CONTRIBUTION OF INFORMATION TECHNOLOGIES TO WORK ORGANIZATION AT THE COVID-19 PANDEMIC

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Abstract. *The article presents the result of an analysis of existing information technologies for organizing remote work in the context of the COVID-19 pandemic. As an example, we considered table of eight free available features for seven shareware services that provide communication capabilities, namely, conferencing, meetings, education, and monitoring. The necessary contribution from IT, management, and economic science are presented.*
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One of the consequences of the COVID-19 pandemic is the transformation of labor relations and the restructuring of enterprises (Ivanova, 2020; Meister, 2020). Now the importance of the product is taken into account, and not the process of its production. When optimizing the costs of the production process, a minimum of human contacts is put as the basis. These trends are seen in education as well (Li, 2020).

The interaction of employees in the labor process is more and more reduced to information exchange. Therefore, the worktime and workplace may be arranged differently. In particular, the large-scale introduction of cloud technologies and virtual services makes it possible to move workplaces into virtual space. Virtual labor organization and virtual control of the result can reduce the number of employees and increase labor productivity, increase the efficiency of the invested capital. Banks are an example of such an organization of work. They were among the first to implement the concept of a digital workspace, introducing electronic payment systems and minimizing the need for direct communication with customers using ATMs and mobile applications.

The effect of the coronavirus has been twofold. On the one hand, the experience of self-isolation has shown that the organization of remote work for a significant part of the team is a completely viable option. You can save on the rental of office space and wasted time and money on the way to the office and reduce the cost of office supplies. On the other hand, many people rightly perceive even minimal protective measures as restrictions on individual rights, especially freedom of movement. Nobody knows how long the coronavirus situation will last. Therefore, no one began to invest large additional funds in the development of virtual tools and systems. On the contrary, existing information systems were used under stress conditions. This led to the ranking and selection of these systems in terms of reliability, simplicity and ease of use. Ultimate overloads reveal the poor choice of even the smallest details of the system implementation, weed out solutions that are not designed for the long term, do not meet all the required standards and have technical flaws. This should be taken into account: many will remain dissatisfied with the result of work during the COVID-19 period and will not consider options for switching to such systems after the pandemic because of negative experience.

As an example, we analyzed in this paper distant conferencing services that resolve communications requests. Leaders need to hold meetings, site approvals, and other events, teachers need to teach lessons, employees need to exchange information in the process of collaboration, etc.

The emergence of this largely stressful operating experience has exposed many of the complexities in this element of virtual reality. Poor connection quality, inability to download a presentation, etc. make it

very difficult to work. Even such a small detail as the ability to upload your photo or create a unique avatar turned out to be critical: if the system offers a limited choice of characters, many similar participants appear during a conference in an expanded format, and this creates certain difficulties. The problem of choosing between a commercial platform with increased comfort and free, but with limited options becomes acute.

Table 1

Comparison of 7 free distant conferencing services

Service name	Skype[1]	Google Meet[2]	Proficonf[3]	CISCO Webex[4]	ZOOM[5]	Uberconference[6]	Oovoo[7]
Participants	≤50	≤100	≤25	≤100	≤100	≤10	≤12
File storage	yes	no	≤500 Mb	no	no	no	no
Video recording	yes, stored ≤30 days	no	no	yes	yes, ≤40 min	audio only	yes
Time	unlimited	unlimited	unlimited	≤50 min	≤40 min	≤40 min, audio only	unlimited
Need software installation	yes	yes	no	no	yes	no	yes
Support	no	no	yes	yes	yes	yes	no
Screen demonstration	yes	yes	yes	yes	yes	yes	yes
Presentations upload and demonstration	no	no	yes	no	no	no	no

[1] https://www.skype.com/en/
[2] https://meet.google.com/
[3] https://sourceforge.net/software/product/Proficonf/
[4] https://www.webex.com/
[5] https://zoom.us/
[6] https://www.uberconference.com/
[7] https://www.oovoo.com/oovoo/

Source: Composed by authors

In *Table 1*, we present a comparison result of several free conferencing services. To evaluate options, services were tested. Some systems are available in both a limited free version and a commercial version. In this case, only the freely available options are shown.

Conclusions. Investments are required in the development of communication tools for various fields of activity and in training in their use. Great efforts should be made to provide maximum information support for those works that are not fully implemented through a computer or in an office, such as transport, catering, manufacturing, tourism, medicine, etc. Particular attention should be paid to the security and physical vulnerability of IT equipment.

The pandemic has given a powerful impetus to the development of virtual reality. It has become an unprecedented challenge for specialists in the field of IT, economics and management, putting forward the task of developing new methodologies for the work organization.

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