

## Minutes of the 2nd “Meeting of the Open RAN Promotion Subcommittee”

1. Date and time  
Thursday, September 8, 2022, 15:00 - 16:45
2. Location  
Web Conference (Cisco Webex)
3. Attendees (honorific titles omitted, in random order)  
Chairpeople: Akihiro Nakao [The University of Tokyo]  
Vice  
chairpeople: Four Telecom Operators  
Shingo Watanabe, KDDI CORPORATION (hereinafter referred to as “KDDI”)  
Takashi Ohashi, Kyocera Corporation (hereinafter referred to as “Kyocera”)  
Presenters: Keiichi Abe, SoftBank Corp. (hereinafter referred to as “SoftBank”)  
Mitsuhiro Kuchitsu, Rakuten Mobile Inc. (hereinafter referred to as “Rakuten Mobile”)  
Katsumi Tanoue, NEC Corporation (hereinafter referred to as “NEC”)  
Secretariat: Ministry of Internal Affairs and Communications  
Others: Member companies
4. Handouts and Projected Materials
  - 1-0: Agenda items
  - 1-1: KDDI “KDDI’s Approach to Open RAN”
  - 1-2: Softbank and Kyocera’s “Achievements and Challenges of Open RAN in Demonstrating of Backhaul System utilizing 5G Millimeter-Wave”
  - 1-3: Rakuten Mobile, “Open RAN Improvement Strategy”
  - 1-4: NEC “NEC’s Approach to Open RAN”
5. Meeting Minutes Summary
  - 5-1 Opening Remarks  
Chairperson Nakao provided remarks:  

O-RAN activities are important for Japan and the rest of the world. It is great to have discussions with people who are taking the lead in Japan’s ICT. Recently, 6G Flagship members, with whom we signed the MOU of B5G, visited Japan and held a workshop with Professor Tokuda of NICT at The University of Tokyo. I received a message from a 6G Flagship member that they were interested in the progress of O-RAN activities in Japan, so I mentioned this O-RAN Promotion Subcommittee. We hope that you will take advantage of this subcommittee for information sharing and partnership building.
  - 5-2 Meeting Minutes  
After looking at today’s agenda, we proceeded as follows:

- (1) In order to provide information on Open RAN, KDDI gave a presentation on “KDDI’s Approach to O-RAN” (Projected Materials 1-1).

[Chairperson Nakao, The University of Tokyo]

What is the progress of competition and collaboration statuses in “Putting Intelligence” in Open RAN?

[Watanabe, KDDI]

Fronthaul is compared with putting intelligence (RIC). Discussions on opening up (standardizing) fronthaul started by 3GPP before the O-RAN Alliance was established. The discussions were not concluded by 3GPP, brought to xRAN Forum, and then taken over by O-RAN Alliance. It is available for commercial use probably because there was time for discussions. On the other hand, full-fledged discussions on RIC started after O-RAN was established. Therefore, it is expected to take some time until products are made, and specifications mature.

It is not advantageous for vendors to move algorithms that conventionally exist inside the base station outside the base station as a RIC function because of issues such as latency and the possibility of exposing parameters. Low layer control is difficult. It is realistic to use RIC to control the functions that are not time-sensitive, such as controlling the hand-over destination. As an operator, I want the algorithm to be externally controllable and have standardized control regardless of the vendor.

[Chairperson Nakao, The University of Tokyo]

In RIC, we can anticipate there will be stakeholders who compete only through algorithms. This is interesting.

- (2) In order to provide information on Open RAN, SoftBank and Kyocera gave a presentation on “Open RAN Achievements and Problems in the Verification Test of Backhaul System by Using 5G Millimeter-Wave” (Projected Materials 1-2).

[Kuchitsu, Rakuten Mobile]

What are retail CU and DU?

[Ohashi, Kyocera]

They are retail CU and DU “Software.” We customized retail software to suit Kyocera’s specification environment and use it with third-party CU and DU.

[Kuchitsu, Rakuten Mobile]

For DU, is the PC server a regular PC server?

[Ohashi, Kyocera]

The L1 accelerator is connected via PCI Express to a regular server. Different from a regular server, L1 accelerator is connected via PCI Express.

[Chairperson Nakao, The University of Tokyo]

It is the objectives of O-RAN that E2E tests are simplified and barriers to entry are lowered. Therefore, it is reassuring that you verified them in verification tests.

- (3) In order to provide information on Open RAN, Rakuten Mobile gave a presentation on

“Toward the Maturation of Open RAN” (Projected Materials 1-3).

[Sato, Fujitsu]

Are there any ingenuity and challenges in demarcation point between multiple vendors when problems occur in operation?

[Kuchitsu, Rakuten Mobile]

We operated in vRAN and multi-vendor configurations for the first time, and had difficulties dealing with vendors. This was within expectation since problems between RU vendors and Rakuten Symphony’s DU/CU vendors occur on a day-to-day basis. Moreover, when it came to virtualization, things sometimes became out of control between the application vendor and FPGA vendor for virtualization infrastructure. What is important is to isolate problems as they occur and identify keys to those problems, while achieving verification results in each unit. Therefore, when upgrading to a new version, we control the identification of causes when problems occur by upgrading OS, FPGA and cloud respectively.

[Chairperson Nakao, The University of Tokyo]

In what format and how often is PlugFest held?

[Kuchitsu, Rakuten Mobile]

Held once a year until last year, twice a year this year.

[Chairperson Nakao, The University of Tokyo]

I would also like PlugFest activities to be shared in this occasion.

- (4) In order to provide information on Open RAN, NEC gave a presentation on “Approach to Open RAN” (Projected Materials 1-4).

[Chairperson Nakao, The University of Tokyo]

What do you think are the problems of O-RAN?

[Tanoue, NEC]

Although it has been verified in the lab, I think the problem is that it is not easily implemented on the physical network. Rakuten Mobile is actively trying to integrate it into the physical network, but companies that own legacy have migration challenges.

[Chairperson Nakao, The University of Tokyo]

I was surprised that NEC was active in Europe. I think there are some issues that they can identify because they are already working internationally. I would like to discuss the problems that you learned through your experience.

- (5) The secretariat took applications from speakers on the following topics for future meeting.
- (a) Schedule of next meeting
    - (i) Around late September to early October
    - (ii) Discussions will begin ahead of creating a report from around the end of the year and then aiming to complete the report by the end of the fiscal year.
  - (b) Presentation topics
    - (i) Latest Open RAN status
    - (ii) Advantages of Open RAN
    - (iii) Problems of Open RAN
    - (iv) Test bed for interconnection tests
    - (v) New technologies of Open RAN

(c) Contact information for presentations: [b5g\\_consortium@soumu.go.jp](mailto:b5g_consortium@soumu.go.jp)

### 5-3 Closing Remarks

The meeting was closed with comments and closing remarks from chairperson Nakao.

His comments are as follows:

I have an impression that each company shared more problems in their presentations than in the first meeting. I would like you to share not only advantages but also problems of O-RAN, and finally promote O-RAN as an important activity in Japan.

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