Coexistence in 950MHz-958MHz in Japan

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Objective

- **This contribution introduces coexistence issues following the IEEE 802.11ah Call for Proposals [1]**

- **This contribution introduces coexistence issues in the 950MHz-958MHz frequency band as specified in ARIB STD-T96 version 1.0 (English translation) [2] and ARIB STD-T96 version 1.1 (Japanese version) [3]**

- **This revision replies to the questions which have been discussed in DCN#1420r1 [5].**

About IEEE 802.11ah

- **Scope:**

  This amendment defines an OFDM PHY operating in the license-exempt bands below 1 GHz, e.g., 868-868.6 MHz (Europe), 950-958 MHz (Japan), 314-316 MHz, 430-434 MHz, 470-510 MHz, and 779-787 MHz (China), 917-923.5 MHz (Korea) and 902-928 MHz (USA) and enhancements to the IEEE 802.11 MAC to support this PHY, and provides mechanisms that enable coexistence with other systems in the bands including IEEE 802.15.4 and IEEE P802.15.4g. [1]

ARIB STD-T96 [2]

- **This standard is established principally for ‘950MHz-band telemeter, telecontrol and data transmission radio equipment for specified low power radio station’.**

- **Radio equipment regulated in this standard uses the frequency of 950MHz-956MHz.**

ARIB STD-T96 [2]

Operation of the standard system:

(a) Short range communication system

PAN

IEEE 802.15.4

Zigbee(TM)

(b) Active tag system

ARIB STD-T96 [2], [3]

Item	Parameters and functionality (ARIB STD-T96 Version 1.0)	Parameters and functionality (ARIB STD-T96 Version 1.1)
Frequency band	950MHz-956MHz	950.8MHz-957.6MHz
Output power	1mW 10mW (only for 954MHz-955MHz)	1mW 10mW (only for 954MHz-957.6MHz)
Contents	Data signal	Data signal
Antenna gain	3dB or less (absolute gain)	3dB or less (absolute gain)
Modulation system	Not specified	Not specified

Questions

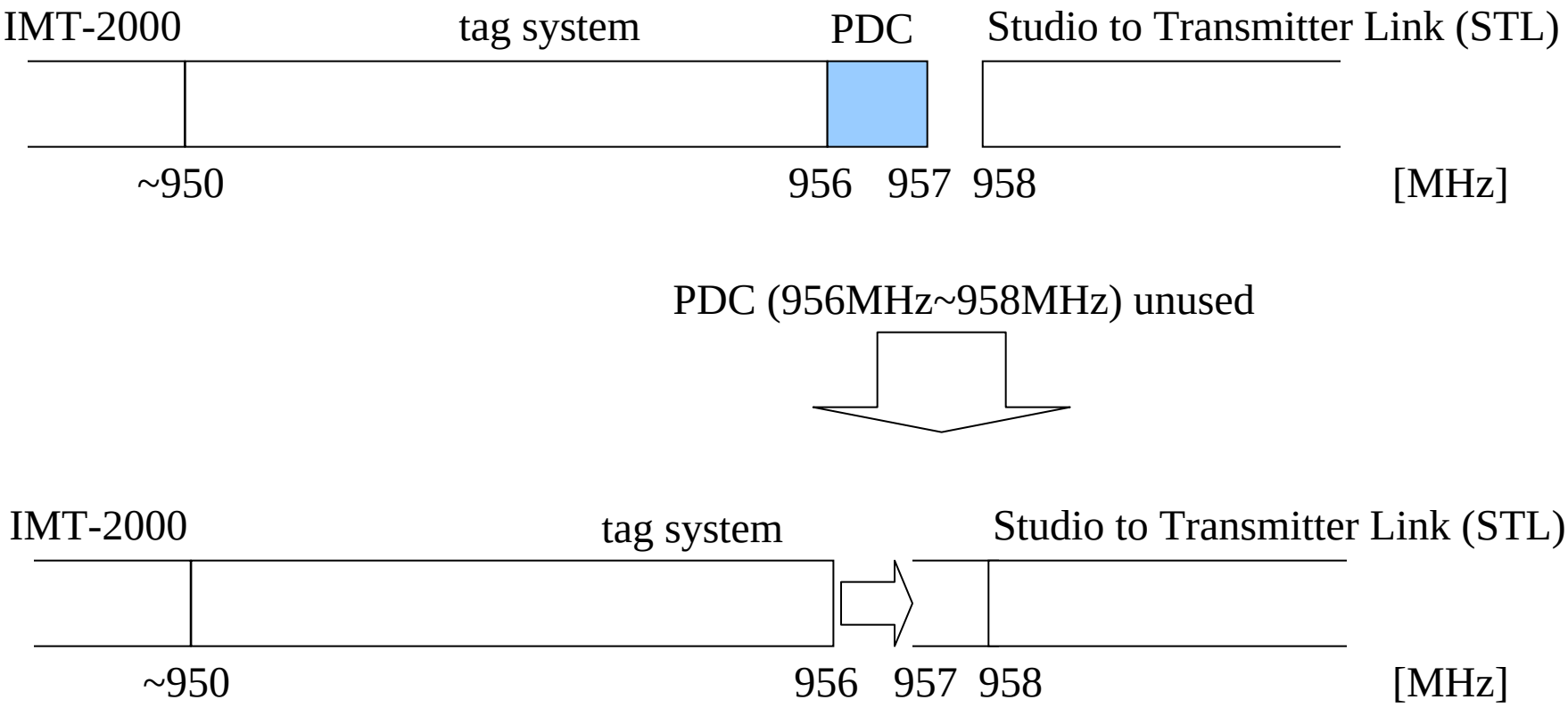
Q1: There is a difference in the frequency spectrum between ARIB STD-T96 version 1.0 and ARIB STD-T96 version 1.1. Why?

A1: Unused spectrum which was formerly assigned to Personal Digital Cellular (PDC) has been added to the tag system spectrum.

Q2: Is there any use of OFDM systems in the ARIB STD-T96?

A2: ARIB STD-T96 does not specify any modulation system. ARIB STD-T96 [2] lists PAN, IEEE 802.15.4, Zigbee(TM) and active tag systems as operation systems.

Personal Digital Cellular (PDC)



References

[1] IEEE P802.11 Wireless LANs, IEEE 802.11ah Call for proposals, IEEE 802.11-10/1373r0, 11.11.2010

[2] Association of Radio Industries and Businesses (ARIB), "950MHz-Band Telemeter, Telecontrol and Data Transmission Radio Equipment for Specified Low Power Radio Station", English translation, ARIB Standard, ARIP STD-T96 Version 1.0, version 1.0, June 26, 2008. Published by Association of Radio Industries and Businesses, Tokyo, Japan

[3] Association of Radio Industries and Businesses (ARIB), "950MHz-Band Telemeter, Telecontrol and Data Transmission Radio Equipment for Specified Low Power Radio Station", Japanese version (no English translation available at this moment), ARIB Standard, ARIB STD-T96, Version 1.1 , 15.7.2010

[4] Association of Radio Industries and Businesses (ARIB), "950MHz-Band Telemeter, Telecontrol and Data Transmission Radio Equipment for Specified Low Power Radio Station", Japanese version, ARIB Standard, ARIP STD-T96 Version 1.0, version 1.0, June 6, 2008. Published by Association of Radio Industries and Businesses, Tokyo, Japan

[5] IEEE P802.11 Wireless LANs, Coexistence in 950MHz-958MHz in Japan, IEEE 802.11-10/1420r1