APT Training 2022

— Developing fundamental network planning skills in regional communities to bridge the digital divide —

The ITU Association of Japan
International Cooperation Department

Since FY2017, the ITU Association of Japan has been conducting courses to eliminate information disparity between urban areas and communities in depopulated area of developing countries as part of a program*1 to support training of human resources in the Asia-Pacific Telecommunity (APT). The objective of the training is to build skills enabling people to analyze communication network conditions in their own countries, to decide on measures to solve problems, and to do overall communication network design as a way to solve problems.

In FY2022, over an eight-day schedule*2 from November 28 to December 8, courses were held fully online, continuing the pattern from last year and the year prior. Considering the difficulty of maintaining concentration when taking online courses, classes were kept short, to about two or three hours per day. This year, 20 students participated, which is more than previous years. With cooperation from the APT secretariat, students were recruited with a target of 20 applications. A total of 19*3 diverse applicants participated from 11 countries including Afghanistan, Cambodia, China, Mongolia, Myanmar, Nepal, Palau, Samoa, Solomon Islands, Bhutan, and Sri Lanka.

The three objectives of the training program were as follows.

(1) To understand any issues with the communications networks in your own country, and to learn methods for proposing concrete plans to overcome the digital divide between regions in the country.
(2) To understand the importance of government having clear policies regarding construction of networks.
(3) To acquire skills for proposing and evaluating solutions to various issues on your own country, through lectures and presentations.

On the first day of the course, Secretary General of The ITU Association of Japan Kazuhiko TANAKA gave a presentation on the current state of ICT in Japan. There was also a lecture on basic network design concepts, given by Takayoshi HAMANO, who started as a lecturer last year and previously worked at Nippon Telegraph and Telephone Corporation (NTT).

On the second day, each participant gave a presentation based on a pre-compiled country report, summarizing the current state of ICT and related issues in their country or particular regions within their country. After the presentations, there was a time for exchanging ideas on the presentations, providing an opportunity for participants to gain a deeper understanding of conditions in other countries. The instructor, Mr. HAMANO, also described activities for the following three days, conducting drills that are a major feature of the training course.

Days three to five were for practicing various drills. Each day, participants would work intently on a particular drill, learning communication network design methods in three types of drill. For each drill, a model of a typical remote area such as in the mountains would be presented, and participants would analyze geographic and other conditions, and study network design methods suitable for such a region, and ways to organize ICT services and environments needed in the region.

Day six was set aside for discussion

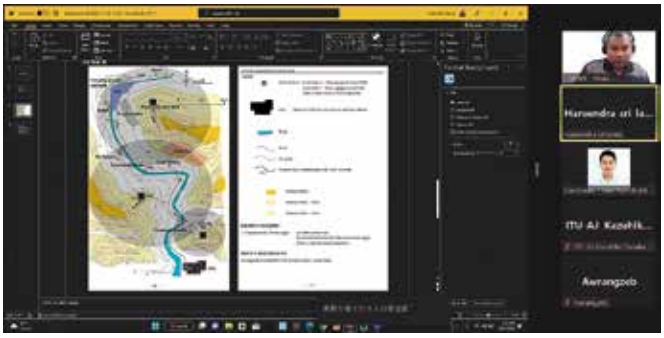
Meeting screen shot

Presentation of a country report

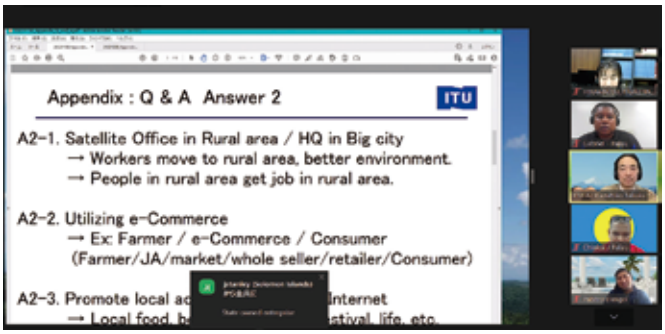
*1 A training program to convey Japanese technologies and services to communications technologists and government-related people in APT member countries, using funding contributed by the Japanese government.
*2 A one-day break during the week has been added.
*3 Due to circumstances, one of the applicants was unable to participate.

Drill group discussion

Drill group discussion



Free discussion screen shot



on a free theme. The discussion theme was ultimately decided according to participants' progress in the course. In this instance, the instructors gave detailed explanations for questions from participants that arose during the drills, and then further discussion was held regarding those responses.

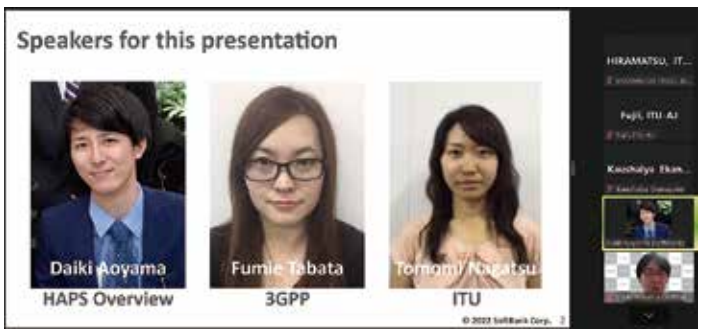
On day seven three lecturers from SoftBank Corp. gave lectures on themes related to HAPS (High Altitude Platform Station). The lectures included an overview of HAPS and related initiatives at SoftBank, as well as standardization activities for HAPS at WRC-23 (World Radiocommunication Conference 2023) and 3GPP (3rd Generation Partnership Project). During the lectures, many questions were submitted through chat, leading to a lively discussion, so it seems that the topic was very interesting for the participants.

On the final day, each of the participants reported on their action plan. The action plans consisted of a proposal for how the participants could apply the skills they had learned in the course to solve a problem in their own country. After each participant's presentation, there was an exchange of ideas regarding the presentation, mainly with the instructor. The idea here was that participants would be able to learn more practical approaches by working on problems closer to their own situation. We expect that this series of experiences will certainly be useful in participants' work in the future.

This was the third time that drills were done in the online course. The course style focused on drills can encourage independence in participants, and promote communication between them. However, performing drill repeatedly can tend to reduce participants' desire to participate, so last year we reduced the number of drills by one, to three. On the other hand, we attempted a new activity by having a day to hold discussion with everyone based on the participants' progress. By having this day of open discussion, we provided an opportunity for participants that did not obtain adequate understanding in the drills to catch up on the material.

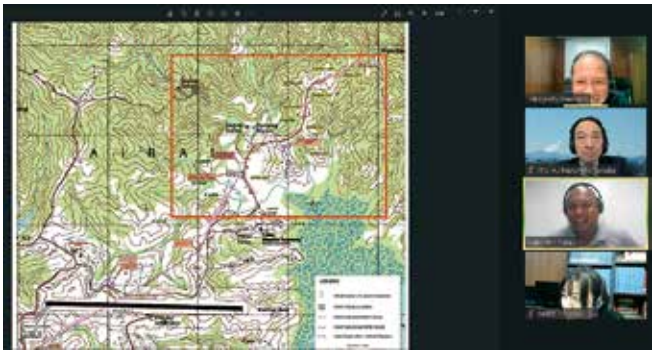
For the drill discussions, we used the "break room" feature of the Zoom web meeting tool, dividing participants into small groups. On the first day, discussions in some groups were more active than others, but the instructors worked to stimulate discussion by giving comments and suggestions to groups that were stuck. For each of the three times drills were done, the group members were switched around. This served to reduce this variation in discussion among the groups and also

SoftBank lecturers

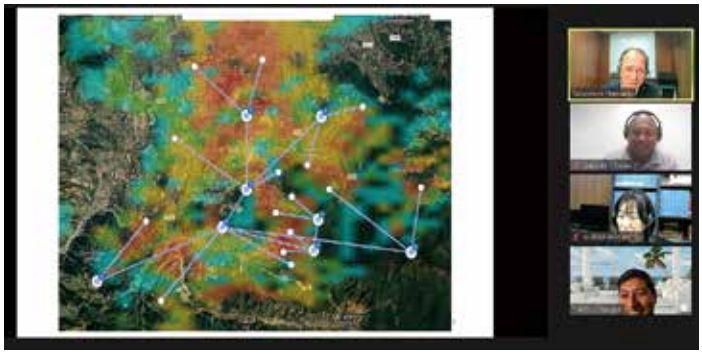


Many questions submitted to the chat during a lecture

Presentation of an action plan



Asking questions regarding an action plan



encouraged more interaction among the participants. This may have contributed to the fact that after the course was completed, members wanted to continue the interaction and the participants and instructors shared email addresses with each other.

Each time after group discussions ended, we asked a representative from each group to present the group's results, and the instructor evaluated their design draft, and gave suggestions such as possible alternative methods. Having a representative present the group's ideas also provided an opportunity for them to understand the drill content better.

Having participants present an action plan was a valuable opportunity for them to output the results of their training. Because of this, we allocated plenty of time for them to create their plan during this course, and scheduled a day without training before the presentation day. On the action-plan presentation day, the instructor gave suggestions suited to each individual proposal after the presentations, which was a good opportunity for participants to get more concrete information related to their own particular issues.

A new feature we tried this time was that almost every day after training finished, we provided an opportunity for participants to check any questions they had from the day's content with the instructors, and encouraged participants to interact with each other during an online free-communication time. We used a communication tool called GatherTown, providing a virtual meeting place environment that enables participants to move around virtually and have either group or one-to-one conversations. No particular theme was set, and members could participate freely, enabling participants and instructors to form deeper friendships.

To make it easier for a broader range of people to participate, this time we reduced the amount of self-study required before the training, and only had participants submit a country report before the training started. This may have contributed to the fact that we were able to attract 19 participants from 11 countries, and provide a good opportunity for discussion that overcame differences in nationality and types of skills. On the other hand, we also had greater differences in attendance rates, possibly because of the wider range of skill levels than previous courses. By having a day for open discussion, we were able to compensate for skill gaps to some extent, but this issue will require further consideration in the future.

As mentioned earlier, this course was held fully online, but by utilizing know-how gained in previous courses, we feel that we were able to deliver a richer course that earlier.

The online course has been offered three times since the year before last, and we have gained much knowledge regarding online training. We also felt a real disparity among the network environments in the various countries, so we hope for technical improvement in the future, but also will continue considering how online training should be done in the future.

We do not think there will be large changes in basic concepts of designing and building communication networks, but there have been considerable advances in communication technology recently, so the content of the drills will need to be reviewed, and we are studying ways to make the training more worthwhile.

Responses to the COVID-19 pandemic have changed greatly around the world recently, and Japan's border control measures have also relaxed greatly. It will still depend on conditions, but we hope to invite participants to come to Japan the next time we conduct this training.

Finally, we would like to express sincere thanks to everyone at the APT and MIC for their direction and cooperation in offering this training, to Instructor HAMANO for his efforts preparing materials and guiding the participants, and to everyone at SoftBank who presented lectures.

Gathering using GatherTown