Annex - I

A.13 justification for proposed draft new ITU-T Y.xyz "Technical report on use of Low Bit Rate Data Application through Satellite for connecting IoT devices, to be used in remote area"

Question:	Q/3	**Proposed new ITU-T technical report**		
Reference and title:	ITU-T Y.xyz "Technical report on use of Low Bit Rate Data Application through Satellite for connecting IoT devices, to be used in remote area"			
Base text:	SG20 –Cnnn		**Timing:**	2024-08
Editor(s):	Shri Bharat Bhatia, IAFI, New Delhi, India E-mail: bharat.bhatia@itu-apt.org Shri Misha Bajpai, IAFI, New Delhi, India E-mail: mishabajpai@yahoo.co.in		**Approval process:**	Agreement

Purpose and scope: IAFI through this contribution, highlights the challenges, to use IoT devices in remote/hilly area due to non-availability or very limited availability of the terrestrial networks like 5G or Wi-Fi in remote/hilly area and satellite technologies can play vital role in connecting IoT devices, to be placed in such area, as provides ubiquitous coverage and IAFI urges Members in the region to support creation of this new work item and for actively contributing in developing technical report.

Scope of the study is limited to the IoT devices to be installed in far remote/hilly area, where terrestrial networks are non-availability or with very limited availability and IoT devices can be connected using best available satellite like GEO/MEO/LEO in that area, with low-speed data connectivity.

Summary:

Satellite connectivity is the best available connectivity option for providing internet in the un-served and under-served areas of the world, it can provide ubiquitous coverage. So, any IoT device can be connected to the internet, regardless of their location, a very important aspect for many applications. The IoT ecosystem needs ubiquitous, resilient and seamless connectivity for the devices to run efficiently. Now, after deployment of hundreds of LEO satellites, satellite internet connectivity has been revolutionized, reducing latency to as low as 50 milliseconds, making it suitable even for real-time applications. IoT Low-Bit-Rate applications require low power, low cost and small size terminals, so task of data transfer in remote area can be effectively perform using satellite.

The best satellite frequency band for connecting IoT devices can be chosen depending on the specific requirements of the application and the regulatory requirements of the region.

IAFI proposes a new work item for a technical report documenting the challenges, use cases and related

economic and cost advantages of Low Bit Rate Data Application through Satellite for connecting IoT devices, to be used in remote area in Asia Oceania Region.

ITU references:

1. WTSA (01-09, March, 2022) Resolution no. 98 - Enhancing the standardization of Internet of Things and smart cities and communities for global development - invites the ITU Telecommunication Standardization Sector membership to submit contributions and continue participating actively in the work of Study Group 20 and in the studies on IoT and SC&C being conducted by ITU-T.
2. ITU Y-4212 (11/2021) - Requirements and capabilities of network connectivity management in the Internet of things.
3. ITU Y-4208 (01/2020) - Internet of things requirements for support of edge computing.
4. ITU-T Y-4702 (03/2016) - Common requirements and capabilities of device management in the Internet of things.
5. ITU Y-400/Y-2069 (07/2012) - Terms and definitions for the Internet of things.
6. ITU Y-4000/Y-2060 (06/2012) - Overview of the Internet of things.

Liaisons with other study groups or with other standards bodies:

- SG-1 of ITU-D
- SG-4 of ITU-R
- SG-13 of ITU-R
- IoT Forum
- Open Connectivity Foundation (OCF)
- AllSeen Alliance
- Thread Group
- Zigbee Alliance
- IEEE

Supporting members that are committing to contributing actively to the work item:

ITU Member States, Sector Members, Associates, Academia-TBD