Advanced Wireless Communications Study Committee and Study on 2020 and Beyond in ARIB

Hendrik Berndt
On behalf of ARIB, Japan
22-24 October, 2013

ARIB

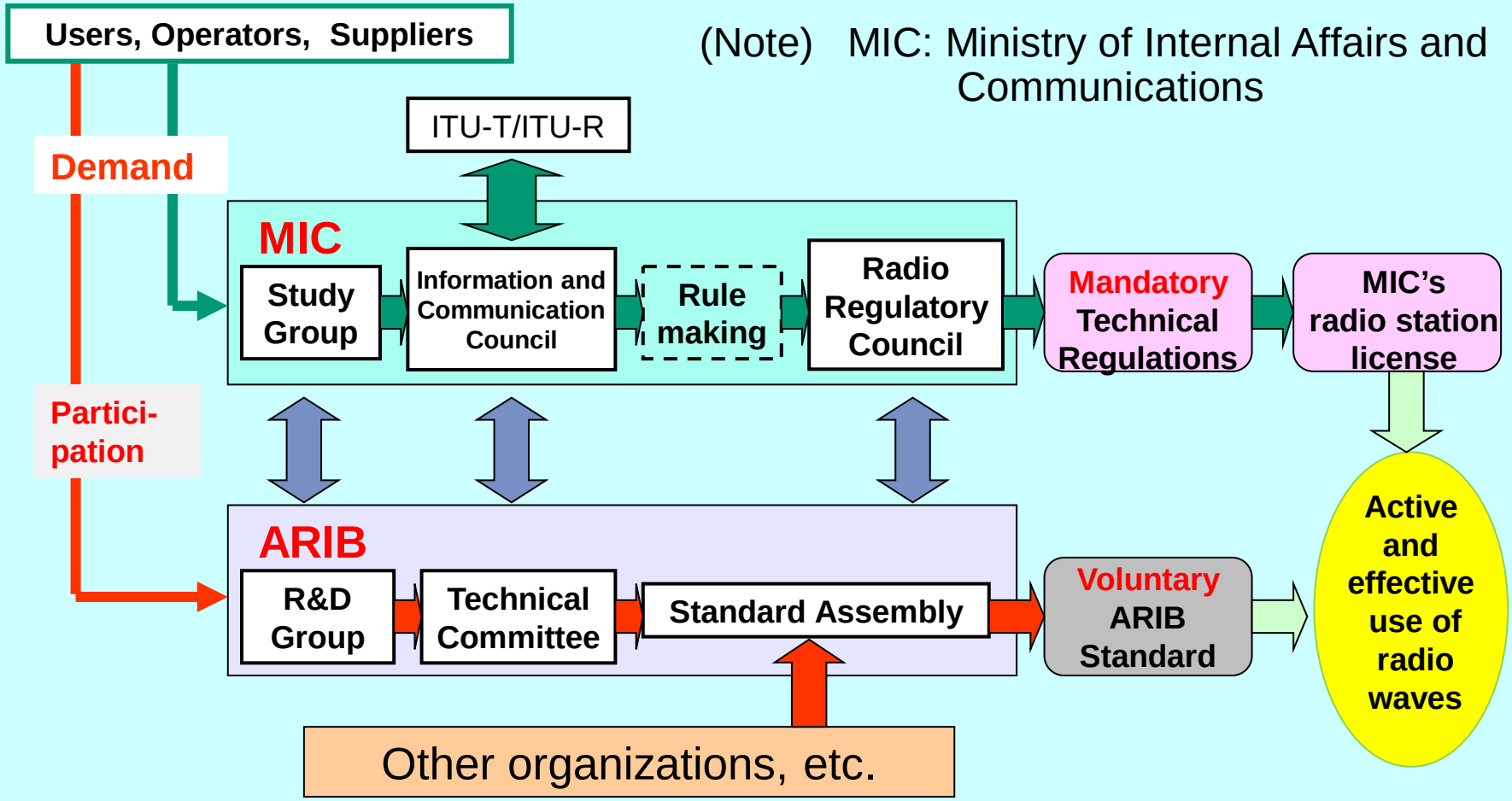
Outline of ARIB

- **Objectives:**
  - To establish technical standards for radio systems as “ARIB Standards” in the field of telecommunication and broadcasting in Japan

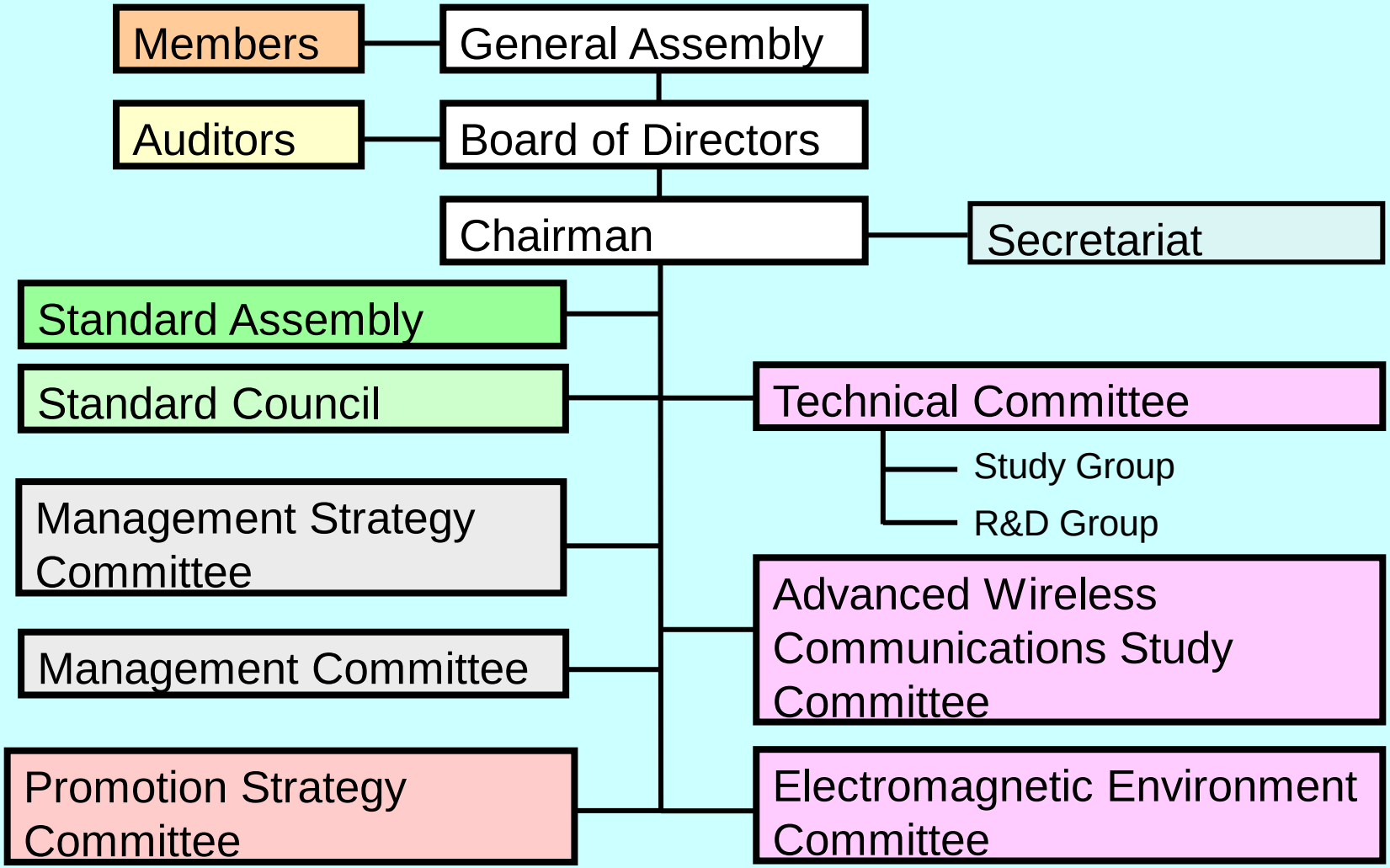
- **Establishment:**
  - 15 May 1995 as a public service corporation by merging two organizations RCR & BTA
    - RCR: Research & Development Center for Radio Systems
    - BTA: Broadcasting Technology Association

- **Members**:
  - 214 members (as of 1st October 2013), including telecom operators, broadcasters, manufacturers, etc.

Standardization Flow in Japan

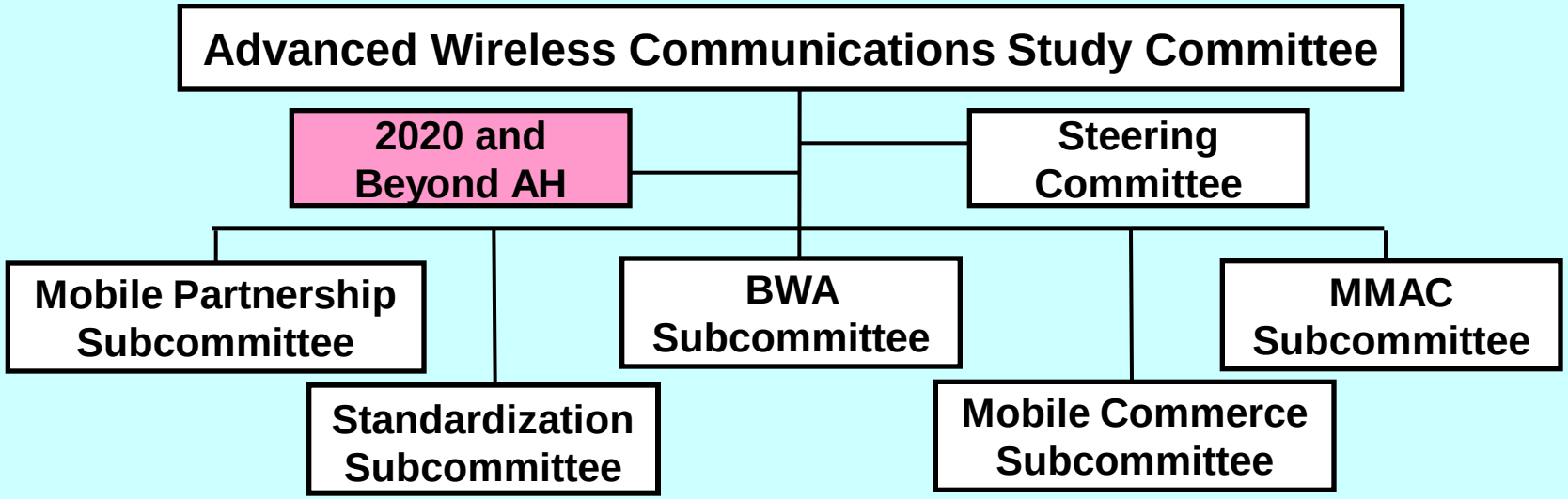


Organization of ARIB



Advanced Wireless Communications Study Committee (ADWICS)

- **Responsibilities**
  - To conduct technical studies on advanced wireless communication systems (including IMT) in cooperation with other related international/domestic organizations
  - To contribute to international standardization activities
- **Structure of the Study Committee**



Scope of Subcommittees

- Mobile Partnership Subcommittee
  - Operate 3GPPs and oneM2M as one of Organizational Partners
  - Prepare contribution to 3GPPs on national regulatory requirements aspects and downstream the specification developed by 3GPPs for ARIB Standards
- Standardization Subcommittee
  - Conduct technical studies on IMT and future IMT issues
  - Promote its standardization through contributions to ITU-R and other activities
- BWA Subcommittee
  - Produce national standards for WiMAX, XGP/AXGP and IEEE802.20 referring to relevant international standards
- MMAC Subcommittee
  - Produce national standards for IEEE802.11 referring to international standards and study UWB
- Mobile Commerce Subcommittee
  - Conduct technical studies on Mobile Commerce

2020 and Beyond Ad Hoc (1/3)

- **Established under ADWICS in Sep. 2013**

  (consists of 30 members as of Oct. 2013)

- **Objective**
  - To study system concept, basic functions and functional structure/ architecture of mobile communication system in 2020 and beyond (2020B)
- **Task**
  - Study technologies used for the system globally in 2020B
  - Study system concept and fundamental architecture of 2020B
  - Study services and applications predicted in 2020B
  - Cooperation and coordination with other international/domestic organizations
- **Deliverables**
  - White paper, Contributions and presentations to ITU and other fora, etc.
- **Two WG under the 2020 and Beyond Ad Hoc**

  → see next slides

2020 and Beyond Ad Hoc (2/3)

- **Service and System Concept WG**

- Scope: Study services and system concept of mobile communication system (not limited to IMT) in 2020 and beyond

- Task: To clarify social roles, key capabilities and key functions of the system in 2020B, study items such as follows
  - Use Cases
  - Requirements
  - Capabilities and new diagram (like the Van Diagram)
  - Spectrum aspect (the high level view)
  - Traffic forecast (the trend and view)

2020 and Beyond Ad Hoc (3/3)

- **System Architecture & Radio Access Technology WG**

- Scope: Study trends of technologies to be used in 2020B, by taking into account study results of the Service and System Concept WG

- Task:
  - Study technology trends below:
    * Radio access technology candidates
    * Major network technology candidates
  - Study basic functions and functional structure/ architecture of 2020B