

Day-to-day Reality of Web-based Collaboration Tools among European Architect Professionals.

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On behalf of phenomenal advantages of project extranet technology You can believe in improving communication among professionals in design and construction industry. But until now, the reality appears not as good. It is technological irony, as evidenced in below presented survey, that advanced solutions for a better collaboration may set up unbreakable barriers. Therefore knowledge of everyday reality in the field of web-based collaboration tools use is critical to all participants of this process, commercial as well academic ones. It is especially important to all European professionals, who are aware of consequences of extending in nearest future borders of European Union, the second biggest market in the world.

Keywords: collaboration tools, project extranets, Internet, Europe, statistics

the problem

With no doubt project extranets and other tools providing more advanced solutions for collaborative design are professionals nearest future. In some countries it already became an everyday practice. In some not yet. Brief overview makes clear that what is common to professionals in United States or some West European countries, esp. United Kingdom, Germany or France for others is not even well enough known to participate in process. This is the way the matter looks like without going into details. This is not confusing if you omit the headlines of up-to-date newsletters or information published in industry specific portals. And for sure it is not if you start to think about it globally.

This paper focuses on the statistical aspects of use of project extranets throughout the European countries, with special attention to East European. The aim of this research is to get most of information on present range and level of the knowledge

and practical use of commercial tools in that region of the world. Another goal of the research is how the limited availability and in consequence the way of use of project extranets may influence future cooperation of architect professionals all over the Europe, especially those from East European countries who aspire to work with their West European colleagues as well with investors or other construction industry participants.

method

Due to aim of this survey it is critical to collect as many data from as many sources as it is possible. Only then results can be representative. Therefore the results were drawn from a web based questionnaire as well individual mailing interviews and collected in MySQL database. The results were processed with statistical tools based on PHP language and presented with database driven web site.

First it was planned as a one time survey.

Finally it was decided to develop into a permanent web based tool for collecting data and information in the field of extranets use. One of its base element will be continued survey collections. Other is to establish web forum for professionals to share knowledge between themselves. Discussion shall be on the ground of newest survey results.

Since the idea is to analyze the region of expanded European Union, survey is geographically limited. Despite the limitation the results can be in general treated representatively to many other regions of the world.

results

In this paper only selected and most representative for its subject results are presented. Detailed results of survey are available on <http://www.arch.pw.edu.pl/extranety.html> survey web site. First of all it is deeply important to come to overview on what part of population in certain countries have an Internet access in general. This is not a part of this survey therefore general statistics in that field were collected from other sources. You may see from following figure that it is not so optimistic if it goes for common Internet access around the world.

The differences sometimes seems to be confusing. This is not only about location in certain part of the world. Even in countries across Europe

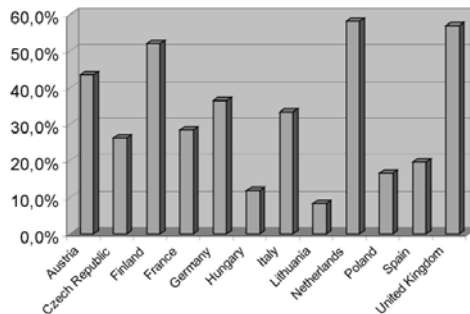


Figure 1. What part of population have an Internet access? (<http://www.nua.com>, ComputerScope Ltd.)

which in few years will be economically unified, numbers are not satisfying. Everybody think of doing business abroad what is close to idea of European Union expansion. But what about infrastructure? It also must be reminded that when there is no infrastructure there is also a lack of experience. For now it is easy to imagine that technologically advanced firms i.e from United Kingdom will have much difficulties to do business in Hungary.

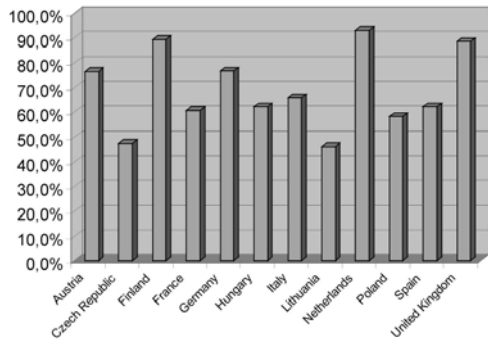
When it goes for companies the results seem to be more optimistic but still are far from expectations.

Since the survey is Internet based only it is not possible to get a data from those firms which do not have an Internet access at all. Up to the moment there were approx. 280 architectural firms surveyed from 6 countries. After preliminary study United Kingdom, Germany, Spain, Poland, Lithuania, Czech Republic were chosen to be included in first stage of this survey as most representative for a whole region.

Apart from more detailed questions to be answered in main part of the survey there are some basic, which sometimes may be confusing to answer. But when we look over final results it becomes clear that it was not without sense. Following figure shows the answers on use of elementary services in digital practice.

An answer "Project extranet!. What is it?" is not a rare one. You may ask why so? And why not so, if in certain countries there is no infrastructure good enough to cover needs of advanced collaborative design tools. Or if there is not at all academic learning programs in that field in such countries like Poland, Czech Republic and other form that region. Finally, the simplest answer is that available Internet access is to expensive to work with it on permanent basis.

The type of Internet access is crucial for a common use of project extranets. Without permanent, inexpensive access, with a speed of at least



128 Kb/s from each of directions You can not think of well organized collaborative design. According to above shown results there is still a lot to change in that matter.

Regional difference of the use of such advanced techniques like project extranets is much bigger then of other services. Up to above results there is no doubt that infrastructure and economical reasons are fundamental for a common implementations.

In next steps reasons for implementing project extranets technology were surveyed in order to get a real knowledge in that matter.

Above results show that project extranet use often becomes in consequence of other participants behaviors and standards. From one side it is good cause it makes the process extorted. From the other not necessarily best solutions will be introduced to new users. Almost the same number of respondents indicated as a reasons economical savings or workflow improvement.

Responders were also asked what are the reasons which will keep them away from newest solutions in nearest future. This was important to get an overall knowledge on a group of potential users which up to the moment have almost nothing to do with the technology.

As expected technical and economical limits are in majority. But the number of content-related reasons is big enough to get a impression that there is still much to do by commercial companies, authorities, technology universities and others to introduce the technology to a wide range of professionals.

conclusions

One of main objective of Internet based collaboration tools is their easy and wide accessibility. There is number of reasons which keep it within limits, in sometimes to a minimum. There can be 3 main groups of those reasons identified:

- Technical - among which the crucial is a wide

Figure 2. How many architectural firms have any kind of an Internet access?

Figure 3. Do You use following services in Your digital practice?

Figure 4. What type of Internet access does Your company use?

Figure 5. What level of project extranet use is Your company engaged with?

Figure 6. What are the reasons Your company started to use project extranets?

	Lithuania	Poland	Germany	United Kingdom	Spain	Czech Republic
e-mail	66.0%	78.0%	97.7%	99.2%	92.0%	76.2%
www	29.0%	43.0%	72.0%	76.4%	65.0%	45.6%
FTP	9.2%	13.4%	26.7%	42.0%	24.3%	12.8%
teleconferencing	1.2%	1.8%	15.2%	18.3%	9.2%	1.5%
firm intranet	0.4%	0.5%	5.6%	6.8%	4.2%	0.6%
project extranet	0.6%	1.1%	13.6%	37.0%	6.4%	1.3%

	Lithuania	Poland	Germany	United Kingdom	Spain	Czech Republic
none	53.8%	41.7%	23.2%	11.4%	37.7%	52.5%
dial-up	39.1%	50.0%	39.1%	36.1%	37.8%	36.4%
permanent	7.1%	8.3%	37.7%	52.5%	24.5%	11.1%
<128 Kb/s	6.2%	7.2%	25.4%	35.7%	16.9%	9.7%
>128 Kb/s	0.9%	1.7%	12.3%	16.8%	7.6%	1.4%

	Lithuania	Poland	Germany	United Kingdom	Spain	Czech Republic
never used	98.5%	97.6%	59.7%	23.8%	68.3%	96.8%
ever used	0.9%	1.3%	26.7%	39.2%	25.3%	1.9%
is using	0.6%	1.1%	13.6%	37.0%	6.4%	1.3%



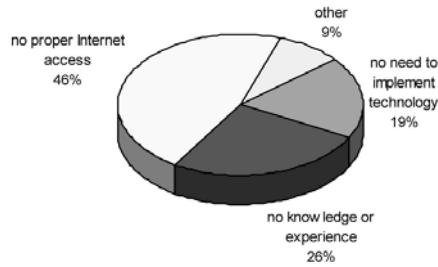


Figure 7. What are the reasons Your company will not start to use project extranets in nearest future?

diversification of an access to Internet network, beginning from no availability to a large number of people

- Economic - among which the costs of an access and use of Internet network exceed any potential advantages and benefits
- Content-related - among which the main is a lack of knowledge or experience in using it

These are quite elementary reasons for users used to technological advantages of technology leading regions. But with no doubt eliminating those limits will play fundamental role in future implementation of web based collaboration tools into a day-to-day practice throughout the European multi branch firms. Until those tools will not find wide-ranging applications in those firms in our region there is no chance to establish an effective collaboration between them and in consequence us European architects. And if not then the fundamental idea of that architectural e-revolution will collapse at the beginning. What is most worrying that soon in era of globalization it will not be just the problem of those who do not follow but as well of those who follow.

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