Artificial Intelligence standardisation
Inclusiveness Newsletter

Edition 5 – September 2024

The inclusiveness Newsletter aims at facilitating a large participation of all stakeholders to the preparation of European standards on Artificial Intelligence (AI). It distributes updated information on the landscape of standardisation activities in international bodies. Such bodies may be:

- CEN CENELEC Technical Committees, namely Joint Technical Committee (JTC) 21

- ISO-IEC Technical Committees, namely ISO-IEC JTC1 SC42 on AI

- Other international fora

The writers try to be as accurate and factual as possible and the contents are reviewed by the members TG Inclusiveness. However, this newsletter is not binding and should not be considered as representing the official positioning of bodies it quotes.

ETUC, the European Trade Union Confederation is providing secretariat and contact services for the newsletter. You may register to the distribution list here.

Any other correspondence should be addressed to TG_Inclusiveness@etuc.org. Feel free to submit contents for the next issue planed by mid-November.

All issues are also available on line:

- ETUC: https://www.etuc.org/en/artificial-intelligence-standardisation-inclusiveness-newsletter

- CEN CENELEC JTC 21 LinkedIn: https://www.linkedin.com/groups/8793224/

We are happy that the Newsletter got more than 500 LinkedIn prints since its last edition, 2 months ago.

- We are also pleased that the Newsletter is now also referenced on CEN CENELEC *On the Spot* magazine. See https://www.cencenelec.eu/news-and-events/news/?tags[]=On%20the%20spot. A text on inclusiveness is available on CEN CENNELEC welcome page.

News from the European Union

- AI Act enters into force: On 1 August, the EU AI Act took effect, aiming to promote responsible AI development and deployment in the EU. The detailed implementation timeline may be found at: https://artificialintelligenceact.eu/implementation-timeline/

- The Commission has made a video on the objectives of the Act and the important role AI standardisation plays in helping achieve these. The video can be accessed from the Dansk Standard

SharePoint : here. The Commission also references this webpage when sharing the video: European AI Office | Shaping Europe's digital future (europa.eu)

- The Commission is launching a call for tender for a study aiming to measure and foster energy efficient and low emission AI systems in the EU. More information on the study can be found at the following URL:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/tender-details/2fb0ee23-64ae-491b-9b0a-d26ff93f9a9b-CN

- The European AI Office recently launched a Multi-stakeholder Consultation on trustworthy general-purpose AI models under the AI Act. Submissions must be completed by 18 September 2024. This will inform the drafting process to detail rules for general-purpose AI model providers in the first General-Purpose AI Code of Practice. It will also inform the AI Office's related work for a template of the summary content used for the training of those models

- Parliament sets up a working group: 2 European Parliament's committees – the Internal Market and Consumer Protection (IMCO) committee and the Civil Liberties, Justice and Home Affairs (LIBE) committee –have established a joint working group to oversee the implementation of the AI Act. See Euractiv link https://www.euractiv.com/section/artificial-intelligence/news/parliament-sets-up-cross-committee-working-group-to-monitor-ai-act-implementation/?utm_source=substack&utm_medium=email

CEN-CENELEC JTC21

- Next plenary meeting will take place in Torino (Italy) from November 4th to 6th.

- JTC 21 has declined a joint development with ISO/IEC for 2 key standards called by the AI Act on risk management and on trustworthiness due to the specificities of the European context. It has also adopted two NWIPs (New Work Item Proposal) "EN Quality management system for EU AI Act regulatory purposes" and "EN AI Conformity assessment framework" to support the operationalisation of the EU AI Act and answer the requirements from the EC standardisation request. Also, an NWIPs on taxonomy of AI systems methods and capabilities has also been registered.

- In WG2 (Operational aspects), activity continues in particular on risk management. 3 groups have been set-up to deepen specific points: terminology, risk acceptability, integration with existing risk management frameworks.

- In WG3, (Engineering aspects), one should note that a NWIP has been voted to adopt directly as European standards, the series of ISO 5259 on data management. Activity continues on logging and computer vision jointly with ISO/IEC JTC1 SC42, and on datasets and bias.

- WG4 (Foundational and societal aspects) concentrates on AI trustworthiness. But it also works on fundamental rights and ethics (competence requirements for ethicist professionals, tools for handling ethical issues, upskilling organisations on ethics and social concern). A new field is being investigated: sustainable AI also linked with environmental impact of AI.

- WG5 (Cybersecurity): NWIP "Cybersecurity specifications of AI systems" has been voted.

- Civil society stakeholders are more and more providing contributions to JTC 21 working groups. One may quote in particular several documents by ANEC on the relationship between AI standards and various phases of a Product Life Cycle. Also documents by NGO Equinet on human oversight regarding AI trustworthiness and risk management.

- For more details on all these activities, please refer directly to the Working Groups. Contacts on request.

CEN-CENELEC JTC21 publishes its internal dashboard

- Because of the intense interest from industry, society and policymakers into European AI standardization at CEN-CENELEC, JTC21 has taken the unusual step of publishing a copy its internal dashboard. The latest edition as of August 31st, 2024 is available in Annex to this Newsletter.

- Note that the dashboard indicates joint activities with ISO/IEC SC42 (Grey colour in the 8th column means CEN CENELEC only). A lot of this work is being done in support of the Standards Request of the EU AI Act. Much of this 'homegrown' work is designed to fill gaps between the requirements of the EU AI Act and the standards documents already available (or soon available) from ISO.

- The dashboard and detailed work plan of JTC21 are continuously being updated. While the published dashboard below has a lot of details, it does not show any timing information or estimated completion dates for the different JTC21 projects. CEN-CENELEC does however publish historical and some estimated dates in its 'live' dashboard for JTC21 at: https://standards.cencenelec.eu/dyn/www/f?p=205:22:0::::FSP_ORG_ID,FSP_LANG_ID:2916257,25&cs=1827B89DA69577BF3631EE2B6070F207D. The information in this 'live' dashboard comes out of the CEN-CENELEC project tracking system, which is itself updated at irregular intervals.

- While this is not visible in the above 'live' dashboard yet, by now JTC21 has passed the milestone where all of its projects in support of the Standards Request have passed the 'approval' stage and are in the 'under drafting' stage.

- For anyone not directly involved in JTC21 or not familiar with standardization, it can be hard to make sense of some of the information in the 'live' dashboard or the dashboard below. For more explanations of standardization structures, processes and regulations, you might want to refer to https://www.cencenelec.eu/ and https://www.cencenelec.eu/areas-of-work/cen-cenelec-topics/artificial-intelligence/ and https://boss.cen.eu/ as well as your national standardization organisation with its AI mirror committee.

ISO/IEC JTC1 SC42

- Next plenary meeting will take place in Le Chesnay (France) from October 7th to 11th.

- Interest for generative AI is growing with work in progress to update 2 foundational standards: ISO/IEC 22989:2022 AI Concepts and terminology and ISO/IEC 23053:2022 Framework for AI systems using machine learning. A new project has been proposed for approval: *Guidance on addressing risks in generative AI systems.*

- Work is almost completed for ISO/IEC 42005 *AI Impact assessment* and well advanced ISO/IEC 12792 *Transparency Taxonomy of AI Systems*, ISO/IEC 12791 *Treatment of unwanted bias* and ISO/IEC 42006: *Requirements for bodies providing audit and certification of AI systems.*

- Several other topics are at a more or less advanced stage. One may quote mostly for WG1 (Foundational standards) and WG3 (Trustworthiness)

  - Guidance and requirements for uncertainty quantification in AI systems
  - Taxonomy of AI systems methods and capabilities
  - Guidance for human oversight
  - Trustworthiness of AI system evaluation (methods, criteria)
  - Human machine teaming
  - Beneficial AI systems
  - Reliability
  - Guidance on addressing societal concerns and ethical consideration
  - Handbook on how to implement ISO/IEC 42001:2023 AI management systems in SMEs
  - Nudges

- For more details on all these activities, please refer directly to the Working Groups. Contacts on request.

Forum

- From 25 to 29 November 2024, SBS (Small Business Standards) will hold its annual Meeting Standards Conference, an awareness-raising initiative dedicated to empowering SMEs through standardisation. It will host a dynamic mix of online, physical events and activities across Europe, raising awareness about the crucial role standards play in SME success. See https://www.meetingstandards.eu/

- High-Level Conference – Coding Equality in the EU AI Act: Equality Bodies rising to the Challenge.

This Conference will take place in person in Brussels on 12 December 2024 from 9.00 to 16.45 CET. It is aimed at Equality Bodies, European law and policy makers, civil society organisations, experts and activists working on the implications of AI systems for equality and non-discrimination.

More details and registration (up to September 30th): https://equineteurope.org/conference-equality-proofing-ai-systems-equality-bodies-rising-to-the-challenge/

- On Tuesday September 24th (14.30 to 15.30 BST), the AI Standards Hub from the UK is organising a webinar "Towards secure AI for all: Inclusive approaches to AI security standardisation".

During the featured panel discussion, Issy Hall (DSIT), Chiara Giovannini (ANEC), and Kris Shrishak (Enforce) will explore what an inclusive, multistakeholder approach to AI security standardisation could look like, providing an opportunity to address specific considerations for civil society and other underrepresented groups. Webinar attendees will have the opportunity to pose questions to the panelists via chat. A detailed event description, including further information about panellists, can be found on AI Standards Hub website

Nice to know, useful to read

- The AI Act: responsibilities of the European Commission (AI Office)

If you are unsure who is implementing and enforcing the new digital law and what the specific time frames are, you might find very useful the blogpost by Kai Zenner, Head of Office and Digital Policy Adviser for MEP Axel Voss in the European Parliament. See https://www.kaizenner.eu/post/ai-act-responsibilities-commission?utm_source=substack&utm_medium=email

- A California Senate Bill would require the developers of AI models trained with more than $100 million in computing resources to follow and disclose a Safety and Security Plan (SSP) aimed at preventing critical harm. The bill still needs to be signed by the State Governor.

ENDS.

SR point column codes: SS = Supporting standards (terminology); RM = Risk management for AI systems; DG = governance and quality of datasets used to build AI systems; RK = Record keeping through built-in logging capabilities in AI systems; TR = Transparency and information to the users of AI systems; HO = human oversight of AI systems; AC = accuracy specifications for AI systems; RO = robustness specifications for AI systems; CS = cybersecurity specifications for AI systems; QM = quality management system for providers of AI system, including post market monitoring process; CA = conformity assessment for AI system

Thematic group	WI Number	Reference	Type of deliverable	WG	Editor	Title	Relationship with work in SC42 or other applicable committee	Stage code in JTC21	Notes on status in JTC21	Stage code in ISO/IEC	Notes on status of underlying standard in ISO/IEC if applicable	SS	RM	DG	RK	TR	HO	AC	RO	CS	QM	CA
Terminology	JT021004, JT021031 (Amendment)	EN ISO/IEC 22989:2023	EN	WG4		Information technology - Artificial intelligence - Artificial intelligence concepts and terminology (ISO/IEC 22989:2022)	Adoption of 22989	Published	EN published	60	Standard published in 2022. Editor: Wei Wei (IBM, Germany)	x										
Terminology	JT021031	EN ISO/IEC 22989/prA1	EN	WG4		Information technology - Artificial intelligence - Artificial intelligence concepts and terminology (ISO/IEC 22989 Amendment 1)	Parallel dev, ISO lead	Under Drafting		60		x										
Terminology	JT021005	EN ISO/IEC 23053:2023	EN	WG4		Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML) (ISO/IEC 23053:2022)	Adoption of 23053	Published	EN published	60	Standard published in 2022. Editor: Milan Patel (Microsoft, UK)	x										
Terminology	JT021032	EN ISO/IEC 23053/prA1	EN	WG4		Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML) (ISO/IEC 23053 Amendment 1)	Parallel dev, ISO lead	Under Drafting		60		x										
Terminology				WG3		Terminology and concepts for domain engineering of AI systems	Parallel dev, ISO lead?		informal preparatory discussions underway. Still to be discussed in WG1		Under discussion in WG3	x										
AI and risk management	JT021011	prEN ISO/IEC 42001		WG2	Marta Janczarski	Information technology - Artificial intelligence - Management system	Adoption of 42001	Preliminary	NWIP to activate PWI approved by JTC 21 but with No vote from BE. Tbd if adoption is still needed. Will not be harmonised by the EC.	60	Standard published										x	
AI and risk management	JT021039	prEN XXX	EN	WG2	Adam Leon Smith	AI - quality management system for regulatory purposes	Complements, and builds on, several ISO/IEC standards, including 42001	Under Drafting													x	
AI and risk management	JT021016	prEN ISO/IEC 23894	EN	WG2		Information technology - Artificial intelligence - Guidance on risk management - ISO/IEC 23894	Adoption of 23894	Published	EN published	60	Standard published		x									
AI and risk management	JT021024	prEN XXX	EN	WG2	Renaud di Francesco	AI Risk Management		Under Drafting	Supersedes earlier work item JT021009 (AI Risks - Check List for AI Risks Management)				x									
Trustworthiness	JT021021	prEN ISO/IEC 24970	EN	WG3	Adam Leon Smith	AI system logging	Parallel dev, ISO lead	Under Drafting		20					x							
Terminology	JT021022	prEN ISO/IEC 12792	EN	WG4	Rania Wazir	Transparency taxonomy of AI systems	Parallel dev, ISO lead	Under Drafting	Editor: Rania Wazir (leiwand.ai, Austria)	40						x						
Trustworthiness	JT021015	prEN ISO/IEC 24029-2	EN	WG3	Arnault Ioualalen	Artificial intelligence (AI) - Assessment of the robustness of neural networks - Part 2: Methodology for the use of formal methods	Adoption of 24029-2	Preliminary		60	Same project editor (Arnault Ioualalen, Numalis, France)								x			
Trustworthiness		ISO/IEC 24029-3	EN	WG3	Arnault Ioualalen	Artificial intelligence (AI) - Assessment of the robustness of neural networks - Part 3: Methodology for the use of statistical methods	Parallel dev?		WG3 discussion points towards parallel development (or alternatively adoption although this takes longer overall)	20	NWIP approved and under development								x			
Trustworthiness		24029-5		WG3	Arnault Ioualalen	Artificial intelligence (AI) - Assessment of the robustness of neural networks - Part 5: Applicability of the methodology to other AI algorithms	Parallel dev?		To be clarified to what extent this would be needed to support the SR. Likely to apply to ML, not just neural networks.		NWIP in preparation								?			
Trustworthiness	JT021018	CEN/CLC ISO/IEC TR 24029-1	TR	WG3		Artificial Intelligence (AI) - Assessment of robustness of neural networks - part 1: overview	TR 24029-1 already adopted by JTC21 (N270)	Published	24029-1 has already been adopted by JTC21 but since it is a TR, another item still needs to be created in response to the SR. Not much more content is available, though, since this is the frontier of research at the moment.	60	TR published								x			
Trustworthiness	JT021012	ISO/IEC 23282	EN	WG3	Lauriane Aufrant	Evaluation methods for accurate natural language processing systems	Parallel dev, ISO lead	Under Drafting			Editor: Rania Wazir (leiwand.ai, Austria). Parallel dev approved, allocated to JWG5; in progress							x				
Trustworthiness	JT021002	ISO/IEC 23281	TR	WG3	Lauriane Aufrant	Artificial Intelligence - Overview of AI tasks and functionalities related to natural language processing	Parallel dev, ISO lead	Under Drafting			Parallel development approved and formally suggested to JTC21; now being done in JWG5	x						x				
Trustworthiness	no WI needed		EN	WG4		Guidelines and requirements for accuracy threshold definition			Conclusion in WG4: Will be covered within the Trustworthiness work item. Alignment on scope/depth with EC/JRC needed.									x				
Trustworthiness	no WI needed	ISO/IEC TS 4213	TS			Accuracy of classification systems	Reference to 4213	n/a	Conclusion in WG4: Adoption probably not required; TS4213 can be referenced from Trustworthiness work item.		Published in 2022							x				
Trustworthiness	no WI needed	ISO/IEC TS 4213 (update)	TS			Accuracy of AI systems for regression, recommendation and clustering	Reference to 4213 ed.2	n/a	Conclusion in WG4: Will be covered in imminent update to TS4213, hence no action needed in JTC21	20	Update in progress							x				
Trustworthiness	JT021008	prEN XXX	EN	WG4	Piercosma Bisconti	Artificial Intelligence trustworthiness framework		Under Drafting					x	x	x	x	x	x	x	x		
Trustworthiness	JT021025	prEN XXX	EN	WG3	Nicolas Cubaud	Evaluation methods for accurate computer vision systems		NWIP ballot	Ballot closes 2024-09-12									x				
Trustworthiness			EN	WG	Nicolas Cubaud	Taxonomy of AI tasks in computer vision		NWIP ballot	Ballot closes 2024-09-12			x						x				
Trustworthiness	JT021013	FprCEN/CLC ISO/IEC/TS 12791	TS	WG3	Adam Leon Smith	Information technology - Artificial intelligence - Treatment of unwanted bias in classification and regression machine learning tasks	Parallel dev, ISO lead	Under Ballot	Second DTS for voting in parallel with ISO/IEC JTC 1/SC 42 "Artificial Intelligence" in the period 2024-06-19 to 2024-09-11					x				x				
Trustworthiness	JT021036	prEN XXX	EN	WG3	Michael van Hartskamp	Artificial Intelligence – Concepts, measures and requirements for managing bias in AI systems		Under Drafting										x			?	?
Data governance	JT021020	prEN ISO/IEC 8183	EN	WG3	Domenico Natale	Information technology – Artificial intelligence – Data life cycle framework	Adoption of 8183	Published		60	Published in 2023			x								

Topic	ID	Standard	Type	WG	Editor	Title	Adoption	Status	Comment	#	Publication
Data governance		ISO/IEC 5259 part 1-4	EN	WG3	Adam Leon Smith	Data quality for analytics and machine learning (ML) - Part 1: Overview, terminology, and examples - Part 2: Data quality measures - Part 3: Data quality management requirements and guidelines - Part 4: Data quality process framework	Adoption of 5259 part 1-4	Published		mostly 60	Publication: Part 1: July 2024 Part 2: FDIS stage Part 3: July 2024 Part 4: July 2024
Data governance	JT021037	prEN XXX	EN	WG3	Michael van Hartskamp	Artificial Intelligence -- Quality and governance of datasets in AI		Under drafting			
Data governance	JT021007	CEN/CLC/TR 18115	TR	WG3	Domenico Natale	Data Governance and quality for AI in the European context		Under Ballot	Voting on Draft Technical Report until 2024-08-29. SC42 had suggested parallel development but work in JTC21 was already too advanced.		
Testing and Conformity assessment		ISO/IEC 42006	EN	WG2		Requirements on bodies performing audit and certification of AI management systems	(Modified?) adoption of ISO/IEC 42006		Next steps under discussion in WG2.	40	42006 at DIS stage, editor Susanne Kuch (DAkks, Germany)
Testing and Conformity assessment		ISO/IEC 29119-11	TS	WG2		Testing of AI systems	Adoption of 29119-11?		Next steps under discussion in WG2.	?	29119-11 has been a TR first and is now continuing to TS after having been held up for a year. Can also draw on ETSI work, BSI work. European specificities expected. Tbd which SRs are impacted
Testing and Conformity assessment	JT021019	prEN XXX	EN	WG2		**Competence** requirements on AI systems auditors and professionals		Under Drafting			
Testing and Conformity assessment			EN	WG2	Emilia Tantar	AI **conformity assessment** framework		Under Drafting			
Cybersecurity	JT021030	ISO/IEC 27090		WG5	Henrich Pöhls	Guidance for addressing security threats and failures in artificial intelligence systems	Contribution to 27090?	Preliminary	PWI for Contribution to 27090, adoption as TR suggested	30.60	Project editor in SC27 WG4: Milan Patel (Microsoft, UK)
Cybersecurity	no WI needed		EN	WG5		Artificial Intelligence — **Privacy** protection			No harmonized standards are required. Privacy protection is covered by the GDPR. Data protection is part of Cybersecurity, SC 27 and JTC 13. There are standards in place like 27701 for GDPR; 29100; 29151 and 29134 for protection of peronal data, Impact assesssment etc.. JTC 13 will be requested for further information. Possible Data extraction as threat from AI-Systems are part of the WG5.		
Cybersecurity	JT021029	[Ballot]	EN	WG5		Artificial Intelligence - **Cybersecurity** specifications for AI Systems		Under Drafting			
Cybersecurity			EN	WG2/5		Conformity assessment in relation to the technical solutions to address AI-specific vulnerabilities (cf. item above)			to be discussed between WG5 and WG2, needs to be aligned with overall conformity assessment work in WG2 and with existing CA in classic IT-Security part e.g. later CRA. CA AI Specifics needed to be discussed. Answer needed from EC : assessment together with requirement (like EN 18031) or separate document (required from CASCO)		15408, 27006/27007/27008

Items beyond the scope of supporting the standardisation request (currently lower priority)

Topic	ID	Standard	Type	WG	Editor	Title	Adoption	Status	Comment
	JT021006	prEN XXX	EN	WG4	Enrico Panai	AI-enhanced nudging	Parallel dev, ISO lead	Under Drafting	Circulation of 1st WD, parallel dev suggested by WG4 convenor with dual editorship Europe / non-Europe (India) and agreed in WG1, but need understanding to keep substance of scope and timeline. Fresh NWIP needed to remove European references. - Existing work in WG4 already quite mature. Parallel development approved and formally suggested to JTC21
	JT021010	prCEN/CLC/TR XXX	TR	WG4	Valeria Livina	Information Technology - Artificial Intelligence - Green and Sustainable AI		Under Drafting	Parallel dev rejected since work in JTC21 already too advanced. However, content expected to be picked up by future Green AI work in SC42.
	JT021035	prCEN/TS		WG4	Juliette Fropier	Sustainable Artificial Intelligence – Guidelines and metrics for the environmental impact of artificial intelligence systems and services",		Preliminary	
	JT021001	prCEN/CLC/TR 17894	TR	WG2	Emilia Tantar	Artificial Intelligence Conformity Assessment		Under Ballot	Voting on Draft Technical Report until 2024-10-24
	JT021019	prEN XXX	EN	WG4	Alessio Tartaro	Competence Requirements for AI ethicists professionals		Under drafting	
	JT021033	prCEN/TS	TS	WG4	Pablo Penarubia	Guidelines for upskilling on AI ethics and social concerns in organisations		Preliminary	
	JT021017	CEN/CLC ISO/IEC/TR 24027:2023	TR			Information technology - Artificial intelligence (AI) - Bias in AI systems and AI aided decision making	Adoption of 24027	Published	
	JT021014, JT021027	prEN ISO/IEC 25059	EN	WG3	Adam Leon Smith	Software engineering – Systems and software Quality Requirements and Evaluation (SQuaRE) – Quality model for AI systems	Adoption of 25059	Published	
	JT021026	prCEN/CLC/TR XXX	TR	WG4	Natalia Giorgi	Impact Assessment in the context of fundamental rights		Preliminary	PWI in progress. Considering e.g. relationship to 42001 and other issues. Not clear yet whether TR or EN.
	JT021034	prCEN/TS	TS	WG4	Pablo Penarubia	Guidelines on tools for handling ethical issues in the AI systems lifecycle		Preliminary	
		ISO/IEC 42102	EN	WG3	Taras Holovad	Taxonomy of AI system methods and capabilities	Parallel dev, ISO lead	NWIP ballot	
	JT021028			WG3	Beyza Yaman	Reference architecture of knowledge engineering based on ISO/IEC 5392	tbc	Preliminary	
			EN	WG3/4		Guidelines for **accuracy** improvement			Conclusion in WG4: Not needed for delivery against SR; deferred.

This is an example for potential work that has been considered in JTC21 but ultimately been found to be either unnecessary or not of sufficiently high priority. It is an ongoing effort in JTC21 to keep the work programme as tight as possible while still responding to standardisation needs as broadly as possible.