

Chapter 17

Usability in Russia

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17.1 Country Profile

Even though Russia is the largest country in the world (16,377,742 km² of land), its 142 million population is sparsely distributed across the vast land and concentrated in the European part. 73% of the population lives in urban areas while 27% are in rural areas. The country's population is predominately ethnic Russian (79%), and for 92% of it Russian is the first language. Russia's GDP in 2008 was 1,418 billion USD, and average salary in 2009 was 642 USD, although it is greatly varied depending on the region. In Moscow, for example, the average salary was 1,090 USD. Educational level is high: 157 out of 1,000 adults have higher education (Russian Federal State Statistics Service 2009a). Only 20 years ago the country underwent rapid and profound transformations, in which its entire political and economic systems were revamped. State-investment in the knowledge intensive sectors of the economy dwindled, while the new and privatized industries of information, communication and technology developed. This resulted in emergence of the IT market, and consequently, the structure and organization of usability research. Most of it is conducted today in the private sector.

17.2 IT Market

High-tech business development in Russia is hindered by the emphasis on natural resources and their extraction. The latter is Russia's basis for the GDP. According to the estimates by the Ministry of Economic Development, IT market volume was 17 billion USD in 2009, which implies that the entire IT market in Russia

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(excluding communications) composed less than 1.5% of its GDP. The situation in the service sector for the high-tech economy, usability for instance, was even worse.

IT services (which include usability) compose only 28.6% of the total IT market. The rest is shared between the Hardware market – 51.4% and the Software market – 20% (Ministry for Economic Development of Russian Federation 2009). In our own opinion, usability services compose no more than 1% of the sector.

There is a certain paradox about usability testing in Russia. Russia has recently become one of the leading IT outsourcing countries. Service export volume, including the presence of development centers for foreign IT companies, rose to 1.7 billion USD. This is bigger than IT export for India. Russian companies alternate between the 7th and the 8th position among 100 leading IT service providers in the world. They are the leaders among suppliers in Central and Eastern Europe (Makarov 2009). Despite these facts, specifically usability testing is outsourced to Russia very rarely. This trend is difficult to understand against the 5.5 billion USD profit that all Russian software companies shared in 2008, and 2.65 billion USD gained from IT services and products export (RUSSOFT 2009).

17.3 Web and Mobile Communication

The explosive growth of the Internet in Russia stimulated the field of usability. In comparison to the year 2000, internet usage rates have grown by 1359,7% (Miniwatts Marketing Group 2009). In summer 2009, 35% of the total population (39.9 million people) used the internet at least once in 6 months (the Fund “Obshestvennoe mnenie” 2009). Such growth attracted many investors to the area of web development. As a result, competition level in most popular fields, e.g. social networks, geo-information services, news portals etc. grew as well. Services such as graphic design and usability became the main competition fields. This created conditions for the development of a market for IT services, namely, usability.

The fast growing mobile services market served as another push for advancing usability. The development of mobile communications was even faster than that of the Web. By the end of 2009, about 85% of people used at least one mobile operator (AC&M 2010). Many unprepared and uneducated clients have joined the mobile service usage, pushing operators to lower the entry step and simplify their service interfaces. As a result, most mobile operators formed their own usability departments and established partnerships with international and Russian usability agencies. Thus, the expanding Internet, and computer and mobile communication markets increased the demand for usability services in Russia.

17.4 HCI/Usability History in Russia

17.4.1 Soviet Era

The changes did not arrive on virgin soil. The development in the field of engineering psychology and ergonomics in the late Soviet period was defined by two trends. On the one hand, there were the heavy industry and military sectors which demanded development of disciplines focused on human factors in technology. On the other hand, production overall was not oriented toward the market. It was heavily tilted toward the means of production and away from consumer goods. As a result, the quality of Soviet consumer goods and services was extremely poor. The design of goods reflected interests and technological limitations of manufacturers and service providers, rather than needs and preferences of consumers. Arguably, by the time the Soviet Union collapsed in 1991, Russian industries and business had no experience in using design development and no design culture.¹ This mentality had a profound impact on the areas of knowledge related to interface development.

The situation in the industry servicing sectors was somewhat better in comparison to the production of consumer goods and services. Several segments secured governmental funding to support research in the fields of human factor and ergonomics for weapons development, space research, aviation, shipping and railway, atomic energy industry and continuous process industries. Those applications became the focus of few research groups in the Soviet Union. Departments of engineering psychology and ergonomics were established in Moscow and Leningrad (today St. Petersburg) State Universities in 1970 and 1966 respectively, and in several other technical research institutions. In 1973 a Laboratory of engineering psychology was created in the Institute of Psychology, at the Soviet Academy of Sciences. The “Ergocenter” opened in 1978 in Tver and was one of the largest research and development centers. It initially serviced the Industry of Defense. In 1990, after the reorganization, the Centre received a civilian status. Among the most interesting in the Soviet period was the work of A.L. Yarus who invented the world’s first eye-tracker and wrote on eye movement research. His book was published in 1965 in the USSR and translated into English 2 years later (Yarus 1967). There were also a number of interesting practical achievements of the Soviet period, which influenced HCI/Usability development in the post-Soviet years. A complete review of the fields of engineering psychology and ergonomics during the Soviet period is presented in English by G. Bedny and D. Meister (Bedny and Meister 1997).

These unique world-class achievements took place in the context of the Soviet scientific community lagging behind in development due to its isolation from the international scientific society. In accordance with the planning by the Soviet

¹It is symptomatically that although there are two big industrial design schools in Russia until recently there were fewer practicing industrial designers than practicing usability specialists.

government, development in the computer industry was centered on mainframes and, partly, on midi- and mini-computers. Personal computers were not seriously taken into account. Nevertheless, often illegally, PCs invaded Soviet technical and scientific organizations. This resulted in a PC software development boom carried on primarily by enthusiasts: professional programmers as well as various amateurs. At first this work was mostly done free of charge. However, the increased introduction of PCs for solving daily tasks of developing businesses created a commercial demand for Russian, locally-developed software. As a result, a large number of software development companies and software development departments in hardware building companies were formed, their programmers starting to earn a reasonably high income.

A competitive software market emerged in the early 1990s represented by a high variety of software applications of the same functionality, that is, dozens of accounting programs designed by different developers. The phrase “user friendliness” adopted from Western European and North American contexts became one of the more popular slogans. Behind it, however, there was no specific user quality concept that could offer quantitative product estimation and comparison. Developers often declared their product as “user friendly” based only on graphical, but not character-based user-interface realization. Whilst in Western Europe and North America this problem was solved by the development of the concept of usability, in post-Soviet Russia it remained marginal, if at all known among scientists as well as commercial software developers.

17.4.2 East-West Human Computer Interaction International Conferences (1991–1996): An Attempt to Import HCI/Usability to Russia

This was the context in which in August 1991 the First International Workshop on Human-Computer Interaction was held in Moscow. Seventy-five Soviet and 15 foreign specialists attended this meeting. This was the last year of the USSR (Bass and Gornostaev 1991). Following the success of this workshop, several annual East-West conferences on Human-Computer Interaction (EWHCI) took place in Moscow and St.-Petersburg between 1992 and 1996. Russia and other former republics of the Soviet Union represented the “East”, while North America, Western Europe, Australia and New Zealand represented the “West”. EWHCI conferences were attended by many brilliant researchers and the overall quality of work presented was very high. Selected papers from EWHCI '93, '94 and '95 were published by Springer-Verlag in their Lecture Notes in Computer Science series (Bass et al. 1993; Blumenthal et al. 1994; Blumenthal et al. 1995). Very positive conference reports for EWHCI '91–'94 were published in SIGCHI Bulletin (Cypher et al. 1991; Grudin et al. 1993; Instone et al. 1994; Price et al. 1995). No doubt, in 1992–1995, EWHCI was a world-level forum in the HCI field. Conferences were sponsored by Apple Computer, Association for Computing Machinery Special

Interest Group on Computer-Human Interaction (ACM SIGCHI), Human Factors Society and a number of local companies.

The interest of westerners in these events was not only in the desire to meet a completely new research community and interchange ideas leading to broadened perspectives and new creativity. They were also interested in the Activity Theory developed in Russia as the HCI community started searching for new theoretical frameworks to overcome difficulties in applying a cognitive approach to both research and practical design. Activity Theory was considered capable of dealing with the HCI problems.

Activity Theory, considered as the most important accomplishment of Russian psychological science, has an extensive history dating back to the works of Vygotsky and his followers, Leontev, Rubinstein and Galperin. However, except for a couple of books published in the West and few publications in the western journals, the theory remained practically unknown outside the Soviet Union until the mid-1980s. At that time it was picked up, reformulated and promoted by a number of western researchers, mostly from Nordic countries. As a result, Activity Theory today is associated not only with Russian psychological tradition, but has become rather a theoretical ground for the larger international community and involved researchers from Europe, North America and Australia.

By the mid-1990s, the economic situation in Russia worsened. Destructive economic reforms, drastic reduction in manufacturing, large-scale deindustrialization, and a severe crisis in higher education and science development forced many Russian researchers and practitioners to abandon their HCI-related careers for new sales- and business-related jobs that offered higher salaries. The “brain drain” among the Russian HCI community was considerable. For example, the leading theorists of the Applied Activity Theory approach to HCI, V. Kaptelinin and I. Verenikina, are now working in Sweden and Australia, respectively.

As a result, participation of non-Western researchers and the quality of presentations at the EWHCI were decreasing every year. The conference had transformed into “meetings for Westerners on Russian territory”. The year 1996 was the last when EWHCI met. One of the reasons for the withdrawal of western specialists from these meetings was the fact that not many Russian delegates were prepared to accept the HCI/Usability concepts as the only paradigm for their future work. Quite often, participating Russian specialists did not have a direct relationship to HCI – their software was just interactive, albeit advanced. It was evident from their annual presentations that their main research interests were in the spheres peripheral to the HCI/Usability mainstream, such as artificial intelligence, hypertext, computer-assisted learning, information visualization, digital libraries, multimedia etc.

The first attempt to import an accomplished western HCI/Usability paradigm to Russia was unsuccessful, as it had been rejected conceptually by the Russian academic community, which at the time went into a decline. The emerging commercial software industry was not ready to accept usability as a key market differentiation parameter for their products.

Still the current situation with usability in Russia is rather positive, and the EWHCI era played its important role in forming this situation. Today, the veterans

of the movement and young enthusiastic newcomers work successfully in this field. The results of their work and its impact on the field of usability will be discussed in the following sections.

17.4.3 Modern Era of Usability in Russia

The current situation in Russia, including organizational aspects, the growth of the commercial sector, as well as education, differs greatly from the Soviet period, and bears signs of great improvement.

17.4.3.1 Commercial Companies

At present there are at least seven companies specializing in usability services: Usethics (founded in 2001), UIDesign Group (2003), UsabilityLab (2006), HumanoIT Group (2007), HCI.ru (2008), UI Modeling Company (2008) and interUX Usability Engineering Studio (2009). Moreover many web-agencies offer expert UI evaluation or testing. Altogether there are about 30 freelance specialists consulting in the field.

Overall in Russia the UI is viewed through the lens of design. Only four companies from the above list offer usability testing and have usability labs (Usethics, UIDesign Group, UsabilityLab and interUX). Most companies don't even mention usability testing on their web sites, focusing purely on UI design. Nevertheless, research culture and technology in companies specializing in usability testing and big interface departments meet the standards of world-wide practice.

17.4.3.2 Interface Departments

The first usability department was created in 1997 in the company RTS Stock Exchange. Since then, more businesses added usability testing to their operation. At present, several companies have testing and UI design departments with over 10 employees. These companies are Beeline (Vimpelkom, department founded in 2006), 1C, Yandex, ABBY, Parallels, Acronis (2007), Kaspersky Lab (2008). Besides these companies, by the end of 2009 at least 20 others established smaller departments or hired individual full-time specialists.

1C is a good example of the growing importance of UI departments in contemporary software development in Russia. The company has a substantial UI department consisting of 15 specialists, who only last year (2009) performed over 100 tests of different 1C products. The impact of this company's usability department is considerable, since many other firms adopt the 1C's technological platform. These partner-firms, for instance, are influenced to invest in their own departments of UI and usability testing.

17.4.3.3 Offshore Usability

Usability testing and expert evaluation are the main projects conducted for international clients in Russia. There is a demand for exhaustive usability testing, in the course of which Russian specialists adapt stimuli material and report the problems found. Testing-support services, by which Russian companies mainly provide the logistics (participants recruitment, hotel booking, translation etc.) are also common.

Based on their experience, local specialists aim at adapting the tests to local cultural and social specificities in order to avoid possible problems related to cultural differences. Problems of such kind include seemingly grammatically correct, but in fact wrong questionnaire translations, interface localization errors, etc., which tend to distort the collected data and result in inaccurate test findings. Fluency in Russian is often not enough. There is also a need for the adequate understanding of Russian reality.

Nowadays remote test monitoring, during which the customer observes the tests with simultaneous translation via the Web, is becoming popular. This scheme allows customers to save on traveling without losing on the detailed, real time control of the testing process. As a rule, a local moderator or assistant can identify problems arising during the test more precisely and finely than a non Russian-speaker or someone unfamiliar with local reality. Even if the project budget doesn't include a report preparation, it still pays to organize a short briefing after each testing day in order to discuss problems found by local specialists. A more detailed review of offshore usability in Russia is presented in the paper by I. Burmistrov (Burmistrov 2006).

17.4.3.4 Usability Organizations and Conferences

The Russian usability community has a rather peculiar history. The Russian local branch of the ACM SIGCHI (a shortened MosCHI) was launched in 1992, and Juri Gornostaev became its first Chair. Unfortunately, by the late 1990s, under the chairmanship of MosCHI's next Chair, Vladislav Valkovsky, the organized usability movement in Russia turned to complete dormancy suffering the same fate as EWHCI conferences.

The rebirth of the usability community took place in 1999, when Yaroslav Perevalov and Ivan Burmistrov of RTS Stock Exchange created a web site called "Usability in Russia" (www.usability.ru) with an internet discussion board as a part of this site. Very quickly the Usability Forum broke the "wall of silence" that reigned in Russian HCI since the last EWHCI conference. The forum turned out to be a very popular and demanded resource. After a period of virtual communication, Russian usability specialists met each other at a real workshop in 2001. The workshop became regular, and between 2001 and 2004 there were 14 meetings of this type. Usually between 25 and 40 people from the European part of Russia participated in these workshops with a constant core of about 15 participants.

Inevitably, at some point leaders of the movement started thinking about the formal standing of their community. After visiting CHI'04 in Vienna and discussing the possibilities with ACM SIGCHI officials, Ivan Burmistrov and Alexey Kopylov

(cofounder of the UIDesign Group) presented at one such meeting a report of the conference with a special emphasis on the Russian community's prospects as a branch of SIGCHI. A meeting held in June 2004 became the constituent assembly of the Russian Special Interest Group. A new short name for the Russian SIG, RusCHI, was also introduced in order to accentuate that this was a new community, and not a sequel of the former unsuccessful MosCHI.

RusCHI was chartered as an official local chapter of ACM SIGCHI on September 30, 2004. Ivan Burmistrov was elected as the first Chair of RusCHI. Currently, this is the largest usability community in Russia. Amongst its main activities are organization of regular workshops (from two to seven meetings per year) and large-scale events such as World Usability Day conferences, which began in 2006 and attract about 200 participants each year. The website of RusCHI is www.sigchi.ru. There is also a local UPA branch (UPA:Russia), founded by UsabilityLab and closely affiliated to this company. Besides that, a youth community named ErgoPro was set up in 2008. This community consolidates young specialists and students who decide to connect their future career with usability.

There also is the Inter-Regional Ergonomics Association, which emerged in 1995 as a result of the Soviet Ergonomics Association reorganization. It is a not totally field specific Association, but nevertheless it is functioning. The main goal of IREA is to facilitate communication and collaboration between all specialists on ergonomics working in different regions of Russia. Specialists from the same region constitute a Regional Branch of IREA. IREA is a Federated Society of the International Ergonomics Association (IEA) and Federation of European Ergonomics Societies (FEES). The IREA activity is coordinated and agrees with the policy and Strategic Plan of these organizations.

Publications on the subject of usability and ergonomics are small in volume but high in quality. In addition to translations of Western literature to Russian, there have also been some original Russian-language publications such as the book by Vlad V. Golovach "UI Design: skills to wash an elephant." Available as a free download online, it was read by over 15,000 people in 1 year.

17.4.3.5 Scientific Organizations

The current situation in research and education is the opposite to that in the commercial sector. The collapse of the USSR led to fast degradation in the sphere of research and education. Engineering psychology and ergonomics suffered from two main causes. The first was the absence of a minimally necessary governmental financial support, and the second was that high-technology industries practically ceased to exist. As a result, there were no venues to work at and to apply the knowledge to. "Ergocenter" is an example of this disorganization. "Ergocenter" was one of the biggest Russian organizations providing scientific support to weapons manufacturing. Soon after the collapse of the USSR it lost most of its personnel. The few of the remaining employees today are occupied writing scientifically outdated academic textbooks.

However, there are some positive points in the overall pessimistic picture. For example, there are courses in HCI and usability taught at a number of universities, and these include “Human-Computer Interaction” at Moscow, St.-Petersburg, Novosibirsk and Novgorod State Universities, and Mari State Technical University; “Software and Hardware Ergonomics” at Moscow Institute of Radio-Engineering, Electronics and Automation (MIREA). The first and still the only Russian textbook on HCI was published in 2005 under the guidance of “Ergocenter” (Magazannik and Lvov 2005). Its second reprint appeared 2 years ago.

A positive example of a research group that has fully integrated and productively works within the HCI paradigm is the Laboratory of Work Psychology (LWP) at the Moscow State University (the head of the laboratory is Prof. Anna Leonova). Since 1993, the laboratory pioneers research on interruptions in human-computer interaction, a theme which has become widely-accepted in international research and development activities since the 2000s. The laboratory’s great emphasis is on combining an ecologically valid experimental setting with a rigorous experimental design. LWP studies investigate the influence of factors such as the interrupted operation complexity and the complexity of interrupting tasks on various indices of interruption handling effectiveness like switching and resumption time and number of errors. The analysis of conventional performance indices is backed up by the analysis of subjects’ behavior as well as eye movement registration and recordings of physiological reactions. Interruptions are the main but not the only theme in the laboratory’s research program. The laboratory had been involved in many joint collaborative research projects with a number of universities in Germany, The Netherlands, and Belgium. Key results of the LWP works are available in publications (see, for example, Zijlstra et al. 1999; De Keyser and Leonova 2001; Burmistrov and Leonova 2003; Leonova et al. 2009). The laboratory maintains state-of-the-art research facilities including TechSmith Morae, Noldus Observer and advanced eye-tracking equipment. An important feature of LWP is its close relationship with the software industry. Many LWP staff members have commercial assignments in addition to the research tasks within the university. No doubt, they are the best candidates for scientific co-operation and joint research in Russia in HCI and related fields.

17.5 Usability Testing in Russia: Distinctive Features

Even though Russia geographically is the largest country in the world, linguistically its population is rather homogenous. Russian language is native for 92% of the country’s residents. In spite of this homogeneity, there are differences in income levels, consumer preferences and life attitudes. Those differences are the most significant among the following groups of cities:

- Moscow
- Cities of capital type consumption (Saint. Petersburg, Novosibirsk, Yekaterinburg, Nizhny Novgorod, Samara, Kazan, Omsk, Chelyabinsk, Rostov-on-Don, Ufa)

- Other large cities
- Small provincial towns and villages.

This geographic particularity determines the first distinctive feature of usability testing in Russia: its resource-intensity. Due to the fact that the geographic distances between the second group of cities and Moscow are rather vast and transport networks are far from developed, it is quite difficult to conduct large usability studies in Russia.

The second feature is a difficulty securing participation. An average fee for participating in a usability test in Moscow and the second type cities is about 1,000 rubles (about 35 USD). In cases of need in respondents with rare skills or high-income level, the incentive can rise up to 150–200 USD. The time which participants need to get to the lab can be a serious demotivating factor. Even within Moscow it might take potential participants up to 1.5 h to get to the lab. On average 10–20% of respondents don't attend at all or appear more than an hour late to a study. It is recommended to use a double recruiting scheme to exclude the possibility of a participant's non-attendance. In this case two participants are being recruited for the same time and if they both attend, the more suitable candidate is chosen. The rejected one receives half of the agreed fee.

Another common problem is that in Russia tests commonly encounter exceeding loyalty of the participant to the tested product. Participants, especially those who are not professional users, often blame themselves for difficulties occurring when they try a product. Participants are often ready to spend more time doing the test rather than report a difficulty in use. As a result, they do not voice their difficulties and they do not complain about the product itself.

Video and audio recording tend not to be problems, if participants are notified about them in advance.

When coming to a study, participants should be asked to bring an ID (normally a civil passport) for signing the NDA considering test contents. If recruiting is done through the web, participants should be notified about the recruitment procedure. They should know that it is necessary to give answers to several questions before being invited for the test. Those who give answers corresponding to screener requirements will be invited. They are not paid to answer those questions. Not many agencies specialize in participants' recruitment for tests and focus groups. In most cases, the partner agency fulfils this function.

The chance of getting participants with fluent English is rather small. If English fluency is required, it should be included in the screener. It will be necessary to make a quick test in English usage before the testing. Participants should be informed upfront that they won't be paid if the test is failed. These requirements stimulate participants to evaluate their skills and suitability for a particular test more adequately. Average price for professional simultaneous translation from Russian into one of the European languages varies between 100 and 200 USD per hour.

Due to a number of state holidays and school vacations, January and May are not the best months for conducting research in Russia.

It is quite easy and cheap to get Internet access from a laptop or a mobile phone in Moscow and other big cities. On the other hand, quality and prices for hotel accommodations often leave much to be desired.

There is one important factor that needs to be taken into account when making payments to Russian companies: foreign currency accounts in Russian banks consist of 20 digits, whereas European banks have 16 digits. The IBAN system is not used in Russia. This factor makes transfers to Russia rather difficult. For example one of our clients had to send the money three times before our bank could credit it to our account.

17.6 Usability in Russia: The Future

Although slowed down in the past by economical and political factors, commercially driven usability activities are more or less flourishing. Since this paper left its draft stage, at least two new interface design companies appeared in the market, and a new professional community (Polezny Club / “Useful club”) emerged. It can be safely projected that in the next few years usability, and especially UI design activities, in Russia will double. At the same time, there is still a noticeable lack of governmental funding and scientific research activities. There is little to no hope of any major improvement in these areas in the future.

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