BURMA

	2011	2012
INTERNET FREEDOM STATUS	Not Free	Not Free
Obstacles to Access (0-25)	23	22
Limits on Content (0-35)	29	23
Violations of User Rights (0-40)	36	30
Total (0-100)	88	75

POPULATION: 55 million Internet Penetration 2011

INTERNET PENETRATION 2011: 1 percent Web 2.0 Applications Blocked: Yes Notable Political Censorship: Yes Bloggers/ICT Users Arrested: Yes Press Freedom Status: Not Free

Introduction

While the military junta that ruled Burma for decades was interested in expanding information and communication technologies (ICTs) for business and propaganda purposes, it also made aggressive attempts to restrict access to digital media and control online content. Elections in November 2010 changed this dynamic. Though widely condemned as flawed, the polls brought into office a nominally civilian government, led by former general Thein Sein and supported by a military-backed party, in March 2011. Since then, the political landscape has opened somewhat, with positive implications for internet freedom. Previously censored news websites have been unblocked, citizens imprisoned for their online activities have been released, and opposition political parties have been able to use online tools to mobilize supporters.

Nevertheless, significant obstacles to greater internet freedom persist. Harsh media laws remain in effect and could be used at any time to punish a wide range of online expression, the technical censorship system appears intact, and some opposition blogs continue to be blocked. Consumer prices for ICTs are still among the highest in the world. Meanwhile, even as some members of the government and private sector begin to explore reforms to the telecommunications sector, new challenges have emerged, including weak coordination between different agencies and resistance from the military and government cronies who have lucrative vested interests in retaining the status quo.

As such, the state continues to dominate the telecommunication sector, with few signs of upcoming fundamental reform. Although mobile phone use and the presence of cybercafes expanded in 2011, the quality of service for phones and internet connectivity is at times

^{* 0=}most free, 100=least free

excruciatingly poor and only a small percentage of the population has regular access to ICTs, particularly in rural areas.¹ Where network infrastructure has improved, it has been biased towards the business sector or preparation for international events Burma is scheduled to host, such as the summit of the Association of Southeast Asian Nations (ASEAN) in 2014.

The state-owned Myanmar Post and Telecommunications (MPT) company launched the first official email service in November 1997. The 2002 establishment of the first private internet service provider (ISP), Bagan Cybertech, helped to increase the number of users in the country, though the company was later taken over by the junta. The government's first attempt to restrict internet freedom was through the 1996 Myanmar Computer Science Development Law,² which made possession of an unregistered computer modem and connection to unauthorized computer networks punishable by up to 15 years in prison.³ Other laws passed later have reinforced a climate of fear and self-censorship surrounding online interactions, though in 2011, internet users pushed the boundaries of permissible speech and mobilized successful campaigns for political or social change.

OBSTACLES TO ACCESS

Poor infrastructure, the economic interests of state-owned companies, and widespread poverty are among the key factors that continue to limit Burmese citizens' internet access and usage. Over the past two years, the number of internet users has notably increased, though it remains only a small fraction of Burma's population of 54 million people. The precise scale of usage is difficult to ascertain, as independent surveys are not available and government statistics lack credibility. Nevertheless, according to government sources and a Burmese telecommunications expert, there were an estimated 500,000 internet users as of early 2012, amounting to almost 1 percent of the population; this was an increase from 110,000 (or 0.2) percent in 2009.

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¹ "Internet cafés must reapply for a business license," Mizzima, May 27, 2011, http://www.mizzima.com/business/5333-internet-cafes-must-reapply-for-a-business-license.html.

² In June 1989, the military junta changed the English rendering of the country's name from Burma to Myanmar. Democracy activists and their foreign supporters, including the U.S. government, have continued using Burma.

³ Computer Science Development Law, September 20, 1996, Chapter X, https://www.myanmarisp.com/ICTnews/law10-96.

⁴ In February 2012, MCPT Minister Thein Tun reported to the Third Regular Session of Parliament that internet users increased to 500,000 in 2011-2012. "Third regular session of First Pyidaungsu Hluttaw continues," *The New Light of Myanmar* XIX, no. 287 (February 2, 2012), http://www.burmalibrary.org/docs13/NLM2012-02-02.pdf. Kyaw Soe, head of the Burmese Telecom Training school also said at the Burmese Economic conference held on May 19, 2012 that there were 500,000 internet users in Burma. Author's interview with conference attendee, June 25, 2012. The International Telecommunications Union cites a similar estimate in its 2011 statistics, likely drawn from government sources: International Telecommunication Union (ITU), "Percentage of individuals using the Internet, fixed (wired) Internet subscriptions, fixed (wired)-broadband subscriptions," 2011, accessed July 13, 2012, https://www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx#.

⁵ In Soo Kang, "Strategies for Operating National CERT of Myanmar," ITU-ASEAN Subregional CSIRT/CIRT/CERT Workshop for CLMV, November 29 to December 1, 2011, Yangon, (Myanmar Korea Information Society Development Institute - KISDI) http://www.itu.int/ITU-D/asp/CMS/Events/2011/CIRTWkshp/S8 Dr Insoo Kang.pdf; "Myanmar introduces 1st

The price of a private internet connection is prohibitively expensive in a country where an estimated 26 percent of the population lives below the poverty line,⁶ though there is significant regional variation.⁷ According to the International Monetary Fund, the gross domestic product per capita was US\$821 for 2011.⁸ By comparison, the installation cost and fees for broadband access range from US\$625 to US\$1,500 depending on the speed and connection method.⁹ For example, the monthly fee for ADSL service from the two main internet service providers (ISPs) ranges from US\$35 for speeds of 128 Kbps to US\$250 for 2 Mbps.¹⁰ This is in addition to installation costs of US\$625 and the requirement to have a landline, a rare commodity in Burma.¹¹ As a result of these barriers, according to the International Telecommunications Union (ITU), the fixed broadband subscription rate was only 0.06 percent in 2011, a figure that did not significantly change from the previous year.¹² In the process of registering an internet connection, consumers must present their national ID, as well proof of police clearance and a personal affidavit affirming they are not involved in political activities.

Because of such economic and regulatory barriers, most users rely on cybercafes, where access typically costs about 200 to 400 kyats (US\$0.25 to US\$0.50) per hour in major cities and about 500 to 600 kyats (US\$0.60 to US\$0.80) per hour in provincial towns, slightly less than two years ago.¹³ From mid-October 2011 until January 2012, internet connection speeds slowed dramatically to the point that in provincial towns, it took 45 to 90 minutes to

telecommunication service call center," Xinhua, December 21, 2011, http://news.xinhuanet.com/english/sci/2011-12/21/c_131320009.htm.

http://hdrstats.undp.org/en/countries/profiles/MMR.html.

⁶ "Cooperative societies will be formed with bottom up initiative, not with top down policy," *The New Light of Myanmar*, June 20, 2011, http://www.myanmargeneva.org/11nlm/jun/n110621.htm. "Myanmar: Country Profile: Human Development Indicators," United Nations' Human Development Index, accessed January 2, 2011,

⁷ For example, Chin State has the highest poverty level, at more than 70 percent. These figures are likely to be conservative, as they are based on data collected before significant increases in fuel prices in October 2005 and August 2007, and an inflationary public sector salary hike in April 2006. Charles Petrie, *End of Mission Report: UN Resident and Humanitarian Coordinator*, UNDP Resident Representative for Myanmar, 2003–2007, April 1, 2008, http://www.pyinnya.com/wp-content/uploads/2008/06/end-of-mission-report-by-charles-petrie-april-2008.pdf.

⁸ International Monetary Fund, "World Economic Outlook Database," International Monetary Fund, April 2011, http://www.imf.org/external/pubs/ft/weo/2011/01/weodata/weorept.aspx?sy=2009&ey=2016&scsm=1&ssd=1&sort=country&ds=.&br=1&pr1.x=88&pr1.y=5&c=518&s=NGDPDPC%2CPPPPC&grp=0&a=#cs1.

⁹ Interviews with local journalists who cover the IT sector, December 12, 2011. See also "WiMax Installation Charges Change from FEC to Kyat," *Popular Journal* [in Burmese],accessed January 2, 2012, http://popularmyanmar.com/mpaper/archives/28610

¹⁰ The exchange rate fluctuated throughout 2011, varying from 750 to 860 kyats per US dollar. This paper uses an average of 800 kyats per dollar for consistency.

[&]quot;Internet Cafes Expect Lower Monthly Fee as the Number of Users Dwindles," *Popular Journal* [in Burmese], accessed January 4, 2012, http://popularmyanmar.com/mpaper/archives/29866.; "Initial Installation Cost Reduced for Wimax Internet Service," *Popular Journal* [in Burmese], http://popularmyanmar.com/mpaper/archives/32988.

¹² International Telecommunication Union, "Fixed Broadband Subscriptions, 2000-2010 Data," ITU, Updated in December 2011, http://www.itu.int/ITU-D/ict/statistics/index.html.

¹³ "Declines in Cyber Cafe Users and Hourly Fee due to Slow Connection Speed," *Popular Journal* [in Burmese], accessed January 7, 2012, http://popularmyanmar.com/mpaper/archives/29371.

open a single webpage.¹⁴ The government attributed the slowdown to a disruption in the SEA-ME-WE-3 fiber-optic cable that is the country's main source of internet bandwidth, an assessment that independent observers confirmed.¹⁵ As a result, many cybercafe users shifted to playing games rather than using the internet.¹⁶ Periodic power outages also continued, reflecting Burma's general lack of electricity and poor infrastructure. Officials from the state-owned MPT have pledged to increase internet connection speeds in time for the Southeast Asia Games in 2013 that Burma is scheduled to host. Chinese firms will reportedly provide technical support for this upgrade and broader ICT security efforts.¹⁷ In November 2011, Chinese state-run media reported that an agreement had been signed for Beijing Xinwei Telecom Technology to supply wireless broadband technology across Burma within five years.¹⁸

Mobile phone penetration is higher than internet use and has grown dramatically since early 2011, though it remains concentrated in large cities like Rangoon and Mandalay. Figures vary as to the precise number of subscribers. According to the ITU, there were 1.2 million mobile phone subscriptions at the end of 2011 (2.5 subscriptions per 100 inhabitants), double the figure from 2010. By comparison, the government reported that 2.8 million mobile phones were in use as of February 2012, which would be a penetration rate of about 5 percent. In April 2011, the government announced a project to expand the number of mobile phone lines to 30 million over the next five years, with the aim of adding four million new connections within the first year. In an effort to realize these goals, in March 2012, the Ministry of Communications, Posts and Telegraphs (MCPT) announced that the cost of a SIM card would be halved, dropping from 500,000 kyats (US\$625) to between

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¹⁴ Interviews with local internet users in Hinthada township, Irrawaddy Region, and in Prome, Pegu Division, January 7-8, 2012.

¹⁵ "Internet Fiber Disruption be Repaired within this Month," [in Burmese] Popular Journal, November 11, 2011, http://popularmyanmar.com/mpaper/archives/31653.; Sai Zom Hseng, "Burma's Internet, Newly Opened, Slows to a Crawl," The Irrawaddy, November 3, 2011, http://www2.irrawaddy.org/article.php?art_id=22379&Submit=Submit.

¹⁶ "Internet Cafes have to Rely on the uses of Pfingo and Games," [in Burmese] Popular Journal, accessed January 7, 2012, http://popularmyanmar.com/mpaper/archives/30157.

¹⁷ "China Supports Burmese Internet Security," [in Burmese] Popular Journal, accessed January 8, 2012, http://popularmyanmar.com/mpaper/archives/33163.

¹⁸ "Sino-Myanmar companies cooperate in telecom technology," The People's Daily Online English, November 13, 2011, http://english.peopledaily.com.cn/90778/7643265.html.

¹⁹ International Telecommunications Union, "Mobile-cellular telephone subscriptions 2006-2011," <a href="http://www.itu.int/ITU-D/icteye/Reporting/ShowReportFrame.aspx?ReportName=/WTI/CellularSubscribersPublic&ReportFormat=HTML4.0&RP-intYear=2011&RP_intLanguageID=1&RP_bitLiveData=False;" (Myanmar (Burma) Telecoms Mobile and Internet," BuddeComm, accessed January 2, 2012, http://www.budde.com.au/Research/Myanmar-Burma-Telecoms-Mobile-and-Internet-html

²⁰ International Telecommunications Union, "ICT Statistics 2009—Fixed Telephone Lines," http://www.itu.int/ITU-D/icteye/Indicators/Indicators.aspx#.

²¹ "Myanmar Introduces 1st Telecommunication Service Call Center," Xinhua, December 12, 2012, http://news.xinhuanet.com/english/sci/2011-12/21/c 131320009.htm; As of February 2012, the MCPT newsletter reported that there were 2.8 million mobile phone users in Burma. *MCPT Newsletter* [in Burmese], February 29, 2012, http://www.mcpt.gov.mm/sites/default/files/pdf/1-1%20Smart-News-Journal%20.pdf.

²² "Myanmar to install more mobile phone lines within 5 years," The Financial Express, April 23, 2011, http://www.thefinancialexpress-bd.com/more.php?news_id=11101&date=2011-04-24.

200,000 and 250,000 kyats (US\$250-US\$312), though even this reduced price remains beyond the reach of most Burmese.²³

Internet access from mobile devices remains extremely limited. In early 2011, some mobile phone providers obtained permission to offer mobile internet access via prepaid cards, but the authorities interrupted this service for GSM users in July and December 2011.²⁴ In practice, mobile internet connectivity barely functions even in Rangoon.²⁵

The government retains control over the country's international connection to the internet. There are two main ISPs: the government-owned MPT and the military-owned Yatanarpon Teleport (YTP). In December 2007, the government opened the Yatanarpon Cyber City, where YTP is based. According to several reports, the authorities restructured the ISP system in October 2010, dividing it into two main networks: the state-owned MPT ISP and a newly-created Ministry of Defense (MoD) ISP. Under the new arrangement, the YTP (serving civilian users) and a newly-established Naypyitaw ISP (serving most government ministries) connect to the international internet via MPT. Meanwhile, the MoD ISP solely serves users from the Ministry of Defense. Such architecture would enable the government to cut off access for civilians, including government employees, at times of political turmoil while keeping the military's connection intact. According to Reporters Without Borders, the arrangement may also facilitate monitoring and hacking of civilian users without risking security breaches for military accounts.

The MPT retains control over the mobile phone market, but grants distribution rights to a select set of trusted companies, either military-linked like Yantanarpon, or privately owned but closely linked to the government, like ELite, a subsidiary of Htoo Trading Company

²³ "Burmese SIM Card Price Slashed by Half," The Irrawaddy, March 6, 2012, http://www2.irrawaddy.org/article.php?art_id=23158.

²⁴ "CDMA 450MHz Not Allowed Internet Uses," [in Burmese] Popular Journal, accessed January 8, 2012, http://popularmyanmar.com/mpaper/archives/32811.

²⁵ Interview with Rangoon phone users, January 2, 2012.

²⁶ Nilar Aye, "Current Status of PKI Development in Myanmar," The Workshop on CA-CA Interoperability Framework in ASEAN August 5-6, 2010,

http://www.gits.net.th/Documents/CACA_Interoperability_ASEAN/CA_Workshop_2_8_10_Myanmar_updated.pdf (site discontinued). Xinhua News, "Myanmar Internet link continues to meet with interruption," People's Daily Online English, November 3, 2010, http://english.peopledaily.com.cn/90001/90781/90877/7187341.html.

²⁷ Ye Kaung Myint Maung, "Nation's First Cyber City Takes Shape," *The Myanmar Times*, December 24–30, 2007, http://mmtimes.com/no398/n001.htm.

²⁸ Author's interview with an official at the Information Ministry who asked to remain anonymous, July 27 and December 30, 2010.; Reporters Without Borders, *National Web Portal Development or Repression*?, November 2010, http://en.rsf.org/IMG/pdf/rap_birmanie-2.pdf.

²⁹ Author's interview with an official at the Information Ministry who asked to remain anonymous, July 27 and December 30, 2010.; Reporters Without Borders, *National Web Portal Development or Repression*?, November 2010, http://en.rsf.org/IMG/pdf/rap_birmanie-2.pdf.

owned by tycoon Tay Za.³⁰ Smaller firms seeking retail vending rights must purchase equipment from these larger distributors. In an example of the difficulties facing those wishing to offer lower prices, in January 2012, the private company Shwe Pyi Ta Khun announced it was seeking permission from the President's Office to sell a SIM card for 5,000 kyat (US\$6) as part of the president's poverty reduction initiative. The news that phones would soon be affordable to average citizens was greeted with enthusiasm. Within a week, however, MCPT officials rejected the proposal, stating that the plan was not possible under existing regulations and without MCPT approval, and that more time would be needed to upgrade the country's mobile phone networks.³¹ Some observers suspected the actual reason was reluctance to allow a private mobile phone operator.³² The rejection sparked a small leaflet campaign calling for cheaper SIM cards; 11 people who took part in the protest were briefly detained for questioning.³³ The incident illustrated the MCPT's reluctance to allow meaningful liberalization, as well as the lack of coordination between government agencies and the influence that those with a vested financial interest in retaining the status quo have on ICT policy.³⁴

Despite the government's control and the above-mentioned slowdown, there have been no credible reports of politically motivated disruptions to internet connectivity in 2011 and early 2012, unlike in previous years. Rather, the disruptions that occurred appeared due to technical problems.³⁵ In addition, the Yatanarpon Teleport ISP was more transparent than in the past in explaining the cause of the slowdown to customers.³⁶

Alongside the unblocking of international and exile news outlets in September 2011 (see "Limits on Content"), the government also unblocked access to the video-sharing website YouTube for the first time in several years.³⁷ Burmese users thus have access to most Web 2.0 applications. At the same time, the government restricts mobile phones from receiving text messages from outside the country. This creates an obstacle for those wishing to set up a Gmail account or recover a lost password, as Google typically sends such information via

³⁰ "30 Million New GSM Mobile Phone Lines," Myanmar Business Network, http://www.myanmar-business.org/2011/05/30-million-new-gsm-mobile-phone-lines.htm (site discontinued).

³¹ Shwe Aung, "Not Possible for 5,000 kyats per Sim Card, says the MPT official," [in Burmese] Democratic Voice of Burma, January 10, 2012, http://burmese.dvb.no/archives/19809.

³² Ba Kaung, "Burmese SIM Card Provider Challenges Monopolistic State Interests," The Irrawaddy, February 15, 2012, http://www.irrawaddy.org/archives/77.

³³ Hpyo Wai Tha, "Burmese SIM Card Price Slashed by Half," The Irrawaddy, February 15, 2012, http://www2.irrawaddy.org/article.php?art_id=23158; Zarni Mann, "11 'SIM Card' Campaigners Detained for Questioning in Rangoon," The Irrawaddy, February 29, 2012, http://www.irrawaddy.org/archives/464.

³⁴ Ba Kaung, "Burmese SIM Card Provider Challenges Monopolistic State Interests," The Irrawaddy, February 15, 2012, http://www.irrawaddy.org/archives/77.

³⁵ Sai Zom Hseng, "Burma's Internet, Newly Opened, Slows to a Crawl," The Irrawaddy, November 3, 2011, http://www2.irrawaddy.org/article.php?art_id=22379&Submit=Submit.

³⁶ Interview with two cybercafe owners and three household subscribers in Rangoon, December 28-29, 2011.

³⁷ Qichen Zhang, "Burma's Government Unblocks Foreign Websites Including YouTube," OpenNet Initiative, September 20, 2011, http://opennet.net/blog/2011/09/burmas-government-unblocks-foreign-websites-including-youtube.

text message. A number of small businesses opened to resolve this problem for users in exchange for a small fee. 38

In a negative development, in March 2011, the MCPT issued a directive banning the use of Voice over Internet Protocol (VoIP) services for making international calls, including applications such as Skype, Gtalk, Pfingo, VBuzzer, and VZO.³⁹ Those violating the regulation may face penalties ranging from fines to confiscation of property to five years imprisonment.⁴⁰ In April 2011, cybercafe owners reported visits by government bureaucrats to check if they were still providing VoIP services, which many were, but no arrests were reported.⁴¹ The measure is apparently aimed at protecting revenue earned from international phone calls made via the network of the state-owned telecom⁴² or via a new government-sponsored VoIP program called Ytalk launched in late 2011.⁴³ In recent years, VoIP has become a vital channel for both business and personal communication, particularly families with a member working overseas. As of May 2012, the ban remained in effect, with the MCPT issuing an additional warning in its April newsletter.⁴⁴ Two months after passage of the VoIP restrictions, the ministry also banned the use of USB sticks, CDs, floppy disks and other external data storage devices in cybercafes, and threatened heavy penalties if the prohibitions are ignored.⁴⁵

There are a number of state institutions tasked with ICT development and management, including the Myanmar Computer Science Development Council, the e-National Task Force (e-NTF), the Myanmar Computer Federation (MCF), and three associations—the Myanmar Computer Professionals' Association (MCPA), the Myanmar Computer Industry Association (MCIA), and the Myanmar Computer Enthusiasts' Association (MCEA). These entities are not particularly active or exist only on paper. During the junta's rule, the authorities used intelligence agencies and the Information Ministry to implement arbitrary and ad hoc censorship decisions. Under the civilian government, the MCPT has demonstrated more authority on telecommunications issues. Nevertheless, there were various incidents in 2011

³⁸ Tun Tun, "Gmail for Sale," Mizzima, September 12, 2011, http://www.mizzima.com/business/5915-gmail-for-sale.html.

³⁹ Htet Aung, "Junta Make Internet Phones Illegal," The Irrawaddy, March 16, 2011,

http://www2.irrawaddy.org/article.php?art_id=20949&Submit=Submit; Aung Myat Soe, "Government bans Internet overseas calls," Mizzima, March 16, 2011, http://mizzimaenglish.blogspot.com/2011/03/government-bans-internet-overseas-calls.html

⁴⁰ "Action can be Taken against VoIP calls," Internet Journal Vol 12, Number 12, March 24, 2011.

⁴¹ Nayee Lin Latt, "Burmese Authorities Crack Down on VoIP Calls," The Irrawaddy, April 7, 2011, http://www2.irrawaddy.org/article.php?art_id=21092&Submit=Submit.

⁴² Aung Myat Soe, "Government bans Internet overseas calls," Mizzima, March 16, 2011, http://mizzimaenglish.blogspot.com/2011/03/government-bans-internet-overseas-calls.html.

⁴³ Interviews with two Burmese IT experts and four journalists, June 20- 25, 2012.

⁴⁴ Smart News [in Burmese], Vol 1, no. 4, April 25, 2012, http://www.mcpt.gov.mm/sites/default/files/pdf/1-6-smart-news.pdf.

⁴⁵ Shwe Aung and Francis Wade, "Internet cafes ban CDs, USB drives," Democratic Voice of Burma, May 16, 2011, http://www.dvb.no/news/internet-cafes-ban-cds-usb-drives/15659.

that point to a lack of coordination between different government agencies in terms of policy formulation, implementation, and enforcement.

LIMITS ON CONTENT

For years, the Burmese government systematically restricted access to political websites and online media outlets run by the Burmese exile community. This changed in September 2011 when the government lifted the blocks not only on foreign news sources such as Reuters, the British Broadcasting Corporation (BBC), Radio Free Asia, and the *Bangkok Post*, but also on major exile media sites such as the *Irrawaddy*, *Mizzima*, and Democratic Voice of Burma; the latter had long been on the regime's blacklist for their critical reporting. ⁴⁶ The websites of international human rights groups were also unblocked.

This opening was followed by other steps that indicated a decline in the government's hostility towards independent media, online and offline, a change that seemed unimaginable a few years ago. A long-standing propaganda campaign in state-run media was discontinued in August 2011, visas were granted to exile journalists to visit, and a range of news outlets participated in government press conferences and media-related policy discussions in early 2012. The Despite these notable positive developments, the impact of the new opening has been tempered by the still low penetration rate and an atmosphere of uncertainty. In particular, harsh laws used to sentence bloggers and online journalists to long prison terms remain in effect and could be employed at any time to punish those accessing, disseminating, or providing information to the unblocked news outlets (see "Violations of User Rights"). As a result, self-censorship remains common among internet users, though less so than in the past.

The Burmese government retains the technological capability to reinstitute strict censorship at any time and some blogs of regime critics reportedly remain inaccessible. In November 2011, Citizen Lab, a research center at the University of Toronto, published evidence indicating that the technology used to filter and monitor online communications in Burma includes devices produced by the U.S.-based firm Blue Coat Systems, in possible violation of U.S.-imposed sanctions.⁴⁸ Citizen Lab's initial testing was conducted in August 2011, prior

⁴⁶ AP, "Myanmar authorities unblock some banned websites," Yahoo! News, September 16, 2011, http://news.yahoo.com/myanmar-authorities-unblock-banned-websites-050311492.html; Qichen Zhang, "Burma's Government Unblocks Foreign Websites Including YouTube," OpenNet Initiative, September 20, 2011, http://opennet.net/blog/2011/09/burmas-government-unblocks-foreign-websites-including-youtube.

⁴⁷ Joseph Allchin, "Govt drops DVB 'killer media' slogan," Democratic Voice of Burma, August 17, 2011, http://www.dvb.no/news/govt-drops-dvb-%E2%80%98killer-media%E2%80%99-slogan/17085.

⁴⁸ "Behind Blue Coat: Investigations of commercial filtering in Syria and Burma," The Citizen Lab, November 9, 2011, http://citizenlab.org/2011/11/behind-blue-coat/?utm_source=Media+Mailing+List&utm_campaign=3881bed4a1-Citizen Lab research report Behind Blue Coat &utm_medium=email.; Andy Greenberg, "Researchers Spot Blue Coat Web

to the above-mentioned unblocking of websites. As expected, researchers found that the Yatanarpon ISP blocked numerous websites, including independent news outlets and content categorized by Blue Coat as pertaining to pornography, LGBT issues, and nudity. An update to the report indicated that as of October 2011, after the news websites were unblocked, some Blue Coat technology remained in place. Specifically, during the severe connectivity problems encountered that month (see "Obstacles to Access"), the error notification message that users in Burma received was clearly generated by a Blue Coat device.⁴⁹

In another indication that the government has not entirely abandoned internet censorship, a small number of politically sensitive blogs, including that of Moethee Zun, one of the 1988 protest leaders living in exile, remained blocked as of May 2012.⁵⁰ The reason for their continued blocking remained unclear, but some observers believed it was because they tend to post embarrassing revelations of government corruption and complaint letters from civil servants about their superiors.

For websites that are not blocked, the Press Scrutiny Board has been known to order news outlets to delete articles that have been barred from publication in hard copy versions. When the weekly journal *Popular News* reported that five ministers had been fired in January 2012, the authorities called the journal within one hour of the information being posted and requested its removal.

In 2010, blogging appeared to be the fasted growing aspect of Burmese internet use.⁵¹ Throughout 2011, however, social media tools gained prominence, including Facebook, Twitter, Friendfinder, Netlog, and the recently launched Google+. Facebook is the most popular of these tools, thanks to the ease with which users can share information, initiate collective action on social and political issues, and obtain news updates from exile media outlets (when their websites were blocked). Although no precise statistics are available on the number of Facebook users, one expert estimated that 80 percent of the country's internet users had a Facebook account, amounting to hundreds of thousands of people.⁵²

Control Gear In Another Repressive Regime: Burma," Forbes, November 9, 2011, http://www.forbes.com/sites/andygreenberg/2011/11/09/researchers-spot-blue-coat-web-control-gear-in-another-bad-regime-burma/.

⁴⁹ "Behind Blue Coat: An update from Burma," The Citizen Lab, November 29, 2011, https://citizenlab.org/2011/11/behind-blue-coat-an-update-from-burma/.

⁵⁰ Users seeking to access his blog received a message of: "Access to the requested URL has been denied... To have the rating of this webpage reevaluated, please contact your web moderator." Interviews with six Internet users in Rangoon, two users from Mandalay, and one user from Prome Township, January 10-12, 2012.

⁵¹ See Freedom on the Net 2011.

⁵² Based on an estimated 500,000 internet users in Burma. Tun Tun, "Facebook's mini-revolution in Burma," Mizzima, August 17, 2011, http://www.mizzima.com/edop/features/5786-facebooks-mini-revolution-in-burma.html.

A turning point in the volume, intensity, and impact of public expression via Facebook was the controversy surrounding the Myitsone Dam. Under construction by China's stateowned China Power Investment Corporation (CPI), it was part of a multi-billion dollar project to build dams at eight locations along the Irrawaddy River, a crucial resource for Burmese people's livelihood and a national cultural symbol. The Myitsone Dam, intended to be the largest of the eight, was being constructed less than 100 kilometers (about 60 miles) from a major tectonic fault line. Experts warned that an earthquake could cause the dam to collapse, with devastating consequences. This sparked intense public outcry. When local media outlets and public figures, including National League for Democracy (NLD) leader Aung San Suu Kyi, criticized the project in August 2011, Facebook users shared news links, circulated video files, and posted comments. This information was then republished on popular blogs. Local private weeklies also adopted a practice of posting politically sensitive news online rather than submitting it to the censorship board for prior approval, as is required for print publication. This not only enabled readers to access uncensored breaking news, but also allowed them to post comments in response. These mutually reinforcing interactions created an emboldened online community and collective "Save the Irrawaddy" campaign. Subsequently, at the end of September 2011, President Their Sein conceded to public demands by announcing a temporary suspension of the project. Despite this vibrancy, however, using Facebook for mobilization remains risky and could potentially draw a prison term.

Several ministries, including the Ministry of Information, have their own websites and blogs. Several other blogs have also emerged—such as *Myanmar Express* Hat have launched malicious attacks against the opposition and Aung San Suu Kyi, including spreading damaging falsehoods. Many observers believe military hardliners may be behind the blog, as it has also criticized reformist President Thein Sein.

Besides employing online tools for social and political mobilization, users have organized gatherings, with government permission, to share general ICT-related knowledge. In February 2012, the third BarCamp in Burma was held. In a notable development, Aung San Suu Kyi attended as a guest of honor and spoke at the gathering, without encountering any interference from the authorities.⁵⁵ Many cybercafe owners provide assistance to their customers on how to open an email account, circumvent censorship, or use VoIP sites, though the authorities have banned them.

⁵³ See for example: Kyee Saytaman's Blog, http://kyeesaytaman.blogspot.com/.

⁵⁴ Myanmar Express, http://www.myanmarexpress.net/.

⁵⁵ Info.NLD, "Daw Aung San Suu Kyi Opened BarCamp Yangon 2012," National League for Democracy, February 14, 2012, http://www.nldburma.org/social-activity/education/477-daw-aung-san-suu-kyi-opened-barcamp-yangon-2012.html.; Jeremy Wagstaff, "Slow Connection: Myanmar faces an IT logjam," Firstpost Business, March 3, 2012, http://www.firstpost.com/business/slow-connection-myanmar-faces-an-it-logjam-232895.html.

VIOLATIONS OF USER RIGHTS

Although the new civilian-led government of President Thein Sien, who took office in March 2011, has introduced unprecedented improvements to the internet freedom landscape, the reforms lack a firm legal foundation. As a result, users remain at risk of prosecution and imprisonment under the repressive laws enacted by the previous military junta, and a small number of individuals imprisoned for online activities remain in custody.

The current constitution, drafted by the military-led government and approved in a flawed 2008 referendum, does not guarantee internet freedom. It simply states that every citizen may exercise the rights "to express and publish their convictions and opinions," but only if they are "not contrary to the laws, enacted for Union security, prevalence of law and order, community peace and tranquility or public order and morality." In addition, three laws have been promulgated regarding ICTs: the Computer Science Development Law (1996), the Wide Area Network Order (2002), and the Electronic Transactions Law (2004). The Printers and Publishers Registration Act (1962) is used to censor traditional media. These regulations are broadly worded and open to arbitrary or selective enforcement, generating a climate of fear. In February 2012, the government postponed introduction to parliament of a new media law, which has reportedly been drafted by the Ministry of Information but not yet been made public. According to one ministry official, it is expected to pass in 2012, but does not include changes to legislation related to electronic media. Second

The most notorious and frequently used criminal law is the Electronic Transactions Law (ETL). Under Section 33 of the law, internet users face prison terms of 7 to 15 years and possible fines for "any act detrimental to" state security, law and order, community peace and tranquility, national solidarity, the national economy, or national culture. ⁵⁹ This may include any act of "receiving or sending and distributing any information relating to" the above broadly defined proscribed areas. In August 2011, state-run media explicitly warned that the ETL could also apply to those who defame individuals and organizations on Facebook, and draw sentences of up to five years in prison. ⁶⁰

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⁵⁶ Burma Constitution (English version), accessed December 20, 2011, http://burmadigest.info/wp-content/uploads/2008/11/myanmar_constitution-2008-en.pdf.

⁵⁷ Burma Lawyers' Council, *Myanmar Law (1988–2004)*, accessed December 20, 2011, http://www.blc-burma.org/html/Myanmar%20Law/Indexs/lr-law-ml-index.html.

⁵⁸ "New Burmese media law postponed," Mizzima News, February 6, 2012, http://www.mizzima.com/gallery/media-alert/6541-new-burmese-media-law-postponed.html.

⁵⁹ Electronic Transactions Law, *State Peace and Development Council Law No.* 5/2004, accessed December 20, 2011, http://www.blc-burma.org/html/myanmar%20law/lr_e_ml04_05.htm.

⁶⁰ Francis Wade, "Prison threat for Facebook 'defamers'," Democratic Voice of Burma, August 3, 2011, http://www.dvb.no/news/prison-threat-for-facebook-'defamers'/16865.

Throughout 2011, several internet users were sentenced under the ETL, though all were subsequently freed as part of a large-scale prisoner release in January 2012. Sithu Zeya, who was sentenced to eight years in prison in 2010 for taking pictures in the aftermath of a bomb blast in Rangoon and for his affiliation with an exiled media outlet, was brought before a judge again in August 2011. He was handed an additional 10-year prison sentence for violating Article 33 of the ETL for the same act. According to his mother, Zeya was beaten during interrogations. Nay Myo Zin, a former military officer and volunteer for an NLD-affiliated blood donation group, was arrested in April 2011. In August 2011, he was charged with violating the ETL and sentenced to 10 years in prison for allegedly writing articles online that were critical of the military, though under a pseudonym.

Both Sithu Zeya and Nay Myo Zin were released in January 2012, along with hundreds of other political prisoners including bloggers Nay Phone Latt, Win Zaw Naing, and Hla Hla Win, whose cases were reported in *Freedom on the Net 2011*. Though celebrated, the releases were bittersweet. Human rights groups report that hundreds of other political prisoners continue to remain in custody. Moreover, for those freed, their release is conditional, as it was based on article 401(1) of the Criminal Procedure Code, which grants the president the power to suspend or decrease a prisoner's punishment.⁶⁴ As the sentences have been suspended, rather than overturned, the current or successive governments could arrest former political prisoners and return them to jail at any time, particularly if they participate in political activities. As of May 2012, no new arrests of internet users had been made. However, at least three former military or government officials remain imprisoned after they were sentenced in early 2010 for leaking sensitive information about junta activities to overseas groups via the internet.⁶⁵

Despite the changes initiated by the new government, reforms have yet to reach the judiciary. Most judges were appointed by the previous junta and the government still interferes with judicial decisions. Trials for bloggers and other online activists that took place in 2011 were grossly unfair, lacking due process and typically held in special closed courts. Most defendants were denied access to legal counsel or adequate time to prepare a defense. Like other political prisoners in Burma, individuals detained on internet-related

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⁶¹ Joseph Allchin, "DVB VJ given additional 10 yrs in jail," Democratic Voice of Burma, September 14, 2011, http://www.dvb.no/news/dvb-vj-given-additional-10-yrs-in-jail/17646.

⁶² Francis Wade, "Jailing of DVB reporters 'arbitrary': UN," Democratic Voice of Burma, November 24, 2011, http://www.dvb.no/news/jailing-of-dvb-reporters-'arbitrary'-un/18889.

⁶³ Aye Nai, "Ex-army captain sentenced to 10 years," Democratic Voice of Burma, August 29, 2011, http://www.dvb.no/news/ex-army-captain-sentenced-to-10-years/17316.

⁶⁴ Burma Lawyer Council, *The Code of Criminal Procedure in Burma*, accessed January 14, 2012, http://www.blc-burma.org/html/Criminal%20Procedure%20Code/cpc 16-30.html#401.

⁶⁵ In January 2010, a former military officer and a foreign affairs official were sentenced to death, and another foreign affairs official was sentenced to 15 years in prison, for the leak of information and photographs about military tunnels and a general's trip to North Korea. As of May 2012, the executions had not been carried out. Interview with Bo Kyi, cofounder of the Association for Assisting Political Prisoners (Burma), July 1, 2012.

charges are at risk of torture and medical neglect in custody. The above cases of Sithu Zeya and Nay Myo Zin illustrated the continued presence of these legal flaws even under the reformist government, though the pair was later released.⁶⁶

The record of harsh punishments against critical internet users has fostered self-censorship and an impression of pervasive surveillance. In reality, however, surveillance is generally spotty due to the limited competence of the authorities, and corruption on the part of local officials. In many criminal cases, including the trials of bloggers and activists, materials such as online chat records and email messages have been used as evidence in court. The authorities either monitor internet activity before arrest, or abuse detainees during interrogation to obtain their passwords and electronic documents.

Cybercafe owners are required to keep records of the personal information and browsing history of their customers, be they Burmese or foreigners, and submit them once a month to the authorities.⁶⁷ They are also obliged to grant free access to the records to police, service providers, or ministerial representatives upon request. Many owners do not systematically carry out such monitoring, however, and the authorities' enforcement of their surveillance responsibilities is similarly inconsistent.

In addition to registering their identity when purchasing a mobile phone, individuals are required to register their computers with the state-owned MPT and obtain the company's permission to create a webpage.⁶⁸ Traditionally, these measures have been selectively enforced and implemented more rigorously for those suspected of engaging in political activism or transmitting information to overseas media outlets.

The previous junta was believed to engage in cyberattacks against opposition websites based abroad. This phenomenon persisted in 2011, and in some instances increased in sophistication, but it was difficult to determine whether the attacks were directed by the government as a whole or orchestrated by a hardline faction within the regime.⁶⁹ In September 2011, at the height of fighting between government forces and the ethnic minority resistance group the Kachin Independence Organization, the website of the Kachin

⁶⁶ Aye Nai, "Ex-army captain sentenced to 10 years," Democratic Voice of Burma, August 29, 2011, http://www.dvb.no/news/ex-army-captain-sentenced-to-10-years/17316.

⁶⁷ "Surveillance of Media and Internet Stepped up under New Civilian President," Reporters Without Borders, May 17, 2011, http://en.rsf.org/burma-surveillance-of-media-and-internet-17-05-2011,40296.html.

⁶⁸ OpenNet Initiative, "Country Profiles: Burma (Myanmar)," May 10, 2007, http://opennet.net/research/profiles/burma.
⁶⁹ According to an IT expert and company owner, top leaders no longer show an interest in procuring high tech devices that enable filtering, intercepting communications, or deploying cyberattacks, either because of the changing political environment or because of the high cost of these tools. Other IT experts and journalists noted that those who previously received ICT trainings in Russia and other countries, as well as the information minister, known as a hardliner, could still be playing a role in launching cyberattacks against opposition websites. Author's interviews with two journalists and two IT experts, December 28-30, 2011 and January 3, 2012.

News Group (KNG), which provided exclusive updates about the conflict and fleeing refugees, was temporarily shut down by a distributed denial-of-service (DDoS) attack.⁷⁰

Prior to its unblocking in late 2011, the English-language edition of the exile Burmese news group, the *Irrawaddy*, was attacked by hackers in March 2011. In a more sophisticated attack than previous ones, the hackers penetrated *Irrawaddy*'s content management system and planted two pieces of highly sensitive false news on the website's front page, with the apparent aim of damaging the agency's reputation. ⁷¹ *Irrawaddy* staff said that the attacks had also potentially jeopardized the identity of confidential in-country sources and contributors. According to an expert investigation, the same IP addresses from which the hacking attack originated (located in London and using proxy servers in China) had also amended several sections on the Burmese military's Wikipedia page with impressive detail, indicating a current or previous connection to the military. ⁷² In 2011, several cases were reported of unidentified attackers hacking the email and Facebook accounts of Burmese exile dissidents, and in one case, the account of a defector from the Burmese army. ⁷³

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⁷⁰ "KNG -Kachin News website attacked by cyber hacker since today 14.09," Kachin News Group, September 14, 2011, http://democracyforburma.wordpress.com/2011/09/14/kng-kachin-news-website-attacked-by-cyber-hacker-since-today-14-09/ (site discontinued).

⁷¹ Ko Htwe, "The Irrawaddy Hacked," The Irrawaddy, March 14, 2011, http://www2.irrawaddy.org/article.php?art_id=20931.

⁷² Shawn W. Crispin, "Burmese exile news site endures hacking, DDoS attacks," Committee to Protect Journalists, May 2, 2011, http://www.cpj.org/blog/2011/05/burmese-exile-news-site-endures-hacking-ddos-attac.php.

⁷³ Aye Lae, "Is Burma Really No. 1 in Internet attack traffic?," Mizzima, August 2, 2011, http://www.mizzima.com/news/inside-burma/5708-is-burma-really-no-1-in-internet-attack-traffic.html. According to exile sources, the e-mail account of a female journalist was also hacked. Author's interview with two Burmese exile journalists in Washington DC, December 20, 2011.