Management Challenges Arising from the Use of Virtual Work*

Gerda Mihhailova
gerda.mihhailova@ut.ee

Abstract: Purpose – Literature on virtual and other new ways of work is diverse and confusing, indicating a need for a framework to structure and systematize the related terminology. The empirical study was needed as there is still a lack of empirical research on how well (and if at all) characteristics of employees’ national and occupational culture determine the management challenges and employees’ satisfaction with virtual work arrangements.

Methodology/approach – Empirical data was gathered using case study research. An Estonian and a Russian company operating in the service sector suited best as they had a diverse multinational workforce and several years of virtual work experience.

Findings - The paper concludes that occupational culture determines much better than national culture the employees’ attitudes towards and satisfaction with virtual work arrangements.

Research limitations/implications – The main limitation arose from the lack of national culture research in East European countries: for many of these nations, national culture dimensions/characteristics (e.g. like offered by Hofstede) are still unknown.

Practical implications – The results help service organizations’ managers to prepare a multinational workforce better for virtual work, knowing ahead the potential challenges and thus train the employees based on their occupational culture background.

Originality/value of paper - The paper contributes to theory by offering a framework which enables to systematize the diverse range of terminology used for new, flexible ways of work. The case studies reveal a huge gap waiting to be filled with research on national culture characteristics of East European countries.

Keywords Virtual work, National culture, Occupational culture

Paper type Research paper

1. Introduction
The paper is about application of new ways of work and more specifically multi-cultural virtual (team)work. A virtual team is a “… group of people with a unique set of skills, which members often reside in different geographical locations and who need to use different means of ICT in order to span time and space boundaries (Kirkman and Mathiew, 2004).” Such information and communication technologies (ICT) are often called groupware, computer supported cooperative work (CSCW) or group decision support systems (GDSS). A team or a real team is: a small group of people with complementary skills who are equally committed to a common purpose, goals, and working approach for which they hold themselves mutually accountable (Katzenbach and Smith, 1999). A multi-cultural team is a team whose members have different cultural backgrounds, for instance because they are from different countries. Due to development of synchronous and asynchronous groupware (e.g. e-mail) people from different parts of the world can collaborate without travelling, but this in turn changes the way organizations function and requires from managers and employees the development of a whole new set of competences.

Virtual work refers to a form of work in case of which ICTs are used for communication between colleagues. Use of virtual work requires more scientific research because management of a virtual team is in many ways different from management of an ordinary team. The classic theories of management are based on organizations, which function using ordinary face-to-face

* This paper was written with support from grant ETF 7018.
meeting people. Problems are sure to arise when managers try to use the techniques of ordinary management for virtual work arrangements. The main changes required in understanding of management in virtual environment are: group processes, communication, empowerment, synergy, etc. Bots et al. (1995) note that the evolution of cultures, caused by the confrontation of different cultures, will result in changing demands towards the supporting technology. This will make it necessary to gain more in-depth knowledge about the relation between organizational cultures and the impact on the possibility and use of supporting technology. Use of different ICTs does not solve the problems of multicultural workforce by itself and in case of any organization (multicultural or not) groupware cannot just be introduced without taking proper preliminary steps (e.g. training). Research is needed on the interplay of information technology, multi-cultural interaction and team performance. If possible, the technology should facilitate the interaction leading to better team performance, whereas in practice the opposite could occur. For instance, executives might simply refuse to take part in electronic meetings. (Hofstede et al. 1997)

The aim of the article is to offer explanation to problems related to virtual teamwork from the perspectives of national and occupational culture and to do that based on case studies of two service sector companies. The research questions are as follows:
1. Are people with different cultural backgrounds better suited (“equipped”, “prepared”) for virtual work?
2. Do representatives of different ethnic and occupational groups stress different problems related to virtual work?
3. Are managers aware about differences between the management of an ordinary and a virtual team?
4. Which managerial techniques do managers use for virtual workforce?

The paper contributes to theory advancement by offering a framework that systematizes the terminology related to new, flexible ways of work. The empirical part of the paper is new in its approach to multi-cultural teamwork by using the interdisciplinary approach – national and occupational culture perspective on the use of ICT.

2. Theoretical background

There is a vast amount of terminology used for the new (sometimes called flexible) ways of work. Based on their definitions it can be concluded that although different in name they most commonly mean virtual work or virtual teamwork. Guss (1997) gives just a brief set of terms used for virtual teamwork: spider web, modular, cluster, learning network, perpetual matrix, spinout, third-millennium group, boundaryless organization, postmodern organization, alternate office, extended enterprise, flexible manufacturing network, distributed global work team, turbo task force, autonomous work group outside existing organizational structures. Over the past decade some of those terms have grown to be more used than others – e.g. remote work(ers) (Gerke, 2006), virtual work(ers) (Hoefling, 2001), tele-work(ers) (Sanchez, 2007), distance/off-site work(ers) (Fisher and Fisher, 2001), virtual/remote/distant communities of practice (Hildreth, 2004).

When an ordinary worker becomes a virtual or tele-worker (s)he is usually starting to use a set of new work-related behaviors and ways to communicate with colleagues, clients and the immediate supervisor. These are making the scenery of new work forms even more blurry and hard to grasp in a systematized way: hot-desking, satellite office, web groups, home work, telecommuting, flexiwork, etc.
Definite overlapping is evident between some of those terms discussed above. Unfortunately there is no agreement among scientists which term to use prevalingly if the only difference is in the name. The most difficult problem is differentiation between virtual work and tele-work, remote work and distant work – the latter three are most commonly used interchangeably. There is still no agreement among researchers regarding several issues (MTÜ Arhipelaag, EQUAL project 2007):

- How many hours per week and under which circumstances should an employee work in order to become a tele-worker?
- Is overtime work (in case an employee does it at home) in the evening also tele-work?
- Is use of ICT a mandatory precondition of tele-work?

Tele-work, telecommuting, distance work, remote work, flexible work, flexiwork, flexwork and e-work are often used as synonyms, but with some geographical differences. In the USA, the term “telecommuting” is used more commonly, Europeans prefer tele-work and the Japanese flexwork. (MTÜ Arhipelaag, EQUAL project 2007)

Tele-working and telecommuting were first introduced and used by an American sociologist Jack Nilles in 1973. Jack Nilles uses tele-working in a broader sense and telecommuting in a narrower meaning: the term “telecommuting” was used in order to explain the phenomena of not taking a person to work, but moving the work to the person. Tele-work means substituting all work-related travelling needs with the use of ICT (Nilles, 2007). Although use of ICT is included in the explanation of tele-work, the main focus in terms of tele-work, remote work and distant work is on the aspect of work location and not on the use of ICT.

The content of tele-work has evolved over time – in its initial meaning it was the same as home-based work, which was considered the main alternative work location (Huws and O’Regan, 2001; Martino, 2001). Huws and O’Regan (2001) suggest that it is possible to distinguish the broader and narrower meaning of tele-work based on work relationship and work location. In the narrow meaning, tele-work is the work done by an employee for an organization, which from the individual perspective is either home-based or mobile work and from collectivistic perspective is work done in a satellite office. Broader meaning of tele-work involves freelancers and firms that use ICT for making their service or work outcome available for the organization.

In case of virtual work and virtual teamwork the focus is always on use of ICT that enables geographical and time flexibility of work. Kirkman and Mathiew (2004) stress that not the geographical location of virtual workers, but the use of ICT defines the essence of virtual teams and the distance between virtual team members can, but does not necessarily have to be long (Figure 1). Lipnack and Stamps (2000) argue that use of ICT that enables to span different boundaries is the most critical factor in distinguishing virtual teams from ordinary ones. According to Lipnack and Stamps (2000) “a virtual team is a group of people who work interdependently with a shared purpose across space, time and organization boundaries using technology.” Virtual work is broader in its meaning than virtual teams and it resembles the term “e-work” used by European Commission.
International Labor Organization defines tele-work as: “…a form of work in which (a) work is performed in a location remote from central office or production facilities, thus separating the worker from personal contact with co-workers there; and (b) new technology enables this separation by facilitating communication (Martino, 2001).” European Commission uses in addition to tele-work the term “e-work”, which is accordingly a form of work in case of which ICT is used to improve the effectiveness of work, increase locational and time flexibility of work and to promote sensible use of resources (Johnston and Nolan, 2002). E-work is mainly used in European Commission reports and indicates attempts to develop further the commonly used term “tele-work”. The main characteristics that distinguish e-work from tele-work are: firstly – traditionally tele-work means changes in work location (usually from office to home), but e-work also entails work in other locations than home (satellite offices, etc.) (Huws and O’Regan, 2001); secondly – in addition to traditional tele-work, e-work also includes tele-collaboration. An example of tele-collaboration is virtual teamwork or work mediated by ICT, which is used by colleagues in an ordinary office setting (Eichmann et al. 2002).

Table I. Flexible and virtual work forms.

<table>
<thead>
<tr>
<th>Flexible work forms (locational flexibility):</th>
<th>Virtual work forms:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework, Hot-desking</td>
<td>Virtual team, Satellite office, Web-group, E-collaboration/tele-collaboration</td>
</tr>
<tr>
<td>Tele-work, remote work, distant work, mobile work</td>
<td></td>
</tr>
<tr>
<td><strong>Distinctive characteristics:</strong></td>
<td>Use of ICT for cooperation is a must</td>
</tr>
<tr>
<td>Use of ICT for cooperation – may be, but not necessarily</td>
<td>Relatively long distance between colleagues is a must</td>
</tr>
<tr>
<td>Relatively long distance between colleagues is a must</td>
<td>Relatively long distance between colleagues – may be, but not necessarily</td>
</tr>
</tbody>
</table>

Diversity of flexible work forms has led to changes in the meaning of tele-work. Initially, the main focus of flexible work forms was on locational flexibility and the term “tele-work” was quite appropriate. Over time, several other forms of flexibility have evolved and the term “tele-work” does not apply to all of these. There are at least four possible types of flexible work
arrangements (Karu, 2007): time flexibility, locational flexibility, contractual flexibility and functional flexibility. Taking all the above into account, the following framework is offered (see Table 1).

Home-based work and hot-desking are forms of work in case people are allowed to choose work location by themselves: in the case of home-based work the location is home/home office, in the case of hot-desking several colleagues share one work-station or table in the office, as most of the time they work outside the office. Virtual work forms have in common the necessity to use ICT for collaboration, distance between co-operation partners may be long, but not necessarily (e.g. virtual teams, see also Figure 1). Satellite office is alternative office space closer to employees’ home for those usually far from head-office. Satellite office is equipped with necessary ICT; sometimes combined with hot-desking. Web-groups are a rather informal way of co-operation – people, possibly from different organizations, are using the same internet based forum for discussion and collaboration. Tele-work (also known as remote work, distant work) has evolved in its meaning closer to virtual work and thus cannot be anymore categorized only as flexible work. The same applies to mobile work, usually used by sales force.

In conclusion, the term “tele-work” has evolved over time from stressing the work location aspect towards emphasizing the use of ICT and other flexible work arrangements. The term “tele-work” has become remarkably broader in its meaning and has become now closer to the term “virtual work”. Although changed in meaning the term tele-work is still used by many authors without any attempt to find a term with more suitable content. The terminology has noticeably been developed by European Commission by introducing the term “e-work”.

<table>
<thead>
<tr>
<th>Focus (primary and secondary keyword):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TELE-WORK</strong></td>
</tr>
<tr>
<td>1. Work location</td>
</tr>
<tr>
<td>2. Use of ICT</td>
</tr>
<tr>
<td><strong>VIRTUAL WORK</strong></td>
</tr>
<tr>
<td>1. Use of ICT</td>
</tr>
<tr>
<td>2. Work location</td>
</tr>
<tr>
<td><strong>Term development:</strong></td>
</tr>
<tr>
<td><strong>TELE-WORK</strong></td>
</tr>
<tr>
<td><strong>E-WORK</strong></td>
</tr>
<tr>
<td><strong>E-COLLABORATION</strong></td>
</tr>
<tr>
<td><strong>VIRTUAL WORK</strong></td>
</tr>
</tbody>
</table>

Figure 2. Development and focus of tele-work and virtual work.

E-work has similarities with virtual work (e.g. use of ICT). Figure 2 gives an overview of terminology development and the keywords used for different terms. Although the terms “tele-work” and “virtual work” are both equally used by researchers, the preference should be given to virtual work in the future. Because tele-work has evolved towards stressing the use of ICT in its meaning (which is a common feature of virtual work), the term “tele-work” needs to be changed in order to better describe the content.

3. National and occupational culture in the context of virtual work
Hofstede’s (1980, 1983, 1997) empirical studies of international differences in values has become the major framework in the study of cultural factors in relation to: ”different ways of structuring organizations; different motivations of people within organizations; and different issues people and organizations face within society” (Hofstede, 1983). Hofstede’s research focuses on the factors that provide distinction between different cultures. He refers to this as ”the collective programming of the mind which distinguishes the members of one group or category
of people from another” (Hofstede, 1997). Although Hofstede’s theory is widely used, it has certain weaknesses – as Hofstede’s empirical studies were conducted in the 1960’s and 1970’s, the data from initial studies is not available for many East European countries and this concerns also this paper. On the content level the Hofstede’s cultural dimensions have been criticized as out of date and too condensed to capture culture (McSweeny, 2002; Shenkar, 2001; Smith et al. 2002). Another problematic issue is that Hofstede’s data was gathered from one organization’s (IBM) branch offices, which may have caused some bias. It has been suggested that at least in trade context, Schwartz’s values may play a more significant role than Hofstede’s dimensions (Siew et al. 2006). Every theoretical framework has its weaknesses and Hofstede’s framework has proved to be a valuable base for many national culture comparison works.

The following four cultural dimensions are the center of Hofstede’s (1983; 1991):

- Power distance;
- Uncertainty avoidance;
- Individualism/Collectivism;
- Masculinity/Femininity;
- Long-term orientation.

Cultural differences are likely to have a great impact on the adoption and use of the internet (Lim et al. 2004; Park and Jun, 2003). For example, cultures that are characterized as having a high level of uncertainty avoidance are, according to Park and Jun (2003), less likely to be early adopters of innovation. Uncertainty avoidance and individualismollectivism are the dimensions that have been determined relevant to the study of consumers’ usage of innovations in different cultures (Lim et al. 2004; Park and Jun, 2003). Although the current study is not about customer relations, this result is likely to be relevant as it may explain why certain cultural groups avoid using ICT and have a lower level of satisfaction with virtual work arrangements.

According to Lim et al. (2004), individualism-collectivism affects the way people build trust, and uncertainty avoidance affects the willingness of people to accept uncertainty. Therefore, it is expected that the dimensions of individualism-collectivism and uncertainty avoidance may affect an individual’s internet usage behavior. However, regardless of whether people are collectivists or individualists, those who have a low level of tolerance for uncertainty will not use the internet because they perceive the uncertainty involved to be too high (Lim et al., 2004). Online environments tend to be task focused with restricted opportunities for relationship development. Thus it can be more difficult for those from collectivistic cultures (Fontaine, 2002). Based on these results the expected outcome of this paper is that employees with the cultural background of a relatively high level of uncertainty avoidance and collectivism will have a lower level of satisfaction with the use of ICT and virtual work.

The effect of power distance, long-term orientation and masculinity on adoption of and satisfaction with virtual work arrangements has been studied much less than the above-mentioned cultural dimensions. Managers in high power distance cultures tend to be autocratic and paternalistic while employees are comparatively comfortable doing as they are told, submitting to the control of a superior and obeying directives without question (Hofstede, 1991). Masculinity stands for preference for achievement, heroism, assertiveness, and material success. Femininity stands for preference for relationships, modesty, quality of life, and caring for the weak. As virtual environment is based on ICT-mediated communication and at least some cases also over long geographical distances, managers need to adopt a new management style as employees cannot be constantly controlled and monitored – inclination towards management by
objectives should follow. This type of management philosophy is probably more suitable and easier to adopt for representatives from feminine and short term orientation cultures. Power distance does not seem to have a direct relational effect (neither positive nor negative) on satisfaction with virtual work arrangements.

Occupational culture reflects the values and identity associated with a specific occupational group. It has been assumed that occupational communities will generate cultures that will manifest similar world views, as a result of a common educational background, professional requirements and contact with colleagues within the occupation (Schein, 1996). Different occupational groups have certainly different, sometimes even controversial values and manners of conduct (Figure 3). Marketing, sales, engineering and IT occupations are of interest most of all in the context of this paper. Sales people are a talkative, mobile group of employees who are usually used to cell phones and laptops. They are usually good negotiators, results oriented and skillful users of ICT. They usually do not feel isolated by the use of ICT as they meet often with clients. (Edwards and Wilson, 2004)

Marketing people are usually creative and high context communicators who strive for achieving synergy which is usually possible only in a face-to-face setting. For building relationships with clients and for achieving all other work goals, marketing people need a lot of face time, which can only partially be replaced by richer means of ICT (e.g. videoconferencing). Engineers have logical argumentation skills and prefer decisions based on facts. For economy reasons they most likely already use audio- and videoconferencing and feel comfortable in virtual environment as it supports their need to be fact driven and goal oriented without too much relationship building expectations.
Figure 3. Functional cultures placed along different scales to describe working practices and communication techniques (Edwards and Wilson, 2004).

IT people may be the least well adapted (right after engineers) to virtual work and that contradicts the usual managerial expectations towards them. Preconditions for successful virtual teamwork are skills for building relationships over distance using ICT, not the ability to write or use IT software. (Edwards and Wilson, 2004) As IT specialists work much of their time alone and tend to use a lot of IT related terminology known inside their occupational network they may have difficulty in adopting virtual or ordinary teamwork orientation.

4. The method, sample and case studies
Methodologically, the case study approach was used as it suited best for the research questions. Two case companies were used that have co-operation history and a similar background: both sell IT solutions on the international market (similar product range) and use multicultural work force.
Table II. Sample size per company and Hofstede’s national culture indexes (Hansa Nova project 2007:20).

<table>
<thead>
<tr>
<th>Case company</th>
<th>Nationality</th>
<th>No. of respondents</th>
<th>Hofstede's cultural dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>PDI</td>
</tr>
<tr>
<td>A</td>
<td>Estonian</td>
<td>16</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Latvian</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Lithuanian</td>
<td>4</td>
<td>45</td>
</tr>
<tr>
<td>B</td>
<td>Russian</td>
<td>21</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>Ukrainian</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Kazak</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Azerbajian</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Uzbek</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Mongolian</td>
<td>2</td>
<td>-</td>
</tr>
</tbody>
</table>

The first company (A) has headquarters in Estonia and sells and installs hotel IT solutions in the Baltic States; has branch offices and employees of respective nationalities in Estonia, Latvia and Lithuania. The company has operated since 1996 and has in total 22 employees. The second company (B) operates in Russia and former Soviet countries. It has headquarters in Moscow (Russia) and operates with its 120 employees in Russia, Ukraine, Belarus, Azerbaijan, Mongolia and Uzbekistan. There are similar occupational groups in both organizations: administrative personnel, sales managers, technical managers and specialists.

The information was gathered from January to March 2007, using structured and semi-structured individual and group interviewing. The final sample consisted of 58 people (see Table II): 39 men and 19 women. Most of the respondents (89%) had higher education, belonged to age group 26–45 years and had average work tenure of 3.5 years at the respective company.

5. The results and discussion

Table 2 shows that unfortunately, for many ethnic groups the number of respondents in most of the cultural groups is very small. In case of company A people agreed and talked about their work arrangement freely, but employees of company B initially agreed but later refused to be interviewed, indicating the fear of losing their job. The final sample size for B was 36 people, which was much lower than anticipated. The only larger ethnic groups are Estonians and Russians, thus only those two can be used in national culture analyses. The second limitation of the study consists in the fact that for many national cultures in the sample, Hofstede’s culture indexes are not available. Schwartz (1999) has included some East European countries (e.g. Estonia, Poland) in its study of national cultures, but there still appears to be a serious lack of national culture studies in East European countries.
The Estonians' sub-sample based on occupational groups was: administrative personnel – 3 respondents, technical specialists – 5 respondents, sales managers – 4 respondents, technical managers – 4 respondents. The same for Russian sub-sample: administrative personnel – 3 respondents, technical specialists – 4 respondents, sales managers – 7 respondents, technical managers – 7 respondents. The average satisfaction level of Estonians with virtual work arrangements was 3.8 and in case of Russians 3.5 (on 7-point scale) (see Figure 4). It appears that the Estonian sub-sample shows higher variation in responses on satisfaction but the average satisfaction is higher than in the Russian sub-sample.

It was previously hypothesized that representatives of national cultures with a high degree of uncertainty avoidance, collectivism and masculinity have a lower level of satisfaction with virtual work and probably prefer to avoid ICT mediated communication. Russians fit this description rather well (see Table 2 for IDV and UAI indexes) but the theoretical hypothesis is not supported. At least based on this sample there seems to be no or very little difference between individualistic-collectivistic cultures and high-low uncertainty avoidance cultures with regard to virtual work. Even if compared by communication channel preference and satisfaction with different channels (ICT) both sub-samples are similar: in both cases respondents prefer to use e-mail and/or online-communication (e.g. MSN) for solving simple tasks and meeting face-to-face and/or using videoconferencing for more complicated problems. Highest satisfaction is achieved (on 7-point scale: Estonians 6.2, Russians 7) if people can communicate by meeting face-to-face. The most disturbing factors in using ICT for respondents in both sub-groups are: firstly – feeling isolated when using only ICT for communication; secondly – slow feedback from the communication partner.

Based on nationality groups using Hofstede’s culture dimensions as indicators of potential difficulty in using virtual work, the current sample allows to conclude that cultural differences have little or no importance. This conclusion is made bearing in mind that the study has also several limitations. Namely, Hofstede’s main four culture indexes are available only for some nationalities in the current sample and the fifth index (long-term orientation) for none of them; the sample size is too small for the second company and the case study approach imposes also its additional limitations (small sample size, problems in generalizing results, potential subjectivity of the researcher). Still, the results serve as bases for phrasing hypotheses for studies with larger samples and demonstrate that one should be critical towards theoretical frameworks.

Figure 4. Satisfaction levels of Estonians and Russians with virtual work arrangements (1 – very unsatisfied; 7 – very satisfied).
Table III. Satisfaction with and specifics of virtual work by occupational group.

<table>
<thead>
<tr>
<th></th>
<th>Tech. specialists (29 respondents)</th>
<th>Tech. managers (13 respondents)</th>
<th>Sales &amp; marketing managers (13 respondents)</th>
<th>Top managers (3 respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men/Women</td>
<td>22/7</td>
<td>10/3</td>
<td>9/4</td>
<td>2/1</td>
</tr>
<tr>
<td>Working hours per week</td>
<td>Over 40</td>
<td>Over 40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Type of payment</td>
<td>Time based</td>
<td>Time based</td>
<td>Time based</td>
<td>Time based</td>
</tr>
<tr>
<td>Comm. channel – preference</td>
<td>Meeting F2F E-mail</td>
<td>Meeting F2F E-mail</td>
<td>Meeting F2F E-mail</td>
<td>Video-conference E-mail</td>
</tr>
<tr>
<td>Comm. channel – highest satisfaction</td>
<td>Video-conference</td>
<td>MSN</td>
<td>E-mail</td>
<td>MSN, tele-conference</td>
</tr>
<tr>
<td>Satisfaction with choosing work location (max 7)</td>
<td>6,5</td>
<td>6,6</td>
<td>6,8</td>
<td>6</td>
</tr>
<tr>
<td>Satisfaction with choosing working time (max 7)</td>
<td>6,7</td>
<td>6,6</td>
<td>6,5</td>
<td>5,6</td>
</tr>
<tr>
<td>Satisfaction with available ICT (max 7)</td>
<td>2,5</td>
<td>2,7</td>
<td>2,6</td>
<td>3,5</td>
</tr>
<tr>
<td>Satisfaction with immediate supervisor (max 7)</td>
<td>2,9</td>
<td>2,5</td>
<td>2,7</td>
<td>N/A</td>
</tr>
<tr>
<td>Satisfaction with virtual work (max 7)</td>
<td>3,3</td>
<td>3</td>
<td>3,7</td>
<td>3</td>
</tr>
</tbody>
</table>

Table III shows employees’ satisfaction with virtual work by occupational group (data from both case companies). Technical specialists and technical managers usually work more than 40 hours per week. Technical specialists are rather content with virtual work arrangements, but would like to work with more up-to-date ICT. The general work satisfaction on 7-point scale is not very
high as this occupational group’s business trips range from 2 weeks to several months. Long periods away from home, uncompensated overtime work and often periods when people are required to work 24h shifts all affect work satisfaction. Technical and sales managers stress the opportunity to choose work time and location, but are rather dissatisfied with the way virtual work is arranged. The middle level managers would like to use quicker means of ICT for contacting top managers, but this is discouraged by senior management. Top management prefers to use solely e-mails or as one of the respondents said: ”It is unbelievable that while on a business trip I spend 4–5 h per day writing e-mails!” In addition to poorly managed communication, there is lack of coordination, poor time management of business trips and an inappropriate compensation system used for virtual work arrangements. It appears that all occupational groups get paid time based salary (even sales force), although management by objectives philosophy and the respective performance based compensation would be much more suitable.

Technical personnel lacks face-to-face (F2F) meetings most. As they solve clients’ technical problems away from office and each other, they would like to have pre-planned weekly or monthly F2F meetings for sharing ideas and learning from each other. This is especially needed as there is no official training offered or supported by top management. In one of the case companies technical specialists have initiated the use of a forum as an unofficial solution for sharing ideas and discussing problems of technical nature.

Belonging to an occupational group can determine very well the satisfaction level with virtual work and the potential positive and negative aspects stemming from it. As it was hypothesized in the previous section, the highest level of work satisfaction with virtual work arrangements could be seen for sales force; followed by technical specialists. In the companies studied, technical people are not like IT personnel described in theory, but more like a hybrid of sales and IT people: they have a strong IT background, but have frequent contacts with clients. This explains their rather high work satisfaction level. Although occupational group affects how people prefer to work, the organizational aspects (management style, communication channel preference, etc.) play also a very important role in general attitudes towards virtual work arrangements. Both companies’ top level management obviously tries to apply classic management concepts for virtual workers and this results in low satisfaction with management and relatively low general work satisfaction.

6. Conclusion
Since 1973 when the term “tele-work” was first used, a whole array of terms have been used to describe the new ways of work. Although in many cases the terms overlap in meaning, in some cases the meaning of a term has evolved, but the name has remained the same. This is causing confusion that can be minimized by using the framework offered in the theoretical part of this paper.

Based on results from two case studies it can be concluded that national culture affects attitudes towards and satisfaction with virtual work much less than occupational culture. Although the case study approach imposes limitations, the results still suggest that in future research the national culture probably has less effect on virtual work than occupational or organizational culture. Although organizational culture was not analyzed in the current study, the results show that top management behavior and communication style has a direct effect on all occupational groups’ satisfaction with virtual work. While representatives of different occupational groups
point out different virtual work problems, no such conclusions can be drawn for national culture groups.

Top management appears to be rather unaware about the need to change managerial techniques when an ordinary workforce becomes a virtual one. Use of ordinary management philosophy has lead to rather low general work satisfaction, thus management by objectives and related motivation system along with more varied means of communication should be used. In the future extensive research will be needed on characteristics/dimensions of national culture for East European countries. More in-depth research is needed on how organizational culture affects virtual work adoption by organizations and what kinds of leadership styles are most suitable for virtual work arrangements.

References


Gerke, S.K. (2006), ”If I can not see them, how can I lead them?”, Industrial and commercial training, Vol.38, No.2, pp. 102-105.


Hildreth, P.M. (2004), Going Virtual: Distributed Comunities of Practice, USA, Idea Group Publishing.


MTÜ Arhipelaag, EQUAL project. „Kaugtöö määratlus,“ available at: http://equal.arhipelaag.ee/content/view/7/18/ (accessed 15 June 2007)