SESEC IV
China Standardisation Newsletter

February – March 2021

Seconded European Standardisation Expert in China
(SESEC)

Index

Takeaways

SESEC Training in CNIS on ESS and CEN-CENELEC Strategy 2030

On 30 March 2021, Dr. Betty XU, the Director of SESEC Project, was invited by the China National Institute of Standardisation (CNIS) for a professional training on the European Standardization System, and on the core contents of CEN-CENELEC Strategy 2030 and CEN-CENELEC Work Plan 2021. More than 70 participants from scientific research and business departments of CNIS and from the China Standard Science and Technology Group attended.

China's Contributions to International Standards in 2020

In February 2021, SAMR's Standard Innovation Administration Division provided a summary of the China-led international standards published by ISO, IEC and ISO/IEC JTC1 in 2020. Specifically, in 2020 China led the development and revision of 185 international standards.

China Critical Network Devices Security Requirements to be Implemented in August 2021

On 20 January 2021, the Standardisation Administration of China (SAC) released its Announcement No. 1 of 2021, approving one mandatory national standard on communication: GB 40050-2021. Drafted by relevant research institutes under the organisation of the Cybersecurity Administration of the Ministry of Industry and Information Technology, GB 40050-2021 is an important standard that implements the security requirements of critical network equipment listed in the Cybersecurity Law.

China - Laos Railway: China Technology + China Equipment + China Standards in OBOR

All the China-Laos railway lines undertaken by the Vientiane Rail Welding Plant, adopt Chinese technology, equipment, and standards. Based on the demand of overseas projects, CREGC has significantly innovated the railway equipment and layout by using the configuration jointly developed by China Academy of Railway Sciences and CREGC, which effectively guarantees the production quality and efficiency of the welded joint, at the same time significantly reducing the production cycle.

SESEC Observes Development of Semi-conductor Standardization in China

The IC industry is thus highly valued by China, also considering the intensification of international competition and the country's growing determination to achieve industrial autonomy. In this context, the Chinese government has taken structural measures to facilitate the development of the IC industry, covering not only finance and taxation, investment and financing, imports and exports, but also standards and technology development, industrial application, and international cooperation.

First China-led International Standard for Industrial Internet Network Technology Adopted by ITU

On 12 March 2021, the International Telecommunication Union Standardization Sector (ITU-T) adopted the first international standard on the network technology of industrial Internet: ITU-T Y.2623, Network Technical Requirements and Framework of Industrial Internet (Based on Packet Data Network Evolution). The standard was led by CAICT and was adopted during the plenary meeting of the 13th Research Group (Future Internet and Clouds).

EU, China Hold High-level Dialogue on Environment and Climate

On 1 February 2021, Chinese Vice-Premier HAN Zheng, also a member of the Standing Committee of the Political Bureau of the Communist Party of China Central Committee, held the first EU-China High-level Environment and Climate Dialogue, together with the European Commission's Executive Vice President, Frans Timmermans. The meeting took place online.

Horizontal Issues

1. SESEC Webinar on China Blockchain Standardization Successfully Held

#Webinar #Blockchain

On 23 March 2021, SESEC held its webinar on China blockchain standardization. 51 representatives from European authorities, Standard Developing Organizations and enterprises registered.

Dr. Betty XU, the Director of SESEC Project, made a detailed introduction of China's legal framework and standards system for blockchain. In China, the government views virtual currencies as illegal, since they are not issued by any recognized monetary institution, and do not hold any legal status that can make them equivalent to money. However, Dr. Betty Xu stressed that blockchain technology applications in other acceptable areas – as opposed to cryptocurrency – are widely welcomed and promoted in China, especially after President XI's official endorsement of blockchain technology in October 2019. In general, there is no specific law on blockchain in China; the *Measures for the Administration of Blockchain Information Service* issued by Cyberspace Administration of China (CAC) are the only regulatory document currently implemented.

At present, there is no national technical committee for blockchain under SAC. Three national standardization plans are developed by SAC/TC28 (National Technical Committee on Information Technology of the Standardization Administration of China). In May 2020, MIIT proposed to set up a national Blockchain TC under SAC, mirroring ISO/TC307, and with the secretariat hosted by CESI. The standards system on blockchain was formed in 2016 by the China Blockchain Technology and Industrial Development Forum (CBD-Forum), in its *White Paper on the Development of Blockchain Technology and Application in China*. According to the White Paper, blockchain standards are divided into five categories: (i) basic, (ii) business and application, (iii) processes and methods, (iv) trust and interoperability, and (v) information security; 21 key standardization directions were also initially identified. In addition, China also actively takes part in the development of international standards: for instance, on 9 June 2020, MIIT successfully proposed a new Work Item on financial distributed ledger technology application guide in ITU.

In conclusion, blockchain is relatively new in China. The legal basis and the administration of standardization still need improvement. At the same time, the official technical committee on blockchain still needs some time before being officially approved. SESEC will follow up the progress of regulations, standards and the establishment of technical committee on blockchain in China.

SESEC is going to hold more online events on hot topics. Looking forward to your participation!

2. SESEC Training in CNIS on ESS and CEN-CENELEC Strategy 2030

#CEN-CENELEC Strategy

On 30 March 2021, Dr. Betty XU, the Director of SESEC Project, was invited by the China National Institute of Standardisation (CNIS) for a professional training on the European Standardization System, and on the core contents of CEN-CENELEC Strategy 2030 and CEN-CENELEC Work Plan 2021. More than 70 participants from scientific research and business

departments of CNIS and from the China Standard Science and Technology Group attended.

Understanding the European Standardization System is the basis for analyzing the work of CEN-CENELEC, and its strategies. Dr. Betty XU first explained the organizational structure and operation mechanisms of the three European standardization organizations (namely CEN, CENELEC and ETSI), also providing an overview of their current cooperation with China in the field of standardization. Dr. Betty XU also analyzed the core and the objectives of the European Standardization System, its close relationship with international standards, market influence, its relationship with the EU legislation and NLF, the development and implementation of EN standards, and how to participate in international standardization.

Moreover, Dr. Betty XU also extensively introduced the background, time span, scope of application, main content, vision and mission of the CEN-CENELEC Strategy 2030. Dr. Xu pointed out that the core element of the Strategy is to achieve the "double transformation of green and digital" across the EU. Specifically, the Strategy clarifies the future work priorities of emerging information technology standards and green standards, pointing out the directions for improving the value and international influence of the European Standardization System, which is of great significance. Finally, Dr. Xu also analyzed the basic framework, strategic focus, standards, and innovations of the CEN-CENELEC 2021 Work Plan from the two aspects of standard development and management.

SESEC will continue to promote the European Standardisation System and international standards in China, and to foster further cooperation between EU and China in standardisation.

3. China's Contributions to International Standards in 2020

#China #International Standards

In February 2021, SAMR's Standard Innovation Administration Division provided a summary of the China-led international standards published by ISO, IEC and ISO/IEC JTC1 in 2020. Specifically, in 2020 China led the development and revision of 185 international standards, among which:

SDO	Number of China-led standards
ISO	121
IEC	55

ISO/IEC JTC1	9

According to SAMR's summary, China-led international standards published by ISO cover mainly fields such as toy safety, metals, components, raw materials, and traditional Chinese medicine; those published by IEC focus on electrotechnical vocabulary, nanomanufacturing, cables, electrical and electronic products; while those published by ISO/IEC JTC1 are mainly for IoT, cryptography, big data and smart city.

Over the past five years, China has been recognised as the country that has made the greatest contribution to international standardisation. China has been promoting the "going global" of Chinese standards, mainly by taking active part in the development of international standards in areas where the country has comparative advantage, and taking an extensive part in international standardization activities. As the independent innovation capability and international competitiveness of China's manufacturing industry continue to increase, in the future China will speed up the development of national and international standards and promote the innovative development of enterprises.

The list of China-led international standards in ISO (Chinese version) can be downloaded here.

The list of China-led international standards in IEC and ISO/IEC JTC1 (Chinese version) can be downloaded here.

Note: According to SAMR's definition, the "China-led" international standards are China-proposed New Working Items or standards of which China serves as the main drafter.

4. China's Contribution in IEEE – World's First Drone Payload Interface Standard

#IEEE #Drone

In February 2021, IEEE 1937.1-2020 (Standard of Interface Requirements and Performance Characteristics of Payload Devices in Drones), developed by the IPDD - Standard Interface for Payload Devices in Drones Working Group of IEEE, was officially released. The working group itself and the development of this standard are led by China Electronics Standardization Institute (CESI). Experts from DJI Innovation, State Grid, Institute of Geographic Sciences and Natural Resources Research in Chinese Academy of Sciences, Xiaomi, Senses Global Corporation, and other technical corporations are also involved.

The standard presents the general interface requirements and performance characteristics of payload devices in drones. Specifically, the drone payload interfaces are described in three categories:

- Mechanical interface, used to fix the payload to the drone.
- Electrical interface, an electromechanical device used to join electrical terminations.
- Data interface, referring to the communication protocol.

The requirements and performance characteristics of the drone payload interface are detailed from the aspects of protection from temperature extremes, humidity, water, dust, vibration/shock, mold, salt spray, etc. Typical drone payloads, interface requirements, and performance characteristics of specific payloads are illustrated.

This standard is the first drone payload interface standard in IEEE. It marks that China's standards for drone payload interface have successfully reached the international stage, and that China's drone technology

has started to reach a level in line with international industrial development.

IPDD will continue to conduct research on the interface standards of various payload devices, including infrared, multispectra, and lasar radar, and will promote the testing and conformity assessment of drone payload interfaces.

The Chinese news for reference is available at:

http://www.cesi.cn/202102/7258.html

IEEE 1937.1-2020 (Standard of Interface Requirements and Performance Characteristics of Payload Devices in Drones) is for sale at:

https://www.techstreet.com/ieee/standards/ieee-1937-1-2020?product_id=2114511#jumps.

5 China - Laos Railway: China Technology + China Equipment + China Standards in OBOR

#Belt and Road Initiative #Railway

According to China Railway No. 2 Engineering Group (CREGC), which is responsible for the construction of the whole track laying project of the Mohan (Boten) - Vientiane section of the China-Laos Railway, on 30 March 2021 the last 500-meter long rail was successfully welded by Vientiane Rail Welding Plant. This marks the accomplishment of the welding of all the 500-meter long rails on the Mohan (Boten) - Vientiane section.

All the China-Laos railway lines undertaken by the Vientiane Rail Welding Plant, adopt Chinese technology, equipment, and standards. Based on the demand of overseas projects, CREGC has significantly innovated the railway equipment and layout by using the configuration jointly developed by China Academy of Railway Sciences and CREGC, which effectively guarantees the production quality and efficiency of the welded joint, at the same time significantly reducing the production cycle. Such efforts have promoted the smooth progress of the construction and production of the China-Laos Railway, and helped China's rail welding technology, equipment and standards to go global.

Background

The Boten-Vientiane section of the China-Laos Railway is due to begin operations in December 2021. The line will stretch 414km between the town of Boten on the Chinese border, and Vientiane, the capital of Laos. Construction started in December 2016. Featuring an electrified overhead line, trains will reach speeds of 160km/h for passenger services and 120km/h for freight. The route will serve 32 stations, passing through 75 tunnels and over a total of 167 bridges.

The Boten-Vientiane railway is a key element of China's Belt and Road Initiative. Aimed at enhancing trade routes. There are plans for a trans-Asia railway that will eventually run for 5,500km, connecting Yunnan and Singapore, via Myanmar, Thailand, Vietnam, Cambodia, and Malaysia.

The China-Laos Railway is the first international railway directly connected to China's railway network and with Chinese investment, since the Belt and Road Initiative was outlined. After opening to traffic at the end of 2021, the railway will play a significant role in improving the traffic conditions in Laos and in promoting the development of regional industry and economy. In fact, this railway connects not only to China, but also to Thailand and eventually to Malaysia in the future, thus contributing significantly to the task of transforming Laos from a landlocked country to a land-linked country.

In short, the project represents a good case study on the internationalization of Chinese technology, equipment, and standards under the framework of the Belt and Road Initiative.

The original news in Chinese is available, for reference, at:

https://mp.weixin.qq.com/s/Kz2lvBDlhoU01BNxm6mR0A

6. China's International Standard Proposal on Express Packaging Approved by ISO

Express Packaging #ISO

In March 2021, the "*Principles, Requirements and Guidelines for Eco-Design of Express Packaging*", proposed by the China National Institute of Standardization (CNIS), was approved by ISO. A specific working group for this standard will be established soon.

At present, although ISO has issued the "Packaging and Environment" standards series, it has not yet carried out research on express packaging standards. The standard proposal "*Principles, Requirements and Guidelines for Eco-Design of Express Packaging*" focuses on resource and environmental issues throughout the life cycle of express packaging. Specifically, based on China's practices, methods, and technical experience in the greening of express packaging, and adhering to the principle of 'reduced, harmless and recyclable package' for express delivery, the standard proposal puts forward the requirements for the establishment of the express package recycling system, express package evaluation, and the collaborative responsibility of upstream and downstream related industries. It will provide guidance and reference for the green design of express packaging, at the same time improving and supplementing the existing ISO "Packaging and Environment" series standards.

In 2020, China's express delivery business volume reached 83.36 billion pieces. According to industry estimates, China's express delivery industry consumes more than 9 million tons of paper waste and 1.8 million tons of plastic waste each year. Greening has therefore become a key priority and focus of China's express packaging standardization work.

In 2018, China revised and released the GB/T 16606 "Express Packaging Supplies" series of national standards, adding various requirements for reducing express packaging and making it harmless. In addition, GB/T 39084-2020 "*Green Product Evaluation Express*", was issued in June 2020 to guide the development of green product certification for express packaging. Recently, China has started to develop a mandatory national standard for the "*Limits for Heavy Metals and Specific Substances in Express Packaging*", which is led by CNIS.

In terms of policies, in August 2020, eight departments including the State Administration for Market Regulation, the National Development and Reform Commission, the Ministry of Science and Technology, and the Post Bureau, jointly issued the "*Guiding Opinions on Strengthening the Standardization of Express Green Packaging*" – proposing to "establish a strict and binding express green packaging standards system". The guiding opinions represent the policy basis for China to carry out the standardization of green express packaging in the upcoming months.

The development of the international standard "*Principles, Requirements and Guidelines for Eco-Design of Express Packaging*" will facilitate the inclusion of China's green and low-carbon practices in express delivery companies in the text of the standard, and ultimately enhance China's role in leading the global movement to reduce plastic and limit plastic, as well as low-carbon development.

https://mp.weixin.qq.com/s/CzMtwAh3CboagsrHjZUREg

7 • CESI Calls for Candidates for the International Experts Group of MIIT/Lithium-ion Battery Safety WG

#CESI #Battery Safety

According to the website of CESI, the MIIT/Lithium-ion Battery Safety Working Group is establishing, under its organizational structure, an International Experts Group.

The International Experts Group will be responsible for promoting international standardization linked to IEC/SC 21A (Alkaline and Non-acid Batteries). It will do so by attending international meetings, contributing to the draft and review of international standards texts, submitting international standard proposals, etc. The International Experts Group is expected to facilitate the active participation of Chinese domestic enterprises in international standardization for batteries, improving the participation of Chinese experts in international standardization projects, thus substantially enhancing China's influence in international battery standardization. In this context, the MIIT/Lithium-ion Battery Safety WG opened for its members a call for candidates to join the International Experts Group. The call was open from 1 to 26 February 2021.

The MIIT/Lithium-ion Battery Safety WG was established in 2008, under MIIT's Electronic Products Safety WG. The aim of the MIIT/Lithium-ion Battery Safety WG, whose secretariat is hosted by CESI, is to standardize the design, production, storage, transport, and usage of lithium-ion batteries. The WG now has more than 160 members covering manufacturers of battery cells, packaging, host devices, test and inspection bodies, research institutes, etc.; among these, numerous FIEs such as TUV SUD, Dell, Bosch, and HP, enjoy full membership and have been participating in the WG's standards-setting processes.

Furthermore, in December 2020 SAC approved the application of MIIT/Electronic Products Safety WG to upgrade to the National Electronic Products Safety Standardization Technical Committee. This move may further enhance the WG's to role within the China's standardization for lithium-ion battery safety.

Source: http://www.cesi.cn/202102/7232.html

8. MIIT Outlines Priorities for Its Standardization Work in 2021

#MIIT Standardization

On 16 March 2021, MIIT published the *Key Points of Standardardisation on Industry and Information Technology in 2021.* The document aims to guide MIIT's standardization work in 2021. The key takeaways are summarized as follows:

1. Accelerating the development of mandatory national standards in various fields, such as safety of key consumer products, restriction of hazardous substances, unit product energy consumption quota and product efficiency, automobile safety, civil explosive, cement, graphite and fluorite mining, radio frequency technique for wireless charging devices, etc.
2. Developing the Guidelines on the Establishment of the National Standards System for Industry and Information Technology – which should focus on product safety, ecological and environmental safety, network and data security, as well as safety production in ships, planes, civil explosive, and communications industries.
3. Revising the guidelines and roadmaps for developing standards systems in the fields of intelligent manufacturing, industrial internet, industrial energy saving and green development, electric vehicles, internet of vehicles (intelligent connected vehicles), intelligent home, cloud computing, lithium-ion battery, and photovoltaics.
4. Launching the development of guidelines for the establishment of standards systems for the integration of intelligent manufacturing in the sectors of steel, petrochemicals, nonferrous metal, building materials, textiles, automobile, and electric equipment.
5. Promoting the guidelines for the establishment of standards systems in intelligent ship, IoT basics and security, 5G + industrial internet, 5G + medical treatment and health, industrial internet + production safety, and blockchain.
6. Improving the alignment of MIIT standards with international standards, comparing MIIT standards and corresponding international standards, and improving the adoption rate of relevant international standards in MIIT system to up to 90%.
7. Developing English versions of MIIT's sectoral standards and mandatory national standards, thus providing support to the Belt and Road Initiative and promoting to the internationalization of China's technologies, products, engineering, and services.
8. Promoting full text disclosure of MIIT's sectoral standards.
9. Facilitating the adoption of national, sectoral, and advanced association standards in industrial policies and planning development.
10. Reviewing ongoing standardization projects, adjusting or cancelling those that fail to be finished within scheduled timeframe.

11. Ensuring the equal participation of foreign-invested enterprises and SMEs in sectoral standardization work.
12. Accelerating the completion of the Measures for the Administration of Professional Standardisation Technical Committees of MIIT.
13. Strengthening supervision on sectoral TCs/SCs/WGs and standardization associations, urging them to timely disclose relevant information throughout the development process of sector standards.

The original Chinese full text of the Key Points is available at:

https://www.miit.gov.cn/xwdt/gxdt/sjdt/art/2021/art_636b342cf41043969840b8c74e288358.html

The English translation of the full text is shown in **Annex 1**.

9. SAC Outlines Priorities for China's Standardization Work in 2021

#SAC Standardization

On 6 April 2021, SAC released the *Key Points for National Standardization in China in 2021*. The document is aimed at guiding China's standardization work in 2021. Below are key takeaways from SESEC:

1. It is the first time that China systematically proposes to leverage on standardization to achieve the CO2 emissions peak target in 2030. Article 16 of the document states that the government "shall develop a standardization action plan for achieving the emissions peak target and improve the current standards system supporting this policy". In the following articles, specific measures are provided for various areas, such as accelerating the development of mandatory standards in energy efficiency, upgrading standards in the petrochemical field, and improving emissions monitoring and control standards. These priorities reflect SAC's awareness of the vital role that standardization should play in supporting China's "green transition", putting forward tailored solutions.
2. Pilot projects will be carried out for digitalized standards. Article 52 of the document reads that the State "shall implement pilot projects on machine readable standards and database standards, explore new management methods and mechanism for national standards under the digitalization context". Furthermore, Article 90 highlights that the State "shall closely follow the development of the application of digital technologies in standardization activities, and strengthen research on advanced standardization technology". These two articles show that SAC recognizes that digitalization is the main direction of standardization work in the future. In this regard, attempts and practices of international/overseas SDOs like ISO/IEC and CEN/CENELC, could provide a good reference.
3. The management of sector standards and local standards will be strengthened. Article 48 of the document underlines that the State "shall determine the code and scope of sector standards, and further promote the filing of sector and local standards". Furthermore, Article 26 stresses the need to "carry out supervision and evaluation work on sector standards, and supervision and random inspection of local standards, so as to improve their quality". These articles reflect SAC's efforts to strengthen the unified management on sector standards. Actors from all over the world will benefit from these endeavours and enjoy more complete sector standards information. However, transparency issues still need to be further addressed in sector standardization activities, considering the fact that a large number of sector standards are frequently used to support regulations and conformity assessment schemes.

4. Setting up an international standards conversion system. Article 67 stipulates that the State "shall facilitate the establishment of an international standards conversion system, hence improving the uniformity of Chinese standards and international standards". Nevertheless, the article also stresses the need to "improve the rationality and effectiveness of adopting international standards", implying that modifications may be adopted to meet China's specific conditions and needs.
5. Intensifying research on the standardization work in key regions and countries. Article 75 stipulates "to intensify research on the standardization strategies, policies and systems in key regions and countries, and support international standardization cooperation and exchanges". These efforts might benefit the European standardization system as it can gain more visibility and attention in China.
6. Improving standardization-related regulations. From Article 79 to 82, the document lists the ongoing and planned standardization regulations and policies. Specifically, it is stressed to accelerate the revision of the *Administrative Measures for National Standards*, of the *Administrative Measures for Sector Standards*, and of the *Administrative Measures for Enterprise Standards*; as well as to complete the drafting of the *Measures for Promoting Association Standards*.
7. Establishing an inter-technical committee (TC) communication mechanism. Article 85 points out that the State "shall explore the establishment of communication mechanisms among national professional standardization TCs, aimed at promoting horizontal coordination, communication and cooperation". This addresses the overlaps and duplication problems widely existing within the standardization system for emerging cross-disciplinary technologies and products. Its development and effect worth continuous observation.

The English translation of the full text is shown in **Annex 2**.

Laws and Regulations

10. Anti-monopoly Guidelines for the Platform Economy Released

#Anti-monopoly #Platform Economy

On 7 February 2021, the State Council's Antitrust Committee issued the *Anti-monopoly Guidelines for the Platform Economy* (hereinafter referred to as the "Guidelines"). The Guidelines reiterate that the *Anti-monopoly Law* and its supporting regulations are applicable to all sectors, treating all main market players equally, fairly, and equitably. They aim to prevent and restrain monopolistic behaviours in the platform economy, thus promoting its orderly and healthy development.

The Guidelines consist of 24 articles under 6 chapters:

- general provisions;
- monopoly agreements;
- abuse of dominant market position;
- concentration of business operators;
- abuse of administrative power to exclude and restrict competition; and
- supplementary provisions.

Specifically, they define the basic concepts of the platform economy, platform operators, operators within platforms, and operators within the platform economy. They aim to ensure that the anti-monopoly regulation for the platform economy adheres to the principles of fair market competition, law-based scientific and efficient regulation, stimulation of innovation and creation, and protection of the legitimate interests of all parties involved. Given the complexity of the platform economy, the Guidelines stipulate that the general principles set out in the *Anti-Monopoly Law* will be followed when defining relevant markets and segments in the field of the platform economy, at the same time taking into account the characteristics of the platform economy for case studies.

Considering the peculiarities of the platform economy, the Guidelines clearly outline the requirements and forms of monopoly agreements, and provide specific provisions for other cooperative behaviours; they also illustrate methods and enforcement considerations for horizontal and vertical monopoly agreements, for hub-and-spoke arrangements, and for identifying cooperative behaviours among operators in the platform economy,

For hot issues like the "either-or option" and "targeted ads and price discrimination via big data", the Guidelines clearly stipulate that the identification of the relevant market is the key prerequisite for determining the abuse of dominant market position in the platform economy. That is, determining whether a case constitutes an abuse of dominant market position, hinges on whether the operator involved has dominant position in the identified market and on case analysis. In this regard, the Guidelines list in detail the criteria to determine or presume that an operator has a dominant market position, including: market share of the operator, relevant market competition, an operator's ability to control the market, an operator's financial and technical conditions, the degree of dependence of other operators, and the degree of difficulty for market entry. At the same time, in order to promote the lawful and compliant operations of all kinds of market players within the platform economy, the Guidelines detail the

specific forms of abuse of dominant market position, which include: unfair pricing behaviour, selling below cost, refusing to trade, limiting trade, tie-in sale or discriminatory treatment with unreasonable trading conditions.

With respect to the concentration of operators in the platform economy, the Guidelines distinguish the turnover calculation methods for different types of platform operators in terms of reporting standards, and clarify that the concentration of operators in the variable interest entities (VIE) structure falls within the scope of anti-monopoly review. The Guidelines stress that the State Council's anti-monopoly law enforcement agency will also investigate and deal with, according to the law, the concentration of business operators that do not meet the reporting standards but have or may have the effect of eliminating and restricting competition. At the same time, the Guidelines clarify the factors that can be considered when assessing the competitive impact of the concentration of operators in the platform economy, as well as the types of additional restrictive conditions that the anti-monopoly law enforcement agency of the State Council can determine.

Finally, the Guidelines stipulate provisions for identifying and preventing, according to law, the behaviours of abusing administrative power to exclude and restrict competition. The Guidelines put forward fair competition review for the formulation of rules and normative documents concerning the economic activities of market entities in the platform economy.

Background:

In recent years, the platform economy has played an increasingly important role in the national economy due to its rapid growth and the new business forms and models that it constantly generates. However, at the same time, there has been an increasing number of reports on the suspected monopoly problems within the platform economy, such as the "either-or" option by platform operators, "targeted ads and price discrimination via big data", or failure to report and implement operator concentration in line with the law. These behaviours harm fair competition in the market as well as the legitimate rights and interests of consumers, and are not conducive to the sustainable and innovative development of the platform economy. In this context, the Central Economic Work Conference held in December 2020 positioned antitrust and prevention of capital sprawl as one of the most important tasks in the national economic work for 2021, highlighting the need to improve the digital rules, as well as the laws and regulations for identifying monopoly behaviours of platform enterprises, to strengthen regulation and enhance regulatory ability, and eventually to promote the release of the Guidelines.

Source: http://www.samr.gov.cn/xw/zj/202102/t20210207_325968.html

Information Security

11. China Critical Network Devices Security Requirements to be Implemented in August 2021

Critical Network Devices #Cybersecurity

On 20 January 2021, the Standardisation Administration of China (SAC) released its Announcement No. 1 of 2021, approving one mandatory national standard on communication: GB 40050-2021 (*Critical network devices security common requirements*).

Drafted by relevant research institutes under the organisation of the Cybersecurity Administration of the Ministry of Industry and Information Technology, GB 40050-2021 is an important standard that implements the security requirements of critical network equipment listed in the *Cybersecurity Law of the People's Republic of China*.

Specifically, the standard stipulates the general security function requirements and security assurance requirements that critical network equipment should meet. It does not only provide a basis for network operators to purchase the equipment; it can also be used to guide the research and development, testing and other work related to network critical equipment.

- Security function requirements

Focusing on ensuring and improving the safety technical capabilities of critical network equipment, mainly including 10 aspects: (i) device identification security, (ii) redundant backup recovery and anomaly detection, (iii) vulnerability and malicious program prevention, (iv) pre-installed software startup and update security, (v) user identity identification and authentication, (vi) access control security, (vii) log audit security, (viii) communication security, (ix) data security, and (x) password requirement.

- Security assurance requirements

Focusing on standardising the capacities of critical network equipment providers to guarantee security in the whole life cycle of equipment, including the requirements of design and development, production and delivery, and operation and maintenance. The standard will play an important role in improving the security and controllability of critical network equipment and reducing the risks of users.

The mandatory national standard GB 40050-2021 will be formally implemented from 1 August 2021. In China, critical network equipment and specialised cybersecurity products need to pass security certification, and only certified products can be sold on the market. In 2018, the Certification and Accreditation Administration of China issued the *Implementation Rules for the Security Certification on Critical Network Equipment and Specialised Cybersecurity Products*, specifying that "the standards for security certification shall be implemented according to the requirements of the competent authorities ": GB 40050-2021, as a mandatory national standard regulating the security of critical network equipment, is likely to be included as such. The Chinese full text of the standard is available at: http://www.gb688.cn/bzgk/gb/newGbInfo?hcno=897AC202AE5F385D28F15CEAEB75E609. SESEC will follow the development of cybersecurity standards and make further analysis.

The Chinese news for reference is available at https://www.sohu.com/a/452990749_416839.

12. Statistical Report on China's Internet Development-Greater Internet Economy Scale

#Internet Economy

In early February 2021, the China Internet Network Information Center (CNNIC) released the *47th Statistical Report on Internet Development in China* (hereinafter referred to as "Report"). The Report provides updated statistics and data on China's Internet industry and market. Specifically:

- By the end of December 2020, China had 989 million Internet users, and the Internet penetration rate reached 70.4%;
- Telemedicine has covered all county-level hospitals, and basic financial services have covered 99.2% of administrative villages;
- In 2020, China's online retail sales reached 11.76 trillion CNY, including 9.76 trillion CNY for physical goods;
- By the end of December 2020, China had 843 million users of Internet government services, 782 million of online shopping, 854 million of online payment, and 927 million of online video users (among which 873 million users of short videos);
- By the end of December 2020, the total market value of China's Internet companies listed on domestic or overseas markets, reached 16.80 trillion CNY, and the total number of Internet and information technology unicorns reached 207.

The report also provides an overview of the standardization development of some Internet-related technologies in China, including quantum technology, blockchain, AI, and industrial Internet. Specifically, by the end of December 2020, China had established a working group on standardization of quantum communication (CCSA/ST7), completed six research reports, and established a national technical committee on standardization of quantum computing and measurement. The National Blockchain Standardization Technical Committee was also created, while two blockchain industry standards and 10 local blockchain standards started to be implemented. The number of members of the Industrial Internet Industry Alliance reached 1,778, contributing to the promotion of cooperation in industrial Internet technology, standards, research and development and application.

Finally, the report also provides statistics on China's IPv6 deployment, cyber security incidents, the progress of new infrastructure, and the development of the digital economy.

CNNIC issued the first *Statistical Report on Internet Development in China* in 1997, and has now become a semi-annual flagship publication. The report can be used as a reference to observe and analyse the development status and trend of China's Internet industry.

Source: http://www.cac.gov.cn/2021-02/03/c_1613923422728645.htm

13. CCSA Sets World's First Standard for IP Network Slicing Overall Architecture

#CCSA #IP Network

IP network slicing is an important part of end2end network slicing. It provides slicing capability for multi-service bearing businesses, such as 5G mobile service, cloud network integration, SD-WAN, private line service, etc. It applies to scenarios such as metro area network, backbone network, and DCI, and at the same time can accommodate the customized demands of users.

At present, China is promoting IP networking slicing standardization and deploying IP networking slicing-based equipment. Specifically, CCSA/TC3 (Network and Service Capability) is developing a cluster of sector standards for IP networking slicing, including: overall architecture for IP networking slicing, technical requirements for orchestration layer, technical requirements for router equipment supporting IP networking slicing function, technical requirements for IP networking slicing northbound interface, technical requirements for IP MPLS network slicing supporting flexible and optimal path algorithm, etc. These standards will contribute to the application of IP network slicing, and to the enhancement of IP network's bearing capability for differentiated connection demands and quality-ensured flexible slicing.

On 27 January 2021, the core standard of the cluster, IP network slicing – overall architecture and technical requirements (draft for approval), went through the review of CCSA/TC3/WG1 (Network and AI Application), and will be submitted to MIIT for approval. Once approved, the standard will be the first standard in the world for IP network slicing overall architecture.

The sector standard stipulates the capability requirements for slicing-capable IP network, as well as the function requirements for end2end network orchestration layer, IP network controller, IP network slice forwarding equipment, IP network slicing process, etc. It provides strong technical guidance for deployment based on IP network slice.

Source:
http://www.ccsa.org.cn/detail/3979?title=TC3WG1%E5%AE%A1%E6%9F%A5%E9%80%9A%E8%BF%87%E2%80%9CIP%E7%BD%91%E7%BB%9C%E5%88%87%E7%89%87%E6%80%BB%E4%BD%93%E6%9E%B6%E6%9E%84%E5%8F%8A%E6%8A%80%E6%9C%AF%E8%A6%81%E6%B1%82%E2%80%9D%E6%8E%A8%E8%BF%9BIP%E7%BD%91%E7%BB%9C%E5%88%87%E7%89%87%E4%BA%A7%E4%B8%9A%E5%8F%91%E5%B1%95

Communication

14. Progress of China's Standardization Work in Communication

#Communication Standardisation

In February 2021, the Ministry of Industry and Information Technology (MIIT) issued the "*Announcement on the First Batch of Sectoral Standards for Development and Revision, and Foreign Language Versions Project Plans in 2021*". The document contains 174 communications industry standards, among which 166 are new standards to be developed, and the remaining 8 are standards to be revised.

The content of these standards involve 13 fields, including Internet of Vehicles (intelligent Internet connected cars), 5G and next-generation mobile communications, artificial intelligence, industrial Internet, Internet of Things, network data security, cloud computing, big data, IPv6 and the new generation of Internet, broadband engineering, integration of communication technologies, future network, and mobile internet. Among these, 122 standards are directly related to products, while the remaining involve foundations, methods, management, and engineering construction.

Furthermore, MIIT's document also includes plans for the formulation of foreign language versions of 26 communication sector standards. Among these, 13 are translations of existing standards, while the remaining 13 consist of new standards to be simultaneously developed in Chinese and foreign language. These standards mainly focus on technical fields, such as IPv4-IPv6 service interoperability exchange based on cloud computing technology, transmission network equipment safety, information accessibility, Ka-band vehicle-mounted satellite communication earth station, and communication optical cables. The formulation of these foreign language standards is seen as an effort to enable Chinese standards to gain more understanding and influence overseas, thus contributing to China's "go global" strategy for standards.

Finally, on 10 March 2021, the Standardization Administration of China (SAC) issued the "*2021 Guidelines for the Initiation of Proposals for National Standards*". The Guidelines emphasize the needs to:

- Strengthen the standardization development of industrial Internet, blockchain, Internet of things, 5G, new generation artificial intelligence, integrated circuits, data security and personal information protection;
- Promote the standardization development of new energy utilization, power storage, and energy Internet;
- Strengthen research on standards for smartification, networking and sharing of new energy vehicles, technology of speed up power charging and battery replacement, fuel cells, high-performance power batteries, charging information sharing, intelligent perception, and driverless technology.

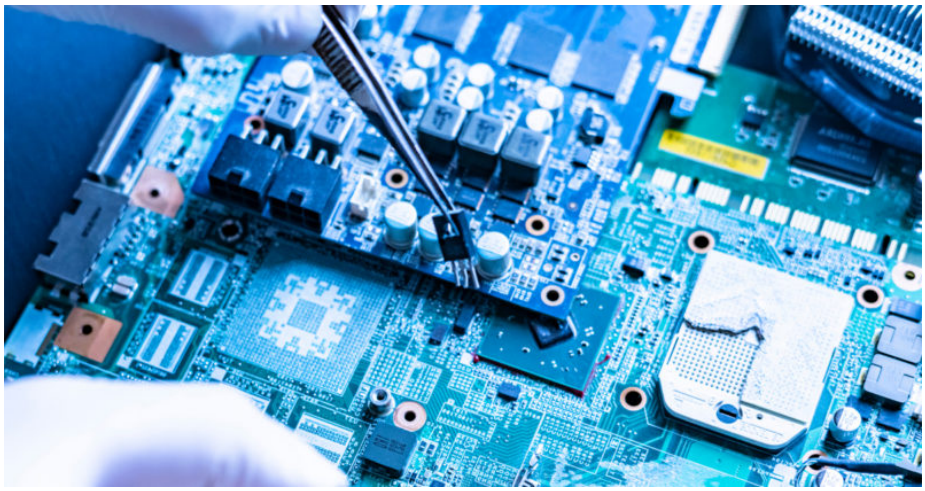
Although China's existing standards in the communications industry are mostly industry standards, the release of this document shows that SAC is encouraging the communications industry to fill the gaps in relevant national standards.

Source: http://www.samr.gov.cn/xw/mtjj/202102/t20210225_326292.html

Semi-Conductor

15. SESEC Observes Development of Semi-conductor Standardization in China

#Semi-conductor



Integrated circuit (IC) is the largest import commodity in China, accounting to 15% of gross imports – almost twice as much as petroleum, the country's second large import commodity.

The IC industry is thus highly valued by China, also considering the intensification of international competition and the country's growing determination to achieve industrial autonomy. In this context, the Chinese government has taken structural measures to facilitate the development of the IC industry, covering not only finance and taxation, investment and financing, imports and exports, but also standards and technology development, industrial application, and international cooperation.

In terms of standardization, on 28 January 2021 MIIT issued a call for comments on the establishment of a new national technical committee, which aims to unify various standardization activities that are currently scattered across different technical organizations. The call represents a concrete effort by MIIT to strengthen China's IC standardization; nevertheless, it drew large attention from overseas actors, as many foreign-invested enterprises are excluded from the new TC. Likewise, many overseas stakeholders are still not very clear about the situation of Chinese standards in the field.

To address this issue, SESEC researched and analysed the work of all relevant Chinese standardization organizations, and prepared several slides summarizing key findings. SESEC would like to share them with you in our webinar on 25 May 2021: you are welcome to participate.

The webinar will take place on 25 May 2021, at 9:30 AM Brussels time, Tuesday. You can register at https://yxmc.webex.com/yxmc-en/onstage/g.php?MTID=e7160359456626ec505eca07b1d8b673f

Industrial Internet

16. First China-led International Standard for Industrial Internet Network Technology Adopted by ITU

#Industrial Internet #ITU

On 12 March 2021, the International Telecommunication Union Standardization Sector (ITU-T) adopted the first international standard on the network technology of industrial Internet: ITU-T Y.2623, Network Technical Requirements and Framework of Industrial Internet (Based on Packet Data Network Evolution). The standard was led by CAICT and was adopted during the plenary meeting of the 13th Research Group (Future Internet and Clouds).

ITU-T Y.2623 focuses on the the production and services of customized, collaborative, service-oriented and intelligent industrial internet. Specifically, it outlines for the first time a clear definition of industrial Internet, which is put in the terminology database of ITU-T; it also standardizes the general technical requirements for networking for industrial internet, as well as the technical requirements of intranet and extranet of factories. Furthermore, the standard defines the networking framework of industrial internet, and regulates the main functional components and interrelationships of network interconnection (including factory intranet, factory extranet, campus network) and data interworking.

The network technology, which together with platforms and security technologies is one of the three functional systems of industrial Internet, is considered to be the cornerstone of the development of the industrial Internet; it is also the critical backup for the transformation and upgrading of manufacturing industry. Therefore, the network is a strategic leading field in which every country wants to obtain first-mover advantage. In June 2019, with the aim to take the lead in the technical research and standardization development of the industrial Internet network, CAICT led the establishment of the standardization project Research on the Framework and Requirement of Industrial Internet Network for Development of New International Standards – in Q22 of ITU-T SG13 (Upcoming network technologies for IMT-2020 & Future Networks). In March 2021, the technical content of the project was adopted during the SG 13 plenary meeting, with a unanimous agreement reached after five meetings for deliberation and multiple meetings for coordination.

The adoption of this CAICT-led international standard, not only reflects China's initial achievement in international standardization of industrial Internet; it also reflects the fact that, to some extent, China’s efforts in industrial Internet technology and standardization have reached a leading position worldwide. The approval of the standard will undoubtedly expand China's influence on the development of international standards in the field. In the future, under the support of government policies, the Chinese industrial Internet industry will gain more competitive edge.

Background:

In recent years, the Chinese government has attached great importance to the development of industrial Internet. For example, the National Development and Reform Commission has positioned industrial Internet as one of the seven key fields of ‘new infrastructure’; while the Ministry of Industry and Information Technology (MIIT) has set up a special working group on industrial Internet, to coordinate all government departments to jointly promote the development of the industry. Over the last three years, MIIT issued more than 10 policy documents on industrial

Internet, including, among others, the '512 Promotion Project' of 5G Industrial Internet, the Notice of Accelerating Industrial Internet Development, and the Action Plan for Industrial Internet Innovation and Development (2021-2023), showing Chinese government's aspiration to foster the advantageous industry of industrial internet.

Source: https://mp.weixin.qq.com/s/DhJdkBMpKhbJkVX1lyhQLw

17. CAICT Outlines Suggestions to Improve Identification and Resolution System for China's Industrial Internet

#CAICT #Identification and Resolution

On 31 December 2020, the China Academy of Information and Communications Technology (CAICT) issued the *White Paper on the Identification and Resolution System of Industrial Internet* (hereinafter referred to as *White Paper*). The *White Paper*, which builds on the *Guidelines on the Establishment of an Integrated Standardization System for Industrial Internet*, provides a summary of the state of play of the industrial Internet identification and resolution system, at the same time identifying new standardization requirements for industrial Internet scenarios, and outlining a set of suggestions to improve the existing standards system.

Specifically, the White Paper divides the industrial Internet identification and resolution standards into eight categories: (i) basic generic technologies, (ii) coding and storage, (iii) identification collection, (iv) resolution, (v) interactive processing, (vi) equipment and middleware, (vii) heterogeneous identification interoperability, and (viii) application. These categories are further divided into 25 subcategories. In terms of standardization development, the White Paper encourages the simultaneous development of:

- National standards: the National Technical Committee 485 on Communication of the Standardization Administration of China (SAC/TC485) is in charge for the research and development.
- Sectoral standards: the relevant research and development can rely on the industrial Internet identification and resolution work group (ST8/WG3) of the China Communications Standards Association (CCSA).
- Association standards: the standard group and identification group of the Alliance of Industrial Internet can take the responsibility for the research of relevant standards.

At present, China has completed 8 national standards for industrial Internet identification and resolution. In addition, there are 5 national standards, 64 sector standards, 54 association standards under research, involving more than 150 enterprises and institutions.

In the future, the *White Paper* may serve as an important reference for the Chinese government to carry out the development of standards for industrial Internet identification and resolution, and to contribute to the development of new *Guidelines on the Establishment of Integrated Standardization System for Industrial Internet.*

Background:

In January 2019, MIIT and SAC jointly issued the *Guidelines on the Establishment of Integrated Standardization System for Industrial Internet,* clarifying the content of the industrial Internet identification and resolution system, and at the same time pointing out that by 2025, a standards system shall be established, covering key technologies, products, management and application requirements of the industrial Internet, and keeping pace with the development of international advanced standards. The *Guidelines* outlined a total of 50 standardization projects for industry Internet identification and resolution, covering six main fields such as code and storage, identification

collection, resolution, interactive processing, equipment and middleware, and heterogeneous identification interoperability. Among these 50 standardization projects, 8 national standards have already been completed.

CCSA is China's core organization for the development of communication standards; it also acts as the secretariat of the National Technical Committee 485 on Communication of the Standardization Administration of China (TC485). The industrial Internet identification and resolution work group under TC485 has, so far, carried out 12 working group meetings to discuss and submit relevant standardization project proposals and documents, which involve fields such as electricity, photovoltaic, ships and food.

The Alliance of Industrial Internet was set up in February 2016 by more than 100 entities from fields including industry, information and communication technology and Internet. At present, it has more than 1600 members, and has published 58 white papers and research reports, and 12 association standards. Therefore, the Alliance has already become an influential social association in China's industrial Internet field.

5G and Industrial Digitalisation

18. China 5G High-tech Video Standards System Series Updated in 2021

5G #Standards

On 23 March 2021, the National Radio and Television Administration (NRTA) published four standards system documents, specifically for 5G high-tech video on interactive video, immersive video, VR video and cloud games. The documents will give full play to the role of standards in guiding and regulating 5G high-tech videos; they will also contribute to the high-quality and innovative development of the radio, television, and network audio-visual industries.

In 2020, the *2020 White Paper Series of 5G High-tech Video Technology* was officially released by NRTA for the first time. It systematically summarized the technologies and principles of the application of 5G high-tech video in the industry. Specifically, high-tech video refers to "high-format, new concept" video in 5G network environment: within this, "high format" refers to the video integrated with 4K/8K, 3D, VR/AR/MR, high frame rate, high dynamic range, wide color gamut and other high-tech formats; while "new concept" refers to an innovative application scene with novel image language and visual experience, which can arouse the interest of the audience. The word "high-tech video", which is one of the top 10 sci-tech keywords of China's radio and TV industry in 2020, has also been highlighted in important national policy documents, including the *Opinions of the General Office of the State Council on Accelerating the Development of New Types of Consumption Driven by New Business Forms and Patterns*.

In general, the standards for 5G high-tech videos mainly cover: (i) foundation; (ii) content production and broadcast; (iii) security; (iv) security; and (v) quality evaluation. Based on the documents, GY/T 332—2020 (sector standard-Specification of data format for interactive video over the Internet) has already been published. And there are also 34 additional standards under development for interactive video, immersive video, VR video and cloud game.

The detailed standards systems and standard development plans are available in Chinese at:

http://www.nrta.gov.cn/art/2021/3/25/art_113_55550.html

19. MIIT Publishs New Regulation for 5G Base Station Frequency Band

#5G Interference

To facilitate 5G application and ensure compatibility of 5G mobile communication with other radio services in the frequency band of 2100MHz, on 4 March 2021 MIIT released the *Technical requirements for radio frequency of 5G mobile communication base stations in the frequency band of 2100MHz (trial)* (hereinafter referred to as “Regulation”).

The Regulation allocates 1920-1980 MHz for 5G base stations to receive signal, while 2110-2170MHz for emitting signals. It also outlines the limits for out-of-band unwanted emissions and spurious emissions to reduce the possibility of interference that 5G systems may bring. The Regulation also stipulates that relevant sector standards or 3GPP standards shall be followed, either for technical requirements or for test methods, for other technical parameters, such as the base station's transmission power tolerance, adjacent channel rejection ratio, spectrum emission mask, bandwidth occupied, transmitter intermodulation, total power dynamic range, error vector magnitude (EVM), frequency error, etc. This is because all Chinese 5G standards are, in fact, sector standards and are identical to their 3GPP counterparts, thus following either will not lead to discrepancy.

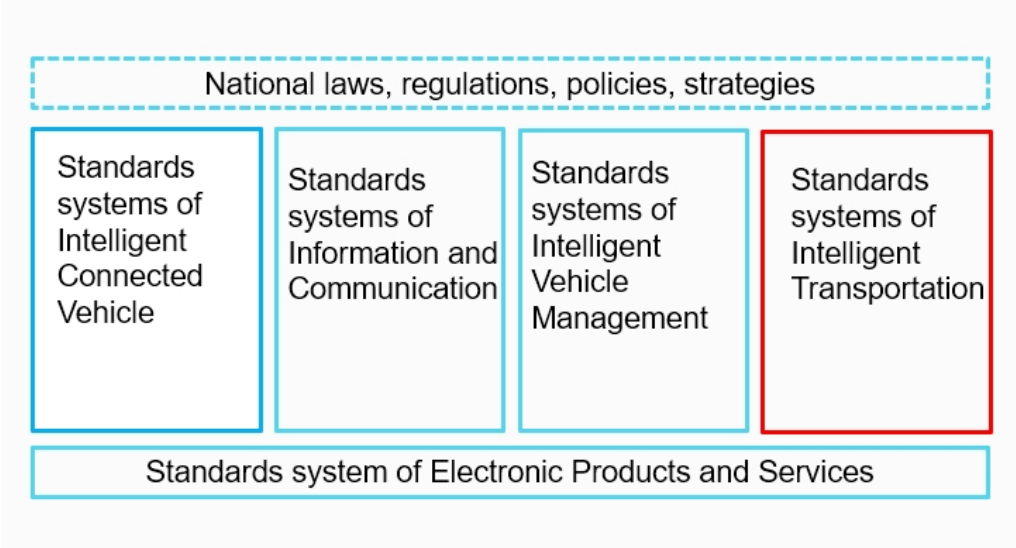
Source: https://www.miit.gov.cn/xwdt/gxdt/sjdt/art/2021/art_91a8112bcb6247fdb97b8ceffff018d6.html

Internet of Things

20. Last Piece of China's Plan for IOV Standards System Completed

#IOV # Standards System

On 1 March 2020, MIIT, MoT and SAC jointly issued the *Guidelines on the Establishment of the National Standards System for Internet of Vehicles Industry (Related to Intelligent Transportation)*. The document represents the last piece of China's efforts to establish the standards system of Internet of vehicles; together with previously released the sections of *Intelligent Connected Vehicles, General Requirement, Telecommunication, Electronic Products and Services,* and *Management of Intelligent Vehicles,* the document outlines a comprehensive plan for the development of Internet of Vehicles standards in the years to come.



The document divides the standardization work of Internet of vehicles (Intelligent Transportation Section) into five parts, including basic standards, intelligent transportation infrastructure, interaction between vehicle information and road information, transportation management and service of Internet of vehicles, and cybersecurity standards. Specifically, it outlines 72 standardization projects (including 55 national standards and 17 sector standards). Among these projects, 11 national standards have already been developed, while other 11 national and sector standards are in the pipeline – although only two of these 22 standards adopt or refer to international/foreign standards (i.e. ISO 15624-2001 *Transport information and control systems—Traffic Impediment Warning Systems (TIWS)—System requirements, ENQ*; and IEEE 1609.2-2016 *Standard for Wireless Access in Vehicular Environments—Security Services for Applications and Management Messages*). This suggests a possibly widening gap in the future between China's standards and international standards in the field. If there are no ISO or IEC counterparts, China's standards may become well positioned to represent the basis for the development of international standards of Internet of vehicles.

It is also noteworthy that 2 sector standards projects outlined in the plan will directly adopt association standards: T/ITS 0038-2015 *Cooperative Intelligent Transportation System-Data Specification for and Blind Area Security Early*

Warning System, and T/ITS 0040-2015 *Cooperative Intelligent Transportation System-Data Specification for Speed Guide Service* – both from the China ITS Industry Alliance. This reflects the growing influence of the Alliance over the Internet of vehicles industry; it also highlights the increasing importance of the role of association standards in the standardization plan of the Chinese government.

Source: https://www.fromgeek.com/telecom/384494.html

21. China Led Development of the World's First International Standard for IoTFin

#IoTFin

In March 2021, IEC released the world's first international standard for Internet of Things finance: ISO/IEC 30163 "*System Requirements for the Integrated Platform for the Pledge Supervision of Movable Property Based on the Internet of Things (Sensor Network) Technology*".

This standard, which was developed by China, applies to the design and development of IoT or sensor network systems for chattel mortgage regulatory services. Specifically, the standard stipulates the system requirements, which can lead to the effective monitoring of the whole process of chattel mortgage in real time, thus contributing to the achievement of the whole life cycle management of bank for chattel mortgage. At the same time, the standard can also help to improve the efficiency and reduce the costs for supervising relevant enterprises.

In 2017, China carried out research on sensor networks and Internet of Things technologies to support the monitoring and tracking of financial transactions on movable property. In 2018, China, together with Japan, Germany, and Russia, initiated the International IoT FinTech Standards Research Group. On behalf of China, the Wuxi IoT Industry Research Institute took the lead in proposing the world's first IoT FinTech Standard ISO/IEC 30163, and completed the development in 2021.

The Wuxi IoT Industry Research Institute was founded in 2009, jointly by the Shanghai Institute of Microsystem and Information Technology of Chinese Academy of Sciences, and the Wuxi High-tech Zone. Focusing on the national strategy for the Internet of Things industry and for major science and technology plans, the Institute participates in the standardization work in the field of Internet of Things, and at the same time promotes the industrial application of Internet of Things technology.

Cloud

22. CCSA New Sector Standard on Cloud Metropolitan Area Network

CCSA #Cloud

With the development of Internet services, especially cloud computing, big data, high-definition video and other services, higher requirements have been put forward for network infrastructure. The Metropolitan Area Network (MAN) is a computer communication network established within a city; it is the closest broadband IP network to users. At present, MAN mainly uses dedicated equipment to provide services; this, however, presents a series of challenges such as long development cycle, lack of flexibility in deployment and difficulty in function expansion. Based on the development of Software Defined Network (SDN)/Network Functions Virtualization (NFV) and new network technology, the industry puts forward a new development direction for MAN cloud.

At present, domestic and foreign operators are actively exploring MAN cloud deployment schemes. From the perspective of network evolution, MAN cloud should aim at meeting the convergence load of broadband, mobile and government-enterprise services, and thus at becoming a new type of MAN that is agile, intelligent, efficient and secure thanks to its improved flexibility. In order to provide guidance to the research and development of equipment, and to accelerate the deployment of MAN cloud-based solutions, the China Communications Standards Association (CCSA) organizes and promotes the development of relevant sector standards.

In January 2021, the WG1 (General Network and AI Application Working Group) of TC3 (Network and Business Capabilities) organized the draft of the sector standard "Reference Architecture and Technical Requirements for Cloud Metropolitan Area Network". The standard, which was jointly led by China Telecom, ZTE and Huawei, provides a universal reference framework for the realization of MAN cloud, standardizes the key technical requirements, and guides the research and development of related technologies and products; therefore, it has an important reference value for promoting the integrated development of cloud and network.

The Chinese original news is available at:

http://www.ccsa.org.cn/detail/3981?title=TC3WG1%E9%80%9A%E8%BF%87%E2%80%9C%E4%BA%91%E5%8C%96%E5%9F%8E%E5%9F%9F%E7%BD%91%E5%8F%82%E8%80%83%E6%9E%B6%E6%9E%84%E5%8F%8A%E6%8A%80%E6%9C%AF%E8%A6%81%E6%B1%82%E2%80%9D%E6%8E%A8%E5%8A%A8%E7%BD%91%E7%BB%9C%E4%BA%91%E5%8C%96%E5%8F%8A%E4%BA%91%E7%BD%91%E4%B8%80%E4%BD%93%E5%8C%96%E5%8F%91%E5%B1%95

Energy Efficiency and Environmental Protection

23. EU, China Hold High-level Dialogue on Environment and Climate

#EU-China #Environment

On 1 February 2021, Chinese Vice-Premier HAN Zheng, also a member of the Standing Committee of the Political Bureau of the Communist Party of China Central Committee, held the first EU-China High-level Environment and Climate Dialogue, together with the European Commission's Executive Vice President, Frans Timmermans. The meeting took place online.

According to Mr. HAN, China has vowed to peak its carbon dioxide emissions by 2030 and achieve carbon neutrality by 2060, which is a major announcement on its own climate and environmental policies. In order to achieve these goals as scheduled, China needs to make arduous efforts to promote energy conservation, emission reduction and low-carbon development.

The two sides agreed to implement the consensus reached by both leaders, give full play to the leading role of the high-level dialogue, deepen China-EU environmental and climate pragmatic cooperation, and make green cooperation a new highlight and engine of China-EU comprehensive strategic partnership.

Noting that this year China will host the 15th meeting of the Conference of the Parties to the Convention on Biological Diversity (COP15) in Kunming, Han said that China hopes to work together with the EU side to push the conference to achieve positive results, launch a new process of global biodiversity governance, and promote the building of a shared future for all life on Earth.

Mr. Timmermans, for his part, highly appreciated China's positive position on climate change and other issues. He expressed a willingness to expand and deepen EU-China dialogue and cooperation in environment and climate, and give full play to the role of multilateral mechanisms. In particular, in his Twitter he posted: "Good to start the EU-China High-Level Environment and Climate Dialogue. 2021 is a crucial year for us to take action on the twin climate and biodiversity crises. We have laid the foundations for a good partnership and will work closely together towards

COP26 in Glasgow and COP15 in Kunming. We must seize these moments to put the world on a path to green recovery, to ensure everyone's health and well-being for generations to come."

The Chinese news on this high-level dialogue for reference is available at:

http://www.mee.gov.cn/ywdt/szyw/202102/t20210202_819979.shtml.

24. Green Product Certification for Building Materials: Rapid Growth Driven by Government

#Green Product Certification

According to the data disclosed by MIIT on 5 February 2021, currently there are 22 Chinese certification bodies accredited for conducting green product certification for building materials. Since the launch of this voluntary certification scheme, green product certificates have been issued to 184 products in 6 areas of green building material products, namely sanitary ceramics, building glass, insulation materials, sealing materials, brick of pottery and porcelain (board), wood and plastic products.

The green product certification scheme originates from the State Council's efforts to unify the multiple certifications that products needed in China, relating to environmental protection, energy saving, water conservation, recycling, low carbon, renewables, and organic products. The scheme was introduced in the State Council's *Opinions on Establishing a Unified Standards, Certification and Labelling System for Green Products* issued in 2016, requiring all products covered to be subject to unified standards, assessment methods, and labelling rules. As a follow-up, in December 2017, the former AQSIQ, SAC, CNCA, Ministry of Housing and Urban-Rural Development (MoHRUD), and MIIT, jointly issued the *Guiding Opinions on Promoting Product Standards, Certification and Labelling for Green Building Materials,* aiming to facilitate the implementation of the State Council's policy in the field of building materials products. Subsequently, in 2019, MIIT, SAMR, and MoHURD released the *Green building materials product certification implementation plan*, together with the *Notice on accelerating the green building materials product certification and production application*: the two documents provide more details for the implementation of the green products certification scheme for building materials.

In parallel, the Chinese government has also taken the lead in prioritising green building materials in its procurement activities, thus supporting the implementation of the green product certification scheme. In October 2020, the Ministry of Finance and MoHURD jointly issued the *Notice on the Pilot Work of Government Procurement to Support Green Building Materials to Promote Building Quality Improvement*. The notice clearly states that: "the government promotes green building materials, such as recyclable building materials, high-strength and durable building materials, green components, green decoration materials, and water-saving and energy-efficient building materials, in government procurement projects". Indeed, strong support by the government will accelerate the adoption of the green products certification by the market, thus amplifying its influence.

The green products certification is still a voluntary scheme, but with the quick green transition and development strongly promoted by China, products with green attributes will likely obtain more competitive advantages, which to some extent will make the green certification a de facto necessity. The new certification will inevitably impact the competition of green building materials in the Chinese market, and it will gain more influence when more building materials will be included in its scope. Therefore, overseas certification bodies and green building materials manufacturers should pay close attention to the development of the green products certification scheme, to prepare and secure a good position in the future competition.

Source：https://www.miit.gov.cn/xwdt/gxdt/sjdt/art/2021/art_bb5714f147ca4662b8283e3a71863bb1.html

25. NEA: Stricter Energy Consumption Standards and Green Energy Consumption Models

Energy Consumption # Green Energy Consumption

On 30 March 2021, during the press conference held by the State Council, the Director of the National Energy Administration (NEA), ZHANG Jianhua, introduced the development of China's renewable energy.

Specifically, the Director highlighted that China is still two five-year plans away from reaching its carbon dioxide emissions peak in 2030. The first is the 14th Five-Year Plan (2021-2025), which also marks a critical period for China's energy strategy towards low carbon. During this period, NEA will vigorously promote green energy consumption models, adopt stricter energy consumption standards, and support the promotion of non-fossil energy in key sectors such as industry, construction, and transportation. NEA will also accelerate the development of new energy vehicles, build photovoltaic integration and other green energy consumption modes, and speed up the replacement of electric energy in heating and cooking, thus improving the level of electrification across all sectors of the society. China's goal is to reduce, by 2025, the energy consumption per unit of GDP by 13.5%, and carbon dioxide emissions per unit of GDP by 18%, compared with 2020 levels.

NEA is also planning to promote carbon dioxide emission peak and carbon neutrality in the energy sector, focusing on the promotion of energy low-carbon smart transition, high-quality development of new energy, new power system construction, development of new energy storage, and other key task to formulate supporting policies and measures. At the same time, NEA will ensure that the national and the various provincial-level 14th Five-year Plans for energy will be coordinated, leading to tangible actions for achieving the goals. Finally, NEA will give full play to the leading role of planning, will consolidate the responsibilities of carbon emission reduction at all levels, and will support regions and cities with the necessary conditions to take the lead in achieving carbon peaks before the others.

Source: https://mp.weixin.qq.com/s/7tHviKyvrtH1NsUdr5s_6Q

Medical Device

26. NMPA Summarizes Progress of China's Medical Device Standardization in 2020

#NMPA #Medical Device Standardisation

At the end of February 2021, the National Medical Products Administration (NMPA) released the "*Annual Report on the Management of China's Medical Device Standards (2020)*". The report summarizes the progress of medical device standardization work in 2020, and more in general during the 13th Five-Year Plan period. The key points are as follows:

1. In 2020, standardization plans were developed for 27 medical device national standards and 87 medical device industry standards. While 24 medical device national standards, 125 medical device industry standards, and 10 medical device industry standards amendments were published.
2. By 31 December 2020, there were a total of 1,758 medical device standards. Among these, 286 standards (16% of total) relate to foundations; 54 (3%) relate to management; 422 (24%) to methods; and 996 (57%) to products.
3. By 31 December 2020, there were 397 effective medical device mandatory standards, accounting for 23% of the total. Among these, 92 are national standards and 305 are industry standards. Furthermore, 106 of these mandatory standards (27% of the total) are basic general standards (27%), 2 (1%) are method standards, and 289 (72%) are product standards.
4. In April 2020, the new version of GB 9706.1-2020 "Medical Electrical Equipment Part 1: General Requirements for Basic Safety and Basic Performance" was officially released. The standard, which will be implemented on 1 May 2023, will be the basis that all medical electrical equipment must follow. This standard, and its related parallel and vertical standards, all adopt the IEC 60601 series, of which 74 IEC 60601 series standards are suitable for conversion. By 31 December 2020, 15 standards were issued, 39 were completed and revised (under review and publication), 15 were under revision, and 5 special safety standards for which conversion is needed were at the national standard project application stage.
5. In 2020, China proposed 9 medical device international standardization projects, including "Medical Infusion Set Part 15: Light-proof Infusion Set", and "Tissue Engineering Medical Products-Quantitative Detection

Method for Residual DNA of Acellular Matrix Scaffold Materials". 1 project was successfully initiated, and 2 projects were approved by member states, entering the project approval voting stage.

6. Among the 8 international standards for medical devices whose formulation is led by China, the first international standard project relating to the prevention and control of the COVID-19 has ended the voting on the Draft International Standard (DIS). Four other international standard projects, including "Cardiovascular Implants-Heart Occluder" and "Medical Infusion Sets Part 15: Light-proof Infusion Sets", have passed the Committee Draft stage voting, entering the Draft International Standard voting stage. "Tissue Engineering Medical Products Cartilage Nuclear Magnetic Evaluation Part 1: Adoption The clinical evaluation method of dGEMRIC and T2 Mapping technology" was adjusted from technical report to the technical specification, the project establishment voting stage was unanimously agreed by the member states, and the working group draft discussion stage was started.
7. In 2020, 322 mandatory medical device standard texts and 808 non-adopted voluntary standard texts were published on the website of the Medical Device Standards Management Center of the National Medical Products Administration.

Source: https://mp.weixin.qq.com/s/GTII8xNwCQaGDzrWVps19w

Introduction of SESEC Project

The Seconded European Standardization Expert in China (SESEC) is a visibility project co-financed by the European Commission (EC), the European Free Trade Association (EFTA) secretariat and the three European Standardization Organizations (CEN, CENELEC and ETSI). Since 2006, there has been three SESEC projects in China, SESEC I (2006-2009). SESEC II (2009- 2012) and SESEC III (2014-2017). In April 2018, SESEC IV was officially launched in Beijing, China. Dr. Betty XU was nominated as the SESEC expert and will spend the next 36 months on promoting EU-China standardization information exchange and EU-China standardization cooperation.

The SESEC project supports the strategic objectives of the European Union, EFTA and the European Standardization Organizations (ESOs). The purpose of SESEC project is to:

- **Promote European and international standards in China;**
- **Improve contacts with different levels of the Chinese administration, industry and standardization bodies;**
- **Improve the visibility and understanding of the European Standardization System (ESS) in China;**
- **Gather regulatory and standardization intelligence.**

The following areas have been identified as sectorial project priorities by the SESEC project partners: Internet of Things (IoT) & Machine-to-Machine(M2M) communication, communication networks & services, cybersecurity & digital identity, Smart Cities (including transport, power grids & metering), electrical & electronic products, general product safety, medical devices, cosmetics, energy management & environmental protection (including eco-design & labelling, as well as environmental performance of buildings).

SESEC IV China Standardization and Technical Regulation Bimonthly Newsletter

SESEC IV China Standardization and Technical Regulation Bimonthly Newsletter is the gathering of China regulatory and standardization intelligence. Most information of the Monthly Newsletter was summarized from China news media or websites. Some of them were the first-hand information from TC meetings, forums/workshops, or meetings/dialogues with China government authorities in certain areas.

In this Bimonthly Newsletter

In this Bimonthly Newsletter, some news articles were abstracted from Chinese government organizations. All new published standards, implementation or management regulations and notice are summarized; original document and English version are available.

Abbreviations

SAMR	State Administration for Market Regulation	国家市场监管总局
CAS	China Association	中国标准化协会
CCC	China Compulsory Certification	中国强制认证
CCSA	China Communication Standardization Association	中国通信标准化协会
CEC	China Electricity Council	中国电力企业联合会
CEEIA	China Electrical Equipment Industrial Association	中国电器工业协会
CELC	China Energy Labeling Center	中国能效标识中心
CESI	China Electronic Standardization Institute	中国电子标准化研究所
CMDSA	Center for Medical Device Standardization Administration	医疗器械标准管理中心
CNCA	Certification and Accreditation Administration of China	中国国家认证认可监督 管理委员会
CNIS	China National Institute of Standardization	中国国家标准化研究院
CNREC	China National Renewable Energy Center	中国国家可再生能源中 心
EPPEI	Electric Power Planning and Engineering Institute	电力规划设计总院
IEC	International Electrotechnical Commission	国际电工委员会
ITEI	Instrumentation Technology and Economy Institute	机械工业仪器仪表综合技术与经济研究所
MEE	Ministry of Ecology and Environment	中国生态环境部
MIIT	Ministry of Industry and Information Technology of People's Republic of China	中国工业和信息化部
MoH	Ministry of Health	卫生部
MoHURD	Ministry of Housing and Urban-Rural Development	住房与建设部
MOT	Ministry of Transport	中国交通运输部
MOST	Ministry of Science and Technology	中国科学技术部
NDRC	National development and reform commission People's Republic of China	中国国家发改委
NIFDC	National Institute of Food and Drug Control	中国食品药品检定研究 院
SAC	Standardization Administration of China	国家标准化管理委员
SGCC	State Grid Corporation of China	国家电网
TC	Technical Committee for Standard Development	标准化技术委员会