

Testing the case for a virtual courtroom with a physical jury hub

Second evaluation of a virtual trial pilot study conducted by JUSTICE

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Executive Summary

Introduction

1. The COVID-19 pandemic has caused considerable disruption to court business. Some courts have managed to stay open but the criminal justice system is said to be facing a backlog of 40,000 cases that will be difficult to clear.
2. HMCTS has expressed its commitment to avoiding physical hearings and arranging remote hearings wherever possible. A range of different Crown court processes are taking place remotely including sentencing hearings, urgent applications for bail or to extend custody, as well as pre-trial and case management hearings. Some Crown courts have now opened for jury trials with social distancing measures in place but this is not sufficient to manage existing demand or begin to clear the backlog.
3. The backlog has caused a number of serious problems. These include defendants on remand being incarcerated for longer periods; increased waiting times; risks of more abandoned prosecutions; increased stress and a lack of work for the legal profession.

The JUSTICE/AVMI Virtual jury trial experiment

1. The question that JUSTICE have posed is whether, in this time of crisis, it is possible to hold ‘dispersed’ or virtual trials in which the principles of fairness, accuracy of evidence and certainty can be met. In order to test the case for virtual jury trials they organised four virtual trial experiments between April-June 2020.
2. This report is the second in a series that provides a description and analysis of what has been learnt from these experiments (for the first report, see Mulcahy, Rowden and Teeder, 2020).
3. The first report evaluated the first two experiments in which everyone taking part in the trial was in a separate room. This report focuses on the final trial in which the jury were assembled together in a physical ‘jury hub’ and all other participants appeared from different locations. In this final experiment the defendant appeared by way of a video link from a court video hearing room in HMP Leeds. This report also draws on additional improvements to the process identified during the third trial where the jury remained dispersed.
4. It is recognised that deliberation of what is technologically possible must be set against two important considerations about what is appropriate. The first of these is that virtual trials must engender confidence in the legal system. The second is that digital solutions to the current COVID-19 crisis must be set against concerns about the digitally excluded.
5. A lot has also been learnt in a short period of time. This report outlines how the trials were conducted before going on to discuss positive and negative aspects of the experiment. We close with recommendations as to what could be done to maximise the chances of virtual trials meeting the high standards expected of the jury trial.

How do virtual trials work?

1. In virtual trials all the participants appear from their separate locations in a courtroom which comes together on a shared ‘public’ screen.
2. A series of other secure virtual rooms also exist behind this shared view of the virtual courtroom. This includes a virtual room for the defendant to consult with counsel.

3. The platform that AVMI have designed for this experiment also allows for documents to be viewed on screen.
4. Certain elements of the experimental design, such as the type of case and the people involved, were consistent across all four mock trials. However, there has been time for reflection between each trial in which alterations to practical, technical and operational issues have been put in place.
5. The most significant change in the fourth trial was the creation of a physical jury hub. The jury were gathered together in a hall that was hired for the purpose.

Evaluation of the process

1. Positive aspects of the JUSTICE/AVMI experiment have been identified in the first report of the evaluation. These include observations that the virtual courtroom facilitated a greater sense of participation rather than rendering people more remote from each other; the potential to create a more level playing field; security benefits; the relief of some of the stress associated with court appearances; and the benefits of tailored technical support and orientation materials to the success of the process.
2. It is recognized that however good the design, the efficacy of the virtual court can always be undermined if lay participants do not have adequate facilities to participate from their home.
3. The most serious concerns raised by those involved in the first three trials related to computer problems and the internet connectivity of jurors. There were also concerns around jurors' computers, and their activities on them, being unregulated.
4. As the relaxation of social distancing rules took place it became feasible to respond to issues raised by experimenting with physical jury hubs where jurors could gather together supported by AVMI technical staff.

Responding to concerns: The creation of a physical justice hub

1. In the fourth experiment jurors were brought together in a physical hub in South London. The facility used had a reception area, large hall, kitchen and three unisex toilets. The hall is of a modern design with plain white walls, wooden floors and lots of natural light which contributed to a sense of wellbeing.
2. The hall's large space was used to house desks and monitors for the jurors, set at 2.5m apart. The four members of the technical team on site set up in a separate room on site.
3. Each juror had two screens on their desk, one for viewing the virtual courtroom and the other for viewing trial documents.
4. Social distancing and hygiene practices were maintained on site through several strategies, including the provision of face masks, hand sanitizer and alcohol wipes. A cleaner was also available to regularly clean the toilets.
5. Jurors were able to relax in the adjacent garden during breaks, but brought their own food and drink.
6. A sense of civic space was created by the use of posters and Crown court banners supplied by HMCTS placed at entrances.
7. Jurors attended the virtual courtroom via the monitors supplied but deliberated in person in socially distanced spacing.

The benefits of a physical justice hub

1. The creation of a physical justice hub was considered to have been a success by all those who participated in the fourth trial and dealt with many of the issues that had arisen in earlier experiments.
2. More particularly, it gave control of technology and place-making back to JUSTICE and AVMI. Good connectivity and high-quality equipment was guaranteed because AVMI was able to provide all the equipment. This avoided the problems with poor internet connection and computing equipment experienced during earlier experiments.
3. The fact that AVMI supplied high quality equipment, set up the rooms and provided instant on site assistance meant that the fourth mock trial went much more smoothly than previous ones.
4. Demands made of the jurors to operate new systems and solve technical problems remotely were removed as they were not required to operate the technology themselves.
5. The connection from the jury hub to the virtual courtroom did not fail once during the day and allowed the judge and barristers to concentrate on the proceedings rather than worrying about who was able to see and hear what was going on.
6. A number of participants commented on the fact that the jury was very engaged with the case. Many of the jurors were actively taking notes, asked pertinent questions, asked for more evidence, and indicated that they would have been prepared to stay longer if necessary.

Next Steps

1. The fourth virtual trial with a physical jury hub was widely considered across the team to be the most successful of the four experiments. In particular, there were far fewer technical problems, all of the responsibilities of jurors regarding technical provision were removed and everyone seemed engaged in the proceedings. These findings are in addition to the benefits outlined in the first report of the pilot which drew attention to the democratizing effect of the defendant being more central to deliberations that they would be in a physical court and being placed alongside their counsel. It is in the view of the authors that HMCTS should seriously consider the benefits of this format for restarting criminal jury trials, in order to deal with the significant backlog facing the criminal justice system.
2. A lot has been learnt in the course of the JUSTICE/AVMI experiments which could form the basis of further investment and good practice guidance if HMCTS are interested in rolling out this initiative. These include the design of preparatory and orientation materials for all lay participants; further investment in the public gallery platform; and creating guidance on such issues as backdrops, lighting and suitable locations for the jury hub.

Introduction

The COVID-19 pandemic has caused considerable disruption to court business. Some courthouses have managed to remain open during the crisis and to conduct socially distanced proceedings.ⁱ Despite these measures the criminal justice system is said to be facing a backlog of 40,000 criminal cases. The Criminal Bar Association has argued that this backlog will not be cleared even if all crown courts are opened with social distancing rules in place (Boycott, 2020). The situation is particularly acute in the Crown Court where the presence of a jury means that social distancing is more complicated. Indeed it has been estimated that it would take three courts in an existing courthouse and the use of videolinks between the rooms to host one trial (Boycott, 2020), meaning that the backlog of cases would only increase. Another solution to the problem has been the creation of so called ‘Nightingale Courts,’ held in commercial premises, Universities or civic centres where there is space to spread out jurors, lawyers and court staff. A working group has been established to develop these plans, made up of HMCTS officials, the judiciary, legal professional bodies, representatives of victims’ groups and other court users (Ministry of Justice, 2020). Consideration is now being given to juries being temporarily replaced by Magistrates sitting with Crown court judges. There have also been calls to abolish the jury during the crisis though this proposal remains highly contentious.ⁱⁱ

HMCTS has also expressed its commitment to avoiding physical hearings and arranging remote hearings wherever possible. To that end, the Kinly Cloud Video Platform (CVP) being trialled in magistrates’ courts has been extended to include some Crown court proceedings as well as Civil and Family courts. Increased use of remote audio and video technology has meant that other parts of the justice system such as tribunals have been able to continue with cases, and even begin to manage their backlog. At this stage, there are no virtual jury trials, but a range of different Crown court processes are taking place remotely including sentencing hearings, urgent applications for bail or to extend custody, as well as pre-trial and case management hearings (HM Government, 2020a). Some Crown courts have now opened for jury trials with social distancing measures in place but this is not sufficient to manage existing demand or begin to clear the backlog. The backlog is causing a number of serious problems:

- Defendants remanded in custody pending trial are being incarcerated for longer periods. It has been estimated by the Institute for Government that waiting times to hear cases could increase by more than 70% in the event of a six-month lockdown, with many defendants and complainants forced to wait more than half a year for trials in the Crown court. This would result in the highest average waiting time ever recorded;ⁱⁱⁱ
- These delays will only increase as more prosecutions are brought;
- Delays in hearing cases is likely to increase the number of abandoned prosecutions as witnesses decide not to testify or struggle to recall incidents;
- The prison population is already close to capacity and the ability to contain the spread of the virus within prisons is extremely challenging;
- Delays in the administration of justice in such cases is likely to create stress for defendants, complainants, witnesses and their wider families, all of whom will be seeking certainty over proceedings that may have been hanging over them for some time;
- Leaving cases to be resolved until social distancing rules are relaxed will create significant backlogs for HMCTS and leave many lawyers without work.

The question that JUSTICE have posed is whether, in this time of crisis, it is possible to hold such ‘dispersed’ or virtual trials in which the principles of fairness, accuracy of evidence and certainty can be met. In order to test the case for virtual jury trials they have organised four virtual trial experiments between April-June 2020.^{iv} These have been conducted in partnership with the technology company AVMI and the support of Corker Binning solicitors. The trials were staged using practicing barristers, judges, court staff and a host of volunteers. They were also observed by in excess of one hundred members of the press, practitioners, HMCTS staff and other interested parties.

This report is the second in a series that provides a description and analysis of what has been learnt from these experiments. After each experiment, AVMI, JUSTICE and the authors identified problems and made adjustments to the next experiment with a view to improving the technology, the user experience and user interface, as well as the processes for preparing participants for their experience of a virtual courtroom. The first report evaluated the first two experiments in which everyone taking part in the trial was in a separate room.^v This report focuses on the final trial in which the jury were assembled together in a physical ‘jury hub’. It also draws on additional improvements to the process identified during the third trial where the jury remained dispersed.

It is recognised that deliberation of what is technologically possible must be set against two important considerations about what is appropriate. The first of these is that virtual trials must engender confidence in the legal system. Socio-legal research into conceptions of justice indicates that satisfaction with courts is not just linked to the outcome of a case but is more directly connected to a sense of ‘procedural fairness’. This includes the ability of parties to meaningfully participate and voice their concerns or position; that the process is transparent and adjudication impartial; that participants have confidence in the consistency of decision-making and see authorities as trustworthy; and throughout the process have a sense of being respected and treated with dignity (see further Tyler 2007-2008). The second is that digital solutions to the current COVID-19 crisis must be set against concerns about the digitally excluded. Research suggests that effective access and use of video technology differs according to age, income, education, mental and physical abilities and location, income, education, mental and physical ability.^{vi}

As noted in our first report, it is important to stress that these trials have been conducted during challenging times when all planning and design meetings have had to be conducted remotely. The fact that policy makers are keen to get input into questions that need a swift answer means that the evaluation reported here has been conducted more quickly than would normally be the case. A lot has also been learnt in a short period of time. In the sections that follow we outline how the trials were conducted before going on to discuss positive and negative aspects of the experiment. We close with a discussion of what could be done to maximise the chances of virtual trials meeting the high standards expected of the jury trial if the senior judiciary and HMCTS were to pursue this option. It is hoped that both our reports on the JUSTICE experiment provide more general reflections which will be of use to any part of the legal system where videolink is being used.

How do virtual trials work?

In virtual trials all the participants appear from their separate locations in a courtroom which comes together on a shared ‘public’ screen. The experiment was undertaken using a bespoke version of AVMI’s managed video conferencing platform. Each participant in the trial was labelled to show who they were and by the fourth experiment all participants occupied a consistent place on the screen throughout the trial (with the exception of the defendant who moved to the ‘witness box’ location to give their evidence). Jurors appeared together in slightly smaller blocks and were easily distinguishable from other participants. Witnesses appeared below the judge once called. For the majority of the trial, the defendant sat in the middle at the bottom of the screen flanked by the prosecution and defence barristers. A screen shot of the participants in the fourth trial can be seen below in figure one.



Figure One: Screenshot of the virtual courtroom on screen in fourth trial from the public gallery

A series of other secure virtual rooms also existed behind this shared view of the virtual courtroom. In each trial, two separate virtual rooms were provided for the defendant to consult with counsel and for others to introduce themselves to witnesses. When the judge required it, the technical team could also remove the jury as a group from the virtual courtroom to their virtual jury room, during breaks, for deliberation and to allow discussion between the judge and advocates on a point of law. The public gallery could also be closed if necessary.

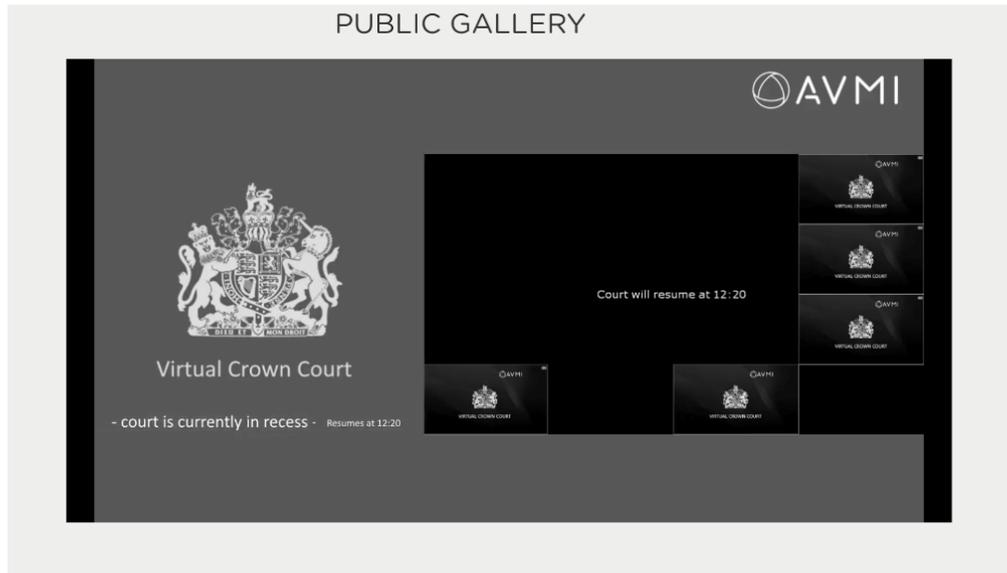


Figure two: Holding screen to show the public gallery when court would resume

In response to concerns that people viewing the public gallery were unsure of whether the link was still working after returning from a break, a change was made in the fourth trial so that that court participants would turn off their cameras (which show the court crest and their role respectively in each box) rather than suspending the video link. However, rolling text was added to the screen to indicate the recess occurring, and giving the estimated restarting time. This is shown in Figure two above.

Certain elements of the experimental design, such as the type of case and the people involved, were consistent across all four mock trials:

- All four trials involved a fictional case involving section 20 Offences Against the Person Act unlawful wounding.^{vii}
- The trials also involved a bundle of documents comprising images of an injury and a location map.
- Three live witnesses were examined and cross-examined in each trial, as was the defendant.^{viii}
- Each trial involved practicing barristers, a retired judge and volunteers recruited by JUSTICE playing all the remaining parts. The same judge and prosecution counsel appeared in all four of the trials, three different defence counsel appeared across the trials and a practicing clerk and usher/jury bailiff appeared in the fourth trial.
- To recreate the public gallery, the virtual court hearing was streamed on YouTube and a link was provided to allow invited observers to view it live, which on the third and fourth trials was hosted on AVMI's website to allow for unlimited observers. Observers were invited from HMCTS, the legal profession, NGOs, academia and the media to view the experiment.
- The trials lasted between 3-5 hours. In the first trial the main focus was on testing the technology, but subsequent trials were longer to allow at least half an hour for jurors to deliberate.
- A script or 'crib sheet,' highlighting what was different and what remained the same in a virtual trial was provided for the judge and clerk to help them in giving instructions to those involved.

Holding four trials with time for reflection between each also allowed JUSTICE and AVMI to progressively address some of the practical, technical and operational issues that arose after each experiment. Notable improvements introduced included:

1. Provision of better information for lay participants on the technology and trial process.
2. Introduction of a pre-trial test call for jurors and witnesses taking place at least a day before the trial to test their technological set-up and orientation to the call platform.
3. Separating out all technical support roles from court officer roles and including a jury bailiff and clerk.
4. Increasing the number of technical staff on hand to five, including an event manager.
5. Wearing of wigs in addition to other formal court dress for the judge and barristers and formal court dress for the court staff.
6. Changes to the public gallery view including the addition of a side panel so that observers could see relevant documentation being discussed in the trial.

Four significant additional changes were introduced for the fourth trial. The first two of these were the inclusion of HMCTS staff to perform the roles of clerk and usher/jury bailiff, and the provision of a new backdrop for the judge showing a coat of arms (supplied by HMCTS).^{ix} The third change was the appearance of a defendant (played by a custody manager) who appeared by way of a prison link booth from HMP Leeds. Save for one short drop in the link of around 30 secs right at the beginning, the prisonlink was stable throughout. The fourth and most significant change was the creation of a physical jury hub. In trials one, two and three the volunteer jurors participated in the trial from their homes, in common with other participants. In response to the concerns outlined in the first report on the experiment (Mulcahy, Rowden and Teeder, 2020), the jury were gathered together in a hall that was hired for the purpose.^x This major change is described in more detail below.

Evaluation of the Process

A series of positive aspects of the JUSTICE/AVMI experiment have been identified and further adjustments to the design have since been implemented. Ten particular issues, dealt with more fully in the first report produced by the authors (Mulcahy, Rowden and Teeder 2020), can usefully be summarized in this context:

Professional performance and creating a sense of occasion.

Those who were experienced in legal proceedings were effective in creating a sense of gravitas by retaining small rituals and marks of respect such as court dress, formal language, and solemn tone. The professionals involved adapted well to the situation remaining calm when there were technical hitches and giving advice and warnings that were particularly pertinent to a trial in which everyone is in dispersed locations. In the final trial the judge also ‘entered’ the screen, after all persons were in attendance, to better replicate what usually happens in a courtroom.

Lay engagement

The presence of all key participants in the trial on a screen just a few centimetres away from others generated a sense of close engagement with the process. This contrasts with courtrooms in physical Crown Courts in which the defendant and observers are placed at the margins of courtroom. This suggests that the virtual courtroom actually facilitated participation rather than rendering people more remote from each other.

Uninterrupted sightlines

The design of the virtual court experiments also had a positive impact on sightlines in the courtroom. All the parties could see each other’s faces very clearly and were accorded equal visual status. This constituted a success for open justice.

Managing the potential for intimidation

Intimidation of other people was made more difficult by the fact that everyone is on full view to others and there were no direct sightlines between participants.

The reduction of stress

Appearing by videolink could relieve the pressure and intensity of being in a physical court. Jurors seemed more comfortable asking questions and drawing the attention of the judge to technical difficulties than is the norm in physical courtrooms.

New verbal and visual cues

Jurors quickly picked up on non-verbal cues from others about how to behave including raising their hand or nodding their head. This indicated a sensitivity to the problem of time lag which is common and familiar to those who regularly use video technology.

Right to counsel

Provision for the defendant and their counsel to confer in a private ‘side room’ if necessary meant that the right to counsel could be respected. Movement between one virtual room and another was swift and seamless.

Facilitation of the best performance on the day

The technical run through provided the day before was a vital part of the preparation for witnesses and jurors. This allowed them to check the strength of internet connections, advise

participants about how to position themselves in relation to the camera and to test sound quality without the additional pressure of being about to give evidence.

Orientation

When people are gathered together in the same physical space and able to observe the same things there is more likely to be a common understanding of what is going on. The dynamic is very different when people are in dispersed locations. Participants also need to be given additional advice on how to manage their appearance, lighting and backdrop when appearing remotely from their home. It became clear in the course of the experiments that there should be additional sensitivity to the need to inform everyone of how to prepare and what to anticipate in virtual trials. Over the course of the experiments a set of orientation materials were provided for lay participants including separate tailored information packs for virtual jurors and virtual witnesses, and an orientation video which demonstrated what the virtual courtroom would look like and the role played by each person in the trial.^{xi}

Technical support

Those participating in the experiment were all offered familiarization sessions with the technical team. This was routinely given to jurors and witnesses in the days before the trial when appearing from home. Originally these sessions were with groups of four jurors but as the experiment progressed they were offered on a one-to-one basis. Problems with poor internet connectivity led to advice being sent to participants about minimizing other internet use in their home while the court was in session, pre-testing where their internet connection was strongest in their home and ensuring that they closed down any other programmes on their computer. This minimised technical problems on the day. The AVMI team also dedicated more support to the project and provided five technicians to support each trial by the third and fourth iterations.

Concerns raised

However good the design, the efficacy of the virtual court can always be undermined if lay participants do not have adequate facilities to participate in their home. These issues are likely to be exacerbated during the COVID-19 crisis when there is higher demand for internet services. If the virtual trial model was adopted by HMCTS, jurors without adequate equipment could be provided with an HMCTS laptop and mobile wi-fi hub which would help ensure they could participate effectively.

The most serious concerns highlighted by those involved in the first three trials related to problems that arose from jurors being dispersed. Criticisms coalesced around the following issues:

1. *Inconsistent connectivity*: The first three trials demonstrated that it was difficult for jurors to ensure consistent connectivity when relying on domestic internet connections and hardware, even when comprehensive briefing, testing and training was implemented. This led to concerns about discriminatory practices in jury selection due to digital inequality.
2. *Cognitive loading and stress*: Having to create a suitable space from which to appear, setting up the internet connection and troubleshooting when problems occurred was a burden for the volunteer jurors.
3. *Interruption to proceedings*: Connectivity problems led to some jurors losing their connection or capacity to transmit video during the trial. Concern was expressed that

this could lead to calls for a re-trial if it happened in a real trial. At a more pragmatic level it was also distracting and meant that proceedings had to be interrupted.

4. *Ensuring that jurors were focused on the trial:* When jurors appear in court from their homes there is the possibility that they could be looking at other things on screen unregulated by court staff.
5. *Suitable locations:* It was accepted that it can be extremely difficult for jurors to find a location in their homes that simultaneously satisfies the need to be close to an internet router, with a plain backdrop, where they can sit at a desk and remain undisturbed by others coming into the room or making noise for between 3-6 hours. These problems may be more acute during the COVID-19 pandemic when schools are shut and jurors may have child care responsibilities.
6. *Technical support:* In the first three trials technical support was provided to jurors by providing a chatroom facility operated by a different software programme. If a technical or other problems arose jurors and witnesses posted a comment in the chatroom. Technicians would then respond online and talk the user through the solutions available to them. If necessary they could also phone them. This process could be slow if users were unfamiliar with the processes being described.

As the relaxation of social distancing rules took place it became feasible to respond to these problems by experimenting with physical jury hubs where jurors could gather together supported by AVMI technical staff.

Responding to concerns: The creation of a physical justice hub

In the fourth experiment jurors were brought together in St Mary's hall, Wimbledon. This facility had a reception area, large hall, kitchen and three unisex toilets. The hall is of a modern design with plain white walls, wooden floors and lots of natural light which contributed to a sense of wellbeing. It was set away from the road in a quiet residential area. The hall was approached by a pathway via an open grassed area; the pathway is shown in figures three and four below.



Figures three and four: The approach to St Mary's hall and the grass lawn outside it which could be used as a waiting space

The interior of the building shown below in figure five is dominated by the main hall which can be divided into two by using a built-in sound-proof room divider. This large space was used to house desks and monitors for the jurors. The four members of the technical team on site set up in the kitchen.^{xii}

During the experiment social distancing and hygiene was facilitated in seven ways:

- The hall had a lawn in front of it which made it possible for people to gather there while social distancing. A barrier system was available for this purpose (see figure four).
- Tape had been placed on the pathway up to the main door indicating stopping points two metres apart (see figure three).
- The reception area was set up with masks, hand sanitiser and advice about social distancing (see figure seven).
- Each juror was given their own desk at which they could sit at a two and a half metre distance from the next juror.
- To minimise technical skills and infection risk, jurors did not have a keyboard or mouse on their desk.
- Soap was made available in the toilets which were cleaned regularly throughout the day.
- All volunteers were asked to bring their own food and drink.

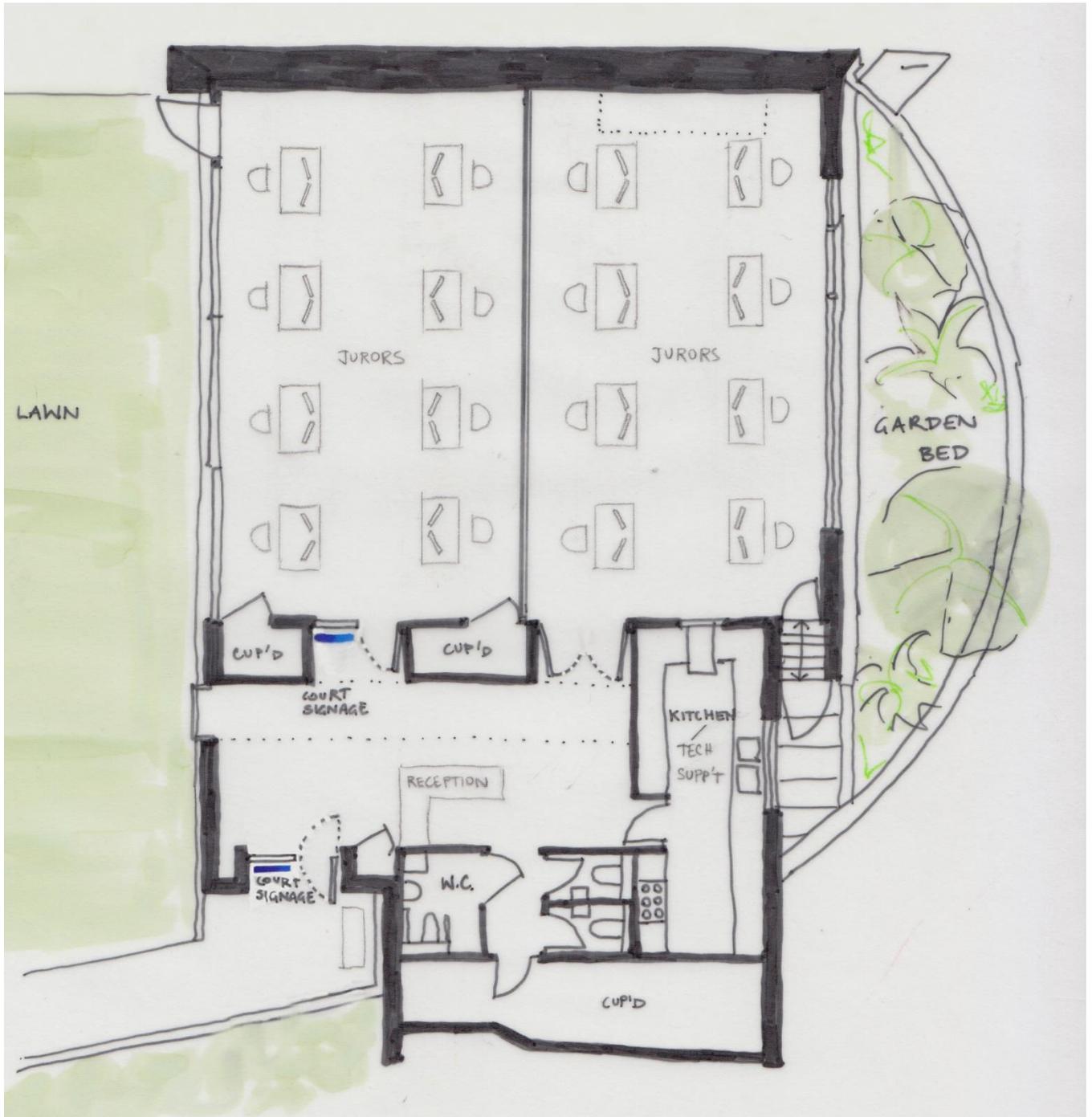


Figure five: Floor plan of St Mary's Hall, Wimbledon (drawing not to scale) as set up for the fourth trial (drawn by Emma Rowden)

The room divider was used to create two smaller rooms. The layout of one of these is shown below in Figure six.



Figures six and seven: To show set up of one half of the hall and reception with hand sanitizer and masks

Drawing on comments raised in the first report of the experiments (Mulcahy, Rowden and Teeder, 2020) attempts were made to create a sense of civic space. A poster about ‘Court and Tribunal rules’ supplied by HMCTS was placed on the wall just before participants entered the building. A pull up banner with ‘Welcome to the Crown Court’ also supplied by HMCTS was placed at the entrance and another simpler version was placed just inside the main door. A further three posters outlining HMCTS expectations of court users were placed in the reception area. These are shown in figures eight and nine below.



Figures eight and nine to show the threshold of jury hub and the reception area.

A temporary reception desk was also set up just inside the door. A member of the technical team, who dressed in a somber suit for the purpose, met members of the jury as they arrived, explained the layout of the facilities and showed them to the desk that had been assigned to them.

The benefits of a physical justice hub

The creation of a physical justice hub was considered to have been a success by all those who participated in the fourth trial and dealt with many of the issues that had arisen in earlier experiments. More particularly, it gave control of technology and place-making back to JUSTICE and AVMI. Good connectivity and high-quality equipment was guaranteed because AVMI was able to provide equipment and avoided the problems with poor internet connection experienced during earlier experiments. Each juror was given access to two screens which allowed them to view the virtual courtroom on one screen and evidence and the affirmation/oath on the other. These replaced the laptops with different camera angles that some volunteers had used in earlier experiments. Jurors were also provided with high quality sound reducing headphones. The desk and equipment available to jurors is shown in figure ten. This also shows the “Legal Responsibilities as Jurors” leaflet and Jury Information adapted for the hall location provided to jurors in plastic wallets.



Figures ten: desk, monitor and headphones made available to all jurors

The use of the room divider meant that the two sections of the main hall shown in figure five could be set up so that all participants had a uniform white backdrop behind them. This avoided problems experienced during the first three trials in which jurors appeared from their homes surrounded by personal effects which could be distracting. This can be illustrated in the comparison of the shared screen in trials one and four shown in figures eleven and twelve below.



Figure eleven: Experiment one

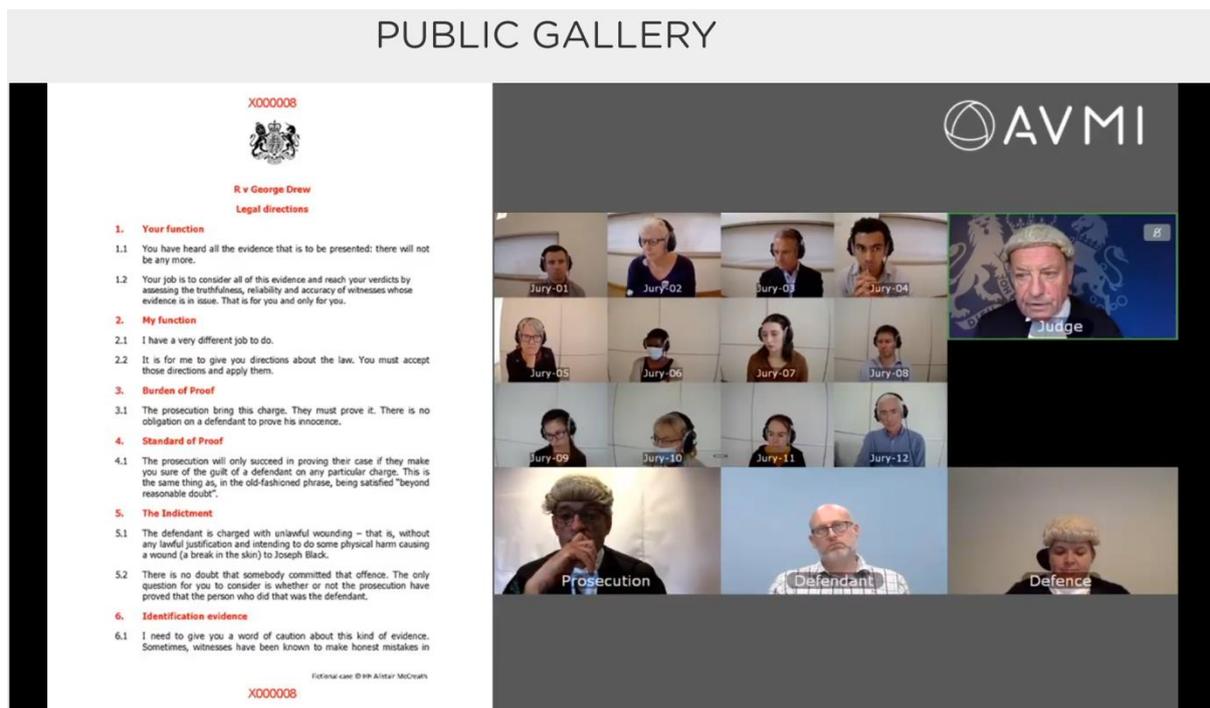


Figure twelve: Experiment four^{xiii}

When jurors were dispersed the judge had to ask them to confirm that no one was in the room with them during the course of the trial. This was not necessary once they were gathered together in a physical space. Concerns that jurors may be answering emails and searching online when using their own computer from their home were also addressed when equipment was provided for them without a keyboard, mouse or access to an internet browser.

The fact that AVMI were in control of providing the equipment, setting up the rooms and providing on site assistance meant that the fourth mock trial went much more smoothly than previous ones. AVMI spent the previous two days beforehand setting up the facility for the fourth virtual trial and, having registered jurors at 9am and answered their initial queries, everyone in the jury hub was ready at 9.20am for a trial that was not scheduled to start until 10am.^{xiv} Jurors seemed much calmer as a result of having technical support to hand. The connection from the jury hub to the virtual courtroom did not fail once during the day and allowed the judge and barristers to concentrate on the proceedings rather than worrying about who was present and participating.

Demands made of the jurors to facilitate their own participation in the trial were also significantly reduced and things were much simpler for them in the fourth trial. They did not have to worry about being able to connect to the trial; they simply had to sit down in front of some monitors. In addition jurors did not have to bother with the chatroom used in earlier experiments to alert technicians to a problem; they merely raised their hand. Jurors were also not expected to bring up evidence on their own screen as they had been expected to do in earlier trials. The provision of two screens meant that evidence was displayed at the same time for every juror by the technical team. Finally, the technical team took control of microphones so that they did not have to worry about individual jurors turning them on by mistake and causing a disruption during the trial. It is significant that there were far fewer technical difficulties and disruptions as a result during the fourth trial.

A number of participants commented on the fact that the jury was very engaged with the case. Many of the jurors were actively taking notes, asked pertinent questions, asked for more evidence, and indicated that they would have been prepared to stay longer if necessary.

Next steps

The fourth virtual trial with a physical jury hub was widely considered across the team to be the most successful of the four experiments. In particular, there were far fewer technical problems, all of the additional responsibilities of jurors were removed and everyone seemed engaged in the proceedings. These findings are in addition to the benefits outlined in the first report of the pilot, which drew attention to the democratizing effect of the defendant being more central to proceedings than they would be in a physical court, and their being placed alongside their counsel onscreen. It is in the view of the authors that HMCTS should seriously consider the benefits of this format for restarting criminal jury trials, in order to deal with the significant backlog facing the criminal justice system and prevent a worsening of the effects of the pandemic on the functioning of the justice system.

A lot has been learnt in the course of the JUSTICE/AVMI experiments which could form the basis of good practice guidance were HMCTS interested in rolling out this initiative. Building upon the advice given in the first evaluation of this experiment (Mulcahy, Rowden and Teeder, 2020), some of which are repeated here below, the following recommendations could usefully be taken into account.

More complex trials

While JUSTICE asked AVMI to consider whether the system could be adapted to include other participants such as a remote interpreter or intermediary, this was not trialled during this experiment and needs further testing. Interpreters do not necessarily need to appear on the screen but their reliance on audio and lip reading mean that there are advantages to them seeing everyone involved in the trial at close quarters.

JUSTICE and AVMI have concluded that conducting trials with multiple defendants and lawyers would be too complex at this stage when the case for virtual jury trials has not yet been fully tested. The issue of how to deal with vulnerable witnesses was also raised. Appearing remotely still allows subtle threatening signals to be made by defendants and witnesses. This could be managed by restricting the video stream but would have to be considered further.

Access to technology

AVMI have also indicated that a series of additional improvements could be tested out if resources were made available. These include the provision of hardware and a secure internet connection to witnesses who are digitally impoverished. The provision of wide angle cameras to participants would also allow court staff to monitor activity in the rooms from which participants are appearing,^{xv} as well as a more stable arrangement with built-in redundancy and fail-safe measures for a more reliable public gallery stream. AVMI has also suggested that pre-trial evaluations of the hardware and internet capacity of participants could be undertaken to ensure that all those taking part have the ability and capacity to fulfill their role in the virtual trial.

Witnesses

Witnesses spend a lot of time waiting to be called into court whether they are in a physical or virtual courtroom. In the virtual court experiments a member of the technical team kept in

touch with witnesses through a chat room function, using mobile phones if necessary. Witnesses knew what order they were appearing in and could see in the chatroom which witnesses were being called. However, this did mean that witnesses had to stay close to their computer for what could be several hours in the run up to them giving evidence. It would be helpful to instigate a system in which they did a technical run through early on the day of the trial and were then given notice by text an hour before they were likely to be called. This would give them time to use the bathroom, get a drink and gather any documents they might need including a religious book or copies of the affirmation/oath they would be required to read out. While the chatroom was useful to communicate with the court, it should not, in the interests of preventing intimidation, be open to witnesses to leave messages that could be seen or responded to by other witnesses.^{xvi}

While jurors were graciously thanked by the judge at the end of the trial and they were invited by email to join the public gallery witnesses exiting the proceedings very abruptly as soon as they had finished giving evidence. It would be valuable to invest in a video which could be shown at this point to thank them for performing their civic duty and where relevant, alert them how to might contact any relevant support (e.g. Witness Support). This would engender a sense of their contribution being valued and consideration shown for their wellbeing.

Videolinks: The need for adequate, frequent and substantive breaks

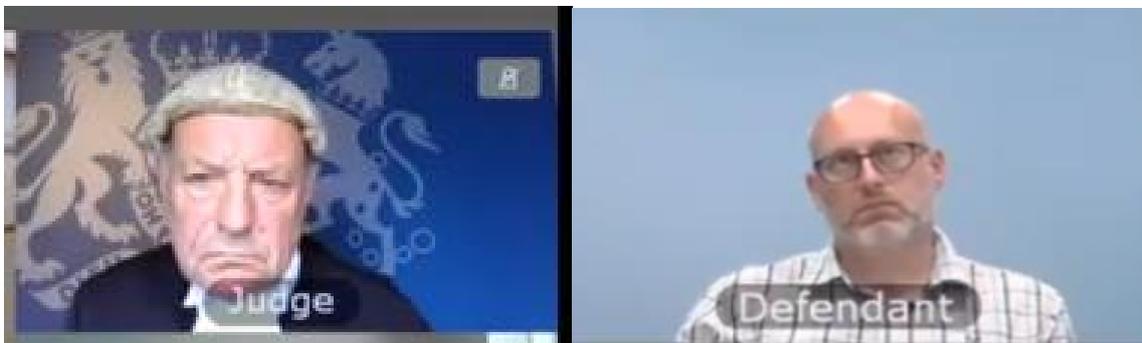
The provision of a light and airy facility for the physical jury hub worked well for the jurors in the fourth trial but this experience was not shared by the custody officer who played the defendant in the trial and appeared from a prison video suite. Unlike other participants he was sitting in a windowless room for the entire day and indicated that he would have liked to take more breaks. Windowless facilities are detrimental both for their lack of fresh air and how they prevent occupants gaining a sense of the diurnal rhythm of the day. With the jury appearing together from the one space, the length of break also needs to take into account new sanitizing and hygiene regimes that may make time spent in bathrooms more lengthy than normal, which should particularly be borne in mind.

Backgrounds, lighting and appearance to the court

Backgrounds, lighting and the appearance of all the participants is important if they are all to be fully able to present themselves well, and a sense of gravitas is to be created. Extremes in colour contrast and lighting temperature can, for instance, make faces difficult to discern. This can be avoided with the careful design of backgrounds and lighting that complement the range of human skin tones (see further Rowden *et al* 2013). The effects of the interplay between colour and light was most noticeable in the fourth trial where it was decided to trial a plainer white background behind the barristers and jury. This was not always successful and greatly darkened the appearance of the prosecutor's face, as well as several of the jurors, who were sitting in different lighting conditions from each other. In the case of the prosecutor, this was rectified during the trial by the re-positioning of a lamp (see figures thirteen and fourteen), but careful thought should be given to research on optimal backdrops and lighting for videoconferencing in the future. Thought might also be given to making pull up banners available to those participating from their home and making a distinctive colour banner available to barristers in order to distinguish them from others.



Figures thirteen and fourteen: Prosecutor with makeshift white paper backdrop and poor lighting to the face on the left, and with improved lighting coming from behind their screen on the right.



Figures fifteen and sixteen: The Judge appearing behind a bespoke backdrop with the Royal Coat of Arms and the 'defendant' appearing from HMP Leeds.

The appearance of the judge and the defendant in the fourth experiment was closest to best practice that the team has achieved thus far. The judge appeared from a dark blue fabric backdrop that avoided glare on which a large, off-centre, silver coat of arms was visible. This greatly enhanced the feeling that the trial was occurring in a court and engendered a sense of the civic sphere. The defendant's appearance onscreen was very clear in part because they were appearing from a light duck egg blue colour, which is the preferred colour for videoconferencing as it works for the largest range of skin tones. Their faces were evenly lit from above and their front, and as such, their facial features were clearly visible onscreen.

The need for adequate communication between participants

AVMI has indicated that the public gallery could be improved with appropriate investment. There is a need for a technician to be constantly monitoring the public gallery in order to ensure that the public and the press see and hear all of the trial so that it is rendered open.^{xvii} There is also a need for those in the public gallery to be able to be given notice of the need to return to court after a recess or when jury deliberation finishes. This would normally be managed with a public announcement system in the court. A messaging system (a bespoke downloadable app, or failing this, WhatsApp or text messaging) might be possible for registered users.

Choice of venue for the jury hub

Much of the success of the fourth trial was down to the choice of venue which was critical to creating a sense of calm, order and the civic realm. Venues selected for this purpose need to be in a quiet location away from the road in which there are no unnecessary distractions. While virtual trials are necessary there also needs to be a space outside the building where participants can wait while socially distancing and retreat to for fresh air during breaks, ideally with an under-cover space for when there is inclement weather. An entrance and reception area that is wide enough to allow for social distancing as people enter the building, register and are shown to their desk is ideal. A jury hub must also have adequate toilet facilities that allow people to respect social distancing, wash their hands and exit the toilet without having to touch any surfaces after handwashing. The facility selected for the fourth experiment would have benefited from more comfortable chairs for jurors and a second room in which the jurors could sit and deliberate without computer equipment interrupting sightlines. Wherever possible, and to maintain a sense of dignity of the courtroom, a clutter-free environment is preferred, with minimal additional paraphernalia (sporting equipment, excess furniture, etc) in view.

Resources

It took the technical team two days to set up the hall, desks and screens and there were four technicians in the building on the day. The costs of set up would be minimised if a space could be found that could be used throughout the duration of virtual trials. If this experiment is rolled out it would be important to put together a room and building specification for those looking for suitable sites. AVMI have suggested that exhibition centres or university premises would be ideal as they are more easily able to manage larger numbers of people circulating, and so could more easily adjust for the requirements of socially distanced jury hubs.

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Observations in this report have been drawn from our extensive research work spanning the past decade in examining the introduction of videolinks to courts and the design of justice environments and law courts. For a more comprehensive reading list, see Mulcahy, Rowden and Teeder (2020, pp34-7).

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Endnotes

ⁱ See further HM Government (2020b).

ⁱⁱ See for instance the statement by Garden Court Chambers (2020).

ⁱⁱⁱ See Institute for Government (2020).

^{iv} The experiment tested a situation where all participants took part in the trial from their homes during lockdown, including all jury members, and the trial was run three times, on 9th April, 17th April and 6th May, 2020. A fourth trial was held on 12th June, 2020, and tested the same virtual platform, except with the jury appearing from one location at a 'jury hub', a community hall in Wimbledon.

^v See further Mulcahy, Rowden and Teeder (2020).

^{vi} See further JUSTICE (2020).

^{vii} The first three trials were a fictional case of *R v Hallett* supplied by the Honorable Society of the Inner Temple. In the fourth case the fictional case of *R v Drew* was devised by HH Alistair McCreath. By providing materials for the exercise, Inner Temple is not endorsing any view one way or the other on the subject of virtual jury trials.

^{viii} The first author played the part of a witness in the third trial.

^{ix} This was printed on fabric material to avoid shine.

^x In the fourth trial, the first author observed from the jury hub and the second author observed the public gallery from their device.

^{xi} JUSTICE directed jurors to the presence of this video and the standard video available for jurors by HMCTS in information sent out in advance. In the fourth trial, the jurors were all shown this at the same time ahead of the court sitting. Witnesses and jurors joining from home were requested to watch the video immediately before joining the call.

^{xii} This had a hatch into the hall through which cables ran. This meant that the hatch door could not be closed during the jury deliberation. In order to ensure that the jury deliberation was held in private the technical team moved into the reception area during this process.

^{xiii} There were changes made to the appearance of the virtual court onscreen. Between witness examinations, an additional space was made for jury bailiff/usher below the court clerk. However, once a witness had been sworn in, these court officers' videos were muted and each of the non-jury participant boxes increased slightly in size to enable the witness to be seen a bit more clearly.

^{xiv} This replicates what happens in standard trials where jurors arrive early and wait around a lot. JUSTICE advised in an email communication that they bring something to read and expect waiting time.

^{xv} In the trials to date the judge has asked jurors and witnesses to confirm that they are in a room alone but this does not allow oversight of whether someone else comes into the room after this discussion has taken place. For this reason, witnesses were asked to sit with their door in view.

^{xvi} The clerk was in touch with the witnesses in the fourth trial to give them a warning against this sort of activity.

^{xvii} In the fourth trial there was a moment towards the end of the trial where the sound cut out for the public gallery and the technical team were only alerted to this by the team observer in the public gallery using the WhatsApp message group organized for the day. This was dealt with elegantly by the judge by continuing with the proceedings, because of the compressed time available for the test, and later explaining during a recess to the public gallery the content of what they had missed, which while not ideal, was a good working solution to the problem. In a real case, the trial would need to stop while this was addressed.