

К ВОПРОСУ О ПРЕИМУЩЕСТВАХ IP-ТЕЛЕФОНИИ THE ADVANTAGES OF IP-TELEPHONY

Основная цель работы – исследование в области технических особенностей IP-телефонии и изучение преимуществ VoIP-технологии.

Nowadays people want to be masters of their own financial destiny, so they welcome everything that cuts their everyday expenses, which seem to be going up all time. In my report I intend to explain how it is possible to get through to any location all over the world almost free of charge and I'll also outline what equipment you'll need.

Over the past few years Voice-over-IP (VoIP) technology has been booming. Many operators offer their customers both the high-speed Internet, and reasonable rates for telephone services.

Users can transfer any types of data, such as text documents, programs, pictures, videos and others via the Internet. Human voice can also be encoded and become one of the types of data.

This information can then be transmitted via the Net over long distances and received in any corner of the world by a conventional telephone. This simple idea should have been put into practice ages ago. However, it remains something bizarre and exotic for most users.

Actually, everything is as easy as ABC. The equipment you will need is an analogue telephone adaptor or an SIP telephone. All this will only cost you about \$30. Moreover, both are currently available. You will also need to access the Internet, the rest of it is the operator's responsibility.

You register your telephone number on-line and your number is given an IP-address. If another subscriber is trying to get through to you using the VoIP-technology, the operation is similar to finding a Web-site. The subscriber gets in touch with you on your IP-address. Before the word uttered the caller reaches the listener's ears, the speech is digitized and compressed.

As a result, we get a flow of data whose average resolution is 30 kb/s. The flow is divided into IP-packets, and it is sent to the listener in separate portions.

To translate digital voice data from the PSTN (Public Switched Telephone Network) into the Internet it was necessary to create a device which would make it possible to change from channel switching to packet switching. This resulted in voice gateways.

Until recently there were purely technical obstacles that hindered the development of this trend. There were no broad band channels which average network users could afford to use. By now this problem has been solved.

In order to provide convenient work with IP-telephony it is better to log on through a swift digital channel xDSL (Digital Subscriber Line) without time limitations or transmitting huge amounts of data. But if you are not very particular about the quality of connection, there is no point in trying to get as many megabits as possible. If this is the case, it is possible to compress the information, so that its volume will become 5 times smaller and then such information can be transmitted at 16 kbit/sek. However, the military in Russia possess certain technologies, that allow compressing voice information, so that its volume decreases 50 times. The quality is certainly poor, but it is quite possible to make out what is being said.

For most of us it may seem fascinating that some of us are already applying VoIP-technology without realizing this fact.

The leading multinationals involved in telecommunications direct the conversations that you have on their lines via the data transmission channels which link, say, two LANs (Local Area Networks). The reason for that is quite obvious: IP-communication sessions compressed in convenient data packets create less traffic than the conventional ones. Using this technology such famous European companies as Telekom, Arcor and others save millions of euros.

So why don't we save a couple of euros now and then? This is the right time to log on. At present there are a lot of operators available in the Russian market. This table gives the names of

major Russian IP-operators and how much each of them charges for local and international phone calls. You can get through to an American subscriber and it will cost almost as much as a local phone call.

It is reasonable to switch to VoIP even if it costs a couple of extra cents every month. Anyone who often makes phone calls and spends long hours on the line will be glad to see, that their telephone bill is not as big as it used to be.

I'm one of those who benefit from this wealth of exciting opportunities. I'm still hooked because I can get through to anyone all over the world virtually free of charge. Let me give you a few addresses of the most popular operators in Russia that will give you the same communication opportunities as I have.

UTL – www.utlcorp.ru

TimePhone – www.timephone.ru

“Telphin” – www.telphin.ru