GLOBAL INFORMATION SOCIETY WATCH 2008

Focus on access to infrastructure

Global Information Society Watch

2008

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TAJIKISTAN

Civil Internet Policy Initiative (CIPI)
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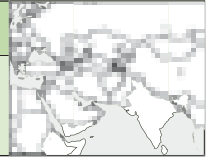
Introduction

The Republic of Tajikistan, located in Central Asia, is a land-locked country encompassing an area of 143,100 kilometres, stretching 700 kilometres from east to west and 350 kilometres from north to south. Tajikistan borders on the People's Republic of China, Afghanistan, Uzbekistan and Kyrgyzstan. South-eastern Tajikistan is only separated from Pakistan by a narrow strip of Afghan territory 15 to 65 kilometres wide. The terrain in the west of the country is hilly desert and semi-desert. To the east the elevation rises to form the highest mountain systems in Central Asia: the Tien Shan and the Pamirs.

Tajikistan is 93% mountainous with more than half of the country sitting at altitudes over 3,000 metres above sea level. Several well-known mountain peaks are over 7,000 metres, such as Ismoili Somoni Peak (formerly Communism Peak, renamed in 2000) at 7,495 metres, and Lenin Peak at 7,134 metres.

The Amy Darya and Syr Darya basins consist of about 1,000 rivers and temporary streams, which are part of the largest system in Central Asia. There are more than 2,000 lakes here, containing 44 cubic kilometres of water, including 20 cubic kilometres of fresh water.

Tajiks (who refer to themselves as Tojiks) make up the majority of the country's population. According to a 2000 census, the population of Tajikistan is more than 6,100,000. Of this 68.8% are Tajik, 24.9% Uzbek, 3% Russian, and 3.3% other nationalities. The official language is Tajik, and Russian is considered as a language of international relations.

The Tajikistani information and communications technology (ICT) market is considered one of the fastest growing and advanced in the region. Internet access technologies in the market include traditional dial-up, digital subscriber line (DSL), Wi-Fi and WiMAX, while mobile technologies include global system for mobile (GSM), third generation services (3G) and code division multiple access (CDMA). There are ten first level internet service providers (ISPs) and ten mobile telephony operators competing in the market. However, the applications of these technologies is poor.

The online population of TajNet (or the internet in Tajikistan) is about 500,000 (April 2008, Ministry of Transportation and Communications) and mobile telephony users stand at about three million (August 2008, Association of Mobile Operators). The capacity of land-line telephony, owned by Tajiktelecom, is over 300,000 users. This network is digitised and is mainly available in urban and suburban areas.

The main technology used to access the internet in Tajikistan is very small aperture terminal (VSAT) technology. Though this technology is considered one of the most expensive in the world, it is 24% to 30% cheaper than fibre-optic connectivity in Tajikistan. Due to its geographic isolation, Tajikistan is not along the main route of the only transnational fibre-optic communication line in the region, the Trans-Asia-Europe Fibre Optical Cable System (TAEFOS). Only two out of ten ISPs have connections to TAEFOS, via Uzbekistan and Kyrgyzstan. Fibre connectivity is mainly used for voice data. The upgrading of the land-line network to next generation network (NGN) is also taking place.[1]

Tajikistan's experience in the management of its country code top-level domain (ccTLD) is unique in the region. Originally .tj was registered in early 1997 by an ISP in the United States, and re-delegated in June 2003 to a local entity. Currently it is managed by the Information Technical Centre of the administration of the president of Tajikistan. The policy of .tj management is jointly developed by local internet stakeholders and the domain manager. It allows every ISP in the country to be a domain name registrar. As of September 2008 there were nine registrars of domain names.[2]

Human capacity and training

The first national official document focused on ICTs for human capacity building was the United Nations Development Programme's (UNDP) National Human Development Report for 2001-2002 (UNDP, 2002). The report was developed by local experts under the joint auspices of the government of Tajikistan and the UNDP, with financial support from the Open Society Institute (OSI) Tajikistan. It suggests that ICTs may work as an enabler of development if a "development dynamic" consisting of five elements – policy and legislation, human capacity, infrastructure, the private sector, content and applications – is in place.

One of the impacts of this initiative was the adoption of the State Strategy on ICT for Development, an e-strategy ratified by Presidential Decree 1174 on 5 November 2003. The e-strategy aims to narrow the social digital divide inside Tajikistan and to improve the ICT status of the country globally. One of the strategy's priorities is improving access to and the quality of the education system. To coordinate the e-strategy, an ICT Council has been established. This unites representatives of public sector and civil society institutions (private companies are represented via the latter) focused on the ICT market. However, the council has yet to begin its work.

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1 www.tojikiston.com

2 www.nic.tj/get.htm

The academic community of Tajikistan consists of over 20 research institutes and over 30 universities. Most of these establishments are members of the Tajik Academic, Research and Educational Networks Association (TARENA).[3] In partnership with local and international civil society institutions (OSI Tajikistan, CIPI, CEENet) and international organisations (UNDP, NATO Security Through Science Programme), TARENA works to apply ICTs to the community's needs. At the same time there are a number of governmental programmes and international/local initiatives focused on the computerisation of secondary schools, e-government development, education management information systems, health management information systems, etc.

However, even after so many initiatives focused on both infrastructure and human capacity development, the main challenge has remained weak human capacity. Research on ICT penetration in state agencies in Tajikistan showed very high demand amongst civil servants for computer skills training (95% of respondents). It also showed a lack of data exchange via the local network, despite the fact that the quality of computer hardware available in state institutions is high and internal and external networking facilities are available. State authority bodies, ignorant of ICTs, make employees use outdated technologies or use a computer simply as a typewriter.

The research study, jointly conducted by the Presidential ICT Council and CIPI in 2007, also found that:

- There is a lack of policy on ICT implementation in the education field as well as other sectors.

- The academic community and secondary education system are focused on applying specific proprietary software applications, rather than technologies generally.

- Most of the internationally funded ICT projects are focused on proprietary software applications that cannot be adapted to local needs.

- Technology is considered a luxury, not a tool.

- The local community of developers is weak.

Socio-cultural factors

The value of TajNet, according to Metcalfe's law which states that the value of a network equals the square of the number of users, is the lowest in the region. TajNet is one of the few cybernets that are lacking social networks and an affordable national webmail service. It is quite common to meet civil servants and representatives of the academic community with email accounts from RuNet in Russia (e.g., mail.ru, inbox.ru, list.ru). On the one hand it suggests ignorance, and on the other illustrates that ICTs have remained a luxury for the majority of citizens and organisations.

Cyberspace offers an unprecedented opportunity for landlocked countries like Tajikistan. Considering its geographic location and historical and cultural heritage, Tajikistan has a unique position among former Soviet Central Asian and other Persian-speaking states of the region, like Afghanistan and Iran. Assuming it manages to develop TajNet properly, Tajikistan may become a cultural bridge in the region among those states.

Legal and regulatory framework

The state policy on the telecommunication industry is mainly regulated by the Main Department of Communications and Informatisation (MDCI), a branch of the Ministry of Transportation and Communications. The MDCI coordinates the activities of its two subordinate entities:

- The State Communications Inspectorate, which deals with technical issues in the ICT industry (standards, spectrum, certificates, etc.)

- The Communications Regulation Agency, which deals with licensing and other legal issues related to the ICT industry (licensing of services).

The Presidential ICT Council is coordinating the e-strategy implementation. It deals more with ICT policy development, unlike MDCI, which is focused on technical issues.

The different types of licences for service provision in the ICT industry can be divided into four categories:

- Telematics and data transfer (internet service licence)

- Voice over internet protocol (VoIP) telephony

- Mobile telephony services, including advanced mobile phone system (AMPS), GSM, CDMA, CDMA2000, 3G

- Fixed telephony services, i.e., public switched telephone network (PSTN) services.

According to ICT legislation, every Tajikistani legal or private entity, regardless of its legal status, is eligible to apply for a licence and to be a service provider. These licences are issued by the State Service on Supervision and Regulation in Communications and Informatisation under the Ministry of Transportation and Communications. The time it takes for an application to be considered cannot be more than one month.

The service also issues separate technical licences that are required for the import and installation of telecommunications equipment such as VSAT, Wi-Fi, WiMAX, etc., and licences for frequency spectrum allocated to run the equipment.

Some positive changes have resulted from an improvement in ICT legislation in the country. These include doubling the number of communications operators, facilitating the use of ICTs in almost all spheres of life, developing infrastructure, and the implementation of various industrial projects and informatisation programmes throughout the country. These changes have allowed the government to begin developing a coherent state policy on developing the information society to meet the information needs of the citizens.

At the same time there are challenges, including legal, economic and administrative ones.

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3   www.tarena.tj/en

Action steps

Tajikistan's e-strategy is one of the main documents constituting the state's ICT policy. It has the potential to play a catalytic role in the ICT sector in the country. This is not only because it seriously considers ICTs an enabler of socioeconomic development in the country, but also because it creates the opportunity to promote the development of a transparent and competitive market by establishing the ICT Council under the president of Tajikistan. The most urgent step to be taken to make use of its advantages is to trigger the work of the council.

It is vital for the policy and legislative experience since independence to be researched and analysed, and for recommendations to be made to strengthen and improve the current legal context. This research needs to include an analysis of why intellectual property rights legislation does not currently exist. ■

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GLOBAL INFORMATION SOCIETY WATCH 2008 is the second in a series of yearly reports critically covering the state of the information society from the perspectives of civil society organisations across the world.

GLOBAL INFORMATION SOCIETY WATCH or **GISWatch** has three interrelated goals:

- **Surveying** the state of information and communication technology (ICT) policy at the local and global levels

- **Encouraging** critical debate

- **Strengthening** networking and advocacy for a just, inclusive information society.

Each year the report focuses on a particular theme. **GISWatch 2008** *focuses on access to infrastructure* and includes several thematic reports dealing with key access issues, an analysis of where global institutions stand on the access debate, a report looking at the state of indicators and access, six regional reports and 38 country reports.

GISWatch 2008 is a joint initiative of the Association for Progressive Communications (APC), the Humanist Institute for Cooperation with Developing Countries (Hivos) and the Third World Institute (ITeM).

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