

ARIB: Activities on ITS Standards

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Kyoto, Japan

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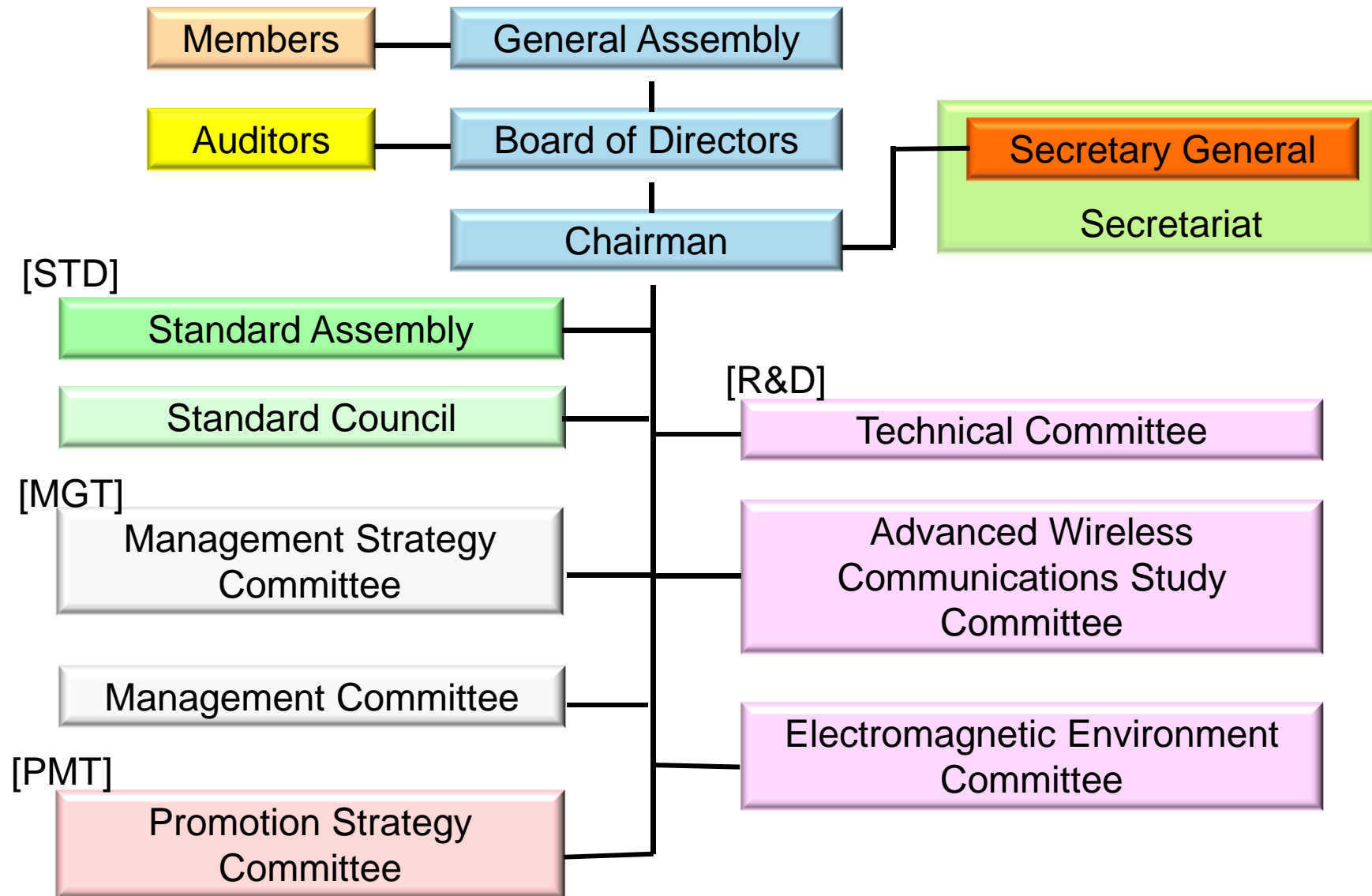
1. ARIB
2. ITS Info-Communications Forum, Japan
3. 700 MHz band ITS System
4. ITS promotion organization in Japan

Reference

Association of Radio Industries and Businesses

- **Establishment:** merger of two organizations in 1995:
 - Research & Development **C**enter for **R**adio Systems (**RCR**)
 - **B**roadcasting **T**echnology **A**ssociation (**BTA**)
- **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
- **Major Activities:**
 - investigation and R&D on utilization of radio waves
 - establishment of voluntary technical standards for radio systems
 - frequency change support for terrestrial digital TV broadcasting
 - consultation, dissemination, collection and publication of information on utilization of radio waves
 - frequency expiration support for re-allotment of radio spectrum

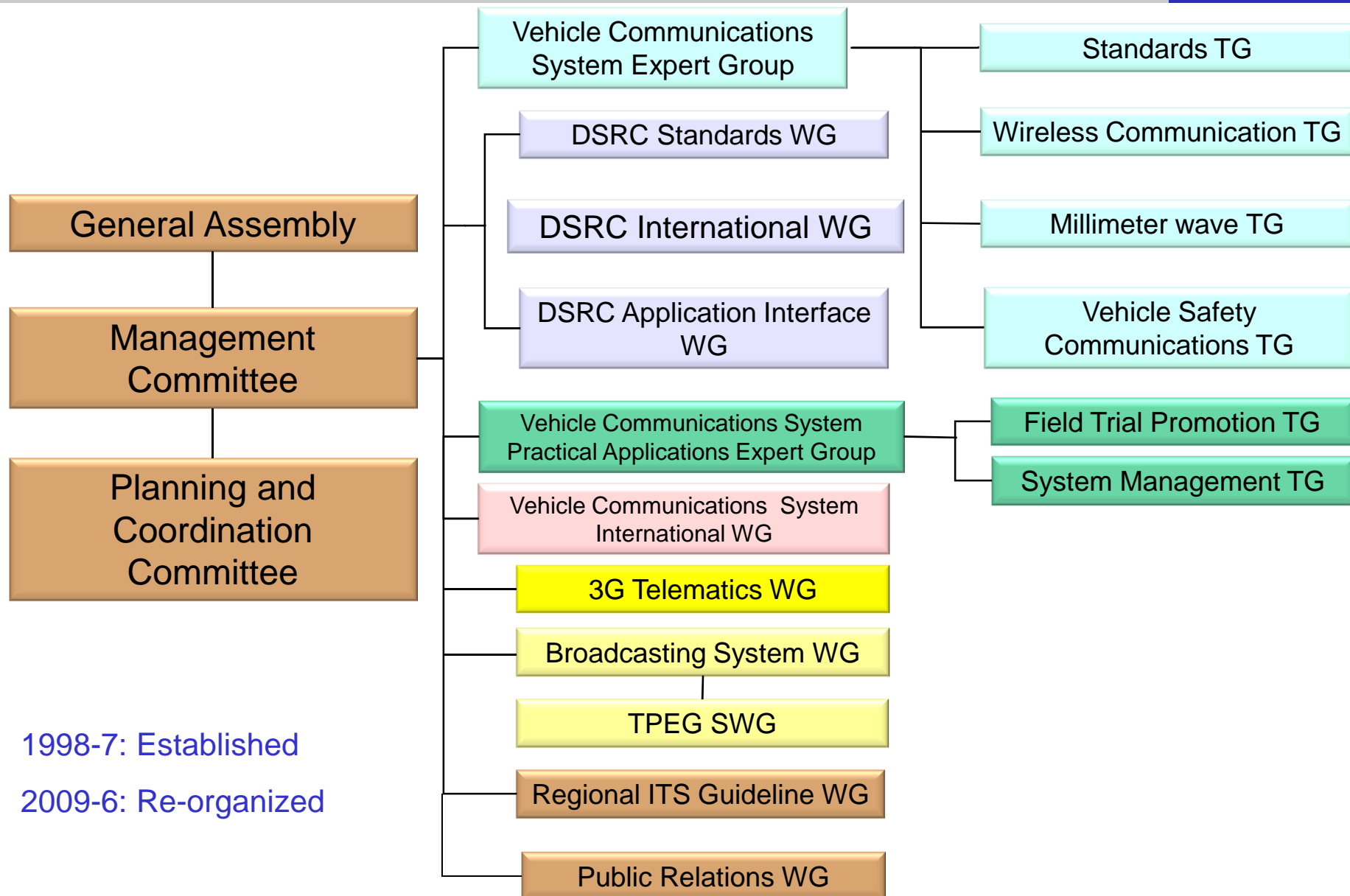
1-2. ARIB: Organization



ITS Info-communications Forum, Japan

- Establishment: 1998
- Objectives:
 - To promote the R&D and standardization of communications technologies that are the keys to the successful introduction of ITS.
 - To provide a forum that encourages and promotes the exchange of R&D and standardization information regarding ITS among related organizations.
 - To promote the smooth development of all aspects of ITS.
- Major Activities:
 - Conduct investigations and studies regarding R&D and standardization of communications systems for ITS.
 - Liaise and coordinate with organizations related to and/or involved in the development of communications systems for ITS.
 - Increase the understanding of ITS among the general public.

2-2. ITS Forum: Organization



1998-7: Established

2009-6: Re-organized

As of August 2011

ITS Info-communications Forum, Japan

- Board of directors
 - Chairman: Hiroyuki Watanabe
Senior Technical Executive, Toyota Motor Corp.
President of ITS Japan
 - Vice-chairman: Mitsutoshi Hatori
Professor Emeritus, University of Tokyo
 - Auditor: Shunichi Toyomasu
Corporate Vice President, Nissan Motor Co., Ltd.
- Secretariat
ITS Group, ARIB

2-4. ITS Forum: Members



As of August 1, 2011

- **Full Members** : 68
Toyota, Nissan, Honda, NEC, Hitachi, Fujitsu, Mitsubishi Electric,
KDDI, NTT, NTT DoCoMo, NHK, DENSO, Zenrin, ...
- **Individual Members** : 8
Prof. Mitsutoshi Hatori, Prof. Hironao Kawashima,
Prof. Sadayuki Tsugawa , ...
- **Special Member s**: 20
Ministry of Internal Affairs and Communications,
Ministry of Economy, Trade and Industry,
Ministry of Land, Infrastructure and Transport,
National Police Agency,
Universal Traffic Management Society of Japan (UTMS)
Vehicle Information and Communication System Center (VICS)
The Telecommunication Technology Committee,
Tokyo Metropolitan Government,
Central Nippon Expressway, ITS Japan, ...

- **August 3, '11**, “*Technical Requirements for Safe Driving Support Systems at 700 MHz band*” was reported to the Minister of Internal Affairs and Communications by the Chairman of Information and Communications Council, Japan.
- Radio Regulatory Council will allocate a center frequency for ITS at 700 MHz band.
- ARIB Standard of ITS at 700MHz band will also be completed by the end of this year.
- All the technical studies (like propagation, interference, etc.) have been completed.

Feasibility test guideline for Safe Driving Support Systems in 700MHz Band (ITS FORUM RC-006)

- **Frequency:** 700 MHz band (single channel)
- **Type of transmission:** broadcast
- **MAC Layer:** CSMA/CA
- **Modulation:** BPSK OFDM/QPSK OFDM/16QAM OFDM
- **Number of subcarriers:** 52
- **Maximum transmission power:** 10mW/MHz
- **Occupied bandwidth:** less than 9MHz

3-3. 79 GHz High-Resolution Radar: Up-date

- ✓ Frequency band: 79 GHz band (77 – 81 GHz)
- ✓ Status in Japan:

The study has been conducted with 79GHz High Resolution Radar WG, ITS Radiocommunications SC, Info-Communications Council. ITS Forum and radio astronomy group has been studying potential interferences from 79 GHz band radar to radio astronomy.
- ✓ APG2012-4 & 5: Proposal by Japan

"Allocation in the band 77.5-78.0 GHz to the Radiolocation Services for Short-Range High-Resolution Radar" as an proposed Agenda Item for WRC2015.
- ✓ ITU-R WG5 WP5A: Contribution by Japan and Germany toward a Recommendation.

4. ITS promotion organization in Japan

