

China AI Policies and Standardizations

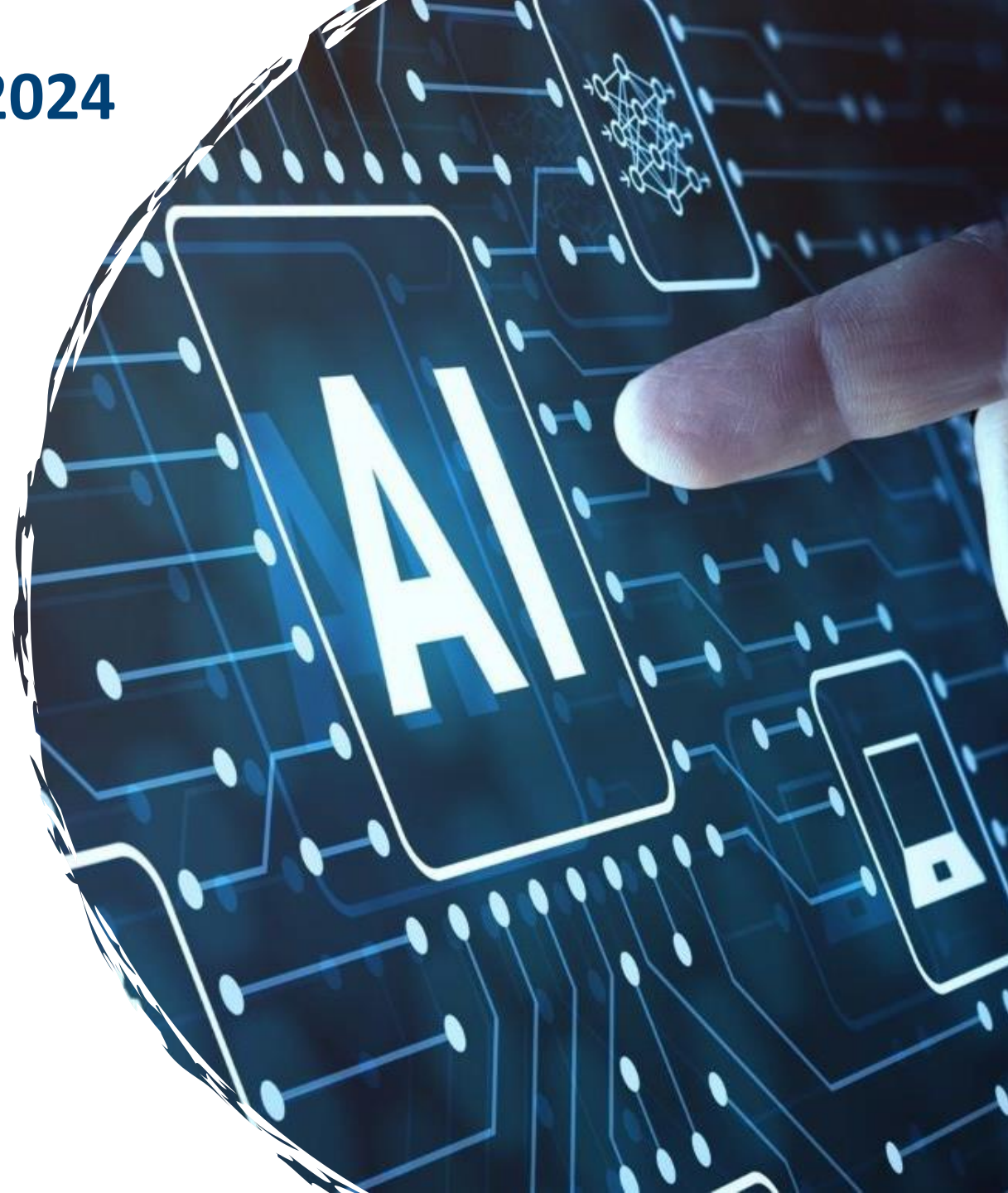
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SESEC INTRODUCTION

A Project co-funded by EC, EFTA, CEN CENELEC & ETSI

- ❖ **Promote** European and International standards in China
- ❖ **Improve** contacts between Project Partners and different levels of the Chinese administration, industry and standardization bodies
- ❖ **Enhance** visibility and understanding of the European Standardization System (ESS) in China.
- ❖ **Gather** regulatory and standardization intelligence
- ❖ **Undertake** technical lobbying



Goals

- The SESEC initiative supports **EC policy** and **ESOs strategic objectives** in China.
- Our ultimate goal is the enhancement of **EU-China dialogue and cooperation** in the field of standardization.
- It is notably expected to support the Framework Cooperation Agreement in place **between the ESOs and SAC**.



- **Personal Information Protection Law of the People's Republic of China**
- **China Data Security Law**
- **New Generation of AI Ethics Norms (Sep 2021)** by Ministry of Science and Technology (MoST): ---Guidelines for natural persons, legal persons, and other relevant institutions that are engaged in AI activities
- **Interim Measures for the Administration of Generative Artificial Intelligence Services (Measures)**



- provisions for content generated via AI or related technology
- the Provisions focus mainly on ensuring that synthetic content is appropriately marked and recorded as required
- Measures primarily aim to guarantee the authenticity, accuracy, and objectivity of the content generated by generative AI

No similar Laws like EU AI ACT is under drafting in China at this moment

Global AI Governance Initiative

Proposed by China, Releasing Date: 2023/10/18

Issuing Authorities: China Cyber Administration CAC

- **people-centered**
- **national sovereignty**
- **AI for good**
- **mutual respect, equality, and mutual benefit**
- **testing and assessment system based on AI risk levels**
- **personal privacy and data security**
- **fairness and non-discrimination**
- **ethics first**
- **wide participation and consensus-based decision-making**
- **technological capacity for AI governance**
- **representation and voice of developing countries in global AI governance**

**Presented by
President Xi at the
3rd Belt and Road
Forum for
International
Cooperation
In Oct 2023**

China's AI Standard Development Organizations

Type I: dedicated AI standards development organizations:

- AI Standardization General Group
- SAC/TC28/SC42 Artificial Intelligence

Type II: organizations with specific focus

- Artificial Intelligence Industry Alliance (AIIA)
- New Generation AI Industry Technology Innovation Strategic Alliance (AITISA)

Type III: technical committees for AI Industrial Applications

- SAC/TC260/Special Working Group on -Big Data Security
- SAC/SWG32 Intelligent Computing
- SAC/TC46/SC15 smart household electric
- SAC/TC 268 intelligent transport systems
- SAC/TC114/SC34 intelligent and connected vehicle
- SAC/TC426/SC1 intelligent residence community
- ...

Introduction of SAC/TC28/SC42 – Mirror ISO/IEC/JTC1/SC42

- **Full name:** National Artificial Intelligence Standardization Technical Committee
- **Year of establishment:** 2020
- **Secretariat unit:** CESI (China Electronics Standardization Institute)
- **Number of member organizations:** 488
- **Subordinated WGs:** 14 Working groups
- Supporting policies drafting of **MIIT** and **MOST**

Existing working groups:

1. Working Group of Fundamental Standards (international standards)
2. Research Group of Chips and Systems
3. Research Group of Model and Algorithm
4. Research Group of Products and Services
5. Research Group of Trustworthiness
6. Working Group of Computer Vision
7. Working Group of Knowledge Graph
8. Working Group of Automated Driving

Newly-established WGs in 2023

1. WG of Humanoid Robot
2. WG of Opensource
3. WG of Intelligent Computing
4. WG of AI's application in Electric Power Industry
5. WG of Smart Living
6. WG of AI Application in Medical Care

Proposed WGs to be established:

1. WG of AI for Science
2. WG of AI's Application in Iron and Steel Industry
3. WG of AI's Application in Energy
4. WG of AI's Application in Railway Station
5. ...

Statistics

National standards:

- **5** published national standards
- **11** national standards under development
- **9** standard project to be officially established;

Sector standards:

- **12** sector standard under research
- **3** sector standards to be officially established.

Engagement in ISO/IEC JTC 1/SC42

- **85** Registered experts (revoking 42 registrations) covering 90% of working group
- **41** votes cast in 2023
- **6** international standards with development led by China, accounting for 12% of total standards

Priorities in 2023

- Software-hardware adaptation
- Open-source
- AI governance
- Computational power test
- Big model
- Engagement in ISO/IEC JTC 1/SC42 and IEEE

Next steps

- Establish new working groups
- Finish the revision of new standard system
- Continue the development of international standards
- Develop standard development in areas of:
 - Software-hardware adaptation
 - AI governance
 - Big model
 - Humanoid robot
 - AI's application in various standards
 - Intelligent computing/scientific computing

Updates in Standards

National Standards

- 20230249-T-469 Information security technology —Artificial intelligence computing platform security framework (at the stage of forming the draft for review)
- Generative artificial intelligence data annotation security specification (at the stage of forming the draft for comment)
- Security specification for generative artificial intelligence pre-training and fine-tuning data (at the stage of forming the draft for comment)

Technical Documents

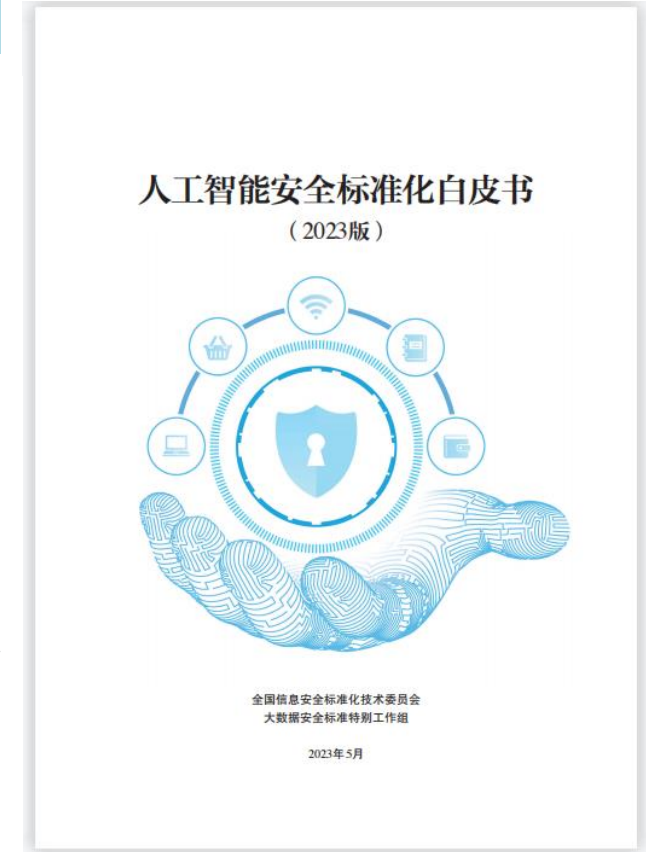
- Basic security requirements for generative artificial intelligence service

Updates in white paper

White Paper on AI Safety and Security Standards

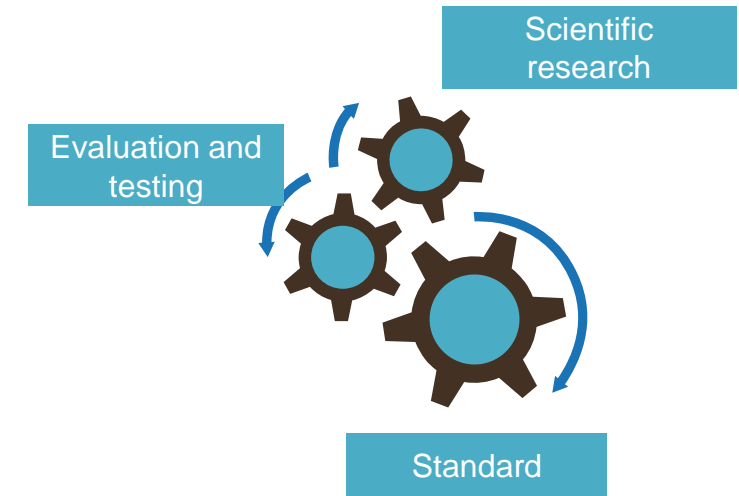
1. Status quo of AI development
2. Risk analysis of AI safety and security
3. Status quo of AI safety and security related policies and standards
4. Demand analysis of AI safety and security standards
5. Suggestions on AI safety and security standards

Annex: relevant standard list (Domestic & Abroad)



Major outcome:

- Systematic comprehensive research on artificial intelligence has been carried out.
- A number of achievements such as the *White Paper on Artificial Intelligence* and the *White Paper on Trustworthy Artificial Intelligence* issued by CAICT (that runs the AIIA) have been translated and reproduced by internationally renowned think tanks.
- Establishing AI test technology platform and evaluation service system via three dimensions of cutting-edge technology, technology applications and trustworthy governance.
- Establishing "Trusted AI" standard system, actively promoting the conversion of relevant AI standards to ITU-T and IEEE standards, and promoting international exchanges and cooperation.



CAICT Trustworthy Artificial Intelligence Assessment System

1-Product and service assessment			2-Application maturity assessment
1.1 Computing architecture <ul style="list-style-type: none"> • AI chips • All-in-one AI for training and inference 	1.3 Basic Services <ul style="list-style-type: none"> • Basic Speech recognition capability • Special speech recognition capability (foreign language, dialect, industry, scene) • Basic speech synthesis service • Assessment of special speech synthesis service capability (foreign language, dialect, industry, scene) • Basic voiceprint recognition service • Duplex voice interaction capability • NLP service platform • Intelligent conversation platform • Assessment on image recognition and processing capability • Assessment on video recognition and processing capability (video understanding, video enhancement, video editing, video editing and production) 	1.4 Typical products <ul style="list-style-type: none"> • Intelligent voice customer service • Intelligent text customer service • Intelligent conversation analysis product • Intelligent conversation product • Machine translation product • Smart assistant • Intelligent voice interaction product (speaker, smart screen) • Vehicle voice interaction system • OCR service or product • Knowledge computing product • Smart assistant • Intelligent decision-making product capability • IDP system • Smart office tool and system capability • Assessment of large-scale pre-trained models • Intelligent risk control product 	2.1 Industry application maturity <ul style="list-style-type: none"> • RPA system and tool application maturity • AI development platform application maturity • Assessment on customer service application maturity • Model/ MLOps capability maturity • Maturity of large-scale pre-trained model application • RPA delivery and implementation • Maturity of intelligent risk control application
1.2 Developing tools and platform <ul style="list-style-type: none"> • AI development platform functional assessment (data processing module, modeling module, deployment module) • RPA system and tool capability • Machine learning platform function • Deep learning platform function • Data annotation platform function • Automated machine learning capability • Edge AI platform function • AI platform function in telecom industry • General capability of computer vision • Intelligent conversation platform • Process mining system and tool capability 			3-Trustworthy AI governance assessment <ul style="list-style-type: none"> • Trustworthy assurance tool • AI technology and product trustworthy capability • AI enterprise risk management capability • AI enterprise trustworthy governance capability

New Generation AI Industry Technology Innovation Strategic Alliance (AITISA)

Published national standard in 2023:

- GB/T 42382.1-2023 Information technology - Neural network representation and model compression - Part 1: Convolutional neural network

Published IEEE standard in 2023:

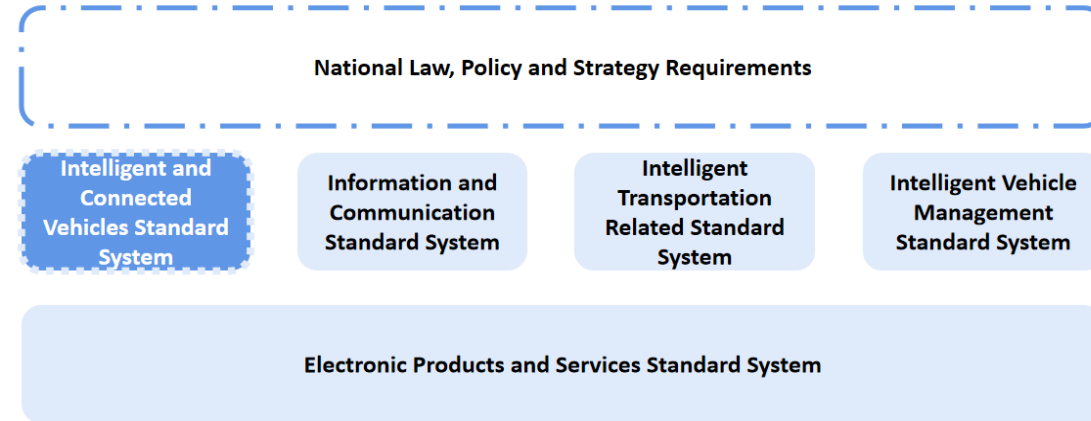
- Standard for Artificial Intelligence (AI) Model Representation, Compression, Distribution and Management

National standards under development:

- 20230715-T-469 Artificial intelligence — Operator interface —Part 1: Basic mathematical classes
- 20230716-T-469 Artificial intelligence —Operator interface —Part 2: Neural network classes



- One example of Sector AI standards
- There are other sector AI standards in Medical Devices area, Transportation, and etc.,



Structure of Standard System for Internet of Vehicles

Key Areas for Standardization:

automated driving, connectivity function and applications, information security of vehicles, resource management and information service, automobile electronics, functional safety, electro-magnetic, environment reliability, automotive chip,

AI for vehicles (working group to be established in 2023)

- **53** standards have been either released, reported for approval or recently initiated as standardization projects;
- **92%** are national standards, while the remaining are sectoral standards;
- **17** standards consist of conversions from international standards (i.e. ISO standards and UN standards)

1. The breakthrough of generative AI technology has created certain impact on China's standardization:

- The acceleration of the formulation and release of regulations and standards related to AI safety/security and governance
- The objective of these rules and standards is to ensure the safety of the AI generated contents, which is in align with other AI technology related policies and regulations released by China.
- Standards are generally national specific, and SAC/TC260/SWG-BDS, the SDO responsible for AI security/safety standards development, rarely adopts or converts the international standards as always.

2. SAC/TC28/SC42 devotes efforts in association standards, national standards and international standards at the same time, and carry out relevant validation and pilot trials. This is also influenced by the China's policy on national standards, hoping to ensure the quality of national standards through the development and verification process of association standards and international standards. AITISA is also following the same Development pattern.

3. AIIA is constantly improving its trusted AI assessment system, and the standards formulated are mostly technical specifications with the aim of supporting the trusted AI evaluation system, thus supporting the applications of AI technology. They obtained support from quite a lot enterprises.



Thank You