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Introduction

The first rule of trouble shooting is keep calm don't panic and always have your towel ready. 😊

Distance learning is adopting personal computer (PC) based video conferencing (VC) solutions over the past interactive television (ITV) methods used in the past. The use of PC based VC solutions allows for rapid adoption and deployment of technologies which can improve the classroom experience by allowing students and teachers additional flexibility in the delivery of educational resources. In addition to adopting PC based VC solutions, Distance learning has developed and added additional features which allow for more efficient support systems and increased capability for the classroom.

A deviation from the type of computing from which many people are familiar is use of a virtual environment. The host (real computer) provides a platform which the end user is not in direct contact with. The virtual platform is what the end user has displayed to them to working as if it is a real metal computer. The use of virtualization allows for fast recovery of computer problems and a simple maintenance structure by not requiring time diagnosing a virtual machine when it can be replaced much quicker than diagnosed.

As with all changes in technologies sometimes support for older technologies is phased out. Although the new PC based video conferencing provides many advantages over ITV, it does come with a sunset on video cassette recorder (VCR) usage. If VCR capability is needed then the tape will need to be converted to a digital format. The video conference PC’s are capable of playing digital video disk (DVD), compact disk (CD), Ogg, Motion Picture Experts Group (MP3, MP4), and many other modern audio video formats.

This document is an ongoing work, as additional issues arise and are noted, the issues and their resolutions will continue to be added to this document. Additional current information will be available at zoom.missouristate.edu (only accessible from within the MSU network).

Your Distance learning technical support staff is working very hard to make the video conference systems as reliable and trouble free as possible. If you have suggestions or recommendations to improve the user experience feel free to pass it on to the technical staff.

Technical Support

Distance Learning technical support staff is always available during scheduled video conference meetings. To contact support call 417-836-6421. Technical support may be available outside of scheduled video conference meeting hours.

Starting a video conference

The Distance Learning video conference computers are designed to auto start and dial into a meeting. Prior to a scheduled meeting start ensure the televisions are turned on. Do not disturb the computer, the
virtual machine session will automatically start. If the virtual machine meeting session is not started by 3 minutes until the class start follow the trouble shooting steps and call the technical support staff at 417-836-6421.

It is important to not disturb the keyboard prior to class start. Disturbing the keyboard will cause the computer to move to “classroom only” mode. The mode will be automatically shutdown and video conference mode will be started.

The computers will begin the auto start process ten minutes prior to scheduled class time. One may not see any activity for the first couple minutes as background maintenance processes are taking place.

**Sharing a screen**

To conduct a screen share move your mouse to the bottom of the Zoom window. In the pop-up task bar a Share Screen icon will appear. Click the icon, a new window will pop up that shows items that can be shared. Click the item to share and if you will be sharing an audio or video click then check share audio check box at the bottom of the window.

Next click share at the bottom right of the window. You are now sharing your screen. Your shared screen will have a green border around it.

To stop sharing move your mouse toward the top of the screen, a drop down menu will appear with a Stop Share button.

**Recording**

Due to the limited scheduled time between classes and Zoom’s recording compile time after a meeting ends, it is not recommended to record a meeting from a classroom computer. A
method for scheduled recording is being developed but not yet available. Until this is available it is recommended that you join your office or laptop computer to the meeting and record with it. To record from your computer or allow another participant to record, select that participant and set the choice to allow them to record.

**Chat**

The video conference system incorporates a text chat system. To use chat select the Chat icon in the Zoom window task bar. A window will pop up to the right of the Zoom window. Within the window, at the bottom you can type a text chat message and select to send to everyone or a specific person in the meeting.

**Creating Video Breakout Rooms**

This section is provided by Zoom.US edited by T. McKellips

1. Start an instant or scheduled meeting.
2. Select Breakout Rooms
3. Select the number of rooms you would like to create, and how you would like to assign your participants to those rooms.
   - **Automatically**: Let Zoom split your participants up evenly into each of the rooms
   - **Manually**: Choose which participants you would like in each room
4. Click Create Breakout Rooms.
   You rooms will be created, but will not start automatically. Once the rooms are created, you can manage the rooms prior to starting them.
Assigning Participants to Rooms

To assign participants to your Breakout Rooms, select Assign next to the room you wish to assign participants to and select the checkbox next to each participant you wish to assign to that room. Repeat this for each room.

Once a participant has been assigned (manually or automatically), the number of participants will show in place of the Assign button.

Preparing Breakout Rooms

If you selected to assign participants to rooms Automatically, your rooms will appear with the participants assigned evenly across your rooms. If you chose to assign participants manually or wish to make changes, you can do so before starting the rooms. Participants who are not assigned to breakout sessions will remain in the main meeting when the rooms are started.

• Move to (participant): select a room to move the participant to


- **Exchange** (participant): select a participant in another room to swap the selected participant with

- **Delete Room**: delete the selected room

- **Recreate**: allows you to recreate the same breakout rooms
- **Add a Room**: add another Breakout Room
- **Open All Rooms**: start the rooms. All participants will be moved to their respective rooms after confirming the prompt to join the Breakout Room. The host will be left in the main meeting until manually joining one of the rooms. The participants (and the host when manually joining a room) will see the message shown below when being moved to the Breakout Room.

  ![Message](image)
Managing Breakout Rooms - In Progress

Once the Breakout Rooms have been started, the participants will be asked to join the Breakout Session. The host will stay in the main meeting until joining a session manually. If a participant has not joined the session yet, it will be noted by "(not joined)" next to their name.

- **Join (room):** allows the host to join the breakout room selected
- **Leave (room):** allows the host to leave the room and return to the main meeting (only shows when in a Breakout Room)
- **Stop All Rooms:** Will stop all rooms after a 60 second countdown, shown to the host and participants, and return all participants back to the main meeting.

**Ask for Help**

Participants in the Breakout Rooms can request that the meeting host join their meeting by pressing **Ask for Help** in the menu bar.

The meeting Host will be prompted to join the room where the request originated from. Select **Join Breakout Room** to join the room.

**Using computer in classroom only mode**

The Distance Learning video conference computers can be used in a stand alone classroom only mode, whereas a video conference connection is not created. Prior to using the classroom mode it is advisable
to confirm that no video conference schedule exists for the time you are planning to use the room as classroom only. If a video conference is scheduled during the time you are using the room, it shall take priority and shutdown your classroom session.

To start a classroom session ensure all monitors and televisions are turned on, wiggle the mouse and press a letter key on the keyboard. Within a few seconds a Windows virtual machine will begin loading. Once it is started it can be used in much the same way as the video conference machine except that a video conference system is not available.

**Media Player**

The virtual machines contain VLC Media player for playing any audio or video files, DVD's or CD's. VLC is very simple to use, herein are a few tips. DVD's are not all the same, you will find some will play in one type DVD player while it will not play in another type of DVD player. Often the reasons are varied as to why this happens, but most common is the poor and varied designs in digital restrictions management and differences in the actual writing of the DVD's. VLC in itself is very versatile and will play many differing audio and video formats.

Upon inserting a DVD in the DVD drive VLC may start automatically, if it does not click the VLC icon on the desktop.

When VLC starts, from the top line menu, select Media, Disc, Play if this does not work, your DVD is not in a standard format. You may need to select Media, Open Folder and drill down to the file you want to play.

At the bottom of the VLC window, you will have all the standard controls start, pause, stop, and other more advanced controls available which are beyond the scope of this document.

**Troubleshooting**

**Virtual Machine Display is not on all screens**

Issue: No video

Tom M’Kellips, DM
Resolve 1: Ensure all TV’s are turned on.
Resolve 2: Cycle the monitors using the button in the top drop down menu (icon next to the Win10 label, see image below). The drop down menu is located at the top center of the primary screen, roll your mouse cursor to the top of the screen and the menu should appear as shown in the image below. The VM is designed for multiple monitor modes the user may change this easily by using the cycle button. If the cycle button does not appear to work, one of two possible conditions may exist. The first may just be a simple disconnect between the button and the VM. Often this is resolved by taking the VM out of full screen mode using <CTRL+ALT+ENTER> and then returning it to full screen with the same command. If this does not resolve it then the underlying host operating system may have not been configured for the display type desired.

**Scheduled class did not start**

Check: Are all TV / Monitors turned on? They may need power cycled.
Issue: VM Player required some kernel updates.

Resolve: Call 417-836-6421 Distance learning technical staff can resolve this issue rapidly, generally less than 5 minutes.

**Zoom did not make connection**

Issue: Scheduled meeting start string failed.
Resolve: If the Windows Zoom virtual machine is running, one can manually join the meeting. First confirm that the Windows Zoom virtual machine is running. To confirm roll your mouse to the top of the primary screen and look at the drop down menu. On the right it should show “Win10” if it is not exactly as stated then you will be in the wrong system, call technical support to resolve the issue. If the correct system is running then either double click the “Zoom” icon or in the search window of the task bar search for “Zoom”. When Zoom starts a window will appear that offers two choices, Join or Sign In. Click “Join” a new window will appear asking for a meeting ID. Enter the correct ID for the meeting the computer is to join with, a list of classroom meeting ID’s are in Appendix D.

Meeting started but no camera is available.

Issue: Camera muted in Zoom
Resolve: Move the mouse to the lower left of the Zoom window, then the menu bar pops up does it show the camera icon with a slash through it. If so click the icon to remove the mute.

Issue: Camera not recognized by USB sub system
Resolve: VM did not connect to camera upon starting. Move the mouse to the top center of the screen and wait for the small drop down menu. Click Virtual Machine then mouse to Removable Devices. Look for the camera in the list. Roll the mouse over the camera. If the pop-up says “Connect (disconnect from host)” click the link. If the pop-up says “Disconnect (connect to host)” then DO NOT CLICK the link the problem is elsewhere. If the camera is not in the list at all then move to the next diagnostic step.

Issue: Camera is hung
Resolve: (When instructed by technical support) Pull the power to the camera, wait 10 seconds then reconnect power. Power can be pulled at the back of the camera or at the power adapter. Did the camera come on line?
Issue: Camera has no power
Resolve: Check to make sure power is plugged in at outlets, is the circuit breaker popped.
Switching Cameras

Some Zoom rooms may have more than one camera, including a document camera. Any of the cameras can be made the active camera during the meeting. However, only one camera can be active at any time. Changing cameras during a meeting is performed via one of two ways. If one is focused within the Zoom window (mouse inside and clicked) pressing ALT+N will cycle through the cameras. Alternately one can click the ^ next to the camera icon in the pop up task bar within the Zoom window and select a different camera.

Microphone not working

Issue: Muted, Power drop on USB sub system, Mixer off, Speaker mic off
Resolve: In the Zoom window move the mouse to the lower left of the window. Ensure the microphone does not have a red diagonal line through it, if so click the icon to un-mute the microphone.
If the problem is not resolved select the ^ next to the microphone icon. Ensure the proper microphone is selected, if it is selected try selecting “same as system” wait about 10 seconds then return to the menu and select the proper microphone. A list of the proper microphone for your system will be found in appendix A.

No audio

Issue: No audio or audio from the wrong speakers
Resolve 1: First are the speakers turned up and off mute?
Resolve 2: Is the correct speaker selected?
Check three places for audio connection issues
If using Logitec, Aver, or Jabra speakers, in the VM drop down, ensure that the proper speaker connection is active.

Within Windows select the speaker icon at the lower right of the task bar via a right click. Now select playback devices right click the correct playback device and select set as default if it is not already set.

Within the Zoom window point the mouse at the lower left of the window. When the menu pops up click the ^ next to the microphone icon. In the speakers section of the menu ensure the correct speakers are selected.

**Video freezes / drops during meeting**

Issue: Momentary freeze of video or complete loss of video.

Resolve: Check the lower left corner of the Zoom window, a signal strength icon should be visible. If bandwidth is poor it may be red which can cause video signal drops. Check Icinga, is it showing ping troubles to the client computer? If this is on a MSU client then report the incident in order to look at circuit issues. The video for the client may need to be muted to continue the meeting with audio and shared screens.
Black window with text or DOS window

Issue: A window appeared at the start of the meeting which is black and contains a few lines of white text. The virtual machine started on the screen opposite of the black window.

Resolve: It is normal window which underlies the virtual machine. The window itself can not be closed; however, one can cycle monitors using the cycle monitor button in the VM drop down menu to extend the virtual machine screen over the top of the window.

If nothing else works then the answer must be 42.
Appendix A Microphone assignments

MSUAlum312  Logitec Group Speaker Microphone
MSUAlum400  Logitec Group Speaker Microphone
MSUCamd001  USB 2 or 4
MSUCamd002  USB 2 or 4
MSUCamd003  Logitec Group Speaker Microphone
MSUCamd004  Logitec Group Speaker Microphone
MSUGohn210  Logitec Group Speaker Microphone
MSUGohn212  Logitec Group Speaker Microphone
MSUJPEX003  Logitec Group Speaker Microphone
MSUPCOB125  Aver
MSUPCOB127  Logitec Group Speaker Microphone
MSUPCOB228  Jabra

Appendix B Speaker Assignments

MSUAlum312  Logitec Group Speaker Microphone
MSUAlum400  Logitec Group Speaker Microphone
MSUCamd001  HDMI
MSUCamd002  HDMI
MSUCamd003  Logitec Group Speaker Microphone
MSUCamd004  Logitec Group Speaker Microphone
MSUGohn210  Logitec Group Speaker Microphone
MSUGohn212  Logitec Group Speaker Microphone
MSUJPEX003  Logitec Group Speaker Microphone
MSUPCOB125  Aver
MSUPCOB127  Logitec Group Speaker Microphone
MSUPCOB228  Jabra
Appendix C Zoom Teleconference back up

If audio is problematic for a class session, Zoom has a backup method which can allow one to continue a class with some limitations. If audio is failing or if a student does not have access to a computer with a microphone the student can dial into the conference using one of the below phone numbers.

US East
- +1 305 859 3847
- +1 646 558 8656
- +1 646 568 7788

US West
- +1 408 638 0968
- +1 415 762 9988

Appendix D Classroom Meeting Numbers

<table>
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<tr>
<th>Classroom</th>
<th>Meeting Number</th>
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<tr>
<td>MSUAlum312</td>
<td>4170000312</td>
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<td>MSUAlum400</td>
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<tr>
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