ISO/IEC JTC 1
SC 42
Novel AI Standardisation Approaches

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Introduction of SC 42

- Committee on AI standardization under the joint initiative on Information Technology (JTC 1)
- IEC and ISO produce international standards and with participation by country – one country one vote
- Collaboration with long established sister ISO and IEC committees covering a broad range of app domains
- Works with JTC 1 committees producing horizontal stds in key areas such as security, cloud, IoT, governance
Societal Concerns and Ethics

Overview

- Adoption of transformative technologies like AI have impacts that go beyond the technology

- AI-specific trustworthiness issues e.g. reliability, privacy, security, explainability, controllability

- Emerging issues related to the context of use of the technology, e.g. algorithmic bias, safety directives in industrial AI, eavesdropping

- AI ethical considerations not limited to SC 42 but extend to ISO/IEC TCs in their applications
Societal Concerns and Ethics

Motivation and current focus areas

- Standards can mitigate ethical issues allowing for broad **responsible adoption**.

- Stakeholders include:
  - industry,
  - regulatory,
  - technologists,
  - interest groups, app domain, society at large
Societal Concerns and Ethics

Motivation and current focus areas, cont.

- Ethical considerations and societal concerns considered across entire SC 42 program
  - Dedicated projects
    - **Overview** of AI ethical and societal concerns with tie-in to trustworthiness and exemplary use cases
    - PWI on **AI best practice guidance for mitigating ethical and societal concerns**
  - Integrated into and enabled by entire SC 42 deliverables portfolio. For instance,
    - Governance, Management System Standards (MSS) – 42001 (AIMS), use cases, application guidelines, safety etc.

- **SC 42 collaborating** with other work programs such as OECD, UNESCO, European Commission
Societal Concerns and Ethics

TR 24368 - Overview of ethical and societal concerns

- Links to traditional standardization work by adding the non-technical ethical perspective necessary to address ethical and societal concerns of an AI system and applications:
  - The ethical and societal layer may be emerging as part of “Harmonized Standards” (new legislative framework).
  - Addressing that an ethical and societal concern with an AI system and application often depends upon the particular social, economic or physical context of its development, implementation, audience and use.
  - Practices for building and using ethical and socially acceptable AI. Organization’s management process.
  - Stakeholder considerations for building and using ethical and socially acceptable AI
- Visionary element: Enable support and a starting point for other international projects
Key Topics: Societal Concerns and Ethics

Overview of ethical and societal concerns


- 22989; provides standardized AI terminology
- 23894; provides guidelines managing AI-related risks
- 24027; bias in AI-systems
- 24028; introduction AI system transparency and explainability
- 24030; use cases of AI applications
- 38507; guidance on governance implications
Societal Concerns and Ethics

Overview of ethical and societal concerns

- Takes into account the context of use of the technology by looking at both technology capability and non-technical requirements such as business requirements, regulatory and policy requirements, application domain needs, and ethical and societal concerns.
- Translating the above into technical requirements.
- Building foundational standards that allow communities to build upon such as terminology, use cases, application guidance and reference architectures.
- Linking technology innovation communities such as proprietary implementations, research and open source communities.
Societal Concerns and Ethics

Overview of ethical and societal concerns

• General all-embracing document

• Has encouraged interdisciplinary expert participation and contribution

• Practical document, organizational focus

• Hands on approach; tangible product - how to address AI themes and principles in practice

• Themes and Principles: Addressing AI systems’ and applications’ potential misuse, abuse and disuse
Societal Concerns and Ethics

**Novel AI Standardization Approaches**

- Align technical experts with non-technical experts
- Necessity to apply expertise inter-disciplinary for creation of ethical AI
- Interplay conformity assessment: The specification of general ethical themes and principles, guidance, considerations - facilitate due diligence of AI systems, on a system/technical level + organizational/ethical level – enhancing public confidence and trust
Societal Concerns and Ethics

Novel AI Standardization Approaches

• International standardization creates a level playing field in markets throughout the world

• New approach legislation feasible

• Importance of conformity assessment

• AI stakeholders: standards define requirements - making compliance with themes and/or principles understandable by concrete guidance
Result:
Interplay between legislation, conformity assessment and standardization

Standardization element:
- The link between legislation and conformity assessment stage
- Complement the requirements of legislation
- Facilitates conformity assessment
- Why: Flexible, inclusive and responsive. Expression of the principles of subsidiarity and proportionality
Thank you

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