

## Development of national network and corporate networks (in the case of Tas-IX network).

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**Abstract** - This article is devoted to the development of the national data network of Uznet and Tas-IX, the history and development of Tas-IX, to improve the efficiency of using international communication channels, by excluding the transfer of local traffic over them. Strengthening the economic state of small and medium-sized businesses in the telecommunications sector by reducing their production costs for traffic transmission.

The aim of the work is to directly contribute to the development of information and communication technologies in the telecommunications market of Uzbekistan. Promotes the development of the Uzbek Internet segment as a factor in the overall development of the society and raising the level of education in it, including by accessing the Internet resources of scientific, educational, state and business institutions.

**Key Words:** Tas-IX, IP, TSP, Internet eXchange Point, ATS, ADSL, Uznet, Internet festeval.

### 1. INTRODUCTION

Worldwide global network. It is based on data transmission protocol, incorporating government, education, business, corporate networks. The parts are interconnected through a unique address space based on IP and TSP protocols. A set of interconnected computer networks that cover the whole world. The Internet provides access to computers, e-mails, board boards, databases and backgrounds, and many other systems that use the IP protocol. [1]

Internet - International - from international and net - network. The Internet is a colorful network, that is, all computers in the network are of one type and any computer can be connected to another computer in the network.

There are so many "secret" terms in the Internet. One of them is Tas-IX. The abbreviation Tas-IX in the Uzbek phrase "Tas" is "Tashkent". Place of agreement on creation of Internet traffic exchange point - Tashkent city. "IX" is derived from the English word "Internet eXchange Point" - "Internet exchange point". Generally speaking, we can describe the Internet as an information exchange point in Tashkent. The point of Tas-IX is located at ATS 244. There are only 4 employees working there.

### 2. METHODOLOGY

When was the idea of Tas-IX born? What motivated him? In January 2004, the Ministry of Justice of the Republic of Uzbekistan registered the Tas-IX Transmission and Communication Center (ISS). Founders of the organization are: "Business Information Business Center" (BCC), "Buzton", "Sarkor-Telecom", "Sharq Telekom", "Texnoprosistem" LLC. The website of the organization - [www.tas-ix.uz](http://www.tas-ix.uz)

Tas-IX Traffic Exchange The Tashkent point has been recognized by RIPE's international organization, which has provided its own AS30865 Autonomous System. In September 2004, five perfect Tas-IX members - VSS, Buzton, Sarkor-Telecom, Sharq Telekom and Technoprosystem - were created with excellent dynamic piring.

"MUTBM NGOs TAS-IX traffic exchange point of the Uzbek independent of the organizational and technical aspects of a number of international traffic exchange points in Europe (Moscow, London, Madrid, etc.) samples. Based on the rich international experience of TAS-IX Members, a wide range of excellence and competence has been achieved. [2]

Tasks of "TAS-IX" NGO: Creating opportunities for direct IP traffic exchange between different networks of data transmission in the Republic of Uzbekistan without use of international channels.

### 3. STATE POLICY

On August 14, 2017, the Cabinet of Ministers of the Republic of Uzbekistan adopted Resolution 625 "On Measures for Further Development of National Content in the World Wide Web." The Resolution envisages the adoption of a comprehensive program for the development of national content in the global information network between 2017 and 2019.

This program, in particular, provides for the creation of a traffic sharing network, which envisages the introduction of mutual settlements between operators, service providers and content creators in the national Internet segment of the global information network. " Implementation of this technical project is entrusted to the Ministry of Information Technologies and Communications of the Republic of Uzbekistan, "Uzbektelecom" JSC, telecommunication operators and providers of Uzbekistan.

After adoption of the resolution media outlets called this project "TAS-IX 2" or "paid" TAS-IX ", the new acquisition network has been operating since 2004 - " TAS-IX MUT "The NGO will become an alternative to the ping-ping network, a traffic exchange point. [3]

Joint Stock Company "Uzbektelecom" has shared plans for the organization of traffic exchange in the new charging network.

"We follow the principle of" breaking old things before building a new home ", which means that the new system will provide services in parallel with existing TAS-IX systems. In this case, all aspects that are restricted in TAS-IX are taken into account. Later on, which of them will remain in the market.

It should be understood that the NGO "TAS-IX MUT Cooperation Center" was registered in 2004 by the Ministry of Justice of the Republic of Uzbekistan. The center has been recognized by the RIPE international organization, which has granted the AS30865 Autonomous System to this organization. The initiator of TAS-IX creation is the largest Internet providers in Uzbekistan. "TAS-IX MUT Interaction Center" NGO is a financial and technical independent organization, and

its main source of funding is payments of current accounts and current accounts. "Uzbektelecom" JSC is also a member of "TAS-IX MUT Cooperation Center" NGO. Despite the positive aspects of the TAS-IX, there are some shortcomings.

The content generator in the existing system, that is, the owner of the site is that it has to pay for your hosting provider. In the new system, everything is contrary, it is planned to create such conditions in which providers themselves "run" after content developers, that is, they are interested in the product distribution. Such conditions will be more convenient, accordingly, the number of those who want to place their content will also grow, and healthy competition will be emerging as a market-based competition for consumers of this content. Thus, national content will be attractive to the network users, so its generations will be a profitable business. This, in turn, appears in the richness of the content of the Web.

Additionally, the introduction of the TAS-IX options involves a number of existing problems, particularly the owners of sites / portals, to resolve the problem of sharing content between hosting providers. " This project is planned to be implemented this year. A new format of mutual relations creates new market conditions that will help to increase the number of content and ease of use. As a result, the number of users in the network grows. Specifically, the content-provider's interests are on the target, which is reflected in the improvement of the quality of the private product.

Additionally, the new project will provide a "ticket to the system" for small providers because it solves the problem of connecting to content resources. Content providers will also be provided with the technical aspects of the issue by allocating the appropriate resources within the center of data processing. The center will be installed on the basis of high-speed channels, including inter-network speeds of up to 100 Gbit / s. up to speed. Thus, subscribers will have an unlimited access to quality content, including national content. As a result, it is necessary to develop new beneficial tariffs. [4]

Not all of this is a simple task, "Uzbektelecom" JSC is ready to support and implement them not only technically, but also within the framework of a business-friendly approach.

Assistance in creation of favorable conditions for creation of national network of Internet.

Participation in various activities of the population of the Republic, popularization of the Internet through press and electronic publications.

Enhancement of economic conditions for the activity of small and medium-sized businesses in the Internet, including but not limited to: Internet access services (Internet providers, internet cafes); use of the Uzbek content of the Internet in production, trade and advertising.

#### 4. DATA ANALYSES, CURRENT STATUS

Telecommunication operators are unable to continue sharing information through internationally-funded international channels. The information exchange between users in neighboring buildings The situation in Tashkent or Moscow is technically inconvenient. So it does not only cost-savings for both operators and the state, but also saves currency resources.

That is why, despite the sharp competition in this market, five interconnected operators have united their efforts to create a single point of internal traffic, which, in turn, reiterates the relevance of this issue to the entire Internet market in Uzbekistan. . The ping-ping center, created by them, is a non-profit, non-profit organization that is open to all participants of this chain of the market but also of other educational institutions.

Every year, Tas-IX administrator and technicians of the Founders will consider the project of traffic exchange development. The required equipment is purchased and installed. The full functioning of "TAS-IX" NGO provides the following:

Increasing the effectiveness of using international communication channels through non-transmitting local traffic. [5]

Reducing production costs for traffic leads to the strengthening of the economic situation of small and medium-sized enterprises.

It contributes directly to the development of information and communication technologies in the telecommunications market of Uzbekistan.

It promotes the development of the Uzbek Internet-segment as a factor for the overall development of the

society and raising the level of education, in particular through the involvement of science, education, public and business institutions in Internet resources.

All in all, Internet connection was initially made through dial-up modems. The speed of the 32Kbps or 56Kbps speed can be maintained. (Good or bad speed is directly related to ETS). Over time, with the advent of Internet technology, providers have been increasingly offering the Internet broadband (ADSL) connection.

There are about 100 different internet providers, from them status able ones are UZNET, UCELL, BEELINE, TPS, EVO, SARKOR TELEKOM, INFONET, SHARQ TELEKOM, EAST TELECOM, INFORM SERVIS TV, UZBEKTELECOM, CRON TELECOM, S-LINK, ARS-INFORM and others. Since 2004 ADSL technology has been widely used in Uzbekistan. By 2019 the share of using ADSL technology will increase by 45%. Instead, the G-Pon technology works on the fiber optic.

As a result, the volume of traffic used by the users has increased dramatically. Its growth has been attributed to the limited access to external channels that connect UZNET with the world. Connection to sites within UZNET was also made through an external channel. The channel was twice as busy as it was for the entrance and exit.

For example, if you visit [www.iiu.uz](http://www.iiu.uz) (if you want to access this site), this site is available on Uzinforcom ([www.dc.uz](http://www.dc.uz)) servers, but still goes to an external network and then goes back to your desired address. was going. The size of the external Internet access channel is limited. It costs a lot for every megabyte. As a result, access to our sites was slow.

This is a reason why Uzbek providers have joined forces to create traffic sharing points on UZnet. The goal is to ensure that a local provider (such as Sharq Telecom) can access the hosted site (eg, UZnet) via a local Internet service provider rather than through an external channel.

Here is an example of a fictitious Internet Explorer, which started its work in 2005. The best site in the field of science and education is the best site in the field of media, the best site in the field of public administration, the best thematic site, the best site in the field of culture and sport, the best site in medicine and health, the best site in the field of network services, The best corporate site, the best site in the

field of tourism and regional linguistics, is the best personal page nominations.

"Heavy" content - movies, music, and downloaded them at great speed. There are many interesting thematic, personal, computational sites, blogs, social networks. For example: Ziyoz.uz, Muslim.uz, Ziyonet.uz, Edu.uz and others.

Almost all providers will not subscribe to the Tas-IX sites at the tariff and will provide this service free of charge. If you do not get out of Uznet, the information is free and enjoyable long enough. [6]

But EVO internet provider, for some reason, is connected to the Tas-IX system, but does not count the Tas-IX. This means that if you go on an external channel, you can still pay for megabytes if you go inside the channel.

Indeed, if the site is in the .uz domain, it is likely that they are at Tas-IX. It may also be located in our domain site as well as in Russia, the US, or any other country. For example, the site islam.uz has its domain, but the host is located in the United States. However, in some countries with sites with other domains, there are strict limitations on this subject. For example, Kazakhstan has sites that use domains with .kz domains only for hosting in Kazakhstan. Rejected. [7]

There are various services available to know if the site you are trying to access is at Tas-IX. The first and most popular one is SHARQ TELECOM, located at <https://st.uz/>. If you type the site address in the box on this page, it will immediately answer the question whether the site is on the Tas-IX or on the Internet. Tas-IX, you can easily sign in, and your account will not be charged.

The Top-rating also featured sites at Tas-IX - they are separately flagged. You can see Tas-IX in green.

### **Web sites that have negative and positive resources and their importance.**

Internal threats of the Internet are threats that may have negative consequences for the status and development of the network information space. These include: information collapse due to overloading of the network; attacks by hackers for destroying or modifying data, blocking traffic and blocking "traffic" routes; casual or organized arbitrary communications channels; incompleteness of information search systems; "moral" outlook of protocols and so on.

External threats are potential threats to users. External threats can be technological and social:

- Technological: slow speed channels; Unfavorable ways to connect to the network; infected viruses; information "flood" and so on.

- Social: Impact on users' physical and mental health; impact on human consciousness; information terrorism, crime and so on. [7]

The impact of information threats on the human mentality in the process of globalization has become a pressing issue. The extent to which violent information is increasing is increasing. The day-to-day advancement of communication places creates favorable conditions for human life. We are aware of the changes and innovations that are taking place around the world. We control the technical equipment easily. Techniques are driving us. In the process of globalization, the speed of information exchange, the rapid development of new models of technology, or the inability of the virtual space to comply with ethical standards. A positive or negative adjustment to the process depends on the will of every person. [8]

Healthy minded individuals are brought up in the family. When a baby is born, it usually takes on a primary school course with family members. There is a wonderful transcript of our people, "It does what it sees in a bird's house". In society, we need to create a basis for our child to work well. To do this, it is crucial to set the agenda and to define the norms of each used technique. The information obtained through the sensory organs is analyzed in our brain, divided into parts, compared to the previous information, and then summarized and expressed its opinion. That personal opinion creates an independent thinking, broadens the outlook, increases the vocabulary. It creates positive qualities for the country, parents, their relatives and friends. It gives us opportunities to know our history, to understand ourselves. Some of our news feeds our enthusiasm and our peaceful lives. We call them "Informational Threats". The number of such threats increases with independent Uzbekistan, which has been enriched with the world and achieved its every success. Influence of information threats or misuse of vertical space is more common among young people. The human brain accepts all the information that is relevant and not relevant, and expresses its perception of it.



## 5. CONCLUSIONS

We would recommend that web developers who are creating their own Web sites install at Tas-IX. There are several reasons for this. First of all, as we have already said, access to the site will be free for the population of Uzbekistan. That is, if you have a resource similar to yours in the external network, users will find that your access to your site is financially acceptable. The above services are free of charge, that is, how many Mb and Gb you move, your account will not be charged. (<http://mrtg.tas-ix.uz/>)

Second, the speed in Tas-IX is much greater than that of external channels. Most providers use Tas-IX at speeds of up to 2 mb/s and more. This is also a major factor that attracts users. (<https://www.uztelecom.uz/uz/jisman/internet2/tariflar-2>)

Thirdly, an external channel is sometimes "dropped" and cannot be accessed from external sites. For example, Vnimanus and its subscribers on the provider's web sites! В связи с внеплановыми работами на территории России: 20.08.2016г. с 01:00 до 07:10 (ТШК) возможно ухудшение качества услуги Интернет. Internal resources, however, are operating regularly. This saves \$.

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