This document contains supplemental information referenced by the European Rolling Plan for ICT Standardisation.

IEEE Standards Activities in Autonomous and Intelligent Systems (A/IS) Overview

Relating to AI, and more specifically Autonomous and Intelligent Systems (A/IS), IEEE has significant standards activities as well as broader engagements with the global standards and technology community to promote the development of autonomous and intelligent systems in a manner that takes into account human ethics and wellbeing, rather than focusing on technological feasibility only. IEEE is developing technical and ethically-focused impact standards.

Relevant Standards Activities

Active Standards*

- IEEE 1232™-2010, IEEE Standard for Artificial Intelligence Exchange and Service Tie to All Test Environments (AI-ESTATE)
- IEEE 1232.3™-2014, IEEE Guide for the Use of Artificial Intelligence Exchange and Service Tie to All Test Environments (AI-ESTATE)
- IEEE 1636™-2018, IEEE Standard for Software Interface for Maintenance Information Collection and Analysis (SIMICA)
- IEEE 1636.1™-2018, IEEE Approved Draft Standard for Software Interface for Maintenance Information Collection and Analysis (SIMICA): Exchanging Test Results and Session Information via the eXtensible Markup Language (XML)
- IEEE 1872™-2015, IEEE Standard for Ontologies for Robotics and Automation

Current New or Revision Projects*

- IEEE P1872.1™, IEEE Draft Standard on Robot Task Representation
- IEEE P1872.2™, Standard for Autonomous Robotics (AuR) Ontology
- IEEE P2040™, Standard for Connected, Automated and Intelligent Vehicles: Overview and Architecture
- IEEE P2040.1™, Standard for Connected, Automated and Intelligent Vehicles: Taxonomy and Definitions
- IEEE P2040.2™, Standard for Connected, Automated and Intelligent Vehicles: Testing and Verification
- IEEE P2247.1™, IEEE Draft Standard for the Classification of Adaptive Instructional Systems

- [IEEE P2418.4™](#), IEEE Draft Standard for the Framework of Distributed Ledger Technology (DLT) Use in Healthcare and the Life and Social Sciences
- [IEEE P2660.1™,](#) Recommended Practices on Industrial Agents: Integration of Software Agents and Low Level Automation Functions
- [IEEE 2672™,](#) Guide for General Requirements of Mass Customization
- [IEEE P2673™](#), IEEE Draft Standard for Patient Digital Biomedical Data Files with 3D Topological Mapping of Macroanatomy and Microanatomy for Use in Big Data and Augmented Intelligence Systems
- [IEEE P2751™,](#) 3D Map Data Representation for Robotics and Automation
- [IEEE P2781™](#), IEEE Draft Guide for Load Modeling and Simulations for Power Systems
- [IEEE P2801™](#), Recommended Practice for the Quality Management of Datasets for Medical Artificial Intelligence
- [IEEE P2802™](#), Standard for the Performance and Safety Evaluation of Artificial Intelligence Based Medical Device: Terminology
- [IEEE P2807™](#), Framework of Knowledge Graphs
- [IEEE P2812™](#), Guide for Minor Guardianship System for Online Mobile Gaming
- [IEEE P3652.1™](#), Guide for Architectural Framework and Application of Federated Machine Learning
- [IEEE P7000™](#), IEEE Draft Standard for Model Process for Addressing Ethical Concerns During System Design
- [IEEE P7001™](#), IEEE Draft Standard for Transparency of Autonomous Systems
- [IEEE P7002™](#), IEEE Draft Standard for Data Privacy Process
- [IEEE P7003™](#), IEEE Draft Standard for Algorithmic Bias Considerations
- [IEEE P7004™](#), IEEE Draft Standard for Child and Student Data Governance
- [IEEE P7005™](#), IEEE Draft Standard for Transparent Employer Data Governance
- [IEEE P7006™](#), IEEE Draft Standard for Personal Data Artificial Intelligence (AI) Agent
- [IEEE P7007™](#), IEEE Draft Ontological Standard for Ethically Driven Robotics and Automation Systems
- [IEEE P7008™](#), IEEE Draft Standard for Ethically Driven Nudging for Robotic, Intelligent and Autonomous Systems
- [IEEE P7009™](#), IEEE Draft Standard for Fail-Safe Design of Autonomous and Semi-Autonomous Systems
- [IEEE P7010™](#), IEEE Draft Wellbeing Metrics Standard for Ethical Artificial Intelligence and Autonomous Systems
- [IEEE P7011™](#), IEEE Draft Standard for the Process of Identifying and Rating the Trustworthiness of News Sources
- [IEEE P7012™](#), IEEE Draft Standard for Machine Readable Personal Privacy Terms

- [IEEE P7013™](#), IEEE Draft Inclusion and Application Standards for Automated Facial Analysis Technology
- [IEEE P7014™](#), Standard for Ethical considerations in Emulated Empathy in Autonomous and Intelligent Systems

Pre-standardization Industry Connections Activities

- ICC16-002, IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems

Draft standards projects, once approved, are often revised and/or used as the base for new projects, and therefore may appear in both the "active standards" and "projects under development" lists.