

Liaison Report from ARIB BWA Subcommittee

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Purpose:

Presentation on liaison request from ARIB BWA Subcommittee to IEEE 802.16 WG

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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

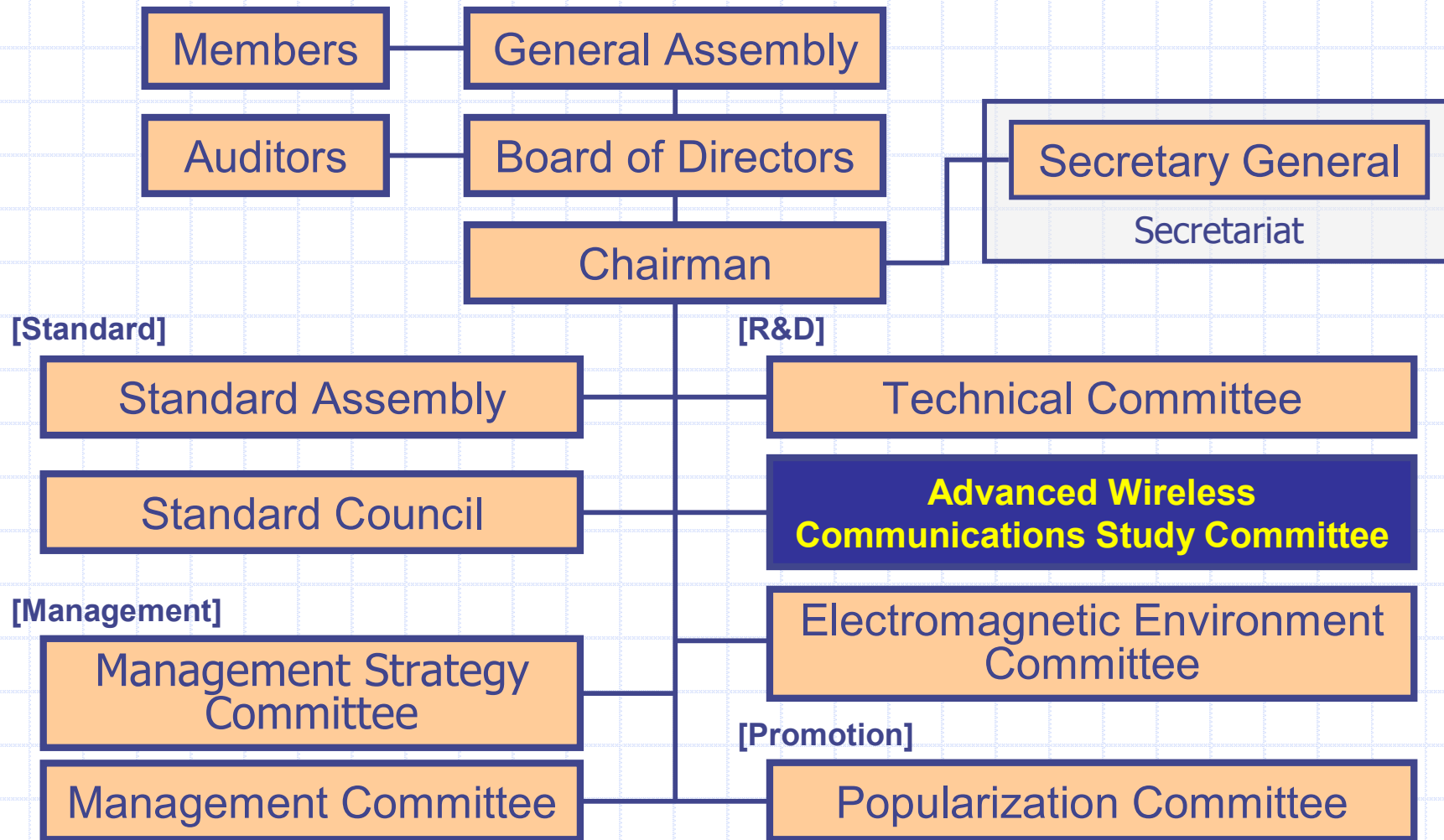
◆ Objectives: Promotion of public welfare by means of:

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

◆ Key Roles:

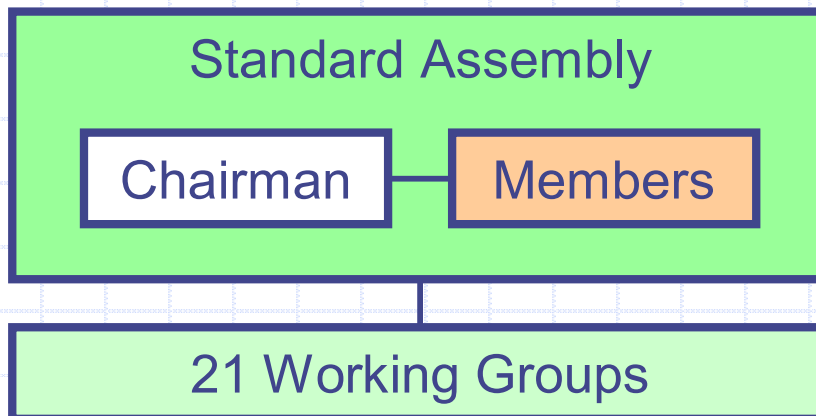
- Investigation and R&D on utilization of radio waves
- Establishment of voluntary technical standards for radio systems
- Consultation, dissemination, collection and publication of information on utilization of radio waves
- Frequency change support for terrestrial digital TV broadcasting

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:



For maintenance and enhancement of ARIB standards

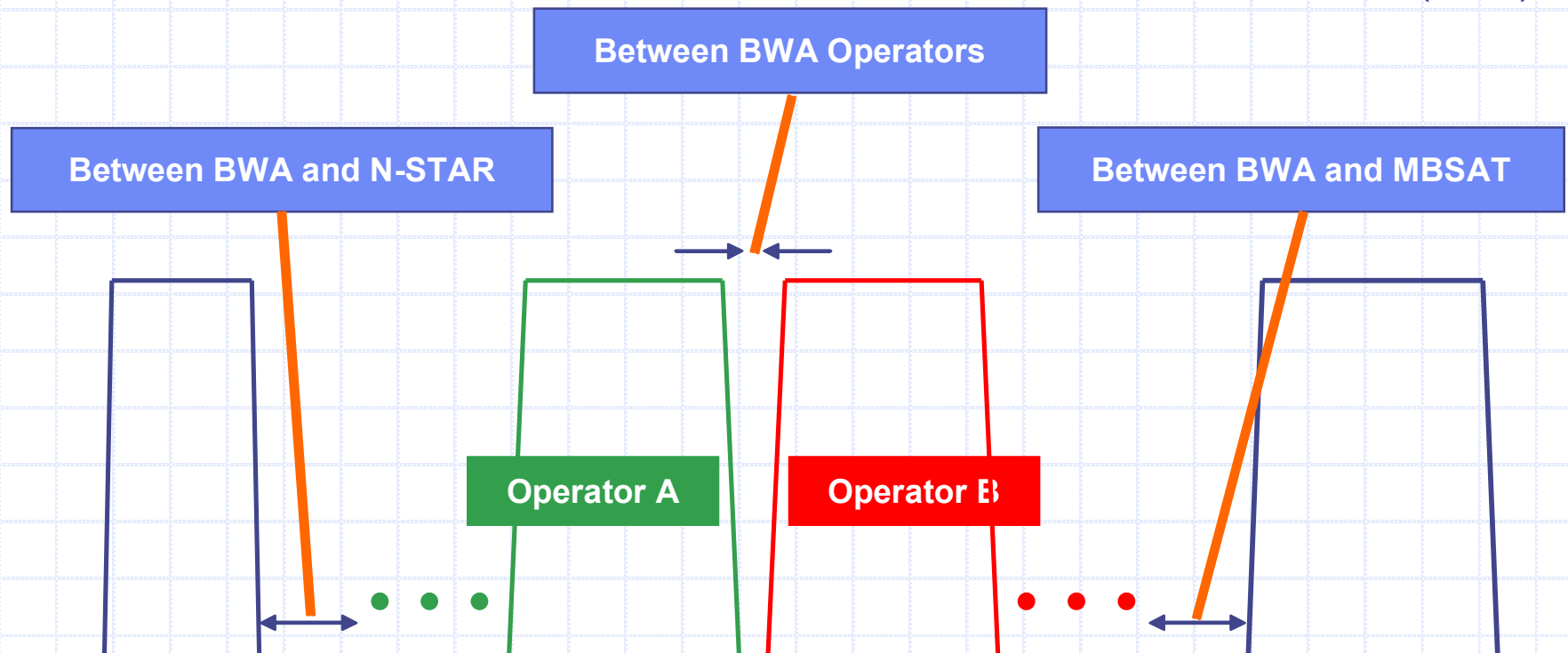
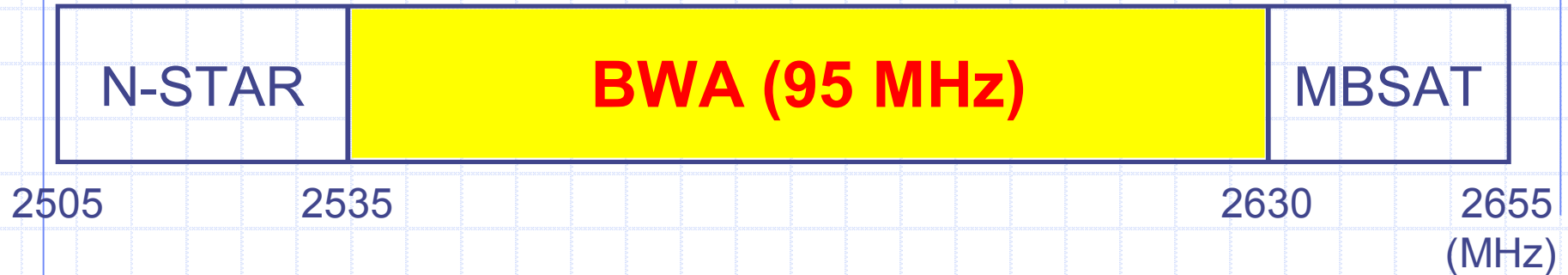
BWA Subcommittee

- ◆ BWA Subcommittee was established in April 2006 under 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)

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)



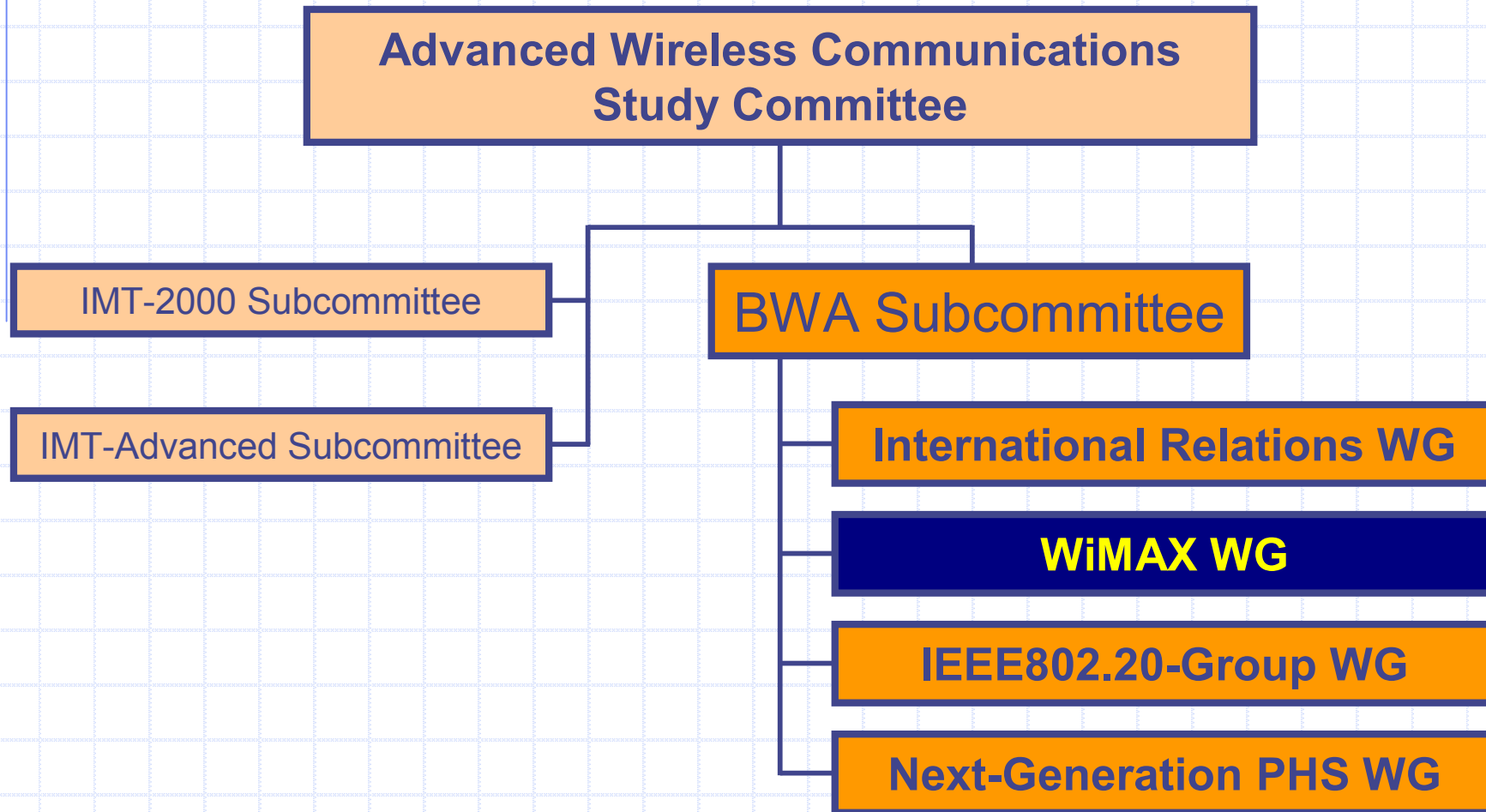
2.5 GHz GB Requirements

- ◆ 20 MHz GB between N-STAR and BWA (including 10 MHz operation-restricted 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 (e.g. between WiMAX and other BWAs)

Timeline for 2.5 GHz BWA System Operation

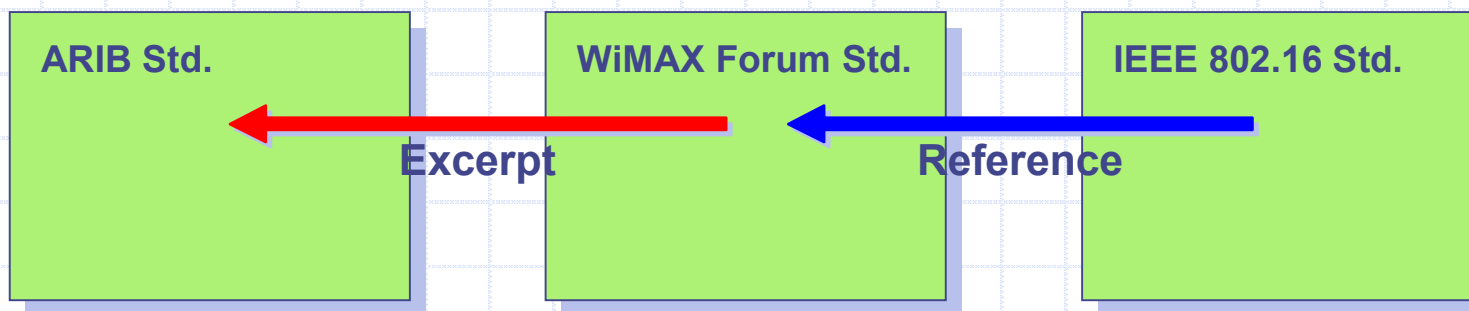
- ◆ Q2 2007 – MIC to issue a licensing policy including spectrum allocation plan
- ◆ Q2 2007 – MIC to issue “call for operators” (beauty contest basis)
- ◆ Q3 2007 – MIC to license spectrum to operators
- ◆ 2H 2008 – Licensed operators to launch services

Organization of BWA Subcommittee



Liaison Request to IEEE 802.16 WG

- ◆ 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 as much compatible with internationally recognized standards as possible
- ◆ As for Mobile WiMAX, targeted international standard which an ARIB standard will refer to is considered as the System Profile defined in WiMAX Forum. The ARIB standard may excerpt majority of contents from it
- ◆ The Mobile WiMAX System Profile refers to IEEE 802.16 standards
- ◆ Consequently, ARIB standards will “indirectly” refer to IEEE 802.16 standards



Liaison Request to IEEE 802.16 WG ... Contd.

- ◆ BWA Subcommittee believes that it is quite beneficial for both BWA Subcommittee and IEEE 802.16 Working Group to work closely each other in the field of mutual interests to perform internationally-coordinated standards development
- ◆ BWA Subcommittee requests an establishment of liaison relationship with IEEE 802.16 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