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THE TECHNOLOGY OF INFORMATIONAL SUPPORT OF IT-SPECIALISTS MOTIVATION MANAGING PROCESSES

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Abstract. *The article introduces a new informational technology of supporting IT-specialists motivation managing processes at industrial enterprises. Its architechtural decisions, the stages of informational support implementation and methods of practical using of the developed informational system are viewed.*

Keywords: informational technology; motivation; needs; reason.

1. Introduction

Human resource management systems which exist in this country and abroad including corresponding program units of Enterprise Resource Planning automatize the main functions of managing the staff at industrial enterprises.

However an important scientific and practical task of managing the staff's motivation doesn't have its scientific or practical solution.

There are several reasons for that:

– the variety of methods evaluating specialists' motivation and their criteria;

– the insufficient level of formalization of existing methods and their algorithmization.

This article studies a new informational technology for supporting motivation management processes which solves the above mentioned problem.

The aim of the article**:** to introduce a new informational technology of supporting IT-specialists motivation managing processes.

2. Analysis of last researches

The received scientific and practical results of the new informational technology of supporting IT-specialists motivation managing processes are based on the such notions as “informational resourses” and “informational processes” [2, 3].

Fig. 1 shows the chart which defines the structural elements of the suggested informational technology.

Information resources – a set of data organized for efficient reliable information [4].

The author uses the information resources in the form of developed models, methods, databases, procedures and processes.

Informational processes are the processes of getting, storing, transforming and transmitting information. The content and character of informational processes are defined by the functional and the structure of the informational system supporting the making of a multicriteria management decision, the choice of motivator complex.

Informational systems as a whole of organizational and technical means for storing and processing information are meant to increase the effectiveness of managing activity due to satisfying informational needs of the users [1, 9].

As practice shows in the process of realising informational systems only certain functions are automized, that's why it is highly important to define clearly what needs to be automized and with what means, because groundless choice may cause significant losses [7, 8].

Informational technology allows to analyse complex alternative solutions with an aim to choose motivators complex taking into account the staff's motivation types and the level of motivators satisfaction which meet the corresponding needs of the staff, it allows also to make decisions on the usage of that or another complex of motivators.

Organizing the process of informational support is shown on Fig. 2.

3. Stages of implementing of informational support

Stage 1. Defining the employer's needs.Having the results of decomposing a human being's needs into main gropus the task of formalization is to ascertain the correspondence of motivators to certain needs (it is achieved with the help of expert evaluation).

Stage 2. Ranking the needs and motivators.On the basis of the known staff and expert evaluation results a ranked list of needs is formed according to motivation types, the list is the basis for receiving a ranked list of motivators for the activity of the staff.

In case of having some restrictions in provision (financing as a special case of provision), a new

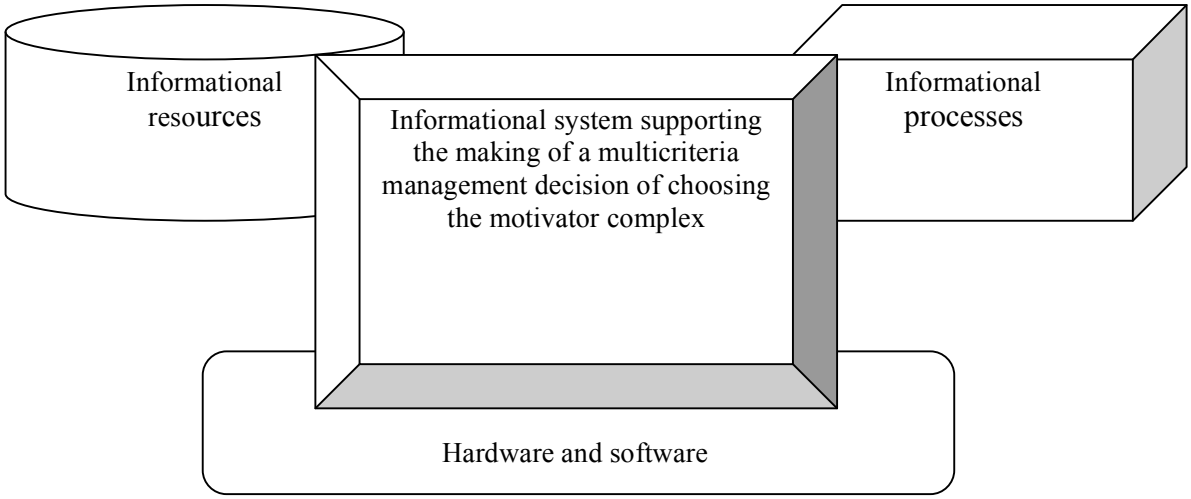

Fig. 1. Chart showing the elements of the technology of informational support of IT-specialists motivation managing process

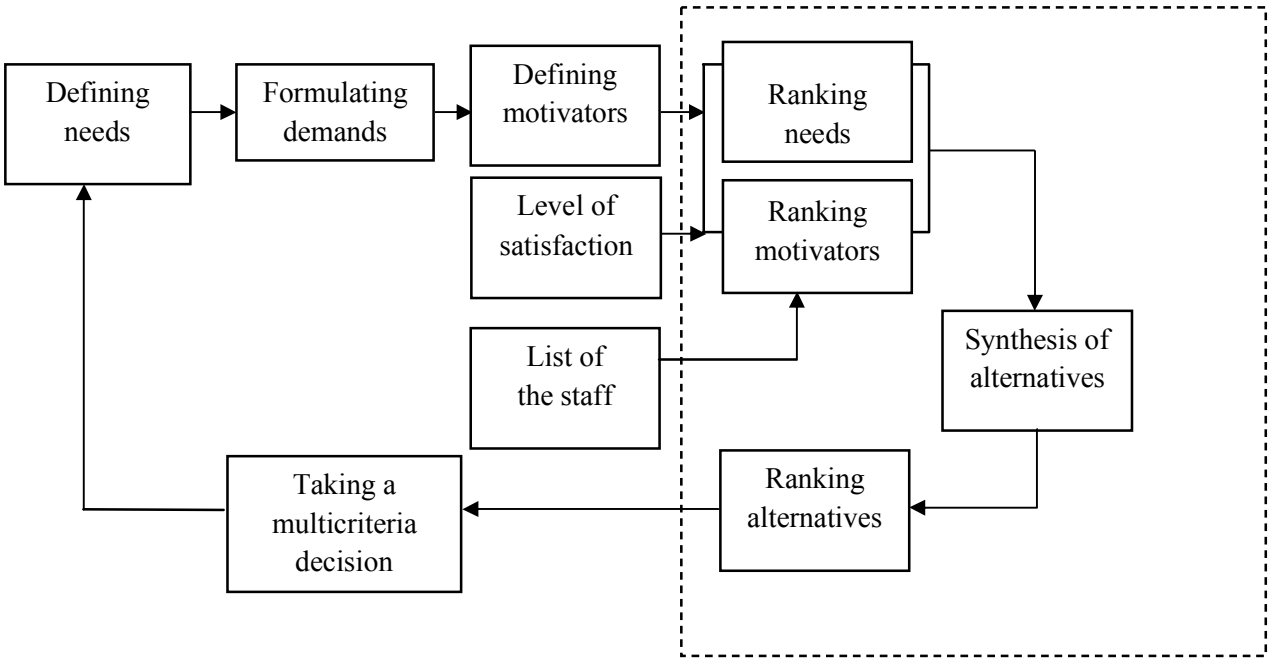

Fig. 2. Organizing the process of informational support of IT-specialists motivation managing process

level of provision is defined by the given number of motivators which is also taken into account while ranking.

Stage 3.Using the data received on previous stages we conduct the synthesis of alternatives and modelling the variants of using motivation complexes according to the methods developed [5, 6].

The evaluation of alternatives is based on the results of ranking their correspondence with motivation complexes which also takes into account quantitative and qualitative structure of employees and the level of financial support of the defined motivators group.

On the basis of the assessment got the decision is made about using this or that motivation complex.

Stage 4. In case of rejecting the recommended motivation complex due to some reason modelling is conducted again with other factors of financing motivators and/or the other staff members which gives the posibility to get some alternative ways of solving the managing task.

The sequence of actions can be realised due to the functional structure created by the informational technology, and in the case of realising this sequence the user gets necessary information for choosing that or another motivators complex with the prediction of IT-specialists needs satisfying in view and it may be done with the help of using a set of motivators with a certain level of their financing (Fig. 3).

Practical implementation of the following informational technology is done with the help of automatised informational system "ICS_MC".

Automatised informational system represents an instrument which allows to select informational resources and realise informational processes.

The functional structure of informational technology describes the interconnection of theoretical statements, methods, algorithms, procedures and applied programs of "ICS_MC" informational system.

Informational system as the management system is closely related to the systems of storing and giving information as well as to other systems which provide the exchange of information.

Storing information is suggested to organise in a centralised common database which is managed by relational Information Management System.

Taking into account the necessity to minimise the price of IS as well as interviewing experts MS SQL Server has been chosen for developing databases of informational support of IT-specialists motivation managing process.

For database development a relational model has been chosen as the most wide-spread.

As the main factors which describe informational support of IT-specialists motivation managing process the following have been selected:

– type of activity;
– person's need;
– motivators;
– employee;
– motivation type;
– complex of motivation indices;
– calculating model.

The indices used in the process of informational support of IT-specialists motivation managing are received as a result of formalisation of the needs and motivators and they are also used as the attributes of derived logical model's nature of the database.

To get ready the initial data necessary for the informational support of IT-specialists motivation managing process the expert must fulfill the following functions:

1. To prepare the lists of needs which IT-specialist have, to determine corresponding motivators, which will influence the needs of IT-specialists. To receive expert evaluation results.

2. To fill in the database with the information about the employees, the list of the needs and their ranking, motivators.

3. The result of the expert's work is a model supporting the decision-making about the leading motivators complex.

The Person Making a Decision (PMD) is responsible for the synthesis and choice of the alternative which is the most satisfying the demands expressed by the following functions (Fig. 3):

1. Entering the initial data which is necessary for conducting automatised calculation with the restricted financing taken into account.

2. Synthesis of alternatives according to the algorithm. After the synthesis the variants are sent to the analysis block which evaluates the ranks of motivators taking into account motivation types ranks the alternatives on the basis of modelling the staff's structure.

The ranked list of alternatives is the basis for making a multicriteria desicion on choice of motivators complex.

3. Making a multicriteria decision on using the complex of motivators which satisfies the quantative and qualitative structure of the staff and the needs (Fig. 4).

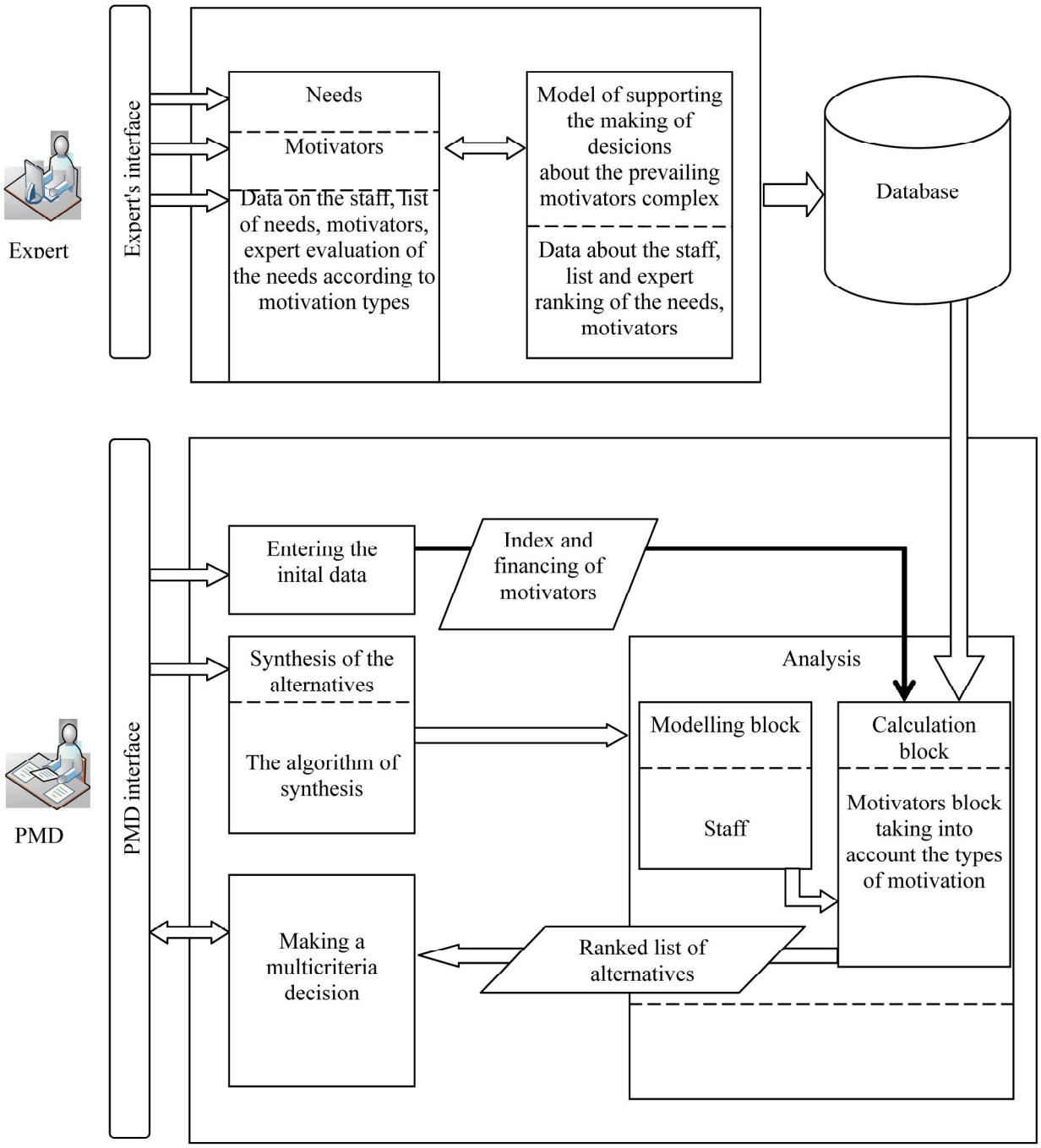

Fig. 3. The functional structure of informational support of IT-specialists motivation managing process

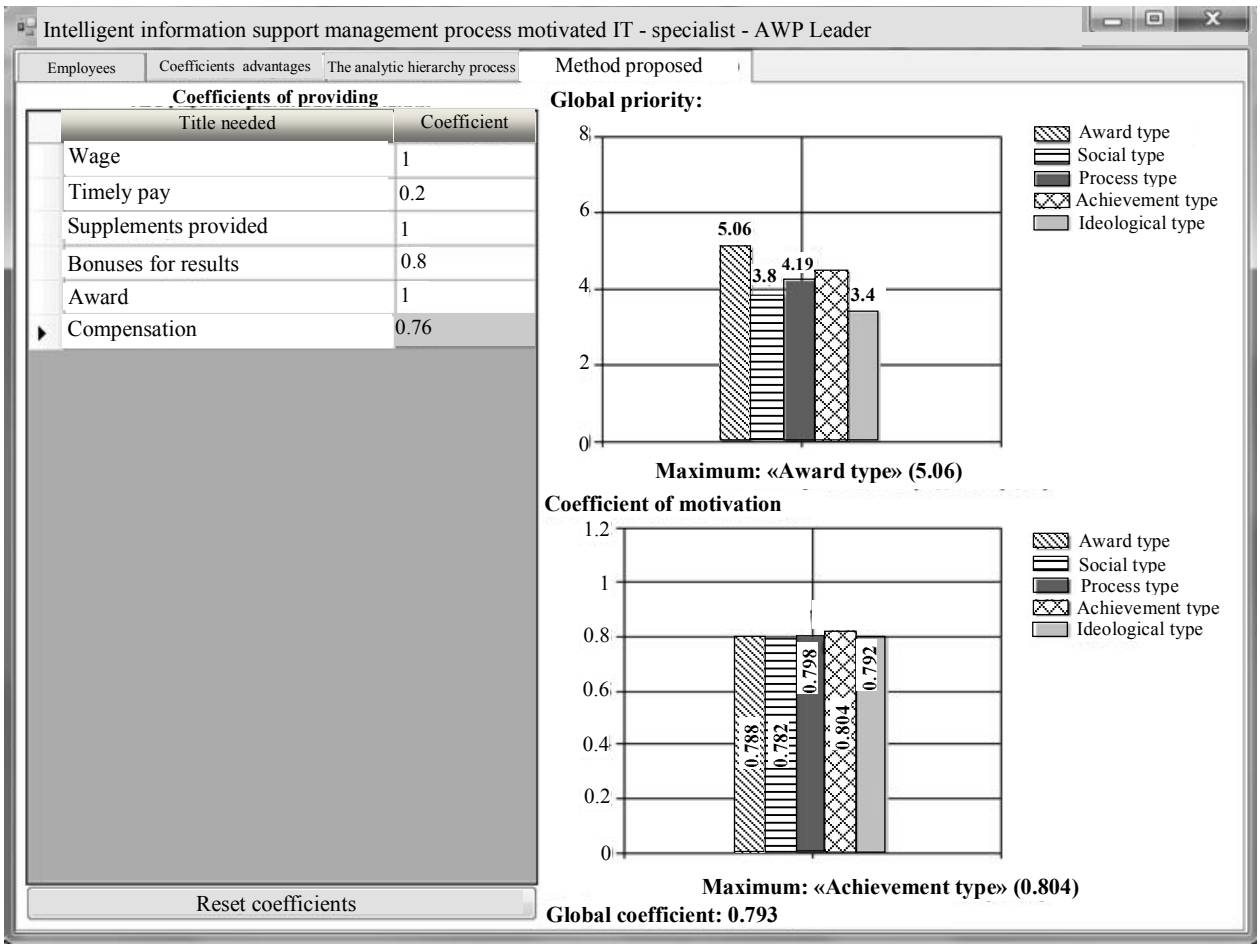

Fig. 4. A fragment of the created automatised informational system "ICS_MC"

4. Conclusions

The developed informational technology of supporting IT-specialists motivation managing process implements theoretical thesises, models, methods, algorithms and procedures with the help of created automatised informational system "ICS_MC".

It allows tne managers of enterprises to get the evaluation of work motivation level at a certain enterprise using different levels of motivators' provision. It can be done for any motivators complex and it allows to make multicriteria decisions about using the motivators complex which satisfies the staff's needs and demands more fully.

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С.В. Козьяков. Технологія інформаційної підтримки процесів управління мотивацією ІТ-фахівців
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Подано нову інформаційну технологію підтримки процесу управління мотивацією ІТ-фахівців на промислових підприємствах. Розглянуто її архітектурні рішення, етапи реалізації процесу інформаційної підтримки та методику практичного використання розробленої інформаційної системи. Розроблено інформаційну технологію підтримки процесу управління мотивацією ІТ-фахівців на промисловому підприємстві, яка реалізує теоретичні положення, моделі, методи алгоритми та процедури за допомогою створеної автоматизованої інформаційної системи «ICS_MC». Показано, що така автоматизована інформаційна система дозволяє керівникам підприємств, використовуючи різні рівні забезпечення мотиваторів, автоматизовано отримувати оцінки рівня вмотивованості праці на підприємстві для кожного комплексу показників мотивації ІТ-фахівців базового підприємства та ухвалювати багатокритеріальні рішення про застосування переважного комплексу мотиваторів, який найповніше задовольняє кількісний та якісний склад персоналу підприємства та вимоги.
Ключові слова: вмотивованість; інформаційна технологія; мотивація; потреби.

С.В. Козьяков. Технология информационной поддержки процессов управления мотивацией ИТ-специалистов
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Представлена новая информационная технология поддержки процесса управления мотивацией ИТ-специалистов на промышленных предприятиях. Рассмотрены ее архитектурные решения, этапы реализации процесса информационной поддержки и методика практического использования разработанной информационной системы. Разработана информационная технология поддержки процесса управления мотивацией ИТ – специалистов на промышленном предприятии, реализующая теоретические положения, модели, методы алгоритмы и процедуры с помощью созданной автоматизированной информационной системы «ICS_MC». Показано, что данная автоматизированная информационная система позволяет руководителям предприятий, используя разные уровни обеспечения мотиваторов, автоматизированно получать оценки уровня мотивированности труда на предприятии для каждого комплекса показателей мотивации ИТ-специалистов базового предприятия и принимать многокритериальные решения о применении преимущественного комплекса мотиваторов, который наиболее полно удовлетворяет количественный и качественный состав персонала предприятия и требования.
Ключевые слова: информационная технология; мотивация; мотивированость; потребности.

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