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COMPUTER NETWORKS AS AN ELEMENT OF LOGISTICS INFORMATION SYSTEMS

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ABSTRACT

Objectives: Determine the place of network in a logistics enterprise system. Offer the parameters system of an estimation of computer network operation efficiency.
Methods/Statistical analysis:In order to build logistical information systems that can be used to solve practical and economic issues, the following stages are needed:
1. Data and information required for the use of logistics information systems.
2. The mathematical model design enables the use of logistics information systems.
3. Building a system for simulation and presentation to conduct the necessary applications and achieve the desired results.
4. User Interfaces
And using the objectively estimate efficiency computer networks (ECN), it is necessary to determine its share in profit of the enterprise, less expensive directly at networks.
Findings:In this paper the place of the network in a logistics enterprise system is determined. The parameters system of an estimation of computer network operation efficiency is offered.

Application/Improvements: This methodology has been applied in the Computer Networks Department of KTC in Jordan

KEYWORDS: Computer network, logistics system, Efficiency, Model, Estimation.

1. INTRODUCTION

Goff describes the concept of logistics to have evolved from the military's requirement of supplies as they moved from their base to a forward position. In ancient Greek, Roman and Byzantine empires, there were military officers with the title 'Logistikas' who were accountable for financial and supply distribution matters. In fact, the Oxford English Dictionary defines logistics as 'the branch of military science having to do with procuring, maintaining and transporting material, personnel and facilities.'

As Goff illustrated, the logistics system started only in the 1950s. This was mainly due to the mounting intricacy of supplying one's business with materials and shipping out products in a progressively more globalized supply chain, calling for experts in the field.

Logistics have either internal focus or external focus discussing the flow from originating supplier to end-user. This is popularly known as Supply Chain Management (SCM). Bayarov says that logistics managers blend a general knowledge of each of these functions so that there is a coordination of resources in an organization. One form of logistics optimizes a steady flow of material through a network of transport links and storage nodes. The other concept harmonizes a sequence of resources to carry out some project.

The concept of logistics requires the process of planning, implanting and controlling the efficient, cost-effective flow and storage of raw materials, in-process inventory, finished goods and related information from point of consumption for the purpose of conforming to customer requirements.

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These days, logistics do not merely involve the main activities of transporting, warehousing, packaging, and related activities but have become a specific part of the management's view and is not a functional company task any more like transport or distribution.

The concepts of the logistics system are focused on cooperative logistics concepts like Supply Chain Management, Efficient Consumer Response (ECR) or Quick Response (QR). Ni Wang, Jye-Chyi Lu and Paul Kvam declared that these concepts are actually discussed in recent logistics publications, were typical descriptions of temporary logistics systems are characterized by notions of push/pull control logic, postponement/decentralization of stock keeping as alternative or complementary strategic opportunities for the design of logistics networks.

A market economy in the logistics systems is becoming more widely used in practical activities of the various enterprise. In any form modern business tightest way assumes interests and set individual object stakeholders and achieve effective implementation is only possible with the principles of logistics management, allows us to trace the role of all elements of logistics systems. The market has everything that you need for the activities of the organization or enterprise: materials, equipment for energy resources, labor, information, and services. Demand in all of this met by a loan.

2. THE CONCEPT OF LOGISTIC

Logistics is the science of planning, control, transport management, storage operations of raw materials and materials, from buyer to consumer, as well as the transmission, preservation, and processing of data and information. The experience of industrialized countries (European, American and Southeast Asian countries) Gives access to higher values of economic indicators within firms or institutions than traditional methods of organizing productive economic activities. The use of logistics systems has led to an increase in the efficiency of the activities and productive capacity of enterprises or companies, through the provision of information and data needed and the use of modern technology to process information.

Based on these concepts, there are many logistics systems that consider computing to be the most important resource for implementing active logistics capabilities to achieve the highest profits.

The productive companies direct all their capabilities to design and develop computer networks within the company to keep pace with the technology to control the accounting and control of expenses, and through the use of information systems and computer networks can recover some expenses over a period of time is estimated by three or four months.

Therefore, the problem of designing computerized information systems for control and control based on logistics concepts plays an important role in all economic activities.
In order to build logistical information systems that can be used to solve practical and economic issues, the following stages are needed:
1. Data and information required for the use of logistics information systems.
2. The mathematical model design enables the use of logistics information systems.
3. Building a system for simulation and presentation to conduct the necessary applications and achieve the desired results.
4. User Interfaces

3. THE PROBLEM

Custom product business entity receives: organizing their activities, which can be formed the conversion, materials processing, and component parts into a new product, affixing services, information processing and intellectual activities: Engineering, designing a new product range of product, strategic planning.

The most important aspects of the activity are to analyses response to market demands, as a result of which it may be necessary not only to increase the volume and quality of production but in the development of fundamentally new products. In this sense, we can talk about the marketing perspective.

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New development requires a change in the work of all services and departments – supply, production, distribution, and transport.

We are talking about the need to adjust the logistics process with an automated logistics process control system, provides a flexible response to the production needs of the market.

Comparing the efficiency of each of the elements logistics structure by comparing its share in the profits, you can plan affects the characteristics of these elements to improve the efficiency of all logistics structure.

Considering the known target, objectives, and method of logistic, define a place for the computer network link layer in the logistics system. In our view, computer networks management without regard to its participation in the latter cannot be considered complete.

If you have in mind production, until recently of problems with computer equipment solution implemented through the establishment of data centers.

Where concentrated appropriate technical means and experts. A computer center is a local unit. Clearly expressed as an independent administrative unit in the structure of the enterprise (or organization). It is the operation, personnel, logistical support, and share in the profits of the enterprise stopped, like other units.

4. THE SOLUTION OF THE PROBLEM

Modern computer technology, solving a wider range of tasks, often located in different unites.
Operation and maintenance of computer equipment in this case is provided by experts, and these units. This information base for their single computer developed by combining special technical means in a computer network.

In this way, the concepts of data center as a localized unites, it has replaced by computer networks of different levels of the hierarchy, varying complexity and purpose, computer networks functional and a certain world, organizational unification of computer equipment. Despite the apparent place compared with computing center. It is a single organism, a very important component of the enterprise structure and hence logistics system. Hardware and software joint computer network, promptly comply with functional tasks, performs processing of the current information, it is designed, engineering, planning, modeling and so on.

Thanks to them for the benefit is reduced one of the most important production parameters – Time.
In many cases the time can be a devise factor in achieving high performance. Through Units influence. On this most important terms of successful of all.

All business, what units the concepts of (computer networks), it turns out a key element of the logistics systems. That objectively estimate efficiency computer networks (ECN), it is necessary to determine its share in profit of the enterprise, less expensive directly at networks. But (ECN) it depends also on other factors, such as:

- The number and cost of equipment (n_{ob}, S_{ob} respectively),
- Indicator perfection software ensure, reflects the possibility of the software product to give the desired end result (K_{pr}),
- The cost of the software (S_{pr}),
- Qualification attendants on levels reproductive, applied, heuristic (K_{per}) and his salary (S_{per}),
- Rationality loading equipment (ʊ) which can be presented relation:

$$ʊ = \frac{actual\ loading}{downloading\ the\ resource}$$

- Indicator rationality loading personnel

$$\Omega = \frac{qualification}{class\ problem}$$

Then ECN = (n_{ob} , S_{ob} , K_{pr} , S_{pr} , K_{per} , S_{per}, ʊ, Ω).
Certainly, it may be mentioned and other arguments, determining the effectiveness of local computer networks, but it underscores their logistics focus.

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Networking production systems sales is the basis of the information and control subsystems of the logistics systems as well as providing flexible adjustment of all logistics system element and logistics of the process depending on market demand, they have specific problems as compared to the commercial computer networks, calling the maximum number of users to transmit the maximum amount of information on time.

5. THE RESULT

In this way, the local production network marketing system due to their characteristics requires approach in their design an.
d operation.
In this paper, the place of the network in a logistics enterprise system is determined. The parameters system of an estimation of computer network operation efficiency is offered.

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