

Activities of ARIB 2020 and Beyond Ad Hoc

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ARIB 2020 and Beyond Ad Hoc

2020 and Beyond Ad Hoc

- Established under ARIB ADWICS in Sep. 2013
- Leader: Takehiro Nakamura (NTT DOCOMO)
- 31 ARIB Members joining
- Objective
 - To study system concept, basic functions and function distribution/architecture of mobile communication system in 2020 and beyond
- Task
 - Study technologies used for system in 2020B
 - Study system concept and fundamental architecture of 2020B
 - Study services and applications offered by 2020B
 - Cooperation and coordination with other international/domestic organization
- Deliverables
 - White paper, Contribute to ITU and other fora

Market and user trends

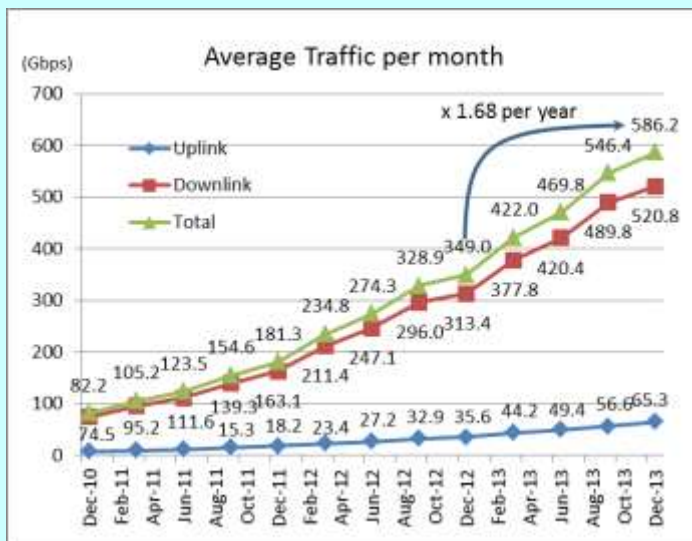
1. “Everything can be done via the Internet” and people will enjoy its benefit.

- **Always connected to the Internet without users’ being conscious**
- **Those non-connected will suffer from disadvantages**

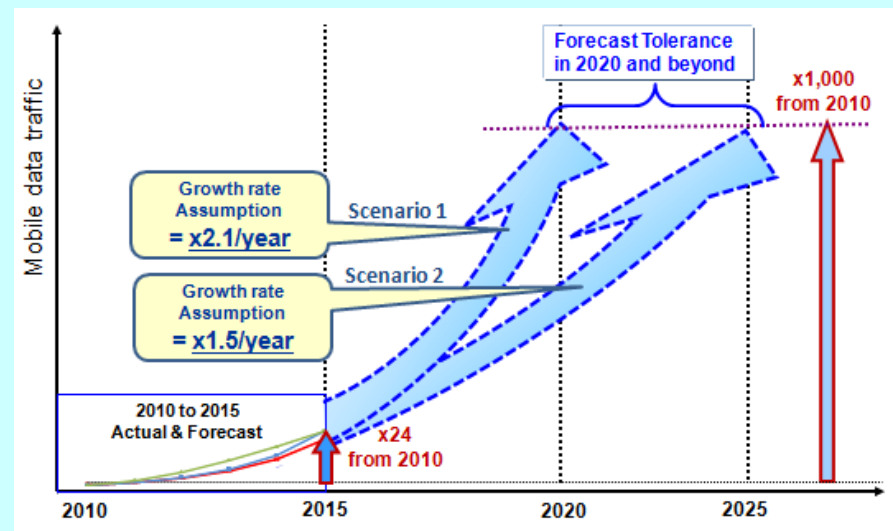
2. ICT will be used in much more cases and will be applied for vast variety of services.

Increase in the volume of mobile data traffic in Japan

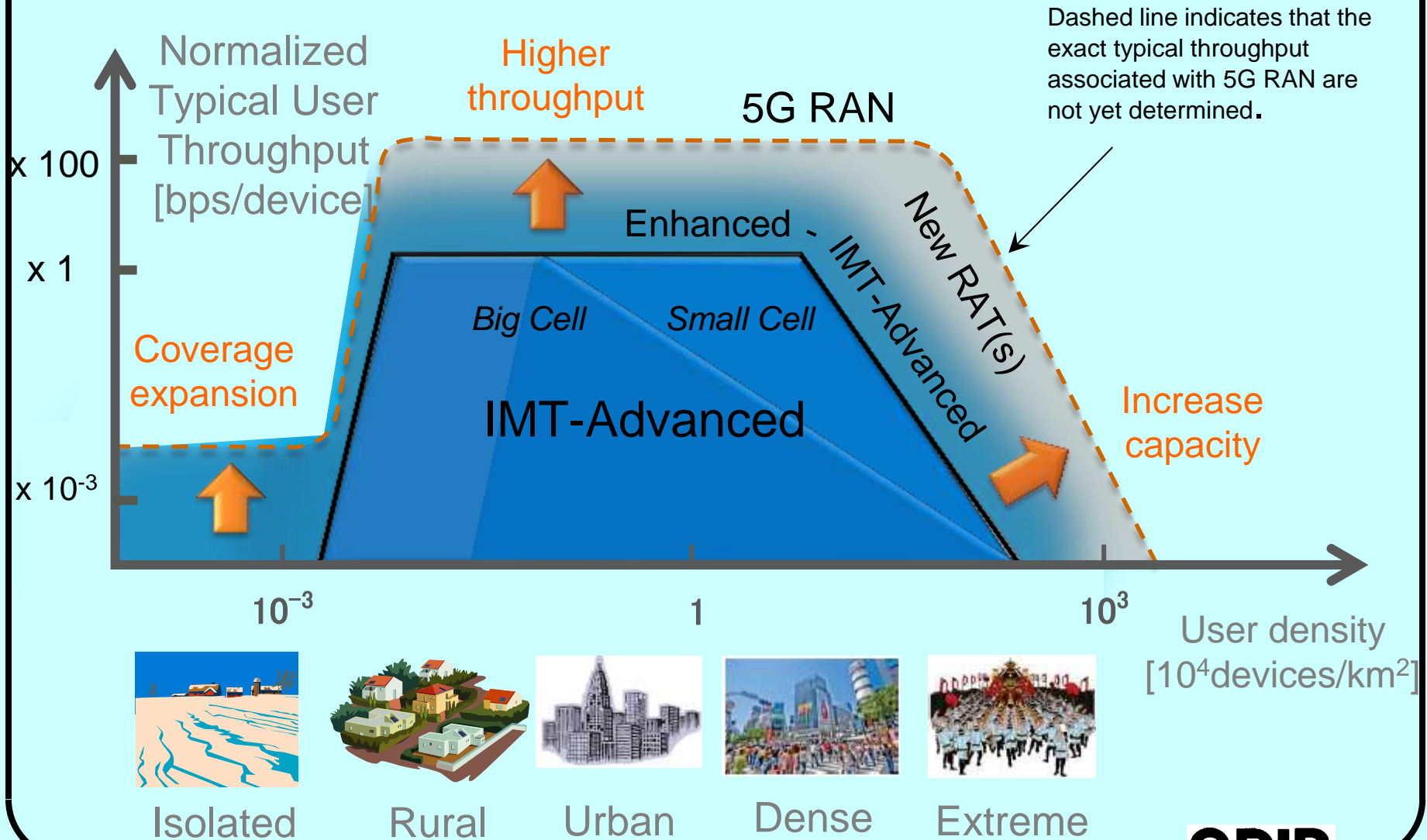
- Mobile traffic growth rate in the past 3 years was around 1.7 per year as a whole
- Assuming the data traffic growth rate of 2.1 - 1.5 times, The 1,000-fold traffic from 2010 will be reached in a timeframe between 2020 and 2025



Ministry of Internal Affairs and Communications, Japan, "Mobile communication traffic in Japan," Data base of ICT statistics, Dec. 2013.

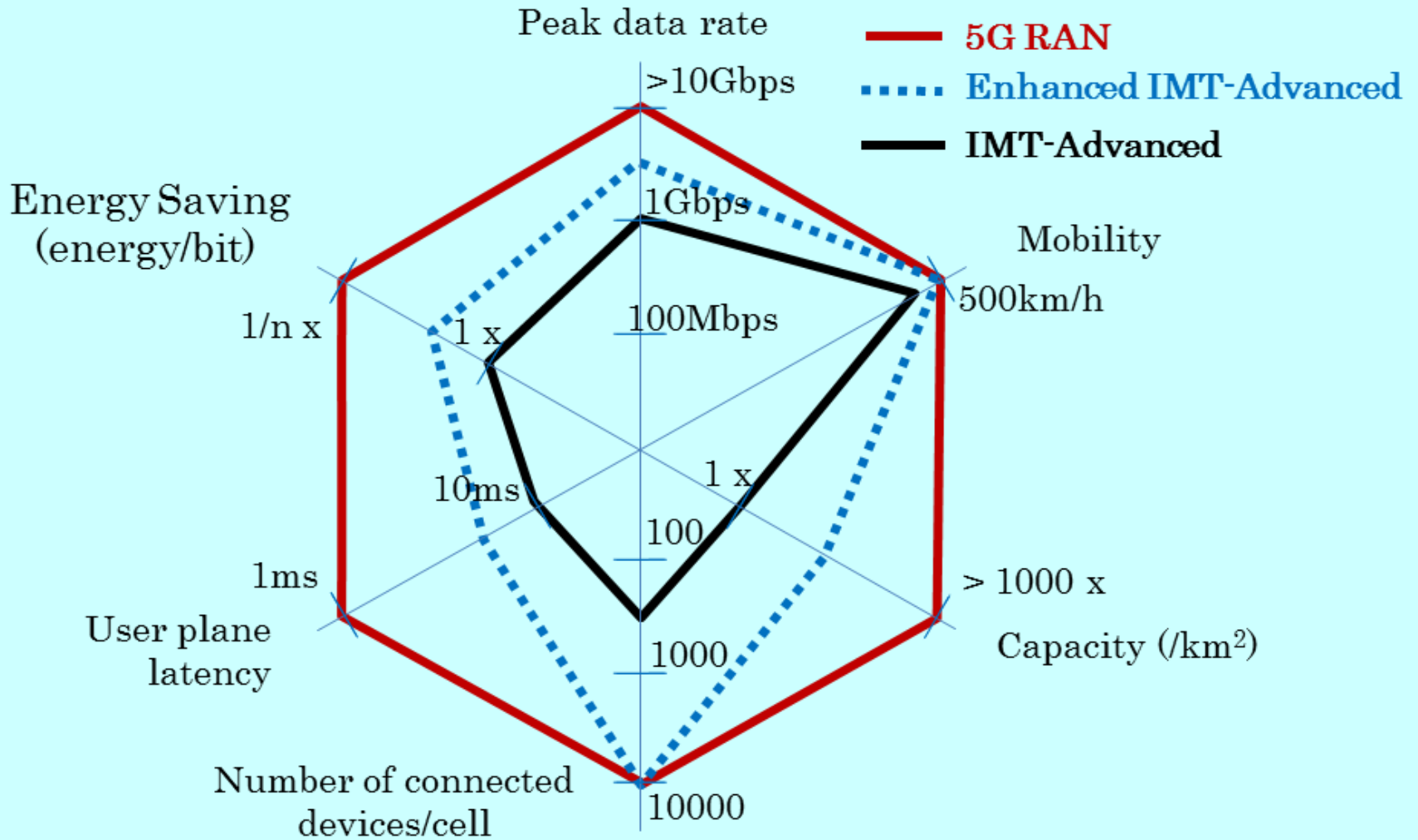


Example of Framework for 5G (1)



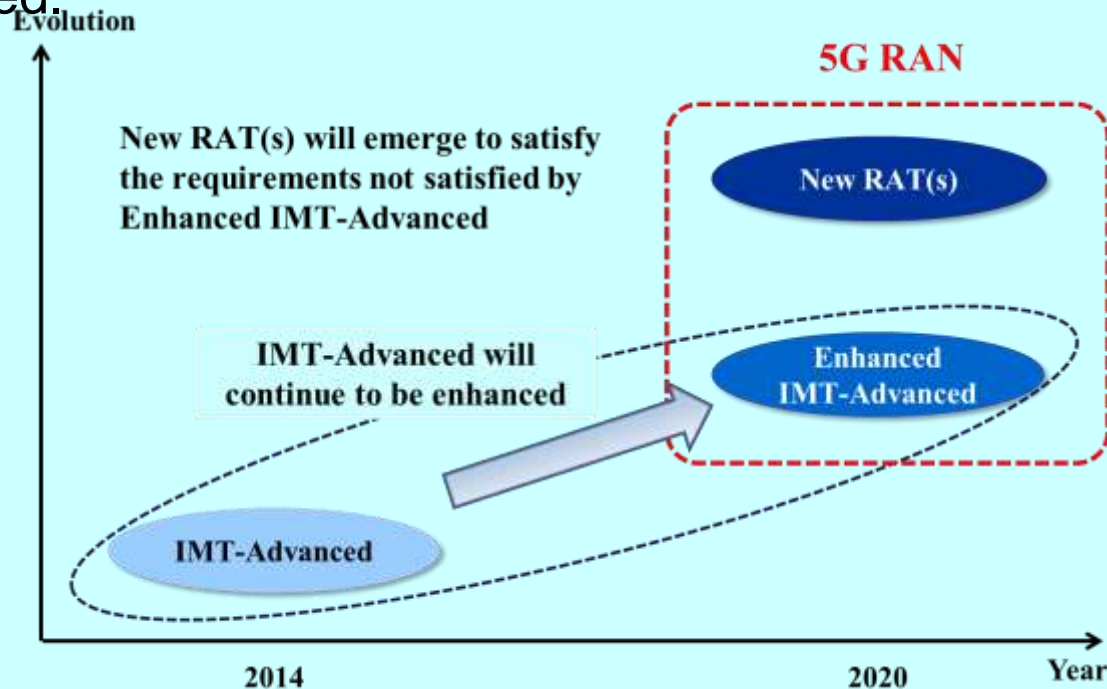
Example of Framework for 5G (2)

Maximum system capabilities



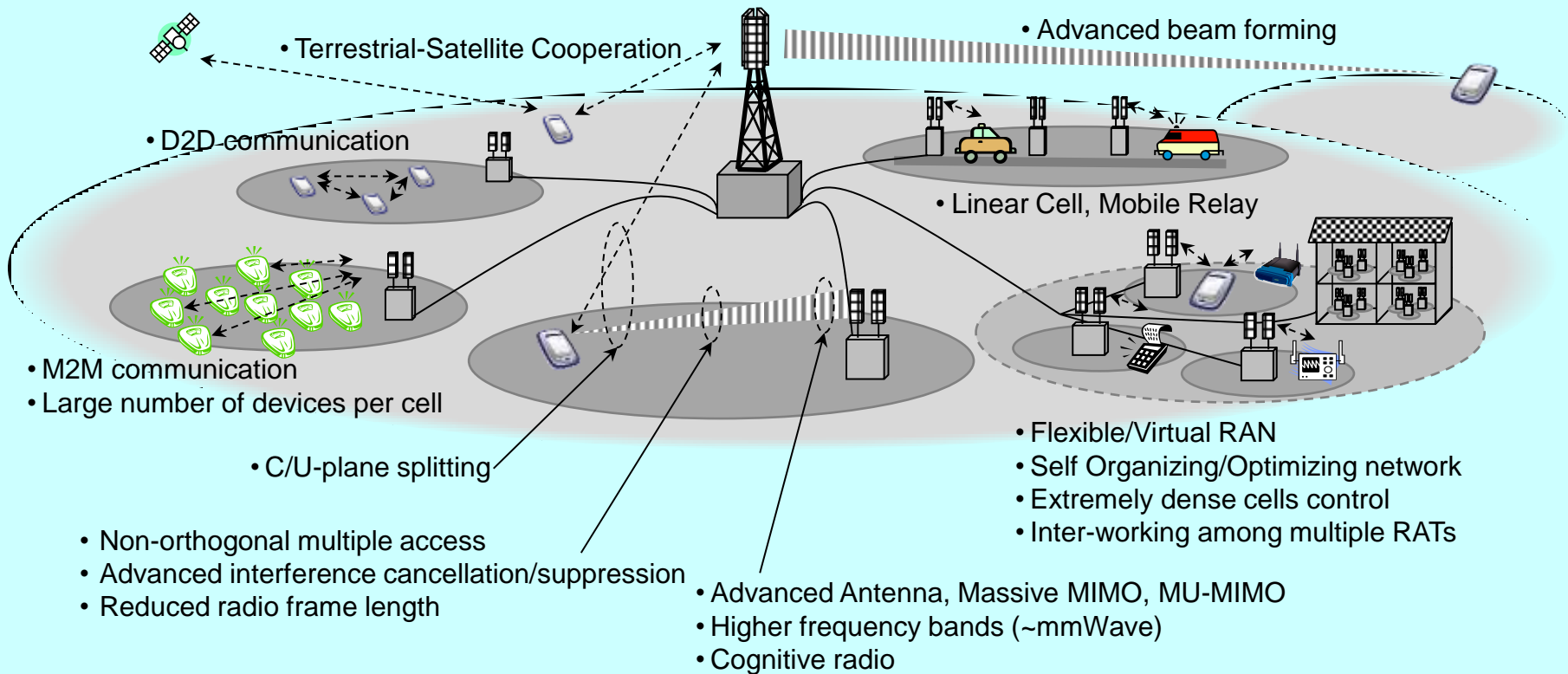
Road to 5G

- 5G RAN, which satisfies all the requirements identified for 2020 and beyond, consists of New RAT(s) and Enhanced IMT-Advanced.
- New RAT(s) need to be developed in order to satisfy the requirements not satisfied by Enhanced IMT-Advanced.
- Enhanced IMT-Advanced is a further enhancement of IMT-Advanced.



Overviews of 5G Radio Access Technologies

Technologies shown here may not be exhaustive and subject to further investigations in ARIB 20B AH



Conclusion

- Overviews of ARIB 20B AH and its study results for “5G” are shown
- ARIB 20B AH is developing a White Paper to capture our investigation results. It will be finalized in September 2014
- ARIB 20B AH is willing to establish collaborations with “5G” research related industrial organizations and academic institutes in order to share our technical activities as well as the investigation results