0.Design of the computer program-apparatus system of the virtual personal cabinet's in university network for scientists, teachers and students

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   Results

The essence of the design is to create the remote access system of user to the means his own work cabinet with providing the virtual presence effect.

And to provide by that the possibility for executing in remote mode on the server and on workstation the programs which applicable in work cabinet. By that don't restrict the possibility down to the limit: to give the possibility for duplex audio-video intercourse, to have the access to local and national mobile communication, access to the means of audio and video casting. To have the possibility for control and monitoring of the means of the science experiments in science and training laboratories.

The virtual cabinet (VC) based on prevalent remote desktop connection equipped additionally by the apparatuses and programs for achievement of the functional completeness.

This is new type of the virtual cabinet for scientist, based on local cabinet workstation and server computer system. The system support the distance access from Internet, to provide maximal approximation to the local work – to create "effect of presence".

The essential difference from virtual cabinets wide proposed in Internet - it's to providing the virtual presence the remote user on the workplace and don't loss the possibilities of the local cabinet.

The well known personal cabinets it is almost the ordinary personal information sites with minimal means for interaction – text interface for question/answer in off-line. They may be good addendum as application or service but it would be to improve for interaction on-line over audio-video.

It was designed the structure and software architecture for VC realization. It was proposed the set of technical means for workstation equipping.

For connection to VC system the technical means of the science experiments and possibility to control from servers it was investigated the possibility for moving over Internet the USB interface.

It was designed pilot version of the VC system based on Windows2008R2 and connected to it the personal cabinet of scientist. If was verified the possibility media communication over remote access. Was developed project of the software for VC function support.

Were analysed the software solutions for redirecting video streams from workstation to server, as that was done in Windows2008 TS for audio stream. Those solutions important for work VC because don't depended from video-equipment type. It was designed the project of the software for Windows2008 TS. There is the hope that Microsoft to develop this software for Microsoft TS in the short future.

Have proposed the system realization in future based on distributed virtual computer (DVC) , which may apply Java VM. This may give the possibility significantly extend the function of the system and improve the effectiveness of the science labour and computer resources utilization after design in Java VM the mean for process interaction over Inernet and means for optimization the process distribution between VM nodes.

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