

Measures on Enhancing Sound Quality in Courtrooms arising from COVID

This note sets out the latest progress of measures taken by the Judiciary in enhancing the sound quality in courtrooms after the installation of shields arising from the COVID-19 pandemic.

Background

2. To ensure that courts can continue to carry on business as safely as circumstances permit during the COVID-19 pandemic in the past two years, the Judiciary has been implementing various preventive and crowd management measures. These include the installation of protective shields in courtrooms. In response to concerns from the legal profession and other court users that the sound quality in certain courtrooms has been adversely affected because of such installation, the Judiciary has, since early 2022, been making continued efforts in exploring and implementing various sound enhancement measures by phases at different levels of court, with priority given to courtrooms with a larger number of users.

3. On 14 October 2022, the Judiciary arranged an on-site briefing and demonstration at the High Court, the District Court and one of the Magistrates' Courts for representatives of the two legal professional bodies and a few members of the LegCo Panel on Administration of Justice and Legal Services. This note summarises the key information on the major challenges and measures taken in enhancing sound quality in the courtrooms.

Challenges in Courtroom Acoustics

4. As background, in addressing the courtroom acoustical issues, the Judiciary has to take into account the following challenges:

- (a) Since the various court premises were built in different years mainly from 1980s to 2000s with non-identical designs and facilities, the sound reinforcement measures need to take into account the existing acoustic design and physical constraints of individual courtroom settings, such as ceiling loadings and cabling infrastructure, as well as the technical difficulty of upgrading the relevant sound facilities;

- (b) sound transmission in courtrooms will considerably be blocked by the installation of protective shields and the masks worn by the speakers¹;
- (c) background noises (such as coughing, rustling clothes, turning pens, zipping and flipping papers) may affect the sound quality. This is particularly so for courtrooms with a larger number of court users, such as plea courts at the Magistrates' Courts and courtrooms for handling high profile cases involving a large number of defendants, legal representatives, media and members of the public;
- (d) any sound amplification measures should not affect the Judiciary's Digital Audio Recording and Transcription Services system ("DARTS system"); and
- (e) given the increasing use of remote hearings with parties, witnesses and/or legal representatives attending the proceedings outside the courtroom (including at a place outside Hong Kong), the sound quality may be affected by various uncontrollable technical factors despite technical tests before the hearings. These include poor sound quality from the remote venue, setting of the audio equipment at the remote end somehow generating feedback, and stability of bandwidth possibly due to wider connection issues with the remote location.

Sound Enhancement Measures

5. To bring about sound enhancements to a total of over 200 courtrooms of the Judiciary as soon as possible, particularly for courtrooms with a large number of court users, we have put in place immediate and/or medium-term measures with appropriate priorities at all levels of court, while working towards the implementation of longer-term upgrading solutions by phases. The actual measures are different in different

¹ While Judges and Judicial Officers ("JJOs") are given powers under section 5A(2)(c) of Prevention and Control of Disease (Wearing of Mask) Regulation (Cap. 599I) to allow court users to remove masks if necessary (e.g. when a witness is to give testimony), the JJOs need to take into account the prevailing public health situation and any other relevant factors before deciding to allow removal.

courtrooms because of their varying needs as well as physical and/or technical constraints.

Immediate Measure – Talkback Device

6. As an immediate solution, talkback devices, comprising movable microphones and amplifiers (see Photo 1 below), have been installed in most of the courtrooms. The amplifying effect of this technical set-up is acceptable provided that the speaker speaks close to the microphones.

7. For courtrooms normally with a large number of court users, such as plea courts of the Magistrates' Courts, such devices alone may not be adequate and we have been introducing further enhancements as indicated below.



Photo 1 : A set of Talkback Device

Medium-term Measure – Wireless Conference System

8. As a medium-term measure, an additional Wireless Conference System (see Photo 2 below) has been provided in courtrooms by phases, with priority given to the larger criminal courtrooms. With this system, additional wireless microphones have been set up on the JJOs' benches, counsel benches and witness boxes. Movable amplifiers have also been added as appropriate at different parts of the courtrooms so that court users at various locations of a courtroom are able to hear more clearly. The sound amplifying effect has become much better with this add-on system.



Photo 2 : Wireless Conference System and amplifier

Long-term Measure – Digital Sound Processing System

9. As part of the Judiciary's on-going commitment to making greater use of technology for enhancing the efficiency of court business, the Judiciary has been upgrading the analog sound processing system to a digital sound processing system (see Photo 3 below) to pave way for the development of new technology applications/functions. Such system will also enhance the sound effect of the courtrooms, while reducing the interference of the amplifying system with the DARTS system. Apart from hardware replacement, the courtrooms will be divided into different speaking zones using integrated microphones and amplifiers/speakers so that there is better control on the audio inputs and outputs with the system. We plan to implement this integrated sound system in all courtrooms in the Judiciary in the long run.



Photo 3: Digital Sound Processing System (with an integrated microphone for both sound amplification and audio recording)

Progress of Sound Enhancement Works

Immediate/Medium-term Sound Enhancements

10. While around 200 courtrooms are currently equipped with talkback devices as an immediate solution, the add-on Wireless Conference System is currently used in 12 larger criminal courtrooms in the District Court and three courtrooms in the Magistrates' Courts (namely Tuen Mun Magistrates' Courts, Kowloon City Magistrates' Courts and Sha Tin Magistrates' Courts). Another 13 sets are planned to be deployed to the Magistrates' Courts in the coming months.

Longer term Measure

11. At present, the longer-term solution of Digital Sound Processing Systems has been installed in nine courtrooms in the High Court. The upgrading works for around six more courtrooms are expected to be completed in Q1 of 2023. By then, it is expected that those relatively large courtrooms for high-profile criminal cases with many defendants and counsels would have their sound systems upgraded. We plan to upgrade other courtrooms with appropriate priorities having regard to their sound enhancement needs and other relevant considerations.

Practical Tips to Court Users

12. To ensure or enhance the effectiveness of the above systems, the Judiciary has provided the following practical tips for court users as appropriate at the courtrooms-

- (a) court users are reminded to stay quiet during the hearings;
- (b) counsels and witnesses are advised to speak to the microphones directly and stay close to them (around 6 to 12 inches) when making submission and giving evidence;
- (c) while there is only one integrated microphone for the Digital Sound Processing System, there are two microphones (one for recording and one for amplifying) for the other two sound enhancement measures. Counsels and witnesses are advised to speak to the microphones marked with labels for amplifying effect; and

- (d) remote participants such as overseas witnesses are advised to use external microphones and stay close to the microphones (with an appropriate distance of around 4 inches).

Provision of hearing aids on request

13. The Judiciary has all along been making digital wireless hearing aids available to facilitate the participation of parties and their legal representatives with hearing impairment in court proceedings upon request. Any relevant court users who wish to be provided with the hearing aids during the court proceedings or conduct sound test of their own hearing aids for suitable adjustment prior to the court proceedings may seek assistance from the court support staff who will make arrangements as appropriate.

Way Forward

14. The Judiciary will continue to closely monitor the quality of sound effect at different courtrooms and introduce enhancement measures as appropriate.

Judiciary Administration
December 2022