



COMPUTER NETWORKS AND INFORMATION TECHNOLOGY

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ANNOTATION

Global computer networks connect subscribers located in different countries, on different continents, that is, the global network is a network that has the ability to combine computers in a voluntary state of the world in it.

Communication between subscribers is carried out in such networks on telephone communication lines, on the basis of radio communication and sputnik communication systems.

Key words: basis of radio communication and sputnik, emergence of computer networks

DOI Number: 10.14704/NQ.2022.20.15.NQ88239

NeuroQuantology2022;20(15):2505-2509

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One of the reasons for the emergence of computer networks is the collaborative use of their resources, the expansion of the possibility of a separate computer. Through the network, users can simultaneously work with the same data and file copies, applications. This situation saves space in information carriers. In addition, the combined use of a set of printer, scanner, modem, laser discs will save additional funds.

When using the network, the reliability of information storage increases, since in a very simple way valuable information can be copied again, and the exchange of information between individual users is facilitated. The network embodies the request of users, allowing many customers to use information at the same time.

- CAN (Campus-Area Network) - campus network, connecting with each other by telephone or modems, but far enough away from each other computer Local Area Network;

-MAN (Metropolitan-Area Network) extended network transmitting information over a large radius (several tens of km), able to transmit communication with a large speed (100 Mbps;

- WAN (Wide-Area Network) is a large network integrating separate networks, which are provided with large-scale (regional) special devices and programs;

- GAN (Global-Agea Network) global (International, Intercontinental) network;

3) by type of network nodes (node - the place where computing networks and their

individual elements are connected). In other words, the node also includes personal, mini - and large computers, a separate network. For example, individual computers in public use networks (in another they are also referred to as stations) are examples of nodes. Separate networks that are not very large will be nodes for the campus network.

4) according to the relationship of nodes:

-computers of the same color (peer-to-peer), not so large, of the same position (here all computers can be both "clients", that is, ordinary users of the network, and "servers", that is, providing services to network users). Macalan, distributed WINDOWS 95 OS network (Distributed) networks. In doing so, the servers serve the users of the network, but do not manage the network;

- server (Server based) or networks with centralized management. The main element of the network here is the server. The remaining nodes can use the resources of the server (for example, Novell NetWare, Microsoft LAN Manager and others).

5) on the use of network operating systems (network OS): homogenous - from the same or Close operating systems in all nodes

used (for example, WINDOWS OS network);

heterogeneous-several network operating systems are used at the same time (for example, Novell NetWare and WINDOWS).

The main capabilities of the network



depend on computers and information objects connected to the network.

Objects that generate information in the network and use it are called network objects. Network objects can be a separate computer, a complex of computers, production robots, etc.

According to the territorial location of information, computer networks can be divided into three main classes: global networks, regional (regional) networks, local (local) networks.

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Communication between subscribers is carried out in such networks on telephone communication lines, on the basis of radio communication and sputnik communication systems.

Regional computer networks bring together subscribers belonging to a region far from each other. For example, a network that connects subscribers within a city or in an economic region or in a separate country. People have been storing, extracting, processing and transmitting information since the invention of writing by the Sumerians about 3000 years BC, however, the term "information technology" in its modern sense first appeared in a 1958 article published in the Harvard Business Review. Its authors, Harold J. Leavitt and Thomas L. Wisler noted that "this new technology does not yet have a single generally accepted name. We will call it information technology (IT)." Their definition consists of three categories: processing methods, application of statistical and mathematical methods for decision-making and modeling of higher-order thinking using computer programs.

Information technologies have been actively developing since the 1960s, along with the appearance and development of the first information systems (IS).

IBM released the first hard drive in 1956, as a component of the 305 RAMAC computer system. Most digital data today is still stored magnetically on hard drives or optically on media such as CDs. Until 2002, most of the information was stored on analog devices, but that year the digital capacity exceeded the analog device for the first time. As of 2007, almost 94% of the data stored worldwide is preserved digitally: 52% on

hard drives, 28% on optical devices and 11% on digital magnetic tape. It has been estimated that worldwide the storage capacity for information on electronic devices has grown from less than 295 bytes in 2007, doubling approximately every 3 years.

Information technology is information management and processing technologies. Usually under this term is understood computer technology. In the field of information technology, work is carried out on the collection, storage, Protection, processing, transmission of various information through exposure and computer networks.

Information technology as the main technical means computing-in addition to organizational techniques, means of communication – telephone, teletype, telefax, etc. are used.

Although information technology has 2506 existed at different stages of human development, the peculiarity of the informative Society of modern times is that for the first time in the history of civilization, the power spent on the achievement of knowledge and production prevails over the costs of energy, raw materials, materials and material consumer products, that is, information technology occupies a leading position among

The complex of the information technology industry is organized by the Computer, Communication System, Data Warehouse, knowledge warehouse and related activities.

Today, information technology can be conditionally divided into "preserving, rationalizing, creating" types. The first type of technology saves labor, material resources, time. An example would be the ordering of tickets to rationalizing information technologies, systems of Hotel Books.

Creative (creative) information technologies consist of systems that produce information, use it and include a person as a component.

The progress and achievements of modern times of Information Technology indicate the need for informatization of all spheres of Science and human activity.

Informatization of society is understood as the wealth of society, which ensures the development of the economy from information, the development of the country's science and



technology, the acceleration of the processes of democratization and intellectualization of society.

The fact is that informatization of society is an objective process associated with increasing the role of intellectual activity in all aspects of human life.

Informatization of society serves to improve the standard of living of the people of our republic, the mining of social conditions, the growth of the economy and the acceleration of Science and technology.

The society informatization process can be divided into 5 main directions:

Integrated automation of cocktail, technological and production jaraeni tools.

Informatization of scientific studies, development and production.

Automation of organizational and economic management.

Informatization of the sphere of service of the population.

Informatization of training and personnel training jaraen.

The help of a computer system in obtaining knowledge, that is, in the disconnection of certain types of information, is benign. Regardless of how information is expressed, the role of computer technology in its collection, storage, operation and use is determined by:

First of all, the use of new information technologies in teaching increases the student's interest in science, accelerating the educational process in relation to the standard (traditional) system, they cultivate creative activity, a differential approach to knowledge transfer, repeat the knowledge gained, facilitate its consolidation and control, make the student a subject of the educational process.

Secondly, it will be possible to use new information technologies in the educational process in the following forms:

- * computer lessons in teaching certain;
- * computer classes-as a fictional material;
- in the organization of Group and frontal work of students;
- in the organization of scientific research of students;
- issues of proper organization of vacancies of students from reading.

Further increase in cocktail efficiency and raising the level.the adoption of multimedia information (text, graphics, video image, sound,

animation) in a large area can only go to work on the basis of the use of new intellectual tools and human machine interfaces.

If there are not enough pictures of increasing cocktail productivity in Informatics, then an increase in efficiency in the entire ring farm can occur only with a decrease.

About 50 percent of all jobs in the world are now provided with information processing tools.

Informatization of society, provision of new information technologies plays an important role in satisfying the of people to various types of information.

While the human Information world lives, the event appeals more and more boldly and in numbers in order to organize processes, their relationships and leprosy ,to find scientific answers to complex questions arising from its own life.

Thanks to information, the theory combines. Theory of practice theory does not exist or develop without.

The main goal of our plants is not to think about the importance of computer science tools, but to divide society into an understanding of methods and means of satisfying the potential of information.

This work will always be available and will be satisfied within the framework of some information. The concept of" is currently used in the study of informaticsWho surrounded 2507 humanity, is according to his services – to be a natural political, social, National. More precisely, these are the planes of one whole, which each of us eats.

At the center of these planes is an information correspondent, and he manages all the information minds: the means of managing the material information science of reality – complement, develop the energetic aspects, and in this he will be closely related to various social factors.

Of great importance in understanding information science is the study of the transformation of information into knowledge. At first glance it seems that the same ammo in a deeper study of their relationship, we see that knowledge in information has a feature of the connection between communicative "other means".

The factor of communication between people in society is the "bridge" between



departments - this is information. This means that the mechanism of transforming knowledge into information "for himself" plays a significant role in generating information. The informant is very poor, it needs a narrow range of sleeves and consists of a finite set of data, which limits the connected circle between people for thousands of years and reduces the human presence in the society information.

Today, the complex of information of various social manifestations is extensive and developed, and its role in society is negligible.

In the last period, there are big changes in Information Communication. These changes create the need for paperless technology. This in turn causes a more extensive development. In order for the role and importance of Information Communication in human life in the future to be much higher than today, the requirement is met to reduce the scope of tasks that must be completed.

With the widespread establishment of informatization in the Republic, opportunities are opening for each of the countries in it to receive at the right time, in the required quantity, in the required quality. Enterprises, organizations and institutions owned by Regions, Cities, and districts in our republic are equipped with modern computer equipment, which is able to transmit and receive information using special devices (network, modem, etc.). The expansion of a person's sphere of thinking in economic, sociological, political and other spheres is due to the fact that besides the quality and quantity of information, the origin of the information subject has become a new subject.

So informatization is not a temporary study, it is a necessary means of development, and the state of Information Communication at the current level of development cannot be supported without informatization. When performing tasks such as fast, high-quality storage, processing and transmission of information, the service of the computing technique is convinced of its immeasurable result. Changes in the management of Economy, the transition to market monasteries have a great influence on the organization and import of accounting accounts. The transition of the account to international systems is being carried out which requires its methodology to produce new images. The information system of the accounting account and its traditional images of

the organization of computer production have undergone major changes. The buyer is required to know objective assessments of the financial situation of the enterprise, to know the methods of financial analysis, to know how to work with securities, to substantiate investments in monetary funds in market processes, etc.

A **computer network** or **data network** is a telecommunications network which allows computers to exchange data. In computer networks, networked computing devices exchange data with each other using a data link. The connections between nodes are established using either cable media or wireless media. The best-known computer network is the Internet.

Network computer devices that originate, route and terminate the data are called network nodes. Nodes can include hostssuch as personal computers, phones, serversas well as networking hardware. Two such devices can be said to be networked together when one device is able to exchange information with the other device, whether or not they have a direct connection to each other.

Computer networks differ in the transmission medium used to carry their signals, the communications protocols to organize network traffic, the network's size, topology and organizational intent.

Computer networks support an enormous number of applications and services such as access to the World Wide Web, digital video, digital audio, shared use of application and storage servers, printers, and fax machines, and use of email and instant messaging applications as well as many others. In most cases, application-specific communications protocols are layered (i.e. carried as payload) over other more general communications protocols.

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