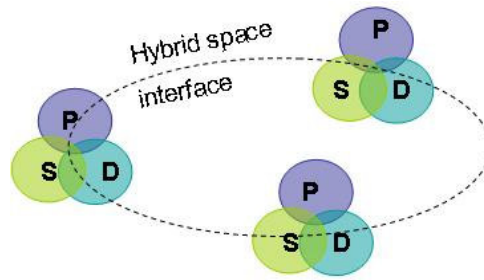


Figure 3. netWork Oasis hybrid space ecosystem (P - Physical, S – Social, D – Digital spaces)

netWork Oasis hybrid space ecosystem is represented by a number of places, each of which is a combination of physical, digital and social spaces, connected by the means of hybrid space interface (Figure 3). Each of these complex triple-space structures are netWork Oasis'es located in different places of Europe/World, or smaller centers – FlexLabs, where the presence of hybrid space might be weaker than in fully-functional netWork Oasis. Figure 4 demonstrates netWork Oasis infrastructure, where Oasis I is current netWork Oasis in Joensuu Science Park premises and will be opened on January 2007; blue circle stands for the current Joensuu FlexLab; other grey dashed circles represent possible future netWork Oasis centers and FlexLabs. netWork Oasis ecosystem is open for interaction with external networks.

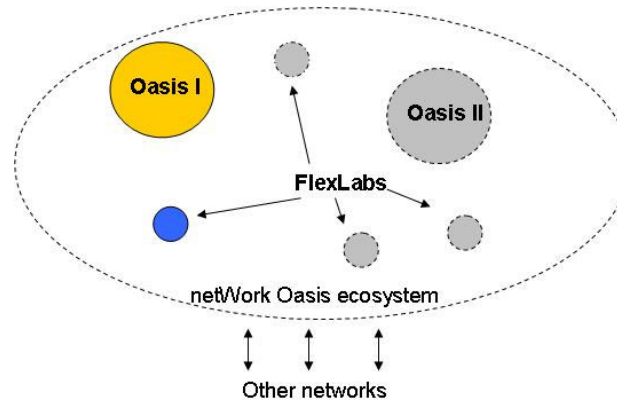


Figure 4. netWork Oasis infrastructure

The netWork Oasis is an example of business ecosystem, where future users of Oasis environment and current users of FlexLab are the developers of the environment themselves. Oasis Garden and, in the future, GLOW hybrid space function as Professional Virtual Community (PVC) tools, where one may find peers and experts from a number of organizations. Garden made it possible to develop several projects in virtual environment, which operate as Virtual Teams, employing members from different companies and physical locations. We'll describe the collaboration process and supportive techniques in more details in the next chapter.

3. NEW EMERGING COLLABORATIVE PLATFORMS

A PVC is an association of individual experts, who collaborate, share ideas and interact in order to create common value. The formation of PVC and distribution of the roles in it is usually not controlled or managed from top-bottom, it is rather spontaneous process. In this context term 'emergence' should be described, as the patterns of PVCs are the emergent structures. Those patterns are based on interactions between the parts of PVC. An emergent behavior appears when a number of simple entities operate together and form more complex behaviors as a system. The properties of emergent systems are hardly predictable, as the number of interactions between the entities increases combinatorially with the number of components. Serendipity is a key word in the behavior of emergent structures (see Chapter 3.2).

At the netWork Oasis we aim at developing Peer-to-Peer (P2P) networks. P2P networks are characterized by the equipotency of all members. They are dynamic and don't have a stable hierarchy. These networks are important from the value creation point of view, as well as they are interesting areas of research on themselves.

Oasis Tribe and Oasis Way of Working are the examples of emerging structure and behavior. Tribes, generally speaking, are characterized by fluid boundaries and heterogeneity, are not parochial, and are dynamic (Fried 1975). Oasis Tribe promotes diversity of its members and their equality in collaboration with each other and contribution to different sub-projects of netWork Oasis project or even new separate project establishment. New members are invited through the existing Oasis network, broadening the areas of expertise and possibilities of the whole Tribe.

Tribe is one of the examples of possible emergent structures from social and professional networks. The behavior developed during its formation is not common for the regular organization and not easily acceptable in the hierarchical structures, but is very beneficial in the networks context. Oasis Way of Working, as an example of emergent behavior, is a culture which was developed by the Tribe members during the conceptual planning. New members learn from other Tribe members and naturally follow. It gives support for networking, favoring serendipity and encouraging diverse and trustful interactions, love for potential, and co-discovery. Oasis Way of Working is a continuously evolving process. Network Incubation and Serendipity Management are two very important results created thanks to the Oasis Way of Working.

3.1. Network Incubation

Business Incubation is one of the key elements in science parks and other development organizations. The role and importance of business incubation has been widely accepted.

In the netWork Oasis project we have noticed that there is one very important link missing in the beginning of this innovation system – Network Incubation. In order to have good quality interactions between diverse people a new approach is needed. During the netWork Oasis conceptual planning the aim for diversity was very high and it was achieved in many levels: age, gender, social background, professional background, geographical background. Network Incubation can be defined as: “*Creating supportive environments and methods for high quality interactions between diverse people in order to create new combinations of competences*”.

In our project we have created supportive environments – netWork Oasis, FlexLab and GLOW- and methods for high quality interactions – Oasis Way of Working between diverse people – Oasis Tribe plus added members - in order to create new combinations of competences – in our case to create an innovative and productive collaborative environment netWork Oasis.

When FlexLab – the test bed for Oasis environment – was established in Autumn 2004 in Joensuu Science Park we were also able to experience the benefits for people from different organizations working in same physical space. Developing our own hybrid space - GLOW - and using our interaction tool Oasis Garden accelerated the serendipitous interactions and thus created a need for Serendipity Management.

3.2. Serendipity Management

Serendipity Management is something out of which we have not found any references in the modern business literature. There are certain elements of it, which are widely known, but again the whole concept of Serendipity Management is new and first time mentioned in our paper in eBRF (Glotova, Kakko, Marjomaa, 2005).

Serendipity Management will be one of the hot topics in near future and our definition for it is: “*Serendipity Management is a concept where you attract curious talent in order to find unexpected, emergent, tacit competence by using facilitation and trust management in very diverse environments.*” When successfully implemented, Serendipity Management can improve the possibility to discover new and intersectional ideas which can be developed to breakthrough innovations.

3.2.1. Theory of Serendipity

There is actually not any clear theoretical definition of the theory of serendipity. One accepted definition of serendipity is: “Serendipity is the faculty for making desirable discoveries by accident, Horace Walpole so named a faculty possessed by the heroes of a tale called “Three Princes of Serendip”” (Webster’s Dictionary 1994).

In the book “Serendipity - Accidental Discoveries in Science” by Royston M. Roberts is described that “In the fields of observation, chance favors only the prepared mind” (Louis Pasteur). The vital character of discovery in serendipitous

findings must be underlined by Albert Szent-Gyorgyi “Discovery consists of seeing what everybody has seen and thinking what nobody has thought”. So it all depends on “discoveries made by accident and sagacity of things which they were not actually in quest of” (Roberts 1989).

The list of these accidental discoveries in science is impressive from Archimedes to Columbus from Teflon to Viagra from Isaac Newton to finding the secrets of DNA.

3.2.2. *Tacit Competence*

Organizational knowledge creation, according to Nonaka (Nonaka et al. 2000), is a spiral process that starts from the tacit knowledge exchange, through externalization and conceptualization processes transforms to explicit, and through experiences in particular contexts to tacit knowledge of individuals again. Tacit knowledge in this spiral plays a role of starting point.

Knowledge, contrary to information, is always context-dependent. In a professionally and culturally diverse environment, such as netWork Oasis, it is a challenge to find a balance between the benefits of diversity and the necessity for common shared context in order to build trust. Trust in a network is especially important for sharing tacit knowledge, which can be discovered and exchanged only in face-to-face communications and common experiences.

Motivation is “a must” for creating shared context, knowledge exchange and finally, building competence network. Motivation can be seen as a sum of several factors: self-motivation of individuals, support from network, inspiration from results, and facilitation.

Self-motivation is hard to control or facilitate, it is personal factor though it can be developed. Motivation from network is one, which comes from the feeling of being a part of the network. In netWork Oasis we build “Oasis Tribe” and develop methods for collaboration, traditions and rituals for the Tribe members in order to increase their attitude and motivation.

Inspiration and motivation from results appears when celebrating success, which can be seen in a variety of events: not necessarily the foundation of a new company or development of a new product, but sometimes a good idea just found in a short-talk or catching up the inspiration from people or place can be much more important. Discovering serendipitous ideas might become the greatest motivator based on previous results.

Facilitation is a key element in increasing motivation on different levels. It is hard to overestimate the importance of facilitation in the complex organizations and networks of diverse people, where creativity and knowledge sharing are the corner stones for success.

Tacit competence has two main multipliers: tacit knowledge of individual experts and, which is more valuable, their motivation to share that knowledge, which can be personal or facilitated, and trust.

Availability of tacit competence in a particular network is one of the main elements of serendipity management.

3.2.3. Facilitation

Facilitation is the enabler to increase motivation to collaborate and share knowledge, as been told in previous chapter. Facilitation can be used in other cases: to increase the quality of interactions, to harness diversity, to improve the productivity of knowledge work, etc.

As interactions make ties between the nodes of the network, thus support, facilitation and motivation for interactions are the key elements for effective network functioning. Interactions can happen spontaneously or in a facilitated manner. Spontaneous interactions are supported by the environment: innovative interior and instruments. But facilitated interactions are also needed in the network of diverse and creative people.

Creative people are often skilled in individual processes, but may have more difficulties cooperating with others. We want to associate facilitation with border breaking, opening up for new potential, achieving results that could not be achieved spontaneously (netWork Oasis Concept Document 2004).

The key factor and vital enabler of motivation is a certain state of mind called Flow (Csikszentmihalyi 2003). Flow is an experience of feeling the deep enjoyment, which comes from doing some activity, and a feeling of being deeply involved in it. After the Flow one feels the increasing self-esteem. The possibility to experience Flow is a strong motivating factor for individuals, organizations and networks. The challenging job within the person's capabilities, including increasing capabilities to grow and learn, will be the most probable place where Flow can occur. To stimulate the interest in the particular job we can do three things:

1. Make the objective conditions of the workplace as attractive as it is possible.
2. Find ways to saturate the job with meaning and value.
3. Choose and reward individuals who find satisfaction in their work.

Creative people can experience Flow more often than others, but even they need to be facilitated to feel so. Creating the environment and developing the working culture, which supports Flow, is one of the main objectives in the netWork Oasis project.

3.2.4. Trust Management

Trust is the core element in working collaborative networks and VOs (Järvenpää, Shaw Thomas 1998). Thus, it is important part of business ecosystem. Trust can be established in several ways and the most important incentives in trust building are deliberate trust supporting leadership and commonly recognised and accepted group norms (Baron, 1992). The role of trust supporting leadership is to "guide" and enable trust building whereas group norms reduce uncertainty and bring security into the network or community.

Having well established trust in the network brings several advantages. Open communication and knowledge sharing improve reactivity and adaptability in the network. In addition trust and open communication help tacit competence to emerge from the network thus benefiting the whole network (Lavikainen, 2005). Trust also affects on serendipity. Although serendipity can occur without trust, it may not be exploited without the help of other network members. In this case, if there is no

willingness to share the new idea, the opportunity induced from serendipity will be neglected and the potential innovation is lost.

This was just one viewpoint of how trust affects on networks, VOs and communities. We have to remember that trust affects strongly also in individual level for example in the workplaces, reflecting relationships also to the network. In fact trust is always established in individual level and the networks and communities are run by the very individuals.

In Oasis we concentrate specifically on the individuals and trust building is therefore aimed at personal networking. This means that individuals represent themselves and not the companies they work for. Our way to do this is to leave out the work titles and thus people are in equal level in the community. In addition we believe that trust is built socially so we try to support social interactions through physical and virtual community tools.

In traditional business contracts have played major role in building trust between the companies. Unquestionably contracts are still needed in today's business life but we think that the viewpoint should be very different. Our opinion is that trust is needed when we want something to succeed and the contracts are needed only when something goes wrong. That is why we want to lay more emphasis on trust building than in formulating watertight contracts.

4. CONCLUSION

In our view, recently business ecosystems are transforming to network ecosystems. Thus the question of how to make networks more effective and productive arises, meaning how to facilitate and support members of PVCs to interact, share, discover and establish new VTs.

At netWork Oasis Project we are driving to a new networking culture, which is based on equality, curiosity, and collaboration. According to our experiences some totally new practices are needed. In our paper we have described more in details Network Incubation and Serendipity Management, which we believe are going to be the vital elements when improving the productivity of PVCs and emerging VTs.

4.1 Acknowledgments

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