

OpenNet Initiative



Country Study
Internet Filtering in Iran
2004-2005

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Internet Filtering in Iran in 2004-2005

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1. EXECUTIVE SUMMARY

Iran has adopted one of the world's most substantial Internet censorship regimes. Iran, along with China, is among a small group of states with the most sophisticated state-mandated filtering systems in the world. Iran has adopted this extensive filtering regime at a time of extraordinary growth in Internet usage among its citizens and a burst of growth in writing online in the Farsi language. As this report demonstrates, Iran's sophisticated Internet censorship regime is part of a trend that the OpenNet Initiative's research has uncovered toward states focusing on blocking expression in local languages, such as Farsi, and with a particular view toward clamping down on what can be published through inexpensive and popular applications, such as weblogs.

Iran is also one of a growing number of countries, particularly in the Middle East region, that rely upon commercial software developed by for-profit United States companies to carry out the core of its filtering regime. Iran has recently acknowledged, as our testing confirms, that it uses the commercial filtering package SmartFilter – made by the US-based company, Secure Computing – as the primary technical engine of its filtering system. This commercial software product is configured as part of the Iranian filtering system to block both internationally-hosted sites in English and sites in local languages. SmartFilter, as with all commercial filtering software packages, is prone to over-blocking, errors, and a near-total lack of transparency. In effect, Iran outsources many of the decisions for what its citizens can access on the Internet to a United States company, which in turn profits from its complicity in such a regime.¹

Our testing showed that online content in the Farsi language is more likely to be blocked than is comparable content in the English language. We found 499 sites blocked out of 1477 tested (34%) in our November round of tests, and 623 sites of 2025 tested (31%) filtered in our December round. The Iranian state has effectively blocked access of its citizens to many pornographic online sites, most anonymizer

¹ Secure Computing has responded to questions about the use of its software in Iran with the following statement: "Secure Computing has sold no licenses to any entity in Iran, and any use of Secure's software by an ISP in Iran has been without Secure Computing's consent and is in violation of Secure Computing's End User License Agreement. We have been made aware of ISPs in Iran making illegal and unauthorized attempts to use of our software. Secure Computing is actively taking steps to stop this illegal use of our products. Secure Computing Corporation is fully committed to complying with the export laws, policies and regulations of the United States. It is Secure Computing's policy that strict compliance with all laws and regulations concerning the export and re-export of our products and/or technical information is required. Unless authorized by the U.S. Government, Secure Computing Corporation prohibits export and reexport of Secure products, software, services, and technology to Iran and destinations subject to U.S. embargoes or trade sanctions." (statement of Secure Computing Chief Executive Officer John McNulty, issued June 22, 2005). The statement does not address whether automatic updates to block lists routinely made available to SmartFilter users by Secure Computing have also been made available to Iranian ISPs, nor does it address the extent to which the adoption of SmartFilter and its updated block list for "non-profit and advocacy organizations" by additional governments (such as Saudi Arabia; see OpenNet Initiative, *Internet Filtering in Saudi Arabia in 2004*, available at <http://www.opennetinitiative.net/studies/saudi/>) is part of Secure Computing's market. Secure Computing's most recent Form 10-Q, filed with the U.S. Securities and Exchange Commission on May 4, 2005, reads: "Our customers operate some of the largest and most sensitive networks and applications in the world. Our partners and customers include the majority of the Dow Jones Global 50 Titans and numerous organizations in the Fortune 1000, as well as banking, financial services, healthcare, telecommunications, manufacturing, public utilities, schools and federal and local governments. We also have close relationships with the largest agencies in the United States government."

tools (which allow users to surf the Internet without detection), a large number of sites with gay and lesbian content, some politically sensitive sites, women's rights sites, and certain targeted Web logs ("blogs"), among other types of sites.

Iran's filtering regime is backed up by an extensive series of laws that control the publication of sensitive information. The press is restrained through a broad set of media-related laws, especially the Press Law of 1986, which includes licensing and substantive regulations. Individuals who subscribe to Internet service providers (ISPs) must promise in writing not to access "non-Islamic" sites. The law requires ISPs to install filtering mechanisms that cover access to both Web sites and e-mail. Punishment for violations of content-related laws can be harsh.

Iran's filtering regime has certain hallmarks of similar programs across the Middle East region, such as an emphasis on blocking a large number of pornographic Web sites. Some other aspects of Iran's blocking – such as that which targets the growing number of Farsi language blogs – sets it apart from other states in the Middle East. Our testing at multiple time periods, including the data in this report and data previously released in ONI work, show a net increase in the amount of blocking underway in Iran, including additional blocking in some content areas and reductions in blocking in others.

2. POLITICAL, TECHNICAL, AND LEGAL CONTEXT IN IRAN

A. Internet Infrastructure and Access

Iran has experienced dramatic growth in Internet usage, increasing from roughly 1 million users in 2001 to approximately 5 million users today. The Telecommunications Company of Iran (TCI) expects the state to reach 25 million users by 2009.² The capital of Tehran alone has approximately 1,500 cybercafés. Pre-paid Internet access cards are readily available.³ Iran had approximately 5,000 Internet hosts in 2003.⁴

Iran is beginning to deploy broadband Internet access widely. The French telecommunications company Alcatel won a contract in 2004 to install 100,000 asymmetrical digital subscriber lines (ADSL) over three years.⁵ The price of Internet access, rather than political or technical controls, is the primary barrier to widespread usage of fast Internet connections.⁶

² See Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report* (July 1, 2004); CIA, *The World Factbook – Iran*, at <http://www.cia.gov/cia/publications/factbook/geos/ir.html> (Jan. 27, 2005) (estimating 4.3 million Internet users in 2003); Telecommunication Company of Iran, *TCI at a Glance*, at <http://www.tci.ir/eng.asp?sm=0&page=18&code=1>; Nazila Fathi, *Iran Jails More Journalists and Blocks Web Sites*, *The New York Times*, Nov. 8, 2004, at A10 (estimating 4.8 million Internet users in Iran).

³ Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*.

⁴ International Telecommunication Union, *Internet Indicators: Hosts, Users and Number of PCs*, at http://www.itu.int/ITU-D/ict/statistics/at_glance/Internet03.pdf (2003).

⁵ Economist Intelligence Unit, *Country Commerce: Iran 2004 Main Report*.

⁶ Economist Intelligence Unit, *Country Commerce: Iran 2004 Main Report*.

Iran has over 650 different ISPs, including 12 major certified ISPs, and 18 Internet content providers.⁷ The Data Communication Company of Iran (DCI) is the largest ISP in Iran and is the provider through which most other ISPs obtain Internet connectivity.⁸ DCI is a subsidiary of TCI, which is run by the recently re-named Ministry for Information and Communication Technology (ICT), which sets TCI policy.⁹ After a recent re-organization, private sector entities will be allowed to operate fixed, mobile, and data communications.¹⁰ Iran's fiber-optic network has expanded recently, with roughly 27,850 KM of fiber in place.¹¹

The Internet has become an important information resource in Iran. Polls show that people trust the Internet more than any other media outlet, including domestic television and radio broadcasts.¹² Beginning in 2000, Iranians began to create internal news sites to circumvent the state's controls over traditional media sources.¹³ Blogs, both Iranian and from elsewhere, are increasingly popular, and Iranian servers host thousands of blogs.¹⁴ The state is aware of the volume and power of blogging in Iran.¹⁵ Some state officials are beginning to participate; for example, the blog found at <http://www.khamenei.ir> is published by a senior member of the government.¹⁶ However, a backlash against blogging has appeared; a recent editorial by the editor-in-chief of the hard-line newspaper Kayhan accused the Central Intelligence Agency of the United States of organizing a blog network to undermine Iran.¹⁷

⁷ CIA, *The World Factbook – Iran*; see Telecommunications Company of Iran, *Annual Report 2003*, at <http://irantelecom.ir/eng.asp?sm=4&page=17&code=4>; Erin McLaughlin, *Iran Keeps an Eye on the Bloggers*, at <http://edition.cnn.com/2003/WORLD/meast/07/16/iran.blogs/> (July 18, 2003).

⁸ See Data Communication Company of Iran, *English Version*, at <http://www.dci.ir/english/index.asp>.

⁹ See Reporters Sans Frontières, *Internet – Iran*, at http://www.rsf.org/article.php3?id_article=10733 (2004).

¹⁰ Telecommunications Company of Iran, *Annual Report 2004*, at <http://www.irantelecom.ir/press/intro8306/tci11.htm> (data as of July 2004). TCI was recently divided into a “mother company” of 31 subsidiaries which include the Data Communications Company, Mobile Communications Company and Backbone Communications Company (TCI). See TCI, *Technical Report*, at <http://www.tci.ir/eng.asp?page=12&code=1>.

¹¹ TCI, *Technical Report*.

¹² ISNA News Agency, at <http://www.isna.co.ir/news/NewsCont.asp?id=427457&lang=P>.

¹³ See, e.g., Shahram Sokooti, *Reformist Web Sites Buck Iranian Press Laws*, Worldpress.org, at <http://www.worldpress.org/Mideast/683.cfm> (Aug. 20, 2002); Peter Feuilherade, *Iran's Banned Press Turns to the Net*, BBC News, at http://news.bbc.co.uk/1/hi/not_in_website/syndication/monitoring/media_reports/2183573.stm; (Aug. 9, 2002); Fathi, *Iran Jails More Journalists and Blocks Web Sites*.

¹⁴ Associated Press, *Iran's Bloggers Fear Clampdown*, CNN.com, at <http://edition.cnn.com/2004/WORLD/meast/02/19/iran.blogging.ap> (Feb. 19, 2004).

¹⁵ See Reporters Sans Frontières, *Internet – Iran*.

¹⁶ See News site of the Institute for Preserving and Publishing Works by Ayatollah Seyyed Ali Khamenei at <http://www.khamenei.ir/EN/home.jsp>; see also Nazila Fathi, *Iranian Cleric Turns Blogger in Campaign for Reform*, The New York Times, Jan. 16, 2005, at 4.

¹⁷ See Hossein Derakhshan, *CIA runs “Spider’s Web” in Iran, radical paper claims*, at <http://hoder.com/weblog/archives/012304.shtml> (Sept. 29, 2004); see also Sobhaneh, at <http://sobhaneh.org/2004/09/29/1591> (Sept. 29, 2004) (publishing original editorial).

B. Media Regulation

1. General Media Regulation

Iran imposes harsh censorship on its news media. Its laws regulate media content based on religion, morals, libel, national security, and anti-revolutionary activity.¹⁸ The Supreme National Security Council oversees the media. Each week, the Council sends Iran's newspapers a list of banned subjects that, if covered, will lead to suspensions (or threats thereof).¹⁹ A dedicated press court handles charges against journalists and media sources.²⁰ Even conservative, "hard-line" newspapers have been sanctioned.²¹ Journalists have been arrested and media sources banned for offending sacred values, spreading "lies," spreading propaganda against the Islamic revolution, "undermining national security," "insulting the Guide [the late Ayatollah Khomeini]," and writing about questionable financial dealings of officials (which was treated as libel).²² There are still independent newspapers operating, and some are critical of the government and offer real political debate.²³ However, there are few remaining liberal papers, and those that do exist feel they must practice self-censorship.²⁴ Nonetheless, Iran claims that foreign media and critical works are allowed in the country.²⁵

While selling and possessing satellite television dishes is officially forbidden, ownership of dishes is common. There are several million dishes in Iran.²⁶ The regime jams foreign-based TV stations, particularly those broadcasting in Farsi.²⁷ In 2003, Cuba blocked satellite transmissions of Farsi satellite television channels from the United States, apparently at Iran's request.²⁸ Authorities confiscated dozens

¹⁸ See, e.g., Payvand, *Temporary ban on Persian daily "Iran" lifted*, at <http://www.payvand.com/news/02/may/1016.html> (May 5, 2002) (offending sacred values); BBC News, *Iran Steps Up Net Censorship*, at <http://news.bbc.co.uk/1/hi/technology/3019695.stm> (May 12, 2003) (spreading lies); Peter Feuilherade, *Iran's Banned Press Turns to the Net*, (anti-revolutionary propaganda); Reporters Sans Frontières, *Internet Under Surveillance 2004 – Iran* ("insulting the Guide" and undermining national security); Reporters Sans Frontières, *Iran -- Annual Report 2004*, at http://www.rsf.fr/article.php3?id_article=9940&Valider=OK (libel).

¹⁹ See Feuilherade, *Iran's Banned Press Turns to the Net*; Reporters Sans Frontières, *Iran – Annual Report 2004*.

²⁰ U.S. Department of State, *Iran: Country Reports on Human Rights Practices – 2003*, available at <http://www.state.gov/g/drl/rls/hrrpt/2003/27927.htm> (Feb. 25, 2004).

²¹ *Iran's Judiciary Orders Conservative-Run News Website to Close*, Agence France-Presse, available at <http://uk.news.yahoo.com/041101/323/f5q0h.html> (Nov. 1, 2004); see Reporters Sans Frontières, *Iran – Annual Report 2004*, at http://www.rsf.org/article.php3?id_article=9940.

²² See, e.g., *Temporary Ban on Persian Daily "Iran" lifted*, Payvand's Iran News, at <http://www.payvand.com/news/02/may/1016.html> (May 5, 2002); *Iran Steps Up Net Censorship*, BBC News, May 12, 2003, at <http://news.bbc.co.uk/1/hi/technology/3019695.stm>; Feuilherade, *Iran's Banned Press Turns to the Net*.

²³ See International Press Institute, *2003 World Press Freedom Review*, at <http://www.freemedia.at/wpfr/Mena/iran.htm>; Reporters Sans Frontières, *Iran – Annual Report 2004*, at http://www.rsf.org/article.php3?id_article=9940.

²⁴ *Still Failing, Still Defiant*, The Economist, at http://www.economist.com/displayStory.cfm?story_id=3471508 (Dec. 9, 2004).

²⁵ Interview with Ali Mohammad Khatami, BBC, Dec. 12, 2003.

²⁶ See Nazila Fathi, *TV Stations Based in U.S. Rally Protesters in Iran*, The New York Times, June 22, 2003, at 9; Jennifer Netherby, *Uncensored Satellite Channel Targets Iranian Audience*, Los Angeles Business Journal, June 26, 2000, available at http://www.findarticles.com/p/articles/mi_m5072/is_26_22/ai_63300783; *Lights, Camera, Revolution*, CBS News, June 18, 2003, at <http://www.cbsnews.com/stories/2002/10/22/6011/main526501.shtml>.

²⁷ Reporters Sans Frontières, *Iran – Annual Report 2004*.

of satellite dishes in Tehran in July 2003 after U.S.-based Persian-language satellite TV stations urged people to demonstrate.²⁹

Media freedom has decreased since April 2000.³⁰ More than 110 daily newspapers and journals have been closed down or suspended since then. Today most independent journalists are barred from reporting, though there have been internal protests and increasing activism among journalists against censorship.³¹ More than 40 journalists have been detained or arrested for criticizing the state since 2000; in 2003, 50 were called in for questioning by various state offices.³² A recent crack-down on the media has led to the detention of roughly 30 journalists.³³

Iran's system of media controls operates within a framework that creates the appearance of the rule of law: though arrests are politically motivated at times, and trials may be conducted in secret, the forms of legal process are generally followed even if their substance is lacking.³⁴ However, extra-legal controls also play an important role in the state's regime: there have been credible accusations of extrajudicial killings of journalists, and journalists have been frequently questioned, and threatened, by Iran's intelligence services.³⁵ One of the most highly publicized examples is the story of Iranian-Canadian journalist Zahra Kazemi, who died in Iranian custody in 2003, about three weeks after being arrested in Tehran for taking photographs outside a prison during a student protest.³⁶ Observers have said that Kazemi "showed obvious signs of torture."³⁷ Iran's media rules are highly restrictive, frequently arbitrary, and open to manipulation for political purposes.

²⁸ See Hank Tester, *U.S.: Cuba Jamming TV Signals To Iran*, NBC6.Net, at <http://www.nbc6.net/news/2334674/detail.html> (2003); Tom Carter, *Castro Regime Jamming U.S. Broadcasts Into Iran*, Washington Times, July 16, 2003, available at <http://www.washtimes.com/world/20030715-114937-2635r.htm>.

²⁹ Reporters Sans Frontières, *Iran – Annual Report 2004*.

³⁰ Farouz Farzami, *Iran's Lonely Crowd: Being an Intellectual Means Keeping Your Thoughts to Yourself*, The New York Times, Nov. 27, 2004, at A35; see Feuillerade, *Iran's Banned Press Turns to the Net* (noting that "moves against pro-reform media began in April 2000 after an attack by Iran's Supreme Leader, Ayatollah Ali Khamene'i, who called the reformist press 'bases of the enemy'").

³¹ See Farouz Farami, *Iran's Lonely Crowd*, The New York Times, Nov. 27, 2004, at A15; Reporters Sans Frontières, *Iran – Annual Report 2004*.

³² See International Press Institute, *2003 World Press Freedom Review*; Reporters Sans Frontières, *Iran – Annual Report 2004*.

³³ See *Still Failing, Still Defiant*, The Economist; *Iran's Judiciary Orders Conservative-Run News Website to Close*, Agence France-Press.

³⁴ See, e.g., Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*; U.S. Department of State, *Iran: Country Reports on Human Rights Practices – 2003*.

³⁵ See, e.g., Karl Vick, *Iran's Reformers Find Leverage in Murder Probe*, Washington Post, Jan. 21, 2004, at A23 (describing the probe into the murder of Canadian journalist Zahra Kazemi by Iranian officials); U.S. Department of State, *Iran: Country Reports on Human Rights Practices – 2003*; Reporters Sans Frontières, *Iran – Annual Report 2004*.

³⁶ See CBC News Online, *Indepth: Zahra Kazemi: Iran's Changing Story*, Updated June 16, 2005, available at <http://www.cbc.ca/news/background/kazemi/>.

³⁷ CBC News Online, *Indepth: Zahra Kazemi: Iran's Changing Story*, Updated June 16, 2005, available at <http://www.cbc.ca/news/background/kazemi/>.

2. Specifics: Iran's Press Law of 1986

The Constitution of Iran states that “[p]ublications and news media shall enjoy freedom of expression provided what they publish does not violate Islamic principles or the civil code.”³⁸ Iran's Press Law, ratified on March 19, 1986, explains that the mission of the press is to enlighten public opinion, advance the objectives of Iran, counteract internal division among citizens, propagate Islamic culture and principles, and reject “manifestations of imperialistic culture” as well as foreign politics and economic policies.³⁹ Publications must not conflict with any of these enumerated goals.⁴⁰

All publications must be licensed by the Ministry of Islamic Culture and Guidance.⁴¹ This regulation appears to include internal, in-house bulletins in its scope.⁴² Anyone who attempts to publish without such a license is subject to prosecution by a religious judge.⁴³ Anonymous publications are not permitted.⁴⁴ The Press Supervisory Board⁴⁵ reviews license applications; this board consists of “devoted Muslims who possess the required scientific and moral competence.”⁴⁶ The board is composed of a state Supreme Court judge, the Minister of Islamic Culture and Guidance (or his proxy), a representative of the Majlis (Iran's legislative body), a university professor, and a managing director of a publication.⁴⁷ The Ministry of Islamic Culture and Guidance can investigate license applicants on behalf of the Press Supervisory Board.⁴⁸

Individuals who apply for press licenses must, among other requirements, be Iranian citizens at least 25 years old, possess a bachelor's degree or have completed “basic seminary education,” and be free of a criminal record and “moral corruption.”⁴⁹ Applicants must complete a questionnaire about their “social, political, cultural, and professional background” and must submit a photo, along with copies of their birth certificates and other personal documents.⁵⁰ Certain categories of individuals are forbidden from obtaining licenses, including those who have publicly supported Iran's former regime (under the Shah).⁵¹

The Press Law has substantive mandates as well as licensing requirements. Publications' names and publishing timetables are regulated.⁵² Most significantly, the name “should not create the

³⁸ Article 24, Constitution of the Islamic Republic of Iran, translation *available at* <http://www.netiran.com/?fn=law14>.

³⁹ Article 2, Press Law, Islamic Republic of Iran, translation *available at* <http://www.netiran.com/?fn=law14>.

⁴⁰ Article 2, Press Law.

⁴¹ Articles 7, 8, Press Law.

⁴² Article 15, Executive By-law of the Press Law.

⁴³ Articles 7, 32, Press Law.

⁴⁴ Article 18, Press Law.

⁴⁵ Article 11, Press Law.

⁴⁶ Article 10, Press Law.

⁴⁷ Article 10, Press Law.

⁴⁸ Article 18, Executive By-law of the Press Law.

⁴⁹ Article 9, Press Law.

⁵⁰ Article 11, Executive By-law of the Press Law.

⁵¹ Article 11 at note 5, Executive By-law of the Press Law.

⁵² Articles 1, 2, Executive By-law of the Press Law.

assumption that the publication is dependent on revolutionary and government organs.”⁵³ The Press Law permits special issues and supplements to the normal publishing timetable, though this cannot occur regularly.⁵⁴ Publications should not publish materials in ways that go beyond the scope of the “methods and requirements” specified in their licenses.⁵⁵ The import and export of publications must be “in accordance with the basis of religious codes and the Constitutional Law of the Islamic Republic.”⁵⁶

Iran has broad limits on the content that the media may publish. While the press may cover both domestic and foreign news, it must “consider the best interests of the community” and “observ[e] the provisions of the existing law.”⁵⁷ However, it may not publish news items that “violate Islamic principles and codes and public rights.”⁵⁸ The press has the right to publish opinions and constructive criticism “while duly observing the Islamic teachings and the best interest of the community.”⁵⁹ Criticism must be based on reason and logic, rather than *ad hominem* attacks.⁶⁰ Articles can quote from anti-Islamic materials or parties for purposes of research, criticism, or rejection of their viewpoints, so long as it would not create publicity for these materials or groups.⁶¹ Insulting certain Iranian leaders is prohibited; violators have their license revoked, and the publication’s managing director and the article’s author are “referred to competent courts for punishment.”⁶² Anyone who insults Islam through the press is subject to the Islamic penal code, unless the insult amounts to apostasy, which creates liability as an apostate.⁶³

In addition, a publication under investigation for defamation may not publish anything about the issue until the investigation is complete.⁶⁴ A press entity that “expressly and overtly” encourages crime will be held vicariously responsible, and those responsible for that media outlet will be prosecuted as accomplices.⁶⁵ Criminal accusations against the press are heard in a “competent court” with a jury.⁶⁶

In theory, state officials should not “resort to coercive measures” to control the press.⁶⁷ In practice, this limitation is not observed.

⁵³ Article 2, Executive By-law of the Press Law.

⁵⁴ Article 4, Executive By-law of the Press Law.

⁵⁵ Article 7, Executive By-law of the Press Law.

⁵⁶ Article 22, Press Law.

⁵⁷ Article 5, Press Law.

⁵⁸ Article 6, Press Law. Violations include publishing “atheistic articles or issues which are prejudicial to Islamic codes;” propagating forbidden or obscene items (see Article 28); propagating luxury; disclosing classified information (see Press Law Articles 24, 29); insulting Islam; publishing defamation and plagiarism (see Press Law Articles 23, 30, 31); and quoting articles from “the deviant press...in such a manner as to propagate such ideas.”

⁵⁹ Article 3, Press Law.

⁶⁰ Article 3, Press Law.

⁶¹ Article 9, Executive By-law of the Press Law.

⁶² Article 27, Press Law.

⁶³ Article 26, Press Law.

⁶⁴ Article 31 Note, Press Law.

⁶⁵ Article 25, Press Law.

⁶⁶ Article 34, Press Law.

⁶⁷ Article 4, Press Law.

C. Internet Access Regulation

Iran has comparatively high freedom of access to the Internet, pricing notwithstanding. Some observers suggest that regulation may increase as conservative officials increase their control in the state and begin to realize the power of the Internet medium.⁶⁸ Private ISPs must be approved by both DCI and the Ministry of Culture and Islamic Guidance.⁶⁹ ISPs must implement filtering mechanisms for Web sites and e-mail.⁷⁰ In 2001, TCI issued regulations requiring ISPs that obtain access from it to filter all materials presumed immoral or contrary to state security, including the Web sites of opposition groups.⁷¹ While TCI's rules have not been routinely enforced, ISPs could face legal action if they do not comply with government-mandated filtering lists, and more than ten ISPs have been shut down for not installing filters.⁷²

In addition, users who subscribe to ISPs must promise in writing not to access "non-Islamic" sites.⁷³ Iran apparently does not monitor the content of pages that users access.⁷⁴ However, in some cities, judges have announced that they intend to monitor cybercafé usage for illegal activities, though this monitoring seems to consist of inspectors visiting cafés; owners of cafés often warn users against viewing non-Islamic material.⁷⁵ This monitoring seems to have increased particularly since May 2001.⁷⁶

D. Internet Content Regulation

Internet content regulation in Iran evolves and changes rapidly. The Iranian state has exerted strong control over traditional media since its inception. As the Internet has grown in popularity as a venue for anti-government or anti-Islamic activity, the state has moved to increase its controls over Internet material by filtering sites from outside Iran and regulating the activities of sites and online journalists that operate from within Iran. Most regulations focus on restricting access to foreign sites and regulating domestic sites, and not on controlling users' behavior.

Internet content regulation in Iran occurs at multiple levels, through multiple methods. ISPs filter foreign sites using Secure Computing's SmartFilter software, which is developed in the United States.⁷⁷ Sites based in Iran can be shut down, suspended, or filtered through direct methods (state orders

⁶⁸ Associated Press, *Iran's Bloggers Fear Clampdown*.

⁶⁹ Reporters Sans Frontières, *Internet – Iran*.

⁷⁰ Reporters Sans Frontières, *Internet – Iran*.

⁷¹ Economist Intelligence Unit, *Country Profile Iran 2001 (Sample)*, at http://store.eiu.com/index.asp?layout=show_sample&product_id=30000203&country_id=IR.

⁷² See, e.g., *Iran Steps Up Net Censorship*, BBC News, May 12, 2003, at <http://news.bbc.co.uk/1/hi/technology/3019695.stm>; see also Reporters Sans Frontières, *Internet – Iran*; Economist Intelligence Unit, *Country Profile Iran 2001 (Sample)*.

⁷³ Reporters Sans Frontières, *Internet – Iran*.

⁷⁴ See OpenNet Initiative, *Unintended Risks and Consequences of Circumvention Technologies: The IBB's Anonymizer Service in Iran*, May 5, 2004, available at <http://opennetinitiative.net/advisories/001/>.

⁷⁵ Reporters Sans Frontières, *Internet – Iran*.

⁷⁶ Reporters Sans Frontières, *Internet – Iran*.

⁷⁷ See Stop Censoring Us, *Iran Government Uses American Filtering Software*, at <http://stop.censoring.us/archives/013307.php> (Jan. 24, 2005) (describing TCI's filtering); see also ISNA, *News 8310-12059*, at <http://isna.ir/news/NewsCont.asp?id=483045&lang=P> (publishing original story); Secure Computing, *SmartFilter*, at <http://www.securecomputing.com/index.cfm?skey=85>.

or pressure) or indirect methods (informal pressure on ISPs); authors and technical staff of sites have been questioned and even arrested.⁷⁸ Activists have expressed concern that recent government activities and proposed laws indicate an expansion of censorship of both domestic and foreign Internet sites.⁷⁹

While Iran does not have Internet-specific regulations for content, the state imposes strong controls on Internet materials under the country's Press Law.⁸⁰ For example, in May 2004, the Prosecutor-General stated that authors of material posted on Web sites created in Iran risked prosecution if they did not respect the national constitution and the Press Law.⁸¹ When sites within Iran are shut down, their owners can appeal to the judiciary on the grounds that they were inappropriately closed or suspended; site owners occasionally win these appeals.⁸²

Internet content controls have support at the highest levels of the Iranian state. In September 2004, religious leader Ayatollah Makarem Shirazi declared that Web sites should be blocked if they "insult sacred concepts of Islam, the Prophet and Imams," or if they "publish harmful and deviated beliefs to promote atheism or promote sinister books."⁸³ In an interview with the BBC, Iran's President Ali Mohammad Khatami stated that Iran has implemented "the minimum necessary" control over the Internet, and does not censor BBC or Voice of America, only "some obscene sites, which are not morally compatible with the culture of our society... or sites that are truly insulting towards religious values and foundations."⁸⁴ Khatami stated that "those political sites which oppose our views and all other scientific and educational sites are available to our citizens."⁸⁵ The President said that Iran emphasizes Muslim values when deciding which sites to censor; thus, "[i]t goes without saying that political sites that propagate turning against beliefs – and in an irrational way, without arguments and with offensive language at that – are, naturally, controlled, because they stir up emotions in an amazing way."⁸⁶ Thus, there are instances in which Iran is open about its Internet filtering activities, though, as our research shows, the state overall is secretive, and, from time to time, misleading, about its filtering practices.

⁷⁸ See, e.g., Reporters Without Borders, *Nine With Links to Reformist Sites Freed But Seven Cyberjournalists Still in Prison*, at http://www.rsf.org/article.php3?id_article=11822 (Oct 11, 2004); Stop Censoring Us, *Four Technicians Released*, at <http://stop.censoring.us/archives/012789.php> (Nov. 15, 2004) (citing to ISNA in Farsi, at <http://www.isna.ir/news/NewsCont.asp?id=454945>); Stop Censoring Us, *Emrooz Staff Thanks Bloggers*, at http://stop.censoring.us/archives/2004_09.php (Sept. 25, 2004) (citing to Baamdad in Farsi, at http://13570baamdad.blogspot.com/2004/09/blog-post_21.html).

⁷⁹ See, e.g., Amnesty International, *Iran: Civil Society Activists and Human Rights Defenders Under Attack*, Nov. 10, 2004, at <http://web.amnesty.org/library/Index/ENGMDE130452004?open&of=ENG-IRN>; Reporters Sans Frontières, *Journalist and Weblogger Sentenced to 14 Years in Prison*, Feb. 23, 2005, at http://www.rsf.org/article.php3?id_article=12636.

⁸⁰ See Islamic Republic of Iran, *Press Law*.

⁸¹ Reporters Sans Frontières, *Internet – Iran*.

⁸² See Stop Censoring Us, *Baztab Ban Lifted*, at http://stop.censoring.us/archives/2004_11.php (Nov. 8, 2004) (citing ISNA in Farsi, at <http://isna.ir/news/NewsCont.asp?id=451755&lang=P>) (stating that a reformist Web site was able to have its block removed by arguing it "had not received the regulations of the national security committee... [and] are now committed to following the rules").

⁸³ Fathi, *Iran Jails More Journalists and Blocks Web Sites*.

⁸⁴ Interview with Ali Mohammad Khatami, BBC, Dec. 12, 2003.

⁸⁵ Interview with Ali Mohammad Khatami, BBC, Dec. 12, 2003.

⁸⁶ Interview with Ali Mohammad Khatami, BBC, Dec. 12, 2003.

There is some dissent within Iran about controls on Internet content. For instance, Bloggers (including reformist state officials) have mounted online protests against blocking.⁸⁷ When three prominent reformist news sites were blocked in August 2004, bloggers inside and outside Iran mirrored parts of the sites and used the increasingly popular Real Simple Syndication (RSS) technology to evade much of the blocking.⁸⁸ The OpenNet Initiative's developers have developed a related application, called RSSMailer.⁸⁹ Reformist legislators appear to favor greater freedom in access to content and have officially complained about the closing of certain sites.⁹⁰

Iran's controls on Internet content have increased recently. In the campaign for the February 2004 parliamentary elections, Internet filtering (as well as controls over traditional media) increased noticeably.⁹¹ In mid-2004, the Supreme Council of the Cultural Revolution established a committee to monitor Iranian-based sites for closure; the Council focuses particularly on pornographic or politically sensitive sites.⁹² However, prosecutors can bring charges to close, suspend, or filter sites that the committee has not itself closed, and authorities do pressure ISPs to block sites which the committee has not deemed worth action (including sites associated with legal, reformist political parties).⁹³ Technology officials have expressed concern that some filtering was ordered by the Chief Prosecutor of Tehran outside proper legal channels, which consists of the five-man committee under the Supreme Council (of which the Chief Prosecutor is only one member).⁹⁴ ParsOnline, a major ISP, filters several blogging sites that the committee has not ordered blocked.⁹⁵ State officials detained IT staff from several reformist Web sites to

⁸⁷ Mark Glaser, *Iranian Bloggers Protest Government Crackdown on Reformist News Sites*.

⁸⁸ Fathi, *Iran Jails More Journalists and Blocks Web Sites; Iran Shuts Conservative-Run News Site*, Nov. 2, 2004, at <http://www.theage.com.au/news/Breaking/Iran-shuts-conservativerun-news-site/2004/11/02/1099262820451.html>; Mark Glaser, *Iranian Bloggers Protest Government Crackdown on Reformist News Sites*; USC Annenberg Online Journalism Review, at <http://ojr.org/ojr/glaser/1095807595.php> (Sept. 22, 2004). RSS (Really Simple Syndication) is a flavor of Extensible Markup Language (XML) that enables the syndication and aggregation of digital content.

⁸⁹ After blogs were targeted for filtering by Iran, ONI worked with prominent bloggers to discuss methods of censorship circumvention that bloggers could use to ensure that their readers in Iran could still access the content they were producing. The ONI developed a system called RSSMailer that allows bloggers to centralize RSS feeds and send items via e-mail to their users. Through this system, Internet users in Iran are able to receive posts from filtered blogs in their email. Available at <http://ice.citizenlab.org/projects/rssmailer/>.

⁹⁰ Mark Glaser, *Iranian Bloggers Protest Government Crackdown on Reformist News Sites*; Interview with Ali Mohammad Khatami, BBC, Dec. 12, 2003; Stop Censoring Us, *Judiciary Announces Charges*, Nov. 9, 2004, at <http://stop.censoring.us/archives/012730.php> (citing BBC Persian at http://www.bbc.co.uk/persian/iran/story/2004/11/041102_ljb-webarrests.shtml); Stop Censoring Us, *Reformist Party Protests Judiciary Over Arrests*, Sept. 30, 2004, at http://stop.censoring.us/archives/2004_09.php (citing Gooya News at <http://akhbar.gooya.com/politics/archives/016757.php>).

⁹¹ Reporters Sans Frontières, *Internet – Iran*.

⁹² See Reporters Sans Frontières, *Internet – Iran*; see also *Iran Blocks Three Reformist Websites*, Sydney Morning Herald, Aug. 24, 2004, at <http://www.smh.com.au/articles/2004/08/24/1093246498879.html?oneclick=true>.

⁹³ *Iran Blocks Three Reformist Websites*, Sydney Morning Herald.

⁹⁴ See Stop Censoring Us, *Two New Members For the Secret Committee*, at <http://stop.censoring.us/archives/013543.php> (Feb. 11, 2005) (citing ISNA); and Stop Censoring Us, *Jahangard: Judiciary Should Stop Unilateral Filtering*, at <http://stop.censoring.us/archives/013166.php> (Jan. 13, 2005) (citing ISNA for the director of the Information High Council's concerns about the failure to follow legal procedures before filtering sites).

⁹⁵ Stop Censoring Us, *ParsOnline Filters Major Blogging Tools*, at <http://stop.censoring.us/archives/013184.php> (Jan. 14, 2005) (citing ITIran) (describing ParsOnline as a "pioneer in Internet censorship").

force them to turn over passwords to the hosting accounts for those sites.⁹⁶ The sites were apparently shut down.⁹⁷

Arrests and detentions of bloggers and online journalists have increased in recent years.⁹⁸ More than 20 people have been arrested and charged in connection with news Web sites (including bloggers, journalists, and technical staff) since the summer of 2004.⁹⁹ Some online journalists who were released in December 2004 appeared on television to confess to committing crimes, but later accused the state of holding them in solitary confinement and subjecting them to torture.¹⁰⁰ Even after being released, many of these journalists continued to face pressure and threats from authorities.¹⁰¹ In addition, recent reports indicate that various agencies within Iran have tried to register every Internet site based in Iran.¹⁰² Some major blogging sites, including Blogger and Persianblog, have reportedly been filtered.¹⁰³

Iran may be moving to augment further its Internet controls. *The New York Times* reports that the Iranian judiciary is drafting a law that will define cybercrimes and authorize punishment for “anyone who disseminates information aimed at disturbing the public mind through computer systems.”¹⁰⁴ The proposed law would ban criticizing the state and its officials, buying and selling alcohol, connecting to sex sites, and distorting the words of the “Supreme Guide.”¹⁰⁵ Drafts of the bill prohibit activity that “poses a threat for the country’s internal or external security”; punishments include fines and prison sentences of up to 15 years if the information is passed to foreign states or organizations.¹⁰⁶ The law makes ISPs, ICPs, hosting companies, and cybercafé owners responsible for monitoring all content to which they offer access and authorizes cancellations of permits or temporary closure of violators (previous versions authorized jail time for executives of companies).¹⁰⁷ This bill was sent to the head of Iran’s Judiciary Office in late November 2004.¹⁰⁸

Filtering is an important component of Iran’s content controls. In January 2003, the state created a commission to compile lists of sites (“blacklists”) to block. In May 2003, Iran announced plans

⁹⁶ Stop Censoring Us, *Technicians Detained to Give Out Server Password*, at http://stop.censoring.us/archives/2004_08.php (Aug. 23, 2004) (citing BBC Persian and Reporters Sans Frontières sources in Persian).

⁹⁷ Stop Censoring Us, *Technicians Detained to Give Out Server Password*.

⁹⁸ *Iran Steps Up Net Censorship*, BBC News, May 12, 2003, at <http://news.bbc.co.uk/1/hi/technology/3019695.stm>.

⁹⁹ Reporters Sans Frontières, *Iran*, at http://www.rsf.org/article.php3?id_article=11822 (Nov. 29, 2004).

¹⁰⁰ Reporters Sans Frontières, *Iran*; see Nazila Fahti, *Let Down by Iran’s Leader, Young Advocates Leave Politics*, *The New York Times*, Dec. 26, 2004, at 17.

¹⁰¹ Reporters Sans Frontières, *Reporters Without Border Condemns Mistreatment of Cyberjournalists and Webloggers*, at http://www.rsf.org/article.php3?id_article=12246 (Jan. 6, 2005).

¹⁰² Stop Censoring Us, *Government to Probe Local Sites*, at <http://stop.censoring.us/archives/012987.php> (Dec. 8, 2004) (citing Gooya).

¹⁰³ Stop Censoring Us, *Jahangard: Judiciary Should Stop Unilateral Filtering*.

¹⁰⁴ Fahti, *Iran Jails More Journalists and Blocks Web Sites*.

¹⁰⁵ UN Office for the Coordination of Humanitarian Affairs, *IRAN: Reformist Websites Blocked*, IRINNews.org, at http://www.plusnews.org/report.asp?ReportID=42918&SelectRegion=Central_Asia&SelectCountry=IRAN (Aug. 30, 2004).

¹⁰⁶ UN Office for the Coordination of Humanitarian Affairs, *IRAN: Reformist Websites Blocked*.

¹⁰⁷ UN Office for the Coordination of Humanitarian Affairs, *IRAN: Reformist Websites Blocked*.

¹⁰⁸ Stop Censoring Us, *Cyber Crime Law to be Finalized*, at <http://stop.censoring.us/archives/012852.php> (Nov. 22, 2004) (citing ISNA).

to block 15,000 sites by providing a blacklist to ISPs.¹⁰⁹ At the time, ministers were quoted as saying they wanted to “block access to immoral sites as well as political sites which rudely make fun of religious and political figures in the country.”¹¹⁰

3. TESTING METHODOLOGY

A. Methods

ONI performs technical testing across multiple levels of access at multiple time intervals. The team analyzes results within the contextual framework of the target state’s filtering technology and regulations. To obtain meaningful, accurate results we:

- generate lists of domain names and URLs that have been or are likely to be blocked;
- enumerate ISPs and national routing topography;
- determine the type, location, and behavior of the filtering technology;
- deploy network interrogation and enumeration software at multiple access points; and
- conduct a thorough statistical analysis of results.

Determining which URLs to test is a vital component of our research, as it reveals the filtering system’s technical capacity and content areas subject to blocking. ONI employs two types of lists:

- a list of “high impact” sites reported to be blocked or likely to be blocked in Iran due to their content (for example, political opposition); and
- a “global list” containing a control list of manually categorized Web sites reflecting a range of Internet content (for example, news and hacking sites).

To explore Internet filtering, we deploy network interrogation devices and applications, which perform the censorship enumeration, at various Internet access levels. These tools download the ONI testing lists and check whether specific URLs and domains are accessible from that point on the network. Interrogation devices are designed to run inside a state (i.e., behind its firewall) to perform specific, sensitive functions with varying degrees of stealth. Similarly, ONI distributes interrogation applications to trusted volunteers who run the software inside the state. For testing, ONI obtains network access at multiple levels through:

- Proxy servers,
- Long distance dial-up,
- Distributed applications, and
- Dedicated servers.

¹⁰⁹ *Iran steps up net censorship*, BBC News, May 12, 2003, at <http://news.bbc.co.uk/1/hi/technology/3019695.stm>; Reporters Sans Frontières, *Internet – Iran*.

¹¹⁰ *Iran steps up net censorship*, BBC News. However, in a December 2003 interview, President Khatami claimed only 240 sites were actually being blocked. Interview with Ali Mohammad Khatami, BBC, Dec. 12, 2003.

During initial testing, we use remote computers located in countries that filter. These remote computers are located behind the state's firewalls yet allow access to clients connecting from the wider Internet. We attempt to access the URL and domain name lists through these computers to reveal what content is filtered, and how consistently it is blocked. ONI also tests these lists from control locations in non-filtered states. The testing system flags all URLs and domains that are accessible from the control location, but inaccessible from ones inside the target state, as potentially blocked.

B. Results Analysis

We carefully analyze the data obtained from testing to document the nature of filtered content, to explore the technical capabilities of the target state, and to determine areas that require in-depth study during internal testing. In particular, ONI examines the response received over HTTP when attempting to access filtered content. As discussed, when content is filtered, users often receive a "block page" – a Web page with text indicating that the requested content cannot be accessed.¹¹¹ In other cases, filtering can be less obvious or transparent, appearing to be network errors, redirections, or lengthy timeouts rather than deliberate blocking. We analyze HTTP headers – text sent from the Web server to the browser – to derive information about both the server and the requested page. This information is generally hidden from the end user. However, these headers indicate whether content was successfully accessed or was inaccessible. If an error occurs, the HTTP protocol returns codes that indicate the type of error in the header. Thus, by analyzing the headers captured during testing, we can distinguish between errors caused by Internet filtering and more mundane, unintentional network connection errors.

We classify results in one of four categories:

- URL is accessible both through the local connection and the remote computer (not filtered);
- URL is accessible through the local connection but inaccessible through the remote computer, which returned a different HTTP response code (possibly filtered);
- URL is accessible through the local connection but inaccessible through the remote computer due to a network connection error (possibly filtered, but not definitive); or
- URL is accessible through the local connection but inaccessible through the remote computer; the remote computer returns a block page (filtered).

If a URL is inaccessible through both the local connection and the remote computer, we consider it "dead" and remove it from the results.

The ONI team analyzes blocked, unblocked, and uncertain URLs both at an aggregate level (to estimate the overall level of filtering) and at a category level (to indicate what types of content the state seeks to control). We publish country studies that provide background on a state's political and legal system, lists of tested sites, and analysis of results to reveal and analyze what information a state blocks and how it does so. We note, however, that our results and analysis capture a "snapshot" of a state's

¹¹¹ See Internet Censorship Explorer, *Blockpage.com*, at <http://www.blockpage.com/gallery/> (defining a block page and providing examples).

filtering system for a specific point or period of time; governments can and do alter the content they block dynamically.

C. Methods Specific to Iran

In Iran, we tested servers on two networks: Pars Online and Telecommunications Company of Iran (TCI). Pars Online began offering Internet services in 1999 and is the largest ISP in Iran.¹¹² TCI is the state-owned telecommunications company.¹¹³ Our testing indicated a significant change in method and content focus during November 2004; for this reason, we conducted a series of tests over a two-week period for these two ISPs instead of capturing a single “snapshot” as we have generally done for our country studies.

D. Topics Tested

ONI tested a standard set of topics from our global list in addition to several lists designed specifically for testing in Iran. These lists included political sites expressing dissent and opposition to the Iranian government, blogs, news sites, religious sites, sites of various international organizations, and sites containing sexual content. We tested sites in both English and Farsi in all categories. We obtained the list of blog sites from a Web site that listed blog sites in Iran with which it disagreed; we then tested this list. (This site also issued a death threat against well-known Iranian blogger Hoder (Hossein Derakhshan).¹¹⁴) We also tested a list posted to an anti-censorship Web site focused on Iran; the site states that the list was submitted by someone claiming to be an ISP administrator in Tehran.¹¹⁵ The sender claimed that the URL list was the “blacklist” of sites required to be filtered.¹¹⁶

4. RESULTS AND ANALYSIS

A. Summary

Overall, roughly one-third of sites we checked were blocked (499 of 1477 URLs tested in November, and 623 of 2025 in December 2004). Iran is highly successful in filtering pornographic sites (100% of URLs tested) and circumvention tools such as anonymizers¹¹⁷ (95% of URLs), characteristic of states that use commercial software such as SmartFilter. Our testing also found significant blocking of

¹¹² Pars Online, *History*, at <http://www.parsonline.com/history.htm>.

¹¹³ Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*.

¹¹⁴ See Hossein Derakhshan, *Editor: Myself*, at <http://hoder.com/weblog/> (blogging in English) and at <http://i.hoder.com/> (blogging in Persian).

¹¹⁵ See Stop Censoring Us, *Blacklist, Latest Version*, at <http://stop.censoring.us/archives/011038.php> (June 16, 2004).

¹¹⁶ Stop Censoring Us, *Blacklist, Latest Version*.

¹¹⁷ Anonymizer sites conceal a user's Web browsing from those monitoring a network. For example, if a user visits the site <https://www.the-cloak.com/login.html>, she can enter a Web site URL, and the anonymizer site loads the URL for her. In addition, the site encrypts the communication. Thus, anyone monitoring the network on which her computer is located could see that she had contacted the anonymizer site, but would not know what site she had the anonymizer fetch on her behalf.

provocative attire, translation, gay / lesbian / bisexual (particularly Iran-focused content), Farsi news, and opposition political sites. The blocking of blogs increased during the period of our testing. In addition, we saw significant change in filtering over the testing period, resulting in a net increase in blocking.

B. Longitudinal Observations

As discussed above, our monitoring in Iran allowed us to document a significant shift in Iranian filtering and to structure our testing accordingly. We ran five tests on two different ISPs over two weeks. We found a marked difference in blocking between the first test and the last four in both content blocked and consistency of blocking. The four later tests found minimal variation in the sites blocked, but a steady increase in the blocking's consistency.

Of 1465 URLs we tested in both of our first test and our final test, ¹¹⁸494 (34%) were blocked in the first run and 592 (40%) were blocked in the last run. The changes between these tests included 129 sites that had been accessible became blocked and 31 sites that were blocked became accessible. The added blocking concentrated on sex / pornography sites (39 URLs) and blogs (36 URLs), while the removed blocks were primarily sex education sites (10) and those depicting provocative attire (eight). Our last four tests demonstrate virtually no variation: of 1959 URLs tested in all these runs, 591 were blocked every time, with only 18 sites initially available and later blocked (15 of these were blogs). This high degree of overlap was consistent over time and across ISPs: we tested both ISPs on a single day and found a 99% overlap in the sites they blocked.

We observed highly consistent results for filtering of each URL at the beginning and end of our testing, but not during the period of change in the middle. Thus, filtering was consistent both before and after the observed change. In our first test, 99% of the blocked sites were not accessible on any server we checked. In contrast, our second and third tests found that approximately 32% of blocked sites were accessible in half our tests.¹¹⁹ Most of this change was temporary: by the fourth and fifth tests, less than 5% of blocked sites could be reached in half our tests. While later tests did not demonstrate the binary nature of the blocking observed in the first test, the final tests were noticeably more consistent than those in the middle. Our analysis suggests that this “blip” resulted from a change in the mechanics of Iran's blocking. Such a change requires modification of multiple, large parts of the filtering infrastructure; it would take time for updates in the blocking method and blacklists to propagate throughout the system. We believe this update period explains the inconsistency in filtering we observed during the middle period of our testing.

According to an OpenNet Initiative test of an older copy of Iran's blacklist in early 2004, over 80% of the blacklisted pages categorized as either sexual or political / religious / social were still blocked during testing, suggesting few situations where previously blocked pages were later made accessible

¹¹⁸ We were able to test more URLs in our later run due to proxy instability during our earlier run. The comparison in this section evaluates only URLs that we successfully tested in both runs.

¹¹⁹ Thus, of sites we found to be blocked, consistency was low: roughly one-third of the URLs were accessible from 50% of servers we tested. For the other 50% of servers, these URLs were blocked.

(unblocked) in those particular categories. However, only 34% of pages on the list categorized as blogs remained blocked.¹²⁰

C. Global List Results

Our global list analysis tests 754 sites in 31 categories.¹²¹ This analysis concentrates on the results from our later tests, which likely represent the current state of filtering in Iran, but we also indicate areas where we found a significant degree of flux during the testing cycle. Extensive filtering was limited to two categories, but nine other categories had some degree of filtering. Overall, 9.5% of sites tested were blocked, with 20 complete blocks and 52 partial blocks. We found extremely heavy filtering in the pornography (100% of sites filtered) and anonymizer categories (95%). The other categories that experienced filtering were provocative attire (18% of sites blocked), translation sites (15% of sites), gay / lesbian / bisexual sites (11%), women's rights sites (7%), blogging domains (6%), humor (6%), sex education (4%), hate speech (4%), and news outlets (3%).

Our testing uncovered significant change in both the sex education and provocative attire categories over time. Our first run of testing found blocking of 39% of sex education sites, compared with 4% in the later runs, and 65% of provocative attire sites, compared with 18% in the later runs. We saw increases in blocking of women's rights sites (from 0% to 7%), translation sites (0% to 15%), gay / lesbian / bisexual sites (5% to 11%), and a decrease in filtering of humor sites (16% to 6%).

Iran recently admitted using Secure Computing's SmartFilter software,¹²² and many blocks in the less filtered categories are consistent with the overblocking that frequently occurs with SmartFilter.¹²³ For instance, it is unlikely that Iran targets the sex education site www.teensource.org in particular, since it does not block any other sites within this category. SmartFilter, however, classifies this particular site as "Pornography/Sex."¹²⁴ This likely explains much of Iran's blocking of gay / lesbian / bisexual sites,¹²⁵ women's rights sites,¹²⁶ and translation sites.¹²⁷ However, certain other blocks do not appear to result from erroneous SmartFilter categorization; for instance, filtering of the Voice of America news site

¹²⁰ OpenNet Initiative, *Internet Content Filtering in Iran: Verification of Reported Banned Websites*.

¹²¹ See Appendix 1 for categorized results of the global list testing. To provide comparable results across multiple country studies, the majority of the sites in our global list have content only in English.

¹²² See Stop Censoring Us, *Iran Government Uses American Filtering Software*, at <http://stop.censoring.us/archives/013307.php> (Jan. 24, 2005) (describing TCI's filtering); see also ISNA, *News 8310-12059*, at <http://isna.ir/news/NewsCont.asp?id=483045&lang=P> (publishing original story); Secure Computing, *SmartFilter*, at <http://www.securecomputing.com/index.cfm?skey=85>; *supra* note 1 (providing Secure Computing's response to Iran's use of the SmartFilter software).

¹²³ See, e.g., OpenNet Initiative, *Internet Filtering in Saudi Arabia in 2004*, at <http://www.opennetinitiative.net/studies/saudi/#toc1d> (describing SmartFilter's overblocking).

¹²⁴ We checked the SmartFilter categorization for each site on Feb. 13, 2005, using the SmartFilterWhere tool available online at <http://www.securecomputing.com/index.cfm?skey=234>.

¹²⁵ SmartFilter categorizes all four blocked sites in this category (www.lesbians-against-violence.com, www.gayegypt.com, www.gay.ru, and gaytoday.badpuppy.com) as "Pornography/Sex". See SmartFilterWhere.

¹²⁶ SmartFilter categorizes www.feminista.com as containing nudity. See SmartFilterWhere.

¹²⁷ SmartFilter categorizes tarjim.ajeeb.com as an "anonymizing utility." See SmartFilterWhere.

(www.voanews.com) and the blogging domain www.movabletype.org are likely the result of direct targeting by the Iranian government.¹²⁸

D. Iran-Specific Results

1. High-Impact Lists

Using our research on topics sensitive to Iran, we compiled a list of Web sites on these topics to probe whether they were blocked. Additionally, we ran two lists of URLs to explore the extent of Iran’s filtering and to check blocking of Iranian blogs. We analyze these tests below. While we cannot make conclusions about the absolute extent of blocking, our data identifies areas that Iran appears to target particularly for blocking.

We tested 1,147 sites in 11 broad categories. 402 sites were completely blocked and 108 were partially blocked (44% total). The blocking matched our global list results, showing extensive blocking of sex sites and anonymizer tools (used to evade filtering). We also found a significant number of political sites filtered, including many with content opposed to or dissenting from the views of Iran’s current government. A large number of blogs and a sizeable fraction of news sites were blocked. ONI found a smaller number of sites in the general categories of religion and lifestyles filtered. However, none of the international organization Web sites that we tested were blocked.

Figure 1 – High Impact List – Frequently Blocked Categories

General Category	Complete Blocks	Partial Blocks	Sites Tested	Total Block Percentage
Blogs	74	12	588	15%
International Organizations	0	0	17	0%
Lifestyles	2	2	15	27%
News	10	4	46	30%
Opposition & Dissent	15	10	62	40%
Political / Religious / Social (General)	30	20	52	96%
Politics	28	22	51	98%
Proxy / Anonymizer Services	17	3	26	77%
Religion	3	1	24	17%
Sex	219	31	251	100%

¹²⁸ SmartFilter categorizes these sites as “general news” and “business, computing/internet” respectively. See SmartFilterWhere.

a. Blogs

Our testing located 86 blocked blogs. Blog filtering increased dramatically during our study: 35 of the 86 blogs were accessible during our first test. We cannot determine whether the additional blocking was a component of other changes we observed or simply reflected the difficulty of finding and adding new targeted sites to the block list.

We tested a large number of blogs on several of the large blogging domains and found that, while Iran blocks a significant number of individual blogs, the state has not taken the (technically) easier step of preventing access to the entire blogging domains. We conclude that Iran wants to preserve access to a significant number of these blogs, while filtering ones with objectionable content.¹²⁹ The one exception we found is that Iran blocks all blogs tested in the domain www.movabletype.org.

Figure 2 – Blog Domain Filtering

Blog Domain	Total Blocks	Partial Blocks	Sites Tested	Block Percentage
blogsky.com	9	0	29	31%
blogspot.com	96	3	257	39%
Persianblog.com	0	7	198	4%

b. International Organizations

We found no blocking of the sites of various international human rights groups or American government agencies that we tested; these findings mirror our global list results.

c. Lifestyles

In this category, we tested entertainment sites (none blocked), illegal drug sites (none blocked), and sites concerning gays, lesbians, and bisexuals within Iran. Four of five sites tested in this last category were filtered; the lone exception was an alternate URL for one of the sites whose main URL was blocked.¹³⁰ Unlike the global list sites in this category, these URLs do not appear to be blocked because of SmartFilter’s categorization, which may indicate intent to filter content related to homosexuality within Iran but ambivalence towards similar content outside the state.

d. News

We found a significant number of Farsi news sites blocked, compared with very little filtering of English-language-only sites. 50% of Farsi news sites we tested were blocked, but only 5% of English

¹²⁹ Cf. Stop Censoring Us, *Baztab Ban Lifted*, at http://stop.censoring.us/archives/2004_11.php (Nov. 8, 2004) (noting a successful appeal by a reformist Web site against being filtered).

¹³⁰ We found <http://www.pglo.org/> blocked and <http://www.pglo1.org/> accessible.

language sources. We observed minimal change in this area over time; one site was accessible in our first test but blocked in our last.

e. Opposition and Dissent

We found significant filtering of sites in this category. Unlike in the news category, we found only a small difference between English-language sites in this category (38% blocked) and those available in Farsi (42% blocked). Our testing found increased blocking in this category over time; four sites were accessible in our first test and blocked in our last one, and only one filtered in our first run and available in our final test.¹³¹

f. Politics

We located a number of blocked sites within this general category, including sites of various political parties. Significant political opposition sites linked to reformist parties that we found blocked include Rouydad (Happening) at www.rooydad.com and Bamdad (Dawn) at bamdad.blogspot.com/.¹³²

g. Religion

We found limited evidence of religious-based filtering in Iran. Of the four blocked URLs we detected, only two distinct sites were represented: the “Iranian Rationalist Forum” for “Atheist, Agnostics, Sceptics, Humanists and Hedonists”¹³³ and an anti-Islam site.¹³⁴ Unlike in other Middle East countries which ONI has tested, such as Saudi Arabia, we saw no effort to block sites related to the Baha’i faith or attempts to convert Muslims to the Christian faith (including a site offering the Bible in Farsi¹³⁵ and the home page of Iranians Christians International¹³⁶).

h. Sex

The sexual content blocked in Iran ranges from typical pornographic sites¹³⁷, to Farsi blogs containing graphic images,¹³⁸ to sites with pornographic pictures onto which the faces of Iranian leaders are superimposed,¹³⁹ to Yahoo! groups offering “pictures of Iranian girls.”¹⁴⁰ We noted an increase in blocking of sites in this category during our testing; initially only 83% were blocked, while 100% were

¹³¹ The four sites for which blocks were added were <http://bamdad.blogspot.com/>, <http://www.iranncr.org/>, <http://www.marzeporgohar.org>, and <http://www.iranncrfac.org/>. The site with the block removed was <http://yeknoon.blogspot.com/>.

¹³² See also Sydney Morning Herald, *Iran Blocks Three Reformist Websites*.

¹³³ Available from <http://kaafar.com/> and <http://www.kaafar.com/>.

¹³⁴ Available from <http://www.page.to/kaveh/> and <http://www.geocities.com/ahangark/>.

¹³⁵ See International Bible Society, *Persian Bible – Farsi Bible*, at <http://www.ibs.org/bibles/farsi/index.php>.

¹³⁶ See FarsiNet, *Iranian Persian Global eCommunity for Farsi Speaking People*, at <http://www.farsinet.com/>.

¹³⁷ See, e.g., *Real Naked Celebrities*, at <http://www.realnakedcelebrities.com/>.

¹³⁸ See, e.g., <http://www.kosokun.blogspot.com/>.

¹³⁹ See, e.g., <http://www.ghorazeh.iran.li/>.

¹⁴⁰ See, e.g., http://groups.yahoo.com/group/Dokhtar_Irani/.

filtered in the final run. This high level of effectiveness in blocking pornographic content is typical of systems that use commercial software such as SmartFilter.

2. SPMIPO List¹⁴¹

We tested a list of 650 sites¹⁴² with material related to separatist, military, paramilitary, intelligence, and political organizations (SPMIPO). We found 14 sites completely blocked and five sites partially blocked (2.9% total).

3. Language

Our testing compared the filtering of sites with English-only content with the filtering of sites in the same category offering content in Farsi (either Farsi-only or Farsi-English). The results indicate that Iran often blocks content available in Farsi at a more consistent level than English-only content, and did not block any categories of English-only content without a near-equivalent level of Farsi blocking. While the small size of the data and potential biases in the ways we collected the sites for testing do not support the making of blanket statements about the nature of language-based filtering in Iran, a few points are worth noting.

- The religion, news, and lifestyles categories had significantly higher blocking rates in Farsi than in English. Although this is not unexpected, the marked degree witnessed here does provide a sense of the relative level of concern.
- While limited in number, the blocking of all the sex sites we tested in Farsi may demonstrate an effort to block this content extensively despite the employment of the SmartFilter technology. Other countries in which we conducted research appear to rely more heavily on SmartFilter, with the English-language focus of the product resulting in a relatively lower percentage of local language blocking.

General Category	English Only			Available in Farsi		
	# Blocked	# Tested	%	# Blocked	# Tested	%
Blogs	5	5	100%	43	44	98%
Lifestyles	1	10	10%	3	5	60%
News	1	20	5%	13	26	50%
Opposition & Dissent	10	26	38%	15	36	42%
Political / Religious / Social (General)	7	7	100%	56	58	97%
Politics	9	9	100%	41	42	98%
Religion	0	15	0%	4	9	44%
Sex	6	6	100%	3	3	100%
Total (Includes non-categorized sites)	54	121	45%	199	250	80%

Note: % indicates the percentage of sites in this category that were blocked.

¹⁴¹ See Appendix 3 for complete results.

¹⁴² Content for some of these sites changed in recent years. We verified content over time using the Internet Archive, available at <http://www.archive.org>.

5. CONCLUSION

Iran follows a pattern uncovered by previous ONI research, particularly in the case of China, whereby filtering regimes that reach a high level of sophistication target for censorship local language content and new forms of online expression, such as blogs. In instances such as Iran and China, the state demonstrates its commitment to a censorship regime that keeps up with the changes in technology. Such a filtering regime is effective in part by keeping citizens guessing as to how the blocking will work over time and introducing uncertainty into the equation. The OpenNet Initiative has found that a growing number of countries, including Iran and China, are shifting the Internet censorship regimes inwards using increasingly fine-grained methods of information control.

Iran's use of the filtering product Smartfilter, developed by a United States-based for-profit corporation, once again raises questions about the complicity of western commercial firms in the filtering regimes of non-democratic countries. Like most commercial filtering systems, the Smartfilter product is prone to over-blocking and errors, as demonstrated time and again by OpenNet Initiative and other research, and its proprietary filtering methodology prohibits outside inspection -- a disturbing combination for those who value freedom of speech and access to information.

Currently, Iran's filtering focuses on Iran-related, and particularly Farsi-language, content.¹⁴³ Non-Iran specific sites, such as news, human rights, and foreign government pages, are subject to less filtering, though pornography, sex, gay, and some proxy and circumvention Web sites are subject to censorship with varying degrees of effort.¹⁴⁴

Filtering particularly targets individual blogs and sites that set up and host them (such as Geocities and Tripod).¹⁴⁵ Many reformist sites are blocked, as are some online Farsi radio stations.¹⁴⁶ Blocking is being added in categories such as sex / pornography sites and blogs, while the blocks are being removed from sites that provide information on sex education and those depicting provocative attire. As Iran's filtering regime grows, its methods appear to be becoming somewhat more precise. However, in light of Iran's reliance upon the commercial SmartFilter product, Iran's filtering regime is likely to continue to suffer from overbreadth.

In sum, Iran's filtering regime continues to grow more sophisticated, more precise in its focus on local sites, and more extensive, while continuing to rely upon error-prone software developed in the United States as a central element of its censorship system.

¹⁴³ See OpenNet Initiative, *Internet Content Filtering in Iran: Verification of Reported Banned Websites*, at <http://opennetinitiative.net/bulletins/004/> (Aug. 13, 2004).

¹⁴⁴ OpenNet Initiative, *Internet Content Filtering in Iran: Verification of Reported Banned Websites*.

¹⁴⁵ Reporters Sans Frontières, *Internet – Iran*.

¹⁴⁶ *Iran Steps Up Net Censorship*, BBC News.

APPENDIX 1**Global List Testing Results**

Category	Number of Sites Tested	Number of Sites Blocked
Alcohol	21	0
Anonymizers	21	7 complete (33%), 13 partial (62%) (only http://darkwing.uoregon.edu/~joe/open-proxies-used-to-send-spam.html was unblocked)
Blogging Domains	17	1 partial (6%) (http://www.movabletype.org/)
Drugs	28	0
E-mail	20	0
Encryption	8	0
Entertainment	27	0
Famous Bloggers	22	0
Filtering Sites	7	0
Free Web Space	11	0
Gambling	26	0
Gay / Lesbian / Bisexual / Transgender / Queer Issues	38	4 complete (11%) (http://gaytoday.badpuppy.com/ , http://lesbians-against-violence.com/ , http://www.gay.ru/ , http://www.gayegypt.com/)
Government	56	0
Groups (including Usenet)	18	0
Hacking	21	0
Hate Speech	25	1 partial (4%) (http://www.sdlusa.com/)
Human Rights	28	0
Humor	1	1 complete (100%) (http://www.crazyshit.com)
Major Events	28	0
Miscellaneous	11	0
News Outlets	36	1 complete (3%) (http://www.voanews.com/)
Porn	36	3 complete (8%), 33 partial (92%)
Provocative Attire	17	3 partial (18%) (http://www.lingerie.com/ , http://www.bodylingerie.com/ , http://www.exoticfashionmall.com/)
Religion (fanatical)	8	0

Religion (normal)	50	0
Search Engines	28	0
Sex Education	27	1 partial (4%) (http://www.teensource.org/)
Translation Sites	13	2 complete (15%) (http://translation.langenberg.com/ , http://tarjim.ajeeb.com/)
Universities	32	0
Weapons / Violence	28	0
Women's Rights	28	2 complete (7%) (http://www.feminista.com/ , http://www.igc.apc.org/Womensnet/dworkin/)
Total	754	20 complete + 52 partial (9.5%)

APPENDIX 2**SPMIPO List Testing Results**

Site	Result
http://fsln.webjump.com/	Blocked
http://www.angelfire.com/ak2/skaaneland/	Blocked
http://www.angelfire.com/biz/radioethiopia/	Blocked
http://www.angelfire.com/fl/fmln/	Blocked
http://www.angelfire.com/la/cominternet/	Blocked
http://www.angelfire.com/la/cominternet/rev.html	Blocked
http://www.angelfire.com/vt/republicvt/	Blocked
http://www.aum-shinrikyo.com/	Blocked
http://www.entifada.net/	Blocked
http://www.kargilonline.com/	Blocked
http://www.mehzavod.ru/	Blocked
http://www.qiaolian.org	Blocked
http://www.radioazadi.org	Blocked
http://www.udfn.com/	Blocked
http://www.cpiran.org/	Partial
http://www.iran-e-azad.org/english/index.html	Partial
http://www.rezapahlavi.org/	Partial
http://www.siahkal.com/	Partial
http://www.wpiran.org/	Partial
Total sites tested = 650 sites	14 complete + 5 partial (2.9%)

APPENDIX 3

Iran Background

A. Demographic Information

Iran has approximately 69 million people of varying ethnicity, linked by shared cultural traditions (the “iraniyat”).¹⁴⁷ Major ethnic groups include Persian (51%), Azeri (24%), Gilaki and Mazandarani (8%), Kurd (7%), Arab (3%), Lur (2%), Baloch (2%) and Turkmen (2%).¹⁴⁸ 58% of the population speaks Persian (Farsi) or Persian dialects, while 26% speaks Turkic or Turkic dialects and 9% speaks Kurdish.¹⁴⁹ 89% of the country is Shi’a Muslim and 9% is Sunni Muslim.¹⁵⁰ 28% of the population is under the age of 14 and 50% is under 20.¹⁵¹ Iran has literacy rates of close to 80% and school enrollment rates of around 73%.¹⁵²

B. Economy

Iran’s Gross Domestic Product (GDP) in 2003 was \$478 billion.¹⁵³ The state possesses large oil and natural gas reserves and relies heavily on them economically – in 2000-2001, these comprised 85% of Iran’s exports.¹⁵⁴ The vast majority of economic activity in Iran is controlled by the state.¹⁵⁵

Iran has experienced high inflation rates (over 15%) since 1999, which has been a major economic concern.¹⁵⁶ Observers estimate that in 2002, 40% of the population lived below the poverty line and unemployment was greater than 15%.¹⁵⁷

¹⁴⁷ CIA, *The World Factbook – Iran*; see Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*.

¹⁴⁸ CIA, *The World Factbook – Iran*.

¹⁴⁹ CIA, *The World Factbook – Iran*.

¹⁵⁰ CIA, *The World Factbook – Iran*.

¹⁵¹ CIA, *The World Factbook – Iran*; see International Crisis Group, *Iran: Discontent and Disarray*, at <http://www.icg.org/home/index.cfm?id=2324&l=1> (Oct. 15, 2003).

¹⁵² CIA, *The World Factbook – Iran*; see Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*

¹⁵³ CIA, *The World Factbook – Iran* (using Purchasing Power Parity methodology).

¹⁵⁴ CIA, *The World Factbook – Iran*; see Economist.com, *Country Briefings: Iran*, at <http://www.economist.com/countries/iran/profile.cfm?folder=Profile-FactSheet> (Feb. 13, 2005).

¹⁵⁵ CIA, *The World Factbook – Iran*

¹⁵⁶ Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*.

¹⁵⁷ CIA, *The World Factbook – Iran*; see International Crisis Group, *Iran: Discontent and Disarray*.

C. Government and Politics

After the 1979 revolution, Iran became a constitutional theocratic republic; the state has a dual power structure, with a supreme religious leader (the “vali-e faqih” or “Rahbar”) and a popularly elected president and legislature (the Majlis). The Rahbar is a powerful figure with ultimate political authority; he has primary control over many state institutions, has the right to appoint key officials (such as heads of the judiciary, broadcast media, armed forces, and various revolutionary bodies), and influences major policy decisions.¹⁵⁸ The Majlis’ power is restrained since its proposals are subject to review by the Guardian Council, which is controlled by hard-line clerics.¹⁵⁹ The Guardian Council essentially functions as an upper house of parliament with significant veto power; it has stymied most recent proposed reformist legislation. The Council also vets all candidates for president and the legislature and, in 2004, rejected 2,500 reform-oriented candidates.¹⁶⁰

The judiciary (judges and prosecutors) is controlled by hardliners, who thereby have significant influence over social issues through the ability to prosecute; the judiciary uses this power to quash dissent and reform (especially in the media).¹⁶¹

Politics in Iran is primarily split between the conservative hard-liners and reformers. However, neither side favors eliminating the theocratic, clergy-controlled nature of the state; reform is a relative term in this Islamic state, and the conflicts are over political and economic reform – democratic participation, economic policies, and interaction with the West.¹⁶² The reformers focus on freedom of speech and ideas (even ideas that are not popular or work against the state) and the availability of materials that support those ideas, but they also believe in restricting materials that advocate against Islam.¹⁶³

After several years of progress by reformers, the hard-liners have reasserted power recently; conservatives have prevented reform initiatives, increased repressive measures, and consolidated their control over the state.¹⁶⁴ In the February 2004 parliamentary elections, hard-liners made major gains and reformers now only hold 50 (of 290) seats in the legislature, down from 200. Some supporters of the reformist President Khatami were tried on political charges and jailed or forced from office in 2004, and a media crackdown has intensified since the election. Apparently, the population is disappointed at the inability of reformers to make significant change, which led to less than 50% turnout for the election.¹⁶⁵ Many reform-minded citizens and journalists are emigrating (around 200,000 per year) and students have shown signs of withdrawing from politics.¹⁶⁶ While there have been increasing foreign contacts and

¹⁵⁸ CIA, *The World Factbook – Iran*; Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*.

¹⁵⁹ Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*.

¹⁶⁰ Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*; see Economist.com, *Country Briefings: Iran*; see also *Still Failing, Still Defiant*, The Economist.

¹⁶¹ Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*; see Feuilherade, *Iran’s Banned Press Turns to the Net*.

¹⁶² Reporters Sans Frontières, *Internet – Iran*; Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*.

¹⁶³ Interview with Ali Mohammad Khatami, BBC, Dec. 12, 2003.

¹⁶⁴ CIA, *The World Factbook – Iran*.

¹⁶⁵ *Still Failing, Still Defiant*, The Economist.

¹⁶⁶ Fahti, *Let Down By Iran’s Leader, Young Advocates Leave Politics*; see *Still Failing, Still Defiant*, The Economist.

more foreign investment since the reformists first came to power, these are being rolled back under the new legislature.¹⁶⁷

Currently, Iran is at odds with the United States and European Union over potential nuclear weapons development in Iran.¹⁶⁸ While the Iranian government has had some discussions with European countries on this issue, relations with the United States remain strained and it is not clear how the re-elected Bush administration plans to deal with Iran; U.S. economic sanctions remain in place.¹⁶⁹

¹⁶⁷ Economist Intelligence Unit, *Country Profile: Iran 2004 Main Report*.

¹⁶⁸ See Steven R. Weisman, Elaine Sciolino, & David E. Sanger, *Rice Says U.S. Won't Aid Europe On Plans for Incentives to Iran*, *The New York Times*, Feb. 4, 2005, at A1.

¹⁶⁹ See, e.g., Dafna Linzer, *IAEA Digs Into Past Of Iranian Program; Probe Traces How Materials Were Obtained*, *Washington Post*, Feb. 17, 2005, at A18.