SESEC VI

Report on the Second Standards Week of SAC/TC28/SC42

Report Date | December 2025

Seconded European Standardisation Expert in China
(SESEC)

Report on the Second Standards Week of SAC/TC28/SC42 [December 2025]

I. Introduction

From 24 to 26 December 2025, the Artificial Intelligence Subcommittee under the National Information Technology Technical Committee (SAC/TC28/SC42 or SAC/SC42) convened its second Standards Week of the year.

SAC/TC28/SC42 is an AI-dedicated national technical committee mirroring ISO/IEC JTC 1/SC42. Its secretariat is set within the China Electronics Standardization Institute (CESI). Its working scope involves the development of basic and generic standards, technology standards, risk management standards, trustworthiness standards, governance standards, and products and applications standards.

The Standards Week gathered over 400 representatives from government agencies, industry and academia to share the latest progress in Artificial Intelligence technologies and their applications, as well as participating in the working group (WG) meetings to discuss standards. The 3-day event featured a Plenary Meeting on 24 December, a General Assembly on 25 December, and 12 working group (WG) meetings spanning across 3 days.

Mr. Fan Kefeng, Vice President of CESI and Mr. Yang Lei, Deputy Director of the Research Center of Information Technology at CESI, presented updates on SC42's standardization work. They also provided an in-depth analysis of the current landscape for AI development in China and outlined the SC42's strategic priorities for 2026.

During the first Standards Week in July 2025, SAC/SC42's work priorities involved AI Computing Power Benchmark, Large Model Evaluation Benchmark, Guidelines for Large Model Selection and Application, Embodied Intelligence and AI Agent Protocols. The second Standards Week carried same priorities forward with addition of a few new ones: **Grading of Terminal Intelligence** and **Enterprise Intelligence Maturity Assessment Model (AIMM)**. The two new priorities belong to the domain of AI applications, signaling a shift in SAC/SC42' work towards elevating AI's ability to deliver value-added benefits and generate tangible profits for industries, while seeking a balance between innovation, development, quality, and safety.

This report provided comprehensive summary of SAC/SC42's standardization work in 2025, including its comparison with the first Standards Week. The structure of this report includes SC42's organizational updates, international standardization activities, and overall work direction in 2026, and incorporates observations from standards discussions occurred across 7 WGs within SAC/SC42.

II. SC 42's AI Standardization Work Report in 2025

1. Current State of AI Development in China

At the meeting, Mr. Yang Lei offered an overview of the status of AI ecosystem development in China. Historically, many AI models developed in China relied on chips and models from overseas suppliers. Testing and evaluation methodologies were also referred from abroad. This resulted in what was described as an "open-loop AI ecosystem" in China, heavily dependent on overseas theories and technologies. However, as the application scenarios enriches with emergence of leading models like DeepSeek, and domestic AI hardware players thrive, China is transitioning towards a "closed-loop AI ecosystem." In this new paradigm,

everything from chips, models and systems, and testing and evaluation will all be developed and supplied domestically.

Mr. Yang's presentation also emphasized a critical concern regarding high-quality datasets for AI training. China is accelerating the construction of high-quality datasets since AI+ Initiative rolled out as a top national strategy. Currently, general-purpose large models developed in China rely largely on high-quality datasets from overseas sources and limited Chinese data extracted from public domestic internet sources, such as encyclopedia and online forums. High-quality data from Chinese source is relatively scarce. A similar issue happened to development of industry-specific large models, where lack of high-quality data is a major obstacle.

2. Top -Level Design

Standardization for artificial intelligence is primarily guided by 4 key policy documents:

- ***National Standardization Development Outline*****,**
- ***Guidelines for the Construction of a Comprehensive Standardization System for National Artificial Intelligence Industry,***
- ***Implementation Plan for Standardization for Emerging Industries***
- ***Global AI Governance Initiative.***

Among these, the ***Guidelines for the Construction of a Comprehensive Standardization System for National Artificial Intelligence Industry,*** issued by MIIT in 2024, serve as the main guiding document for SAC/SC42's standardization work.

The Guidelines establish four working principles for shaping China's AI standardization landscape: (1) stay driven by innovation, (2) uphold an application-oriented approach, (3) align closely with industries, and (4) uphold openness and collaboration. Furthermore, the guidelines stipulate that by 2026, China should have developed and published **at least 50 national and sector standards** and participated in **at least 20 international standards**.

SAC/SC42 collaborates closely with the National Artificial Intelligence Standardization General Group. This group is responsible for developing national AI standardization system and relevant policy implementations and coordinating the content and responsible stakeholders of AI-related national standards.

As of July 2025, SAC/SC42 and the National Artificial Intelligence Standardization General Group had identified **280 standards** as part of the national AI standardization framework, comprising **83 national standards and 197 sector standards**. These standards span foundational software and hardware—including computing infrastructure and development frameworks—as well as key technologies such as AI agents and embodied intelligence. They also encompass AI products and services, the empowerment of new industrialization through AI, and safety and governance.

By December 2025, **an additional 64 standards** had been newly identified for development, bringing the total to **344 standards planned** within the Chinese AI standardization system. This updated portfolio includes **136 national standards and 208 sector standards**, reflecting a net increase of 53 national and 11 sector standardization projects over the preceding six months.

These standards are regarded as critical and fundamental to the constructing AI infrastructure. They are designed to enable the large-scale, seamless, and value-adding deployment of AI across all sectors of the economy.

3. SC42's International Standardization

Over 100 Chinese experts from SAC/SC42 are registered in ISO/IEC JTC1 SC42, participating across its 5 working groups, 6 joint working groups and 2 ad hoc groups. They hold key leadership positions such as the conveners of ISO/IEC JTC1 SC42 WG2 (Data) and WG5 (Computational approaches and computational characteristics of AI systems) and as **s**ecretary of WG5. To date, these experts have led the **publication of 6 international standards** and are currently leading **development of another 5 international standards**.

Published ISO/IEC Standards	Not Published ISO/IEC Standards
ISO/IEC 5259-4:2024 Artificial intelligence - Data quality for analytics and machine learning (ML)	***ISO/IEC AWI 25623 Artificial intelligence - Machine learning (ML) model description framework***
ISO/IEC TS 8200:2024 Information technology - Artificial Intelligence - Controllability of automated artificial intelligence systems	***ISO/IEC TS 25568 Information technology - Artificial intelligence - Guidance on addressing risks in generative AI systems***
ISO/IEC TS 4213:2022 Information technology - Artificial intelligence - Assessment of machine learning classification performance	***ISO/IEC AWI 4213 Artificial intelligence - Performance measurement for AI classification, regression, clustering and recommendation tasks***
ISO/IEC 5392:2024 Information technology - Artificial intelligence - Reference architecture of knowledge engineering	***ISO/IEC TS 42112 Information technology - Artificial intelligence - Guidance on machine learning model training efficiency optimization***
ISO/IEC TR 17903:2024 Information technology - Artificial intelligence - Overview of machine learning computing devices	***ISO/IEC AWI 25872-1 Artificial Intelligence - Knowledge enhancement for pretrained machine learning models***
ISO/IEC TR 24372:2021 Information technology - Artificial Intelligence (AI) - Overview of computational approaches for AI systems	

SAC/SAC42's international standardization efforts primarily address foundational AI standards, data quality and governance, trustworthiness and security, AI system characteristics and computational method, and social-technical impacts - reflecting a clear strategic commitment to building the essential technical infrastructure for AI while proactively defining the global norms for its responsible adoption.

4. Key Standards

Building on the standards projects reported in July 2025, SAC/SC42 has identified three new major standards categories as key priorities over the past 6 months - Agent Protocols, AI Terminal Intelligence Grading and Enterprise Intelligence Maturity Assessment Model(AIMM).

(1) Agent Protocols

To address interconnectivity issues for multi-modular agents and agent-to-agent communication for AI-powered consumer products, 9 national technical guiding documents (GB/Z) are under development. They aim to provide foundational support for the AI consumer product market and standardize the agent protocol practices. The documents under development are listed below.

- *20252057-Z-469 Artificial Intelligence - General technical requirements for Agent platform*
- *20252058-Z-469 Artificial Intelligence - Technical requirements of multi-modal agent*
- *20254281-Z-469 Artificial Intelligence - Agent interconnection - Part 1: General Architecture*
- *20254969-Z-469 Artificial Intelligence - Agent interconnection - Part 2: Agent identity code*
- *20254970-Z-469 Artificial Intelligence - Agent interconnection - Part 3: Agent identity management*
- *20254971-Z-469 Artificial Intelligence - Agent interconnection - Part 4: Description for agents*
- *20254972-Z-469 Artificial Intelligence - Agent interconnection - Part 5: Agent discovery*
- *20254973-Z-469 Artificial Intelligence - Agent interconnection - Part 6: Agent interactions*
- *20254974-Z-469 Artificial Intelligence - Agent interconnection - Part 7: Agent tool invocation*

Following a pilot phase for validation through real-world applications, experts reporting on the progress of projects revealed that **these national technical guiding documents may be converted to voluntary national standards, or where warranted, mandatory national standards**.

(2) AI Terminal Intelligent Grading

Furthermore, Mr. Yang Lei and Mr. Fan Kefeng highlighted the standards development of AI Terminal Intelligence Grading as critical. They concurred that the AI consumer goods market in China is currently challenged by the absence of a unified intelligence grading standard. This gap has resulted in unregulated market competition and makes it difficult for consumers to accurately assess a product's level of intelligence.

To address this, SAC/SC42 is developing another series of national technical guiding documents for grading AI-enabled terminal intelligence. The series comprises nine parts and establishes a reference framework, general requirements, and specific criteria for common consumer product categories.

These technical guiding documents, detailed below, are now undergoing **final approval,** which is the last phase before official publication. Experts reporting the progress of the projects revealed these technical guiding documents **may also be converted to voluntary or even mandatory national standards in the future**.

- *20254266-Z-469 Artificial Intelligence – Grading of terminal intelligence – Part 1: Reference framework*
- *20252054-Z-469 Artificial Intelligence – Grading of terminal intelligence – Part 2: General requirements*

- *20252055-Z-469 Artificial Intelligence – Grading of terminal intelligence – Part 3: Mobile terminal*
- *20252056-Z-469 Artificial Intelligence – Grading of terminal intelligence – Part 4: Microcomputer*
- *20251854-Z-339 Artificial Intelligence – Grading of terminal intelligence – Part 5: Television*
- *20251853-Z-339 Artificial Intelligence – Grading of terminal intelligence – Part 6: Glasses*
- *20254269-Z-469 Artificial Intelligence – Grading of terminal intelligence – Part 7: Cockpit*
- *20254268-Z-469 Artificial Intelligence – Grading of terminal intelligence – Part 8: Speaker*
- *20254267-Z-469 Artificial Intelligence – Grading of terminal intelligence – Part 9: Earphone*

(3) Trustworthy AI to Support AI+ Action Plan

In the AI+ Action Plan issued by the State Council in Aug 2025, developing Trustworthy AI was listed in Action 14 as a key task to enhance the safety and security level of AI. In response to this central policy, SAC/SC42's standardization has focused on pain points in real-life AI applications, developing several important standards to support the implementation of AI+ Action Plan.

SAC/SC42's WG Trustworthy, the dedicated working group for trustworthy standards, developed ***GB/T 46347-2025 Artificial intelligence - Risk management capability assessment.*** The standard was published in Oct 2025. As one of the key standards in the field, ***GB/T 46347-2025*** took guidance from ***ISO/IEC 23894:2023 Information technology - Artificial intelligence - Guidance on risk management*** for its description of the AI risk management process.

It is neither an adoption nor a modification. The standard devises its own risk assessment model which includes risk level grading, risk elements, and risk capability requirements. The standard also defines a quantitative approach to identifying risk assessment level of AI product. It is designed to guide AI product developers, users, and relevant third parties in order to conduct proper risk assessment activities.

To deepen the integration of AI across industries, China has initiated a new national standard project, ***20255438-T-469 Artificial intelligence - Enterprise Intelligence Maturity Assessment Model (AIMM)***, so far led by mostly Chinese companies such as Huawei and Alibaba Cloud. This standards project was introduced in October 2025. It defines maturity requirements across strategy, resources, application, management, and efficiency in enterprise AI adoption. The standard will serve as both a guiding tool for AI transformation and a practical mechanism for implementing national AI policy, helping organizations identify strengths and weaknesses while devising targeted improvements.

AIMM's development builds upon an earlier association standard released in January 2025 by SAC/TC28/SC42, which referenced frameworks in ***ISO/IEC 42001:2023 Information technology - Artificial intelligence - Management system***.

As the first cross-industry AI maturity model in China, AIMM has attracted significant attention, particularly during Standards Week events. It is viewed as a potential accelerator for AI integration and a key benchmark for assessing enterprise capability and market positioning - factors that may contribute to reshaping industry competitive landscapes.

III. Standards Discussions and SESEC Observations

Beyond the Standardization Report presented by Mr. Fan and Mr. Yang, SESEC observed standards discussion within several key working groups: Embodied Intelligence, Trustworthy AI, AI Chips and System, and AI Model and Algorithm.

1. WG Embodies Intelligence

A major focal point for this WG was the introduction of the "**Embodied Intelligence Evaluation Benchmark System**," structured around **five pillar standards** currently under development:

- *Artificial intelligence - Test methods for trustworthiness of embodied intelligence* (standards proposal undergoing approval)
- *20252043-Z-469 Artificial intelligence - Intelligent grading of embodied intelligence*
- *20252044-Z-469 Artificial intelligence - Technical requirements for embodied large model system20252047-Z-469 Artificial intelligence - Specifications for embodied intelligence data quality*
- *2024-1326T-SJ Key technologies of Artificial intelligence - Embodied intelligence - Data collection specification* (sector standard)

This integrated system aims to establish a comprehensive assessment framework covering trustworthiness, a 6-level grading intelligent application scheme (L0-L5), large model performance, data quality, and data format compliance. Its objective is to provide a standardized, full-spectrum evaluation capabilities for embodied intelligence systems, from behavioral integrity to data source, thereby **supporting standardized industry development and credible product certification.**

Discussions also involved in-depth technical reviews of 4 document drafts, including:

- *Humanoid robots – General principles – Unique product identification code* (standards proposal undergoing approval)
- *20255546-Z-469 Artificial Intelligence - Guidelines for the Construction of Embodied Intelligence Data Training Grounds*
- *20252044-Z-469 Artificial intelligence - Technical requirements for embodied large model system*
- *20252043-Z-469 Artificial intelligence - Intelligent grading of embodied intelligence*

Given the acknowledged importance of product traceability mechanism for the safe and secure application of embodied intelligence, standards addressing unique identification code for humanoid robots are considered necessary. Expert discussion centered on operational feasibility of such a mechanism and the need to promote this standard within the market.

2. WG Trustworthy AI

The greatest highlight in this discussion was the proposal for a national standard on managing risks in generative artificial intelligence. Notably, this domestic effort is closely aligned with an ongoing international initiative: ***ISO/IEC AWI TS 25568 Information technology - Artificial Intelligence - Guidance on addressing risks in generative AI systems***, a technical specification on the same topic, whose development within **ISO/IEC JTC1 SC42** is led by China. In fact, the main drafters of the national standard proposal - from Alibaba Cloud - are also contributors to the international standard. They leveraged the ISO document's framework as the basis for the national standard draft.

This topic dominated the meeting agenda. The clear intention was to synchronize China's national standardization process with the international timeline. However, this raised questions regarding potential

adoption or modification of the international standard. Addressing this, the expert from Alibaba Cloud stated that while the framework would be borrowed, the technical specifications from the ISO standard were unlikely to be directly applicable in China. They plan to tailor the specifications to ensure applicability within the Chinese context. The modifications are expected to be substantial and would not meet the conditions for either a modified adoption or a direct adoption. Therefore, this standard would likely not be published as an adoption of ***ISO/IEC AWI TS 25568.***

Despite the concern, the proposal received overwhelmingly positive feedback from the most Chinese experts. Many advocated for its urgent publication, even ahead of the final ISO/IEC specification, to establish an early regulatory framework and secure a first-mover advantage in shaping the safe and secure development of the domestic generative AI industry.

3. WG Chips and System & WG Intelligent Computing

The WG Chips and System has been collaborating with WG Intelligent Computing on the matter of AI software and hardware adaptation, developing standards that align with the ever-growing demand of computing power. As noted by Mr. Yang Lei in the previous part of the report, China's AI development supply chain is becoming more complete and self-reliant. However, significant development areas remain for AI chips, a point also briefly mentioned by technical experts in the WG meeting. China urgently needs a synchronized standards system dedicated to AI chip development and market alignment. As AI chip technologies are still immature and evolving rapidly, the WGs have focused on developing GB/Z documents aimed at solving interoperability issues between different types of AI chips and increasing computing power efficiency.

4. WG Model and Algorithm

On 29 December 2025, three voluntary national standards on general purpose large language modes developed by this WG were officially published. Siemens was the only foreign enterprise involved in the developing Part 1 and Part 2 of these standards.:

- *GB/T 45288.1-2025 Artificial intelligence - Large-scale model - Part 1:General requirements*
- *GB/T 45288.2-2025 Artificial Intelligence - Large-scale model - Part 2: Testing and evaluation for metrics and methods*
- *GB/T 45288.3-2025 Artificial Intelligence - Large-scale model - Part 3: Service capability maturity assessment*

These three standards are developed to support *Provisions on the Administration of Deep Synthesis of Internet-Based Information Services* and *Interim Measures for the Administration of Generative Artificial Intelligence Services*.

According to CESI, this standards series constitutes **China's first national evaluation framework for AI large models**. It fills a critical gap in the technical evaluation system by establishing a nation-wide unified benchmark to ensure that model performance, safety, and service capabilities comply with relevant laws and regulations.

Furthermore, WG Model and Algorithm is developing an additional 3 voluntary national standards and 5 national technical guiding documents:

GB/T Under Development	GB/Z Under Development
20253396-T-469 Artificial intelligence - Large-scale model: Part 4: computer vision large-scale model systems	*20252036-Z-469 Artificial intelligence - Large-scale models - Part 6: Code Large Language Models*
20253399-T-469 Artificial intelligence - Large-scale models - Part 5: Multimodal large language models	*20252037-Z-469 Artificial intelligence - Large-scale model - Part 7: Speech large-scale model*
20254568-T-469 Artificial intelligence - System specification for model collaboration among terminal and cloud devices	*20254289-Z-469 Artificial intelligence - Technical specification for on-device large model engines*
	20257137-Z-469 Evaluation and Testing Methods for Large Video Models
	20257139-Z-469 Artificial intelligence - Evaluation metrics and methods for general auditory intelligence

Notably, ***20253396-T-469 (Part4: computer vision)*** *and* ***20253399-T-469 (Part5: multi-modal)*** are extensions of the ***GB/T 45288 series***. Once published, they will also become part of the national evaluation framework.

IV. Work Plans for SC42 for 2026

In 2026, SAC/SC42's standardization work will be carried out in **three major action steps:**

(1) Promote AI-Empowered New Industrialization.

This will involve continuously developing and enhancing of AI evaluation benchmark system, with a focus on standards pertinent to large model and computing power. Additionally, SC42 will establish new working groups comprising leading players from key industries such as non-ferrous metals, petrochemicals, construction materials, machinery, automotive, electrical equipment and light industry. By working with industry leaders, they will capture practical insights and real-world experience for improving standards . Furthermore, SC42 will actively promote AIMM among the enterprises and collaborate with industry leaders to develop standards for industrial-specific large model and datasets.

(2) Accelerate AI Software and Hardware Adaptation.

This effort will focus on establishing test bed for conformity assessment for AI software and hardware adaptation standards. SC42 will also accelerate development of such standards while enhancing *aiconntest* an open-source AI interoperability evaluation platform developed and maintained by CESI.

(3) Actively Participate in International Standardization.

Lastly, SC42 will maintain active participation in ISO/IEC JTC1/SC42 and lead international standards in generative **AI risk management, machine learning** and **knowledge enhancement**. The committee will also strengthen ties with international organizations such as **ANSI, CEN/CENELEC, ETSI, IEE, ITU-T** and **BRICS** to create more global exposure and opportunities for Chinese products.

V. Conclusions

The work of SAC/TC28/SC42, as detailed in this report, demonstrates a strategic paradigm where AI standardization is treated as a core instrument of national industrial and technology policy. This approach has two parallel objectives and they are to build a sovereign domestic ecosystem and to influence global technical norms.

Domestically, standardization is the primary engine for implementing the national "AI+" agenda. The work is marked by rapid, targeted expansion, with the **planned standard portfolio growing from 280 to 344 items within six months**. This includes the development of pivotal application-focused standards like the Enterprise Intelligence Maturity Assessment Model (AIMM) and AI Terminal Intelligence Grading, designed to structure markets and guide industrial upgrade. This effort is guided by the **national target to develop at least 50 national and sector standards by 2026.**

In the international arena, SC42 maintains an active and influential presence. **Over 100 Chinese experts** participate in ISO/IEC JTC 1/SC 42, holding key leadership roles. To date, they have led the **publication of 6 international standards** and are leading the **development of 5 more**. This engagement supports the **national target to participate in at least 20 international standards**, focusing on foundational areas like data quality, computational approaches, and risk management.

China's AI standardization under SC42 is a dynamic and strategic endeavor. It systematically builds a comprehensive domestic standards system to structure its own market and industry, while actively working within global bodies to ensure international standards are compatible with its domestic development path. This coordinated approach ensures that standardization serves as a fundamental lever for achieving technological sovereignty and shaping the future of the AI ecosystem both at home and abroad.

Introduction of SESEC Project

The Seconded European Standardisation 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 Standardisation Organizations (CEN, CENELEC and ETSI). Since 2006, there has been four SESEC projects in China, SESEC I (2006-2009). SESEC II (2009-2012), SESEC III (2014-2017), SESEC IV (2018- 2022) and SESEC V (2022-2025). Dr. Betty XU is nominated as the SESEC expert and will spend the next 36 months on promoting EU-China standardisation information exchange and EU-China standardisation cooperation.

The SESEC project supports the strategic objectives of the European Union, EFTA and the European Standardisation 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 standardisation bodies;
- Improve the visibility and understanding of the European Standardisation System (ESS) in China;
- Gather regulatory and standardisation 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 & labeling, as well as environmental performance of buildings).