SESEC IV
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Seconded European Standardisation Expert in China
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Takeaways

SESEC Training in SAC on Vienna and Frankfurt Agreement

On 18 December 2020, Dr. Betty XU was invited to give a training to relevant personnel of SAC and secretaries and experts of China TCs mirroring ISO/IEC, on Vienna and Frankfurt Agreement. The training was held both online and offline, attracting more than 150 participants. This training also influenced the policies of SAC on international standards adoption and alignments between national and international standards.

SESEC, EU SME Centre, CICC hold first Joint Webinar for European exporters

The first joint webinar by SESEC, EU SME Centre and the China-Italy Chamber of Commerce (CICC) was held successfully on 28 January 2021. The theme of the webinar was "Chinese standards and compliance for European exporters", to provide European exporters with a general introduction to China's standardisation system and key requirements that they should follow.

China Tried to Strengthen its Semiconductor Standardization

On 28 January 2021, MIIT solicited public comments for the establishment of National Integrated Circuit Standardization Technical Committee. The deadline is 27 February, 2021. MIIT hopes the New TC will put national integrated circuit industry chain on one single platform, which can help China establish a complete internal supply chain, and thus be independent of foreign advanced technologies.

SAMR solicits opinions on the newly revised Measures for the Administration of National Standards

Chinese government has made a series of revisions to the Measures for the Administration of National Standards to meet new requirements under the new *Standardisation Law*, regarding which SAMR published a call for comments on 19 December 2020. The revision of the Measures for the Administration of National Standards supplements and improves China's standards development and revision system. It reflects China's efforts to establish a more scientific, transparent and applicable national standardisation system.

Guidelines on the Adoption of International Standards (2020) issued by SAC

At the beginning of December 2020, SAC issued the Guidelines on the Adoption of International Standards (2020). These guidelines aim at propelling the conversion between Chinese standards and international standards as well as their application, thus and ensuring the effective adoption of international standards in Chinese national standards. It proposed, the first time, that China led or China proposed ISO/IEC New Working Items, need to be paralleled set up new Working Items in China's national TC level.

China Practical Guidelines for the Prevention of Ethical Security Risks in AI

On 5 January 2021, the National Information Security Standardisation Technical Committee (SAC/TC 260) issued the Practical Guidelines for Cybersecurity Standards – Guidelines for the Prevention of Ethical Security Risks in Artificial Intelligence. The Guidelines target organisations and individuals engaged in the research and development, design and manufacture, deployment and application, and other related activities in the field of artificial intelligence (AI).

China REACH: China Restricted Chemical Substance Standard released

The revised Provisions on the Environmental Administration of New Chemical Substances (MEE Order No. 12) were released on the 29th April, 2020 and will take effect on 1st January, 2021. As a significant support for the implementation of China REACH, GB/T 39498-2020 (Guidelines for the Control of the Use of Key Chemical Substances in Consumer Products) was officially released on 19 November 2020. The standard will come into force on 1 June 2021.

Horizontal Issues

1. SESEC Training in SAC on Vienna and Frankfurt Agreement-Attracting 150 Participants Engaged in ISO/IEC Standardisation

#Vienna Agreement #Frankfurt Agreement

On 18 December 2020, Dr. Betty XU was invited to give a training to relevant personnel of SAC and secretaries and experts of China TCs mirroring ISO/IEC, on Vienna and Frankfurt Agreement. The training was held both online and offline, attracting more than 150 participants. This training also influenced the policies of SAC on international standards adoption and alignments between national and international standards.

After a brief introduction of the SESEC project, Dr. Betty XU first explained in detail the European standardisation and technical regulation system, including the roles and responsibilities of different actors such as the European Commission, EFTA, CEN-CENELEC and ETSI; as well as the goals, essence and consistency of the European Standardisation System. A central part of the training was a detailed overview of the Vienna Agreement between ISO and CEN, and of the Frankfurt Agreement between IEC and CENELEC. Dr. Betty focused on the parallel development and review of standards, and emphasised the primacy of international standards. Specifically, Dr. Betty XU highlighted that the Frankfurt Agreement is in general similar to the Vienna Agreement, with the main differences being:

- All IEC standards-setting is subject to the IEC-CLC parallel procedure (except where permitted by the Technical Committee);
- All New Work Item proposals by CENELEC will be submitted to IEC (CENELEC will start New Work Item proposals only after the new work plan is approved);
- EC-CENELEC standards led by CENELEC do not follow parallel development and adoption procedure;
- Common modifications to international standards can be made at the European level.

After the training, participants were given time to raise questions. Most of the questions related to China's participation in international standardisation development, highlighting the fact that, in practice, European countries exert major inference in some international standards, perhaps due to the Vienna Agreement and Frankfurt Agreement.

The training gave a full and detailed overview of the international cooperation mechanism between ISO/IEC and CEN/CENELEC; as such, it provided support to China to better coordinate with the international standardisation system.

2. SESEC, EU SME Centre, CICC hold first Joint Webinar for European exporters

#Webinar #Horizontal

The first joint webinar by SESEC, EU SME Centre and the China-Italy Chamber of Commerce (CICC) was held successfully on 28 January 2021. The theme of the webinar was "Chinese standards and compliance for European exporters", with the aim to provide European exporters with a general introduction to China's standardisation system and key requirements that they should follow, both for normal trade and for cross-border e-commerce.

The webinar focused on two main aspects:

- An overview of Chinese standardisation system: type of standards, who does what, and future directions;

- Standards compliance for EU exports to China under normal trade and cross-border e-commerce.

Dr. Betty Xu, the Director of the SESEC project, and Dr. Martina Gerst, senior Technical adviser/trainer for Market Access China shared their insight on it respectively. Their slides can be downloaded here:

Chinese Standardization System EN

Standards and compliance for EU exports to China

The event attracted more than 120 registrants and nearly 100 participants. Due to the time limits, only a few questions from attendees were addressed in the meeting. More questions and comments collected will be responded soon.

This webinar was the first of a webinar series to be organised. In fact, standards and compliance remain one of the main reasons why products exported from the EU to China encounter delays at the Chinese customs. The webinar series aims to address this issue by increasing the awareness of EU exporters on standards and compliance.

We are looking forward to your participation in our upcoming activities - stay tuned!

3. General Agreement for Comprehensive Agreement on Investment Reached Between EU and China

#Comprehensive Agreement on Investment

On 30 December 2020, Chinese President Xi Jinping had a virtual meeting with European Council President Charles Michel, European Commission President Ursula von der Leyen, German Counsellor Angela Merkel (representing the German Presidency to the Council of the EU), and French President Emmanuel Macron. The leaders agreed in principle on the conclusion of the negotiations for a Comprehensive Agreement on Investment (CAI) between the EU and China.

On 22 January 2021, the European Commission published the full text of the CAI. The text is for information purposes only, and may undergo further modifications over the next months; it will be considered final and binding only upon signature by both parties.

The CAI covers various aspects of market access, level-playing field, sustainable development, and dispute resolution. SESEC analysed the full text, focusing in particular on the content relating to standardisation. In particular, CAI emphasises that both the EU and China are determined to strengthen their economic, trade and investment relations by taking into account the relevant international standards. Both the EU and China shall make their best endeavours to ensure that internationally agreed standards are implemented and applied in their territories, especially for regulation and supervision, and for fighting tax evasion and avoidance in the financial services sector. The CAI also stresses that labour standards shall not be used for protectionist purposes.

More specifically, Section III (Regulatory Framework), Sub-section 2 (Transparency), Article 7, focuses entirely on standard-setting. It reads:

> Each Party shall allow enterprises that are covered enterprises of the other Party, to participate in the development of standards by its central government bodies, including related standardisation working groups and technical committees at all levels, on terms no less favourable than those it accords to its own enterprises, including its covered entities. The list of such standardisation working groups and technical committees, as well as their members, shall be made publicly available. This shall include publication of the setting up of standardisation working groups and technical committees.
>
> Each Party shall make available to covered enterprises of the other Party, the requirements for application procedures to the standardisation bodies in a timely and transparent manner, including the conditions for access and requirements for each membership type. On the request, in writing, of covered enterprises of the other Party, relevant standardisation bodies shall inform such an applicant of the status of its application, without undue delay. If the competent authority requires additional information from such an applicant, it shall notify this applicant without undue delay.
>
> Each Party shall recommend that local and non-governmental standardizing bodies in its territory allow enterprises that are covered enterprises of the other Party to participate in the development by those bodies of standards and related conformity assessment procedures, on terms no less favourable than those they accord to its own enterprises, including its covered entities.
>
> Paragraphs 1 and 2 of this Article do not apply to:
>
> - sanitary and phytosanitary measures as defined in Annex A of the World Trade Organisation (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures; or
> - purchasing specifications prepared by a governmental body for its production or consumption requirements.

> For the purposes of paragraphs 1 and 2 of this Article, "central government body", "local government body", "non-governmental body", "standards" and "conformity assessment procedures" have the meanings assigned to those terms in Annex 1 of the WTO Agreement on Technical Barriers to Trade. Consistent with Annex 1, the two latter terms do not include standards or conformity assessment procedures for the supply of a service.

The full text of CAI is available at https://trade.ec.europa.eu/doclib/press/index.cfm?id=2237. SESEC will closely monitor the future progress and ratification of CAI, and will regularly publish ad hoc analysis.

4. 2020 Enterprise Standard Top Runner Conference Held in Beijing

#Top Runner

On 19 December 2020, the China National Institute of Standardisation (CNIS) organised, together with relevant industry associations, the 2020 Enterprise Standard Top Runner Conference in Beijing. The aim of the conference was to further promote the "top runner" system of enterprise standards, thus guiding the transformation and upgrading of enterprises, and matching the growing demand of consumers for quality products and services.

LIN Ling, the Director of CNIS' Research Institute of Resources and Environment, provided an overview of the "top runner" system and its implementation status in 2020. Specifically, the first batch of the "top runner" list in 2020 was published, and included: 154 products/services, 331 enterprises and 453 enterprise standards released by 76 conformity assessment agencies. In terms of next steps, CNIS will work on four main directions: (i) promoting the work coordination of the "top runner" system of enterprise standard at both the national and local level; (ii) cooperating with relevant industry associations to continue developing "top runner" enterprise standards; (iii) further improving the evaluation mechanism of "top runner" enterprise standards; and (iv) promoting the mutual recognition of "top runner" standards, international standards and regional standards.

The Enterprise Standard "Top Runner" system started to be implemented in 2018, and is generally considered to provide good opportunities for enterprises. On the one hand, it helps them to build brands, increase market awareness, and trade quality products and services; on the other hand, the system contributes to the promotion of the enterprise credit system and market information disclosure mechanism – in addition to improving the overall business environment and market competition. During the conference, ZHANG Xiaogang, former president of the International Organisation for Standardisation (ISO), also said that the implementation of the "top runner" system has effectively increased the influence and authority of Chinese enterprises.

Numerous policies and incentives have been formulated to encourage enterprises to actively take part in the enterprise standard "top runner" system. A few examples include:

- Government acceptance of the assessment results;
- Priority granted under government procurement tenders;
- Establishment of a special fund for "top runner" enterprises;
- Credit support;
- Local government financial incentives.

Nonetheless, there are no specific incentives for foreign-invested enterprises to participate in the programme. In the list of "top runner" enterprises and products, though there is some evidence of foreign enterprises (e.g. A.O.Smith and Maxell), large foreign

enterprises like Siemens are absent. One reason is due to the lack of detailed specifications on how the evaluation and selection of the "top runner" system is conducted, which increases uncertainty for foreign enterprises vis-à-vis national competitors. As a result, large foreign enterprises often decide not to participate in the system. It must be noted that, in general, China established the "top runner" system to increase the provision of high-end products to the consumers, meaning that foreign enterprises can still be able to hold their market share in China as long as the quality of their products remains competitive.

5. Report on the Development of Association Standards (2020) published

#Association Standard

In November 2020, the Report on the Development of Association Standards (2020) was published. The report, compiled by CNIS, uses data and typical cases to analyse the state of play and the characteristics of the development of association standards. Therefore, the report represents a useful reference to understand the overall development of association standards in China.

The report consists of three parts and nine chapters, covering three main aspects of association standards: (i) policies and data of association standards; (ii) cases of social associations; and (iii) cases of association standards.

Specifically, the policies and data of association standards are illustrated in two separate chapters, through summaries and graphs compiled based on information from the National Association Standard Information Platform.

Case studies are also provided on 40 relatively active social associations, selected from the National Association Standard Information Platform as representative cases. They provide insights on the characteristics and takeaways of their standardisation efforts and practices.

Finally, case studies on various association standards are also provided, particularly in fields such as fiber core switching robots, building materials, automotive aftermarket, electric motors, green manufacturing and intelligent transportation. The case studies illustrate their overall development, publication and implementation process and experience.

Link of related news (in Chinese language): https://www.cnis.ac.cn/bydt/zhxw/202012/t20201218_50895.html

6. What is the current situation of China automobile standards go global?

#Automobile #Go Global

On 30 December 2020, the China Automotive Technology and Research Centre (CATARC) convened the second meeting of the "go global" working group on automobile standards. The meeting reviewed the state of play of the "go global" strategy of China's automobile standards.

Currently, China's automotive standards have gained influence and made substantial progress in Southeast Asian, Central Asian and North African markets. Specific achievements include:

Communications of standards in ASEAN market: CATARC organised several bilateral and multilateral meetings in the ASEAN region, including the (i) China-ASEAN Exchange on the policies and regulations of energy conservation and emission reduction of automobiles, and (ii) China-Indonesia Seminar on Standardisation of Electric automobiles. Moreover, the China-Malaysia (CATARC-Marii) next generation automobile expert group will convene in the first quarter of 2021: its objective will be to promote China's standardisation system and key projects in the field of new energy automobiles.

Breakthroughs in Central Asian market: CATARC held the "China-Uzbekistan Electric Automobile Standard Certification Conference" – jointly with the Uzbekistan Standardisation Metrology Certification Authority and the Ministry of Automobile Industry. One of the outcomes of the conference was the establishment of a dedicated China-Uzbekistan Electric Automobile Standardisation Expert Group. In addition, CATARC also completed four training courses on 19 specific electric automobile standards. At present, Uzbekistan has begun its translation and conversion of China's automobile standards, and is trying to adopt these standards as its own standards.

Conversion of standards in North Africa: CATARC and BYD – China's EV giant – were awarded the certificate of membership of the Moroccan Electric Automobile Standards Technical Committee. To date, Morocco has already begun the conversion of ten GB electric automobile standards into Moroccan national standards; one draft standard has already been formed. Moreover, Morocco has invited CATARC to participate in the *ex-post* evaluation of the converted standards.

Background:

CATARC is the Secretariat of the National Technical Committee of *Auto* Standardisation SAC/TC114. It is also the main player in China's automobile standardisation. SAC/TC114 has 30 technical subcommittees, whose work covers all kinds of technologies within the automobile sector – from traditional gas-powered automobiles to new energy automobiles and intelligent connected automobiles.

Over the past few years, the Secretariat of SAC/TC114 has established various working groups to conduct research and development of standards in key areas, including: test standards for automotive collision, standards for auto airbag, commercial automobiles, automobile noise, electric automobiles motors, and electric automobiles batteries. SAC/TC114 has also opened the membership of its communication committee to eleven foreign auto companies that have set up joint ventures in China.

CATARC's "go global" working group of automobile standards was established on 31 March 2020, with the aim to become a platform for research, communication and cooperation, providing strong support to China's automobile standards and products "go global". The main research activities of the working group focus on the strategies, models and methods of internationalisation. Moreover, based on sector requirements, the working group has frequently organised specific communication and cooperation initiatives on the "go global" strategy, aimed at expanding the international influence of Chinese automobile standards and Chinese automobile brands.

Another key responsibility of the "go global" working group, is to provide support to decision-making when it comes to determining whether and how Chinese automobile standards should influence foreign auto markets and countries. Specifically, the working group has launched multilateral and bilateral communication with other countries, aimed at understanding aspects such as the situation of their automobile markets, industrial policies, technology development, standardisation regulatory system, the procedures for participating in the development and revision of standards, and the impact of international standards. Finally, the working group also analysed and provided clarity on the competitive areas and key projects in China's automobile standards system, and outlined relevant strategies, models and methods based on the principles, objectives and requirements of the "go global" strategy.

Link of related news (in Chinese language): http://www.catarc.org.cn/work/detail/2092.html

7. MIIT No. 48 Announcement on New Sector Standards

#Sector Standard

On 9 December 2020, the Ministry of Industry and Information Technology (MIIT) issued the Announcement No. 48 of 2020, approving 669 sector standards. Among these, there are 58 communication sector standards (7 revised standards and 51 newly developed ones).

The communication standards released cover broadband speed enhancement, big data, cloud computing, network data security, radio monitoring, mobile communication intelligent terminal, cluster communication, and other fields. Three standards, including "*Classification and Grading Method for Basic Telecommunication Enterprise Data*", started to be implemented from the date of release; while the remaining 55 standards, including "*Technical Requirements and Testing Methods for Big Data Time-Series Databases*", started to be implemented from 1 January 2021.

The other 611 sector standards released cover machinery, chemical, petrochemical, metallurgy, non-ferrous metals, gold, building materials, rare earth, automobile, shipping, aviation, light industry, textile, military civil products (civil explosives), and electronics.

In addition, Announcement No. 48 also approved 23 foreign versions of sector standards – 10 of which cover optical communication, communication power and station environment, 4G, and other fields. However, the foreign versions of these sector standards are not open access to the public: interested stakeholders can only purchase the paper version from designated publishers:

Sector	Publisher
Nonferrous metal	Metallurgical Industry Press
Rare earth	
Light industry	China Light Industry Press
Communication	Posts & Telecom Press

The full Chinese text of Announcement No. 48 (2020) is available at:

https://www.miit.gov.cn/zwgk/zcwj/wjfb/gg/art/2020/art_92c6044d50d14118ac057e6399a82517.html

8. China Tried to Strengthen its Semiconductor Standardization – MIIT established National Integrated Circuit Standardization Technical Committee

#Semiconductor Standardization

On 28 January 2021, MIIT solicited public comments for the establishment of National Integrated Circuit Standardization Technical Committee (hereinafter referred to as New TC). The deadline for submitting comments is 27 February, 2021.

According to the notice for public comments, the secretariat of the New TC will be in CESI (China Electronics Standardization Institute). It will be in charge of the research, development, and revision of standards for integrated circuit, including integrated circuit materials and equipment, semiconductor integrated circuit, film integrated circuit and hybrid film integrated circuit, microwave integrated circuit, integrated circuit module, integrated circuit chip, IP core, and micro-electromechanical systems (MEMS). Its work ranges from providing national standards and

sector standards involved in the design, research and development, and production and application in the above-mentioned fields, to offering support for other standardization technical committees and technical organizations on developing integrated circuit standards of relevant products and sectors. Internationally, the New TC will mirror IEC/TC47/SC47A integrated circuit, SC47D packaging, SC47F MEMS.

The New TC is expanded from SAC/TC78/SC2 (semiconductor integrated circuits, mirroring IEC/SC47A), which took charge of national integrated circuit standardization before. Members in the New TC, including former members, have increased by several times. It has 90 entities, such as research institutes, colleges and universities, industry associations, and user units. The 90 entities cover the whole integrated circuit industry chain, including materials and equipment, design and manufacturing, packaging and testing, and products and applications of integrated circuit. From the list of the members given in the notice, China's enterprises (organisations) comprise major part of all the members, such as SMIC, Huawei Technologies Co and its chip design unit HiSilicon, and Harbin Institute of Technology, etc. Foreign enterprises account for a small proportion. (These include the joint ventures like Senodia, ACM Research, and Sgmicro, and wholly foreign-owned enterprises like Silergy and Vimicro).

This New TC was established under the uncertainties and concerns of potential risks and blocks of China's participation in international standardization activities in integrated circuit. MIIT tried to optimize and strengthen its national standardization work in integrated circuit to support domestical semiconductor industry. It took the lead to set up the New TC, so as to integrate all national standardization groups of integrated circuit and tap into their full potential.

MIIT hopes the New TC will put national integrated circuit industry chain on one single platform, which can help China establish a complete internal supply chain, and thus be independent of foreign advanced technologies.

In addition, this New TC will strengthen China's development of integrated circuit standards, especially standards in key technological fields, such as AI, 5G, and IoT. It is strongly encouraged that European enterprises should offer their opinions actively and participate in the standardization work of this New TC. The harmonization of China's standards with international standards can secure the harmonized global supply chain and facilitate the international trade.

Background

In June 2014, the State Council issued "Outline for the Development of National Integrated Circuit Industry", emphasizing the development of standards in major innovative areas of integrated circuit to give full play of technical standards. In 2020, it issued Several Policies to "Promote the High-Quality Development of Integrated Circuit Industry and Software Industry in the New Era", further strengthening the establishment of integrated circuit standardization organization to improve the standard system.

In last 2-3 years, the global political situation had dramatically changed, and US-China trade tension made China feel the threats of losing the supply of integrated circuit. Those made China tried ever harder on developing its own integrated circuit industry, then stanadrds.

On the standardization working level, the standards of integrated circuit in China used to be done by SAC/TC78/SC2 (National Semiconductor Device Standardization Technical Committee) for a long time. CESI, however, believed that the SAC/TC78/SC2 could not meet the requirements of the development of national standards. Therefore, CESI put forward the establishment of the New TC.

Source (in Chinese language):

https://www.miit.gov.cn/zwgk/wjgs/art/2021/art_c1b77f7f003143e5a44ed36bc60a7b8c.html

Laws and Regulations

9. SAMR solicits opinions on newly revised Measures for the Administration of National Standards

#National Standard Administration #Call for Comments

Since their enforcement in 1999, the *Measures for the Administration of Nation Standards* have always been the main supporting regulation of the *Standardization Law of the People's Republic of China*. The Measures are designed to guide the development and revision work of China's national standardisation system, and therefore are an important part of the country's legal and regulatory framework for standardisation. However, after the release of the *Plan for Furthering the Standardization Reform* and of the new *Standardization Law*, the Measures are no longer suitable for China's current conditions. In this context, the Chinese government has made a series of revisions to the Measures, regarding which the State Administration for Market Regulation (SAMR) published a call for comments on 19 December 2020. The deadline for submitting comments is 18 January 2021.

The main changes in the proposed draft for comments are summarised as follows:

1. The scope of national standardization development is specified according to the new *Standardization Law*. On the basis of this new scope, the revised Measures further distinguish mandatory standards with recommended standards.
2. The "reference materials" outlined by the new *Standardization Law* is further defined as "technical requirements needed to be embodied by material objects", requiring that the reference materials should "be used together with relevant standards for test and comparisons". The numbering rule of reference materials is also clearly defined.
3. Procedural provisions for different stages of the standard-setting process are added. These include: the addition of the mechanisms of standard verification, project evaluation, approval of the final version, and evaluation of the effects of standard implementation; the strengthening of the procedural requirements for soliciting opinions and for conducting technical examination; the request for a strict standard-setting cycle; and the clarification of the principles for handling patents related to national standards.
4. The need to increase the supply of standards is highlighted. The revised Measures make clear that China should adopt and apply international standards, and at the same time compile and release foreign language editions of national standards. In addition, the Measures also introduce special procedures for the conversion of association standards into national standards. Finally, the draft Measures also stipulate that the standard-setting process and cycle can be shortened to respond to emerging emergencies.
5. Efforts to promote the implementation of standards are outlined. After the publication of national standards, the State Council's administrative departments in charge of standardization should make the standards text publicly available and free of charge for public accessibility. Furthermore, the Measures clarify: (i) the legal force of the old and new standards during transition period, (ii) the publicity and education of national standards, (iii) the mechanism of standard implementation feedback, and (iv) the mechanism of standards implementation evaluation.

The revision of the *Measures for the Administration of National Standards* supplements and improves China's standards development and revision system. It reflects China's efforts to establish a more scientific, transparent and applicable national standardisation system. However, this draft still overlooks some issues that would have a significant impact on overseas stakeholders.

The main points, including pros and cons, of the document observed by SESEC are summarised as follows:

1. Improve the coordination between Chinese standards and international standards. The draft proposes that "the development of national standards and relevant international standards are encouraged to be made simultaneously, in order to accelerate the application of international standards" (Article 6). The draft also proposes that "the projects of national standards and international standards are encouraged to be applied simultaneously" (Article 16).
2. The issue of copyright protection of adopted international standards still remains unsolved. Although the draft proposes that "the adoption of international standards should conform to the copyright policy of relevant international standards" (Article 6), it also states that "the State Council's administrative departments in charge of standardization should make the standards text publicly available and free of charge for public accessibility and supervision" (Article 33). This latter article is, in fact, inconsistent with the copyright policy of most international standards organizations at present. Therefore, problems still exist in how to address the difference of copyright policies between China's standards and international standards in a reasonable manner.
3. The draft suggests that significant efforts will be made to promote the internationalisation of Chinese standards. Specifically, Article 7 proposes that China "needs to start the project initiation, compilation and issuance of foreign language editions of Chinese national standards, for areas which have not adopted international standards and relating to international trade, production capacity, and equipment cooperation".
4. The proposed Measures define, in a clear manner, the cycle of the development of national standards. Specifically, Article 22 indicates that "the approval of mandatory national standards should not exceed 24 months from their planning to final submission". The cycle is further reduced to 12 months for recommended national standards.
5. The mechanisms for the WTO/TBT notification of national standards still need to be improved. Although Article 26 of the draft Measures proposes that "the notification of calls for comments on mandatory national standards should meet the requirements of the WTO/TBT agreements", there still is a large number of recommended national standards which are used as the basis of mandatory market access schemes, like CCC, – thus becoming de facto mandatory. These should be taken into consideration for WTO/TBT notification.
6. The issue of the transitional period of standards remains unclear. Article 34 stipulates that "when new national standards are issued, but not yet fully implemented, enterprises can choose between the implementation of the original national standards and the implementation of new national standards. However, when newly revised national standards are implemented, the original national standards shall be abolished". The article does not clarify how to determine the transitional period, which negatively impacts the level of transparency of the whole system.
7. Policy guidance is enhanced for the application of recommended national standards. The proposed draft Measures state that "priority should be given to recommended national standard for the implementation

of activities such as infrastructure construction, basic public services and government procurement" (Article 35), and at the same time that "enterprises and other relevant social organizations, as the key actors enforcing national standards, should strictly implement mandatory national standards and actively adopt recommended national standards during production stages, sales stages, etc." and "standardization administrative departments and relevant sector administrative departments at different levels are encouraged to adopt national standards when developing relevant policies" (Article 38).

8. Finally, the draft Measures define the mechanisms through which association standards can be converted into national standards. Specifically, Article 31 stipulates that China "should build a mechanism through which association standards are converted to national standards, particularly in the case of association standards which are advanced, leading, with good implementation results, and which need to be adopted nation-wide". This article clearly highlights the inevitable direction that association standards will take in the future, also stimulating social organisations to expand their goals and efforts in the development of association standards.

Visit here for the draft for comments of the Measures (in Chinese language)

10. 2020 Version of the Negative List to Chinese Market Launched

#Negative List

On 16 December 2020, the National Development and Reform Commission (NDRC) and the Ministry of Commerce (MOC) jointly published the *2020 Version of the Market Access Negative List*. The Negative List indicates the 123 categories of businesses that are not allowed to be conducted in China – as well as the legal basis of these regulations.

After three rounds of revisions, the *2020 Version of the Market Access Negative List* was officially published and put into effect in December 2020. Compared with the previous version, the number of items on the 2020 version of the Negative List was reduced from 151 to 123, a reduction of 18%. The reduction is particularly significant if compared to the first ever version of the Negative List published in 2016, which contained 328 items.

The introduction of the 2020 List will lead to reduced market entry restrictions; it will also integrate more effectively markets with competent governments, and accelerate the formation of a single domestic market that is efficient, standardized, and fair in competition.

According to NDRC, the Negative List will be further revised in 2021 (2021 version), to introduce new relaxed market access measures applying to the Hainan Free Trade Port. The future version will further promote fair competition, strengthen the rigid constraints of the review system for fair competition, abolish regional segmentation and local protection, and ultimately contribution to the establishment of a unified market.

The full table of the Negative List to the Chinese Market is available at:

https://www.ndrc.gov.cn/xwdt/tzgg/202012/t20201216_1252995.html

11. Guidelines on the Adoption of International Standards (2020) issued by SAC

#SAC #International Standard Adoption

At the beginning of December 2020, the Standardisation Administration of China (SAC) issued the Guidelines on the Adoption of International Standards (2020). These guidelines aim at propelling the conversion between Chinese standards and international standards as well as their application, thus and ensuring the effective adoption of international standards in Chinese national standards (hereinafter referred to as 'the adoption').

This document outlines 8 key sectors for the adoption, namely: agriculture and food, consumer goods, equipment manufacturing, information technology and electrical engineering, new materials, service industry, social administration and public services, and energy resources. The guidelines also indicate the basic requirements that must be met throughout the execution, feedback, coordination and safeguarding of the adoption process.

The document will guide China to adopt more international standards in a timely manner, especially in the eight key sectors listed. Furthermore, the guidelines encourage the "simultaneous initiation of international standardisation projects proposed by China, with the initiation of national standardisation projects": this is expected to ensure the effective adoption of international standards in China, as it overcomes potential obstacles originating from the misalignment of international standards from those used in China. The document also proposes a guidance, coordination and notification mechanism aimed at facilitating the proposal, execution, feedback and improvement of adoption projects.

The following sections of the guidelines are particularly noteworthy:

- The administrative department of standardisation of local people's governments, and national professional standardisation technical committees, shall conduct research and analysis on international standards and their applicability in Chinese standards. They shall continuously monitor the development and progress of international standards, provide recommendations on adoption projects in a timely manner, and verify the progress of the adoption, in order to ensure its scientific nature and effectiveness.
- The domestic technical counterparts of international standardisation organisations shall follow up on the research and analysis on international standards, and actively provide feedback to national professional standardisation technical committees and all other relevant units.
- The relevant administrative departments of the State Council shall cooperate with the administrative department of standardisation of the State Council, to promote the simultaneous drafting of international standardisation projects proposed by China with Chinese national standardisation projects. It proposed, for the first time, that China led or China proposed ISO/IEC New Working Items, need to be paralleled set up new Working Items in China's national TC level.

However, the document also reflects some drawbacks in China's adoption work, for instance:

- The document does not specify the existence of relevant policies to ensure the coordination and consistency of Chinese standardisation projects with international standardisation projects.
- The guidelines explicitly mention that the applicability of adoption projects will be analysed and verified: this implies that the adoption might, in practice, involve a revision of international standards, which in turn may create unnecessary technical barriers to trade.
- The document does not cover the issue of copyright.

Finally, in our view, the document fails to cover many other issues that often emerge during the adoption process. For instance, it does not illustrate how to deal with issues involving intellectual property (IP) rights in the adoption

process, thus potentially leading to other issues such as the impossibility to adopt IP-related international standards and ineffective protection of IP.

12. China Rolls out Catalogue of Industries for Encouraged Foreign Investment (2020 Edition)

#Foreign Investment

On 28 December 2020, the National Development and Reform Commission (NDRC) and the Ministry of Commerce (MOC) jointly published the 2020 version of China's national industry catalogue that encourages foreign investment. The catalogue consists of 1235 articles – with 127 new articles and 88 modifications compared with the 2019 catalogue.

There are three main takeaways from the 2020 version of the catalogue: (i) increased role of foreign investment in the supply chain; (ii) encouraged foreign investment in production services; (iii) encouraged investment in Central and Western China. The 2020 version of the catalogue started to be formally implemented on 27 January 2021.

A draft version of the 2020 catalogue had previously been open for public comments – specifically from 31 July to 30 August 2020. The final version of the catalogue incorporates numerous comments submitted by foreign-invested enterprises, foreign chambers of commerce, industry associations, as well as relevant departments and local areas.

The *Catalogue of Industries for Encouraged Foreign Investment (2020 Edition)* is an important foreign investment promotion policy in China. Foreign investment projects under the catalogue may enjoy preferential treatment, such as reduced taxation and easier land use – in accordance with laws, administrative regulations and the provisions of the State Council.

The full Chinese text of the catalogue can be downloaded here.

13. New Release: Rules on Counteracting Unjustified Extra-territorial Application of Foreign Legislation and Other Measures

#Horizontal

The Ministry of Commerce promulgated *Rules on Counteracting Unjustified Extra-territorial Application of Foreign Legislation and Other Measures* (hereinafter referred to as the *Rules*) on 9 January, and these *Rules* will be effective as of the date of promulgation.

According to the Ministry of Commerce, this document was issued against the backdrop of "some countries promoting unilateralism, prohibiting relevant countries from trading with them, and even urging enterprises from other countries to cut economic and trade ties with relevant countries", and it is obvious that they are targeting at China. However, "the issuance of the *Rules* will not change China's international responsibility. According to international treaties that China has signed and participated in, the *Rules* shall not apply to cases involving extra-territorial application of foreign legislation and other measures".

In terms of specific measures, five aspects are outlined in the *Rules*:

1. Timely report. When a citizen, legal person or other organization of China finds unjustified extra-territorial application of foreign legislation and other measures, which means he/she/it is prohibited or restricted from engaging in normal economic, trade and related activities with a third state (or region), he/she/it shall report such matters within 30 days.

2. Assessment and determination. When the working mechanism takes charge of the assessment and determination of unjustified extra-territorial application of foreign legislation and other measures, it shall take all factors (mentioned in the document) into consideration.
3. Prohibition order. When the working mechanism, upon assessment, confirms that there exists unjustified extra-territorial application of foreign legislation and other measures, it may decide that the competent department of commerce of the State Council shall issue a prohibition order for foreign legislation and other measures.
4. Judicial remedy. Chinese citizens, legal persons or other organizations may sue in domestic courts for damages for the improper extraterritorial application of foreign laws and measures.
5. Punishment system. For violations of the obligation to report truthfully and failure to comply with the prohibition order, punishment should be impose

According to the *Rules*, the working mechanism shall assess and determine whether there exists unjustified extra-territorial application of foreign legislation and other measures; the working mechanism is composed of relevant central departments and led by the competent department of commerce of the State Council, and the specific matters are handled by the competent department of commerce and the Department of Development and Reform in conjunction with other relevant departments of the State Council. The document also mentions the content of assessment:

1. Whether international law or the basic principles of international relations are violated.
2. Potential impact on China's national sovereignty, security and development interests.
3. Potential impact on the legitimate rights and interests of the citizens, legal persons or other organizations of China.
4. Other factors that shall be taken into account.

These assessments are broad in scope and more detailed rules are required to screen specific acts in practice. In addition, the working procedure for the assessment of the working mechanism is not stated in the document, and how to determine the extent of the damage and the response measures should be further clarified.

Related Chinese news: https://baijiahao.baidu.com/s?id=1688378630160241442&wfr=spider&for=pc

Click here for the translation of the Rules.

Information Security

14. China Promotes Guidelines for Data Security Standards System in Telecommunications and Internet Industries

#Data Security # Standards System

On 17 December 2020, the Ministry of Industry and Information Technology (MIIT) issued the *Guidelines on the Construction of a Data Security Standards System in the Telecoms and Internet Industries*.

As the guiding document of the data security standardization work, the Guidelines clearly define the basic principles that the industry data security standard work should follow, and puts forward the framework of the data security standards system.

According to the Guidelines, the data security standards system for telecoms and internet industries comprises four categories:

- basic and general standards – these include terminology definitions, data security frameworks and data categories and classifications;
- critical technology standards – these deal with data security technology used throughout the entire data lifecycle, including in the collection, transmission, storage, processing, exchange and destruction of data;
- security management standards – these concern data security specifications, data security assessments, monitoring and early warning and processing, emergency responses and disaster back up and security capability certifications; and
- critical field standards – these concern 5G, mobile data, connected cars, the Internet of Things, the Internet of Industry, cloud computing, Big Data, AI, blockchain and other critical fields.

These standards will cover the regulation, evaluation and protection of data collection, transmission, storage, processing, exchange, and destruction, which will guide the telecommunications and Internet industries to effectively implement the requirements of relevant laws and regulations on data security management.

The Guidelines were introduced in detail in the 7th meeting of the Data Security Group under CCSA TC8 on Internet and Information Security (CCSA TC8 TF1) on 27 January 2021. At the meeting, CCSA TC8 TF1 said it would use the Guides as the basis and guidance to carry out standardization work. In particular, TF1 should give play to the guiding role of the framework proposed in the industry data security standards system in the application of standard project approval, constantly promote the development and revision of industry data security standards and the implementation of key standards, and promote the leading and supporting role of standards in ensuring data security.

The full text of the Chinese Guidelines for the Construction of Data Security Standard System in the Telecommunications and Internet Industries can be downloaded here. The Chinese reference can be found at

https://www.miit.gov.cn/jgsj/kjs/jscx/bzgf/art/2020/art_05443293fbb3406bb70be70f660faddf.html

https://mp.weixin.qq.com/s/yrVrVL58goSdjK_ASyORvA

Communication

15. CCSA Drafts 3 White Papers on Standards in 2020

#White Paper

In 2020, CCSA organized its members to complete and publish *White Paper on Cloud Virtual Reality Platform Technology under 5G Network*, *White Paper on Standardization of Identity Resolution of Industrial Internet*, and *White Paper on Key Scenarios and Technologies of Cloud Augmented Reality*.

- *White Paper on Cloud Virtual Reality Platform Technology under 5G Network* discusses the implementation details of cloud VR platform technology under 5G network in China. It provides a technical reference for the functional requirements, security capabilities and typical cloud VR service implementation of the cloud VR platform, aiming to provide suggestions for the construction of China's cloud VR platform, and promote the development of China's VR industry.
- *White Paper on Standardization of Identity Resolution of Industrial Internet* i) reviews the development status of identity resolution standardization in China and abroad, ii) analyzes the new requirements for standardization on industrial Internet, iii) further improves the framework of the existing standards system, iv) researches on the implementation path of standardization work, and v) puts forward standardization suggestions based on the current situation.
- Based on global standardization situation on Cloud AR industry, *White Paper on Key Scenarios and Technologies of Cloud Augmented Reality* introduces the key scenarios of AR cloud-based application in several fields, analyzes the demand of AR cloud-based application, and proposes the overall technical framework and key technologies of Cloud AR solution. It aims to put forward standardisation suggestions for China to build the end-to-end capability of Cloud AR business, and promote the development of China's AR industry.

In addition to these three white papers, CCSA also published white papers on information and communication energy, blockchain, quantum secure communication, and "Internet of Things + Blockchain". The Chinese versions of the white papers are available at:

http://www.ccsa.org.cn/achivement?id=52&title=%E7%99%BD%E7%9A%AE%E4%B9%A6

The original Chinese news is available at:

http://www.ccsa.org.cn/detail/3935?title=%E4%B8%AD%E5%9B%BD%E9%80%9A%E4%BF%A1%E6%A0%87%E5%87%86%E5%8C%96%E5%8D%8F%E4%BC%9A2020%E5%B9%B4%E5%8F%91%E5%B8%833%E5%86%8C%E6%A0%87%E5%87%86%E7%99%BD%E7%9A%AE%E4%B9%A6

Artificial Intelligence

16. China Brings out Practical Guidelines for the Prevention of Ethical Security Risks in AI

#Ethical Security #AI

On 5 January 2021, the National Information Security Standardisation Technical Committee (SAC/TC 260) issued the *Practical Guidelines for Cybersecurity Standards – Guidelines for the Prevention of Ethical Security Risks in Artificial Intelligence*. The Guidelines target organisations and individuals engaged in the research and development, design and manufacture, deployment and application, and other related activities in the field of artificial intelligence (AI).

In recent years, the rapid development of AI has profoundly changed people's lives and social models. AI has also brought many ethical and security risks, including those affecting social values, infringing individual rights, affecting fairness and justice, and blurring the boundaries of responsibility. Therefore, TC 260, in accordance with the requirements of Chinese laws, regulations and social values, has developed these practical guidelines to put forward a series of safety risk prevention measures against the ethical security risks of AI. Specifically, the Practical Guidelines cover terms and definitions, ethical security risks of artificial intelligence, and focus in particular on the prevention of such risks (basic requirements, research and development, design and manufacture, deploy and application, and customer use).

In Europe, the European Commission has been paying great attention to ethics long before the development of AI technology. In the field of AI, the High-level Expert Group on AI published in April 2019 the *Ethics Guidelines for Trustworthy Artificial Intelligence* and the *Policy and Investment Recommendations for Trustworthy Artificial Intelligence*: the two documents outlined a human-centric approach on AI, and listed the requirements that AI systems should meet in order to be trustworthy. While in China, previous standardisation activities in the field of AI focused mainly on technology and industrial/social application. Therefore, the introduction of these Practical Guidelines shows that China has now started to attach great importance also to ethical security risks. Beginning with standards, these Practical Guidelines will ensure that AI is safe and controllable; they will also contribute to coordinate the development and security of AI, and promote the application of AI in the national economy, society, ecology and other aspects.

The full Chinese text of the Practical Guidelines is available at:

https://www.tc260.org.cn/front/postDetail.html?id=20210105115207

5G and Industrial Digitalisation

17. 2020 White Paper on China's 5G Development and Economic and Social Impact: China's 5G standards are in continuous innovation

5G #Standards

On 15 December 2020, the China Academy of Information and Communications Technology (CAICT) held the "Symposium on ICT In-Depth Observation Report", during which the *2020 White Paper on China's 5G Development and Economic and Social Impact* was released.

The White Paper provides an overview of the latest achievements of China's 5G standards development. In general, China's 5G standards are developing continuously towards enhancing technical capabilities and supporting 5G application in vertical industries. Significant progress has also been made in standards for 5G enhancement, end-to-end network slicing technology, and Virtual Private Network (VPN) technology.

Specifically, in terms of **standards for 5G enhancement**, in June 2020 the 3GPP Release 16 standards were officially completed. Compared with the Release 15 standards, R16 ones have improved significantly in key performance, application capacities, and underlying network services. During the standardisation process of R16, enterprises in China submitted more than 21,000 drafts related to wireless and network, accounting for 35% of all 3GPP papers.

The overall architecture of **end-to-end network slicing technology** has also been completed. Slicing technology is the key core function of 5G. Organizations including 3GPP, IETF, ITU, ETSI, and CCSA, have all been working on the standardization of this technology; however, the standardization of cross-domain and cross-manufacturer communications still lags far behind their commercialization trends. For this reason, CCSA set up the End-to-End Network Slicing Project Group to plan the overall architecture of end-to-end network slicing technology, categorise existing standards, and organize research and testing of common standards. At present, the establishment of the overall architecture of end-to-end network slicing technology has been finished: it covers the overall technical requirements for 5G end-to-end network slice, the 5G network slicing technical requirements for end-to-end interworking based on slicing packet network (SPN), and the 5G network slicing technical requirements for end-to-end interworking based on IP carrying network. This achievement was complemented by the formulation of test methods for end-to-end network slicing technology by the IMT-2020 (5G) Promotion Group. Finally, based on these efforts, main equipment manufacturers have finished inter-domain tests for sub-slices from the same manufacturers, and are currently working on cross-domain tests for different manufacturers.

Finally, research on **VPN standards in the 5G industry** has been promoted. The 5G Applications Industry Array has established the 5G Industry VPN Research Group, with the aim to promote technological research and standards development. In terms of network architecture, according to different application scenarios, geographical locations and service scopes, the group defined the wide area VPN (WAN), and local area VPN (VLAN), and the classified deployment architecture will contribute to an effective

distribution of resources in 5G core networks, at the same time safeguarding businesses security. Concerning services capacity, the development of standards in the framework, functions and interfaces of industry-oriented service platforms has been promoted, so as to facilitate the joint management of 5G networks by network operators and manufacturers in different industries. Efforts have also been made in developing standards for lightweight UPF functions and interfaces for enterprises, thus ensuring the distribution of VPN resources with low costs. On top of this, research and development of key technologies for the interoperability between 5G and industrial LAN continues to occupy a central role in the agenda, especially 5G LAN function, interoperability between the two networks, and operation support.

Background:

The Symposium on ICT In-Depth Observation Report is an annual conference held by CAICT, a major event during which research results, analyses and forecasts of the development trends of innovation and integration of the ICT industry are shared. In 2020, the conference focused on the 5G+ industry, computing infrastructure, artificial intelligence, and connected vehicles. Specifically, it provided an overview of the state of play of industrial technologies, both domestically and internationally, and outlined ten potential trends of ICT industry development. During the event, several reports were also released for the first time, including: the *2020 White Paper on China's 5G Development and Economic and Social Impact*; the *Global Digital Governance White Paper (2020)*; the *Internet of Things White Paper (2020)*; and the *Digital Twin Cities White Paper (2020).*

Internet of Things

18. China IoT Security Test Technology Adopted as International Standard

#IoT Security

Recently, a Chinese Internet of Things security test technology – TRAIS-P TEST – has been published by the International Organisation for Standardisation/International Electrotechnical Commission (ISO/IEC) as an international standard. The standard is accessible at:ISO/IEC 19823-16:2020 Information technology — Conformance test methods for security service crypto suites — Part 16: Crypto suite ECDSA-ECDH security services for air interface communications.

This standard is an international test standard for TRAIS-P. Specifically, it standardises conformance test methods for Radio Frequency Identification (RFID) security cipher suites, so as to protect the security of RFID active products and systems. The standard will further improve the international standard system of the Tag and Reader Air Interface Security (TRAIS), particularly in terms of product test. Therefore, the standard also marks the completion of the establishment of the TRAIS international standards system, based on two levels of technology test and product test, thus safeguarding more effectively the air interface security connection for the global RFID system.

This standard was developed by the WAPI Industry Alliance, and it represents a significant step for China's technological contribution to ISO international standards. China has submitted 26 standards with the essential patent declarations; among these, 12 standards relate to cybersecurity and were all submitted by members of the WAPI Industry Alliance.

Background:

Radio Frequency Identification (RFID) is the key technology at the core of the Internet of things, which is widely used in different fields – including warehousing logistics, access control, parking management, automation of production line, and anti-counterfeit of commodities.

The TRAIS technology system, put forward by China, can provide air interface security services such as entity authentication, confidential communication, and access control; these are able to resist the security threats faced by RFID, including tag forgery, data eavesdropping and data tampering, and thus ensure the extensive and safe use of RFID. Two technologies of security protocol in the system have already been adopted as international standards:

- ISO/IEC 29167-16:2015 Information technology – Automatic identification and data capture techniques – Part 16: Crypto suite ECDSA-ECDH security services for air interface communication;
- ISO/IEC TS 29167-15:2017 Information technology – Automatic identification and data capture techniques – Part 15: Crypto suite XOR services for air interface communication.

In addition, TRAIS technology has also been adopted in China's national standards:

- GB/T 28925-2012 Information technology – Radio frequency identification: 2.45GHz Air Interface Protocol;
- GB/T 28926-2012 Information technology – Radio frequency identification: 2.45 GHz Air Interface Conformance Test Method;
- GB/T 29768-2013 Information technology – Radio frequency identification: 80000/900 MHz Air Interface Protocol;
- GB/T 35102-2017 Information technology – Radio frequency identification: 800/900MHz Air Interface Conformance Test Method.

Link of related news (in Chinese language): http://www.cac.gov.cn/2020-12/15/c_1609599870440682.htm

Big Data

19. 8 Big Data Sector Standards led by CAICT Come out

#Big Data #Sector Standard

On 17 September and 28 December 2020, the Ministry of Industry and Information Technology (MIIT) approved two new batches of communication sector standards – among which there are 8 big data standards which were led by the China Academy of Information and Communications Technology (CAICT). Specifically:

Standard Name	Standard No.
Big Data – Technical Requirements and Test Methods for Business Intelligence (BI) Analysis Tools	YD/T 3759-2020
Big Data – Technical Requirements and Test Methods for Data Management Platforms	YD/T 3760-2020
Big Data – Technical Requirements and Test Methods for Data Integration Tools	YD/T 3761-2020
Big Data – Technical Requirements and Test Methods for Data Mining Platforms	YD/T 3762-2020
Big Data – Technical Requirements and Test Methods for Time Series Databases	YD/T 3772-2020
Big Data – Technical Requirements and Test Methods for Distributed Batch Processing Platforms	YD/T 3773-2020
Big Data – Technical Requirements and Test Methods for Distributed Analytical Databases	YD/T 3774-2020
Big Data – Technical Requirements and Test Methods for Distributed Transaction Databases	YD/T 3775-2020

These 8 standards are all based on research and drafts completed by the Big Data Technology Standards Committee of the Chinese Communication Standardisation Association (CCSA TC601). They were discussed and finally approved by the CCSA TC1 WG6 Big Data and Blockchain Working Group. More than 30 organisations participated in the process, including Huawei, Ali Cloud, Tencent Cloud, ZTE, the Institute of Computing Technology of the Chinese Academy of Sciences, China Telecom, China Mobile, and China Unicom.

At present, CAICT has more than 40 big data standards under development, covering data processing platforms, databases, data analysis tools, application solutions, trusted data services, Capability Maturity Model, as well as other big data whole process categories. These standards will define the technical requirements and specific testing methods of various products and solutions using big data, thus will be applicable throughout the R&D, testing, evaluation and acceptance phases of big data products.

Chinese text for reference:

https://mp.weixin.qq.com/s/CLIR_5vsY2hHCikPtLdhsA

Industrial Internet

20. MIIT unveils Industrial Internet Innovation and Development Action Plan (2021-2023)

#MIIT #Industrial Internet

The Ministry of Industry and Information Technology (MIIT) issued the *Industrial Internet Innovation and Development Action Plan (2021-2023)* on 13 January 2021. The purpose is to carry out the innovation and development strategy of industrial internet, and to promote the integration and development of industry and digitalization.

This document proposed development goals for 2023 in areas including industrial and digital infrastructure, application of industrial internet, technological innovation, cultivation of industrial ecology and security and services. Meanwhile, it put forward that we should facilitate technical innovation through standardization*: "By 2023, we should establish a more comprehensive working mechanism for the standardization of industrial internet and a unified, integrated and open system of industrial internet standards should be basically in place. In addition, we need to finish the research and development of more than 60 key standards."*

To accomplish these goals, the following requirements for standardization were outlined:

- Strengthen the working mechanism. We should bring into play the national coordinated advancement group, general group, and advisory group for industrial internet standards, promote the research on the planning system of industrial internet standards and the implementation of relevant policies and measures, and advance the coordination between different departments, different industries, and different fields on major issues.
- Improve the system of standards. We should combine the applications of new technology such as 5G, edge computing, artificial intelligence, and the development trends of industries. Moreover, we need to clarify the key areas and direction of standardization to guide the promotion and implementation of standardization in subdivisions.
- Research and develop standards in key areas. Standards in industries including basic generic technologies, key technologies and typical applications are urgently needed. In addition, we should strengthen the protection and application of intellectual property in industrial internet and promote the implementation the national standards series *Navigation for Patents* (GB/T39551.1~7-2020) (herein "navigation" means patents retrieval and analysis), so as to improve the service for industrial intellectual property and ensure a simultaneous improvement of the quantity and quality of industrial internet intellectual property.
- Intensify international cooperation. We should actively participate in international activities in the International Telecommunications Union (ITU), International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) and the research and development of international standards. We should also strengthen technical communication and standardization cooperation with international industry advancement groups to promote the application and sharing of standards.

With regards to the development of specific technical standards, the article highlights:

- Basic generic standards in internet, platforms, security systems, general requirements, and the definition of terms.
- Key technical standards in “5G plus industrial internet”, the model of network information, industrial big data, and safety protection.
- Application standards in key industries such as raw materials, equipment, and electronic information.
- Standards of data exchange interfaces in industrial internet big data centers.
- Standards for key technology of cryptographic applications.
- Standards for the classification and grading of enterprise cybersecurity.
- Standards for full life cycle processing, classification and grading and transactions assessment of industrial data.

Background:

SAC and MIIT released *Guidelines for the Establishment of the Integrated Standardization System for Industrial Internet* in January 2019 to guide the standardization of industrial internet. This guideline presents the framework of China’s industrial internet standards system, which includes 320 government standards projects (national standards and sector standards), covering several technical fields including basic generic technology, networks, logos, edge computing, platforms and data, industrial apps, security, typical applications, and vertical industry applications. While 45 projects have been completed and 76 projects have been initiated before the proposal of the system, there are 199 standards to be developed. In December 2019, MIIT set up the coordinated advancement group, general group, and advisory group for industrial internet standards. The coordinated advancement group takes charge of the coordination of government departments and the advisory group should provide consultation and advice. The general group is responsible for the research on the need of standards for industrial internet and formulation of plans, systems, policies, and measures for standardization of industrial internet under the guide of the coordinated advancement group and advisory group. It should also coordinate the technical contents and technical management of industrial internet standards and strengthen the joint effort from different areas and different industries in the research and development of industrial internet standards. This general group has started its work in July 2020.

http://www.gov.cn/zhengce/zhengceku/2021-01/13/content_5579519.htm

Energy Efficiency and Environmental Protection

21. Measures for the Administration of Eco-Environmental Standards to Come Effect in China

Eco-Environmental Standard Administration

On 15 December 2020, the Ministry of Ecology and Environment released the *Measures for the Administration of Eco-Environmental Standards*, which will come into effect on 1 February 2020.

Background

The Measures can be seen as an upgraded and integrated version of: (i) the *Measures for the Administration of Environmental Standards* (Decree No. 3 of the State Environmental Protection Administration), and (ii) the *Measures for the Administration of Filing Local Environmental Quality Standards and Pollution Emission Standards* (Decree No. 9 of the Ministry of Environmental Protection). Both Decree No. 3 and Decree No. 9, although they played an important role in guiding and standardising the development of eco-environmental standards, are no longer suitable for the new environmental management requirements introduced by recent environmental protection laws and regulations, such as the new *Environmental Protection Law* and the new *Standardisation Law*.

Impact

The Measures feature four main highlights, namely they:

- Improve the classification and systems of eco-environmental standards;
- Clarify the role, development principles and implementation rules of various eco-environmental standards;
- Stipulate new requirements for the development and filing of local standards; and
- Put strong emphasis on the implementation and evaluation of standards. This point aims to guide more effectively the formulation, revision and implementation of eco-environmental standards.

Positioning

The Measures are the main reference and guiding document for China's eco-environmental standards. They specify the composition of the eco-environmental standards system, the principles and basic requirements for the development of various standards and their implementation methods, the management requirements for local eco-environmental standards, as well as the general requirements for the implementation and evaluation of standards and information disclosure.

The implementation of the Measures is supported by the *Working Rules for the Development and Revision of Eco-Environmental Standards*, issued in December 2020. The Working Rules are the special management regulation for the development and revision of national eco-environmental standards. They stipulate the basic principles, division

of responsibilities, working procedures and requirements for the revision of national eco-environmental standards, as well as work quality, progress management and punishment measures.

Content

The Measures consist of 54 articles, grouped in 10 chapters, which can in turn be divided into four sections: (i) general provisions; (ii) roles and positioning of various standards, and their management requirements; (iii) management requirements of local standards; and (iv) implementation evaluation of standards, and other provisions.

Among these, the second section illustrates in detail the role and management requirements for six types of standards, namely: eco-environment quality standards; eco-environment risk control standards; pollutant discharge standards; eco-environment monitoring standards; eco-environment basic standards; and eco-environment management technical standards.

Improvements

The Measures brought several improvements to the previous legislation, especially as they:

- Further improve the standards system and classification. The category of "eco-environmental risk control standards" has now been added; while other relevant standards such as soil pollution risk control, response to climate change, and marine eco-environmental protection, have now been included within the eco-environmental standards system.
- Adjust and clarify the role, developing principles and basic content requirements of the six types of eco-environmental standards and their developing principles. In particular, the positioning, distinction and application scope of the emission standards for different types of pollutants are now more specific and clear.
- Further clarify the requirements relating to the implementation of standards. Specifically, the Measures stipulate that a supporting work plan for the implementation of the standards should be formulated before the release of the emission standards, so that effective implementation can be ensured.
- Strengthen guidance for local eco-environmental standards. Specifically, the Measures stipulate (i) the circumstances under which local emission standards should be developed, and (ii) the basic principles for the development of local standards. At the same time, the Measures further standardise several management and procedural requirements, such as for the filing of local standards.
- Increase the evaluation and information disclosure requirements for standard implementation. In order to give full play to the role of standards in environmental governance, and to optimise economic development, new provisions on information disclosure of standards have also been added.

The Chinese version of the Measures can be found on the website of the Ministry of Ecology and Environment:

http://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202012/t20201218_813921.html

22. SAMR Adds 3 Standards in China Green Product Assessment Standard List

#Green Product Assessment

On 18 December 2020, the State Administration for Market Regulation (SAMR) released the *Announcement on Publishing the Second Batch of the List of Standards for Green Product Assessment*. The announcement contains three new standards that are added in the List of Standards for Green Product Assessment, specifically:

No.	Standard Code	Standard Name
1	GB/T 37866-2019	Green product assessment—Plastic products
2	GB/T 39020-2020	Green product assessment—Detergents
3	GB/T 39084-2020	Green product assessment—Packings for express service

The *Opinions of the General Office of the State Council on Developing a Unified Standard, Certification and Identification System of Green Products* (issued in December 2016) stipulated that a green product identification, standards list and certification catalogue should be uniformly published. Green product certification should then be organized in accordance with the standards included in the standard list.

On 12 April 2018, the first batch of the *List of Standards for Green Product Assessment* was officially released. It included assessment standards for 12 green products, namely: textile products, solar water heating system, waterproof materials and sealants, sanitary wares, building glass, thermal insulation, wood plastic composites products, furniture, paper and paper products, coating material, ceramics tiles (board), and wood-based panels and wooden flooring.

There are totally 15 standards included in the *List of Standards for Green Product Assessment*. The release of the *List* is a key means to achieve a unified national standards, certification and labeling system for green products. The list provides a standard basis for improving the green market system and increasing the supply of green products.

The full Chinese text for the *List of Standards for Green Product Assessment i*s available at:

List of Standards for Green Product Assessment (Second Batch) (second batch)

List of Standards for Green Product Assessment (First Batch) (first batch)

23. China REACH: China Restricted Chemical Substance Standard released

Restricted Chemical Substance #China REACH

On 19 January 2010, the Chinese Ministry of Environmental Protection (MEP) instituted the revised version of the *Provisions on Environmental Administration of New Chemical Substances*. This new legislation brought China's environmental regulations into closer accordance with the EU REACH law. The new Chinese legislation is often referred to as "China REACH".

Then, after 9 years of implementation, the second revision on the Provisions was made in 2020. The revised Provisions on the *Environmental Administration of New Chemical Substances (MEE Order No. 12)* were released on the 29th April, 2020 and will take effect on 1st January, 2021.

As a significant support for the implementation of China REACH, *GB/T 39498-2020 (Guidelines for the Control of the Use of Key Chemical Substances in Consumer Products)* was officially released on 19 November 2020. The standard will come into force on 1 June 2021.

Application Scope

GB/T 39498-2020 applies to consumer products, including product components, parts, accessories, packaging, and instructions for use. But it does not apply to products under special government supervision such as food, medicine, cosmetics, tobacco, special equipment, aircraft, ship, and military products.

Main Content

GB/T 39498-2020 is based on the EU "REACH Regulation ((EC) No 1907/2006)". The limit requirements of this standard refer to the "EN71-9 General Requirements for Organic Compounds in Toys", "EN71-12: 2013 Toy Safety-Part 12 N-nitrosamines and N-nitroso Compounds", "Ecological textile standard Oeko-tex100-2017", and other foreign standards' limit requirements, putting forward restrictions on consumer products in China. Specifically, in accordance with the requirements of GB/T 39498-2020, it is necessary to focus on the control of the key chemical substances in consumer products, including heavy metals, alkanes, halogenated alkanes, benzenes, polycyclic aromatic hydrocarbons, phenols, aldehydes, ethers, alcohols, esters and salts, amines, dyes and other chemical substances that cannot be classified, etc. (117 categories in total).

Background

In recent years, recall notification of the European Union and the United States for consumer products in China showed that more than half of the product recalls occur due to the hazards of chemicals. The primary reason for this is that there is a lack of national standards regarding the restriction on chemical safety hazards in China. To accelerate the export of Chinese products and improve the products quality, it is urgent to develop standards on the control of key chemical substances in consumer products that will lead the development of industry.

Conclusion

Enterprises related to consumer goods should pay full attention to the standard updates and have a comprehensive understanding of restricted and banned substances and related requirements, so as to improve the quality of consumer goods and reduce product risks.

China REACH VS EU REACH

It is known that all companies are obliged to notify new chemical substances, which are not listed on the Inventory of Existing Chemical Substance in China (IECSC), to the Chemical Registration Centre (CRC) before they are exported to China. In common with the submission of EU REACH registration dossiers, datasets are also required to support China REACH notification applications. Actually data requirements in EU and China overlap in some cases, but there are also several distinct differences.

- Both regulations have data requirements that include submission of (i) complete datasets and (ii) datasets modified by using specific rules for adaptation.
- Several eco-toxicological tests must be conducted on Chinese test organisms in accredited MEP-approved Chinese laboratories.
- In common with EU REACH, a risk assessment report is required to be carried out by companies submitting a notification.

SESEC IV Upcoming Online Events

- SESEC IV Online Event 23: Summary of China Conformity Assessment Changes in 2020

Conformity assessment is the name given to the processes that are used to demonstrate that a product, service or management system or body meets specified requirements. When applied to product, it involves testing to an established performance standard, as well as inspection, quality management, surveillance, accreditation and declaration of conformity. While learning from the experience of international conformity assessment standardization, China also actively summarizes its explorations, practices and cases, and actively shares them with international counterparts, contributing to the worldwide promotion of the "conformity assessment toolbox".

On 2 March, SESEC will hold its online event 23, where Dr. Betty XU will share the information SESEC gains on the changes of China conformity assessment in 2020. Welcome to join us! Looking forward to your participation!

Detailed information is as follows:

SESEC IV Webinar 23

Topic: "Summary of China Conformity Assessment Changes in 2020"

Time and Date: 9:30- 10:30 am Brussels time, Tuesday, 2 March 2021

Presenters: Dr. Betty XU

Language: English

Please register your participation to SESEC IV Webinar 23 via following links:

https://yxmc.webex.com/yxmc-en/onstage/g.php?MTID=e7b61c475ac5c225147a7fd32a2361ce0

- SESEC IV Online Event 24: China Blockchain Standardization

A blockchain is a decentralized, distributed, and oftentimes public, digital ledger consisting of records called blocks that is used to record transactions across many computers so that any involved block cannot be altered retroactively, without the alteration of all subsequent blocks. Since October 2019, China has taken blockchain as an important breakthrough in core independent innovation and accelerated the development of blockchain technology and industrial innovation. China's blockchain standardization initiated at the end of 2016, basically in sync with international standardization. In terms of the number of applications for blockchain patents, China currently ranks first in the world.

In order to sort out the development of blockchain standardization in China, SESEC will hold online event 24 with Dr. Betty XU sharing summary and analysis. Welcome to join us! Looking forward to your participation!

Detailed information is as follows:

SESEC IV Webinar 24

Topic: "China Blockchain Standardization"

Time and Date: 9:30- 10:30 am Brussels time, Tuesday, 23 March 2021

Presenters: Dr. Betty XU

Language: English

Please register your participation to SESEC IV Webinar 24 via following links:

https://yxmc.webex.com/yxmc-en/onstage/g.php?MTID=e04945a5a0946b4f8cb654f350f1c193f

- SESEC IV Online Event 25: Progress of China Standards 2035

The "China Standard 2035" project was officially launched on 1 March 2018 and is scheduled to be completed in two years. On 14 January 2020, the "China Standard 2035" project Conclusion Meeting was held. The project team reported the overall situation of the project work, the research situation of each topic and the second-phase research plan. The experts attending the meeting had a concentrated discussion on the national standardization development strategy research plan.

Since the China Standard 2035 project is considered the driver to promote the standardization strategy in China, it has attracted much attention all over the world. As a result, SESEC will hold the online event 25 to introduce the progress of China Standards 2035 project. Dr. Betty XU will briefly introduce the project and provide attendees with what is going on for the China Standards 2035. Welcome to join us! Looking forward to your participation!

Detailed information is as follows:

SESEC IV Webinar 25

Topic: "Progress of China Standards 2035"

Time and Date: 9:30- 10:30 am Brussels time, Thursday, 15 April 2021

Presenters: Dr. Betty XU

Language: English

Please register your participation to SESEC IV Webinar 25 via following links:

https://yxmc.webex.com/yxmc-en/onstage/g.php?MTID=e5d1e01db1c79bac66d30a59c649fcbc8

- SESEC IV Online Event 26: China-EU Eco-design Standardization – Similarities and Differences

Eco design is both a principle and an approach. It consists of integrating environmental protection criteria over a service or a product's lifecycle. The main goal of eco design is to anticipate and minimize negative environmental impacts (of manufacturing, using and disposing of products). Simultaneously, eco design also keeps a product's quality level according to its ideal usage. A number of non-EU countries (USA, Australia, Brazil, China and Japan) have legislation similar to the EU's eco-design and energy labelling directives.

Regarding the importance of eco-design in the context of sustainable development, SESEC arranges online event 26 on eco-design on 11 May 2021. Dr. Betty XU will provide the analysis on the similarities and differences between China and EU on eco-design standardization. Welcome to join us! Looking forward to your participation!

Detailed information is as follows:

SESEC IV Webinar 26

Topic: "China-EU Eco-design Standardization – Similarities and Differences"

Time and Date: 9:30- 10:30 am Brussels time, Tuesday, 11 May 2021

Presenters: Dr. Betty XU

Language: English

Please register your participation to SESEC IV Webinar 26 via following links:

https://yxmc.webex.com/yxmc-en/onstage/g.php?MTID=e29aa4e6e3724e8195b51b429c6dfc888

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