Belarus

The Belarus government has moved to second- and third-generation controls to manage its national information space. Control over the Internet is centralized with the government-owned Beltelecom managing the country's Internet gateway. Regulation is heavy with strong state involvement in the telecommunications and media market. Most users who post online media practice a degree of self-censorship prompted by fears of regulatory prosecution. The political climate is repressive and opposition leaders and independent journalists are frequently detained and prosecuted.

Background

Under President Alexander Lukashenka, the Belarusian regime has been criticized for its repressive and increasingly authoritarian tendencies. In 2008, it was announced that Lukashenka would most likely run for a fourth term in 2011.[1] During his rule a number of independent and opposition leaders have been detained, opposition parties banned, and public demonstrations suppressed. The economic and political system remains highly centralized, with executive authority vested exclusively in the office of

RESULTS AT A GLANCE					
Filtering	No Evidence of Filtering	Suspected Filtering	Selective Filtering	Substantial Filtering	Pervasive Filtering
Political			●		
Social			●		
Conflict and security			●		
Internet tools			●		

Other Factors	Low	Medium	High	Not Applicable
Transparency	●			
Consistency	●			

KEY INDICATORS	
GDP per capita, PPP (constant 2005 international dollars)	10,238
Life expectancy at birth (years)	70
Literacy rate (percent of people age 15+)	100
Human development index (out of 179)	67
Rule of law (out of 211)	184
Voice and accountability (out of 209)	182
Democracy index (out of 167)	132 (Authoritarian regime)
Digital opportunity index (out of 181)	78
Internet users (percent of population)	29

Source by indicator: World Bank 2009a, World Bank 2009a, World Bank 2009a, UNDP 2008, World Bank 2009b, World Bank 2009b, Economist Intelligence Unit 2008, ITU 2007, Miniwatts Marketing Group 2009.

the president. Charges of election fraud have also been widespread. Human rights organizations have been extremely critical of the current regime, including its steadily increasing control over information during the last several years. Nevertheless, Lukashenka remains genuinely popular with many, particularly the middle-aged and rural populations who have benefited most from his protectionist economic policies and the overall stability that Belarus has enjoyed[2] (which contrasts with political instability in Ukraine, Georgia, and other CIS countries). Market analysts predict that economic hardship will force the privatization of state assets, but such a move would most likely benefit top Belarusian officials.[3]

Internet in Belarus

Steady economic growth in Belarus has stimulated the development of telecommunications in recent years. However, because of excessive regulation and state control of major participants in the telecommunications industry, the development of telecommunications remains low compared to the rest of the region. The state retains a dominant position over the telecommunications sector, with all external fixed-line connections passing through the state-owned operator Beltelecom. Taking into account both the increase in Internet users and the potential of the Internet to spread political ideas, the government is adopting restrictive policies, monitoring content, and placing temporary limitations on access to politically sensitive Web sites, particularly during times of public protest.

  The cost of Internet access in Belarus has decreased in recent years prompting a notable rise in Internet usage and a growing ISP market. As of 2008, Belarus had an Internet penetration rate of approximately 29 percent.[4] Prices for Internet access remain higher than those of neighboring countries. In 2008, the cost of dial-up Internet

access through Beltelecom was around USD 0.68 per hour, while an ADSL connection (512 Kbps) cost around USD 122 per month,[5] placing the latter beyond the reach of most citizens, given that the average salary was around USD 436 per month as of July 2008. Private operators are attempting to break into the market by offering lower prices.

Because Beltelecom controls the market, tariffs for residential local calls are below cost. The government is preserving this policy in order to ensure that fixed voice services are affordable for all.[6] At the same time, Beltelecom is keeping prices high for international calls and Internet access service, a policy that allows the operator to subsidize local call services and remain a revenue-generating enterprise. This policy, however, hinders the establishment of a competitive market.

In recent years, broadband Internet services have developed rapidly. Beltelecom has announced plans to provide broadband Internet service to a large number of its subscribers and to launch Wi-Fi service. In April 2008, the Ministry of Communications estimated that 170,000 Internet users were using broadband services and forecast that by 2010 this number would reach 500,000 users.[7]

The most active Internet users in Belarus belong to the 17–22 age group (38 percent), followed by users in the 23–29 age group.[8] Internet access in Belarus is predominantly urban, with 60 percent of users living in the capital Minsk. The profile of the average Internet user is male, university educated, living in the capital, and working in a state enterprise. The Ministry for Statistics and Analysis estimates that one in four families in Belarus owns a computer at home.[9] In 2005, 58 percent of schools in Belarus had computers, and 25 percent of the schools had Internet access. The popularity of Internet cafés has fallen in recent years, as most users prefer to access the Internet from home or work. Russian is the most widely used language by Belarusians on the Internet, followed by Belarusian, English, and Polish.

As Internet usage has risen, related services have developed into fast-growing and profitable businesses in Belarus. According to ministry data, 150 ISPs had licenses to operate in the country, while only 41 were active at the beginning of 2008.[10] Conditional on obtaining a license, ISPs and mobile operators can apparently enter the market without facing any serious barriers. Fixed-line operators, however, are awaiting further liberalization of the market. There are four mobile operators, and the government owns stakes in all of them. The country's first deputy IT and communications minister, Ivan Rak, has announced that the tender for 3G licenses in Belarus would be held by September 1, 2009.[11] The state-controlled operator Beltelecom holds the biggest market share, with 187 public Internet access points in the country. Beltelecom's subsidiary Belpak is the main ISP in the country. Beltelecom holds exclusive rights over the external channels of communications,[12] and all ISPs are required to run their traffic through its infrastructure, often at high prices.

Only the network of the National Academy of Sciences of Belarus (BasNet) has its own independent satellite connection,[13] but it provides Internet access exclusively to

academic institutions. In 2008, the speed of Beltelecom's internal Internet channel was significantly increased to 5.2 Gbps, with prospects to increase to 8 Gbps in 2010 (from a mere 1.5 Gbps in 2006). In comparison, BasNet's speed is 12 Mbps. Beltelecom routes its traffic predominantly through Russian operators (70 percent) to connect to the Internet.[14]

Second-tier ISPs have the right to build their own infrastructure, except for the construction of external liaison channels. Providers are also required to use Beltelecom channels to connect users (so-called last mile).

Despite the state-proclaimed ''liberalization'' of the Belarusian mobile market, the government continues to own a significant stake in four operators.[15] The main ISPs in the country apart from the state operator are Aichyna, Belinfonet, BN, and Solo. Because VoIP services are considered international services over which Beltelecom has exclusive rights, the state operator is the only operator licensed to provide commercial VoIP services in Belarus. The high prices maintained by the monopoly encourage the emergence of illegal VoIP providers, which are criminally prosecuted. Under decree of the Ministry of Communications and Informatization, IP telephony is permitted only for noncommercial purposes.[16] Regulation of P2P connections is currently not a priority for the government.

Beltelecom controls the main IXP and charges other ISPs for using it.[17] Nonetheless, a large number of second-tier ISPs are using the IXP because it significantly cuts down traffic costs. Interconnection tariffs between telecommunications operators are still not regulated.

There are more than 22,300 Belarusian Web sites, of which around 13,500 domain names were registered with the country-code top-level domain name ''.by'' by mid-2008.

Legal and Regulatory Frameworks

Extensive governmental regulation, a strict licensing regime, and Beltelecom's monopoly are major impediments to the development of competitive Internet services in Belarus. Beltelecom is under the direct supervision of the Ministry of Communications and Informatization. This arrangement could change as a result of the WTO's accession requirements, which demand that Beltelecom be privatized and end its monopoly on external communication channels. The ministry declared that Beltelecom's control over external communication channels would remain after privatization, with licenses given only to those operators that have built their own external communication infrastructure. Belarusian legislation has established a license-based regime for the following types of telecommunications activities: fixed local/national telephony, mobile telephony, radio trunk transmission, and data transmission.[18]

The Ministry of Communications and Informatization is the main regulatory authority of the telecommunications sector and is divided into six main departments: statistics, telecommunications, postal communications, television and broadcasting, certification, and technical regulation and standardization. The ministry is frequently accused of placing unjustified limitations on commercial operators to reinforce Beltelecom's monopoly. The ministry is a founder of Beltelecom and regulates the activities of the operator. This setup undermines regulatory independence, a principle essential for the efficient functioning of the communications sector. Policy relating to ICT appears to be created mostly on an ad hoc basis by President Lukashenka and his administration. The president frequently holds special meetings to issue directives regarding ICT regulation and the implementation of particular policies. The Security Council, chaired by the president, decides on a wide range of questions related to the security of the regime, including information security. Additionally, a number of state entities have significant power to influence and control the Internet. The Operational Analytics Center (formerly the State Center for Information Security), under the supervision of the president and initially a subdivision of the special security services (KGB), is a specialized body responsible for protecting state secrets. The center has preserved its close collaboration with the KGB. The center also manages the administration of the country's top-level domain (''.by''). The State Inspection on Electronic Communications is a subunit of the Ministry of Communications and Informatization and exercises wide authority with regard to the Internet. The Inspection supervises the electronic communications sector, and in the event of a violation of the rules, it can impose sanctions on operators or propose the revocation of a wrongdoer's license.

Department ''K''—a division of the Ministry of Internal Affairs—is responsible for investigating cyber crime (arts. 212, 349–355 of the Penal Code). The department coordinates its work with the police and other authorities. Department ''K'' keeps 1,500 Belarusian hackers on its records. Records show that 4,642 criminal cases related to usage of computer technologies commenced in the period of 1998 to 2006, of which 2,826 were registered in 2005. Belarus has witnessed a rapid growth of cyber crimes, and authorities have estimated a 30 percent increase for the first half of 2007 in comparison to the whole of the previous year.[19] The most common cyber crimes in the country are unauthorized appropriation of information through usage of computer technology (72 percent) and modification of computer information (13 percent).[20]

Although Belarus lacks a well-developed Internet regulatory framework, the authorities appear anxious to achieve control over the Internet. Conscious of the popularity of the Internet among opposition groups and private media, authorities compel self-censorship through frequent threats and prosecutions. In addition, in order to avoid public debate of pending legal measures, authorities often delay publishing laws before their final promulgation.

A number of laws refer to the Internet, such as the Law on Informatization of 1995,[21] the Law on SORM of 1999,[22] and the Law on Electronic Communications of 2005.[23] The Internet is within the ambit of regulation of the Law on Informatization, which subjects Internet activities to a number of media restrictions. The Law on the Media of June 2008 provides a similar regime for Web sites and media. The legal framework allows for the application of restrictive measures on Web sites, such as blocking of content or the cessation of operation. This is a result of increasing intent on the part of a number of state officials to control the Internet.

In 2006, the government approved the Program on Protection of Information. The main objective of this program is to prevent illegal access to information by the special services, to protect information systems, and to counteract excessive investigative measures. A new center was created in support of this program, but many activists have questioned its independence and effectiveness.[24]

E-commerce is also regulated by the state. All Internet retailers are legally obligated to register domain names with the State Center of Information Security, as well as to obtain a license for retail trade by e-commerce activities. International electronic payment systems are seriously limited in Belarus. All international monetary transfers must occur through banks that notify the tax authorities of all fund transfers from abroad.

Surveillance

Officially, Internet filtering and monitoring of telecommunications networks are illegal in Belarus. However, authorities conduct surveillance of Internet activities under the pretext of protecting national security. In 2001, the president extended the concept of ''national security'' to include the Internet as a potential threat to the information security of the country.[25]

Under the Law on Operational and Investigative Activities (SORM) and the Law on Authorities of National Security in the Republic of Belarus, the Ministry of Internal Affairs and the KGB have the right to monitor information carried through any communication channel in order to ''fight criminal activity'' and ''guarantee national security.''[26] Such activity may be carried out only as provided for in the law; however, the law gives the KGB the right to obtain any data from state entities and from private or public organizations considered to be ''necessary'' for accomplishing the KGB's objectives, and gives it unlimited access to the information systems and databases (including log files and so on) of communication providers. Article 17 of SORM establishes that all persons who are providing any type of electronic communications services should integrate additional certified equipment and program mechanisms into their systems, as specified by the KGB.

Belarus does not have systems monitoring Internet traffic analogous to the Russian SORM-II. However, it is likely that the Belarusian and Russian special services cooperate in this sphere. More than 70 percent of Belarusian Internet traffic goes through Russia, and part of it is processed through the Russian system SORM-2. Nonetheless, some providers confirm that the authorities have unofficially requested that all user IDs be kept for a few months and be turned over to the security services on demand.

On November 21, 2005, the leader of one of the opposition parties (Anatoliy Lebedko) was called to the prosecutor's office in relation to material published on his party's Web site (ucpb.org).[27] Lebedko was subsequently interrogated about the source of the information posted online and the person responsible for the article's content. Such examples of surveillance over Internet activities are not isolated.

ONI Testing Results

In 2007 and 2008, the ONI tested seven main ISPs: Atlant, Aichyna, BASNET, Belinfonet, Belpak (Beltelecom), BN, and Solo. The testing confirmed blocking by almost all ISPs. Many Web sites tested on the academic network BASNET were inaccessible in Belarus, among which were opposition Web sites and local and global freedom-of-expression Web sites, including a number of Web sites of international organizations, some dedicated to Belarus. International social networking, hosting, e-mail, P2P, and translation and multimedia Web sites were also filtered on BASNET, in addition to Web sites containing information on drug and alcohol consumption, as well as terrorist activities. Anonymizer Web sites were blocked on commercial ISPs and on the academic network. Several LGBTQ Web sites have been filtered openly since the beginning of 2005, on the basis that they contain pornographic material.[28] Interestingly, these Web sites were inaccessible on some ISPs but accessible on the state-owned Beltelecom. Some erotic Web sites were blocked as well. Access to U.S. military Web sites appears to be restricted through reverse filtering.[29]

Since April 2008, an association focused on promoting freedom of expression among ISPs has started gaining popularity in Belarus.[30] Nonetheless, most of the large operators are limiting access to the Internet when necessary to serve specific objectives. A study carried out in the spring of 2008 compiled a list of Web sites that are currently blocked by Belarusian companies. The results of this local survey are presented in the following table.[31]

Internet access is forbidden in military and national security agencies, as well as in the banking sector. Beltelecom's monopoly control over international connections provides the state with an effective and enforceable system for regulating and restricting Internet traffic. During presidential elections, access to opposition and independent media Web sites was temporarily blocked. During the February 2006 presidential

Position	Restriction of Access to Certain Internet Content	Percentage
1	Multimedia and P2P sites	28
2	No restrictions of Internet access	22
3	Access allowed only to a limited number of Web sites	20
4	Systems allowing for an instant exchange of messages	16
5	Erotic and porn sites	12
6	Limited traffic	10
7–8	Limitations on upload of large files	8
7–8	Social networks, Internet journals	8
9	Speed of download of information affected	6
10	Complete restriction of Internet access	4

elections, ONI documented second-generation techniques, including ''just-in-time'' filtering of opposition Web sites, which included DNS tampering, network disconnection, and allegations of DoS attacks.[32] Some specialists have suggested that, during presidential elections, Beltelecom established so-called traffic-shaping practices—that is, deliberately slowing down access to specific IP addresses. Beltelecom allegedly received special requests from authorities to block certain Web sites for a limited period of time.

Self-censorship by Internet users has become a pervasive phenomenon. In 2005, the popular Belarusian portal tut.by refused to put up banners advertising opposition Web sites. It is unknown whether this activity was a result of pressure by the authorities or merely an attempt to protect its own business.[33]

Researchers at ONI confirmed that most Internet cafés restrict access to Web sites containing pornographic, terrorist, and proxy-related material. Internet cafés install software that either blocks URLs in the list of forbidden Web sites or alerts the administrator if such a URL is visited. The restricted URL list includes Web sites forbidden for distribution by the Republic Committee on Prevention of Pornography, Violence, and Cruelty Propaganda. Administrators often require passport identification of customers. Some Internet cafés also limit the volume of Internet traffic and decrease download speeds when exceeded. On the request of state security services, administrators keep logs of users' network activity.

Conclusion

As Internet use in Belarus has risen significantly in recent years, the government is intent on extending its firm control over the national information space. The level of online piracy in the country is very high, but the government does not adequately

confront such activity. Instead, it heavily regulates market participants and is taking a sluggish approach to technological innovation. All ISPs in Belarus must connect to the Internet through channels of the state-owned ISP Beltelecom, thus facilitating the government's control over all Internet traffic. The president has established a strong and elaborate information security policy and has declared his intention to exercise strict control over the Internet under the pretext of national security. Based on periodic testing, ONI has detected sporadic but sophisticated blocking of Internet content, prompted by political events in the country, suggesting that the regime is inclined toward using second- and third-generation techniques.

Notes

1. In the earlier redaction of the Belarus constitution, it was provided that the president cannot remain the head of state for more than two terms. A referendum in 2004, however, abolished that restriction, opening the doors for the current president to stay in power for an unlimited time.

2. The World Bank has acknowledged the high levels of growth of the Belarusian economy in recent years. Nonetheless, the bank has emphasized that the economy is highly dependent on the price of Russian gas and the industries are subject to strict state regulations.

3. IHS Global Insight, ''Belarus,'' May 2009, http://www.globalinsight.com/.

4. Miniwatts Marketing Group, ''Internet World Statistics: Belarus,'' 2009, http://www.internetworldstats.com/europa2.htm#by. Note that the Ministry of Communication and Informatization estimates that the Internet users are only around 3.3 million; Interfax News Agency ''Minsvyazi Prognoziruet 500 Tysyach Polzovateley Shirokopolsnogo Interneta v Belorussii v 2010 Godu'' [Communication Ministry Forecasts 500 Thousand in Belarus by 2010], http://it.tut.by/news/96876.html.

5. *ByFly*, ''2 Khoroshie Novosti Dlya Nashikh Abonentov'' [Two Pieces of Good News for Our Subscribers], December 15, 2008, http://www.byfly.by/bnews/26518/.

6. European Bank for Reconstruction and Development, *Communications Sector Assessment 2008*, http://www.ebrd.com/country/sector/law/telecoms/assess/belarus.pdf.

7. *It.Tut.by*, ''Ministr Svyazi: v Belorussii 170 Tysyach Polzovateley Shirokopolosnogo Interneta'' [Minister of Communications: There are 170 Thousand Broadband Subscribers in Belarus], April 21, 2008, http://it.tut.by/news/96647.html.

8. *Tut.by*, ''Issle dovanie auditorii interneta v Belarusi, 2009,'' [Investigation of the Internet Audience in Belarus, 2009], April 2009, http://tutby.com/service/advert/statistics/.

9. *It.Tut.by*, ''Minstat: v 2007 Godu Kompiuter Byl v Kazhdoy Chetvertoy Belorusskoy Semye'' [Ministry of Statistics: in 2007 Every Fourth Belarusian Family had a Computer], March 12, 2008, http://it.tut.by/news/96941.html.

10. *It.Tut.by*, ''Ministr Svyazi: v Belorussii 170 Tysyach Polzovateley Shirokopolosnogo Interneta'' [Communications Minister: There are 170 Thousand Broadband Subscribers in Belarus], http://it.tut.by/news/96647.html.

11. IHS Global Insight, ''Belarus,'' May 2009, http://www.globalinsight.com/.

12. Beltelecom's legal monopoly is established in article 44 of the Law on Telecommunications of July 19, 2005.

13. The BASNET satellite connection is provided by the Norwegian company Taide. ISP BASNET also has a 34 Mbps connection to the European network. It does not have its own land connection to GEANT and connects through the Polish scientific network PIONIER.

14. Beltelecom connects through four foreign operators: RosTelecom (Russia) with 2 Gbps, Peter-Star (Russia) with 1.2 Gbps, Teleglobe (Canada) with 0.6 Gbps, and Sprint (USA) with 0.6 Gbps.

15. European Bank for Reconstruction and Development, *Communications Sector Assessment 2008*, http://www.ebrd.com/country/sector/law/telecoms/assess/belarus.pdf.

16. *ByBanner.com*, ''Ministerstvo Svyazi i Informatizatsii Razreshaet Skype'' [The Ministry of Communications and Informatization Allows Skype], March 3, 2006, http://www.bybanner.com/article/1747.html.

17. Beltelecom National ISP, ''Dostup k Natsionalnoy Tochke Obmena Traficom'' [National IXP Access], http://www.beltelecom.by/services/internet/.

18. Licensing terms and conditions, depending on the communications services provided by the licensee, are defined in the regulation on licensing of activities in communications adopted by the Resolution of the Council of Ministers of Belarus dated October 20, 2003, No. 1387 (revised resolution of the Council of Ministers of Belarus dated December 29, 2007, No. 1903).

19. *It.Tut.by*, ''Za Polgoda Prestupleniy v Sfere Informatsionnoy Bezopasnosti Bolshe, Chem za ves Proshly God'' [In the First Half Year 30% More Crimes in the Field of Information Security than in the Last Year], October 5, 2007, http://it.tut.by/news/97906.html.

20. Based on the materials of the Ministry of Internal Affairs, available at http://mvd.gov.by/modules.php?name=Content&pa=showpage&pid=259, (Accessed May 19, 2009).

21. ''Zakon Respubliki Belarus ob Informatizatsii'' [Belarus Law on Informatization], http://pravo.by/webnpa/text.asp?start=1&RN=V19503850 (accessed May 19, 2009).

22. ''Zakon Respubliki Belarus ob Operativno-rozysknoy Deyatelnosti'' [Belarus Law on Investigative Activities], http://pravo.by/webnpa/text_txt.asp?RN=H19900289 (accessed May 19, 2009).

23. ''Zakon Respubliki Belarus ob Electrosvyazi'' [Belarus Law on Telecommunications], http://pravo.by/webnpa/text.asp?start=1&RN=H10500045 (accessed May 19, 2009).

24. *Delovaya Gazeta*, ''Chto Skryvayut Spetssluzhby?'' [What Do Special Services Conceal?], January 31, 2006, http://www.bdg.by/news/news.htm?81714,1.

25. ''Zakon Respubliki Belarus ob Utverzhdenii Kontseptsii Natsionalnoy Bezopasnosti'' [Law of the Republic of Belarus on Implementing the Concept of National Security], http://pravo.by/webnpa/text_txt.asp?RN=P30100390 (accessed May 19, 2009).

26. The Law on Operational and Investigative Activities (09.07.1999) and the Law on the Authorities of State Security of the Republic of Belarus (03.12.1997).

27. *ByBanner.com*, ''Belorusskaya Prokuratura Zainteresovalac Saytom OGP'' [The Belarussian Prosecutor's Office Showed an Interest in the OGP's Web site], November 12, 2005, http://www.bybanner.com/article/1301.html.

28. Filtering has been acknowledged by Beltelecom's current representative Andrey Saborov. See *Bybanner.com* ''Beltelecom Potverdil Nalichie Blokirovki Dlia 'Golubyih' Saytov'' [Beltelecom Confirmed the Blocking of Gay Sites], http://www.bybanner.com/article/647.html.

29. Reverse filtering occurs on the Web server hosting the content, as opposed to at a point along the way of the traffic flow, and is based on restricting requests based on geographical location of the originating Internet Protocol address. Copyright holders who want to restrict access to their content in certain markets often use reverse filtering. Examples include hulu.com, BBC.com, and other sites that syndicate commercial video and audio content that is subject to licensing. The ONI has detected that many U.S. military sites are inaccessible outside the United States. We strongly suspect that this may be as a result of reverse filtering.

30. *Tut.It.by*, ''V Belarusi Poyvitsya Assotsiatsiya Otvetstvennykh Internet-izdatele'' [An Association of Responsible Internet Publishers will be Created in Belarus], April 30, 2008, http://it.tut.by/news/96572.html.

31. *Tut.It.by*, ''Top 10 Korporativnykh Setevikh Zapretov v Belarusi'' [Top 10 Corporate Net Bans in Belarus], March 6, 2008, http://it.tut.by/news/96984.html.

32. OpenNet Initiative, ''The Internet and Elections: The 2006 Presidential Elections in Belarus (and Its Implications),'' April 2006, http://opennet.net/sites/opennet.net/files/ONI_Belarus_Country_Study.pdf.

33. *Obedinennaya Grazhdanskaya PartiyaSvaboda, Sobstvenocst Zakonnost*, ''Na Belorusskikh Forumakh Vvodyat Tsensuru'' [Censorship on Belarus Forums], April 20, 2005, http://www.ucpb.org/index.php?lang=rus&open=2799.