

Automation of control and analysis of execution of official duties and instructions in the hierarchical organization

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Abstract. The article considers the problem of monitoring over execution of official duties of employees. This problem is characteristic of the enterprises having a hierarchical management structure. The functions and the modes of monitoring are defined, the types of analysis of the staff activities are provided. The description of the program complex allowing distributing functions and instructions for between the employees is given. The developed computer program allows tracking the performance, creating reports. The computer program has a demarcation of access rights and provides the can be operated in both local, and a large-scale network.

1 Introduction

When the bosses are beginning to think about automation of their business or organization, they are usually interested in complete solutions. Automation of the production, financial and accounting aspects are fundamental to the work of the enterprise. But it is equally important for successful business to be automated personnel and managerial aspects, which could be the basis for the optimization of management processes in an enterprise or organization.

If you look at the problem of optimizing of the management process from the outside, we see interpersonal interaction as the structure "the boss - subordinate". The feature of this interaction is that the same person can be the chief and a subordinate. At the same time it is the structure of interpersonal interaction "boss - subordinate" in general, is a multi-level hierarchy.

In any company bosses give orders to their subordinates. In small companies or in structural units orders are usually given orally. In this case, the boss or manager remembers orders, to monitor compliance. In the medium and large companies or structural units the number of orders is large enough. Orders made in writing in form of orders, resolutions on the various types of documents. There are different special services office. But even in these circumstances, the bosses can have problems controlling their orders. This creates an opportunity for staff of any changes in the terms or execution of orders in general. As a result of this fall performing discipline of employees may lead to a decrease in effectiveness of the company or organization as a whole.

Automation of control over the execution of orders would be true to the company's development direction.

2 Methods of control of execution of orders

There are two types of control: on the essence and timing. Monitoring essentially involves assessing the correctness and completeness of the performance of the assignment. Time-control must ensure the timely execution of orders [1].

There are two basic ways to monitor the performance of official duties and assignments: manual and automatic. The manual method is labor-intensive and highly dependent on the human factor. Currently, with the development of information technologies on the market there are several ways to control automated embodiments, from implementation to function in Excel HRM systems [2-5]. Implementation in Excel is simple enough, but do not have a sufficient number of functions, such as there is no connection to the network. Modules HRM systems have full functionality, but they are quite complex, expensive, and are inextricably linked with other modules, which are not always needed. Therefore, it was decided to set up its program implementation

3 Program description

The Software of accounting performance of official duties and assignments was developed. The software enables to set official duties and assignments for subordinates and to control fulfillment and generate

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reports. Duties are periodic (daily, weekly, monthly, quarterly, annually, etc.). Orders are ad hoc and are not periodic. The Software can be used in a variety of companies which have multi-level hierarchical structure "the boss - subordinate". Duties and assignments are accompanied by the documents. Documents - a regular files, most of them are pdf or word, but there may be other types.

The employee logs in with his or her username and a password. All employees will be divisions bosses and subordinates (bosses only or subordinates only), depending on the position. Bosses can assign duties and orders for subordinates and monitor their implementation. To official duties and assignment files can be attached, such as the implementation of the instructions. Typical duties will be entered by administrators or staff, endowed with the necessary powers.

For example, for the university, the main boss is the rector. He may assign duties and assignments to all employees. He usually appoints duties for closest subordinates, pro-rectors, directors of institutes and higher schools, heads of departments. Vice-rectors may assign duties and assignments to all employees, except the rector and vice-rectors.

Institutes, high schools are located on the second level of the hierarchy. In institutes and high schools the main boss is director. He is subordinated to the rector and vice-rectors and boss for all their divisions. Deputy directors are also the heads of all employees of the division, except for the director and the other deputy directors.

At the third level of the hierarchy there are departments. The head of the Department is subordinate to the rector, vice-rector, the director and his deputies and the head of the department for all employees. Deputy head of the department is usually the academic secretary, who is also head of the department for all employees except the head of the department. Other employees are generally not superiors and subordinates only. In exceptional cases, the department may include laboratory. The Chief of the Laboratory is a subordinate head of the department and the boss for all laboratory staff. At the head of the laboratory may be substituent which is subordinate chief of the laboratory, and the chiefs of all other lab employees.

For the plant a similar hierarchy can be built. On the first level is the management (director, deputy), on the second level are departments (head of department, deputy), at the next level are plots (master, foreman, deputy), and at the next level are the other subordinates.

Subordinates receive official duties and assignments and execute them. After work, they make a mark in the

program about a date. Bosses perform controlling execution and make organizational decisions.

Administrator performs a special role in this system. He performs the initial filling of the database, introduces a hierarchy of departments and positions of employees indicating the position and the department in which the employee works. Instead of entering the administrator can do the import data from the human resources department, or another database. Each employee is assigned as user name (login) and password, which he can change at their discretion.

After starting, the program opens a window with the following tabs:

1. Duties.
2. Orders
3. Subordinates.
4. Messages.
5. Divisions.
6. Personal data.

On the tab "Duties" employees can:

- assign duties itself, and bosses assign duties for subordinates;
- put a mark on the execution of the assignment, indicating the date of implementation responsibilities;
- download and view documents accompanying duty;
- view the history performance of duties;
- bosses can view as subordinates acted;
- prepare and publish reports on the performance of duties.

On tab "Order" employees can perform the same action as in the tab "Duties", only with the orders, except for watching stories, because orders and one-off stories are not.

On the "Subordinates" tab bosses see the table of their subordinates. For each subordinate boss sees the course of performance of official duties and assignments. He can assign new duties and assignments, and may cancel them, except those appointed a senior chief. On this tab, boss can also see what is not made to date. Staff can prepare and print reports on the execution of duties and assignments subordinates. On the tab "Messages" users can write messages of other users, and send it. Staff can also view sent messages. The message can be attached to the files. Unwanted messages can be deleted.

On the tab "Divisions" the user sees a division in which it operates, as well as divisions for which he is the boss. It is possible to generate and print reports on the execution of duties and assignments the staff of subordinate divisions.

On the tab "personal data", the user can see and update details, such as name, surname, date of birth,

home address, passport data, the user name (login) and password.

For example, the head of the department instructs all employees to write an article and abstracts for the conference. The form must be filled in the program shown in fig. 1. In this form should indicate the order text, execution date, department, position and attach the necessary files. After this, all the subordinates see this order in its program in the window shown in Fig. 2. After execution of the order the subordinate makes a note on the implementation and indicates the due date, as shown in Fig. 3. The boss can see information about employees who have not completed at the moment the order. An example is shown on Fig. 4.

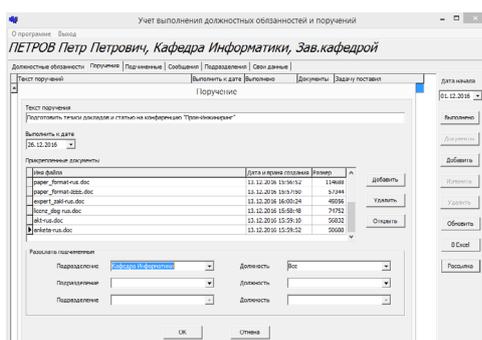


Fig. 1. Enquiry Form subordinate distribution.

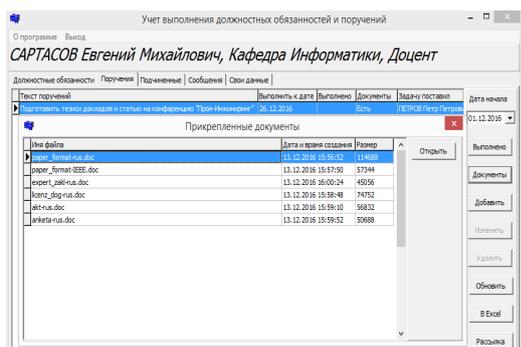


Fig 2. Subordinates browsing orders.

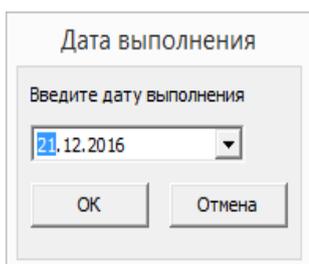


Fig. 3. The mark on the implementation of the order.

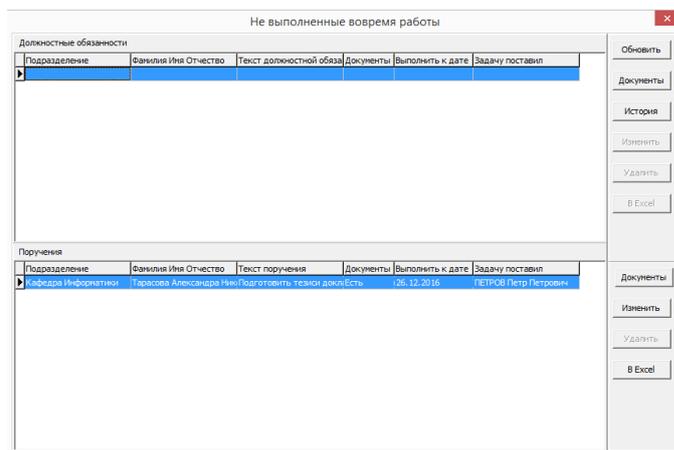


Fig. 4. Window shows not performed official duties and assignments.

Conclusion

As a result, the authors offer a complete software product that allows you to automate routine operations managers of different levels. The software is easy to use, has an intuitive interface. The program supports setting permissions. The program is implemented in the network version, and can operate in either a LAN or via the Internet

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