

Interactive Hybrid Medical Conference in Japan

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Case Report

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Abstract

This paper reports medical informatics conference held in November 2020, which is under influence of CoVID-19, in hybrid way. The methods taken to ensure presenters, chairpersons, participants, supporting staffs, vendors seamless infrastructure regardless of on line or on site. This made question answer session rich as usual. Some other outcomes newly made possible are reported, such as demonstration shown on big personal screen, much better than slide projector screen, new participants who became able to participate over prefecture boundaries in challenged times.

1. Background

The 40th Joint Conference on Medical Informatics (JCMI) was held in Hamamatsu for 4 days in November 2020. This was a national conference of the Japan Association of Medical Informatics. At this conference, the 2020 conference of the Asia Pacific Association for Medical Informatics (APAMI) of the International Medical Informatics Association was also held for 3 days within the above conference.

In terms of scale, this joint conference is usually held in eight rooms and venues for exhibitions and demonstrations with more than 3000 participants. However, in 2020, this conference was held online because of the demand that the participants could not travel across prefectural boundaries due to the spread of CoVID-19 and orders from their affiliated institutions. Online participation was made available for all individuals involved in this conference, including participants, speakers, chairpersons, handling committee members, and people in charge of corporate exhibitions. The APAMI conference is held every 2 years and often involves 100–500 people.

While the impact of CoVID-19 on medical education has been reported [1], we report its impact on medical academic conferences.

2. Methods

This paper describes hybrid medical conference in CoVID-19 situation taken place in 2020 November at Hamamatsu, where presenter, chairperson audience were able to participate either on site or online. Participation outcome, issues solved, and new feature introduced are reported.

3. Results

To determine the format of this conference, we kept the following aspects in mind:

The importance of academic conferences includes deepening of discussion through a series of questions and answers in sessions, exchange of information in lobbies, development of personal connections, collection of information from exhibitions, and cultivation of business opportunities. Thus, it is absurd to play a PowerPoint presentation with audio and to hold a question-and-answer session through email. The chat function is impractical for deepening discussions. Further, giving lectures to unresponsive audiences

is difficult [2]. Therefore, we aimed to conduct an interactive hybrid conference. In other words, we attempted to maintain interactivity and equally treat on-site and online participants in lectures.

Thus, we aim to transform on-site activities into online activities. The addition of multiple major changes to routine operations performed every year may cause serious problems. Hence, accessorially possible functions can be added without problems. For example, text-based communication (e.g., chat communication) that cannot be used on-site was out of consideration.

We should accommodate diverse presentations. The Japan Association for Medical Informatics(JAMI, organizer of this) have made for presenters able to display not only simple slideshow but also demonstrations online and on personal computers that are brought to conference venues and connected either high-definition multimedia interface or Dsub-15 connector VGA video for the past 20 years.

Faculty development of handling committee members. We asked the volunteer handling committee members to perform various tasks. These tasks include correspondence (and roll-calls) with on-site speakers and chairpersons, helping preparation of online speakers and chairpersons, and detection of online participants with a hand raised, informing the chairpersons of the presence of such online participants and giving mute and unmute cues while on-site participants asked questions. While every academic conference was held online by November 2020, we pioneered a hybrid format for holding a conference. Because many conferences will presumably be held in this format in the future, each handling committee member of our conference is expected to become a leader in other academic conferences.

Based on our examination, we installed a WebEX Events system in every room. In the largest venue with a capacity of 2000 people, audio-visual devices were placed, as shown in the figure 1.

Predicted technical problems include control of the audio system volume in on-site venues (for online participants), verification of communication bandwidth to prevent acoustic echoing and bubbling, and prevention of unnecessary audio output (recommending the use of earphones or headsets). To address these problems, handling committee members must perform a brief rehearsal with each online participant before the sessions.

The operational problem includes how to unmute online participants who wanted to give comments and questions. In this conference, we decided that the organizer would control the audio devices. Thus, sufficient time was needed to find online participants with a hand raised. In general, speakers first take questions from on-site participants, and the organizer looks for such online participants during the question-and-answer session with on-site participants. We assume that participants are interested in being involved in the question-and-answer session (unmuting). However, we doubt whether they properly mute their devices after asking questions. The failure of muting causes noise similar to the case in regular meetings.

This conference had 2,848 participants (2,909 participants in the year before the COVID-19 pandemic), showing no noticeable decrease. Because of restrictions on entry to Japan, the APAMI conference was conducted on-site by only foreign students who had already been in Japan, in addition to Japanese participants. The total participants are 54, including online-registered participants.

Table 3 shows the numbers of on-site and online participants in major sessions in each session category in the JCMI and APAMI conferences. Sessions with a large total number of participants were characterized by an increased number of online participants. In particular, sessions on artificial intelligence have interested many people from a wide range of professions. Many hospital staff members participated in sessions on regional cooperation, presumably because travel across prefectural boundaries was restricted. It was unexpected that many online participants attended luncheon and dolce seminars organized by the corporate sponsors, despite that food was provided only to on-site participants.

The following are some of the spin-offs of our experience with these conferences:

- While the English versions of slide presentations were displayed at on-site venues, the participants could see the Japanese-translated version (prepared in advance) with their own tablets or other devices.
- Participants could peep in other venues.
- They could participate online even after leaving the venues in the middle of conferences.
- Post-conference content viewing was easily prepared and offered to registered participants.
- The slide presentations were more clearly displayed on the devices of the online participants than on on-site projector screens.

Although the question-and-answer sessions in other online conferences were inactive (only a pair of a question and an answer per participant through the chat function or voice communication), we believe that the question-and-answer sessions in our conferences were adequate because we treated the on-site and online participants equally. Deepening of question-and-answer session is an indispensable feature of academic conferences.

The costs of holding a conference reasonably increased because of the need for a floor sound system, staff who informed online chairpersons about the on-site conditions, etc.

Corporate exhibitions were inactive. A new potential publicity strategy alternative to on-site corporate exhibitions may be online corporate exhibitions that take advantage of clear display on participants' devices, as described previously. Another new potential strategy is the attraction of luncheon seminars for participants who eagerly attended without a lunch service.

This hybrid configuration increases total cost of the conference, thus we have to find factors which increase income. For example, though November is still in academic conference crowded season, we can

expect participants who gave up participating simultaneously held conference, and medical staffs who enjoy no traveling charge.

In summary, the interactive hybrid format of conferences appears to guarantee the quality and quantity of question-and-answer sessions. Despite the importance of on-site lobbying and other activities, this format certainly attracts participants who cannot participate due to geographical distance. We expect that this will become the mainstream format in the future if costs and corporate publicity are improved.

4. Conclusion

One of vital center of academic conference is rich question answer session. This should not be sacrificed even by CoVID-19. Technical and organizing configurations to realize are described in this paper. Additional outcome by this configuration is also described, such as demonstration shown on big personal screen, much better than slide projector screen, new participants who became able to participate over prefecture boundaries in challenged times.

Declarations

Competing interests: The authors declare no competing interests.

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Table

Table 3 is available in the Supplementary Files section.

Figures

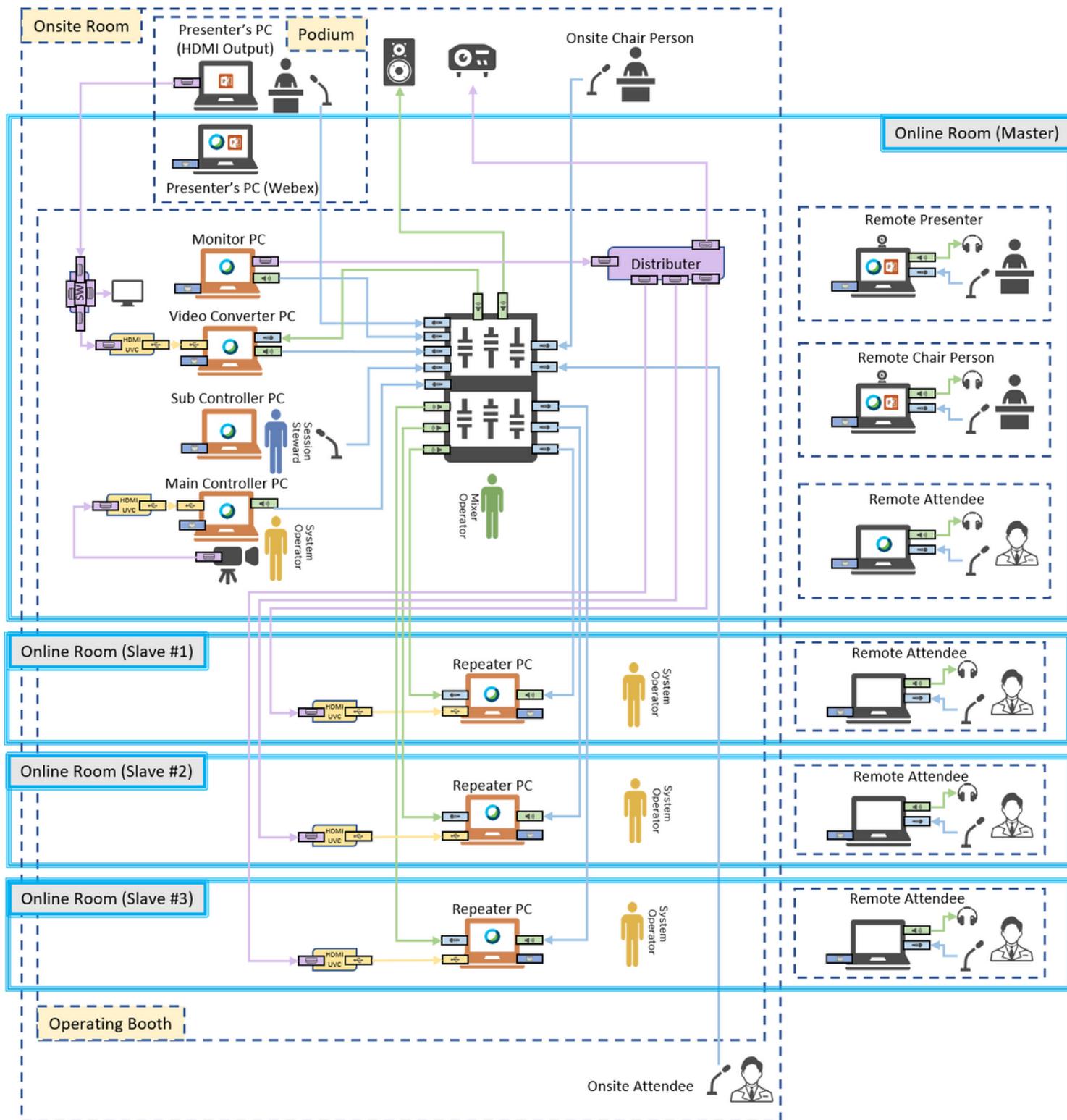


Figure 1

Configuration of the conference using WebEX Events system

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Table3.xlsx](#)