Although India’s internet penetration rate of less than 10 percent is low by global standards, the country is nonetheless home to tens of millions of users and has become an important leader in the high-tech industry. Meanwhile, access to mobile phones has grown dramatically in recent years, with penetration reaching nearly 60 percent of the population. In the past, instances of the central government and state officials seeking to control communication technologies and censor undesirable content were relatively rare and sporadic. However, since the November 2008 terrorist attacks in Mumbai, which killed 171 people, the need, desire, and ability of the Indian government to monitor, censor, and control the communication sector have grown. Given the range of security threats facing the country, which also include a persistent Maoist insurgency, many Indians feel that the government should be allowed to monitor personal communications such as telephone calls, e-mail messages, and financial transactions. It is in this context that Parliament passed amendments to the Information Technology Act (ITA) in 2008. The changes came into effect in 2009 and have expanded the government’s censorship and monitoring capabilities.

The spread of information and communication technologies (ICTs) began accelerating in India with the liberalization of the telecommunications sector as part of the

---


New Economic Policy in July 1991. Throughout the early 1990s, various aspects of the telecommunications industry were opened to the private sector, including radio paging and mobile phones. The government’s New Telecom Policy of 1999 and New Internet Policy of 1998 have further spurred the growth of the ICT sector, resulting in a large number of manufacturing units and internet-service providers (ISP) setting up bases in the country.

**OBSTACLES TO ACCESS**

Infrastructure limitations and cost considerations restrict access to the internet and other ICTs in India, though both infrastructure and bandwidth have improved in the last two years. Estimates on internet penetration in India vary considerably. The International Telecommunication Union (ITU) reported 61.3 million users as of 2009, while the Internet and Mobile Association of India (IAMAI) found that about 77 million Indians had used the internet at least once in their lifetimes. A spring 2010 survey by the New Delhi–based research and marketing firm Juxt resulted in an estimate of 51 million “active” internet users, who had used the internet at least once in the past year. (40 million urban and 11 million rural). Despite this confusion, most measurements put the overall internet penetration rate at a rather low 5 to 8 percent of the population. There are signs that this figure is increasing, however, and one recent study predicted that the number of Indian users would reach 237 million in 2015, from a current estimate of 80 million.

Internet use among urbanites appears to be more evenly distributed across the country than several years ago, with the total number of users in towns of under 500,000 people exceeding the total number in the eight largest cities. IAMAI attributes this growth to the prevalence of cybercafes and government e-kiosk initiatives. The latter entail the

---

2 Ibid.
creation of 100,000 local facilities that would include computers, printers, digital cameras, scanners, projection systems, and telemedicine equipment.

While many of India’s users access the internet via cybercafes, the share of urbanite users with home connections has increased to 53 percent, according to one survey. This shift has been driven in part by greater and cheaper access to broadband service. For example, the state-owned ISP Mahanagar Nigam Telephone Limited (MTNL) provides entry-level DSL access at US$1 per month, and US$2 to US$5 per gigabyte for limited-usage plans. Per capita income in India for the 2009–10 fiscal year was estimated at US$930.

There is a pronounced urban-rural divide, with an approximate rural user base of just 6.46 million, and only 4.18 million active users. This represents a tiny fraction of the total rural population of about 800 million, and indicates that there are approximately 10 times more urban internet users than rural internet users in India. While cost is an obstacle, surveys indicate that lack of electricity and especially low computer literacy and awareness of the internet are more significant. Low literacy rates, particularly in English, are also a major impediment. The availability of internet content in India’s eight most widely spoken languages is growing, but remains poor. In August 2010, the U.S.-based Internet Corporation for Assigned Names and Numbers (ICANN) approved a proposal by the Department of Information Technology to allow domain names in Hindi, Bengali, Punjabi, Urdu, Tamil, Telugu, and Gujarati. In addition, the U.S.-based software and internet giants Microsoft and Google have launched initiatives to incorporate Indian languages into their programs and services.

Broadband penetration is very limited at 0.74 percent, particularly when compared with an overall teledensity rate of 52.74 percent. According to the Telecom Regulatory Authority of India (TRAI), as of March 2010 there were 8.7 million broadband connections in the country, an increase from 6.2 million a year earlier, and comprising over half of the

---

internet subscriptions in the country. In 2004, the government launched a Broadband Policy with the aim of reaching 20 million broadband subscribers by 2010. Having fallen short of this target, in June 2010 the TRAI initiated a consultation process to develop an improved national broadband policy.

Meanwhile, the government and private companies are working to expand India’s conduits to the international internet and build up the broadband infrastructure. The government is planning to roll out a network of 500,000 kilometers of fiber-optic cable to provide villages with high-speed connections, in some cases linking smaller existing networks. India is connected to the international internet through a number of submarine cables, and the private firm Pacnet plans to invest US$150 million to extend a cable to the city of Chennai in the southeast. As a result, after 2012 the supply of international bandwidth available to Indians is expected to vastly increase, which would likely lead to lower end-user prices.

India’s overall mobile-phone penetration figures are promising, with almost 60 percent of the population using mobile phones. The TRAI cited the total mobile subscriber base as almost 730 million by December 2010, more than double the 347 million users recorded by the ITU for 2008. Access to the internet through mobile phones has risen as well, apparently due to a series of inexpensive rate plans that service providers introduced in early 2010. Still, only a small percentage of mobile-phone users access the web on their devices. According to IAMAI, an estimated 20 million people had such access in late 2010, up from 12 million in 2009. As of mid-2010, only the state-run Bharat Sanchar Nigam Limited (BSNL) and MTNL offered third-generation (3G) mobile internet services, though several private providers were scheduled to launch 3G services by early 2011.

However, in August 2010 it was reported that the Ministry of Home Affairs (MHA) had asked the Department of Telecommunications to suspend newly introduced 3G mobile service and halt providers’ ongoing rollout of the technology, particularly in Jammu and Kashmir. The authorities apparently wanted time to develop the ability to intercept 3G

---

communications in the volatile region.\textsuperscript{26} Short-message service (SMS), or text messaging, has been blocked periodically in Jammu and Kashmir. For example, it was suspended in April 2010 amid popular unrest, but the ban was revoked within days.\textsuperscript{27} On September 23, 2010, the Indian government temporarily blocked mass text messages across India in anticipation of a court ruling on a hotly disputed place of worship in Ayodhya. Following the deferment of the verdict date, the ban was extended until September 30.\textsuperscript{28}

There are presently no blanket restrictions on accessing advanced web applications like the video-sharing site YouTube, the social-networking site Facebook, or the Twitter microblogging platform. Such sites are becoming increasingly important in India. According to Alexa, Facebook is the third most popular site, followed by YouTube at fifth, the social-networking site Orkut at eighth, and Twitter at tenth.\textsuperscript{29}

Three major operators sell international internet bandwidth at the wholesale level: Tata Group’s VSNL, Bharti Airtel, and Reliance Globalcom. Since the deregulation of the telecommunications sector in the late 1990s, users in India have been able to choose among hundreds of different public and private service providers. BSNL and MTNL, both state owned, are the two largest ISPs, with a combined 70 percent of subscribers.\textsuperscript{30} They retain a dominance established before the appearance of private competitors such as Sify Technologies, Bharti Airtel, and Reliance Communications, each of which controls less than 10 percent of the market.\textsuperscript{31} Few of the 104 service providers authorized to offer broadband have been able to penetrate the market given the strong position occupied by BSNL and MTNL.\textsuperscript{32} However, both companies have been forced to offer lower rates to stave off the private ISPs.

Private companies have been more successful in the mobile-phone service market. The top 10 providers are Bharti Airtel, BSNL, Vodafone Essar, Reliance Communications, Idea Cellular, Tata Communications, Tata Teleservices, Aircel, MTNL, and Tata Teleservices (Maharashtra) Limited (TTML).\textsuperscript{33} Licenses are issued following a bidding process, but launching a mobile-phone service business in practice requires considerable financial clout and access to important government officials. In October 2010, a major corruption scandal involving the licensing of 2G services in 2008 was exposed. Evidence

\begin{flushleft}
\small{\textsuperscript{26} Mansi Taneja, “Home Ministry Asks DoT to Stop All 3G Services,” Business Standard, August 10, 2010, \url{http://www.business-standard.com/india/news/home-ministry-asks-dot-to-stop-all-3g-services/404078/}.
\textsuperscript{28} “India Bans Bulk Text Messages Before Mosque Verdict,” Reuters, September 22, 2010, \url{http://www.reuters.com/article/idUSGE68M03W20100923}.
\textsuperscript{30} TRAI, The Indian Telecom Services Performance Indicators: January—March 2010 (New Delhi: TRAI, July 2010), \url{http://www.trai.gov.in/WriteReadData/trai/upload/Reports/51/finalperformanceindicatorReport9agust.pdf}.
\textsuperscript{31} Ibid.
\textsuperscript{32} Mookerji, “Stage Set for New Broadband Policy.”
\textsuperscript{33} “10 Top Telecom Service Providers in India,” Rediff.com, August 9, 2010, \url{http://business.rediff.com/slide-show/2010/aug/09/slide-show-1-10-top-telcos-in-india.htm#contentTop}.
\end{flushleft}
revealed that the former Telecom Minister, A. Raja, had intentionally favored a few select bidders, including Reliance Communications. By not conducting a competitive auction before granting the licenses, his actions reportedly cost the government up to $39 billion.\(^\text{34}\) Raja resigned in November 2010, and was under investigation by a parliamentary public accounts committee at year’s end.\(^\text{35}\)

Although opening a cybercafe was relatively simple in the past, law enforcement authorities have reportedly complicated the process in recent years. Obtaining a license now requires approval from as many as six different agencies. These difficulties, combined with increases in home and mobile internet connections, have dimmed prospects for new entrants to the cybercafe market.

The TRAI is the main regulatory body for telecommunications matters, with authority over ISPs and mobile-phone service providers. It functions as an independent agency, offering public consultations and other participatory decision-making processes. While it has received some criticism, it is generally perceived as fair. However, the Ministry of Communications and Information Technology (MCIT) and the MHA also exercise control over several aspects of internet regulation, and interventions by the MHA in particular carry considerable weight. There have been no publicized disputes between the ministries and the TRAI to date.\(^\text{36}\)

**LIMITS ON CONTENT**

There has been no sustained government policy or strategy to block access to ICTs on a large scale, though blocks have been imposed sporadically during crises, such as the Kargil war with Pakistan in 1999. Attempts to filter content have mostly originated with state-level executive authorities, and with private individuals through court cases. However, government measures to institute administrative processes for removing certain content from the web, sometimes for fear they could incite violence, have become more common in recent years.

Since 2003, the institutional structure of internet censorship and filtering in India has centered on the Indian Computer Emergency Response Team (CERT-IN), a body created in 2003 within the MCIT’s Department of Information Technology. CERT-IN serves as a nodal agency for accepting and reviewing requests from a designated pool of government officials to block access to specific websites. When it decides to block a site, it directs the Department of Telecommunications—also part of the MCIT—to order all licensed Indian

---

\(^\text{34}\) Robert Clark, “India Rocked by 2G Scandal,” Telecoms Europe, November 19, 2010, [http://www.telecomeurope.net/content/wrap-india-rocked-2g-scandal](http://www.telecomeurope.net/content/wrap-india-rocked-2g-scandal).


ISPs to comply with the decision. There is no review or appeals process in place. In June 2009, the authorities blocked a highly popular adult cartoon site called Savitabhabhi without granting the creators an opportunity to defend their right to free expression, raising concerns about the arbitrary nature and broad scope of the government’s power in this area. While there is no publicly available list of officially blocked websites, no politically oriented website is believed to have been blocked during the reporting period.

Pressure on private intermediaries to remove certain information in compliance with administrative censorship orders has increased since late 2009, with the implementation of the amended ITA. The revised law grants the MCIT authority to block internet material that is perceived to endanger public order or national security, requires companies to have a designated employee to receive government blocking requests, and assigns up to seven years’ imprisonment for representatives of a wide range of private service providers—including ISPs, search engines, and cybercafes—if they fail to comply with government blocking requests. While some observers acknowledge that incendiary online content could pose a real risk of violence, particularly given India’s history of periodic communal strife, press freedom and civil liberties advocates have raised concerns over the far-reaching scope of the ITA, its potential chilling effect, and the possibility that the authorities could abuse it to suppress political speech.

When Google began reporting government requests for data and content removal in early 2010, India ranked third in the world for removal requests and fourth for data requests. Between July 1, 2009, and December 31, 2009, India had submitted 142 removal requests, of which 77.5 percent were fully or partially complied with. The requests related to the Blogger blog-hosting service, Book Search, Geo, SMS channels, web searches, YouTube, and especially Orkut. In one case that gained international attention, Google in September 2009 took down an Orkut group on which users had reportedly posted offensive comments about the chief minister of Andhra Pradesh, who had been killed in a helicopter crash a few days earlier. Indian officials were apparently concerned that the comments could spark communal violence.

Google has removed content in response to requests from various government authorities. For example, in January 2007 the company agreed to an arrangement allowing police forces to directly report objectionable content to Google and ask it for details regarding internet protocol (IP) addresses and service providers. By May of that year, Google had cooperated with the Mumbai police regarding online communities and

---

37 Keating, “The List: Look Who’s Censoring the Internet Now.”
41 Sharma and Vascellaro, “Google and India Test the Limits of Liberty.”
comments directed against the Indian historical figure Shivaji, right-wing leader Bal Thackeray, and dalit leader B. R. Ambedkar.43

Bloggers are rarely forced by the government or private individuals to take down their writings, but there have been a few instances in which this has occurred.43 For example, blogger Chetan Kunte criticized NDTV journalist Barkha Dutt for her station’s coverage of the November 2008 terrorist attack on Mumbai, accusing her of engaging in sensationalism and irresponsibly airing information about the movements of security forces. Dutt and NDTV threatened to seek punitive measures against Kunte through the courts, and the blogger agreed to remove the critical content.

While online journalists and bloggers are not often required to censor their writing, it is understood that certain topics must be approached with caution. These include religion, communalism, the corporate-government nexus, links between government and organized crime, Kashmiri separatism, hostile rhetoric from Pakistan, and various forms of aggressive, demagogic speech. Such topics are indeed addressed by online writers, but they are handled carefully to avoid inciting violence, particularly by nonstate actors.

Highly partisan reporting and commentary abound on the Indian internet, stemming from real or perceived divisions between the government and the people, between ethnic and religious communities, and between India and some of its regional neighbors. Such material is especially common on left- or right-wing extremist sites and sites related to Kashmir.

The Indian blogosphere is quite active and eloquent, complementing the rise in internet use by different interest groups and civil society actors. However, the actual number of bloggers still appears to be quite small, and the blogosphere is fragmented given the large number of blogging platforms available.

Online communication and social-networking services are increasingly being used as means to organize politically. Various politicians, including the 87-year-old former deputy prime minister L. K. Advani,44 use social media and ICTs to reach out to voters. In the run-up to the 2009 general elections, political parties and their allies mounted massive SMS campaigns to drum up support.45 Citizens also mounted online campaigns on various issues, including one protesting the phenomenon of accused or convicted criminals running for

44 Advani’s blog can be found at http://blog.lkadvani.in/.
seats in Parliament. Other sites aimed to educate voters about candidates’ backgrounds, aggregate election-related news articles. A collaborative online platform called Vote Report India allowed citizens to share information on violations of electoral rules using media including SMS, e-mail, and Twitter.

### Violations of User Rights

The Indian constitution, particularly Article 19, protects freedom of speech and expression. Along with the right to life and liberty under Article 21, Article 19(1)(a) has also been held to apply to the privacy of telephone conversations, and established guidelines regulate the ability of state officials to intercept communications.

ICT usage is governed primarily by the Telegraph Act, the penal code, the code of criminal procedure, and the ITA. The 2008 amendments to the ITA, which took effect in October 2009, raised concerns about an expansion of state surveillance capacity, including interception of SMS and e-mail messages. Several provisions of the revised law entail possible restrictions on users’ rights.

For example, the changes considerably broadened the scope of activities identified as criminal offenses under the act, which now include sending messages that are deemed offensive, dishonestly receiving stolen computer resources or communication devices, identity theft, impersonation, violation of bodily privacy, cyberterrorism, and the publication or transmission of sexually explicit material. The prescribed punishments vary, but many offenses carry up to three years in prison. Under the revised Section 80, lower-ranking police officers are permitted to conduct personal searches and arrests without a warrant in public spaces and private businesses that are accessible to the public, provided there is a reasonable suspicion that a crime covered under the act has been or is about to be committed.

Section 69 expands the circumstances under which communications may be monitored, intercepted, and decrypted. Previously, such surveillance was governed by the 1885 Telegraph Act, which allowed it only during times of “public emergency” or in the “interests of the sovereignty and integrity of India.” The amended ITA drops these and other

---

46 See Jaago Re at http://jaagore.com/.
47 One such site was Blogadda at http://indiaelections.blogadda.com/.
48 See Vote Report India at http://votereport.in/.
49 http://lawmin.nic.in/coi/coiason29july08.pdf.
50 PUCL v. Union of India (1997) 1 SCC 301. See also Vikram Raghavan, Communications Law in India (London: LexisNexis Butterworths, 2007), 760–761.
limitations. Section 69B, for instance, allows the central government to collect traffic data from any computer source without a warrant, whether the data are in transit or in storage.52 Critics of the ITA amendments have also raised concerns that the law does not adequately protect personal information held by private corporations. Although the changes require corporations handling sensitive personal data to maintain “reasonable security practices and procedures,” the rules are not clearly defined, and it remains unclear how they will be enforced.53

Internet users have sporadically faced prosecution for online postings, and private companies hosting the content are obliged by law to hand over user information to the authorities. In September 2007, after Google and a major ISP cooperated with a police investigation, information-technology worker Lakshmana Kailash K was jailed for 50 days for allegedly defaming an Indian historical figure online. It later emerged that another person had posted the material, and Kailash was arrested based on the wrong IP address.54 In May 2008, two men were arrested and charged for posting derogatory comments about Congress party chief Sonia Gandhi on Orkut; the case is still pending.55 As in the 2007 case, Google, which owns Orkut, accommodated the authorities’ request for identity information.56 In July 2010, a magazine editor in the southern city of Kerala was arrested on defamation charges for an article posted on the magazine’s website about an Indian businessman residing in Abu Dhabi.57

In 2009, the Supreme Court ruled that both bloggers and moderators can face libel suits and even criminal prosecution for comments posted by other users on their websites. The case stemmed from several anonymous comments criticizing the right-wing party Shiv Sena that appeared on a web community moderated by a 19-year-old from Kerala, Ajith D. The party’s youth wing filed a criminal complaint against Ajith, who asked the Supreme Court to quash the case before it proceeded further, but the court rejected his request.58

The overall level of ICT surveillance in India remains unclear, though a series of scandals and new measures in recent years have raised concerns over wide powers granted to security agencies to monitor communications. Intercepts of telephone conversations are allowed under guidelines prescribed by the Supreme Court, and are admissible as evidence.

For example, the MHA intercepted mobile-phone communications between the gunmen and their Pakistan-based handlers during the Mumbai terrorist attacks in 2008. These communications were then used as evidence in court. With respect to internet communications, anecdotal accounts indicate that the government’s Intelligence Bureau began using a keyword-based interception system in addition to targeted IP-address interception as far back as 2001.

In May 2010, the news magazine *Outlook* published transcripts of phone tapping that recorded individuals including lawmakers from the ruling party. The calls, made on mobile phones at a range of different times and locations were reportedly intercepted and recorded using a new GSM monitoring device. By the end of the year, another major scandal had erupted over the leaking of hundreds of intercepted 2009 phone conversations between lobbyist Niira Radia and an assortment of politicians, bureaucrats, and journalists. The records revealed evidence of corruption and other abuses, and triggered a lawsuit against the government by Radia’s employer, business tycoon Ratan Tata, who argued that his privacy rights had been breached. The government responded with the claim that Radia was being monitored as a suspected agent of foreign intelligence services. Lastly, in the context of a corruption investigation related to a former telecommunications minister, the mobile-phone provider Reliance Communications reported to the Supreme Court that the authorities had submitted over 150,000 phone tapping requests from early 2006 to the end of 2010, an average of 30,000 requests per year. The public uproar surrounding these scandals prompted proposals for a law specifying private companies’ obligations with respect to wiretap requests from the authorities. The government was also reportedly planning a commission to adjudicate complaints related to such surveillance.

Prior judicial approval for communications interception is not required under either the Telegraph Act or the ITA, and the revised ITA grants both central and state governments the power to issue directives on interception, monitoring, and decryption. All licensed ISPs are obliged by law to sign an agreement that allows Indian government authorities to access user data, though the providers may lack the technical capacity to respond to some requests. For example, in September 2010, ISPs claimed that they would be unable to comply with a

59 [Mumbai Attack Terror Tape—Phone Conversation Part1](http://www.youtube.com/watch?v=1PSauTty9LA) (YouTube, February 26, 2009), 10 min., 34 sec.,


Department of Telecommunications notice requiring them to enable the interception of BlackBerry messages for national security reasons (see below).  

The national government is reportedly in the process of centralizing its telecommunications monitoring apparatus, which is currently divided among a variety of security agencies and ministries. The overhaul would speed up the collection and processing of intercepted information, integrate disparate databases, and eliminate the need for manual intervention by private companies.

Although the situation may vary from state to state, user anonymity is restricted in many cybercafes, as the operators are required to record certain basic user details in registries. The record of each visitor has to be kept for six months, with details including name, address, identification card information, reason for use of the cafe, and contact numbers. Some cybercafes voluntarily exceed these requirements by requesting a passport photo for their records, demanding explanations if users are visiting a cybercafe outside their own localities, or retaining user files for as long as three years.

Moreover, cybercafes are often subjected to intimidation by local police. There have been anecdotal reports of police instructing owners to retain information like Permanent Account Numbers (PANs)—tax-related numbers that the largely youthful clientele would probably lack. Pressure for more rigorous collection of user data has reportedly increased since September 2010, when an anonymous e-mail message took credit for a recent terrorist attack on Taiwanese tourists in New Delhi. With respect to mobile phones, the Department of Telecommunications has instructed operators to issue and activate mobile SIM cards only after users register their personal details with the carrier.

India has emerged as a leader among countries urging telecommunications companies to reveal their codes or provide other ways for the authorities to intercept their traffic. Indian officials have cited the 2008 Mumbai gunmen’s use of mobile and satellite phones to plan and execute their attacks. Also of concern to New Delhi are Chinese companies’ growing stake in the telecommunications infrastructure market, which raises fears of infiltration or sabotage, given the two countries’ historic rivalry and previous Chinese cyberespionage efforts.


“inspect the hardware, software, design, development, manufacturing facility and supply chain, and subject all software to a security threat check.” The new rules have met with significant objections from international companies, who warn that they exceed previous international practice. The Swedish firm Ericsson is among those that have resisted the rules, while the Chinese company ZTE was the first to accept them.

The government threatened to shut down BlackBerry services altogether in 2010, demanding that the device’s manufacturer, Research in Motion (RIM), provide it with the capacity to read encrypted e-mail and instant messages sent via BlackBerry. The dispute remained unresolved at year’s end, after Indian authorities rejected RIM’s proposed solutions to the decryption problem. In September 2010, India’s home secretary warned that RIM, Google, and Skype could be required to operate their services from locally based servers, enabling closer monitoring by security agencies. Meanwhile, as noted above, the government has threatened to block the introduction and expansion of 3G mobile service across the country until operators provide sufficient means for security-related interception. The companies were still negotiating with the authorities at year’s end.

There have been no reports of government agents physically attacking bloggers or online activists. However, given India’s complex ethnic, religious, and linguistic make-up, verbal intimidation and concerns over the threat that online postings might spark communal violence, attacks from Maoists, or reprisals from religious extremists lead many online writers to be cautious about what they post.

After scandals emerged of individuals from China infiltrating the Indian military and National Security Council, there are some indications that India is preparing an offensive cyberwarfare capability. According to press reports in August 2010, the government was

considering a plan to enlist civilian professionals in efforts to hack the computer systems of hostile powers.\(^7^8\)  