USE OF SATELLITE TELEPHONY

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Annotation
This article is dedicated to satellite telephony transmitting voice traffic through network protocols in digital form. Voice, passing through the tube, turns into a sequence of digits, and audio compression protocols allow you to further reduce the volume of transmitted data to reduce your communication costs. Besides, satellite video conferencing is quite a budget solution for remote meetings and trainings as well as personal calls if your opponents have limited access to communication. Videoconferencing is much more comfortable than telephone conversations, because it allows you to see the interlocutor, his facial expressions and gestures, simultaneously view documents.
Keywords: local network, business applications, terminal, radio control, geostationary satellite.

Introduction

Internet connection via VSAT (Very Small Aperture Terminal) antenna with SIP-telephony integration allows saving 4 million 320 thousand soums and more on communication services in comparison with tariffing of other communication systems on remote objects.

Such a complex is suitable for small and medium-sized businesses, remote offices, as well as for social facilities, such as schools and clinics.

Main part

In the connection process, the data network (Internet access and local area network) and voice services will be combined. One cable from the satellite router will connect both the computer and the IP telephone. As a result, communications management will be simplified, it will be possible to quickly expand the network and connect additional services, such as business applications (auto-attendant, voice menu and mail, conferences, recording of negotiations and keeping statistics in CRM).

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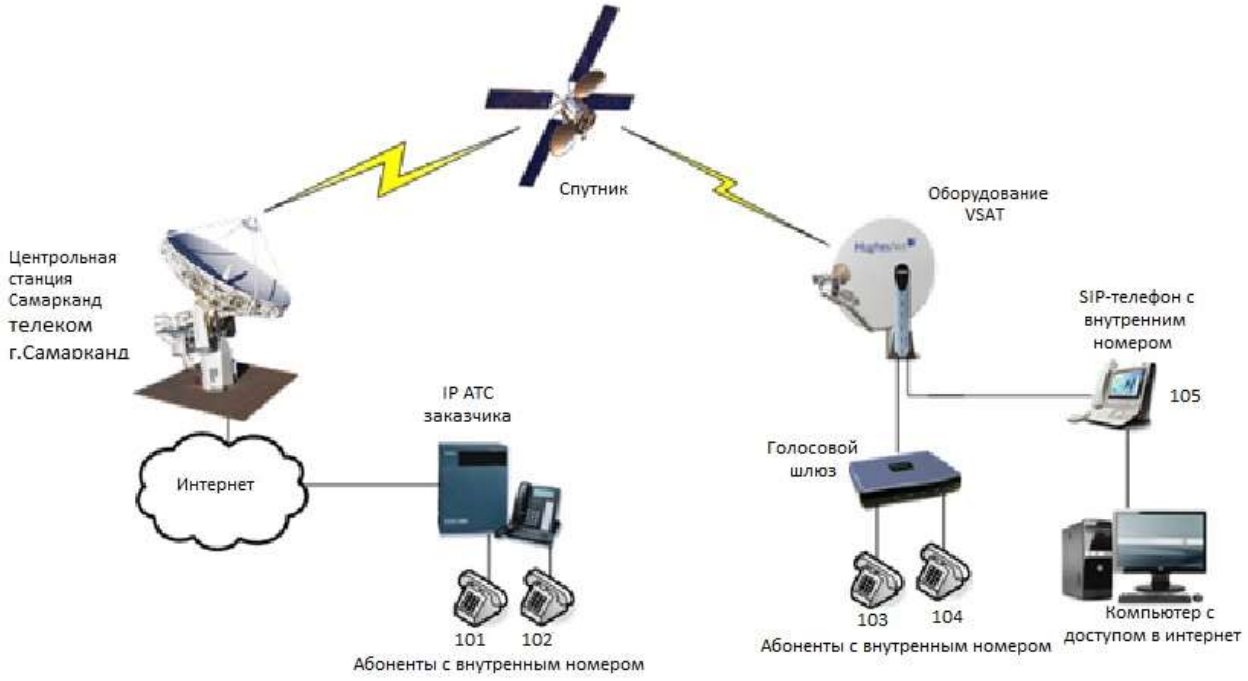


Picture1. Scheme of the VSAT satellite dish in Samarkand.

Satellite telephony transmits voice traffic over network protocols in digitized form. Your voice, after passing through the tube, turns into a sequence of digits, and audio compression protocols allow you to further reduce the volume of transmitted data, also to reduce your communication costs.

VSAT terminal during data transmission will give priority to audio and video stream from the phones. Thanks to that, you'll be able to communicate comfortably even with a busy network and active work on the Internet.

A VSAT satellite dish is virtually independent of terrestrial infrastructure. You do not need neither mobile towers nor powerful communications - only visibility of the sky and electricity, a small generator is enough. Thus, you can provide full-fledged communication in the remotest corner of the earth.

VSAT videoconferencing

In recent years, there has been a successful practice of using VSAT videoconferencing for:

-Emergency communications
-Coordination of actions of services at emergency incidents
-Organization of press-conferences
-Distance education, interactive training
-Virtual presence at court
-Telemedicine, remote examination, consulting.

Besides, satellite videoconferencing is quite a budget solution for distance meetings and trainings, as well as for personal calls in case your opponents have limited access to communication. Video conferences are much more comfortable than telephone conversations, because they allow you to see

the interlocutor, his mimics and gestures, simultaneously look through the documents, etc. You can give your interlocutor a tour of the facility, consult on an unexpected breakdown or conduct a full-fledged presentation of the project.

Organization of videoconferencing is first of all related to the capacity of VSAT terminals, especially if we are talking about multi-point operation. Our equipment allows you to switch video communications on at any moment of time without any prior notification of the operator's need to extend the channel.

VSAT satellite internet allows simultaneously sending necessary data to interlocutors, demonstrating presentations, using flip-charts, additional text chats and connecting remotely to the interlocutor's table. Thus, the head of the organization can conduct negotiations and meetings in real time, without having to travel for long business trips and saving time for decision-making.

Modern video conferencing systems are very easy to use, and even the average user quickly learns the intuitive interface. Video conferencing capabilities are expanding, including camera enhancements and improved pan/tilt/zoom functions. Cloud-based services allow you to connect to the conversation with a regular browser. If you're working from the office, a headset and webcam are enough to start the conversation.

Developments in technology make satellite conferencing cheaper and more practical, since a satellite dish is now only needed to connect to the Internet. VCS service is free, you pay only for the support of the account and traffic. On average, 10 minutes of conference costs no more than 9,400 sum, depending on the number of speakers and video quality.

Video conferencing equipment is quite compact and can be transported in car. A compact VSAT antenna (1, 2 m) and a small access terminal, to which a personal computer is connected, is enough to start a dialogue from anywhere in the world.

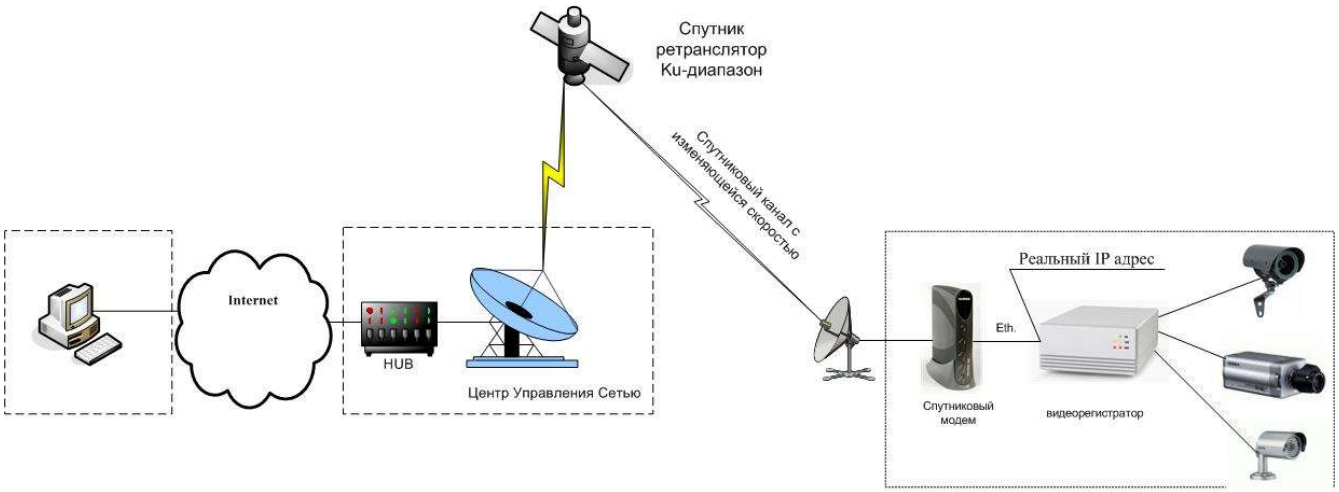
VSAT video surveillance

In case you are to monitor a distant building or territory located hundreds kilometers away from you, it is more rational to connect video surveillance via ground, mobile or satellite.

Administrators of security service can monitor the state of the object being in any place of the world. In addition, modern technologies of image processing and IP- video camera picture quality make it possible to identify people, license plate numbers of vehicles and collect other useful information as they take pictures of what is happening.

The difficulty arises in the transmission of the collected data volume. The Internet connection channel must be very wide and stable for the stable operation of the network. Only satellite antenna can provide this level of connection at a remote site.

VSAT-terminals are more compact than the ordinary "plates" and are in permanent contact with geostationary satellites. Their software allows providing a guaranteed channel - in such a manner the images from the video cameras will be broadcasted uninterruptedly regardless of the fact whether the channel is occupied by other equipment. VSAT satellite communications are not much dependent on the terrain and are suitable for both analog and IP video surveillance networks.



Picture 2. VSAT Satellite Communication

The cameras can be connected either directly to a satellite router or to a video recorder: the latter option, among other things, allows you to save a lot of money. A camera connected directly to the network transmits video continuously. The recorder records video on the hard drive and starts broadcasting only when operator requests it or when a predetermined scenario appears (for example, when a new object appears in the monitored sector), thereby saving on expensive traffic.

Moreover, VSAT station makes it possible to connect telephony and other services at the object on the basis of broadband access to the Internet together with video surveillance system. Thus, you will not only provide the necessary protection at a remote site, but also, if necessary, quickly deploy a full-fledged office on site.

- VSAT network composition analysis;
- VSAT network operation control;
- GSM control;
- Geopositioning of the satellite earth station.

Conclusion

At the same time, the special software has a modular principle of construction, uses a database management system to store data MSSQL (Microsoft SQL Server - management system relational databases) and allows you to include any number of modules in its composition, focused on analysis and solving the problems of satellite radio monitoring.

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