

Simplifying the Testing of AI Systems with SMART Standards

New IDiS Whitepaper from DIN and DKE describes the evolution from manual standards evaluation to digitally supported testing processes

Berlin/Frankfurt am Main, October 1, 2026. With the increasing prevalence of AI systems and the requirements of the European AI Act, the testing of AI systems is becoming increasingly important. Especially for high-risk AI systems, companies must demonstrate that applicable requirements are met. At the same time, AI systems and their operating conditions are constantly changing—therefore, standards requirements must be reevaluated on an ongoing basis and translated into specific testing steps. Many of these steps have so far been performed manually.

The new Whitepaper **“Scalable Testing of AI Systems with SMART Standards: Scenarios from a User Perspective”**, published by the Digital Standards Initiative (IDiS) of DIN and DKE, outlines how digital standards can simplify this growing testing demand. The Whitepaper describes a phased development path—from today’s largely manual testing practices to digitally supported and, in the future, networked testing processes.

Enormous testing demand cannot be handled manually

The application of AI standards requires many manual, individual steps: standards must be identified, obtained, and interpreted; requirements must be extracted and operationalized for the respective testing process. If an AI model, its context of use, or the underlying requirements change, parts of this process must be repeated. Added to this are sector-specific product regulations as well as cybersecurity and data protection requirements. Therefore, there is a need for methods that consistently and transparently support these recurring preparatory tasks. Expert evaluation by a human remains indispensable in this process.

SMART Standards as the Foundation for Automated Testing

SMART Standards lay the foundation for automation, says Wolfgang Niedziella, spokesperson for the DKE Executive Board: “SMART Standards make the content of standards available in a way that machines can reliably process it, transforming the standard from a static document into an active component in the testing process.” The latest Whitepaper applies the conceptual work of recent years to a single, highly specific technology area for the first time. It presents a vision, the initial stages of which can already be implemented today.”

DIN

Julian Pinnig
DIN e.V.
DIN-Platz
Burggrafenstraße 6
10787 Berlin
Phone: +49 30 2601-2812
Email: julian.pinnig@din.de

VDE

Vanessa Rothe
Press Officer
VDE Association for Electrical,
Electronic, and Information
Technologies e. V.
Merianstraße 28
63069 Offenbach am Main
Phone: +49 69 6308-292
Email: vanessa.rothe@vde.com

“As AI systems continuously evolve over their lifecycle and their characteristics change as a result, the effort required to ensure ongoing compliance with standard requirements increases,” says Christoph Winterhalter, Chairman of the DIN Executive Board. “Standards must therefore be more closely integrated into digital development and testing processes. The Whitepaper shows which steps can be supported digitally and where technical evaluation remains indispensable.”

Invitation to Help Shape the Future

Using a fictional company as an example, the Whitepaper demonstrates how automated testing using SMART standards can be implemented in practice. Standard content is delivered via standardized interfaces and can be read by machines. The Whitepaper outlines this path as it progresses through increasing levels of maturity: The end result is a shared ecosystem for AI quality, in which standards, data, and testing tools are available as standalone resources.

The publication is aimed at stakeholders in AI development, standardization, testing, and quality infrastructure, as well as at companies that incorporate standard requirements into digital processes. DIN and DKE invite interested organizations to help shape the future of this work. [The IDiS Whitepaper 4 “Scalable Testing of AI Systems with SMART Standards: Scenarios from a User Perspective” is available for download here.](#)

All previously published IDiS white papers are also still available for [download](#):

IDiS Whitepaper 3: The Business Oriented Benefits of SMART Standards in Standard Application Processes

IDiS Whitepaper 2: Use Cases for SMART Standards

IDiS Whitepaper 1: Scenarios for Digitizing Standardization and Standards

About IDiS

To maintain the competitiveness of industry and standardization, standards must also be digitized. With a mandate from DIN and DKE, IDiS (Initiative for Digital Standards) promotes and accelerates the development and gradual establishment of SMART Standards—the standards of the future. IDiS thus offers enormous benefits for the future work of standard users, industry, SMEs, and standardization. The initiative sees itself as a community dedicated to demonstrating the benefits of SMART Standards and the associated digital transformation—in as practical a way as possible. Numerous concepts and deliverables have already emerged within the network. Furthermore, two-thirds of the participating stakeholders are companies, underscoring the relevance of SMART Standards for industry. For more information, visit the [IDiS website](#).



PRESS RELEASE

About DIN

DIN, the German Institute for Standardization, is the independent platform for standardization in Germany and worldwide. Together with industry, scientific institutions, public authorities and civil society as a whole, DIN plays a major role in identifying future areas for standardization. By helping to shape the green and digital transformation, DIN makes an important contribution towards solving current challenges and enables new technologies, products and processes to establish themselves on the market and in society. Around 40,000 experts from industry, research, consumer protection and the public sector bring their expertise to work on standardization projects managed by DIN. The results of these efforts are market-oriented standards and specifications that promote global trade, encouraging rationalization, quality assurance and environmental protection as well as improving security and communication. For more information, go to www.din.de

About DKE

The DKE German Commission for Electrical, Electronic & Information Technologies (DKE) is the national platform for about 10,000 experts from industry, science and public administration to elaborate standards and safety specifications for electrical engineering, electronics and information technology. Standards support global trade and, among other things, the safety, interoperability and functionality of products and systems. As a competence centre for electrotechnical standardization, the DKE represents the interests of German industry in European (CENELEC, ETSI) and international standardization organizations (IEC). In addition, the DKE provides comprehensive services in the field of standardization and VDE specifications. For more information, visit www.dke.de