



STANDARDS AND SMART CITIES PROJECTS

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WHY STANDARDS



M2M



M2H

WHY STANDARDS



Preparing the way for smart cities

How our work will help to accelerate the rollout of smart cities across the United Kingdom

BENEFITS OF STANDARDS

INTEROPERABILITY

COST REDUCTION

SPECIALIZATION

NETWORKING

CYBER SECURITY CHALLENGES

PROVEN SOLUTIONS

INDEPENDENT ADVICE

REFERENCE MODELS



WHY STANDARDS (ACCORDING PMI)

Standards provide guidelines, rules and characteristics for project, program and portfolio management. Standards are widely accepted and, when consistently applied, they help you, your global peers and your organization achieve professional excellence.

Ref:

STANDARDS AND PROJECT MANAGEMENT

PROJECT CHARTER

PLANNING

REFERENCES AND STANDARDS

METHODOLOGY

BEST PRACTICES

TIME, COST, SCOPE, QUALITY CONSTRAINTS

EARNED VALUE

RACI

LESSONS LEARNED

Ref:

ORGANIZATIONS

The header of the ITU website, featuring the ITU logo, the slogan "Committed to connecting the world", and navigation menus for "General Secretariat", "Radiocommunication", "Standardization", and "Development".

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About ITU-T Study Groups Events All Groups Join ITU-T Standards

Focus Group on Smart Sustainable Cities

YOUNG STANDARDS

This PAS was sponsored by the UK Department for Business, Innovation & Skills (BIS).

Its development was facilitated by BSI Standards Limited and it was published under licence from The British Standards Institution.

It came into effect on **28 February 2014.**

YOUNG STANDARDS

Smart City Standard debuts

Posted by [Jesse Berst](#) on **02/26/2014**
Smart Cities Council Advisor the Open Geospatial Consortium is out with an updated standard of great relevance to all cities. It creates a standard way to describe and geo-locate sensors, actuators and processors.



ENERGY



GRID



CITIZENS



**NET-
WORKING**



HEALTH

TRANSPORT



**THE INTERNET
THINGS**



HOMES

**FREE
CLOUD
COMPUTING**

STANDARDS

EXAMPLES OF STANDARDS



IEEE Standards Activities for Smart Cities

Overview

In order to meet the increased energy demands of the future, cities throughout the world will need to become smarter. To enable and facilitate this, IEEE has been working for many years on the infrastructure and networking necessary to design, generate, automate, operate, deliver, distribute, support, and connect energy to the cities, homes, and systems that demand it—both now and over the coming years. Major related standards projects are underway in the areas of Smart Grid, Cloud Computing, the Internet of Things (IoT), Intelligent Transportation, and eHealth.

Smart Energy: Connecting to Smart Grids

Approved standards and projects under development

- IEEE 2030 series on the Smart Grid, including electric vehicle infrastructure
- IEEE 1547 series on handling distributed resources in electric power systems
- IEEE 1815 series on electric power systems communications

IEEE Pre-standards activities

- Smart Energy Data Repository
- Systems and Components for Energy Routers



Smart Networking and Connectivity

Approved standards and projects under development

- IEEE 802 series on wired and wireless networking
- IEEE 1775 series on powerline communication equipment
- IEEE 1901 series on broadband over powerline networks
- IEEE 1451 series, addressing sensors
- IEEE 1900 series on dynamic spectrum access
- IEEE 1801 on low-power chip design

IEEE 1905.1 integrates market leading networking technologies and leverages their dynamics

IEEE 1905.1

- IEEE 802.11
- IEEE 1901
- IEEE 802.3
- MoCA



IEEE Standards Activities in Cloud Computing

Overview:

Cloud computing offers the promise of ubiquitous, scalable, on-demand computing resources provided as a service for everything from mobile devices to supercomputers. Cloud computing offers end consumers a “pay as you go” model—a powerful shift for computing towards a utility model like the electricity system, the telephone system, or more recently the Internet. IEEE is coordinating the support of cloud computing through its Cloud Computing Initiative, the first broad-based collaborative project for the cloud to be introduced by a global professional association.

- IEEE P1609.0 Draft Guide for Wireless Access in Vehicular Environments (WAVE) - Architecture
- IEEE P2301 Draft Guide for Cloud Portability and Interoperability Profiles (CPIP)
- IEEE P2302 Draft Standard for Intercloud Interoperability and Federation (SIIF)

IEEE Standards Activities in the eHealth Space

Overview:

IEEE has many standards in the eHealth technology area, from body area networks to 3D modeling of medical data and personal health device communications. Another area is the IEEE 11073™ family of standards is a group of standards under Health Informatics/Personal Health Device Communication, for data interoperability and architecture. IEEE 11073 standards are designed to help healthcare product vendors and integrators create devices and systems for disease management, health and fitness and independent living that can help save lives and improve quality of life for people worldwide.



IEEE Standards Activities in the Internet of Things (IoT)

Overview

The success of the Internet of Things (IoT) depends strongly on standardization, which provides interoperability, compatibility, reliability, and effective operations on a global scale. Recognizing the value of IoT to industry and the benefits this technology innovation brings to the public, the IEEE Standards Association (IEEE-SA) has a number of standards, projects and events that are directly related to creating the environment needed for a vibrant IoT.



SMART GRID STANDARDS



Smart Grid Network Technology & Protocols Standards Mapping


Wide Area Network (WAN)		NAN/FAN		Smart Meters	HAN, BAN, IAN		Technology Standards
Substation	Core/Metro Network/Backhaul Network	Substation			Wireline	Wireless	
LAN IEEE 1815/IEC 61850 Several Options	Wireline	Wireless		IEEE SC31 (1377, 1701, 1703, P1704)	Wireline	Wireless	
	IEEE 802.1 IEEE 802.3	IEEE 802.16q/e IEEE 802.20 IEEE 802.22	LAN IEEE 1815/IEC 61850 Several Options		IEEE 802.1 IEEE 802.3 IEEE 1901 IEEE 802.11 IEEE 802.15.4 IEEE 802.16	IEEE 802.1 IEEE 802.3 IEEE 1901 IEEE 1901.2 IEEE P1905.1 IEEE 802.11 IEEE 802.15.4	


ISO


◆ Subcommittee	◆ Subcommittee Title
ISO/TC 268/SC 1	Smart community infrastructures

Standards and projects under the direct responsibility of ISO/TC 268 Secretariat

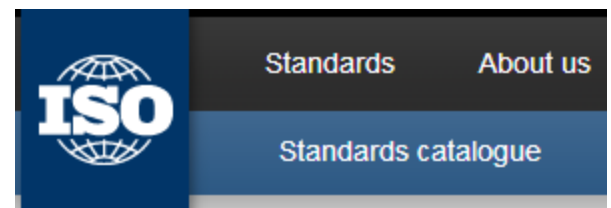
◆ Standard and/or project

 [ISO/AWI 37101](#)
Sustainable development and resilience of communities -- Management systems -- General principles and requirements

 [ISO/DIS 37120](#)
Sustainable development and resilience of communities -- Indicators for city services and quality of life

 [ISO/AWI TR 37121](#)
Inventory and review of existing indicators on sustainable development and resilience in cities

Ref:



SOME ITU RECOMMENDATIONS



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ITU-T L.1300: Best practices for green data centres

ITU-T L.1310: Energy efficiency metrics and measurement methods for telecommunication equipment

ITU-T L.1400: Overview and general principles of methodologies for assessing the environmental impact of information and communication technologies

ITU-T L.1410: Methodology for the assessment of the environmental impact of information and communication technology goods, networks and services

ITU-T L.1420: Methodology for energy consumption and greenhouse gas emissions impact assessment of information and communication technologies in organizations

RESEARCH OPPORTUNITIES

RESEARCH & INNOVATION

Participant Portal

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Commission

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CALL – SMART CITIES AND COMMUNITIES

H2020-SCC-2015

Sub call of: H2020-SCC-2014-2015

Publication date	2013-12-11	Deadline Date	2015-03-03 17:00:00 (Brussels local time)
Total Call Budget	€108,180,000	Main Pillar	Societal Challenges
Status	Open	OJ reference	OJ C361 of 11 December 2013

Topic: Development of system standards for smart cities and communities solutions

SCC-03-2015

Ref:

IOT CHALLENGES OPPORTUNITIES

Cisco Security Grand Challenge

A Global Initiative to Secure the Internet of Things

Get Ready to Respond by June 17, 2014

Cisco and NineSigma are inviting proposals from the global security community for innovative solutions to secure the "Internet of Things": to deliver intelligent cybersecurity solutions for the real world, addressing threats before, during, and after an attack. Specific focus areas for the Cisco Security Grand Challenge include malware defense, security credential management, and privacy protection.

[Learn more about how to respond](#) ▶

TIME TO DEADLINE

105
days

Ref:



