



Delhi Policy Group

Advancing India's Rise as a Leading Power

DPG Cyber Review

Volume 1, Issue 7

AUGUST 2020



Delhi Policy Group

Core 5A, 1st Floor, India Habitat Centre, Lodhi Road, New Delhi- 110003

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ABOUT US

Founded in 1994, the Delhi Policy Group (DPG) is among India's oldest think tanks with its primary focus on strategic and international issues of critical national interest. DPG is a non-partisan institution and is independently funded by a non-profit Trust. Over past decades, DPG has established itself in both domestic and international circles and is widely recognised today among the top security think tanks of India and of Asia's major powers.

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DPG Cyber Review

DPG Cyber Review is compiled by our research team from publicly available information and open source media to provide an overview of significant developments related to cyber and digital technology domains during the month. Your comments and feedback can be addressed to Brig. Abhimanyu Ghosh (Retd.), Senior Fellow for Cyber Security and Digital Technologies at abhi.ghosh@dpg.org.in

Cover Photographs:

Prime Minister Narendra Modi launches submarine cable connectivity from Chennai to the Andaman & Nicobar Islands (CANI), through video conferencing from New Delhi, on August 10, 2020.

Source: <https://www.pmindia.gov.in/en/image-gallery/>

Prime Minister Narendra Modi addressing the Grand Finale of Smart India Hackathon 2020, through video conferencing from New Delhi, on August 01, 2020. Source: <https://www.pmindia.gov.in/en/image-gallery/>

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Abstract

During August, Indian cyber space was the target of attack, mostly from intelligence agencies of China and Pakistan. However, some attacks also originated from Taiwan, Hongkong and Iran.

With the opening up of the space sector for private participation, Indian private space company, "Skyroot", successfully launched an upper stage rocket engine on August 12, 2020 and announced plans to launch its first small satellite launch vehicle (SSLV) by December, 2021.

In keeping with the priority attached by the Indian Government to connectivity in remote and border areas of strategic importance, a 2300 km long submarine optical fibre cable between Chennai and the Andaman & Nicobar Islands was inaugurated by the Prime Minister. Projects to provide mobile connectivity to border villages in J&K and Ladakh are also under implementation.

In the midst of the continuing border standoff in Ladakh, China has started laying fibre optic cables and installing other equipment for 5G communications along the Line of Actual Control (LAC).

Indian 5G trials are likely to commence in September, 2020. However, Chinese 5G equipment vendors may be restricted from these trials and auctions on grounds of national security.

Industry bodies like NASSCOM, CII and academic institutions like IITs and IISc are teaming up with the Government organisations for growth of Artificial Intelligence (AI) in India. It is estimated that AI and data could add \$450-\$500 billion to India's GDP by 2025. Quantum computing and technology adaptation are also gaining pace and a national Quantum Plan will be ready soon. Blockchain technologies are being explored by the Election Commission to enable remote voting, minimise election tampering and maximise poll accessibility.

India will soon introduce a new Cyber Security Policy. A draft Health Data Management Policy has been released for data privacy protection under the National Digital Health Mission (NDHM). A Computer Emergency Response Team for the Financial Sector (CERT-Fin) to secure the country's financial sector from cyber attacks is in the offing.

The announcement of a ban on certain items of defence imports has offered new opportunities for major IT companies and start ups which have thus far played a limited role in the development of digital technologies for the Armed

Forces. Incentive schemes for local manufacturing of electronic components and semiconductors are also showing results.

During August, the international cyber space has come under attack both from crime mafias and malign state actors. The New Zealand stock exchange became non- operational due to one such cyber-attack.

An intensifying US-China technology Cold War during the month saw China adopting its own brand of "self-reliant" economic strategy. Huawei launched a semiconductor chip production line completely delinked from US technology. Huawei's smart car solutions business unit plans to launch 100 and 200-channel low-cost multichannel Light Detection and Ranging (lidar) sensors soon. Chinese Video App TikTok has filed a lawsuit challenging the US government's ban of TikTok in the US.

The White House has approved the transfer of 100 megahertz of electromagnetic spectrum from military use to commercial 5G. The US Federal Communications Commission (FCC) has approved 'Project Kuiper' of Amazon to launch and operate a constellation of 3,236 internet-providing satellites.

A number of bilateral cooperation arrangements on cyber security, data protection and 5G networks have been brought into operation during the month to protect national assets and individual privacy "from aggressive intrusions" by malign state actors.

China has proposed setting up a BRICS innovation base to strengthen cooperation among the five-country bloc which includes India in sectors like 5G, AI and digital economy.

National Developments

Cyber Threat Scenario

Indian security agencies reported on August 17, 2020 that the Chinese People's Liberation Army's secret unit '61398', known for cyber espionage, has intensified its activities against India and is eyeing information related to India's defence and research.¹

Inter-Services Public Relations (ISPR), the Pakistani military's media arm, claimed on August 12, 2020 that the country's intelligence apparatus had identified a major cyberattack by Indian intelligence agencies wherein the cell phones and other devices of Pakistani government officials and military personnel were hacked. The allegations were not corroborated.²

Indian government's nodal cyber security agency, CERT-In, investigating the recent cyberattack on the National Highway Authority of India (NHAI), reported on August 14, 2020 that the internal network of the NHAI office was compromised by unknown attackers from IP addresses in Taiwan and Hong Kong. Cyber attackers had exfiltrated data and leaked sample data of two systems of NHAI into the public domain.³

Haryana police alerted WhatsApp users on August 30, 2020 about a new trend of cybercrime by fraudsters hijacking WhatsApp accounts to defraud targeted individuals and organisations as many activities, including financial transactions, had moved online after Covid-19. A series of preventive and precautionary measures were advised.⁴

Cyber-security firm Group-IB reported on Aug. 24, 2020 that a group of low-skilled hackers operating out of Iran has been launching attacks against companies in India and attempting to encrypt their networks with a version of the 'Dharma' ransomware.⁵

¹ <https://www.dnaindia.com/india/report-chinese-army-s-secret-61398-unit-spying-on-india-s-defense-and-research-warns-intelligence-2835741>

² <https://timesofindia.indiatimes.com/world/pakistan/pak-army-claims-major-cyber-attack-by-indian-intelligence-identified/articleshow/77511959.cms>

³ <https://ciso.economictimes.indiatimes.com/news/logins-from-taiwan-hong-kong-ips-found-during-june-cyberattack-on-nhai/77539636>

⁴ <https://ciso.economictimes.indiatimes.com/news/haryana-police-warn-about-hijacking-of-whatsapp/77826982>

⁵ <https://www.zdnet.com/article/group-of-unskilled-iranian-hackers-behind-recent-attacks-with-dharma-ransomware/>

Digital Technologies

Indian private sector aerospace startup 'Skyroot' successfully test-fired an indigenous upper stage rocket engine 'Raman' on August 12, 2020. In the next six months, 'Skyroot' plans to test fire two full stages of its rocket under development.

The company builds Small Satellite Launch Vehicles (SSLV) named 'Vikram' for lifting small satellites, weighing 250-700 kg, into the earth's lower orbit. The first launch vehicle, 'Vikram-I', is set to be launched around December, 2021 while Vikram-2 and Vikram-3 are planned around 2022-2023. The startup has raised \$4.3 million to date and is currently working to secure another \$15 million by 2021.⁶

This is the encouraging outcome of opening up of the space sector for private participation by the Government of India and the formation of the Indian National Space Promotion and Authorisation Centre (IN-SPACe), an arm of the Indian Space Research Organisation (ISRO).⁷

Communication Technology

Prime Minister Shri Narendra Modi inaugurated a 2300 km long submarine Optical Fibre Cable between Chennai and the Andaman & Nicobar Islands, laid at the cost of Rs.1,224 crores (\$ 168 million), on August 10, 2020. The submarine OFC link will deliver bandwidth of 2 x 200 Gigabits per second (Gbps) between Chennai and Port Blair, and 2 x 100 Gbps between Port Blair and other islands.⁸

IT Minister Ravi Shankar Prasad stated on August 10, 2020 that the Government is prioritising connectivity in remote and border areas of strategic importance. Mobile connectivity to 144 villages in the Union Territories of Jammu & Kashmir and Ladakh is under implementation. Further, satellite based DSPTs (Digital Satellite Phone Terminals) are being provided at 1347 sites for the Army and PMFs in remote areas, of which 183 sites are operational.⁹

⁶ <https://indianitblog.com/5-facts-about-indias-first-space-tech-startup-skyroot-aerospace/2003/>

⁷ [https://inc42.com/buzz/skyroot-becomes-first-indian-startup-to-successfully-test-fire-multi-stage-rocket-engine/#:~:text=Founded%20by%20Pawan%20Kumar%20Chandana,\(SSLV\)%20for%20small%20satellites.](https://inc42.com/buzz/skyroot-becomes-first-indian-startup-to-successfully-test-fire-multi-stage-rocket-engine/#:~:text=Founded%20by%20Pawan%20Kumar%20Chandana,(SSLV)%20for%20small%20satellites.)

⁸ <https://www.livemint.com/news/india/pm-inaugurates-2-300-km-long-submarine-ofc-connecting-chennai-port-blair-11597038116539.html>

⁹ <https://pib.gov.in/PressReleasePage.aspx?PRID=1644795>

5G Technology

As the border standoff continues, China has started to lay fibre optics cables and install equipment for fifth-generation wireless 5G technology along the Line of Actual Control (LAC) in the Demchok Area, with fresh infrastructure also coming up at Pangong Tso.¹⁰ The installation and development of cellular transmission technology by China were flagged by Indian intelligence agencies in the first week of August.¹¹

The Department of Telecommunications (DoT) is expected to provide spectrum to telecom operators for the purpose of carrying out 5G trials by September, 2020. The trials have been delayed due to the Covid-19 pandemic.¹² However, Chinese companies will not be allowed to participate in the trials and auctions, under investment rules amended in July, 2020 that cite national security concerns to restrict bidders from nations that share land borders with India.¹³

Last month, a Department of Telecommunications (DoT) committee has also recommended banning Chinese equipment makers. The 6-member committee, comprising members from the DoT, Intelligence Bureau, and National Security Council Secretariat, had been appointed to review the role that Chinese equipment makers will have in the upcoming 5G trials and eventual auctions.¹⁴

The fifth-generation or 5G technology will have better prospects in India following progress on development of India-specific use cases and an enabling policy environment, lack of which was holding India back from embracing next-generation technology. The global 5G use cases may not be applicable to India, as stated by Sunil K Gupta, Secretary, Telecom Regulatory Authority of India (TRAI) at a Webinar on August 13, 2020.¹⁵

¹⁰ <https://www.timesnownews.com/india/article/china-not-de-escalating-building-5g-infra-in-demchok-area-with-fresh-construction-at-pangong-tso/644195>

¹¹ <https://telecom.economictimes.indiatimes.com/news/china-builds-5g-infra-along-lac-fresh-construction-at-pangong-tso/77801897>

¹² <https://telecom.economictimes.indiatimes.com/news/dot-expected-to-provide-spectrum-for-5g-trials-by-sep-report/77537704>

¹³ <https://www.livemint.com/industry/telecom/china-s-huawei-zte-set-to-be-shut-out-of-india-s-5g-trials-11597325607599.html>

¹⁴ <https://www.cnbc18.com/telecom/dot-committee-recommends-banning-chinese-cos-from-5g-trials-6481431.htm>

¹⁵ <https://telecom.economictimes.indiatimes.com/news/5g-to-have-a-better-future-in-india-trais-gupta/77520161>

Artificial Intelligence

The Ministry of Defence plans to use artificial intelligence to carry out predictive analysis of public grievances, to identify the cause and nature of grievances and frame policy accordingly. A tripartite memorandum of understanding has been signed in this regard by MOD with the Department of Administrative Reforms and Public Grievances and the Indian Institute of Technology, Kanpur (IITK).¹⁶

On August 18, 2020 NASSCOM released a report "Unlock Value from Data and AI: The Indian Opportunity" which states that Artificial Intelligence (AI) and data could add \$450-\$500 billion to India's GDP by 2025 and drive India's economic growth. Nearly 45% of this value is likely to be delivered by three sectors: consumer goods and retail, agriculture and banking, and insurance.¹⁷ The report articulates the key structural steps that India needs to take to realise the value of this technology.

On August 28, 2020 the Confederation of Indian Industry (CII) established a new forum on Artificial Intelligence chaired by IBM's Sandip Patel. The CII AI Forum will focus on building a strong AI ecosystem in India by building awareness at scale and enhancing capabilities. It will also work with the government in shaping a conducive policy and regulatory regime; encourage public-private partnerships in research and development; and facilitate pilot implementation of AI solutions in priority sectors.¹⁸ On August 4, 2020 Nokia announced a collaboration with the Indian Institute of Science (IISc) to establish the Nokia Centre of Excellence (CoE) for Networked Robotics. The CoE will promote inter-disciplinary research involving robotics, advanced communication technologies and Artificial Intelligence (AI) to develop socially relevant use cases.¹⁹

On August 6, 2020 NHAI signed an MoU with the Indian Institute of Technology, Delhi to set up a Centre of Excellence for use of Artificial Intelligence (AI) in data-driven decision making and a advanced data management system for highways. Under the partnership, IIT-Delhi will work

¹⁶ <https://cio.economictimes.indiatimes.com/news/next-gen-technologies/defence-ministry-to-use-ai-to-carry-out-predictive-public-grievance-analysis/77366955>

¹⁷ <https://cio.economictimes.indiatimes.com/news/corporate-news/artificial-intelligence-could-add-450-500-billion-to-gdp-by-2025-nasscom/77625795>

¹⁸ <https://economictimes.indiatimes.com/tech/software/cii-launches-artificial-intelligence-forum-chaired-by-ibms-sandip-patel/articleshow/77801590.cms>

¹⁹ <https://www.nokia.com/about-us/news/releases/2020/08/04/nokia-to-set-up-robotics-lab-at-indian-institute-of-science-for-research-on-socially-relevant-use-cases-based-on-5g-and-emerging-technologies/>

with the NHAI to develop advanced analytics based on AI, prepare simulation models, and enhance data storage and retrieval capacities to further strengthen NHAI's capabilities in data-driven decision making.²⁰

Quantum Technology

At the India Quantum Technology Conclave (IQTC2020) held on August 06, 2020 Department of Science and Technology (DST) Secretary Professor Ashutosh Sharma highlighted the importance of bringing industry on board in Quantum Technology and Science in India and said that a national Quantum plan will be ready in a few months. The conclave focused on preparedness on "Quantum computing and Technology adaptation in India" and discussed future strategies and roadmap for the development of quantum technologies in India.²¹

The Finance Minister, in her Budget speech, had announced the setting up of a National Quantum Technology Mission with an investment of Rs 8,000 crore (\$1.095 Billion) over five years.

Blockchain Technologies

It was reported on August 11, 2020 that Election Commission (EC) officials are exploring the potential of using blockchain technology to enable remote voting. Growing concern over election security, voter registration integrity, poll accessibility, and voter turnout has led governments to consider blockchain-based voting platforms as a means to increase faith and participation in essential democratic processes. The aim is to overcome the geographical hurdles, minimise election tampering and maximise poll accessibility.²²

Government Initiatives

Strategy/Policy

During his Independence Day speech on August 15, 2020 Prime Minister Narendra Modi announced that India will soon introduce a new cyber security policy.²³ He also indicated that optical fibre connectivity would be provided to

²⁰ <https://cio.economictimes.indiatimes.com/news/government-policy/nhai-inks-pact-with-iit-delhi-to-set-up-centre-of-excellence-for-use-of-ai-in-decision-making/77412582>

²¹ <https://pib.gov.in/PressReleasePage.aspx?PRID=1643690>

²² <https://www.drishtiias.com/daily-updates/daily-news-analysis/blockchain-technology-in-voting>

²³ <https://indianexpress.com/article/technology/tech-news-technology/pm-modi-india-will-have-a-new-cybersecurity-policy-soon-6555565/>

all 6 lakh villages of the country in 1,000 days and high-speed internet connectivity via a submarine optical fibre cable will be extended to Lakshadweep within this period.²⁴

A draft Health Data Management Policy was released on August 26, 2020 for the National Digital Health Mission (NDHM), which aims to create a digital health ecosystem with a unique health ID for every citizen. The policy has proposed a framework and a set of minimum standards for data privacy protection to be followed in compliance with applicable laws and regulations with respect to "sensitive personal information", "personal health records" and "health locker".²⁵ Public comments on the draft have been sought by September 3, 2020.

On August 18, 2020 it was reported that Indian government is setting up a Computer Emergency Response Team for the Financial Sector (CERT-Fin) to secure the country's financial sector from cyber-attacks, bearing in mind the increase in number of digital transactions on account of Covid-19 and threats from hostile countries such as China and Pakistan. This decision was taken by the Financial Stability and Development Council (FSDC) chaired by the Finance Minister, in coordination with financial regulators.²⁶

Capability Building

At the Science Policy Forum held on August 31, 2020 the Government of India announced an **Emerging Technologies Initiative (ETI)** in partnership with the New, Emerging and Strategic Technologies (NEST) Division of MEA and the Office of the Principal Scientific Advisor. The vision of **ETI** is to understand, analyse and anticipate the impact of emerging strategic, disruptive, futuristic & critical technologies on economies, social equity, security and international relations. NEST will function as the coordinator bringing together policy and operational interfaces with key partner countries and international organisations.²⁷

Defence Minister Rajnath Singh announced on August 9, 2020 a list of 101 items that the Defence Ministry will stop importing. This has offered new opportunities for major IT companies and Start Ups, which had so far played a

²⁴ <https://indianexpress.com/article/india/pm-modi-all-6-lakh-villages-to-get-high-speed-net-country-a-new-cybersecurity-law-6556540/>

²⁵ <https://ciso.economictimes.indiatimes.com/news/govt-unveils-data-policy-for-digital-health-mission/77775988>

²⁶ https://m.hindustantimes.com/india-news/govt-plans-cyber-security-system/story-bHRwwBeFVGLlrA3VMmOaDO_amp.html

²⁷ https://twitter.com/spf_in/status/1300306553715654656

restricted role in the development of digital technologies for the Indian Armed Forces. Indigenous digital technologies, such as artificial intelligence (AI), machine learning (ML), swarming drones, blockchain, and quantum computing, which are crucial to strengthen the military, will get a boost.²⁸

Speaking at the Grand Finale of the Smart India Hackathon (SIH) 2020 on August 1, Prime Minister Narendra Modi commended students working on solutions to the challenges being faced by the country, which can strengthen India's aspirations on Data, Digitisation and Hi-tech Future.²⁹ In his Mann ki Baat address on August 30, he again congratulated the youth of the country for participating enthusiastically in the AatmaNirbhar Bharat App Innovation Challenge.³⁰

Budgetary Support

Union Minister Ravi Shankar Prasad said on August 18, 2020 that budgetary support by the Indian Government under schemes for manufacturing of electronic components and semiconductors, the modified electronics manufacturing clusters (EMC 2.0) scheme, and the production-linked incentive (PLI) scheme for large scale electronics manufacturing, announced earlier this year, is showing results. These schemes jointly offer incentives of around Rs 50,000 crore (\$ 6.853 Billion) over the period of the next five years. All the top mobile manufacturers and their contract manufacturers have applied under the PLI scheme, including five global champions and five national champions.³¹

International Developments

Cyber Threat Scenario

Israel said on August 12, 2020 that it had thwarted a cyber-attack on its defence industry by a hacking group known as Lazarus, which the United States says is run by North Korean intelligence. Israel's Defence Ministry said hackers posing

²⁸ <https://indianexpress.com/article/explained/explained-what-is-the-negative-imports-list-for-defence-announced-by-rajnath-singh-6547318/>

²⁹ <https://www.technologyforyou.org/pm-addresses-grand-finale-of-smart-india-hackathon-2020/>

³⁰ <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1649759>

³¹ <https://telecom.economictimes.indiatimes.com/news/received-proposals-worth-rs-12-lakh-crore-under-pli-scheme-ravi-shankar-prasad/77615833>

as potential employers sent job offers to defence workers trying to infiltrate their networks and gather sensitive information.³²

The New Zealand Stock Exchange (NZX) said on August 31, 2020 that its main website had collapsed after days of disruptions due to cyber-attacks from abroad. The attack was identified as a Distributed Denial of Service Attack (DDoS), which overwhelms the online service rendering it inoperable.³³

On August 13, 2020 the U.S. National Security Agency and Federal Bureau of Investigation publicly alleged that a Russian hacking tool, code named "Drovorub" and linked to a specific Russian intelligence team, was associated with hackers who broke into the Democratic National Committee in 2016.³⁴

The U.S. Department of Commerce and the European Commission have initiated discussions on August 10, 2020 to evaluate the potential for an enhanced EU-U.S. Privacy Shield data sharing framework to comply with the judgement of the Court of Justice of the European Union in the Schrems II case. The judgement declared that this framework is no longer a valid mechanism to transfer personal data from the European Union to the United States.³⁵

In a statement on August 27, 2020 the Pakistan Telecommunication Authority (PTA) said it has asked YouTube to "immediately block vulgar, indecent, immoral, nude and hate speech content for viewing in Pakistan". The PTA said viewing such content has "extremely negative effects" and can foster "repugnant discord".³⁶

Digital Technologies

The Trump Administration is taking strong action to ensure American leadership in the industries of the future - artificial intelligence (AI), quantum information science (QIS), 5G communications, and other key emerging technologies that will shape the US economy and security for years to come. The White House, the National Science Foundation (NSF) and the Department of Energy (DOE) announced more than \$1 billion in awards for the

³² <https://www.reuters.com/article/us-israel-cyber-attack/israel-says-it-thwarted-foreign-cyber-attack-on-defence-industry-idUSKCN25825T>

³³ <https://www.crn.in/security/new-zealand-stock-exchange-website-collapses/>

³⁴ <https://ciso.economictimes.indiatimes.com/news/nsa-fbi-expose-russian-intelligence-hacking-tool-report/77542130>

³⁵ https://ec.europa.eu/newsroom/just/item-detail.cfm?item_id=684836

³⁶ <https://news.yahoo.com/pakistan-tells-youtube-block-objectionable-102002066.html>

establishment of 12 new AI and QIS research and development (R&D) institutes nationwide.³⁷

To overcome US Sanctions, Huawei has launched the "Tashan Project", that will build a 45nm semiconductor chip production line completely delinked from US technology by the end of this year, as reported by a blogger on August 12, 2020. Huawei is also exploring cooperation with other companies to build a 28nm chip production line with its own technology.³⁸

Video app TikTok filed a lawsuit on August 24, 2020 challenging the US government's ban of TikTok in the US, accusing it of being a national security threat. President Donald Trump had signed on August 6, 2020 an Executive Order invoking the International Emergency Economic Powers Act, giving Americans 45 days to stop doing business with the Chinese owners of consumer apps TikTok and WeChat.³⁹

5G Technology

On August 10, 2020 the White House approved the transfer of 100 megahertz of electromagnetic spectrum from military use to commercial 5G. However, the Pentagon will continue to use the bandwidth, balancing commercial use with military needs.⁴⁰ The transfer covers the mid-band frequencies from 3450 MHz to 3550MHz, better suited to expand 5G access for all Americans and strengthen potential competitors to China's Huawei in the global market.⁴¹

The US Federal Communications Commission (FCC) has approved "Project Kuiper" of Amazon on August 2, 2020 to launch and operate a constellation of 3,236 internet-providing satellites that will provide backhaul solutions for wireless carriers extending LTE and 5G service to new regions and deliver high-speed, low-latency broadband service to places beyond the reach of traditional fibre or wireless networks. Amazon will spend \$10 billion on the project.⁴²

³⁷ <https://www.whitehouse.gov/articles/trump-administration-investing-1-billion-research-institutes-advance-industries-future/>

³⁸ <https://cnettechpost.com/2020/08/12/huawei-reportedly-launches-tashan-project-to-build-45-nm-chip-production-line-this-year/>

³⁹ <https://www.securityweek.com/tiktok-sues-over-ban-ordered-trump>

⁴⁰ <https://www.bloomberg.com/news/articles/2020-08-10/pentagon-to-share-spectrum-with-u-s-telecoms-for-5g-networks>

⁴¹ <https://breakingdefense.com/2020/08/pentagon-gives-up-huge-slice-of-spectrum-for-5g/>

⁴² https://www.business-standard.com/article/international/amazon-set-to-launch-3-236-satellites-to-beam-affordable-internet-120080200202_1.html

Internet of Things

The Global Times reported on August 13, 2020 that China's new-generation space-borne Internet-of-Things (IoT) project codenamed Xingyun-2 has successfully completed technological testing for the laser communication payloads onboard the two satellites of the network. The project is being steered by a company under the state-owned China Aerospace Science and Industry Corporation (CASIC).⁴³

Huawei has formed a team to focus on developing low-cost multichannel Light Detection and Ranging (lidar) sensors with the goal of making the technology affordable for all smart vehicles. Wang Jun, head of Huawei's smart car solutions business unit, said on August 13, 2020 that the company plans to launch 100-channel and 200-channel lidar products soon, at a cost of US\$ 500 or less.⁴⁴

On August 10, 2020 the European Commission launched a sector inquiry into the 'internet of things' (IoT) covering consumer-facing IoT products and services over the next two years. The inquiry will focus on how IoT ecosystems handle personal data, interoperability, exclusivity, and the use of proprietary standards. Under the EU's General Data Protection Regulation (GDPR), there is a requirement that devices should only collect data that is necessary for use.⁴⁵

Blockchain Technologies

On August 13, 2020 the U.S. Justice Department announced that it had seized \$2 million from more than 300 terrorist cryptocurrency accounts. The accounts were linked to three Middle East terror groups who are using cryptocurrencies and social media campaigns to finance their operations. It was the largest ever seizure of online terrorist funding.⁴⁶

On August 27, 2020 the U.S. Department of Justice filed a civil forfeiture complaint to seize 280 crypto-currency accounts used by North Korean hackers and their Chinese agents, who had carried out a series of cyber thefts

⁴³ <https://www.globaltimes.cn/content/1197631.shtml>

⁴⁴ <https://www.scmp.com/tech/big-tech/article/3097246/huawei-aims-develop-low-cost-lidar-systems-boost-autonomous-driving>

⁴⁵ <https://www.pinsentmasons.com/out-law/news/european-commission-launches-inquiry--internet-of-things>

⁴⁶ <https://www.dailymail.co.uk/news/article-8625173/US-seizes-2-million-dollars-cryptocurrency-terror-groups-including-ISIS.html>

of over \$300 million from crypto-currency companies around the world, including one in the U.S.⁴⁷

International Cooperation

Bilateral Cooperation

On the second leg of a four-nation tour of Central and Eastern Europe, US Secretary of State Mike Pompeo met with Slovenian officials on August 13, 2020 and signed a joint declaration on 5G Clean Network Security that aims to keep untrusted telecommunications vendors like Huawei out of Slovenia.⁴⁸

Israel and the US are close to signing a memorandum of understanding (MOU) that would commit Israel to joining the US State Department's "Clean Network" and not use Chinese equipment in building its 5G networks. Israel opened a tender to build its 5G network on August 4, 2020 before US Secretary of State Mike Pompeo had announced the expansion of the Clean Network initiative that seeks to protect national assets and individual privacy "from aggressive intrusions by malign actors, such as the Chinese Communist Party".⁴⁹

Taiwan and the U.S. on August 26, 2020 issued a joint declaration on 5G security, strengthening their cooperation under Washington's "Clean Network" initiative to block major Chinese tech companies including Huawei.⁵⁰

Multilateral Cooperation

China is considering establishing a BRICS innovation base to strengthen cooperation among the five-country bloc, which includes India, in sectors like 5G, AI and digital economy, Chinese Industry and Information Technology minister Xiao Yaqing stated on August 25, 2020. Xiao said Beijing is actively considering setting up the base in China in order to strengthen practical cooperation among BRICS members.⁵¹

⁴⁷ <https://www.livemint.com/news/world/us-moves-to-seize-cryptocurrency-accounts-linked-to-north-korean-heists-11598597643833.html>

⁴⁸ <https://www.financialexpress.com/industry/technology/mike-pompeo-in-slovenia-pushes-5g-security-warns-about-china/2054345/>

⁴⁹ <https://www.jpost.com/israel-news/israel-us-close-to-signing-deal-on-leaving-china-out-of-5g-infrastructure-638684>

⁵⁰ <https://asia.nikkei.com/Politics/International-relations/Taiwan-and-US-join-forces-on-5G-security-in-move-to-exclude-China>

⁵¹ <https://www.hindustantimes.com/world-news/china-keen-to-establish-brics-innovation-base-focussing-on-5g/story-1m00RJzsE8yhNg6q3L7BsM.html>



Delhi Policy Group
Core 5A, 1st Floor,
India Habitat Centre, Lodhi Road
New Delhi - 110003
India

www.delhipolicygroup.org