Iranian Internet Infrastructure and Policy Report

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INTRODUCTION

// In our previous report, we undertook an investigation of the Iranian government's budget for the year ahead, and made a number of hypotheses about Iran's future ICT policies. One of the projects that dominated in Iran's ICT budget allocations for the year was the National Information Network (or, SHOMA), which is set to be rolled out in full by the end of 1394 (March 2016). The project is already behind schedule, however, with the previous target of 60% of Iranian families and businesses being able to access SHOMA by the end of March 2014 looking increasingly unattainable.

The past month has, however, seen Iran take a few more tentative steps in the direction of establishing SHOMA, in the form of new regulations and important infrastructure development projects that will be detailed later in this report. Regardless of this progress, there remains an immense amount of work left to be done if SHOMA is to be completed on time, and on budget.

Despite all of its problems, SHOMA is seeing continued progress in large part because of the value attached to the project by the Supreme Leader's own Supreme Council of Cyberspace (SCC), which has been very eager in its pursuit of a controlled 'National Internet'. In this month's report, we'll introduce you to the SCC, its members, its responsibilities, and its role in overseeing the country's Internet filtering and censorship initiatives. It is by far the most influential and politically powerful institution in Iran with regards to Internet management and development policy, and in this report we will detail the extent of its powers.

THE SUPREME COUNCIL OF ⬣ CYBERSPACE (SCC)

OVERVIEW

On 7 March 2012, Iran's Supreme Leader, Ayatollah Seyyed Ali Khamenei, signed an order establishing the Supreme Council of Cyberspace (SCC). This order established the SCC as the body responsible for coordinating and implementing cyberspace policy in Iran.

The SCC is invested with significant authority, and its decisions are legally-binding. It has the power to unilaterally dictate policies relating to the Internet, and its actions cannot be obstructed by the Iranian Parliament. The SCC is also able to compel the Commission to Determine the Instances of Criminal Content (CDICC) to pursue particular policies on Internet censorship, with the body having no choice but to submit to the SCC's judgements.

The two stated objectives of the SCC are:
· To fully exploit the positive potential of Iranian cyberspace
· To protect the country and people from the negative potential of cyberspace

Although it is unclear exactly what the SCC means when it talks about the 'positive' and 'negative' aspects of cyberspace, we can build a picture of the body's intent based on previous statements from Iranian authorities, which will allow us to understand the elite's divergent assessments of the Internet's potential for the Islamic Republic.

After the controversial 2009 presidential election, some Iranian politicians claimed that the Internet was a Western tool used to wage a 'Soft War' against Iran's interests. As a result, the country has tried to explore policies for managing Iranians' Internet usage, of which the most high-profile have

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been SHOMA, and the country's comprehensive content filtering system. Such measures are framed as efforts to protect Iran from the so-called 'negative potential' of cyberspace.

At the same time, there are a number of high-profile establishment figures who argue that the Internet can be utilised as a valuable tool in the global promotion of Iranian revolutionary ideology, and as a means of presenting the 'true' face of Iran to the world. For example, some of Rouhani's own government ministers have been active on social networks such as Twitter or Facebook - Mohammad Javad Zarif, Iran's Foreign Minister, maintains an active social media presence on both Facebook and Twitter.

THE NATIONAL CENTER OF CYBERSPACE (NCC)

According to the Supreme Leader's initial order, the SCC is also responsible for overseeing the establishment of the National Center for Cyberspace (NCC). This body is responsible for monitoring and tracking the latest technological and policy developments across domestic and global cyberspace.

The NCC statute was passed on 13 September 2013. This statute lays out a number of organisational objectives, of which the most significant are:

• Minimising Iran's Internet dependency on other countries by developing Iranian websites, online services and infrastructure

• Promote and support domestically-produced online content to cater to Iranian users
Educate people about online security for use in their personal lives

• Prioritise content development over new infrastructure and Internet services, in order to promote religious and state ideology

• Reorganise the exchange of information with the international network, and use SHOMA to separate domestic and international traffic

• Prepare for a cultural war between Iran and its enemies

• Protect the country against cyber attacks

• Collaborate with other nations and governments to decrease the influence of superpower nations over the Internet, and to protect the international rights of Iranian users

The official outline of the NCC's responsibilities is comprised of 21 articles. The most important ones include:

• Long-term planning for the advancement of Iranian 'soft power', and the propagation of Islamic and Islamic Republican ideology

• Reviewing and organising long-term plans such as the launch of SHOMA, internet protocol television (IPTV), and internet protocol media (IP media) such as on-demand TV services.

• Encouraging the private sector to engage more proactively with cyberspace, by increasing content production and service provision

• Designing and organising a systematic filtering method for the Internet

The NCC has three supreme committees which are in place to assist the SCC:
1. The Supreme Committee of Cyberspace Policy Regulation (SCCPR)
2. The Supreme Committee for the Improvement and Production of Cyberspace Content (SCIPCC)
3. The Supreme Committee of Cyberspace Security (SCCS)

THE STRUCTURE OF THE SCC

According to the official summary published on Khamenei.ir, the SCC is made up of 20 members, 13 of whom come from government or state organisations, and 7 of whom are individuals appointed by the Supreme Leader. Interestingly, however, the SCC currently exceeds these official numbers, with 9 appointed members taking up seats at the time of writing. The reason for the addition of these 2 additional members is unclear.

Representatives of Government Bodies	• Hassan Rouhani: President (Chairman of the SCC) *Moderate* • Ali Ardashir Larijani: Chairman of Parliament *Conservative* • Sadeq Ardeshir Amoli Larijani: Head of the Judiciary *Hardliner* • Ezzatollah Zarghami: Head of Islamic Republic of Iran Broadcasting (IRIB) *Hardliner* • Mohammad Hassan Entezari: Secretary of the SCC and Head of the NCC *Moderate* • Mahmood Vaezi: Minister of Information Communications and Technology *Moderate* • Ali Jannati: Minister of Culture and Islamic Guidance *Moderate* • Reza Faraji Dana: Minister of Science, Research and Technology *Moderate* • Mahmood Alavi: Minister of Intelligence and National Security *Conservative* • Ahmad Salek Kashani: Head of Cultural Committee in the Parliament *Conservative* • Seyyed Mehdi Khamoshi: Head of Islamic Development Organisation (IDO) *Hardliner* • Mohammad Ali Jafari: Commander of Iranian Revolutionary Guard Corps (IRGC) *Hardliner* • Esmaeil Ahmadi Moghaddam: Commander of Police *Hardliner*
Appointed Members	• Hamid Shahriari (Former Secretary of the Supreme Council of Information and Communication Technology) *Conservative* • Seyyed Javad Mazlomi (Supreme Leader's Deputy of Cultural Affairs) *Conservative* • Masoud Abotalebi (Executive at IRIB) *Unknown* • Kamyar Saghafi (Head of Shahed University) *Unknown* • Rasoul Jalili (Professor at Sharif University of Technology, and Director of the IT security company Amnafzar Co.) *Unknown* • Mohammad Sarafraz (Head of Press TV and Hispan TV) *Hardliner* • Alireza Shah Mirzaei (Former deputy of Policy Regulation at NCC) *Unknown* • Reza Taghipour (Former ICT Minister) *Conservative* • Mehdi Akhavan Behabadi (Former Secretary of the SCC) *Conservative* (Source)

Political Affiliation of SCC Members

■ Unknown ■ Moderate ■ Conservative ■ Hardliner
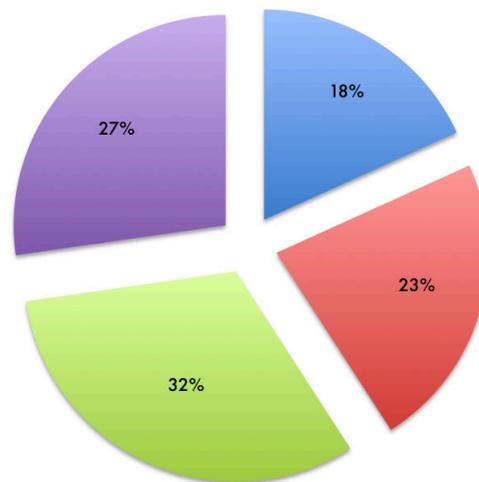
[Fig I. - Political Affiliation of SCC Members]

The SCC is dominated by political conservatives and hardliners, with the moderate members of Rouhani's cabinet easily outnumbered by the hardline appointees of the Supreme Leader. As a result, the SCC's actions line up far more closely with the Supreme Leader's political positions than they do the elected government of President Rouhani.

Rouhani's government does hold some nominal power within the SCC - President Rouhani remains the chairman, and the moderate Mohammad Hassan Entezari was elected as its Secretary. Yet for these figures to push any filtering reductions past the rest of the SCC remains a fairly unlikely prospect.

According to the Internal Regulations of the SCC:

• The secretary of the SCC is elected after receiving an absolute majority of votes from sitting SCC members and an official endorsement from the Supreme Leader. The Supreme Leader has the power to dismiss the elected secretary, and make a request to the SCC to elect a replacement.

• The Chairman of the SCC, or a group of 5 or more SCC members can request the dismissal of the Secretary of the NCC. For this request to pass, an absolute majority of SCC members should vote in support of the decision.

• The SCC meeting should be held at least once a month, however, there have been long delays between SCC meetings since 2012; President Rouhani did not hold his first SCC meeting until seven months into his presidency.

THE SCC'S LONG-TERM PLANS
On 15 December 2012, the SCC revealed 8 long-term plans for Iranian cyberspace:
    · Improving cyber security and defence
    · Improving production of content on cyberspace
    · Improving cyberspace services
    · Improving cyberspace infrastructures

· Regulation of cyberspace
· Support for state-backed, and independent online activists
· Development project for science, research, culture and strategic studies
· Increase international engagement and influence on Internet issues

In addition, the SCC passed a general policy concerning the separation of domestic and international traffic on 12 March 2013. In line with this policy, the ICT Minister was due to launch the first Internet Exchange Point (IXP) in Tehran in April 2013, though Small Media was unable to find any evidence that such a launch actually took place.

THE SUPREME COUNCIL OF CYBERSPACE (SCC) BUDGET
The Iranian Parliament approved the new SCC budget in January 2014, which according to Khabar Online, has been set at 1,000 billion IRR (40 million USD). This money will be taken from the ICT budget and will be allocated to both the Supreme Leader-influenced SCC and its subsidiary body, the NCC. Also, the revenue section of the SCC budget next year has been written-off by Iran's Parliament because the SCC officially acts as a regulator, and not an executive.

SIGNIFICANT SCC STATEMENTS AND ACTIVITIES IN 2013

FEBRUARY 5:
In an interview with Khabar Online, SCC Secretary Mehdi Akhavan Behabadi announced that:
· Facebook would remain blocked in the short-term.
· The filtering mechanism would change from URL filtering to content filtering, blocking specific users and text online, rather than whole pages or sites, which the SCC believes will mitigate public frustration over the extent and implementation of filtering. The first phase of content-based blocking was planned to be deployed by May/June 2013. In reality, however, Small Media has seen no evidence of any such sophisticated content filtering mechanisms having been implemented as of February 2014.
· The Commission to Determine the Instances of Criminal Content (CDICC) should not have any role in the actual implementation of Internet censorship. The CDICC can only identify the types of online content that violate the law, with the ICT Ministry holding ultimate responsibility for the implementation of filtering policies.
· The SCC suggested that the judicial system create a Special Filtering Court for resolving issues related to censorship - to date, however, no such court has been established.
The SCC aims to block all illegal VPNs, in part to force websites move their servers inside Iran. Behabadi claimed that the loading speed for websites based inside Iran would be 10 times faster than those hosted outside the country. (Source)

FEBRUARY 6:
A new SCC initiative stipulated that registered entities must request official recognition as a legal VPN by registering on vpn.ir. The SCC limited VPN registration to businesses and universities. A legal VPN could not be used as a tool to bypass the filtering system, and if the user wants to use it as a circumvention tool, they first had to contact the CCDIC. vpn.ir was only accessible within Iran, due to it being located on the country's internal network. The scheme was cancelled in July 2013, with the government admitting that the scheme had failed to catch on. (Source I, Source II, Source III)

JULY 17:
Behabadi announced that the SCC had studied a proposal to require all Internet users to undergo registration prior to being granted web access. The purpose of this plan was to define different levels of filtering based on individual user needs; for example, differentiating the demands of the business sector from those of students. Though these ideas were never implemented, the notion of a registration process was later integrated into plans for SHOMA.(Source)

SEPTEMBER 22:

President Rouhani appointed the ICT Minister, Mahmood Vaezi, as the interim supervisor of the NCC and the SCC, until the appointment of a permanent secretary. (Source)

NOVEMBER 1:

The SCC met for the first time in nine months. It was the first meeting since Hassan Rouhani's election victory, with the new president sitting as the chairman of the council. During the meeting, Rouhani announced his full support for SHOMA and argued that it must be launched swiftly, as it is an essential component in the country's development. (Source I, Source II)

DECEMBER 4:

The former Secretary of the SCC, Akhavan Behabadi joined the SCC as an appointed member, by order of the Supreme Leader. (Source)

CONTENT FILTERING AND BLOCKED SITES

FEBRUARY 2:

The news website Entekhab was blocked after publishing a letter from Professor Sadegh Zibakalam that was critical of the hardline newspaper **Kayhan**. The block on **Entekhab** was lifted on 8 February 2014. (Source)

FEBRUARY 12:

Jaish al-Adl, a terrorist group, abducted 5 Iranian soldiers along the border of Pakistan and posted images of the kidnapped soldiers on Twitter. A few hours after the tweet, Iranian Twitter users created a 'Twitter storm' to ask the Iranian government and international communities to do something. Despite the official filtering imposed on Twitter, Iranian users managed to get #FreeIranianSoldiers trending worldwide, and secured global media coverage from major networks such as Al Jazeera.

The official website of Ayatollah Yousef Saanei was blocked. Ayatollah Saanei has voiced major criticisms of the Iranian regime, earning the ire of hardliners. (Source)

FEBRUARY 15:

Psiphon, one of the most popular circumvention tools in Iran, was blocked. Additionally, an anonymous member of CDICC stated that the circumvention tool ZenMate has been blocked since 8 February. According to the Fars News Agency, the CDICC has developed a plan to block all eight major circumvention tools. These eight circumvention tools were not mentioned. (Source)

FEBRUARY 18:

The CDICC Secretary Abdolsamad Khoramabadi denied that the mobile communication app Line has been blocked, stating that CDICC has not yet made a decision as to the future of the app. On 17 February, some Iranian news websites reported that Line had been blocked due to a breach of users' privacy, and the sharing of criminal content by some users. (Source)

FEBRUARY 26:

Rightel is still unable to offer video calling to its customers, with the service having been suspended since February 2013. According to Vaezi, the problem of 'abuse' of video calling services will soon be resolved by offering a 'family SIM card', which will permit video calls to be made to family members only. (Source)

POLICY DEVELOPMENTS

FEBRUARY 8:
Deputy ICT Minister Ali Asghar Amidian announced that licenses for all of Iran's Private Access Providers (PAPs) - which offer high speed Internet connections - will be extended for another 10 years. In addition, the regulatory system surrounding these licenses will be reviewed, in order to increase the number of PAPs in Iran. The current PAP licenses have expired. (Source)

FEBRUARY 17:
The CRA published new regulations on Internet prices, which reduced the price of international Internet bandwidth by 35%. As a consequence, the cost of STM-1 has decreased from 380,000,000 IRR (15,215 USD) to 240,000,000 IRR (9,609 USD).

Speed based on bits per second (BPS)	Price in IRR (USD)
64 Kbps	564,200 (22.60)
128 Kbps	1,128,400 (45.20)
265 Kbps	1,692,600 (67.80)
512 Kbps	2,821,000 (113)
1024 Kbps	5,077,800 (203.30)
2048 Kbps	9,027,200 (361.45)
4 Mbps	15,233,400 (610)
8 Mbps	25,389,000 (1,016.50)
20 Mbps	51,342,200 (2,055.70)
34 Mbps	72,217,600 (2,891.60)
100 Mbps	186,186,000 (7,454.90)
155 Mbps = STM-1	240,349,200 (9,623.60)

Also, the CRA has decreased the price of ADSL connections by 20% for end-users, using a stepwise calculation method. For instance, the price of 8Gb is calculated as below:
Tariff Level 1 for the first 5Gb + Tariff Level 2 for the remaining 3Gb = (5 * 36,000) + (3 * 28,000) = 264,000 IRR ~ 10.60 USD

Tariff Level	Range of bandwidth based on Giga-bit (Gb)	Tariff per Gb IRR (USD)
1	1 < bandwidth volume < 5	36,000 (1.45)
2	5 < bandwidth volume < 10	28,000 (1.12)
3	10 < bandwidth volume < 20	24,000 (0.96)
4	20 < bandwidth volume < 40	20,000 (0.80)
5	40 < bandwidth volume	16,000 (0.64)

In addition, the regulations have resulted in the national IP tariff falling by 25%, as well as specifying that the contention ratio of each Internet connection should be 8:1, meaning that a connection speed of 1 Mbps would, in reality, only offer users speeds of around 128Kbps.

Soon after these regulations were imposed, a number of ISPs stood up and criticised them, arguing that the ICT Minister is unnecessarily discriminating between ISPs and PAPs by offering PAPs substantial discounts. PAPs and TCI announced that they had not yet received any offical documentation informing them of the imposition of these new regulations. They state that until such documents arrive, they will be unable to reduce their prices. (Source I, Source II, Source III)

FEBRUARY 21:
Deputy ICT Minister Nasrollah Jahangard said that the government would like to establish data centers in each of Iran's provincial capitals, in order to reduce the price of hosting data on Iranian servers. According to Jahangard, cheap data centers in Iran would help Iranian app developers to produce local apps by allowing them to make use of high download and upload speeds. Additionally, the government would like to encourage the use of local data centers to boost data security. (Source)

STATEMENTS FROM MINISTRIES
AND POLITICIANS

FEBRUARY 7:

The US Treasury issued a statement announcing the lifting of sanctions against Iranians that prevented them from purchasing certain services, software, and hardware relating to personal communications. (Source)

Vaezi announced that the 3G exclusivity rights granted to Rightel will expire in July/August 2014, at which point other telecommunication companies such as Irancell will be permitted to offer 3G to their customers. Also, Vaezi stated that his ministry will aim to issue 4G telecommunications licenses by the end of 1393 (20 March 2015). (Source)

FEBRUARY 8:

Mohammad Mehdi Kakvan, head of Iran Cyber Police (FATA) in Tehran Province, suggested that Tehranis should be careful about the Bluetooth functionality of their mobile phones, as criminals have been commonly exploiting Bluetooth to steal sensitive data such as contact lists. (Source)

FEBRUARY 9:

Ramezanali Sobhani Fard, an MP and Chairman of Iran's Parliamentary ICT Committee, indicated that the deadline for launching SHOMA was originally set for last year but has continued to see delays. He also added that in future, the ICT industry should constitute 2% of Iran's GNP. The figure currently sits at 0%. (Source)

FEBRUARY 15:

Ali Hakim Javadi, the former director of the Information Technology Organisation of Iran (ITO), claimed that all Internet users in Iran have been monitored to some extent but that the government lacks the legal and regulatory frameworks to act against users on the basis of such information. Also, Javadi stated that Facebook contains both useful and harmful content, and that Iran should selectively block only the harmful and criminal content, rather than the entire site. According to Javadi, Iran could compete with global social networks by launching domestic alternatives. (Source)

Entezari said that the 'Healthy Internet' will launch in Iran to promote Islamic identify on the Internet. According to Entezari, the 'Healthy Internet' is completely different from the 'Clean Internet' in the Ahmadinejad government, though the distinctions remain unclear and dubious. (Source)

Esmael Radakani, deputy head of the Security of Production and Exchange of IT, said that Iran would set up a new Computer Emergency Response Team (CERT) by the end of 1393 (March 2015). Much like the pre-existing Iranian CERTs, its task would be to monitor Internet security and publish news updates and advice on such matters. (Source)

Majid Zahedi Vash, director of the state-funded Soroush Resaneh Institute announced that the launch date of Internet TV had been postponed indefinitely until it is granted a license from the Communications Regulatory Authority of Iran (CRA). Previously, Zahedi Vash said the first phase of Internet TV would be launched in February 2014. (Source)

FEBRUARY 19:

Amir Sayah, the director of the Mobile Department at Digital Media and Information Technology

Center (SARAMAD) announced that Iranian app developers will require authorisation from SARAMAD in order to release mobile apps. Additionally, all Iranian app centers should secure official permission for their websites. Though some non-Iranian app stores such as Google Play have been blocked for some time, it is not clear what the implications of these new SARAMAD regulations will be for those that remain unblocked, such as App Store. (Source)

FEBRUARY 23:

Hojjatoleslam Nasrollah Pejmanfar, an MP and member of Iran's Parliamentary Cultural Committee argued that joining blocked social networks such as Facebook and Twitter is illegal, and that all Iranian web users must obey the law. He added that he expected Iranian authorities to respect the law, and to stay away from banned platforms such as Facebook and Twitter. (Source)

FEBRUARY 25:

Mohammad Ali Esfanani, a member of the CDICC, said that universities and educational centers can submit requests to access the Internet unfiltered, with these requests reviewed by CDICC before subsequently being granted/denied. Up to now, however, Small Media has been unable to find any evidence of such bans being lifted. (Source)

FEBRUARY 27:

Jannati named his opinion about social network and said that Iran should aim to create an environment in which citizens are able to freely use social networks such as Facebook or Twitter. (Source)

STATEMENTS FROM CIVIL SOCIETY AND PROFESSIONAL ORGANISATIONS

FEBRUARY 9:

Masoud Riyaziat - President of the Association of Internet Companies - said that the Iranian Internet suffers from two primary issues:

1. There is not enough Internet bandwidth in the country, causing users to endure frustratingly slow speeds.

2. Internet bandwidth is incredibly expensive, and the TIC has been exploiting its monopoly to secure huge revenues.

Riyaziat believes the government needs to focus on increasing the country's Internet bandwidth, whilst reducing the associated costs. (Source)

FEBRUARY 18:

Games developer Morteza Rezaei announced that a new Iranian computer game titled: 'Peacefire: Turkmenchay' is in production, with a release date set for April/ May 2014. According to Rezaei, it is a historical game based on the 1826-1828 Russo-Persian War. The player is tasked with fighting back against the Russian invasion, with the length of the game estimated at around 5 hours. The game is being produced by an all-Iranian development team. (Source)