

«Сейфуллин окулары-18(2): «XXI ғасыр ғылымы – трансформация дәуірі» Халықаралық ғылыми-практикалық конференция материалдары = Материалы международной научно-практической конференции «Сейфуллинские чтения – 18(2): «Наука XXI века - эпоха трансформации» - 2022.- Т.1, Ч.III. - Р.50-52.

TELECOMMUNICATIONS IN SOCIETY

Nurtaev S.Kh., lecturer of TSAU

Tashkent, Uzbekistan

It is simply impossible to imagine the current modern generation without telecommunication technologies. These technologies have become so "ingrained" into our lives that it is simply unrealistic to imagine our existence without them. But some people do not even notice these important modern technologies. So let's try to figure out what it is and why do we need telecommunications in the modern world?

What is meant by the term telecommunications? It's simple, by telecommunications it is customary to understand the whole complex of technical means that are designed to transmit information over any distance. This set of technical means includes: sound, signal, text, sign, written image and many other types. All these means are transmitted via cable, optical, radio and other electromagnetic systems [1].

The system of technical means by which telecommunications is carried out is called a telecommunications network. The telecommunications network has one of the important characteristics of the entire technology under consideration: it provides the ability to obtain the necessary information or data to ensure the activities of any participants in telecommunications or to meet the personal needs of users. Telecommunications technical means include: equipment and machines used for data processing that transmit or receive telecommunications messages.

The participants in the activities of telecommunications include:

- a) legal entities and individuals of the state, as well as foreign legal entities and individuals who can provide services in this area;
- б) authorized body - a body that regulates activities carried out in the area under consideration - in the field of telecommunications;
- в) users of telecommunications services.

Although in our time telecommunication networks are quite developed and very relevant, we must not forget that our society is developing daily, various knowledge is increasing every day and therefore science does not stand in one place and will never stand. Thus, telecommunications also keep pace with the times and I would like to list the promising areas of telecommunications technologies:

- 1) creation of intelligent antenna devices with improved energy;
- 2) creation of telecommunication systems in a very small wavelength range (~ 1 mm) with an operating frequency that will reach up to 100 GHz;

- 3) creation of new signal-code structures by using a combination of signal manipulation methods and new signal coding methods in order to increase the throughput of transmission systems and improve their energy;
- 4) the development of new methods for the design and manufacture of telecommunications equipment, which ensures the emergence of more powerful machines that will perform a huge number of tasks [2] . Also, do not forget that telecommunications have long been part of the world of computer technology. And perhaps, in the near future, will soon be completely immersed in this world. With television, this process is already in full swing. Most countries use digital broadcasting, which will rapidly replace analogue. Also, the telecommunications industry earns good money by selling digital set-top boxes for conventional TVs, it gets the opportunity to make some television channels on a paid basis, as well as in broadcasting satellites.

And this is not all the prospects for the future in this direction! As you noticed, telecommunications are very closely connected with other scientific fields, such as: physics, energy, electronics, computer science, and soon networks will cover even more industries.

Now back to the structure of our telecommunications. Telecommunication networks for remote communication have certain channels [3]. According to the principle of operation, these same channels are divided into:

- a) simplex or one-way - transmitting data, but not receiving information in response (as an example, radio is suitable here).
- b) duplex - able to transmit and receive a signal at the same time (this includes the telephone - "one of the main entertainment of modern people").
- c) half-duplex - capable of receiving and transmitting in turn (walkie-talkies).

Also, communication channels are divided into different types according to the implementation:

- a) wireless;
- b) fiber optic;
- c) wired.

According to the environment of placement and existence, in addition to space, channels are underwater (intercontinental cables at the bottom of the ocean), underground (buried cables), ground (pillars with wires) and air (radio waves). According to the technology used - continuous and discrete (analog and digital).

We have dealt with communication channels in telecommunication technologies. Now we need to understand the networks themselves. A little higher, I already mentioned the term telecommunications network, but now you need to understand "deeper" in this concept.

Telecommunications is a complex industry that provides users and customers with different types of telecommunications, develops and innovates, creates, sells and uses equipment that so many people in our society need [4].

It is impossible to do without telecommunications in our modern civilized world. Almost the entire population of our planet has long ago mastered and actively uses the technical means of telecommunications (telephones, televisions, etc.), and modern society is rapidly beginning to use the latest in the field of

telecommunications technologies. And my forecast for the future is this: telecommunications will be used for many more centuries.

References

- 1) Бройдо В.Л., Ильина О.П. Вычислительные системы, сети и телекоммуникации: Учебник для вузов. 4-е изд. - М.: Питер, 2011. – 443 с.
- 2) Продвинутых пенсионеров в России становится больше. [Электронный ресурс] - Режим доступа. - URL: <http://www.gizmonews.ru/tag/internet-polzovateli/> (дата обращения: 25.04.16)
- 3) Современная телекоммуникация - это быстрая связь. [Электронный ресурс] - Режим доступа. - URL: <http://fb.ru/article/179855/sovremennaya-telekommunikatsiya---eto-byistraya-svyaz> (дата обращения: 25.04.16)
- 4) Телекоммуникации - понятие и классификации. [Электронный ресурс] - Режим доступа. - URL: <http://xbb.uz/ICT/Telekommunikacii-ponjatie-i-klassifikacija> (дата обращения: 25.04.16)