

Cyber Security Bulletin

Updates on Cyber Security by the Centre for Internet and Society

In September 2016, the Centre for Internet and Society undertook research into cyber security in the Indian context with support from the Hewlett Foundation. Our research is focused broadly on understanding the current state of cyber security in India, cross border sharing of information and associated processes, economics of cybersecurity, sectoral security standards for the fintech industry, and the role of security researchers and professionals in strengthening the Indian cyber security.

We are happy to start a Cyber Security Newsletter series this month onwards. This letter aims to share key research outputs, submissions, and news items about latest developments in the realm of cyber security in India and information about CIS' participation in key events/ meetings since September 2016.

September 2016

CYBER SECURITY NEWS

- A **cyber attack** has led to the release of information regarding India's future submarine fleet's (The Scorpenes) capabilities. Reports suggest that the leak of secret information led to the cancellation or shelving of further collaboration with the French manufacturer.
- Given that security breaches have gone unreported in the past, the **RBI has issued a stern direction** to report all security breaches, such that the overall network is not compromised. Furthermore, it has set a deadline (31st March) for all banks to set up mechanisms for reportage of such attacks.

EVENTS

EVENTS ATTENDED

Hakon 2016

Udbhav Tiwari attended **Hakon 2016**, a conference held between September 30 and October 2, 2016 at Indore, Madhya Pradesh, India, on behalf of CIS under the Hewlett Cyber Security Project.

National Cyber Defence Summit 2016

National Cyber Defence Summit – 2016 was organized by the National Cyber Safety and Security Standards in association with State & Central Governments,

Ministry of Defence, Government of India, AICTE & Anna University on 30 September and 1 October 2016 in Chennai. Vanya Rakesh attended the summit.

CYFY 2016

The India Conference on Cyber Security and Internet Governance. Sunil Abraham participated as a panelist at **CYFY 2016** event organized by Observer Research Foundation

CIS IN NEWS

Is India Prepared for a Cyber Attack? Suckfly and Other Past Responses Say No.

SEPTEMBER 21, 2016

The article by Sushil Kambampati was **published in the Wire** on September 21, 2016. Pranesh Prakash was quoted.

October 2016

CYBER SECURITY NEWS

- State Bank of India, Axis Bank and others were **attacked by malware**, resulting in SBI blocking 6 lakh debit cards. Some reports suggest that over 30 lakh cards were compromised.
- A **DDoS attack on the servers** of global DNS host Dyn affecting various major websites like Paypal, Spotify, Netflix and Twitter.

BLOGS & SUBMISSIONS

MLATs and the proposed Amendments to the US Electronic Communications Privacy Act

OCTOBER 20, 2016

By VIPUL KHARBANDA and ELONNAI HICKOK

In continuance of our blog post on mutual legal assistance treaties (MLATs), we **examine** a new approach to international bilateral cooperation being suggested in the United States, by creating a mechanism for certain foreign governments to directly approach data controllers.

How Long Have Banks Known About The Debit Card Fraud?

BLOOMBERGQUINT, OCTOBER 22, 2016

By UDBHAV TIWARI

Udbhav Tiwari **writes** on the recent cyber security breach on bank infrastructure that has sent financial institutions into a frenzy and describes the scope and extent of the damage, whilst providing solutions for the same.

CIS IN NEWS

The Big Debit Card Breach: Three Things Card Holders Need to Understand

OCTOBER 20, 2016

The article by Alex Mathew was **published by Bloomberg** on October 20, 2016. Udbhav Tiwari was quoted.

Tech companies like Gmail, WhatsApp may be asked to store user information

OCTOBER 14, 2016

The article by Surabhi Agarwal was **published in Economic Times** on October 14, 2016. Pranesh Prakash was quoted.

November 2016

CYBER SECURITY NEWS

- The Indian Embassy (in South Africa, Libya, Italy, Switzerland, Malawi, Mali and Romania) was the victim of a major **cyber attack** that resulted in personal data of those of Indian origin being compromised.
- **Tesco Bank repaid £2.5 million** to around 9000 customers on account of a cyber heist. It is being called one of UK's biggest cyber heists.

BLOGS & SUBMISSIONS

CERT-In's Proactive Mandate - A Report on the Indian Computer Emergency Response Team's Proactive Mandate in the Indian Cyber Security Ecosystem

NOVEMBER 19, 2016

By UDBHAV TIWARI

CERT-IN's proactive mandate is defined in the IT Act, 2000 as well as in the Information Technology (The Indian Computer Emergency Response Team and

Manner of Performing Function and Duties) Rules, 2013 (CERT-In Rules, 2013) both of which postdate the existence of the organisation itself, which has been operational since 2004.

EVENTS

EVENTS ATTENDED

Industry Consultation Panel on Data Retention - DSCI

Udbhav Tiwari was a panelist for an **Industry Consultation Panel on Data Retention** organised by the Data Security Council of India (DSCI) at the Le Meridian, New Delhi on 23 November 2016.

CIS IN NEWS

The thrill of saving India from cybercrime

NOVEMBER 20, 2016

The article by Peerzada Abrar was **published in the Hindu** on November 20, 2016. Sunil Abraham was quoted.

December 2016

CYBER SECURITY NEWS

- A hacking group that calls itself “**Legion**” **hacked into the social media accounts** of various well known individuals such as Rahul Gandhi, Vijay Mallya and Barkha Dutt.
- Around \$31 Million was lost on account of a **cyber attack on Russian Central Bank** and other commercial banks. One of the many cyber attacks on the financial sector across the world.

BLOGS & SUBMISSIONS

Incident Response Requirements in Indian Law

DECEMBER 28 2016

By VIPUL KHARBANDA and ELONNAI HICKOK

Cyber incidents have serious **consequences** for societies, nations, and those who are victimised by them. The theft, exploitation, exposure or otherwise damage of private, financial, or other sensitive personal or commercial data and cyber attacks that damage computer systems are capable of causing lasting harm.

Mapping of India’s Cyber Security Related Bilateral Agreements

DECEMBER 29, 2016

By LEILAH ELMOKADEM and SAUMYAA NAIDU

The intention of this exercise is to offer a dynamic visualization that demonstrates which countries India has collaborated with on cyber security efforts and initiatives. This is an **ongoing map** that we will be updating as our research continues.

Developer team fixed vulnerabilities in Honorable PM’s app and API

DECEMBER 4, 2016

By PRANESH PRAKASH

The official app of Narendra Modi, the Indian Prime Minister, was found to contain a security flaw in 2015 that exposed millions of people’s personal data. A few

days ago a very similar flaw was reported again. This **post** by Bhavyanshu Parasher, who found the flaw and sought to get it fixed last year, explains the technical details behind the security vulnerability. The original post can be read **here**.

The Hack That Never Happened

DECEMBER 5, 2016

By PRANESH PRAKASH

This **article** was published in The Ken. It emphasises the importance of data security in light of the hacks into Narendra Modi’s app that put 7 million user data at risk.

The Curious Case of Poor Security in the Indian Twitterverse - The Wire

DECEMBER 15, 2016

By UDBHAV TIWARI

Udbhav Tiwari **analyses** the technical, legal and jurisdictional issues around the recent Twitter and email hacks and makes suggestions for targeted entities.

EVENTS

EVENTS CONDUCTED

Multistakeholder Consultation on Encryption

The Centre for Internet & Society (CIS) in collaboration with ORF and Takshashila Institution organized a **Multi-Stakeholder Consultation on Encryption** on December 17, 2016 at TERI in Bengaluru. The Roundtable sought to gain public feedback towards an encryption regulation in India.

EVENTS ATTENDED

11th DSCI - NASSCOM Annual Information Security Summit 2016

Udbhav Tiwari participated as a panelist in the **11th DSCI-NASSCOM Annual Information Security Summit 2016** in New Delhi on December 14, 2016. The event was organized by DSCI and NASSCOM.

CIS IN NEWS

Vijay Mallya cries foul after his Twitter and email accounts are hacked

DECEMBER 10, 2016

The **article** by Alnoor Peermohamed was published in Business Standard on December 10, 2016. Sunil Abraham was quoted.

Fake Narendra Modi apps aplenty, but it’s up to users to protect themselves

DECEMBER 2, 2016

The **article** was published by Indian Express on December 2, 2016. Pranesh Prakash was quoted. Also see Nandini Yadav’s blog post in BGR on December 3, 2016.

Lack of clarity about cashless and online transactions makes digital payments more worrisome

DECEMBER 1, 2016

The **article** by Neha Alawadhi was published in the Economic Times on December 1, 2016. Sunil Abraham was quoted.

January 2017

CYBER SECURITY NEWS

- MEITY is working on detailed [guidelines on digital payments](#) to ensure protection of consumers. At present there are no specific guidelines on digital payments and no regulator to ensure fair play in the segment. The digital payment platforms are presently governed by the rules notified by the RBI, IT Act and other related acts.
- Organisations across the country not confident of their ability to sense, resist and respond to cyber threats where 75% of Indian respondents say that their [cyber security function does not fully meet their organization's needs](#). The National Cybersecurity Coordinator Gulshan Rai said that the country will need immense focus to encourage technological innovations in cyber security to secure national critical infrastructure from cyber criminals.

BLOGS & SUBMISSIONS

Comments on the Report of the Committee on Digital Payments (Watal Committee)

DECEMBER 27, 2016

By SUMANDRO CHATTAPADHYAY and AMBER SINHA

The Committee on Digital Payments constituted by the Ministry of Finance and chaired by Ratan P. Watal,

Principal Advisor, NITI Aayog, submitted its report on the “Medium Term Recommendations to Strengthen Digital Payments Ecosystem” on December 09, 2016. The report was made public on December 27, and comments were sought from the general public. Here are the [comments](#) submitted by the Centre for Internet and Society.

EVENTS

EVENTS CONDUCTED

Master Class on FinTech and Digital Payments

A Master Class by Srikanth Lakshmanan and Anivar Aravind was conducted at CIS Bangalore Office on 26 January 2017. Some of the topics included Indian Digital payments landscape as a user over the decade, Experiences as ex-BFSI software developer and Indian BankTech overview, Understanding UPI, Payment Fraud, a discussion on Watal Report, etc.

Cashless Consumer Open House

Cashless Consumer was a consumer awareness initiative to drive awareness, educate consumers about digital / cashless payment systems, voice consumer concerns, share security best practices, make consumers a stakeholder in the design of payment / cashless systems, seek better consumer rights in cashless systems. It was conducted by Srikanth L and Arvind Anwar on 26 January 2017 at the CIS Bangalore Office.

EVENTS ATTENDED

Training programme for International Standardization Work

National Institute of Training for Standardization, under the Bureau of Indian Standards organised Training programme for Chairs, Convenor and Experts for International Standardization Work on 19 and 20 of January, 2017. Udbhav Tiwari attended this training as learning for CIS's standardisation work at the the International Standards Organisation.

CIS IN NEWS

The Dangers of Aadhaar-Based Payments that No One is Talking About

JANUARY 17, 2017

This [article](#) highlights how the Aadhaar-based payments, which could potentially allow citizens to pay anytime anywhere with the tap of a finger, entails issues and concerns as there are fears that integrating biometrics with digital payments could prove to be a security headache. Sunil Abraham was quoted

Security woes, bad networks hamper India's digital banking dreams

JANUARY 30, 2017

This [report](#) states that though the Modi government has promoted cashless transactions in the wake of India's demonetisation drive to crack down on 'black

money', several challenges loom, especially in India's villages where internet networks remain patchy and few people know how to use smartphones. Sunil Abraham was quoted.

Millions of Indians move from cash to digital payments, but some ask whether it's safe

JANUARY 14, 2017

This [article](#) highlights cyber security concerns in light of transition towards digital transactions and lack of awareness and regulation of privacy, data protection and digital security in India. Sunil Abraham was quoted.

February 2017

CYBER SECURITY NEWS

- The Government has informed the Supreme Court that it will set up a **specialized agency to block cybercrimes**, specifically to block and curb sharing of sexual offence videos on social networking platforms. The SC in turn has asked for a specification of the structure and functioning of the body in order to check cybercrimes.
- GOI launched a desktop and mobile security called “Cyber Swachhta Kendra” through CERT-in for desktops and mobiles. It also **launched M-Kavach**, a smartphone security solution for Android devices.

BLOGS & SUBMISSIONS

50p and Digital Payments Masterclass Learning - CIS

FEBRUARY 15, 2017

By UDBHAV TIWARI

Sunil Abraham, Saikat Dutta and Udbhav Tiwari from the CIS team attended 50p on the 24 and 25 of January 2017 in Bangalore, India. This **blog** lists the learnings from the event to shape CIS's work in the digital finance and payments space in the future.

EVENTS

EVENTS CONDUCTED

Digital Security Workshop

CIS organised a Digital security Workshop for Journalists in Mumbai in coalition with the International Center for Journalists at the Hindustan Times Office on 2nd and 3rd February 2017. Pranesh Prakash's presentation may be accessed **here**.

EVENTS ATTENDED

Securing Digital Payments: Imperatives for a Growing Ecosystem

Udbhav Tiwari attended a roundtable on Securing Digital Payments: Imperatives for a Growing Ecosystem, at “The Claridges”, APJ Abdul Kalam Road, New Delhi on 3rd February, 2017 organised by ORF and Koan Advisory

CIS IN NEWS

No Genie At Your Fingertips

FEBRUARY 20, 2017

This **article** talks about how Aadhaar biometrics will now enable cashless shopping sans card and smartphone and discusses the hopes and security fears. The article by Arindam Mukherjee was published in the Outlook. Pranesh Prakash and Sunil Abraham were quoted.

Giving out your fingerprint for Aadhaar payments is as bad as telling the seller your banking password

FEBRUARY 3, 2017

In light of projects such as Digital India, Smart City Project, Startup India, etc. a lot of has been said

about technology. This **article** highlights that there are still areas of improvement like a privacy and data protection law, an alarming shortage of cybersecurity experts and cases of government as well as personal data being under jeopardy in the years gone by. Pranesh Prakash was quoted.

Is Your Aadhar Biometrics Safe? Firms Accused Of Storing Biometrics And Using Them Illegally

FEBRUARY 24, 2017

This **article** highlights how Fears of Aadhar biometric security have been compounded as the government is sprinting towards the next phase of ‘cashless India’ and digitization. Pranesh Prakash and Sunil Abraham were quoted.

March 2017

CYBER SECURITY NEWS

- IT Minister Ravi Shankar Prasad said that the **Indian government is open for international collaboration** in the field of cybersecurity and handling cyber terrorism. The minister claimed that India would be the voice of moderation, reason and assimilation with regard to internet discourse. He said the Digital India platform is designed to bring parity between the digital haves and have-nots.
- **UIDAI asks Google India and Indian CERT to take down apps and sites accessing Aadhaar data.** It was found that some websites and apps were providing unauthorized Aadhaar related services. The illegal/unauthorized websites were blocked by Department of Telecommunication and unauthorized mobile apps were removed from Playstore.

BLOGS & SUBMISSIONS

Information Technology (Security of Prepaid Payment Instruments) Rules, 2017

March 20, 2017

The Centre for Internet and Society submitted **comments** on the Information Technology (Security of Prepaid Payment Instruments) Rules, 2017. The comments were prepared by Udbhav Tiwari, Pranesh Prakash, Abhay Rana, Amber Sinha and Sunil Abraham.

It's the technology, stupid

MARCH 31, 2017

By SUNIL ABRAHAM

This **article** lists down eleven reasons why the Aadhaar is not just non-smart but also insecure because it is based on biometrics. It argues that biometrics should be used for targeted surveillance, but this technology should not be used in e-governance.

EVENTS

EVENTS ATTENDED

Internet Freedom Festival

Vidushi Marda spoke at a panel on Practical implementations of human rights respecting cybersecurity policy at the Internet Freedom Festival held from - 6 - 10 March, 2017 in Valencia, Spain.

Rights Con 2017

Vidushi Marda spoke at a panel titled 'Walking the cyber talk: How successful have we been in building

a global, multi stakeholder culture of cybersecurity?' at Rights Con 2017 held from 29 to 31 March, 2017 in Brussels, Belgium.

ICEGOV2017

Amber Sinha took part in the UNICEF - ICEGOV2017 Roundtable about Leveraging Technology for Greater Financial Inclusion and Cyber Safety organised by the Learning Links Foundation held in New Delhi on 9 March 2017.

CIS IN NEWS

12 Digit Conundrum

MARCH 13, 2017

This **report** highlights that even as the Centre plans to link as many as 500 schemes to Aadhaar, concerns over data safety are rising. Sunil Abraham was quoted.

Digital Illusions

MARCH 3, 2017 (PRINT EDITION)

This **article** highlights security concerns with the Watal Committee report and the move towards digital financial transactions. CIS's work was quoted.

April 2017

CYBER SECURITY NEWS

- **RBI to set up new subsidiary for cyber security.** The Unit will be based in Mumbai with 4 specialized departments - Research, monitoring networks, monitoring computer systems and the project department will be fully functional by 2018.

EVENTS

EVENTS CONDUCTED

Digital Forensics and Cyber Investigations

Dr. Madan M. Oberoi was the Speaker at the inaugural #FirstFriday@cis_india event at the Delhi office on 7th April, 2017 on Digital Forensics and Cyber Investigations.

EVENTS ATTENDED

ISO/IEC JTC1/SC 27 Meetings

CIS participated in the ISO/IEC JTC 1/ SC 27 Working Group meetings organized by Bureau of Indian Standards, University of Waikato and Novotel in New Zealand during April 18 - 25, 2017. Udbhav Tiwari attended the meetings in Working Group 1 - Information security management systems and Working Group 5 - Identity management and privacy technologies.

May 2017

CYBER SECURITY NEWS

- **MeitY requires government departments to have a Chief of Information Security officer (CISO)**, where it shall be the responsibility of the Secretary of a department to identify a member of senior management to serve as CISO. The CISO will be expected to establish a cybersecurity program and coordinate security policy compliance efforts across the organization and interact regularly with CERT-in.
- **Zomato reported a massive data breach**, where it was claimed information from 17 million accounts, including email IDs and hashed passwords, was stolen. 17 million accounts were stolen. Zomato reassured users that no payment information or credit data had been leaked. Affected passwords were reset and users were logged out as a precaution. The stolen information includes email IDs and hashed passwords.

BLOGS & SUBMISSIONS

WannaCry's origin, modus operandi, impact & safe cyber practices explained

MAY 31, 2017

By UDBHAV TIWARI

This [post](#) explains the origin of WannaCry.

EVENTS

EVENTS ATTENDED

Third Multi Stakeholder Consultation on Encryption

Saikat Datta, Japreet Grewal and Udbhav Tiwari represented CIS at the Third Multistakeholder **Consultation** on Encryption held at the Taj Palace, New Delhi on the 11 of May, 2017 organised by the Observer Research Foundation, New Delhi. The discussion centred around issues such as trust between the government and citizens, key lengths, standards for device encryption and sector-specific security regulations.

National Standards Conclave

Udbhav Tiwari represented CIS in the 4th National Standards **Conclave** held on the 1st and 2nd of May, 2017 at The Lalit, New Delhi. The event looked at creating a National Standards Strategy to focus on India's standardisation efforts in the global stage. The event also focused on the release on the National Standards Portal, a website that creates a one stop access of standards, technical regulations and TBT information.

CIS IN NEWS

Hacker steals 17 million Zomato users' data, briefly puts it on dark web

MAY 19, 2017

This [article](#) highlights the recent case where according to information security blog and news website HackRead, the data of users of Zomato was being peddled online on the "dark web" for about \$1,000 and at least 17 million user records have been stolen from online restaurant search platform Zomato. The company, also a food delivery platform, advised users to change passwords. Pranesh Prakash was quoted.

WannaCry: ATMs not to shut down, clarifies RBI, but how safe are our machines?

MAY 16, 2017

The [blog post](#) highlights the onslaught by ransomware WannaCry across the globe and denial by the

Reserve Bank of India about how it has asked banks in the country to shut down ATMs despite multiple conflicting reports on the same. Udbhav Tiwari was quoted.

Experts stress on need for enhanced security

MAY 6, 2017

With more and more people falling prey to phishing scams, the [article](#) highlights how experts believe that lack of adequate security features in online payment systems will only increase the number of such cases with the rise in such crimes. Also, cyber security consultants blame the lack of preparedness before taking the digital economy route as a cause for such problems. Pranesh Prakash was quoted.

June 2017

CYBER SECURITY NEWS

- As Indian Government embarked on initiatives like Digital India, it has spurred the use of digital payments across the country. This **highlights** the need for a cybersecurity reboot, where companies in India need to be proactive to ensure they foster efficiency and efficacy in cybersecurity management.
- With **rise** in cashless economy post-demonetisation, improved cybersecurity has become necessary with the government and financial firms in India promoting cashless transactions. Also, global cyber security company urged for a major beefing up of online defences of consumers and banks against hackers.
- **Reports** suggest more than 60 per cent of the software used by companies in India is unregulated, which poses a threat of cyber attacks. Recent survey by EY shows over 49 per cent of chief information officers identified security threats from malware as a major threat posed by unlicensed software, while 26 per cent employees admitted to installing outside software on work computers.

BLOGS & SUBMISSIONS

Cybersecurity Compilation: Indian Context

JUNE 18, 2017

By LEILAH ELMOKADEM and edited by ELONNAI HICKOK

This **document** intends to serve as a comprehensive source compiling all the cyber-security related regulations, policies, guidelines, notifications, executive orders, court rulings, etc.

EVENTS

EVENTS ATTENDED

Has Geek Open House

On May 26, 2017 at the **Has Geek open house** participants discussed the state of information security in India the legal and regulatory measures that companies must comply with, and consumers should be aware of. Udbhav Tiwari was a speaker at the event organized by Has Geek in Bengaluru.

EuroDIG 2017

Elonnai Hickok attended EuroDIG 2017, a year-round dialogue on politics and digitisation across the whole European continent which culminates in an annual event. It was held in Tallinn, Estonia on 6th-7th June 2017.

Panel at the Second Think Tank Forum

Udbhav Tiwari participated on a panel titled "The New Cold War: Information and Cyber Wars" at the Second

India Think Tank Forum organized by ORF, the Think Tank Programme at UPenn and the McKinsey Institute between the 19 to 21 June, 2017 at the Claridges in New Delhi.

DSCI Best Practices Meet 2017 - Identity Systems and Trust Panel

Udbhav Tiwari represented CIS on a panel titled "Reposing Trust in Citizen Identity Systems" at the DSCI Best Practices Meet held at the ITC Gardenia on the 22 and 23 of June, 2017 in Bangalore.

EVENTS CONDUCTED

CISxScholars Delhi

On June 29, 2017, Harsh Gupta **discussed** "FAT ML (Fairness, Accountability, and Transparency in Machine Learning) for Lawyers and Lawmakers" at the CIS office in Delhi.

CIS IN NEWS

Are biometrics hack-proof?

JUNE 11, 2017

This **article** published by Livemint on June 11, 2017 talks about the growing concerns over biometric security in india and lists views of several experts asking if biometrics can really be hacked. Pranesh Prakash was quoted.