

## Vietnam

The expansion of Internet use in the country has become a cause for concern for the government of Vietnam, which on one hand aspires to expand information and communication technologies for development purposes, and on the other, sees the Internet as a source of instability. The Vietnamese state has taken steps to control Internet use through legal and regulatory frameworks, and by



filtering content that it deems threatening to the regime, state unity, or national security. With the rise of social networking and blogging as tools to express dissent, the Internet has become a contested space in Vietnam: the government attempts to rival social networking sites such as Facebook through the development of a state-run social networking site on the one hand, while patriotic hackers launch cyber attacks on dissident Web sites on the other.

### RESULTS AT A GLANCE

Filtering	No evidence of Filtering	Suspected Filtering	Selective Filtering	Substantial Filtering	Pervasive Filtering
Political					•
Social			•		
Conflict and security			•		
Internet tools				•	

### OTHER FACTORS

	Low	Medium	High	Not Applicable
Transparency	•			
Consistency	•			

KEY INDICATORS	
GDP per capita, PPP (constant 2005 international dollars)	2,681
Life expectancy at birth, total (years)	74
Literacy rate, adult total (percent of people age 15+)	92.5
Human Development Index (out of 169)	113
Rule of Law (out of 5)	2.1
Voice and Accountability (out of 5)	1.0
Democracy Index (out of 167)	95 (Authoritarian regime)
Digital Opportunity Index (out of 181)	126
Internet penetration rate	26.6

*Source by indicator:* World Bank 2009, World Bank 2008a, World Bank 2008b, UNDP 2010, World Bank Worldwide Governance Indicators 2009, Economist Intelligence Unit 2010, ITU 2007, ITU 2009. See Introduction to the Country Profiles, pp. 222–223.

## Background

Vietnam is a one-party state governed by the Communist Party of Vietnam. The party does not maintain a strict adherence to ideological orthodoxy.<sup>1</sup> Today, Vietnam is making a transition from a centrally planned economy to a market-oriented mixed economy. Since opening up its economy there has been an increased socioeconomic gap, which the government sees as a potential source of political instability.<sup>2</sup> The party maintains a tight grip on the Internet and information flows, and is sensitive to content that can cause social instability.

As a part of the country's development project, the government is promoting information and communication technologies (ICTs) and e-commerce. The government's commitment to ICTs can be seen in the country's Master Plan for ICT Development for 2005–2010, the creation of a National Steering Committee for ICT, and the creation of the Ministry of Information and Communication. However, the Communist Party of Vietnam sees the Internet as a threat to stability and actively seeks to monitor Internet content. After a period of relative openness and tolerance of independent voices and criticism in 2006 when liberal publications were established, the government clamped down on what it considers unlawful usage of the Internet. Because the ICT sector in Vietnam is changing constantly, it is difficult to describe the situation "on the ground" with complete accuracy.

## Internet in Vietnam

Internet use in Vietnam is growing rapidly. In 2009, the country had an estimated 23,283,300 Internet users, with a penetration rate of 26.6 percent.<sup>3</sup> The country's broadband subscription rate is 3.6 percent.<sup>4</sup> Recently the home surpassed public access centers as the primary place that users access the Internet.<sup>5</sup> Prior to 2009, users primarily went to public access centers, such as Internet cafés or post offices. Access through mobile phones has also increased, reflecting competitive and attractive mobile phone packages.<sup>6</sup> A study conducted by Yahoo! and Kantar Media found that 71 percent of users in major cities such as Can Tho, Danang, Hanoi, and Ho Chi Min City accessed the Internet from their homes.<sup>7</sup> However, Internet cafés remain popular throughout the country, providing service to youth, online game players, and those who are unable to afford broadband access.

While any Vietnamese firm can operate as an Internet service provider (ISP), only companies that are state-owned can operate as Internet access service providers or Internet exchange providers. Formally, the Ministry of Posts and Telecommunications lists nine Internet access services providers, five Internet exchange providers, and 15 online service providers as licensed in Vietnam.<sup>8</sup> The state-owned ISP, the Vietnam Posts and Telecommunications (VNPT), dominates the broadband market. As of November 1, 2010, the VNPT held 74 percent of the market share, followed by Viettel with 11 percent, FPT Telecom with 10 percent, and SPT with 2 percent.<sup>9</sup>

State regulation determines how Internet connectivity in Vietnam is organized and managed, and facilitates Internet content filtering by limiting external access points that must be controlled.<sup>10</sup> Only Internet exchange points (IXPs) can connect to the international Internet, while online service providers (OSPs) and Internet content providers (ICPs) may connect to ISPs and IXPs.<sup>11</sup> At the edge of the network, Internet agents, such as Internet cafés, connect to their contracted ISPs.<sup>12</sup> Internet service providers may connect with each other and with IXPs, but private ISPs cannot connect with each other in peer arrangements.<sup>13</sup> Currently, IXPs can theoretically maintain independent connections to the international Internet, but it is not clear how many do so in practice. Internet connectivity in Vietnam is slow compared to other Asian countries—on average, broadband connection speed for downloading is 6.66 Mbps, and the speed for uploading is 3.77 Mbps.<sup>14</sup>

In Vietnam, Internet filtering happens at the domain name system (DNS) level, which means that instead of blocking a site, ISPs simply configure domain names to resolve to an invalid address or remove blocked Web sites from their DNS servers. It is widely known that blocking at the DNS level is subject to vulnerabilities, as this form of blocking can be easily circumvented by Internet users through the use of circumvention tools, proxy servers, and virtual private networks (VPNs) or simply by

tampering with the DNS (for instance, changing a DNS provider to a publicly available one such as Google DNS).<sup>15</sup> There are many Vietnamese circumvention help sites whereby more advanced Internet users provide information on how to access blocked sites. One example is <http://facebookviet.com>, which provides instructions on how to access Facebook (which was blocked by ISPs after a government order in November 2009).<sup>16</sup> The countrywide block on the Web site was essentially irrelevant because it was so easily circumvented by users.<sup>17</sup> Filtering techniques are vulnerable because of their design, but the filtering regime is even further weakened by the fact that government orders to block Web sites are unevenly enforced by ISPs.<sup>18</sup>

### Legal and Regulatory Frameworks

Vietnam's legal regulation of Internet access and content is multilayered and complex, and can occur at the level of National Assembly legislation, ministerial decisions, or through VNPT rules created for the management of the Internet infrastructure. Although Article 69 of the 1992 constitution of Vietnam states that "the citizen shall enjoy freedom of opinion and speech, freedom of the press, the right to be informed, and the right to assemble, form associations and hold demonstrations in accordance with the provisions of the law,"<sup>19</sup> state security laws and other regulations trump or eliminate these formal protections and guarantees. Freedom of expression and the right to assemble are constrained by the Criminal Code, which prohibits "abusing democratic freedoms to infringe upon the interests of the State" (Article 258), "conducting propaganda against the Socialist Republic" (Article 88), and "carrying out activities aimed at overthrowing the people's administration" (Article 79). These laws have been invoked to arrest people considered cyber dissidents such as prodemocracy bloggers.<sup>20</sup> Because of the harsh penalties for violation of such laws, self-censorship is commonplace in Vietnam.

Media in Vietnam are state owned and under tight control by the Vietnamese state. The 2006 Decree on Cultural and Information Activities subjects those who disseminate reactionary ideology, including revealing secrets (party, state, military, and economic), who deny revolutionary achievements, and who do not submit articles for review before publication to fines of up to 30 million dong (approximately USD 2,000).<sup>21</sup> These regulations appear to target journalists because criminal liability already exists for some of the proscribed activities, including the dissemination of state secrets. All information stored on, sent over, or retrieved from the Internet must comply with Vietnam's Press Law, Publication Law, and other laws, including state secrets and intellectual property protections.<sup>22</sup>

All domestic and foreign individuals and organizations involved in Internet activity in Vietnam are legally responsible for content created, disseminated, and stored. Just as ISPs and Internet cafés are required to install monitoring software and store

information on users, users are also formally deputized to report content that opposes the state or threatens state security to the relevant authorities.<sup>23</sup> It is unlawful to host material that opposes the state; destabilizes Vietnam's security, economy, or social order; incites opposition to the state; discloses state secrets; infringes upon organizations' or individuals' rights; or interferes with the state's DNS servers.<sup>24</sup> Those who violate these Internet use rules are subject to a range of penalties. The National Assembly enacted the Law on Information Technology on June 22, 2006.<sup>25</sup>

On August 28, 2008, the state enacted Decree Number 97 on the Management, Supply, and Use of Internet Services and Electronic Information on the Internet,<sup>26</sup> which was strengthened in December by the Ministry of Information's Circular Number 7.<sup>27</sup> Under Article 6 of the decree, it is prohibited to use the Internet to oppose the government; to undermine the state and state unity, national security, public order, or social security; to incite violence or crime; or to damage the reputations of individuals and organizations.<sup>28</sup> Information about users violating Article 6 must be reported to the state.<sup>29</sup> To strengthen and clarify the contents in Decree 97, the Ministry of Information issued Circular Number 7 on December 18. Under Circular Number 7, blogs are restricted to only personal content, and providers of online social networking services (such as blogging platforms) are obligated to keep reports about users and provide such information to authorities every six months or upon request. Further reinforcing the law was the creation of the Administration Agency of Radio, Television, and Electronic Information under the Ministry of Information to monitor the Internet.

The initiatives of 2008 came on the heels of increased dissatisfaction among the population and growing instability in the country. In June 2008, inflation in Vietnam had reached 27 percent, and inflation for rice (a dietary staple) had reached 70 percent; within the first six months of 2008, 500 demonstrations had already taken place, despite restrictions on the right to strike.<sup>30</sup> In response to the growing instability, a crisis meeting of the party's Central Committee was called in July. The Vietnam Committee on Human Rights argues that it was within this context that the party started to intensify controls and repression.<sup>31</sup>

The state has become increasingly concerned about young people neglecting their studies for the Internet and, in particular, online gaming.<sup>32</sup> In 2006, Joint Document Number 60/2006, which regulates the production, supply, and use of online games in the country, was enacted.<sup>33</sup> In July 2010, after a public outcry over the negative effects of the Internet on youth—in particular, instances of youth engaging in murder and robbery for money to play online games—the Ministry of Information and Communication cracked down on online games by temporarily terminating their licensing and ordering ISPs to force shops that offered games to close by 11:00 PM.<sup>34</sup> In Hanoi, Internet retailers and businesses providing Internet service must be located at least 200 meters way from the entrance of any schools (up to high school) and can operate between 6:00 AM and 11:00 PM only.<sup>35</sup>

## Surveillance

The Vietnamese government stringently monitors objectionable Internet activities. An Internet surveillance unit under the Ministry of Public Security is particularly interested in customers who access politically sensitive sites,<sup>36</sup> and firewalls have been deployed to block access to overseas Web sites that host sensitive content, such as international news and human rights Web sites.<sup>37</sup> In addition, under Decision Number 15 of 2010, domain servers in Hanoi are required to install a copy of the Internet Service Retailers Management Software, a government-controlled software developed by the National University of Hanoi.<sup>38</sup> Some believe that the software is for blocking as well as for surveillance.<sup>39</sup>

The growing popularity of social networking Web sites has prompted the Vietnamese government to develop its own, "Go.vn" (<http://go.vn>), in order to compete with other popular platforms. Go.vn is similar to Facebook, but it is government run, and users must register with official identification details, including government-issued identity numbers. Vietnamese officials have described Go.vn as being the country's biggest online investment so far, and it is expected that by 2015 Go.vn will boast more than 40 million registered users.<sup>40</sup> Some analysts believe that the site will strengthen the state's Web monitoring and surveillance capacities.

## Cyber Attacks

Harassment, detainment, and imprisonment of bloggers as well as attacks on their Web sites and e-mails occur regularly in Vietnam.<sup>41</sup> *Viet Nam News*, a state-run newspaper, reported that more than 1,000 Web sites were attacked in 2009.<sup>42</sup> Although the newspaper attributed such attacks to a general lack of security protection for Vietnamese Web sites, many Web sites that have faced cyber attacks generally contain dissident content.<sup>43</sup> Web sites with content critical of the state (including blogs and discussion forums) that are hosted outside of Vietnam have had administrative passwords stolen or suffered dedicated denial of service (DDoS) attacks.<sup>44</sup> Viet Tan, the Vietnam Reform Party, often reports experiencing DDoS attacks. In April 2009, coinciding with the 24th anniversary of the Fall of Saigon, Viet Tan's Web site suffered a large-scale DDoS attack. Attackers compromised Web sites and installed a malicious program so that visitors executed the malicious script on their computers with instructions to attack the Viet Tan Web site. Viet Tan members have also reportedly received targeted malware attacks through e-mail.<sup>45</sup>

It is unclear who is behind the attacks and whether they are state sanctioned; however, cyber attacks have become instrumental to controlling online content and, as demonstrated recently by the Vulcanbot and the Vecebot botnets, have become increasingly sophisticated.

In December 2009 and October 2010, DDoS attacks were launched through a botnet on Web sites and blogs that expressed dissent. In the first instance, attackers compromised VPSKeys, a driver distributed by the Vietnamese Professional Society (VPS) to provide support to Vietnamese Windows users typing in Vietnamese, with a Trojan horse. The attackers then sent a fake e-mail from the VPS instructing users to download a VPSKeys software update that was, in fact, the compromised version. Once users installed the malicious software update, their computers would join the Vulcan botnet and be given instructions to perform DDoS attacks on dissident Web sites.<sup>46</sup> Vulcanbot's command-and-control servers were primarily located in Vietnam, and the botnet was thought to be part of a larger effort to attack the growing anti-bauxite-mining movement in Vietnam,<sup>47</sup> which had included the application of a firewall to three key Web sites (<http://boxitvn.net>, <http://boxitvn.org>, and <http://boxitvn.info>) the detaining of key organizers, and forged e-mails from organizers.<sup>48</sup> Tens of thousands of users were probably infected. According to a member of Google's security team, "These infected machines have been used both to spy on their owners as well as participate in distributed denial of service (DDoS) attacks against blogs containing messages of political dissent."<sup>49</sup>

In October 2010, SecureWorks discovered Trojan horse malware that was used to launch DDoS attacks against Vietnamese blogs and discussion forums that were critical of the government and the bauxite mining operations. The botnet's deployment coincided with "Vietnam Blogger Day," a coordinated online action to celebrate the release of Dieu Cay, a blogger and political prisoner. Dubbed Vecebot, the botnet infected between 10,000 and 20,000 host computers, most of them located in Vietnam.<sup>50</sup> SecureWorks has suggested that it is possible that the Vecebot attacks were a continuation of the Vulcanbot attacks. While many speculate that such attacks are state-sanctioned, there has been no solid evidence to connect such attacks to the Vietnamese government. There is, however, evidence that the perpetrators of the attacks may be a pro-Vietnamese Communist Party hacking group.<sup>51</sup> For SecureWorks, the Trojan is a new family of malware that appears to have political, as opposed to commercial, objectives.<sup>52</sup>

### ONI Testing Results

In 2010, OpenNet Initiative testing was conducted on two major Vietnamese ISPs, FPT Telecom Corporation and Viettel Corporation. Founded in 1993 by Vietnam's Ministry of National Defense, Viettel is a military-owned Internet service provider that began offering Internet-access services to the public in 2002. As of November 2010, Viettel had captured 11 percent of the broadband market, making it the second largest ISP in the country after the Vietnam Posts and Telecommunications.<sup>53</sup> FPT Telecom is one of Vietnam's leading IT companies and telecom service providers. It is a joint-stock

company that held 10 percent of the market share in November 2010, making it the third largest ISP in the country after Vietnam Posts and Telecommunications and Viettel.<sup>54</sup> Evidence of filtering was found on both ISPs, with Viettel blocking significantly more Web sites than FPT Telecom.

Testing on FPT Telecom was conducted by ONI in September 2010. The content of the blocked Web sites fell into four broad thematic categories: political, social, conflict and security, and Internet tools. Testing on Viettel was conducted by the ONI in October 2010. Like FPT Telecom, the content of Viettel's blocked Web sites fell into the same four broad thematic categories: political, social, conflict and security, and Internet tools.

When users attempt to access blocked Web sites on both ISPs, they encounter a standard network error page. Technical analysis of the data from each ISP revealed that these errors were the result of a form of DNS tampering, where the entries for blocked Web sites are removed from the ISPs' DNS servers.

The blocking pattern of the ISPs reflects the government's concerns about content that challenges its authority. Both ISPs filter Web sites with Vietnamese-language content that is critical of the Vietnamese Communist Party and that argues for political reform, such as <http://x-cafevn.org> and the Web site of the Viet Tan (<http://viettan.org>). Vietnamese-language Web sites operated outside of Vietnam are also a target of filtering. This includes Web sites that critique the party, such as the Web sites of the *Vietnam Daily News* based out of California (<http://vietnamdaily.com>) and the *Hướng Dương* based out of Australia (<http://huongduong.com.au>). Vietnamese-language news Web sites operating overseas that are not necessarily critical of the Vietnam state but contained news stories about Vietnam are also filtered by both ISPs, including Dân Việt (<http://danviet.com.au>), Vietmedia (<http://vietmedia.net>), and Việt Báo Online (<http://vietbao.com>). Two Web sites related to the Degar people in Vietnam—an ethnic minority with whom the state has had a history of conflict—are also blocked (<http://montagnard-foundation.org> and <http://montagnards.org>).

Web sites of international human rights groups were accessible with the exception of Human Rights Watch (<http://hrw.org>), which was found blocked on Viettel. FPT Telecom, which blocked Human Rights Watch in 2007–2008 testing, did not block the Web site in 2010 testing. English- or French-language Web sites with content on Vietnam were rarely blocked, with the exception of Radio Free Asia (<http://rfa.org>), which was blocked by both ISPs. Blocking of foreign media Web sites was infrequent and inconsistent. An exception is that both the English- and Vietnamese-language version of Voice of America were found blocked on Viettel and FPT.

OpenNet Initiative testing found inconsistencies in the level of filtering between the two ISPs. For instance, the Vietnamese-language news Web site of Vietnamese American Television (<http://vietmaryland.com>), which is critical of the Vietnamese government and based out of the United States, was found blocked on Viettel but not



on FPT Telecom. The inconsistencies in the level of filtering between VNPT and FPT Telecom reflect previous findings from ONI testing in 2007–2008.

Both ISPs blocked significantly more political Web sites than social or conflict and security sites. FPT Telecom filtered only one Web site per category. The Web sites of the Vietnamese Youth Foundation (<http://vnyouth.com>) and the Federation of Associations of the Republic of Vietnam Navy and Merchant Marine (<http://vietnamnavy.com>) were found to be blocked on FPT Telecom. None of these Web sites were blocked in the 2007–2008 round of ONI testing. In the social category, Viettel blocked the Web site of the Vietnamese Youth Foundation (<http://vnyouth.com>) and Người Việt, a local language news site (<http://nguoi-viet.com>). Viettel blocked two Web sites with content relating to the military and two Web sites with detailed content related to the Vietnamese navy and marines, <http://vietnamnavy.com> and <http://tqlcvn.org>. Neither ISP blocked pornographic content.

In the Internet tools category, both ISPs blocked Facebook (<http://facebook.com>). Both ISPs also targeted circumvention Web sites for filtering but differed in the specific sites they were blocking. For instance, Viettel filtered <http://anonymizer.com>, <http://the-cloak.com>, <http://anonymouse.org/>, <https://megaproxy.com>, <http://proxyweb.net/>, and <http://inetprivacy.com>, while FPT filtered only <http://inetprivacy.com>.

## Conclusion

The government of Vietnam has committed to the advancement of ICTs as part of the country's development project. Internet penetration in Vietnam is expanding rapidly, with many citizens connecting to the Internet at home and through mobile phones. As the penetration rate continues to grow, the government is taking steps to ensure that the Internet is not being used in a way that can cause domestic instability. These controls are being accomplished through a robust legal and regulatory framework that lays down Internet use rules for private users and Internet services. The state further controls Internet use by monitoring users and filtering Web sites that contain questionable content.

Despite restrictions to free access, Vietnamese netizens continue to take advantage of the Internet as a space for expressing criticisms of the state. As a result, Vietnamese cyberspace has increasingly become a contested space among various actors, as illustrated by the cases of increasingly sophisticated cyber attacks launched against groups critical of the state.

## Notes

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