

**Briefing on the second meeting of
ITU-T Study Group 20
“IoT and its applications including smart
cities and communities (SC&C)”**

From 18-26 January 2016, Singapore

SG20 management team

SG20 Chairman

- Nasser Saleh AL MARZOUQI (United Arab Emirates)

SG20 Vice Chairmen

- Fabio BIGI (Italy)
- Silvia GUZMÁN ARAÑA (Spain)
- Takafumi HASHITANI (Japan)
- Hyoung Jun KIM (Republic of Korea)
- Abdulrahman M. AL HASSAN (Saudi Arabia)
- Ziqin SANG (China)
- Sergio TRABUCHI (Argentina)
- Sergey ZHDANOV (Russian Federation)



SG20 Structure

	Title
PLEN	
Question 1/20	Research and emerging technologies including terminology and definitions
Working Party 1	Internet of Things (IoT)
Question 2/20	Requirements and use cases for IoT
Question 3/20	IoT functional architecture including signalling requirements and protocols
Question 4/20	IoT applications and services including end user networks and interworking
Working Party 2	Smart cities and Communities (SC&C)
Question 5/20	SC&C requirements, applications and services
Question 6/20	SC&C infrastructure and framework

- See: <http://www.itu.int/en/ITU-T/studygroups/2013-2016/20/Pages/structure.aspx>
- List of Questions: <http://www.itu.int/en/ITU-T/studygroups/2013-2016/20/Pages/questions.aspx>

Tasks and objectives

- Develop framework and roadmaps for the harmonized and **coordinated development of IoT**, including M2M communications, ubiquitous sensor networks and smart cities and communities;
- **Assess** how the use of IoT has an **impact** on the smartness of cities;
- Study **requirements** and capabilities of IoT and its applications including SC&C;
- Develop standards, guidelines, methodologies and best practices to help cities (including rural areas and villages) deliver services using the IoT, with an initial view to address city challenges;
- **Cooperate** with other regional and international standards-development organizations (SDO) and industry forums.



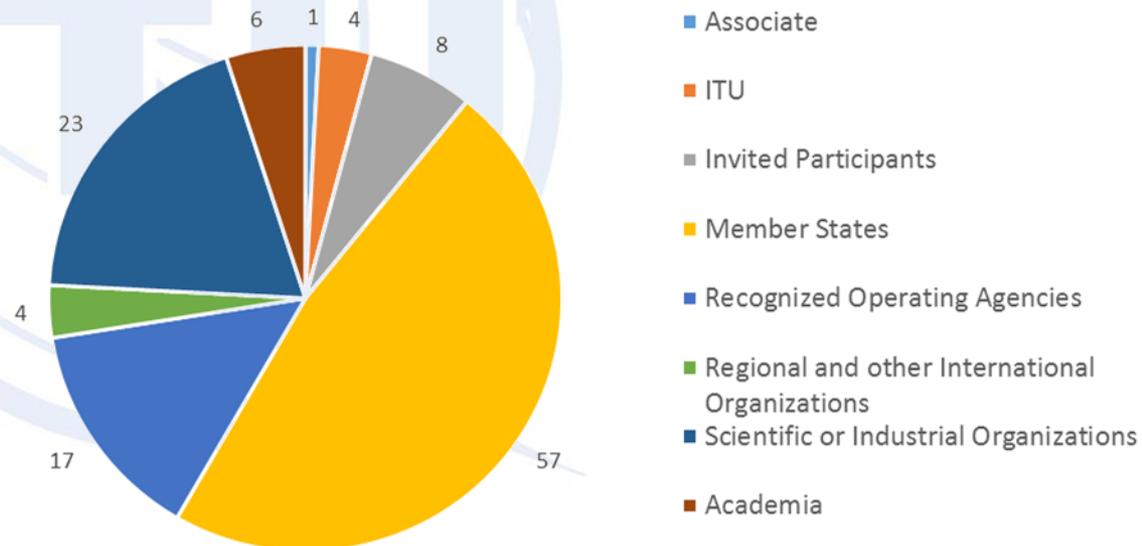
Statistics

Participation:

- 120 participants: 57 Member States, 1 Associate, 6 Academia, 17 Recognized Operating Agencies, 4 ROIO, 23 SIO, 8 Guests and 4 ITU Staff.

Final list of participants by sector

Category	Qty
Associate	1
ITU	4
Invited Participants	8
Member States	57
Recognized Operating Agencies	17
Regional and other International Organizations	4
Scientific or Industrial Organizations	23
Academia	6
Total	120



Attendance

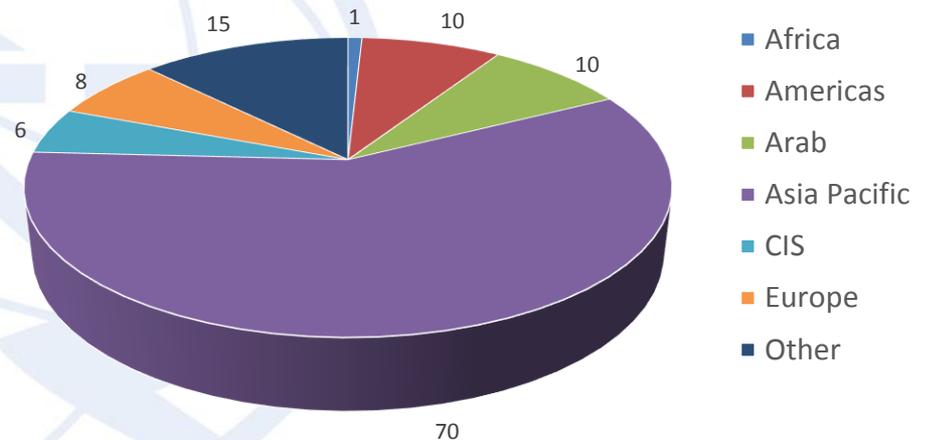
- Remote participation

Region	Total
Americas	5
Asia Pacific	9
CIS	1
Europe	5
TOTAL	20

- Participants by Region

No	Region	Qty
1	Africa	1
2	Americas	10
3	Arab	10
4	Asia Pacific	70
5	CIS	6
6	Europe	8
7	Other	15
	TOTAL	120

Participants by region



Results of the 2nd Meeting

- Consented Recommendations: 2 at this meeting
- Recommendations Decided/Determined/Approved: none at this meeting
- Other texts approved: (Total: 8) 8 supplements
- New work items: 13
- List of pre-approved interim meetings: see [TD 274 Rev.1.](#)
- Final text of the 15 outgoing Liaison Statements: see [LS database.](#)
- Resignations: Mr Omar Elloumi (Alcatel-Lucent), as Q3/20 Rapporteur due to other commitments with oneM2M.
- New Appointments:
 - Mr Harinderpal Singh Grewal (Infocommunications Development Authority of Singapore (IDA)) as Co-Vice-chairman WP2/20
 - Ms Shane He (Nokia Solutions & Networks) as Q3/20 Rapporteur
 - Mr Leng Chye Leck (IDA) as Associate Rapporteur Q4/20
 - Mr Song Luo (CATR, China) as Associate Rapporteur Q3/20
 - Ms Xueqin Jia (China Unicom) from Associate Rapporteur Q5/20 to Associate Rapporteur Q2/20
- Interim Physical Rapporteur Meetings are scheduled for **2-13 May 2016** in Geneva
- Next JCA IoT and SC&C Meeting: **6 May 2016** in Geneva
- **Next ITU-T SG20 meeting: 25 July to 5 August 2016** in Geneva

2 Consented Recommendations

- Recommendation "**ITU-T Y. IoT-DM-reqts (ITU-T Y.4702)**" which is entitled "Common requirements and capabilities of device management in the Internet of Things", was proposed by Q2/20 for Consent by SG20 at this meeting. The draft new Recommendation was consented on 26 January 2016 and is provided in [TD 207 Rev.2](#).
- Recommendation "**Y.IoT-SPSN (ITU-T Y4553)**" which is entitled "Requirements of smartphone as sink node for IoT applications and services", was proposed by Q4/20 for Consent by SG20 at this meeting. The draft new Recommendation was consented on 26 January 2016 and is provided in [TD 226 Rev.1](#).

Supplements Approved

Supplements	TD
Supp.IMSC, Draft Supplement to ITU-T Y.4000 series: Smart Sustainable Cities - Integrated management, for agreement	TD 248 Rev.1
Supp.framework-arch-SC, Draft Supplement to ITU-T Y.4000 series: Smart Sustainable Cities - Setting the framework for an ICT architecture, for agreement	TD 247 Rev.1
Supp.MSinfra, Draft Supplement to ITU-T Y.4000 series: Smart Sustainable Cities - Multi-service infrastructure in new-development areas, for agreement	TD 246 Rev.1
Supp.Overview-SC-infra, Draft Supplement to ITU-T Y.4000 series: Smart Sustainable Cities - Overview of smart sustainable cities infrastructure, for agreement	TD 245 Rev.1
Supp.SC-buildings, Draft Supplement to ITU-T Y.4000 series: Smart Sustainable Cities - Intelligent sustainable buildings, for agreement	TD 244 Rev.1
Supp.SC-guide, Draft Supplement to ITU-T Y.4000 series: Smart sustainable cities - a guide for city leaders, for agreement	TD 243 Rev.1
Supp.SC-plan, Draft Supplement to ITU-T Y.4000 series, Smart Sustainable Cities - Master plan, for agreement	TD 242 Rev.1
Supp.SC-stakeholders, Draft Supplement to ITU-T Y.4000 series, Smart Sustainable Cities - Setting the stage for stakeholders' engagement, for agreement	TD 241 Rev.1

Results (Q1/20)

- **Five new work items:**
 - Y.HEP, Framework for Home Environment Profiles and Levels of IoT Systems
 - Y.SCC-Terms, Vocabulary for Smart Cities and Communities
 - Y.IPv6RefModel, Reference Model of IPv6 Addressing Plan for Internet of Things Deployment by Smart Cities, Public Administrations and Companies
 - Y.IPv6-suite, Reference Model of Protocol Suite for IPv6 Interoperable Internet of Things Deployments
 - IPv6-IoT Supp, IPv6 Potential for the Internet of Things and Smart Cities
 - 1 input Liaison statement and 1 output liaison statement.
- Report of Q1/20: [TD 223 Rev.2](#)

Results (Q2/20)

- Held 25 sessions within which all 37 Contributions received were reviewed along with 11 TDs
- The Draft Recommendation Y.IoT-DM-Reqts (Common requirements and capabilities of device management in IoT) was proposed for Consent.
- Three new Work Items were proposed for approval and 1 outgoing Liaison Statement was prepared.
- Q2/20 agreed also to revise Recommendation Y.2067 “Common requirements and capabilities of a gateway for Internet of things applications”.
- Q2/20 Living list: [TD 293 Rev.1](#)
- Q2/20 Report: [TD 292](#)

Results (Q3/20)

- Held 7 sessions within which all 10 Contributions received were reviewed along with 3 incoming liaison statements.
- Progress on 5 draft Recommendations:
 - Updated draft recommendation Y.IoT-cdn ([TD 208](#)), Framework of constrained device networking in the IoT environments;
 - Updated draft recommendation Y.IoT-son ([TD 225](#)), Framework of Self-organization networking in the IoT environments;
 - Updated draft recommendation Y.NGNe-IoT-arch ([TD 270](#)), Architecture of the Internet of Things based on NGNe;
 - Updated draft recommendation Y.IoT-DE-RA ([TD 249 Rev.1](#)), Reference architecture for IoT device capability exposure;
 - Updated draft recommendation Y.IoT-SCE ([TD 250 Rev.1](#)), Reference architecture for IoT network service capability exposure.
- Q3/20 Living List: [TD 284](#)
- Q3/20 Report: [TD 271 Rev.3](#)

Results (Q4/20)

- Held 14 sessions within which all 21 Contributions received were reviewed along with incoming liaison statements.
- Q4/20 produced 16 output documents including revised texts of on-going and initial draft Recommendations, living list and the meeting report.
- Main results:
 - Finalized draft Recommendation "Y.IoT-SPSN" ([TD 226 Rev.1](#)) for consent by SG20, Requirements of smartphone as sink node for IoT applications and services.
 - Updated draft recommendation Y.IoT-ASF ([TD 231](#)), Adaptive software framework for IoT devices;
 - Updated draft recommendation Y.del-fw ([TD 232](#)), Framework of delegation service for the IoT devices;
 - Updated draft recommendation Y.IoT-EH-PFE ([TD 233](#)), Performance evaluation framework of e-health systems in the IoT;
 - Split the Y.IoT.TPS.rfw work item scope and create a new work item ITU-T Y.TPS-afw ([TD 268 Rev.1](#)) with an initial draft recommendation "Architectural framework for providing transportation safety service" for SG20 approval;
 - Agreed to submit new WI for SG20 approval and developed initial draft recommendation ITU-T Y.IoT-IoD-PT ([TD 255 Rev.1](#)), "Identity of IoT devices based on secure procedures and ensures privacy and trust of IoT systems".
- Q4/20 Report: [TD 277 Rev.2](#).
- Q4/20 Living list: [TD 276](#).

Results (Q5/20)

- Discussed seven Contributions, four TDs from the previous meeting and one Liaison Statement.
- Decided to develop one new draft Recommendation:
 - Y.smartports, Requirements of smart management of supply services in Smart Ports [TD 282 Rev.1](#).
- Four Draft Supplements were submitted for Agreement.
- Q5/20 produced nine output documents including the meeting report, one initial text of a new draft Recommendation and two revised texts of ongoing draft Recommendations.
- Q5/20 Report: [TD 286 Rev.1](#).

Results Q6/20

- Two new work items were approved based on contributions made by Spain:
 - Platforms interoperability for smart cities and communities
 - Telecommunication systems as infrastructure in smart cities and communities.
- Four supplements were submitted for Agreement.
- There was also a joint Q5/20 and Q6/20 meeting that reviewed seven contributions made by Spain. One incoming liaison statement was reviewed, and one outgoing liaison statement was prepared.
- Q6/20 Report: [TD 275 Rev.2](#).
- Q5/20 and Q6/20 joint report: [TD 283 Rev.2](#).



FORUM ON INTERNET OF THINGS IN Smart Sustainable Cities: A New Age of Smarter Living

Singapore, 18 January 2016

Guest of Honour: Dr. Yaacob Ibrahim, Minister for Communications and Information.

Hosted by:

iDA INFOCOMM
DEVELOPMENT
AUTHORITY OF
SINGAPORE

Organizer:



This forum discussed the role that Internet of Things (IoT) in dealing with development challenges and creating a smart world that facilitates sustainable economic development along with a high quality of life within smart sustainable cities

- Programme & Presentations: <http://www.itu.int/en/ITU-T/Workshops-and-Seminars/iot/20160118/Pages/programme.aspx>



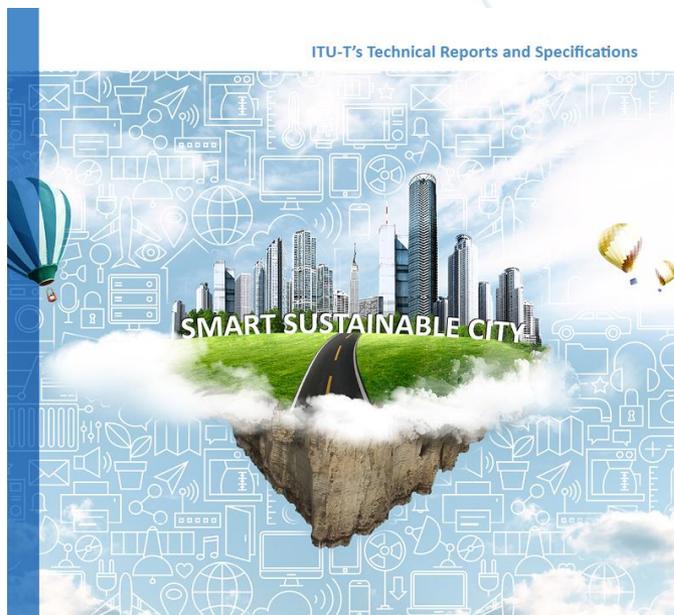
New - ITU-T, Smart Sustainable Cities website



Smart Sustainable Cities

<http://www.itu.int/en/ITU-T/ssc/Pages/default.aspx>

Flipbook: Shaping smarter and more sustainable cities: Striving for sustainable development goals



Shaping smarter and
more sustainable cities

*Striving for sustainable
development goals*



This compendium thoughtfully put together by ITU provides a comprehensive overview on Smart Sustainable Cities and includes the 21 Technical Reports and Specifications developed by the Focus Group on Smart Sustainable Cities (FG-SSC).

For policy makers and practitioners, this compendium will be an invaluable resource as it contains a guide and master plan for ready reference and a handy list of key performance indicators for Smart Sustainable City transitions.

Access here:

http://wftp3.itu.int/pub/epub_shared/TSB/ITU-T-Tech-Report-Specs/2016/en/flipviewerxpress.html

World Smart City Forum



Save the date!

13 July 2016

Singapore



Please register at:

ITU - tickets with code: worldsmartcityITU2016

<https://worldsmartcityforum.eventbrite.co.uk/?access=worldsmartcityITU2016>

THANK YOU

- ITU-T SG20 “IoT and its applications including smart cities and communities (SC&C)”
itu.int/go/tsg20
- Contact: tsb20@itu.int

