

# Kyrgyzstan

Access to the Internet in Kyrgyzstan has deteriorated as heightened political tensions have led to more frequent instances of second- and third-generation controls. The government has become more sensitive to the Internet’s influence on domestic politics and enacted laws that increase its authority to regulate the sector. Recent liberalization of the telecommunications market in Kyrgyzstan has made the Internet affordable for the majority of the population. However, Kyrgyzstan is an effectively cyberlocked country dependent on purchasing bandwidth from Kazakhstan and Russia. The increasingly authoritarian regime in Kazakhstan is shifting toward more restrictive Internet controls, which is leading to instances of “upstream filtering” affecting ISPs in Kyrgyzstan.



## Background

In 2005, Kurmanbek Bakiev won the presidential elections after the violent downfall of the 14-year authoritarian regime of the former president, Askar Akayev. The new head of state vowed to distribute more powers to the parliament, encourage free speech,

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)	1,894
Life expectancy at birth (years)	68
Literacy rate (percent of people age 15+)	99
Human development index (out of 179)	122
Rule of law (out of 211)	191
Voice and accountability (out of 209)	149
Democracy index (out of 167)	114 (Hybrid regime)
Digital opportunity index (out of 181)	135
Internet users (percent of population)	13.8

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.

fight corruption, and tackle poverty. However, Bakiev's enthusiasm to introduce democratic constitutional amendments seemed to have died away soon after his inauguration. The political shift in power did not result in significant economic improvements in Kyrgyzstan, as the country entered economic stagnation and two-thirds of the population remained below the poverty line. International observers predict that new civil conflicts may erupt if the country does not adopt urgent economic measures.<sup>1</sup>

The Internet is one of the few free outlets for expressing public criticism in Kyrgyzstan, and it has been used as an instrument to mobilize protest and opposition against the government. Kyrgyzstan's UN global ranking for e-government for 2008 (0.4195) has deteriorated; however, compared to its Central Asian neighbors, the country remains in second place after Kazakhstan.<sup>2</sup>

### Internet Infrastructure

Kyrgyzstan has one of the highest Internet penetration rates in Central Asia, although the figures gathered from different sources vary widely. According to local sources, around 7 percent of the population had access at the end of 2008 (760,664 people).<sup>3</sup> The ITU reports a high figure for Internet penetration for 2008 (13.8). The government estimated that Internet penetration would reach 10 percent by 2008,<sup>4</sup> while the United Nations *e-Government Survey* states that Internet penetration was no more than 5.6 percent for 2008.<sup>5</sup> Broadband users in Kyrgyzstan are estimated to be only 0.05 percent for 2008.<sup>6</sup> Personal computers (PCs) remain unaffordable for the vast majority: only 1.9 percent of the population own a PC.<sup>7</sup> There are more than 150 public Internet access centers in the country, including commercial Internet cafés and free-access centers sponsored by NGOs. The majority (51 percent) of users access the Internet from their workplace, 21 percent through their mobile telephone, 20 percent from Internet

cafés, and only 8 percent from home.<sup>8</sup> Development of the Internet infrastructure still targets only the urban markets, in particular the two largest cities—Bishkek (in which 77 percent of the Internet users are concentrated) and Osh.

There are slightly more female than male users. Forty percent of all users are aged between 10 and 20, 35 percent are aged 20 to 30, and 16 percent are between 30 and 40. Most of the users are students (50 percent), and they prevail over the users who work (34 percent of users are employees in private companies, and 9 percent are employees in the state administration). Interestingly, the 25 percent of users who have defined themselves as unemployed make up the third largest group of Internet users. Russian sites remain the most visited among Kyrgyz Internet users (90 percent), compared with only 8 percent Kyrgyz and 2 percent English-language sites.<sup>9</sup> In spite of the popularity of the Russian language in everyday life, the Kyrgyz language portion of the Internet is expanding.

Kyrgyzstan has made relatively early progress in the liberalization of its economy compared to other CIS countries. The republic joined the WTO in the second half of 1998. In order to comply with the requirements for liberalization of the telecom sector in 2006, the government agreed to put more than 77 percent of the incumbent KyrgyzTelecom up for sale. Nonetheless, only 10 percent of the shares were transferred to private hands by 2007, and 77.84 percent of the incumbent is still owned by the state. In 2008, around 61 percent of all users connected to the Internet through KyrgyzTelecom.<sup>10</sup>

Notwithstanding the pending privatization of the main incumbent, the liberalization of telecommunications services, driven by foreign investment and financial assistance, has resulted in an increasingly competitive, profitable, and growing Internet sector in the last few years. The Law on Electronic and Postal Communications, drafted on the basis of sector best practices, has opened the market for competition. The communications regulator has developed and implemented new access, interconnection, and tariff regulations after extensive consultations with stakeholders.<sup>11</sup> The competitive market has provided a wide choice of telephone connection service, Internet access, mobile connection, and television and radio channels to the population. This has led to increased competition among the operators, and in particular Internet service providers. In 1996, there were only two operators—AsiaInfo and Elcat—that charged USD 2.50 per hour for Internet use. By 2000, there already were 16 companies providing Internet access for USD 0.90 an hour, and finally in 2005 there were 38 companies on the market, which dropped the cost for Internet access to USD 0.30 an hour. To win competitive advantage on the market, ISPs have introduced Internet cards, and these have become very popular.

Out of the 38 active ISPs, only three have independent external connections to the international Internet (KyrgyzTelecom, Saima Telecom, and Elcat). Also, only three providers own the infrastructure they use (KyrgyzTelecom, Saima Telecom, and Elcat).

The others lease lines and cables from the state-controlled top-tier ISP KyrgyzTelecom. The government has a major stake (50 percent) in Elcat, another top-tier ISP. All other ISPs are private except for the research and educational networks. All ISPs are based in the capital and very few of them operate in other regions. The majority of ISPs connect to the Russian portion of the Internet by fiber-optic cable. In addition to its major Russian connection, KyrgyzTelecom has built external connection ports to China and Kazakhstan. On a number of occasions, KyrgyzTelecom has been affected by KazakhTelecom's filtering practices, since it is buying international traffic from the foreign provider. For Internet data transfer, two of the largest ISPs—AsiaInfo and Totel—use fiber-optic lines financed by the Soros Foundation and extend parts of the infrastructure themselves where necessary. There are a number of Internet cafés in the capital, and although Internet cafés can be found in the regions, the connection is often unreliable.

The Soros Foundation also financed the national Internet Traffic Exchange Point (IXP). This IXP is governed by the Association of Telecommunications Operators and distributes local traffic among the local ISPs. The international Internet bandwidth in the country is 300 Mbps, and the most popular means for Internet access is through dial-up connection. Leased lines with transfer speeds of up to 64 Kbps are widely available for businesses, while higher-speed broadband access lines are very limited.<sup>12</sup> A private company, AsiaInfo, administers the country's top-level domain zone “.kg.”<sup>13</sup> There are around 1,500 top-level domain names registered in the Kyrgyz Internet zone. The two most-visited Web sites are local media sites, while most information sought online is education related.

In recent years, the mobile sector in Kyrgyzstan has grown significantly. As a result, the government has expressed its intention to exert control over the mobile services. The number of mobile users in 2006 topped 1,000,000 (or 20 percent of the population), which is an increase of almost 50 percent compared to the previous year. As of September 2007, there were five mobile operators in the country. The dominant operator is Bitel GSM, which owns 78 percent of the market. The other operators, MegaCom, FONEX, and Katel, have a limited presence with 10 percent, 8 percent, and 4 percent, respectively.<sup>14</sup> A new operator, NEXI (offering CDMA service), became active in 2007.

Overall, state regulation in the communications sector created favorable conditions for establishing a competitive communications market. By 2008, the government issued 429 licenses to over 280 telecommunication companies.

VoIP licenses are readily available. To obtain a license, companies are required to contribute 20 million som (approximately USD 517,000) to a national IT development fund. Once an applicant obtains the license, they are licensed as an operator, or can resell their services to other companies. There are no restrictions on the provision of P2P services in the country.

## Legal and Regulatory Frameworks

Compared with its neighbor Kazakhstan, Kyrgyzstan does not compel local ISPs to work with the state-owned provider and respects the rules of competition in the market. Previously, in order to ensure that a USD 500 million loan from the World Bank to build Kyrgyzstan's telecom infrastructure was repaid, a state decree granted KyrgyzTelecom the exclusive rights to international long-distance services until 2003.<sup>15</sup> This decree has since been overruled, and ISPs now have independent channels for international connections. Operators have built their own data transmission networks within the capital, Bishkek, providing an alternative to the incumbent KyrgyzTelecom's infrastructure. Outside of Bishkek, however, IT development is hindered by poor infrastructure, and only the incumbent KyrgyzTelecom provides Internet access. Internet companies are not investing in building their own networks, leading to very low Internet availability outside the capital. A retail-tariff-rebalancing plan was proposed in 2008, which is expected to begin improving investment in local infrastructure.

In 2002, the state declared ICT development a priority by way of the National Strategy on Information and Communication Technologies for Development of the Kyrgyz Republic. The national ICT plan was reviewed by the ICT Council and approved by the president in 2003. Eager to harness Internet capabilities in order to stimulate economic growth, the government is implementing action plans and ICT strategies to encourage development of e-government, e-education, and the e-economy. Moreover, under a joint program between the government and international organizations, 95 percent of central government bodies, as well as 50 percent of local ones, were connected to the Internet and now provide online information about their services.<sup>16</sup> However, the cyber presence of political opposition is limited. Only three Kyrgyz Web sites belonging to political parties were detected by ONI.<sup>17</sup>

The communications regulator in the country is the National Communications Agency (NCA) whose chairman is appointed by the president of Kyrgyzstan. The NCA is financed by fixed-percentage contributions from operators, and therefore it is not dependent on the state budget. The NCA regulates and supervises postal and electronic communication companies, issues licenses, monitors the Internet, and settles disputes among operators. The Ministry for Transport and Communications is the policy-making body in the communications sector, responsible for formulating the sector development policy, including designing privatization programs, enhancing competition, and exercising monitoring functions. Although the functions of NCA and the ministry are legislatively separate, the two entities often enter into disputes with regard to their authority to regulate some activities, in particular licensing, radio frequencies, telephone number capacity, and tariffs. The process is quite political and there are frequent disagreements concerning the development of communications

regulatory programs and regulations. Since 2008, the legal framework has been under revision as a working group is debating new amendments to the 1998 Law on Electronic and Postal Communications. At the same time, the government has introduced new restrictions on the media. The recently introduced amendments to the Media Law have attracted criticism from local journalists.<sup>18</sup>

The presidential administration has made efforts to introduce restrictive measures to control Internet content. In the spring of 2005, members of the government proposed amendments to the Law on Mass Media that would have led to blocking all “.ru” domain sites containing content “offensive” to Kyrgyzstan. In turn, these amendments would have limited Kyrgyz access to sources solely on the “.kg” domain, which is regulated by local authorities, effectively creating a national “intranet.” Although this proposal was rejected, it revealed a shift in official attitudes toward reigning in Internet development in the country.<sup>19</sup>

Kyrgyz national security laws do not directly apply to Internet activities. Nevertheless, in 2003 the National Security Council proposed the creation of specialized communication and information security within the Security Council. The Security Council would be, *inter alia*, responsible for examining internal and external policy questions in the field of information security. In 2005, a government resolution on the Program for Information Security was adopted. The program’s main objective is to create protection for the individual, the society, and the state in the information space, but even after its amendments of 2005 it continues to lack precise definitions for what constitutes commercial secrets, state secrets, and private information. This absence of clear terminology may lead to variable interpretations, which could create space for potential abuse. Furthermore, the program does not explicitly define what information can be restricted, which broadens the scope for potential abuse, including the possibility that these provisions will be used as a justification for filtering Internet content.

### Surveillance

There is no legislation in Kyrgyzstan that allows national security bodies to organize surveillance over the Internet. KyrgyzTelecom itself launched a technical investigation to prevent “gray traffic” generated by other ISPs, meaning spam or other illegitimate requests for information.

Proposals have been made for conducting state-led surveillance activities at the ISP level. In July 2006, the State Agency for Intellectual Property proposed the creation of an “Inter-Departmental Commission on State Regulation of the Kyrgyz Segment of the Internet.” This institution, based on an existing Russian model, would have coordinated the activity of the executive power bodies and organizations participating in the Kyrgyz segment of the Internet. The proposal was rejected.

On a few isolated occasions, the government has attempted to track down the IP addresses of users accessing forums or chats.

### ONI Testing Results

In 2007 and 2008, the OpenNet Initiative conducted testing from various access points on four main first-tier ISPs: AsiaInfo, Elcat, KyrgyzTelecom, and Saima Telecom. The ONI could not officially detect filtering by the providers at the time testing was carried out.

In 2008 and 2009, ONI observed a number of Web sites periodically unavailable on KyrgyzTelecom and Saima Telecom, such as <http://www.kyrgyzpress.com>, <http://www.prezident.kg> (a site containing materials derisive to Kyrgyz state officials), and <http://www.24.kg> (a media site). The reasons why these sites were targeted have not been clarified, although these observations are consistent with second-generation controls. In 2005, during the parliamentary elections, ONI documented the extensive use of DDoS attacks against opposition and media Web sites and Kyrgyz ISPs.<sup>20</sup>

Filtering by upstream providers (upstream filtering) was also detected in early 2009, with a number of Web sites blocked by the Kazakh state Internet provider, which included <http://www.livejournal.com> (a popular blogging site), <http://www.internews.fr>, <http://www.posit.ru>, and others. Access to these sites was inaccessible for the majority of users in Kyrgyzstan because of filters implemented by the main Kazakh telecommunication operator, which sells its services to KyrgyzTelecom. Filtering also exists at the enterprise level (i.e., NGOs, corporate clients) in order to block access to content deemed irrelevant and to economize on Internet traffic.

### Conclusion

The Kyrgyz government has implemented policies aimed at fostering the development of the communications sector, which is seen as an instrument for attracting foreign investment. Potential limits in Internet freedom are posed by generally poor access and “upstream filtering” resulting from dependence on Kazakh and Chinese connections. There is also evidence of emerging second-generation methods, which are employed during periods of heightened political tension in the country. While the Kyrgyz government has shown determination in opening up the market to competition and abolishing measures leading to state-controlled access, much remains to be done in order to establish stable mechanisms guaranteeing media freedom and freedom of information. Kyrgyzstan is unlikely to follow the example of its neighbors that have introduced first-generation controls on Internet access, but second- and third-generation controls are likely to continue to evolve as the government grapples with the increasing significance of the Internet in domestic politics.

## Notes

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2. Compared to Kyrgyzstan's e-government readiness ranking in 2005 (0.4417). See United Nations, *United Nations e-Government Survey 2008: From e-Government to Connected Governance*, <http://unpan1.un.org/intradoc/groups/public/documents/UN/UNPAN028607.pdf>.
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15. Paul Budde Communication Pty., Ltd., "Kyrgyzstan—Telecoms Market Overview and Statistics," September 2008.
16. Kyrgyzstan Government Gate Portal, <http://www.govservices.kg>.
17. These parties are the Moia Strana Party, the Democratic Party Turan, and the Ar-Namys Party, whose previous leader is the current prime minister, F. Koulov.
18. Bruce Pannier, "Kyrgyzstan: Rights Groups Assail Restrictive New Media Law," Radio Free Europe/Radio Liberty, June 17, 2008, <http://www.rferl.org/content/article/1144636.html>.



19. Before liberalization, KyrgyzTelecom carried out filtering of voice traffic in order to limit access to non-Kyrgyz providers offering IP-telephony service, to thereby compel the use of local providers. Voice traffic was filtered in all the standard ports on all popular non-Kyrgyz providers of IP telephony. Allegedly, Cisco (Pix) and Huawei (EuDemon) products were used for filtering voice content.

20. OpenNet Initiative, "Special Report: Kyrgyzstan: Election Monitoring in Kyrgyzstan," February 2005, <http://www.opennetinitiative.net/special/kg/>.



This is a section of [doi:10.7551/mitpress/8551.001.0001](https://doi.org/10.7551/mitpress/8551.001.0001)

# **Access Controlled**

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**Edited by: Ronald Deibert, John Palfrey, Rafal Rohozinski,  
Jonathan L. Zittrain**

### **Citation:**

*Access Controlled: The Shaping of Power, Rights, and Rule in Cyberspace*

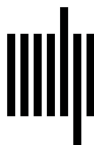
**Edited by: Ronald Deibert, John Palfrey, Rafal Rohozinski, Jonathan L. Zittrain**

**DOI: 10.7551/mitpress/8551.001.0001**

**ISBN (electronic): 9780262266031**

**Publisher: The MIT Press**

**Published: 2010**



**The MIT Press**

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This book was set in Stone Serif and Stone Sans on 3B2 by Asco Typesetters, Hong Kong.

Printed and bound in the United States of America.

Library of Congress Cataloging-in-Publication Data

Access controlled : the shaping of power, rights, and rule in cyberspace / edited by Ronald Deibert . . . [et al.] ; foreword by Miklos Haraszti.

p. cm. — (Information revolution and global politics)

Report from the OpenNet Initiative.

Includes bibliographical references and index.

ISBN 978-0-262-01434-2 (hardcover : alk. paper) — ISBN 978-0-262-51435-4 (pbk. : alk. paper)

1. Cyberspace—Government policy. 2. Internet—Government policy. 3. Computers—Access control. 4. Internet—Censorship. I. Deibert, Ronald. II. OpenNet Initiative.

HM851.A254 2010

005.8—dc22

2009049632

10 9 8 7 6 5 4 3 2 1