IRAN

	2012	2013
INTERNET FREEDOM STATUS	NOT FREE	NOT FREE
Obstacles to Access (0-25)	21	22
Limits on Content (0-35)	32	32
Violations of User Rights (0-40)	37	37
Total (0-100)	**90**	**91**

* 0=most free, 100=least free

POPULATION: 78.9 million
INTERNET PENETRATION 2012: 26 percent
SOCIAL MEDIA/ICT APPS BLOCKED: Yes
POLITICAL/SOCIAL CONTENT BLOCKED: Yes
BLOGGERS/ICT USERS ARRESTED: Yes
PRESS FREEDOM 2013 STATUS: Not Free

KEY DEVELOPMENTS: MAY 2012 – APRIL 2013

- In a bid to increase domestic speeds and decrease international data costs, authorities throttled encrypted traffic from outside connections and set out to transfer Iranian content to domestically-hosted servers (see **OBSTACLES TO ACCESS**).
- Blogs and news sites which support President Ahmadinejad were blocked as part of a larger conflict between conservative factions due to the June 2013 presidential election (see **LIMITS ON CONTENT**).
- The government has moved to more sophisticated instruments for blocking text messages, filtering content, and preventing the use of circumvention tools in anticipation of the election (see **LIMITS ON CONTENT**).
- Sattar Beheshti, a prominent blogger and critic of Ahmadinejad, was killed while in police custody (see **VIOLATIONS OF USER RIGHTS**).

EDITOR'S NOTE ON RECENT DEVELOPMENTS

This report covers events between May 1, 2012 and April 30, 2013. On June 14, 2013, Iranians took to the polls to elect a new president for the first time since the deeply-flawed presidential elections of 2009, which led to large-scale protests and a violent crackdown on supporters of the opposition "Green Movement." With an eye on preventing a repeat of 2009, authorities waged an aggressive campaign of filtering websites, blogs, and even text messages that expressed support of certain political candidates. In the week leading up to the vote, the disruption of services reached its peak. Encrypted traffic was throttled to 1 to 5 percent of normal speeds and the authorities used a "white list" to block all international connections that were not pre-approved. Because of this, most online tools that allow users to circumvention censorship and communicate anonymously were blocked or dysfunctional. A large number of Iranian activists and journalists were targeted by sophisticated malware attacks or smear campaigns on social media.

Hassan Rouhani, a cleric and political opponent of President Mahmoud Ahmadinejad, was commonly seen as the most moderate or pragmatic candidate in the race. This also applied to issues of internet freedom, on which he stated that some Iranian authorities were "living in the 19th century while today's world is the information world."[1] Rouhani was elected president after only the first round with just over 50 percent of votes and took office on August 3, 2013.

INTRODUCTION

The internet was first introduced in Iran during the 1990s to support technological and scientific progress in an economy that had been badly damaged by eight years of war with Iraq. Until 2000, the private sector was the main driver of internet development. This changed under the government of the reformist President Mohammad Khatami (1997–2005), when the authorities invested heavily in expanding the internet infrastructure, but also began to clamp down on free expression online. Meanwhile, Supreme Leader Ali Hosseini Khamenei first asserted control over the internet through a May 2001 decree that centralized service providers' connections to the international internet. Internet filtering, which began toward the end of the Khatami presidency in 2005, has become more severe since the disputed presidential election in June 2009.

Alongside the expansion of existing controls, in July 2011 the Iranian authorities began referring to the creation of a "National Information Network" (NIN), ostensibly to create a "safe internet."[2] Though confirmed details of the plan remain sketchy, objectives include the mandatory registration of internet protocol (IP) addresses, the moving of government-approved websites to servers based inside the country, and the launching of Iranian equivalents of major online services like e-mail, social-networking sites, and search engines. These measures will restrict online anonymity, increase monitoring capabilities, and allow Iranian authorities to control access to particular international

[1] *Iranian Internet Infrastructure and Policy Report, April – June 2013*, June 2013, Small Media, available at http://smallmedia.org.uk/InfoFlowReportAPRIL.pdf.http://smallmedia.org.uk/IIIPJune.pdf.
[2] "Iran to launch national data network," Press TV, August 10, 2011, http://www.presstv.ir/detail/193306.html;.

communication flows during periods of political unrest without the need to shut down all domestic services.

Despite all of these limitations, the internet remains the only viable means for Iranian citizens and dissenters to obtain news and organize themselves. Traditional media outlets are tightly controlled by the authorities, and satellite broadcasting from outside Iran is subjected to heavy jamming. Paralleling the rise in censorship, the use of virtual private networks (VPNs), proxies, and other circumvention tools has also grown dramatically since 2009. Nonetheless, authorities blocked these tools in March 2013, forcing users to switch to a different set of well-known tools, which were then blocked two months later. These actions were taken as a set of broader measures to increase security and cut down on dissent in the run up to the June 2013 presidential election. While sites related to discriminated religions, liberal opposition movements, human rights, and international news outlets remain blocked, the past year saw an increase in filtering of websites and blogs supportive of President Mahmoud Ahmadinejad, whose relationship with the Supreme Leader has soured. Currency-exchange sites were also blocked as the government sought to control the devaluation of the Iranian *rial*. Finally, numerous activists and ordinary Iranians remained in prison, while many more were detained over the past year. The brutality of the security forces is well-known, and this year the death of blogger Sattar Beheshti caused outrage after it was exposed over social media.

OBSTACLES TO ACCESS

Current statistics on the number of internet users in Iran are inconsistent and highly disputed, though most observers agree that usage continues to grow. On the one hand, data from the Statistical Center of Iran, a government body, suggests that over 21 percent of the country's 20.3 million households were connected to the internet in 2011. These statistics also put the number of total internet users at 11 million or a penetration rate of almost 15 percent.[3] On the other hand, Iran's Center for Managing National Development of Internet (MATMA), a government-affiliated organization, claimed that 60 percent of Iranians are connected to the internet, though the methodology of the study includes the use of cybercafes. Iran's Media News reports that around 13 percent of Iranian internet users have access to high-speed internet, while 84 percent still rely on dial-up connections.[4]

In contrast, the International Telecommunication Union (ITU) estimated the number of internet users in Iran at 26 percent for 2012.[5] Citing the Iranian Information Technology Organization as its source, the ITU also claimed that there are only four fixed-broadband subscriptions per every 100

[3] "21.4 of Iranian families have access to the Internet", Wimax News, accessed June 24, 2013, http://wimaxnews.ir/NSite/FullStory/News/?Id=3190.
[4] Radio Zamaneh, "Most internet users still use dial-up in Iran," Payvand Iran News, March 24, 2012, http://www.payvand.com/news/12/mar/1222.html.
[5] "Percentage of individuals using the Internet," International Telecommunications Union, accessed April 25, 2013, http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx.

inhabitants.[6] Less than four percent of Iranians have access to a high-speed internet connection of at least 1.5 Mbps.[7] In terms of user demographics, men are 58 percent more likely to use the internet than women, and 94 percent of fixed-internet subscriptions are located in urban areas. [8]

Internet speeds are incredibly slow in Iran, which ranked 164 out of 170 countries in a recent study.[9] Furthermore, Iranians have the most expensive internet service in the world when price is calculated relative to speed, quality, and download capacities.[10] In December 2012, the Communication Regulatory Authority approved an increase of broadband internet tariffs by about 50 percent, resulting in a cost increase for end users by about 10 to 15 percent. According to the CRA, the change in price is due to fluctuations in foreign exchange rates which have increased the cost of international data traffic.[11]

A directive by the CRA asking all ISPs to separate internet traffic from intranet traffic, in line with the continued implementation of the National Information Network (NIN), has resulted in a significant increase in speeds when accessing sites hosted inside Iran.[12] It has been said that the full implementation of the NIN plan will result in a tenfold increase in the country's bandwidth.[13] However, the speed of access to sites hosted outside Iran remains very low and the connection is one of the most unstable in the world.[14] A number of major ISPs suffer an average of 10 to 20 percent of packet loss. Renesys, a global network monitoring service, also reported substantial and frequent disruptions to the connectivity of specific ISPs in Iran.[15] (For more on the National Information Network, please see "Limits on Content.")

Iran's mobile telephone sector continues to grow as well. According to the ITU, Iran had a mobile phone penetration rate of 76.9 percent, up from 41.7 in 2007.[16] Iran is also considered the largest potential market for mobile phones in the Middle East and is reportedly investing heavily in its mobile infrastructure.[17] RighTel, the third largest mobile service provider of Iran, increased its coverage for 3G and now has 17 cities under partial 3G mobile coverage. However, Iran's security-

[6] "Fixed (wired)-broadband subscriptions," International Telecommunications Union, accessed April 25, 2013, http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx.
[7] "Less than 1 percent of Iranians have high-speed internet," Trend, September 3, 2012, http://en.trend.az/regions/iran/2061143.html.
[8] "21.4 of families have access to the Internet", Wimax News, accessed June 26, 2103 http://wimaxnews.ir/NSite/FullStory/News/?Id=3190.
[9] Radio Zamaneh, "Most internet users still use dial-up in Iran," Payvand Iran News, March 24, 2012, http://www.payvand.com/news/12/mar/1222.html.
[10] Radio Zamaneh, "Most internet users still use dial-up in Iran," Payvand Iran News.
[11] "The effects of sudden increase of cost accessing Internet,", ISNA, accessed 26 June, 2013, see http://bit.ly/ZdJ7o1.
[12]"The separation of Internet and Intranet traffic has been initiated", IT Iran, accessed 26 June, 2013 http://itiran.com/?type=news&id=17699.
[13] "Launch of National Information Network, First half of this year", IT Iran, accessed 26 June, 2013 http://itna.ir/vdcfmcd0.w6dy0agiiw.html.
[14] "BGP Update Report", SecLists.Org Security Mailing List Archive, accessed 26 June, 2013 http://seclists.org/nanog/2012/Nov/312.
[15] Renesys Iran Internet Events Bulletin http://www.renesys.com/eventsbulletin-cgi-bin/mt-search.cgi?search=iran&IncludeBlogs=1&limit=20.
[16] "Mobile cellular," International Telecommunications Union, accessed April 25, 2013, http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx.
[17] "Surfing the web on am iPhone in Iran, Guardian, accessed June 24, 2013, http://socialenterprise.guardian.co.uk/it/articles/media-network-partner-zone-publici/web-iphone-iran.

driven view of the internet has slowed the development of internet infrastructure in the country. For example, a plan to make high-speed wireless internet available in public spaces in Tehran, proposed by the ISP MobinNet, was blocked by the CRA after it failed to provide a license to the company with no official explanation.[18] In April 2013, the Psychological Association of Qom Hawza sent a letter to the parliament requesting that RighTel's 3G service be blocked in order to prevent "the breakdown of Iranian families" and "immorality among the youth."[19] The use of mobile wireless is often criticized for allowing video calls between members of the opposite gender.

In Iran, the limitations imposed on ICTs closely follow the country's internal political dynamics. For example, beginning around October 6, 2012, and timed with sporadic protests over economic conditions, the Telecommunications Company of Iran temporarily blocked several types of foreign-hosted media files. According to initial reports, this blocking targeted audio (.MP3), video (.MP4, .AVI), and Adobe Flash/Shockwave content.[20] Over late 2012 and early 2013, authorities periodically throttled the speeds of virtual private networks (VPNs) in order to dissuade Iranians from their use. In anticipation of the June 2013 presidential elections, the authorities blocked all circumvention tools in March 2013 (see "Limits on Content") and engaged in extreme throttling of encrypted traffic, with secure traffic running at between one to five percent of the speeds for unsecured and domestic traffic. Authorities effectively ran a "white list" of permitted applications and services, using deep packet inspection (DPI) to monitor content and distinguish between unencrypted, encrypted, and abnormal traffic. International connections and traffic that did not fall within an approved "white list" were throttled and terminated after 60 seconds. Domestic traffic, which is monitored, did not fall under these restrictions.[21]

In a bid to decrease costs and improve speeds, authorities have been looking to move Iranian content to servers hosted within the country. This would allow the state-owned internet company to avoid paying high international traffic costs, especially taxing during this time of currency fluctuations brought on by economic sanctions. According to Iran's Deputy Minister of ICT, the government has already moved more than 90 percent of its websites to providers based inside the country and is now pressuring privately-owned websites to follow suit.[22] Compliance has been limited, however, primarily because hosting services offered by Iranian companies are significantly more expensive than those of their overseas competitors due to economic sanctions on technology imports.

Iran's deputy minister for ICT has stated that more than 90 percent of the government's websites have been moved to domestic servers, and the authorities are pressuring privately-owned websites to follow suit. However, since Iranian companies cannot offer the same low prices as many

[18] "License to launch a public WiFi network was not issued", Mehrnews, accessed June 24, 2013, http://www.mehrnews.com/detail/News/1640766.
[19] *Iranian Internet Infrastructure and Policy Report, March – April 2013*, April 2013, Small Media, available at http://smallmedia.org.uk/InfoFlowReportAPRIL.pdf.
[20] "Some audio and video formats have been blocked in Iran", BBC Persian, accessed June 24, 2013, http://www.bbc.co.uk/persian/science/2012/10/121005_na_audio_and_video_format_blocked_in_iran.shtml.
[21] *Iranian Internet Infrastructure and Policy Report, March – April 2013*, April 2013, Small Media, available at http://smallmedia.org.uk/InfoFlowReportAPRIL.pdf.
[22] "The ministry promises 20 Mbps internet again," [translated] Mashregh News, July 23, 2011, see http://bit.ly/16tlGLu.

international companies, many have yet to make the move. Still, authorities have already requested that ISPs separate traffic destined to servers within the country from that traffic going outside, resulting in relatively high-speeds for accessing approved content, versus incredibly slow access to websites hosted internationally that are already filtered. Many observers and former officials, however, are pessimistic about the situation of the internet in the country. In an interview, Seyed Ahmad Motamedi, a communications minister under former president Khatami, referred to the country's ICT sector as unsustainable and "a serious catastrophe."

The telecommunications industry in Iran is tightly controlled by the government or related entities. In recent years, the role of the Islamic Revolutionary Guards Corps (IRGC)—a politically important branch of the security forces that also controls large sections of the economy—in the ICT sector has notably increased.[23] In September 2009, for example, the IRGC purchased a controlling stake in the Telecommunications Company of Iran (TCI), the country's main provider of internet and mobile phone services. The Data and Communication Company (DCC), which operates under the TCI, retains a monopoly on internet traffic flowing in and out of Iran. Other providers must purchase bandwidth from the DCC. Direct access to the internet via satellite is only permitted to certain institutes and is prohibited for personal use. The mobile phone market is under similar state influence. IranCell, the second mobile operator behind the TCI, is owned in part by a web of proxy companies controlled by the IRGC (there are a number of high profile IRGC ex-commanders among its management). The third operator, RighTel, was launched in early 2011. It, too, is a government-owned entity.

There is no independent regulatory body for ICTs in Iran. The Communications Regulatory Authority (CRA) is responsible for telecommunications licensing. It is part of the Ministry for Information and Communication Technologies and its head is appointed by the minister.[24] In March 2012, the broader decision-making process related to ICTs underwent a change, when Iran's Supreme Leader Khamenei issued a decree establishing "The Supreme Council on Cyberspace" (SCC). The SCC is intended to provide a centralized focal point for policy-making and regulation of Iran's virtual space, effectively removing such authority from the executive, legislative, and judiciary branches of the government and bringing it under Khamenei's direct control. Observers believed this reflected Khamenei's dwindling trust of President Ahmadinejad and his hesitation to leave such an important area of policy under the president's authority.

LIMITS ON CONTENT

The Iranian authorities continued to restrict access to tens of thousands of websites, particularly those of international news sources, the opposition Green Movement, ethnic and religious minorities, and human rights groups. A member of the Commission to Determine the Instances of Criminal Content (CDICC) stated in April 2013 that about 1,500 "anti-religious websites,"

[23] "The Revolutionary Guards is entering the IT market," Digarban, December 12, 2011, http://www.digarban.com/node/3715.
[24] Communications Regulatory Commission of Iran, accessed July 31, 2012, http://www.cra.ir/Portal/Home/.

including sites that promote the Wahhabi or the Baha'i faiths, are blocked each month.[25] Major international social media tools, such as the social-networking site Facebook, the video-sharing portal YouTube, the microblogging service Twitter, and the photo-sharing application Flickr, are blocked. In late 2012 and early 2013, several political and economic events sparked new reactions by those in charge of the filtering system in Iran, including the devaluation of Iran's currency and the increasing frictions among pro-state (conservative) bloggers.

Iranian authorities employ a centralized filtering system that can effectively block a website within a few hours across the entire network in Iran. Private ISPs are forced to either use the bandwidth provided by the government or route their traffic (which contains site-visit requests) through government-issued filtering boxes developed by software companies inside Iran. The filtering boxes search for banned text strings—either keywords or domain names—in the URL requests submitted by users, and block access accordingly. On April 15, 2012, the Ministry of Communication's ICT Research Center announced a plan to create a local and integrated system for "refining" internet content, rather than implementing filters at the country's internet gateways as it does currently. The Research Center, in describing the reasoning behind the plan, stated that "although the internet has many advantages, it is polluted with immoral websites, and can endanger society's moral health."[26]

In 2013, Mehdi Akhavan Behabadi, the Secretary of the Supreme Council of Cyberspace, announced a plan to change the filtering system from "URL Filtering" to "Content Filtering" ahead of the presidential election in June 2013. This change would potentially increase restrictions on content that the state does not currently sanction.[27] The list of cybercrimes was also updated ahead of the elections. According to the updated list, the following activities are considered to be illegal: encouraging people to boycott the elections by publishing online content, publishing fake results of surveys about the elections, and publishing any content that mocks the election or its candidates.[28]

Internet traffic over cell phones is subjected to a similar level of restrictions as fixed-line connections. Iranian mobile users also do not have access to major app stores such as Apple's iTunes or Google Play, either due to a blockage by the Iranian government (in the case of the former) or by the providing company (with regard to the latter). Warnings were also issued against the potential misuse of SMS advertisements ahead of the presidential election. According to the director of Iran's Information Technology and Digital Media Development Center, Hassan Alizadeh, the content of bulk instant messages would be supervised more heavily.[29] According to a report from the official website of *Ansar-e Hezbollah*, the conservative Islamic paramilitary group

25 "Internet delivery case is likely suit," [translated] IT Analyze.ir, April 17, 2013, http://itanalyze.com/news/2013/04/17/20866.php?utm_source=feedly

26 "The new scheme of ICT research center of Ministry of Communications for filtering", Jam News, accessed June 24, 2013, http://www.jamnews.ir/NSite/FullStory/News/?Id=74737.

27 "Proposition of establishment of special court for filtering/sites that receive government subsidies", Khabar online, accessed 24 June, 2013, http://www.khabaronline.ir/detail/275237/ict/ict.

28 "Examples of presidential elections were announced in the criminal context" [translated], Baharnews.ir, accessed June 24, 2013, http://www.baharnews.ir/vdci.zavct1avubc2t.html.

29 "Precise control over the content of bulk SMS, Non Iranians to be prevented from using SMS", Mehrnews, accessed June 24, 2013, http://www.mehrnews.com/fa/newsdetail.aspx?NewsID=1731245.

warned that phones with internet connections should be considered a threat to the Islamic Republic, especially ahead of the upcoming election, as they are at risk of being hijacked by Western powers to incite post-election violence.[30] Around politically sensitive dates, authorities have filtered SMS messages or even blocked all text messaging capabilities to prevent the spread of information. For example, on April 4, 2013, short-message service (SMS) text messages containing the word "Mashaie" were blocked, referring to Esfandiar Rahim Mashaei, the presidential candidate supported by Ahmadinejad. Texts containing political slogans related to Mashaie and Ahmadinejad had also been blocked in the past.

On September 24, 2012, Iran blocked access to Gmail in a move that caused outrage among internet users and even some Iranian officials who were using the site as their primarily e-mail service. It was later said that the Gmail block was an "involuntary" consequence of trying to reinforce censorship of Google's YouTube video-sharing site in response to the inflammatory, anti-Islam clip "Innocence of Muslims."[31] Mohammad Reza Miri, a member of the telecommunications ministry committee, was quoted as saying the ministry lacked the "technical knowhow to differentiate between these two services."[32] The provided explanation did not seem to make sense, however, since at the time of blocking Gmail, YouTube was already blocked. Nonetheless, the Gmail blockage was lifted after a few days, mainly due to public pressure. It seems these measures are designed to frustrate users and eventually force them to seek more easily-monitored alternatives based in Iran. Although many Iranians have been able to access the blocked platforms using various circumvention techniques, the authorities have actively worked to disrupt such efforts, forcing users to constantly search for new solutions.

In another attack on Google's services, Adwords, its online advertising service, was also blocked by the Iranian authorities. In spite of economic sanctions and various difficulties, many Iranian businesses had been using Adwords to advertise their products on Google. These small businesses have suffered greatly as the result of the Adwords blockage.[33] There are also reports that while access to the main Google domain is available, other country-specific domains are blocked. These include Google Canada, Germany, UK, Japan, China, Netherlands, France, Italy, and Spain.[34] This restriction may be in place in an attempt to maintain tighter control on Iranian users' access to Google services. Voice over Internet Protocol (VoIP) and chatting services are also disrupted inside Iran, whether by the intentional throttling of VoIP-linked data speeds or the blocking of services altogether. According a report published in April 2013, the government-owned TCI is the only ISP to not officially block services such as Viber, Skype, ooVoo, and Yahoo Messenger.[35]

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[30] "Serious weakness in the management of satellite discussion", Yalasarat, accessed June 24, 2013, http://yalasarat.com/vdcipvar.t1avv2bcct.html.
[31] "Internet in Iran: Google not filtered, Gmail filtered", BBC Persian, accessed June 24, 2013, http://www.bbc.co.uk/persian/iran/2012/09/120924_asf_iran_gmail_block.shtml.
[32] "Iran unblocks access to Gmail", AFP, accessed June 24, 2013, https://www.google.com/hostednews/afp/article/ALeqM5hR36K96WD9GYoBp51umwiKBb0nYQ?docId=CNG.94fb48b493fa1aacf4fc347be86ebaf0.7c1.
[33] "Google ads in Iran has become more complicated", BBC Persian, accessed June 24, 2013, http://www.bbc.co.uk/persian/science/2012/09/120907_na_google_adwords_banned_in_iran.shtml.
[34] "Google country domain filtering", ITNA, accessed June 24, 2013, http://www.itna.ir/vdchqkni.23nzkdftt2.html.
[35] *Iranian Internet Infrastructure and Policy Report, March – April 2013*, April 2013, Small Media, available at http://smallmedia.org.uk/InfoFlowReportAPRIL.pdf.

This coverage period was marked by increased frictions within pro-regime conservatives, mainly between the pro-Ahmadinejad and pro-Khamenei camps, catalyzed by the June 2013 presidential election. There was a sustained wave of filtering of blogs supportive of President Ahmadinejad, in addition to campaign sites linked to presidential candidate Mashaei and former president Mohammad Khatami, whom many Iranians called on to run in the elections. Iran's Supreme Leader expressed his approval of filtering out pro-Ahmadinejad blogs while speaking at a gathering of university students.[36] Ahmadinejad, however, has confronted the judiciary to free his many online supports who have been arrested (see "Violations of User Rights" for more information on the arrest of bloggers).[37] The Persian-language Wikipedia page for Ahmadinejad was also reportedly blocked at points during the coverage period for containing "insults"' to the president, according to the head of the Commission to Determine the Instances of Criminal Content.[38]

Several news websites associated with high-profile conservatives were also blocked. The website of Alef News, which belongs to Tehran's conservative parliamentarian Ahmad Tavakkoli, was filtered after publishing news on the corruption of Iran's powerful Larijani brothers, who are in top positions in the Islamic Republic. Tabnak and Baztab Emrooz, news websites associated with Mohsen Rezaie, a former IRGC commander and a candidate in the upcoming presidential election, were also blocked due to the content of user comments. All of these sites were unblocked after several days, apart from Baztab Emooz, which has been taken down completely.

In an attempt to control the spiraling devaluation of the *rial*, Iran's currency, authorities blocked a majority of websites and applications that provide data on foreign exchange trading and gold markets. Many ordinary Iranians are converting their rials into foreign currencies and gold in an effort to preserve the value of their savings. Authorities took a multifaceted approach to the blocking. Any references to the price of the dollar, currency, and gold coins were filtered in mobile text messages.[39] In addition, internationally-hosted sites were blocked and individuals behind sites hosted within Iran were arrested or intimidated.[40] Some local sites were also blocked to traffic from outside Iran, like the domestically-hosted website of the Association of Iranian Exchanges, an independent, apolitical and nonprofit organization of currency traders licensed by the Central Bank of Iran.[41] Some sites were allowed to operate again on the condition that they only displayed the government-established exchange rates, rather than the market rate.[42] The move to restrict foreign

[36] "Remarks in meeting with students", Khamenei.ir, accessed June 24, 2013, http://farsi.khamenei.ir/speech-content?id=20686.
[37] "I personally follow up the blogger's arrest,partisanship is a symbol of tribalism" , Mehrnews, accessed June 24, 2013, http://www.mehrnews.com/detail/News/1668142.
[38] *Iranian Internet Infrastructure and Policy Report, March – April 2013*, April 2013, Small Media, available at http://smallmedia.org.uk/InfoFlowReportAPRIL.pdf.
[39] "The words gold,foreign exchange,coin, dollar have been blocked in SMS system", Smsmart, accessed June 24, 201, see http://bit.ly/1eK6FY7.
[40] Examples of these websites were parstools.com, zar.ir, eranico.com and mazanex.com.
[41] The website of the Association of Iranian Exchanges is kanoonsarafan.com.
[42] "Sites announcing the rate of gold and foreign exchange have been blocked", Radio Farda, accessed June 24, 2013, http://www.radiofarda.com/content/f4_iran_ban_exchange_rate_websites/24727416.html.

access to domestically-hosted websites was interpreted by many as a sign of what may come after the full implementation of the National Information Network.[43]

The online restrictions were not limited to political and economic content. Persian-language music blogs, dating sites, digital security information, and movie download hubs were subjected to increased filtering and content takedown orders. For instance, Travian, a popular online roleplaying game available in Persian, was blocked despite having obtained a license from the Ministry of Culture and Islamic Guidance. According to Fars News Agency, Travian was blocked in order to support "the development of domestic online game companies," "to protect personal information," and "protect against the transfer of money out of the country."[44] The founder of the first domestically produced game, "Asmandez," reacted to the incident saying that filtering is not a solution to support national game production.[45] Travian was unblocked on January 10, 2013, but the company notified users that the website will be completely shut down on March 21, 2013. As of December 2012, Travian had 150,000 users in Iran, of which 100,000 were active.[46] The Persian-language version of the site now redirects to the English version.

Aside from filtering, the regime also employs administrative measures to remove unwanted content from the web. The 2009 Computer Crime Law (CCL) makes service providers, such as blogging platforms, responsible for any content that appears on their sites. This has led to the suspension of blogs or shuttering of news websites hosted on platforms inside Iran, under orders from government officials. Website owners have been forced to register their sites with the Ministry of Culture and have then received requests to remove particular posts deemed unacceptable by the government. According to Alireza Shirazi, the founder and manager of Blogfa, such massive censorship has damaged the Iranian blogosphere by discouraging users from blogging.[47] Mehdi Botourabi, the director of the popular blogging platform Persianblog, also stated that the censorship of blogs has increased exponentially. According to him, new blocking requests were occurring at a rate of six times more than in 2011.[48] As with blocking, the targets of such censorship have included websites and blogs associated with high-ranking officials.

In a change from previous practices, there were reports of incidents in which hosting companies were ordered to directly remove content from websites without any notification to the website owners. For instance, one post on the site Weblognews that criticized the internet censorship method in Iran was deleted by the host company without notifying the site owners.[49] Weblognews is one of the prominent conservative websites that publishes news from around the Persian blogosphere and the internet. Nonetheless, Iranian officials continue to insist that censorship in Iran

[43] Iranian Internet Infrastructure And Policy Report, January 2013 http://smallmedia.org.uk/sites/default/files/reports/IIIP01.pdf.
[44] "The online game "Travian" has been filtered", Farsnews, accessed June 24, 2013, http://www.farsnews.com/newstext.php?nn=13911013000562.
[45] "Supporting local games doesn't mean filtering", ITNA, accessed June 24, 2013, http://itna.ir/vdcdsn0x.yt0o96a22y.html.
[46] "Why Travian has been filtered in Iran?" , BBC Persian, accessed June 24, 2013, http://www.bbc.co.uk/persian/science/2013/01/130104_na_travian_blocked_iran.shtml.
[47] Ibid.
[48] "Persian blog manager: compared to last year, weblog filtering has increased 6 times", Kalameh, accessed June 24, 2013, http://www.kaleme.com/1391/07/19/klm-115654/.
[49] "A strange incident", Weblognews, accessed June 24, 2013, http://weblognews.blog.ir/post/2.

is done a lawful manner. According to the Director of the Internet Unit at the Center for Digital Media at the Ministry of Culture and Islamic Guidance, "unlike some countries like the U.S., where internet monitoring is done in a dictatorial manner, in Iran, refining websites is based on laws with orders from the Working Group to Determine Instances of Criminal Content online or by judiciary officials, in a democratic and completely lawful manner."[50]

In an effort to show that content filtering is based on a legal framework, institutions to oversee internet filtering have been created. The Committee in Charge of Determining Unauthorized Websites is empowered to identify sites that carry forbidden content and report that information to the TCI and other major ISPs for blocking. The committee is headed by the prosecutor general and other members are representatives from 12 governmental bodies. The CLL also identifies the violations that might result in a website being marked for filtering. These are defined very broadly and range from insulting religious figures and government officials to distributing pornographic content and the use of illegal circumvention tools.[51]

In practice, little information is available about the inner workings of the committee, and censorship decisions are often arbitrary and nontransparent. According to the law, the committee should meet biweekly to decide on any website bans, though the bulk of filtering decisions are likely made upon discovery of objectionable content, or by a small technical team. In addition, owners of websites registered with the Ministry of Culture have complained that they received no explanation when their websites were filtered.[52] The authorities claim there is a procedure for disputing filtering decisions. However, the process is highly inefficient, and even conservative bloggers have failed to have their webpages unblocked by lodging complaints.[53] Moreover, the dispute process requires the website owner to disclose his or her personal information and accept responsibility for any misconduct in the future, a commitment that few are willing to make given the risk of severe punishment.

Self-censorship is extensive, particularly on political matters. The widespread arrests and harsh sentences meted out to reporters and activists after the 2009 elections, as well as perceptions of pervasive surveillance, have increased fear among online journalists and bloggers. Many of them either abandoned their online activities or use pseudonyms. The result has been a palpable drop in the amount of original content being produced by users based inside the country.

In addition to filtering, censorship, and intimidation, the state counters critical content and online organizing efforts by extending regime propaganda into the digital sphere. There are at least 400 news websites either directly or indirectly supported by the state. They seek to set the agenda by providing pro-government commentary or publishing rumors. There have also been a large number of government-backed initiatives to promote blogging among its supporters and members of the

[50] "Filtering in Iran is fully democratic", Wimaxnews, accessed June 24, 2013, http://wimaxnews.ir/NSite/FullStory/News/?Id=3185.
[51] "12 memebers of Committee in Charge of Determining Unauthorized Sites," Weblognews, December 16, 2009, http://weblognews.ir/1388/09/mediablog/5740/.
[52] "The News stie's reporter will be insured," Hamshahri Online, November 1, 2011, http://www.hamshahrionline.ir/news-150108.aspx.
[53] "On filtering of Ahestan," Ahestan (blog), January 15, 2010, http://ahestan.wordpress.com/2010/01/15/ahestan.

Basij paramilitary group. In July 2011, the head of the Basij said there were three million members active online.[54]

Furthermore, the majority of independent content producers lack the financial resources to operate in such a hostile environment. The online advertising market in Iran is exclusively limited to apolitical and progovernment websites. Even businesses based outside Iran avoid political websites to maintain trading relationships with the country. Although the United States adjusted its sanctions against Iran to enable American internet companies to provide services to Iranian users, Google Advertising does not recognize Persian as one of the languages in its system, disadvantaging Persian content producers.[55]

The Iranian government has intensified its fight against the use of circumvention tools. The use of virtual private networks (VPNs), which use a secure protocol to encrypt users' data and bypass filtering in Iran, was particularly targeted in late 2012 and early 2013. Kamal Hadianfar, the head of a specialized unit within the cyber police, claimed that between 20 to 30 percent of Iranian users make use of VPNs.[56] Mehdi Akhavan Behabadi, Secretary of the Supreme Council of Cyberspace, announced the launch of legal, state-approved VPNs to replace "illegal" VPNs. Shortly after, on March 8, 2013, all unauthorized VPNs were blocked inside Iran.[57] There are also reports that the use of other circumvention tools such as Tor, the popular anonymizer and anti-filter tool, was hampered due to sophisticated disruption and blocking practices by the authorities.[58] Many users quickly shifted to other well-known circumvention tools, such as Psiphon, Freegate, and Kerio VPN, and within a month Psiphon reported between 700,000 to 900,000 daily users in Iran.[59] However, two months later, the authorities had severely limited access to these and all other tools, leaving Iranian users with few options.[60]

Following the Chinese model of internet control, Iran is very keen to develop national versions of popular online services as part of its National Information Network. Since Western-built tools such as Gmail or Skype provide a degree of privacy or encryption, the government is instead diverting funds to launch Iranian equivalents of major online services like e-mail, social networking sites, and search engines that can be easily controlled for political purposes. In July 2012, Iran's ICT minister Reza Taghipour indicated that Iran would use China's and South Korea's extensive experience in

[54] "Basij have had large and effective measures in cyberspace," Fars News, October 11, 2011, http://www.farsnews.com/newstext.php?nn=13900719001180.
[55] Jamal Abdi, "Obama Norooz promise a good step, more needed to ensure U.S. not part of 'Electronic Curtain,'" NIAC InSight, March 21, 2012, http://www.niacinsight.com/2012/03/21/obama-promises-to-ease-internet-restrictions-in-norooz-message/.
[56] "Iran to crack down in web censor-beating software",AFP, accessed June 24, 2013, https://www.google.com/hostednews/afp/article/ALeqM5jIFi-LdqBsdtrj7mRYnCMTlSGjCA?docId=CNG.f710ad6e0ee1dc52f64c985918d1bac1.741.
[57] "Iran blocks VPN use ahead of elections", accessed June 24, 2013, http://www.wired.co.uk/news/archive/2013-03/11/iran-vpn-block.
[58] "Iranian Internet infrastructure and policy report", Small Media, accessed June 24, 2013, http://smallmedia.org.uk/sites/default/files/reports/IIIP01.pdf.
[59] "Cyber Dialogue on Iran", Shahrvand, March 28, 2013, http://www.shahrvand.com/archives/37590.
[60] *Iranian Internet Infrastructure and Policy Report, March – April 2013*, April 2013, Small Media, available at http://smallmedia.org.uk/InfoFlowReportAPRIL.pdf.

order to develop a national search engine for use in Iran.[61] The government also indicated plans to launch a national Facebook-type service and e-mail systems. In December 2012, Iran launched its own video-sharing website in a move by officials to create a state-run competitor to sites like YouTube. The site, called Mehr.ir, is run by the government-controlled broadcaster, the Islamic Republic of Iran Broadcasting (IRIB). The IRIB is looking to create new digital platforms as a means of attracting new audiences and extending its broadcasting monopoly—guaranteed by the constitution—into cyberspace. The IRIB is under the direct supervision of Iran's Supreme Leader, who appoints its director. In April 2013, the head of the Ministry of Information and Communication Technology (ICT) stated "Basir," referred to as "the Islamic Google Earth," will come online in the next few months. However, many of these initiatives have failed to attract large numbers of users due to poor design. In addition, international sanctions on Iran over its nuclear program have limited the government's ability to purchase the equipment required to run data centers on the scale needed to host a national e-mail service, for example.[62]

Due to the limited nature of Iran's online sphere, many people have shifted to posting on closed social-networking platforms like Facebook, which is perceived to offer a safer environment for expressing views among a limited audience of contacts, compared to publicly posting comments on websites or keeping a blog. Social media is also used extensively by Iranian human rights activists to document abuses and launch advocacy campaigns. For instance, users have mobilized on Facebook and Twitter to demand the release of the jailed human rights lawyer Nasrin Soutodeh. Soutodeh's husband employs Facebook as a means of updating followers on her condition in prison, including her 49-day hunger strike from October to December 2012.[63] Sotoudeh, together with Iranian filmmaker Jafar Panahi, is a recipient of the European Union's 2012 Sakharov Prize for Freedom of Thought.[64] The son and daughter of imprisoned blogger Dr. Mehdi Khazali also post updates and prison letters on their respective Facebook pages, which are widely covered by Iranian blogs. An online petition was organized to call for his release.[65] Iranians also used social media to document and promote environmental campaigns and to call for blood drives to assist the victims of several devastating earthquakes.[66]

Nonetheless, some individuals associated with the regime have sought to discourage these practices. The Iranian Cyber Police, in November 2011, warned users that exchanging information on foreign social-networking sites could constitute a criminal act and lead to prosecution.[67] Speaking from a

[61] "Iranian search engine in the works: official," Payvand, accessed June 24, 2013, http://www.payvand.com/news/12/apr/1192.html.
[62] "Persian email service, Chaapaar will be launched in December," IRNA, September 27, 2011, http://www.irna.ir/NewsShow.aspx?NID=30583255.
[63] Hadi Nili, "Iranian Lawyer Nasrin Sotoudeh on Hunger Strike in Prison," GlobalVoices, November 16, 2012, http://globalvoicesonline.org/2012/11/16/iranian-lawyer-nasrin-sotoudeh-on-hunger-strike-in-prison/.
[64] Thomas Erdbrink, "Her Demand Met, Imprisoned Iranian Ends Hunger Strike," New York Times, December 4, 2012, http://www.nytimes.com/2012/12/05/world/middleeast/nasrin-sotoudeh-iranian-rights-advocate-ends-hunger-strike.html?_r=0.
[65] See "Immediate & Unconditional Release of Medhi Khazali," http://www.gopetition.com/petitions/immediate-unconditional-release-of-mehdi-khazali.html.
[66] Hooman Askary, "Iran's Most Memorable Internet Moments in 2012," GlobalVoices, December 27, 2012, http://globalvoicesonline.org/2012/12/27/irans-most-memorable-internet-moments-in-2012/.
[67] "Is being a member of social networks a crime?" Jahan News, November 17, 2011, http://www.jahannews.com/vdcdkk0fxyt0no6.2a2y.html.

religious perspective, in January 2012 an Iranian cleric declared Facebook to be un-Islamic and that membership constituted a sin.[68] Similarly, in April 2013, a prominent cyber police commander referred to Facebook as "the most disgusting spyware and the most dangerous warfare of the U.S."[69]

Despite these declarations, Supreme Leader Khamenei joined Facebook on December 13, 2012, through an announcement on his Twitter page. As mentioned, both Facebook and Twitter are blocked inside Iran, as they are considered tools of the soft war against Iran.[70] Secretary of the SCC Mehdi Akhavan Behabadi addressed the issue of Iran's Supreme Leader joining Facebook by stating that although membership in social networking websites is legal, using circumvention tools to access these networks is illegal. He added that the government of Iran has no decision to remove the filtering from social networking websites, such as Facebook.[71] Despite the restrictions imposed on Facebook and Twitter, both platforms were widely used by the Iranians to discuss election-related issues. In addition, all six presidential candidates had accounts on these platforms.[72]

VIOLATIONS OF USER RIGHTS

Iranian internet users suffer from routine surveillance, harassment, and the threat of imprisonment for their online activities, particularly those critical of the authorities and among the members of ethnic and religious minorities. The constitution provides for limited freedom of opinion and expression, but numerous, haphazardly-enforced laws restrict these rights in practice. The 2000 Press Law, for example, forbids the publication of ideas that are contrary to Islamic principles or detrimental to public rights, none of which are clearly defined.[73] The government and judiciary regularly invoke this and other vaguely worded legislation to criminalize critical opinions. The 2009 Computer Crime Law (CCL) identifies punishments for spying, hacking, piracy, phishing, libel, and publishing materials deemed to damage "public morality" or to be a "dissemination of lies."[74] Punishments mandated in the CCL are severe. They include the death penalty for offenses against public morality and chastity, as well as long prison sentences, draconian fines, and penalties for service providers who fail to enforce government content restrictions. Numerous users were arrested over the coverage period and, in the gravest violation of user rights, blogger Sattar Beheshti was killed while in police custody.

Since June 2009, the authorities have cracked down on online activism through various forms of judicial and extralegal intimidation. An increasing number of bloggers have been threatened,

[68] Amrutha Gayathri, "Muslim Cleric Says Facebook is Un-Islamic, Membership Sin," International Business Times, January 11, 2012, http://www.ibtimes.com/articles/280026/20120111/muslim-cleric-facebook-un-islamic-membership-sin.htm.
[69] Hadi Nili, "Iran: Facebook is 'the most disgusting US spyware'," GlobalVoices, April 25, 2013, http://globalvoicesonline.org/2013/04/25/iran-facebook-is-the-most-disgusting-us-spyware/.
[70] "Official responses to Ayatollah Khamenei's Facebook page: registration is not a crime", BBC Persian, accessed June 24, 2013, http://www.bbc.co.uk/persian/iran/2012/12/121225_l_khamenei_facebook_reax.shtml.
[71] "Change in the organising national cyber defense", Jamejam, accessed June 24, 2013, http://www.jamejamonline.ir/papertext.aspx?newsnum=100826926096.
[72] http://www.rferl.org/content/iran-internet-disruptions-election/25028696.html
[73] Press Law, http://press.farhang.gov.ir/fa/rules/laws2.
[74] *Islamic Republic of Iran: Computer Crimes Law Article 19*, January 30, 2012, www.article19.org/data/files/medialibrary/2921/12-01-30-FINAL-iran-WEB[4].pdf.

arrested, tortured, kept in solitary confinement, and denied medical care, while others have been formally tried and convicted. Four individuals—Saeed Malekpour (a web developer), Mehdi Alizadeh Fakhrabad (web developer), Vahid Asghari (blogger and IT student), and Ahmad Reza Hashempour (website designer)—were sentenced to death between October 2011 and January 2012 under extremely questionable circumstances on charges relating to insulting religion or conspiring with foreign enemies. Malekpour, for example, was prosecuted on charges of "insulting and desecrating Islam" because a software program he had designed was used to upload pornography, although it was done without his knowledge.[75] Numerous bloggers remain in prison and are currently serving prison terms of up to 20 years, including Hossein Ronaghi-Maleki[76] and Hossein Derakhsan, considered the father of the Iranian blogosphere.[77]

The most significant human rights violation that occurred during the coverage period was the death of Sattar Beheshti, an Iranian blogger. Beheshti was arrested on October 30, 2012 by the Cyber Police of Iran for criticizing the government in posts he made online. He was pronounced dead after four days in custody. News of his death was first published on opposition websites close to the Green Movement, and then spread to other media outlets. Despite initial difficulties in obtaining an official confirmation of his death, it quickly became one of the top news headlines in the media and across social networking sites and blogs. Combined with pressure from the international community, the sustained attention across the Iranian media and political spectrum forced an official investigation. The head of the Tehran Cyber Police was dismissed by the Commander of the Islamic Republic Security Forces for "shortcomings in the supervision and handling of the case."[78]

Dr. Mehdi Khazali, a dissident blogger, ophthalmologist, and director of a publishing house, was arrested on October 30, 2012 during a meeting of the writers association *Saraye Ghalam* (Pen Society).[79] Dr. Khazali has been arrested multiple times for fiercely criticizing President Ahmadinejad.[80] Ironically, he is also the son of Ayatollah Khazali, a leading conservative cleric, though they have differing political views. After a 140-day hunger strike, he was finally released on June 3, 2013.[81] Kaveh Taheri, a blogger from Shiraz, Iran, was arrested on September 23, 2012 for

[75] Saeed Malekpour, interviewed by Olivia Ward, "Saeed Malekpour: A Canadian on Iran's death row," The Star, February 18, 2012, http://www.thestar.com/news/world/article/1132483--a-canadian-on-iran-s-death-row; Amnesty International, "Iran must halt execution of web programmer," January 19, 2012, http://www.amnesty.org/en/news/iran-must-halt-execution-web-programmer-2012-01-19.

[76] Ronaghi-Maleki is a blogger serving a 15-year sentence imposed in December 2009 for "spreading propaganda against the regime" and insulting the Supreme Leader.

[77] Deraksan lost his appeal against a 19-year sentence imposed on charges of cooperating with hostile countries, spreading propaganda against the regime, and insulting Islamic thought and religious figures.

[78] "Tehran's Cyber Police Chief Fired Over Blogger's Case" , December 12, 2012. http://www.payvand.com/news/12/dec/1003.html?utm_source=Payvand.com+List&utm_campaign=867f41c0f8-RSS_EMAIL_CAMPAIGN&utm_medium=email

[79] "Dr. Mehdi Khazali Has Been Re-Arrested And Has Launched A Dry Hunger Strike," Persianbanoo, October 31, 2012, http://persianbanoo.wordpress.com/2012/10/31/dr-mehdi-khazali-has-been-re-arrested-and-has-launched-a-dry-hunger-strike/.

[80] "Cyber Dissident Database: Dr. Mehdi Khazali," CyberDissidents.org, accessed April 30, 2013, http://cyberdissidents.org/bin/dissidents.cgi?id=125&c=IR.

[81] "Iranian Political Prisoner Mehdi Khazali Released After Weight, Health Plummet," Payvand Iran News, June 4, 2013, http://www.payvand.com/news/13/jun/1024.html.

acting against national security and disseminating online propaganda against the government. As of March 2013, he remained in detention pending any formal trial.[82]

As previously mentioned, even conservative supporters of President Ahmadinejad faced abuse over their online activities. For instance, Ahmad Shariat, who runs the conservative blog *Nedaee az Daroon*, was arrested on July 22, 2012 after publishing a post critical of the Revolutionary Guards and Iran's judiciary system.[83] The arrest was widely condemned in the Iranian blogosphere.[84]

Iranians outside of Iran were also intimidated for their online activities. Shahin Najafi, an Iranian rap artist, faced heavy criticism for a song that he published online titled *Naghi* (the name of a Shi'a Imam). Some have called the song blasphemous and a number of Grand Ayatollahs issued apostasy sentences (*fatwas*) against him.[85] The father of an Iranian student in the Netherlands was also arrested for his son's satirical posts on Facebook. The authorities threatened the son that if he does not return to Iran, his father will be executed.[86] Finally, Iman Amiri, an internet security student at Malmo University in Sweden, was arrested on January 21, 2013 upon returning to Iran. He is now in detention at Evin Prison and was reportedly subject to torture to force a confession.[87] Numerous other dissidents who are active online were arrested in late 2012 and early 2013, although many of their cases relate more strongly to their offline activities.[88]

There was a significant rise in the reports of individuals arrested for their activities on Facebook. In October 2012, four internet users in Sirjan were arrested because of their supposed use of antigovernment activities and the insulting of officials on Facebook. In an interview, Mehdi Bakhshi, the attorney general of Sirjan, warned internet users "to avoid any illegal online activities, such as publishing photos of women not wearing hijab, otherwise there would be legal consequences awaiting them."[89] In the same month, the individuals behind a Facebook page that published photos of Iranian girls were arrested for promoting "vulgarity and corruption among Iranian youths."[90] Iran's Cyber Police warned well-known athletes and artists against publishing personal photos on social networking websites. Ali Niknafs, the deputy supervisor of recognition and prevention at

[82] "A weblogger is in detention without trial for more than five months," Human Rights Activists News Agency, March 4, 2013, https://hra-news.org/en/a-weblogger-is-in-detention-without-trial-for-more-than-five-months.
[83] "The editor of Nedaee az Daroon was arrested", accessed June 24, 2013, http://www.digarban.com/node/7984
[84] Fred Petrossian, "Iran: Pro-Ahmadinejad Blogger Jailed," GlobalVoices, July 31, 2012, http://globalvoicesonline.org/2012/07/31/iran-pro-ahmadinejad-blogger-jailed/.
[85] "Harsh reactions to a song by an Iranian Rapper", BBC Persian, May 09, 2012 http://www.bbc.co.uk/persian/rolling_news/2012/05/120509_u07_shahin_najafi_reaction.shtml.
[86] "Iranian seizes father for son's facebook post", RNW, accessed June 24, 2013, http://www.rnw.nl/english/article/iran-seizes-father-sons-facebook-posts.
[87] "A network security student was arrested after his arrival to Iran," Human Rights Activists News Agency, March 12, 2013, https://hra-news.org/en/a-network-security-student-was-arrested-after-his-arrival-to-iran#more-2482.
[88] "2013: Netizens Imprisoned," Reporters Without Borders, accessed June 27, 2013, http://en.rsf.org/press-freedom-barometer-netizens-imprisoned.html?annee=2013.
[89] "Four people arrested in Iran for 'insulting authorities' in Facebook", BBC Persian, accessed June 24, 2013, http://www.bbc.co.uk/persian/iran/2012/10/121026_l39_facebook_iran_arrest.shtml.
[90] "Facebook band 'Tehran babes' has been disintegrated," [translated] Momtaznews, accessed June 24, 2013, see http://bit.ly/15vXiTi.

Cyber Police, stated that sharing personal photos through social media would increase the chances of improper use of photos, harming the reputation of Iranian celebrities.[91]

In March 2012, the Communications Regulatory Authority issued Bill 106,[92] which required the registration of all IP addresses in use inside Iran. Implementing such registration will allow the authorities to track users' online activities even more thoroughly and is a fundamental part of implementing the National Information Network through the restriction of anonymity online.

As of March 2012, customers of cybercafes must provide personal information (such as their name, father's name, national ID number, and telephone number) before using a computer. Cafe owners are required to keep such information, as well as customers' browsing history, for six months. They are also required to install closed-circuit surveillance cameras and retain the video recordings for six months.[93] Mehdi Mir-Mohammadi, head of the IT-Union of Tehran commented that some of the elements in the new regulations infringe on user's privacy and expressed concern over the fact that they could be taken advantage of and lead to new forms of cybercrimes. [94]

In addition, the CCL obliges ISPs to record all the data exchanged by their users for a period of six months, but it is not clear whether the security services have the technical ability to process all this data. When purchasing a mobile phone subscription or prepaid SIM card, users must present identification, facilitating the authorities' ability to track down the authors and recipients of specific messages.

Despite international legal restrictions placed on the selling of surveillance equipment to the Iranian government, there have been numerous media reports that Chinese and some Western companies have been providing the Iranian authorities with technology to monitor citizens' digital activities. Specifically, investigative reports by Reuters and the *Wall Street Journal* found that Huawei Technologies[95] and ZTE Corporation,[96] both Chinese firms, were key providers of surveillance technology to Iran's government, allegations both companies have denied. According to an uncovered PowerPoint presentation outlining the system's capabilities, Iran's MobinNet ISP would potentially have the capacity to utilize deep packet inspection (DPI) to conduct real-time

[91] "There is no compensation for lost dignity", IRSport24, accessed June 24, 2013, http://www.irsport24.com/Default.aspx?PageName=News&Action=Subjects_Details&ID=15222.
[92] Bill 105, Communication Regulation Authority, http://cra.ir/Portal/File/ShowFile.aspx?ID=f1a93935-938c-4d93-9eed-b47bc20685d4.
[93] Golnaz Esfandiari, "Iran Announces New Restrictions For Internet Cafes," Payvand, January 5, 2012, http://www.payvand.com/news/12/jan/1048.html?utm_source=Payvand.com+List&utm_campaign=d6730c3065-RSS_EMAIL_CAMPAIGN&utm_medium=email.
[94] "Internet cafes are required to authenticate users, all the pages viewed in the Internet cafes should be recorded", Asriran, accessed June 24, 2013, see http://bit.ly/1fIAhE5.
[95] Steve Stecklow, Farnaz Fassihi, and Loretta Chao, "Chinese Tech Giant Aids Iran," The Wall Street Journal, October 27, 2011, http://online.wsj.com/article/SB10001424052970204644504576651503577823210.html.
[96] "UANI Calls on Chinese Telecom Giant ZTE to Withdraw from Iran," Market Watch, press release, March 26, 2012, http://www.telecomyou.com/newscenter/news/uani-calls-on-chinese-telecom-giant-zte-to-withdraw-from-iran-marketwatch-press-release.

monitoring of communication traffic, block websites, track users, and reconstruct e-mail messages as a means of monitoring citizens. [97]

Filtering and physical intimidation are supplemented by hacking and distributed denial-of-service (DDoS) attacks on the websites of government critics, including leading opposition figures. Throughout 2012 and early 2013, there was a rise in the number of hacking incidents. Numerous Facebook accounts of Iranians users who were deemed to be un-Islamic were hacked and defaced with a statement from Iran's judiciary saying, "By judicial order, the owner of this page has been placed under investigation." The friends of such users were also tagged in posts containing similar messages. [98] Mana Neyestani, a well-known Iranian caricaturist, had his Facebook fan page hacked by a group called "Islam's Soldiers." The hacking group added its logo and a number of caricatures with pro-Assad, anti-Israel, and anti-Saudi Arabia themes to Neyestani's Fan page during the few hours they had control. [99] It is not clear what role the Iran's Cyber Police or other security forces played in this incident.

Iran has significantly increased its hacking capabilities in recent years. According to Jeff Bardin, the chief intelligence officer at the American open source intelligence company Treadstone 7, Iran has become much more sophisticated and pervasive in its use of online tools. There have also been several officially announced plans on recruiting and training hackers. The Deputy of IT and Communications at Iran's Civil Defense Organization announced that a Cyber Defense program of study would be introduced to some universities in the country on the graduate level. He added, "Familiarizing managers and commanders with the concepts of cyber defense is one of the main strategies of the Civil Defense Organization."[100] In the first such plan by a tertiary institution in Iran, the University of Lorestan announced that it will actively work to take down and hack into national and international websites that display anti-Islamic content.[101] Researchers at Amirkabir University are currently developing a "national network of cyber defense" while a team at Shiraz University is creating its own domestically-produced anti-virus software in support of a government ban on foreign digital security software.[102]

According to Zone-H, a website dedicated to tracking hacking incidents, there were a total of 1,387 website defacements attributed to Iranian hackers during March 2013 alone, with a similar number in February. The majority of these are attributed to the Ashiyane Digital Security Team, which ranks as the second most active group in world, with defacements of thousands of websites linked to foreign governments and high-level organizations.[103] It is also noteworthy that the head of

[97] "Special report: How foreign firms tried to sell spy gear to Iran", Reuters, accessed June 24, 2013, http://www.reuters.com/article/2012/12/05/us-huawei-iran-idUSBRE8B409820121205.
[98] "Combating immoral crimes in Facebook", Fardanews, accessed June 24, 2013, http://bit.ly/OQdomi.
[99] "Iran: 'Soldiers of Islam' hack catoonist's Facebook page", Cyberwarzone, accessed June 24, 2013, http://cyberwarzone.com/iran-%E2%80%9Csoldiers-islam%E2%80%9D-hack-cartoonists-facebook-page.
[100] "Iranian gov't pays paramilitary hackers, bloggers to bring you Islamic Revolution 2,0", Arstechnica, accessed June 24, 2013, http://arstechnica.com/tech-policy/2012/06/iran-expands-online/
[101] "New mission of Lorestan University: Hacking anti-regime sites inside and outside the country", Daneshjoonews, accessed June 24, 2013, http://www.daneshjoonews.com/node/7380.
[102] "Middle East and North Africa CyberWatch – March 2013," CitizenLab, April 2, 2013, https://citizenlab.org/2013/04/middle-east-and-north-africa-cyberwatch-march-2013/.
[103] Ashiyane Digital Security Team Report on Zone-H

Ashiyane, Behrouz Kamalian, was sanctioned under the European Union's human rights sanctions regime for being linked with the IRGC and responsible for cyber-crackdown both against domestic opponents and reformists and foreign institutions. [104] In the weeks leading up to the presidential elections, there was also a significant increase in targeted cyberattacks against high profile activists and journalists traced back to Iranian servers.[105]

http://zone-h.org/archive/filter=1/notifier=Ashiyane%20Digital%20Security%20Team/page=3.

[104] Council of the European Union, "Council Regulation (EU) No 1002/2011 of 10 October 2011 Implementing Article 12(1) of Regulation (EU) No 359/2011 Concerning Restrictive Measures Directed Against Certain Persons, Entities and Bodies in View of the Situation in Iran," The Official Journal of the European Union, October 10, 2011, p.5. (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:267:0001:0006:EN:PDF) - See more at: http://www.defenddemocracy.org/behrouz-kamalian#_ftn2.

[105] Iranian Internet Infrastructure And Policy Report, March – April 2013 http://smallmedia.org.uk/InfoFlowReportMARCH.pdf.