$$Kt = \sum_{i=1}^R v_i t_i,$$

где R – количество целевых рынков компании.

4. Определение показателей перспективной конкурентоспособности компании:

- оценка резервов повышения эффективности работы компании (резервов реализации КФУ) на каждом целевом рынке,
- определение перспективной конкурентоспособности p_i каждого i -го целевого рынка,
- определение показателя перспективной конкурентоспособности компании как суммы произведений коэффициентов перспективной конкурентоспособности каждого целевого рынка компании на соответствующий показатель важность/перспективность этого целевого рынка:

$$Kp = \sum_{i=1}^R p_i v_i,$$

где R – количество целевых рынков компании.

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Integration of the automated control system into the educational establishment

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doi: 10.18411/sr-10-02-2021-60

idsp: sciencerrussia-10-02-2021-60

Abstract

This article deals with issues related to the integration of an automated control system into an educational establishment. Here we talk about the main tasks of this project, highlighting possible challenges and potential results.

Keywords: automated control system, integration, management.

At present, the information space is integrated into all spheres of modern life. [1-3]. Modern technologies allow significant optimization and simplification of labour and communications, as well as acceleration of the production and training process. Information Technology are widely present at all levels of education. Most classrooms in modern schools have interactive and projection equipment. Overwhelming number of Higher Educational Institutions have a very advanced material and technical base, which includes traditional visualization tools, as well as equipment for conferences, online broadcasts, etc.

In the current reality, regardless of the type of educational institution, each office is an autonomous element, meaning that each equipped room is an independent system. The exception is the interaction of computers with the Internet, the global world information transmission system. Regardless of the type of hardware or software, each of the elements of the system requires maintenance, modernization, updating and other regulatory actions. This in turn creates the demand for a large number of IT specialists among the staff, a complex plan for regular checks and required work. Classrooms have a high workload due to a tight schedule, which leads to the problem of irregular maintenance of a specific system and can result in negative consequences.

The integration of an automated control system into existing systems can be introduced as a solution to this problem. The purpose of the deployment of this system is full control and monitoring in real time for all hardware and software, as well as complete control and management over facilities from lighting and climate to video conferencing.

An authorized control system assumes the transmission of multimedia, both audio and video, and control signals to any room using a simple one-step control system. The control and management of the room systems is carried out by the control processor using special software and interface blocks, which are interconnected using appropriate converters and extenders.

Automated control systems combine the wide range of electronic equipment, such as computers, projectors, audio amplifiers, signal switching facilities, etc., into a single interconnected system.

Many ready-made hardware and software systems assume the presence of a control panel and a multisystem monitor, which allows interactive control of the entire complex. Control is carried out remotely from anywhere in the room via wired / wireless keypads or touchpads. Smartphone or tablet can also be used as a control tool.

Any type of authorized control system and any methods of forming this complex will face the same set of the main tasks:

- Real-time monitoring of equipment condition;
 - Remote access to resources;
 - Elimination of routine operations that do not require direct interaction with the device;
 - Speeding up the process of response to emerging errors and problems;
 - Improving the accuracy of data on the condition of equipment;
 - Simplification of accounting documentation;
 - Expanding the capabilities of a particular room, through the use of more technically advanced offices, through interactive tools and video conferencing
 - Simplification of interaction between elements of the system.
- The main challenges of implementing an automated control system:
- High cost of all the necessary equipment and software licenses;
 - Significant time of project development;
 - Requirement for a partial reorganization of the formed IT structure;
 - Temporary increase in the workload on IT employees during the implementation of the system;
 - Requirement to form a qualified team for the implementation and maintenance of the system.

The fulfilment of this project of implementing of automated control system, is expected to obtain the following results:

Significantly improve the quality of the educational process by obtaining the opportunity to use the advantages of specialized classrooms in any room;

Provision of automatic collection of objective information on the operation of the equipment, which is necessary for strategic planning and assessment of the effectiveness of the use of equipment in the educational process. Significant reduction of the labour costs associated with the need to collect, pre-process, analyse and use this information, while increasing the effect of its use;

Introduction of equipment operation monitoring will lead to reduction of equipment operation costs due to the organization of regular maintenance;

Automation and simplification of equipment control and management processes will significantly increase the productivity and quality of work of service personnel;

It is possible to reduce the number of maintenance personnel by simplifying the procedure for management, monitoring and configuration changes, which in turn will allow to redistribute the functional responsibilities of IT employees.

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