The IEEE IoT Initiative for Smart Cities

Virtual Forum on "The Role of Standards
in Accelerating Digital Transformation for Cities and Communities
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IEEE
Internet of Things

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IEEE World Forum on Internet of Things

IEEE Standards: Enabling City Technologies for Humanity

IEEE is committed to smart cities standardization and offers a portfolio of standards and programs to address key aspects of the smart cities' framework:

INTELLIGENT TRANSPORTATION
IEEE 1609™ SERIES
IEEE 1901™ SERIES
IEEE 802.15.4p™
IEEE 1512™
IEEE P2040™ SERIES
IEEE P2048.11™

5G
IEEE P1914.1™
IEEE P1918.1™
IEEE 802.11™ SERIES
IEEE P1915™ – IEEE P1921.1™ SERIES
IEEE 802.1CM™

FRAMEWORK STANDARDS
IEEE 2413™ – IEEE P2413.1™
IEEE P2784™

◆IEEE

INTERNET OF THINGS (IoT)
IEEE 2413™
IEEE 1588™
IEEE 1451™ SERIES
IEEE P1451-99™
IEEE 2050™
IEEE P2144™ SERIES
IEEE P2786™

SMART GRID
IEEE 1547™ SERIES
IEEE 1815™
IEEE 2030™ SERIES
IEEE C37™ SERIES

eHEALTH
IEEE 11073™ SERIES
IEEE 139™
IEEE 602™
IEEE 1363™ SERIES
IEEE P2049™ SERIES
IEEE P2788™
IEEE P2843™

CYBER SECURITY
IEEE P802E™
IEEE 1363™ SERIES
IEEE 1402™
PIEEE 1686™
IEEE 2410™
IEEE P2813™
IEEE P2025.2™
IEEE P2049.2™
IEEE P2900™ SERIES
IEEE P2048.4™

eGOVERNANCE
IEEE P7002™
IEEE P7004™
IEEE P7005™
IEEE P7006™
IEEE P2141™ SERIES
IEEE P2418.8™
IEEE P2089™
IEEE P2813™
IEEE P2812™

LEARNING TECHNOLOGIES
IEEE 1484™ SERIES
IEEE 1278™ SERIES
IEEE 1516™ SERIES
IEEE 1730™ SERIES
IEEE P2048™ SERIES

SMART HOME
IEEE 802®
IEEE 1901™ SERIES
IEEE 1905.1™
IEEE 2030.5™
IEEE P2900™ SERIES
IEEE P2785™
IEEE P2811™
IEEE P2823™
IEEE P1851™
IEEE P2048.7™
IEEE P2048.8™

The IEEE IoT Global Cities Alliance

Global collaboration between the IEEE IoT Initiative and cities worldwide, in order to work side-by-side with city leaders and stakeholders on:

- best practices and standards: use/improved communications of existing ones + building and prioritising new ones together
- co-hosting and speakers in the IEEE IoT Smart Cities Summits and the IEEE World Forum on IoT
- publishing of smart city strategies, frameworks, use cases and results in IEEE journals, magazines and newsletters reaching our 450k membership in 160+ countries worldwide
- production and communications of the "Smart Cities Webinar Series"

<u>IEEE IoT/SA Smart Cities Survey:</u> being sent out to IEEE members, smart city leaders and stakeholders with **currently 83 cities** onboard from: Australia – Brazil – Canada – China – Colombia – Ecuador – Finland - Hong Kong – India – Iran - Japan – Malaysia – Mexico – Morocco – Pakistan – Portugal – Senegal – Sweden – UK - USA

<u>Regional chairs:</u>
Asia: Nim Cheung (Hong Kong)   **Europe:** Rosaldo Rossetti (Portugal)   **India:** Sri Chandrasekaren (India)
Latin America: Victor Larios (Mexico)   **MEA:** Mohamed Essaaidi (Morocco)   **North America:** Fawzi Behmann (USA)

The Global Observatory for Urban Intelligence

An ITU/IEEE initiative, to be built on open-source and open-data, which aims to provide an ongoing understanding of cities and how digital transformation can best serve cities in developing social, economic and environmental dimension of urban growth, for sustainability and resilience, through:

- **Smart Cities Ontology:** develop a common language to communicate smart cities across cities, nations, global regions, based on a multi-disciplinary approach which is served by existing technology-based ontologies

- **Correlations:** build relationships between the ontology's objects to best represent the complex behavior of a city's ecosystem, based on a multi-disciplinary approach and using AI/ML to to automate much of this process

- **Develop an international community of city observatories** run as a collaboration between local authorities and academia that will gather and upload data on an ongoing basis to the GOUI's cloud-database

- **Open-source tools for querying and modeling (inc. AI/ML)** for understanding, sharing and comparing smart cities, for policy-making, strategic decision-making, piloting and monitoring, as well as prediction and risk-analysis.

- Create and provide a **playbook and best practices**

- Provide users with the **communications tools to network**, share and collaborate, based on the resources of the "Global Observatory for Urban Intelligence".