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ITU-APT Foundation of India (IAFI)[1]

PROPOSAL ON ESTABLISHING A TASK GROUP FOR RADIO LOCAL AREA NETWORKS (RLANs)

1. Introduction

Wi-Fi and other Wireless Local area technologies are extensively used in wireless local area networks to provide high speed data communications. Remote working and work from home due to Covid-19 pandemic in the recent years has led to an unprecedented increase in use of Wi-Fi during the last two years. A new global study commissioned by the Wi-Fi Alliance predicts that the global economic value of Wi-Fi will rise to a staggering $4.9 Trillion by 2025. This economic value includes contributions from the use of Wi-Fi by consumers, businesses, service providers, and more.

In order to meet the severe shortage of Wi-Fi spectrum, many countries around the world have opened new Wi-Fi bands. The two main new Wi-Fi bands are Wi-Fi 6e in 6 GHz band and WiGig in 60 GHz (V Band). New innovations in Wi-Fi technologies are key to Asia's manufacturing, innovation, and exports, not just for telecom but the Industrial sector as a whole. Internationally, more than 35 countries have delicensed 6 GHz frequency band. These include the United States, UK, Canada, Korea, Brazil, UAE, Saudi Arabia, and the countries in the EU. The rationale for delicensing has been to enhance benefits to citizens while reaping the benefits of economic growth in their economies.

It is therefore critical that AWG should create various reports and recommendations on this important wireless technology.

2. Need for establishing a new Task Group for RLANs

RLAN is a highly cost-effective wireless access technology, thanks to the simple network architecture, ease of installation, user control over the network and economy of scale. The technology plays a vital role in providing affordable and advanced connectivity to all users. Studies on RLAN use cases and deployment in AWG could help APT members to develop their national broadband plans with emphasis on unserved and underserved areas.

Policies, regulations and measures for spectrum are critical resources for delivering connectivity. WAS/RLAN technology operates on license-exempted spectrum with dynamic spectrum access method like Automated Frequency Coordination (AFC). Studies on spectrum access and coordination will help APT members in developing policy and regulation to ensure spectrum

[1] ITU-APT Foundation of India (IAFI) is an Affiliate member of APT. Details of IAFI can be seen at itu-apt.org

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resources is accessed effectively and efficiently amongst license-exempted user while protecting the incumbents.

The latest RLAN technology raises challenges on both digital policy and technical that could stand in the way of realizing its potential benefits. Many items, including new spectrum access and incumbents' protection, seamless transition between licensed and unlicensed networks, the scalability and robustness of network and etc., should be carefully studied and provided proper guidelines for the regulators and industries to enable timely and efficient deployment of WAS/RLAN.

3. Proposal

In view of the above, it is proposed that AWG create a new task Group to study RLANS spectrum, technology, applications, and the regulatory landscape. With the recent restructuring of AWG, Working Group on Terrestrial Services (WG TER), is the right place to carry out these studies and other activities relating to RLAN.

A draft work plan for the first report on RLANS in 6GHz is attached as Annex 1. Further micro workplans will be developed as needed by the TG

Summary of the Proposal

- **Proposed name of the Task Group: Task Group on** Radio Local Access Networks;
- **Proposed Working Group location for the Task Group:** WG-TER;
- **Abbreviation:** TG-RLAN
- **Proposed Terms of Reference:**

- To develop various AWG output documents:
  (i) To share information on status of spectrum usage and national regulatory experiences in Asia-Pacific region and emerging RLAN technologies
  (ii) To perform studies of technical and operational matters for RLAN.
  (iii) To study the system description, architecture, functionality, and service requirements of RLAN.
  (iv) To study the operational scenarios and deployment of RLAN in Asia pacific Region
  (v) To study the coexistence, spectrum sharing and frequency coordination between RLAN and other radio services to ensure protection of the existing / incumbent services.

Possible deliverables: APT Recommendations/Reports and other documentation

Enclosed: Draft Work Plan

DRAFT Work Plan for a new APT Report on Radio Local Area Networks (RLAN) in the 6 GHz band (5925-7025 MHz)

Title	New APT Report on **Radio Local Area Networks (RLAN)** in the 6 GHz band
Document Type	APT/AWG Report
Group/Chair	WG-TER, Mr. Takahiko Yamazaki (J)
TG/SWG	[TG RLAN]
Editor(s)	Mr. Bharat Bhatia (IAFI)
Scope	This Report provides an overview of technology developments and implementation aspects of **Radio Local Area Networks (RLAN)** in the 6 GHz band (**5925 – 7025 MHz)** The report will cover an overview of: - Global trends in **Radio Local Area Networks (RLAN)** technologies in 6 GHz band - On-going industry developments and technical improvements in **Radio Local Area Networks (RLAN)** - Use cases and experiences of implementation of **Radio Local Area Networks (RLAN)** in the 6GHz band - Information on RLAN rules adopted by APT and non-APT administrations
Purpose	To provide APT Members with relevant information and guidance on **Radio Local Area Networks (RLAN)** technologies in 6 GHz band as mentioned in the scope.
Related Document	• ECC Decision (20) 01 On the harmonised use of the frequency band 5945-6425 MHz for Wireless Access Systems including Radio Local Area Networks (WAS/RLAN) • https://docs.fcc.gov/public/attachments/FCC-20-51A1.pdf
Related Organization	IEEE
Timelines	**2022** AWG-30 (September 22) - Consider received contribution, - Develop a work plan and an outline of the report **2023** AWG-31 (TBD) - Consider received contributions, - Send LS to external organizations, if appropriate - Develop a working document and update work plan **2023/24** AWG-32 (TBD 2023) - Consider received contributions, - Update the working document and finalize it as an APT/AWG Report