

Software Tools and Their Application in Telecommunication Networks

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ANNOTATION

Special software is used for data transmission using the capabilities of telecommunication technologies. This software works according to specific protocols or mechanisms designed to simplify and standardize the work of all network nodes, building it according to a single algorithm. The article discusses this area.

KEYWORDS: Telecommunication, Software, Standardization, Algorithm, Mechanism, IT.

INTRODUCTION

The MIME (Multipurpose Internet Mail Extensions) standard was developed to convert data into a format understandable by a mail server for transmission over computer networks. The communication between the user's computer and the server is carried out in the form of a dialogue in the client-server mode, where a certain program is a participant from all sides.

Special programs are used for the operation of instant messengers, which allow you to exchange messages, make phone calls with voice and video data transfer. Communication here is not only a computer - a mail server, telephone stations are also connected to the dialogue.

MATERIALS AND METHODS

Telecommunications - long-distance, long-distance communication and all forms of information transfer between computers over various types of communication lines, including data, voice, video, etc.

Traditional telecommunication networks include [1]:

- Computer networks (for data transfer).
- Telephone networks (voice data transmission).
- Radio networks (voice data transmission - broadcasting services).
- Television networks (sound and image transmission - broadcasting services).

RESULTS AND DISCUSSION

New methods, tools and technologies of information transmission have been used in telecommunication systems at various stages of society's development.

The convergence of telecommunication networks (radio, telephone, television and computer networks) opens up new opportunities for data, voice and image transmission. That's what the Internet claims [2]:

- *to the global universal multiservice role*

- *(infocommunication) high-quality new generation network*
- *data, voice and image transmission*

Telecommunication technologies are a set of algorithms, methods and means of information transmission. Modern telecommunication technologies are based on the use of global computer networks.

Global computer networks are regional and local networks, as well as computer networks that connect individual computers located far apart over long distances. The most popular global network is the Internet (composite IP network).

The global Internet was created in 1990 based on the ARPANet network. The TCP/IP network protocol family (stack) is used for data transfer on the Internet.

Computer network software for information processing in order to increase efficiency and make maximum use of technical means, as well as provide collective access to computing and information network resources, organization of dynamic distribution and redistribution of network resources in case of failure and failure of personal computers. technical means and others.

Network operating systems are included in system network software implemented in the form of a network operating system with distributed functions. Their capabilities include [3]:

- network equipment support;
- support of network protocols;
- support of routing protocols;
- support for network traffic filtering;
- support access to remote resources such as printers, disks, etc.

The management carried out using the network operating system includes: planning the times and sequence of receiving and giving information to subscribers; distribution of tasks solved by network computers; assign priorities to tasks and output messages; change computer network configuration; distribution of information computing resources of the network to solve user problems.

Microsoft Windows Server is an example of a server operating system designed to power next-generation networks, applications, and cloud services. It enables you to develop, deliver, and manage powerful communications and applications, build highly secure network infrastructures, and increase the efficiency and value of technology in your organization.

This version of the Microsoft server operating system reduces the operating costs of organizations, increases operational efficiency, provides more efficient use of power and increases the performance of computers, as well as simplifies server management and enables the use of Microsoft's virtualization strategy on client and server computers [4].

CONCLUSION

Novell's NetWare network operating systems have a long history of development. NetWare did not support multitasking to ensure high productivity, and there was no graphical user interface. The latest editions of NetWare offer solutions to simplify and protect networks - corporate and public, wired and wireless, storage and client desktop.

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