

Project	IEEE 802.20 Working Group on Mobile Broadband Wireless Access < http://grouper.ieee.org/groups/802/20/ >	
Title	Liaison Request from ARIB BWA Subcommittee	
Date Submitted	2007-05-14	
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Re:	Liaison with IEEE 802.20 WG	
Abstract	ARIB BWA subcommittee requests liaison with IEEE 802.20 WG. An ARIB overview and the recent Japan BWA development are also presented.	
Purpose	To establish liaison between IEEE 802.20WG and ARIB BWA Subcommittee to introduce IEEE 802.20 standard into Japan.	
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Patent Policy	The contributor is familiar with IEEE patent policy, as outlined in Section 6.3 of the IEEE-SA Standards Board Operations Manual < http://standards.ieee.org/guides/opman/sect6.html#6.3 > and in <i>Understanding Patent Issues During IEEE Standards Development</i> < http://standards.ieee.org/board/pat/guide.html >.	

Overview of ARIB

- ◆ Full Name: Association of Radio Industries and Businesses
- ◆ Establishment:
 - A public service corporation in the private sector chartered by the Minister of Posts and Telecommunications on May 15, 1995.
 - Established by merger of two organizations:
 - ◆ Research & Development Center for Radio Systems (RCR)
 - ◆ Broadcasting Technology Association (BTA)
 - These two organizations were both established in 1985.
- ◆ Members:
 - 273 members (as of September 30, 2006), including telecom operators, broadcasters, manufacturers, etc.

Objectives and Key Roles of ARIB

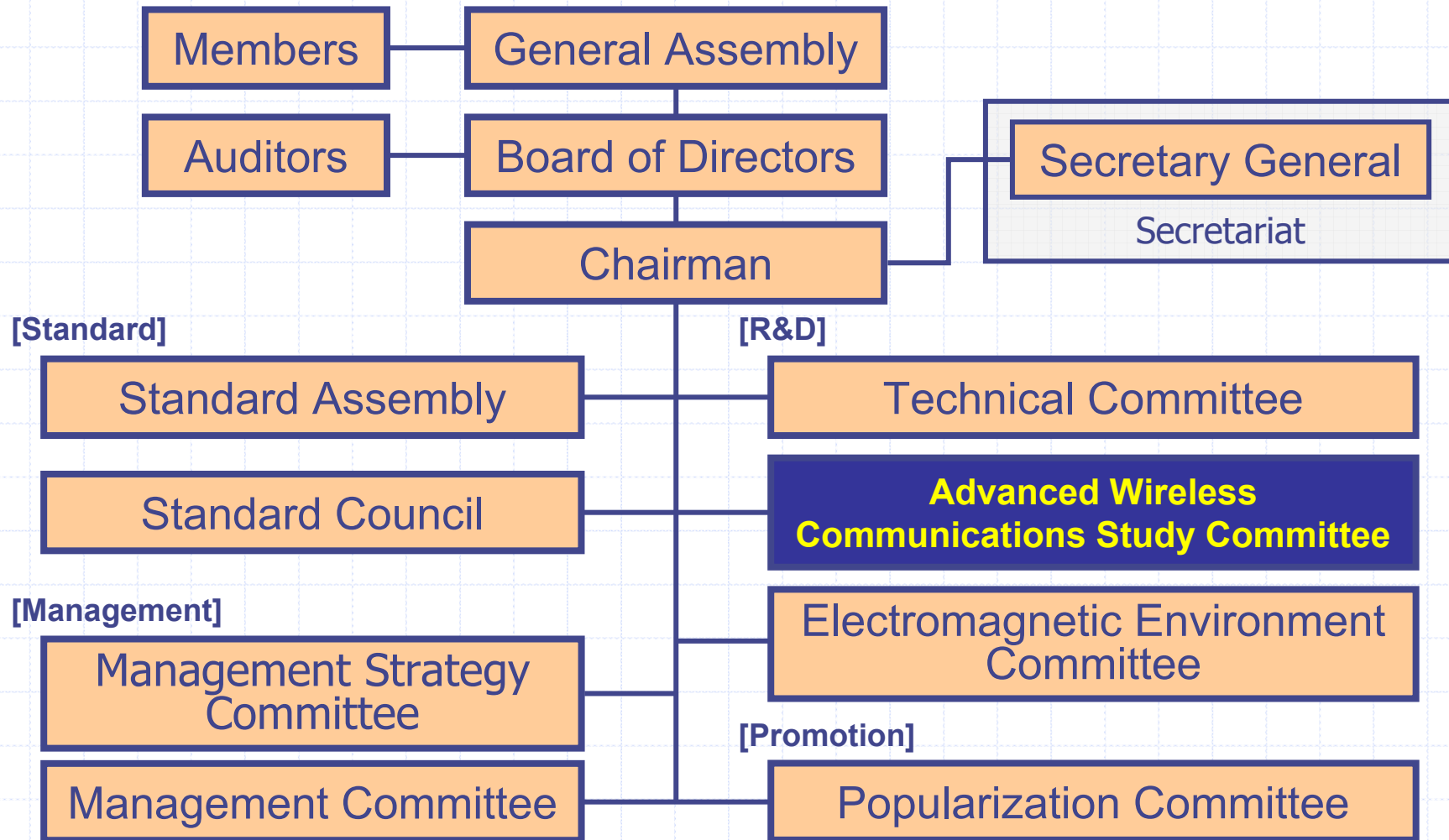
◆ Objectives: Promotion of public welfare by means of:

- Conducting investigation, R&D and consultation of utilization of radio waves
- Promoting realization and dissemination of new radio systems

◆ Key Roles:

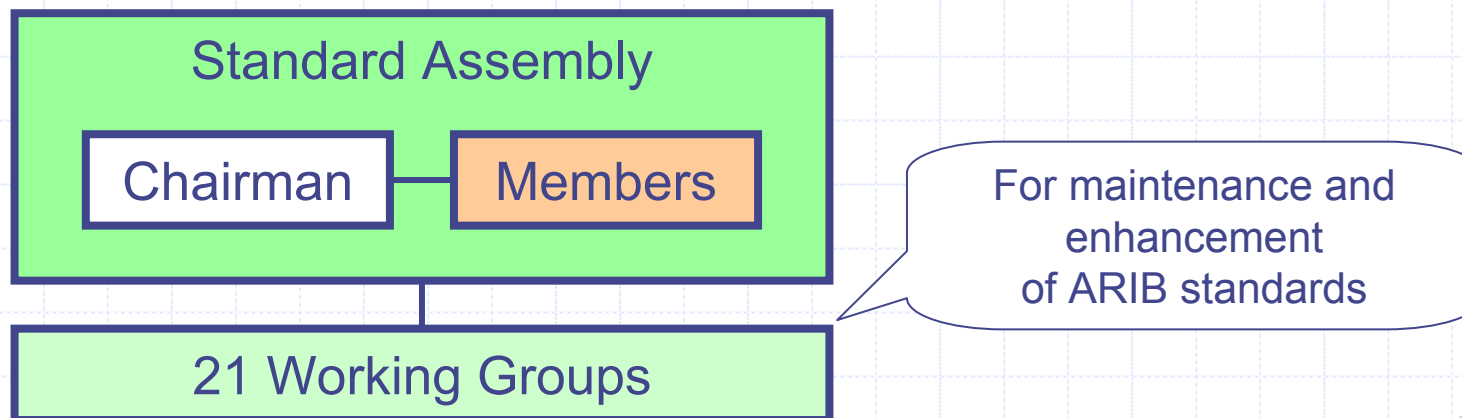
- Investigation and R&D on utilization of radio waves
- Establishment of voluntary technical standards for radio systems
- Consultation, dissemination, collection and publication of information on utilization of radio waves
- Frequency change support for terrestrial digital TV broadcasting

Organization of ARIB



ARIB Standard Assembly

- ◆ Establishment: 1995, reorganized from the RCR Standard Assembly and the BTA
- ◆ Members: 206, including 20 foreign affiliated members, as of March 1, 2006
 - Open to any entity, organization and person
 - No limitation on nationality
 - Independent from ARIB membership
- ◆ Organization:



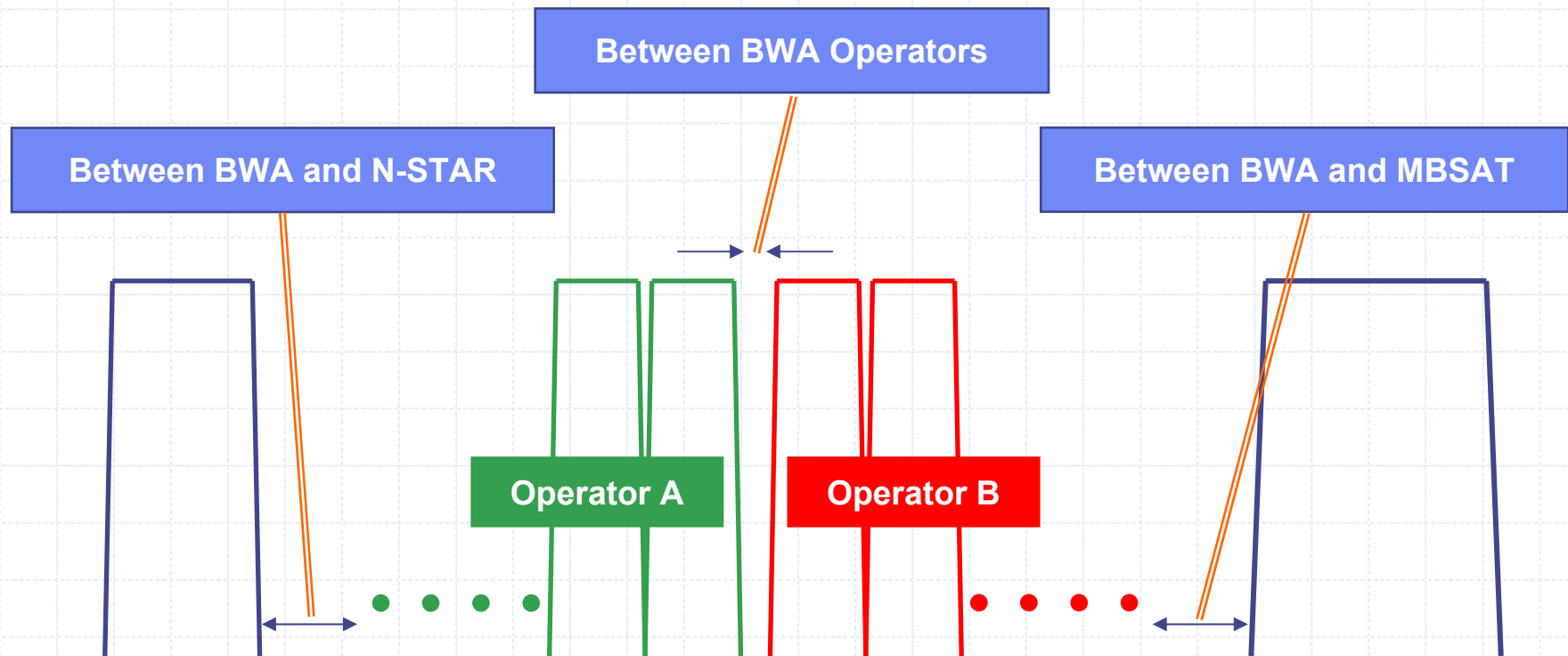
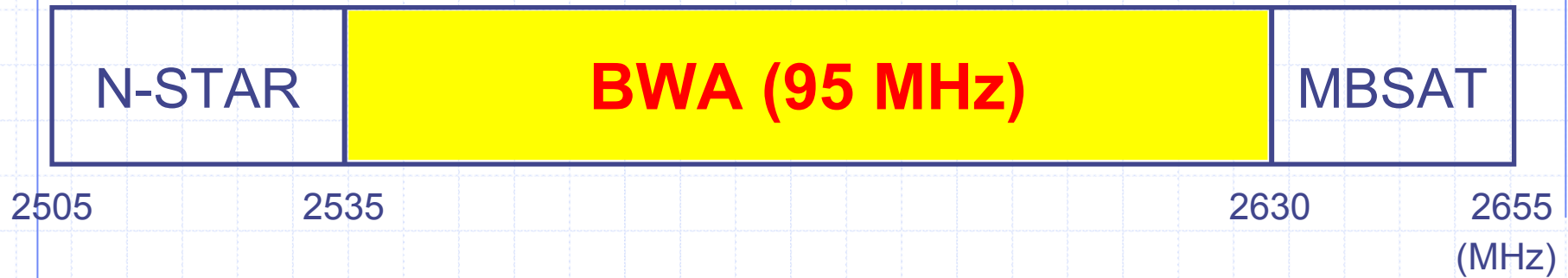
ARIB BWA Subcommittee

- ◆ BWA Subcommittee was established in April 2006 under the Advanced Wireless Communications Study Committee in ARIB
- ◆ Scope of Work
 - To study technologies on BWA systems and standardize their technical specifications as ARIB Standards
 - For the time being, target systems are BWA systems to be operated in the 2.5 GHz band, whose technical requirements were approved in the Information and Communications Council in December 2006
- ◆ Technologies under Study
 - Mobile WiMAX (based on IEEE 802.16-2004 Standard amended by 802.16e-2005)
 - **MBTDD-Wideband (based on IEEE 802.20 Draft)**
 - **MBTDD-625k MC (based on IEEE 802.20 Draft)**
 - Next-Generation PHS (based on PHS MoU Group Draft)

Japan MIC 2.5 GHz BWA Committee

- ◆ MIC (Ministry of Internal Affairs and Communications) established the 2.5 GHz BWA Committee in the Information and Communications Council in February 2006 to define technical requirements for 2.5 GHz BWA systems
- ◆ The Information and Communications Council approved in December 2006 the report prepared by the 2.5 GHz BWA Committee, and MIC is now preparing relevant regulations and a licensing policy
- ◆ There are four systems described in the committee report:
 - Mobile WiMAX, 802.20 (MBTDD-Wideband, MBTDD-625k MC), and Next-Generation PHS

2.5 GHz Regulatory Issue: Guard Band (GB)



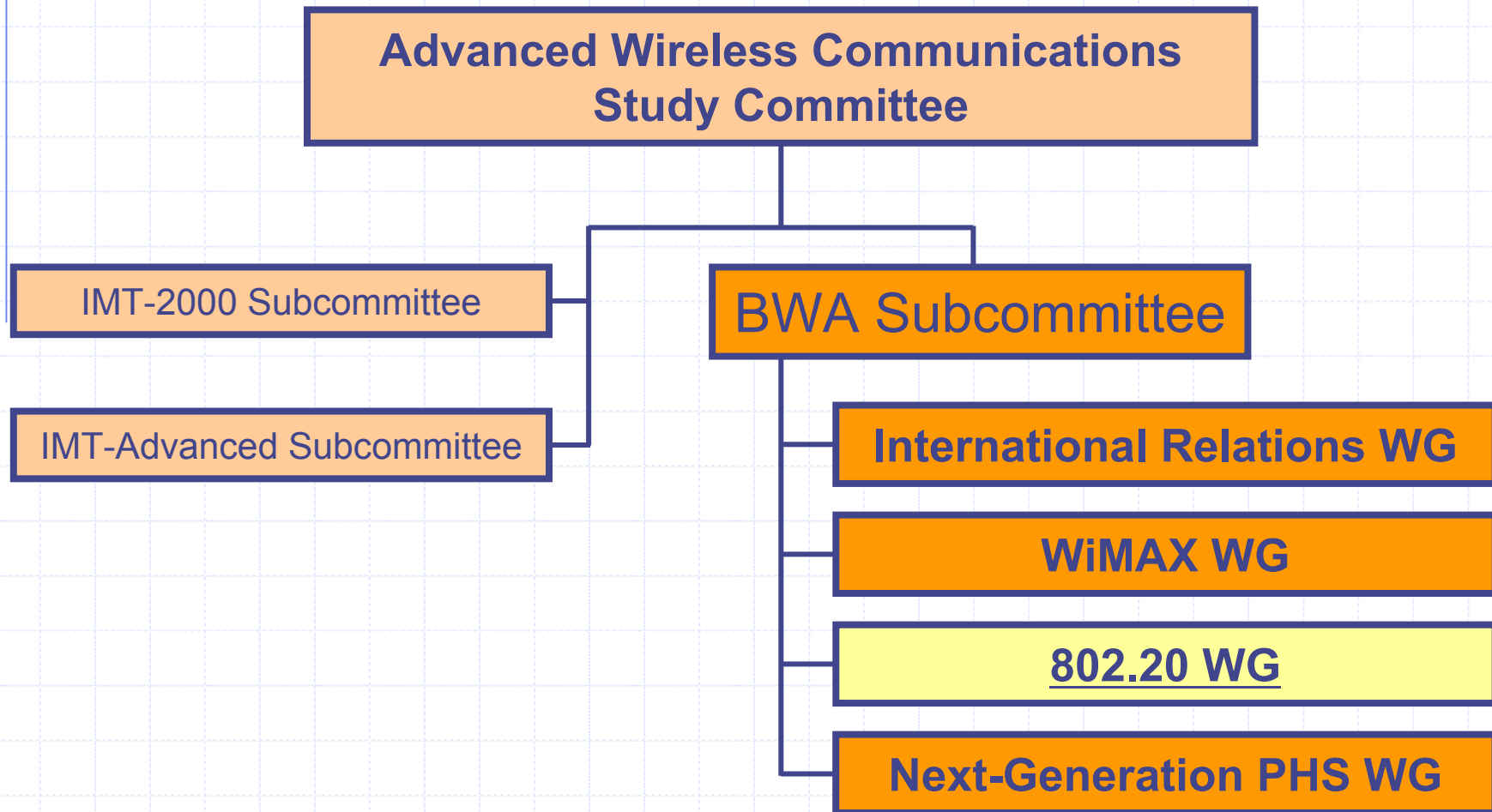
Japan's 2.5 GHz Band GB Requirements

- ◆ 20 MHz GB between N-STAR and BWA (including 10 MHz usage-limited band)
- ◆ 5 MHz GB between MBSAT and BWA
- ◆ 1 MHz GB between synchronous BWA operators (e.g. between synchronous WiMAX operators)
- ◆ 5 MHz GB with mandatory site-engineering between asynchronous BWA operators (i.e. between 802.20 and other BWAs)

Timeline for 2.5 GHz BWA System Operation

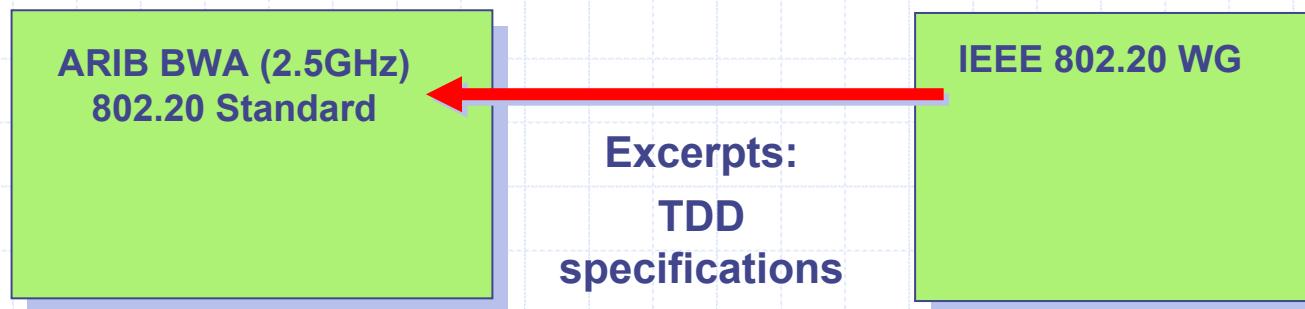
- ◆ Q1 2007 – MIC to issue a draft licensing policy including spectrum allocation plan (to be finalized in Q2)
- ◆ Q2 2007 – MIC to issue “call for operators” (beauty contest basis)
- ◆ Q3 2007 – MIC to license spectrum to operators

Organization of BWA Subcommittee



Liaison Request to IEEE 802.20 WG (1)

- ◆ The ARIB BWA Subcommittee is developing technical standards (ARIB standards) for 2.5 GHz BWA services in Japan
- ◆ It is intended that such ARIB standards should be compatible with internationally recognized standards as much extent as possible.
- ◆ A new ARIB BWA standard will refer to the TDD specifications in the 802.20 specification.
- ◆ It will excerpt the contents necessary from the 802.20 specification.



Liaison Request to IEEE 802.20 WG (2)

- ◆ ARIB BWA Subcommittee believes that it is quite beneficial for both the subcommittee and IEEE 802.20 Working Group to work closely each other in the field of mutual interests to perform internationally-coordinated standards development
- ◆ The subcommittee requests an establishment of liaison relationship with IEEE 802.20 Working Group in order to exchange information, views and opinions of both sides to achieve higher commonality between the standards of each party and future enhancements to them as well

Procedures Necessary for Liaison

- ◆ Confirmation by the vote of the 802.20WG
 - P&P Section 2.3.9
- ◆ ARIB Liaison: Kazuhito Ishida (QUALCOMM JAPAN)
- ◆ Further discussions on MoU
 - EC
 - Other agreements as needed

- ◆ The ARIB BWA subcommittee would like to discuss further and wishes to conclude liaison with IEEE 802.20 WG sooner.