Guide for using Adobe Connect for Remote and Asynchronous Delivery of Engineering Technology Courses

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Introduction

This guide provide an overview on the use of Adobe Connect (AC) conferencing software to stream and record lectures from VTC classrooms.

The AC video conferencing technology has been used at the VSC for several years. Starting in approximately 2010 it was adopted at VTC to deliver lectures for classes in the computer, electrical, and mechanical engineering technology departments. In 2015 Adobe Connect and Vidyo were selected as the platforms for the remote delivery "Telepresence" system that replaced the VIT system. Over the past two years these technologies have been more broadly adopted to deliver classes for nursing, engineering, science, math, and other topics. Lecture streaming and recording is an integral component of the Manufacturing Engineering Technology BS degree program.

The Telepresence rooms on the Vermont Tech campuses and off-campus sites include computers, video cameras, microphones, and the other integrating components. This hardware is interfaced with two different teleconferencing applications - Adobe Connect and Vidyo. Each of these systems have different advantages and disadvantages.

Advantages of the Vidyo system include better student-instructor video and audio interaction and easier initiation at each lecture period. Disadvantages of the Vidyo system include the requirement that students to be located at specific sites with the appropriate hardware and (under the current software contract) the inability to record lectures. The Vidyo system is used by programs where student-instructor interaction is critical and recording is not required.

Advantages of the Adobe Connect system include flexibility whereby students can log in from any computer (at work, at home, at a VTC remote site) and lectures may be recorded for asynchronous delivery of the content. Disadvantages include a more complicated start up routine and poorer quality video/audio student-instructor interaction. The Adobe Connect system is utilized by other programs where there is a need to record and post videos for asynchronous delivery.

This guide focuses on the use of Adobe Connect for synchronous and asynchronous delivery. It was chosen for manufacturing related courses because it allows recording of the lectures, which is necessary for students who work shifts during the lecture times. It also provides the flexibility of allowing students to access streamed lectures from any computer, either at work or at home. This feature seems to be very convenient for working students with families.   The interaction of remote students with the classroom is available through a chat window and through audio. It is also possible to show video images of the classroom and remote students but this consumes a portion of the window so manufacturing classes delivered via adobe connect typically do not include video feed from remote students.

(1) Adobe Connect Account

The first step to utilizing Adobe Connect is to request an account through the IT department. This is not a standard part of the IT accounts created for new and adjunct faculty and should be requested in advance of the semester start.

(2) Telepresence Hardware and Login Procedure

Guides on the use of the Telepresence systems have been produced but the VTC IT department and are located in all of the rooms. The Adobe Connect Teachers Guide is included in this document as an appendix. It focuses on the initiation of the hardware and some of the basic functions.

(3) **Creating a New Meeting, Setting a Unique URL, Making it Accessible**

To create a new site for a class go to *vscmymeeting.adobeconnect.com*, login, and create a new meeting. When a meeting is first created you have the opportunity to create a unique URL, e.g. *vscmymeeting.adobeconnect.com/MEC1040,* where the course number is included. Otherwise the URL has random letters and numbers. Having simpler a URL defined with the course number is not necessary but can be convenient when communicating to students how to access the live-streamed lectures. Once a meeting is created it is not possible to change the URL.

When setting up the meeting to serve as a site for a class lecture it is important to make the meeting accessible to anyone with the URL so that they can access the class by entering the URL

or selecting a link from a Moodle site. From the meeting page this is done under Meeting →
Manage Meeting Information → Edit Information and then select the access option.

(4) Adobe Connect – Pods and Layouts

The Adobe Connect interface is organized as "pods" which are windows that present different
types of information to the users. There are 9 different pods but basic interaction with the
remote students and lecture content delivery can be accomplished with the "Camera", "Chat",
"Share" pods. Pods are added using the "Pods" drop down menu.   It is also convenient to use
the "Attendee List" pod to have a record of who is present remotely.

The interface allows for different different "Layouts" of pods. The figures below show the basic
layouts used for delivering different manufacturing courses. The layout and use of pods is a
broad topic and the information presented here is a basic starting point and represents what
was commonly used for mechanical and manufacturing courses.
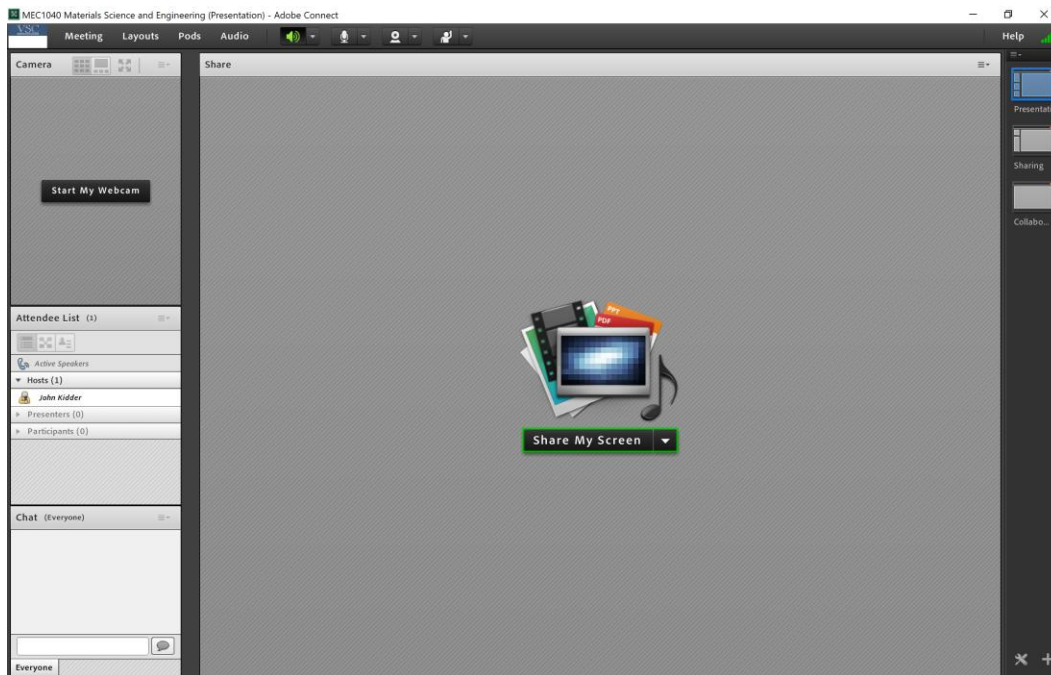
Figure 1 – A basic layout showing the Share, Camera, Attendee List, and Chat pods

The pods can be rearranged and resized directly. Along the right side of the main window are
icons for different "Layouts", in this case named "Presentation", "Sharing", and "Collaboration".

The different layouts allow the instructors to switch between modes where the emphasis is on different types of content, i.e. information delivered via the camera (i.e., capturing a discussion when writing on a traditional white board) versus a mode where content is delivered via Powerpoint slides.

The figures below are screenshots from lectures that were streamed live and also recorded for remote students while lecturing face-to-face cohort in the room on the Randolph Center campus. They show different configurations of the adobe connect pods for different types of information.

Figure 2 - Layout with the Share pod as the largest. An uploaded document (Powerpoint presentation) is being shared and the Camera, Attendee List, and Chat pods are arranged along the sides.
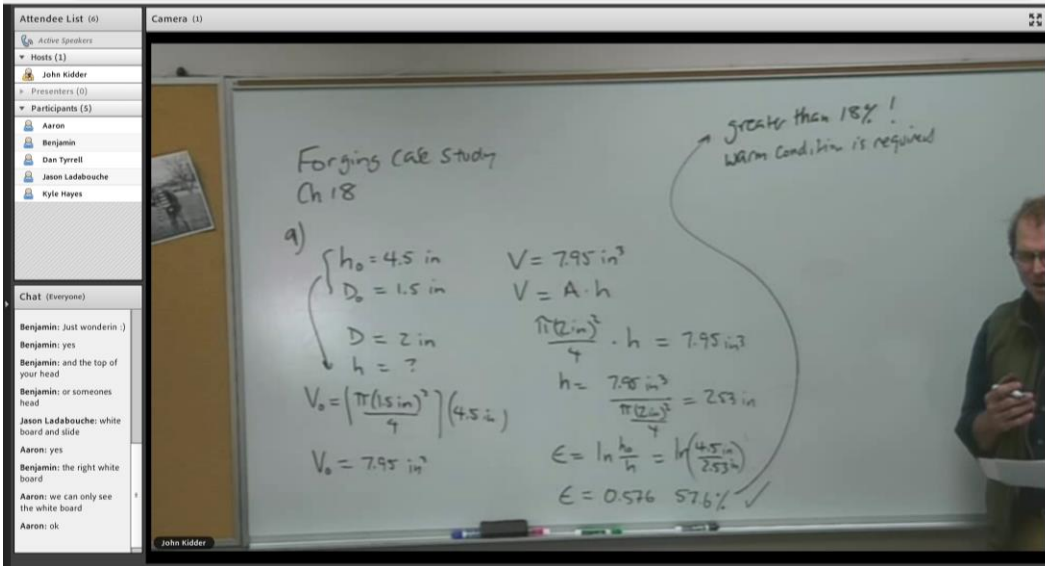
Figure 3 – Layout where the discussion centers around work on the white board.
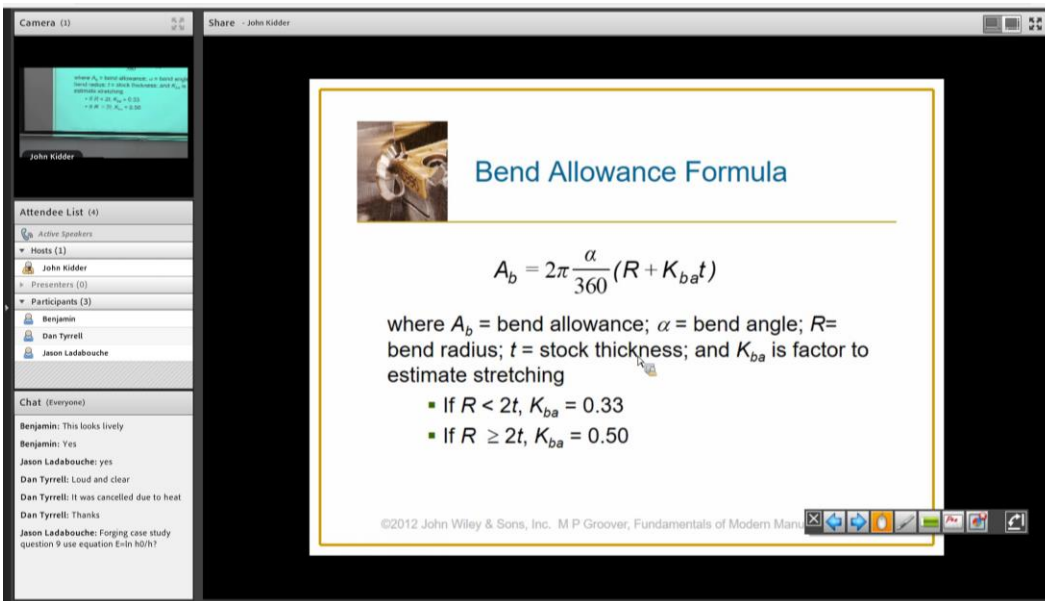

Figure 4 – Layout where the discussion centers around content from slides. This view is of the recording (and what online students would see) where the slides are presented using the Share My Screen option followed by selection the Powerpoint application.
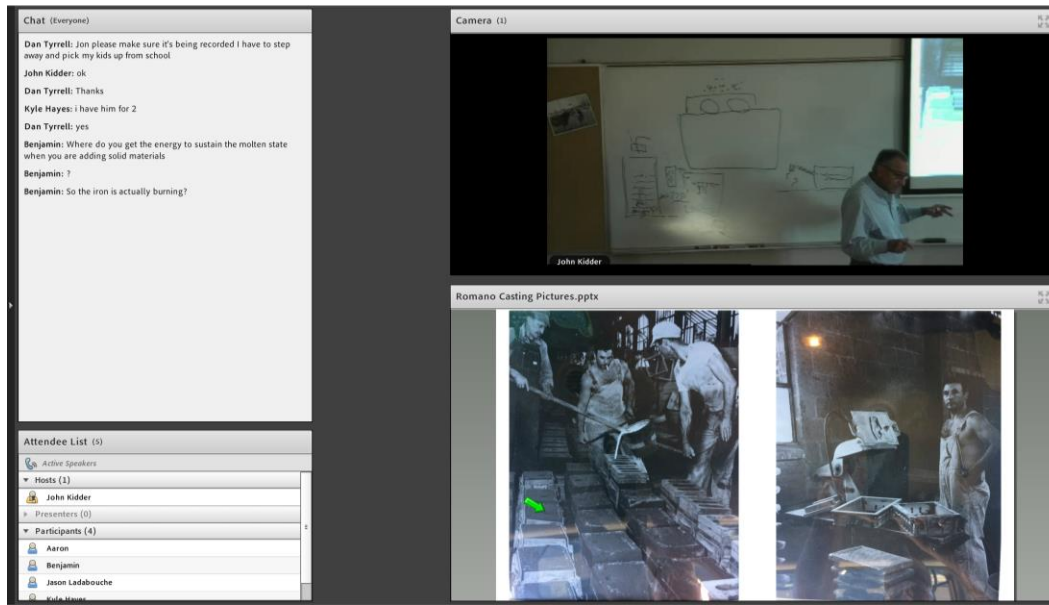
Figure 5 – A layout where the instructor is using graphic information (in this case some images of a foundry) as well as diagrams on the board.

(5) Sharing Information – My Screen, Document, Whiteboard

The Share Screen function allows the instructor to show information in three different ways: By Share My Screen, Share Document, and Share Whiteboard.

Share My Screen

The "Share My Screen" mode is the most versatile way of showing information. It allows the instructor to present information from an open application (Powerpoint, Word, a web browser). When this option is selected a "Start Screen Sharing" window opens up and the user is able to select from items to share from the Desktop, Applications, or Window by selecting the tabs at the top. When an application is selected Adobe Connect the instructor the is shown the application and the Adobe Connect window is reduced to a "Currently Sharing" window in the lower right corner. The "Currently Sharing" window can be further reduced (and will do this automatically) to a bar of icons. This bar of seven icons indicates to the instructor the status of the meeting – if a student has posted to the Chat window, if the microphone is still working, if the camera is activated, etc. The Sharing window can be expanded again by selecting the "Share" icon on the far left of the bar (which looks like a computer monitor). From there the instructor can "Stop Sharing" and return the main meeting window.
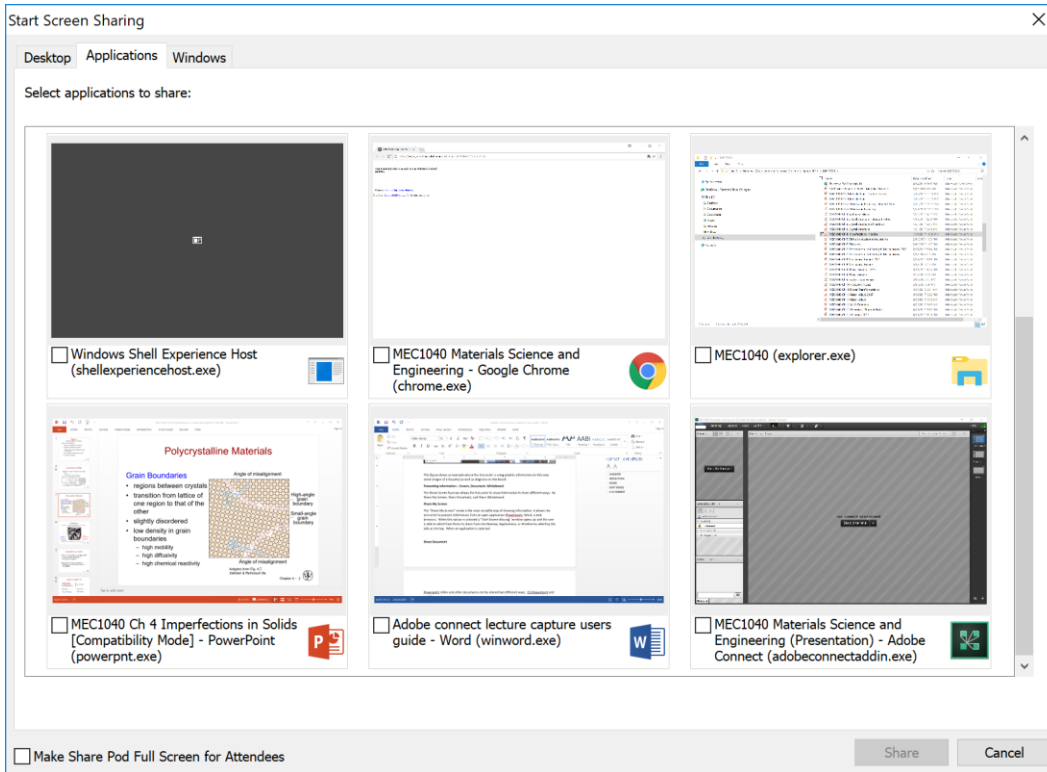
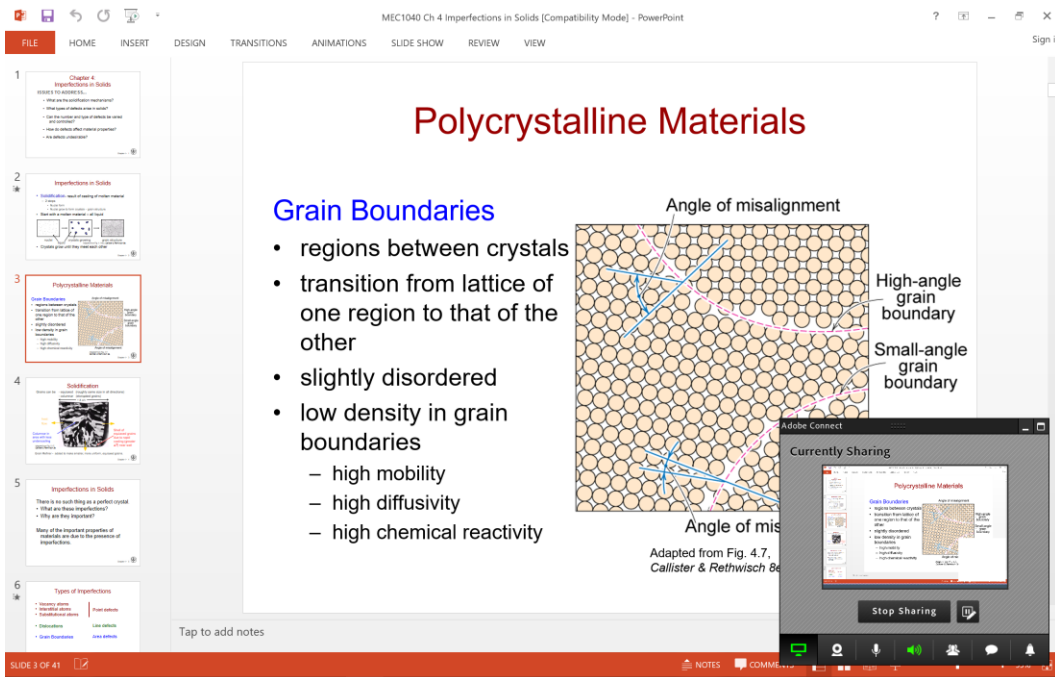**Figure 6** – The Start Screen Sharing window

Figure 7 – After selecting the application to share the Adobe Connect window is reduced to a "Currently Sharing" window in the lower right corner.

The Share My Screen mode seems to be the best way to show Powerpoint lecture slides to students online as well as in the classroom. The ways in which an instructor can share information through the Adobe Connect system while simultaneously sharing information to students in the classroom is a complex topic and is beyond the scope of this guide. Furthermore, this is dictated by the hardware in the room, which may include a single monitor and a single screen for a traditional classroom or two screens and two monitors as exists in the Telepresence rooms. This issue is important and may be addressed in greater detail in updated version of this guide.

Share Document

Another way to share lecture slides and other documents is to use the Share Document feature. To do this Powerpoint slides and other documents need to first be uploaded into the system and presented using Share Document and presented in the window. This has the advantage of showing the instructor the same window that the students are seeing and allows the instructor to monitor the chat window directly rather than through the Sharing toolbar.

Share Whiteboard

Adobe Connect has a whiteboard feature where the instructor can write onto an electronic whiteboard within the application. This would be an alternative to capturing a conventional white board using a camera.

(6) Delivery of content from a web browser

Information on the web can be presented using the Share My Screen option and choosing the web browser as the application. The one limitation is the inability to share the sound so the content cannot include sound (e.g. youtube videos).

(7) Delivery of videos

When video is delivered from an application (web browser, video player) through the Share My Screen feature the audio does not transmit.   A microphone can be used to pick up the audio from the compute speaker microphone but there will be issues with delay and quality of the video and audio will be poor. If the video files (FLV or MP4) are available then the videos can be uploaded and shown using Share Document.

(8) In-Class Discussion - Audio Capture

One of the challenges to effectively capturing the classroom learning environment is audio capture. Even in a face-to-face classroom it can be challenging to get students to ask questions and participate in discussions. On a teleconference platform the use of microphones creates a secondary barrier to encouraging this participation. When students in the classroom are

required to share microphones it can disrupt the discussion and makes it challenging to retain an environment where students can freely and spontaneously interact in a natural and fluid manner. In a room outfitted with microphones that nearly match the number of students this is less of an issue, although the students need to be instructed to demute the microphones when they ask question.   There have been efforts over the past year to increase the number of microphones in the Telepresence rooms and classes with 10 or 15 students in the room can be captured adequately   It is more challenging to capture larger classes where there are 20 or 30 students attending in-person and there may not be enough microphones to easily capture individual student comments or questions.

(9) Recording Lectures and Posting the Video Links on Moodle

To record a lecture go to the "Meeting" menu and select "Record Meeting" and you will be prompted to name the recording. It is useful to name the recording using the date. More information on recording is included in the IT users guide included in the appendix of this document.
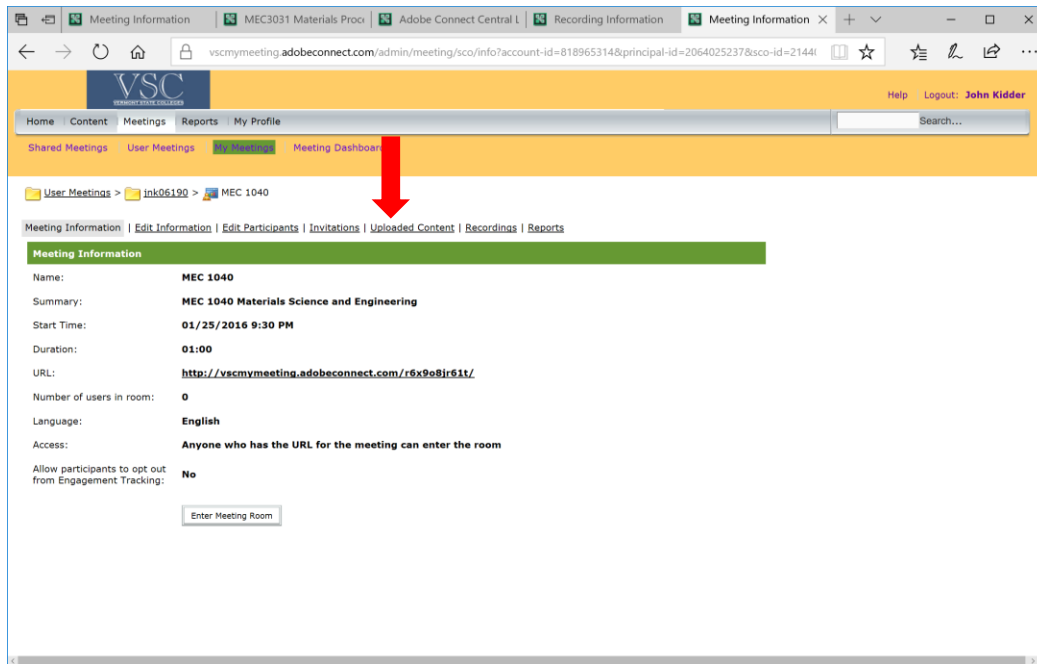
Figure 8 – The Meeting Information window showing the Recordings link

After a recording is completed it will be listed on the "Recordings" page (shown figure 9). For the recording to be accessed from link on Moodle in must be made "public". This is done by

selecting the recording using the small box to the left in the list and then selecting the "Access Type" button, and then selecting "public" in the next window.
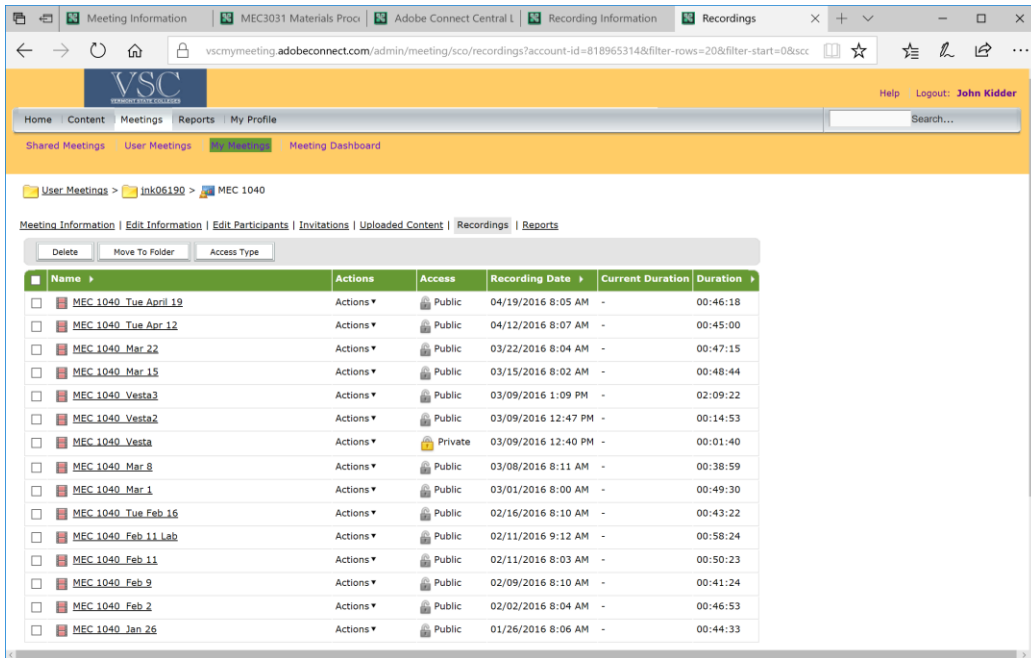

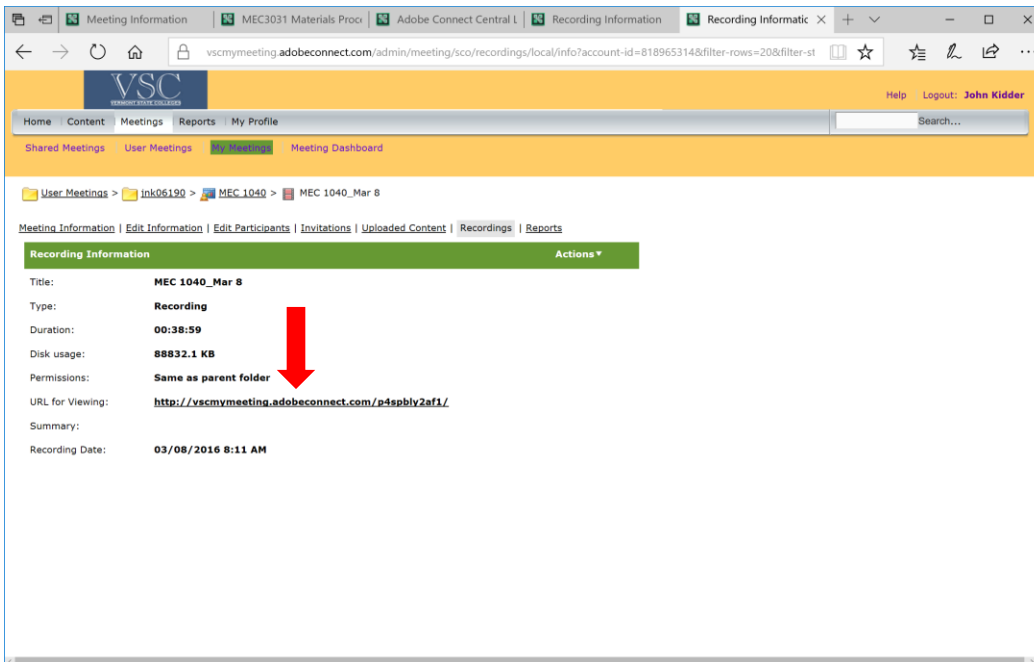**Figure 9** – The Recordings window showing the list of recordings.

Figure 10 – The recording information window showing the URL for the specific lecture video. Using a right-click it can be copied and transferred as a link to Moodle.

The URL link can be posted in Moodle using the "Add an activity or resource" function to make these accessible to students for asynchronous delivery. Figure 11 shows a listing of recorded lectures posted in Moodle. In the particular case shown here only students included in the "Video Lectures" group were given access to the lectures in the mode.

Figure 11 – The listing of recorded lectures on a course Moodle site.

ADOBE CONNECT TEACHER GUIDE

1. Turn on both TV's

2. Turn on all microphones

3. Turn on computer

4. Login to computer

5. Login to Adobe Connect

6. Adjust window size

7. Enable microphone

8. Enable camera

9. Share screen

10. Record meeting

11. Adjusting Speaker Volume

12. Change camera angles

13. End of class procedures

STEP 1: TURN ON BOTH TV'S

- Turn both of the large TV's on. The remotes should be in the tray underneath the touchscreen TV or on a table near the instructor computer.

STEP 2: TURN ON MICROPHONES

- Turn both the headset microphone and table top microphones on.

Headset Microphone

-Push and hold the power button located on the top for two seconds and the light will turn green.

-To mute the microphone, push the power button once (light turns orange) and push again to unmute (light turns green).

Table Top Microphone

-Push and hold the power button located on the bottom for three seconds. The light on the top-side will turn green a moment later.

-To mute the microphone, press the PUSH button once (light turns red) and push again to unmute (light turns green).

-Please remember to turn off all microphones after class.

STEP 3: TURN ON COMPUTER

- Press the power button located on the front of the computer.

STEP 4: LOGIN TO COMPUTER

- At the logon screen, please login with your Vermont Tech username and password.
- **NOTE:** You need to enter **vtc** before your username when logging in at this location.

  Example Username: **vtc**abc01230

STEP 5: LOGIN TO ADOBE CONNECT

- Open a web browser and go to:

  http://vscmymeeting.adobeconnect.com
- Open your meeting

STEP 6: ADJUST WINDOW SIZE

- If the Adobe Connect window does not span across both displays automatically, click the "1" button in the top-right corner.

STEP 7: ENABLE MICROPHONE

- Enable your microphone by clicking the microphone button on the top menu bar.
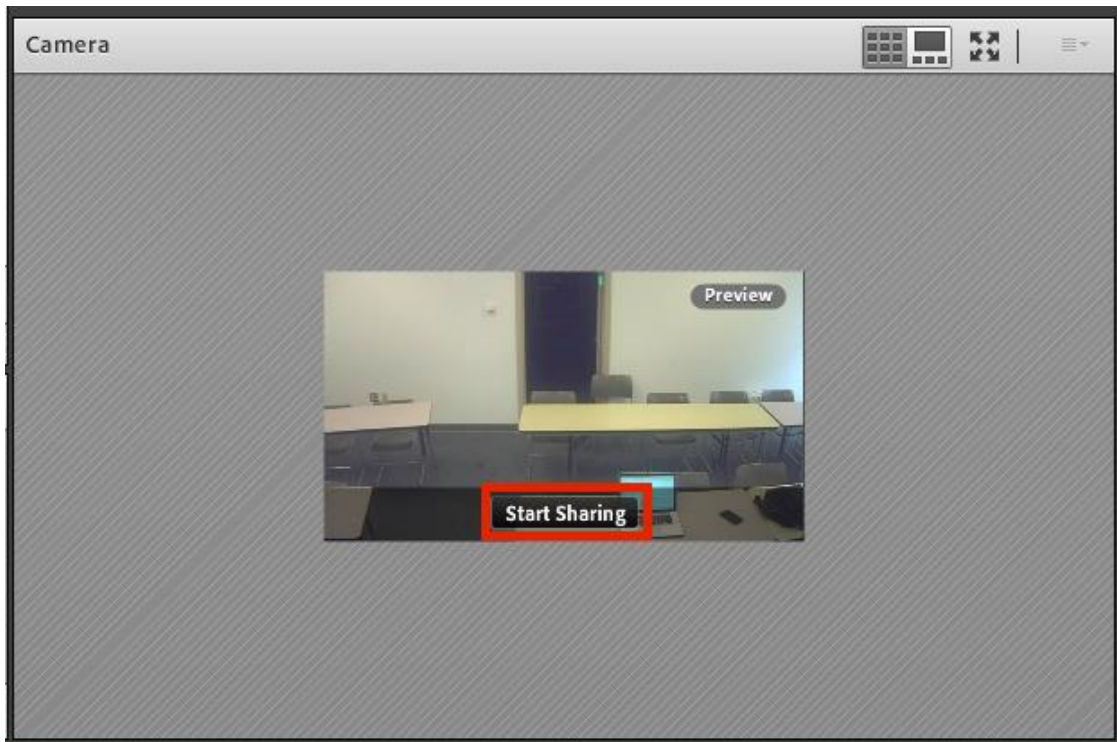
STEP 8: ENABLE CAMERA

- Enable your camera by clicking on the "webcam" button on the menu bar.

- After your camera preview is displayed, click on the "Start Sharing" button that is on top of the preview.

- **NOTE:** If you receive a notification about needing the Adobe Connect add-in, choose the option to install it. Your window may close and reopen after installation.
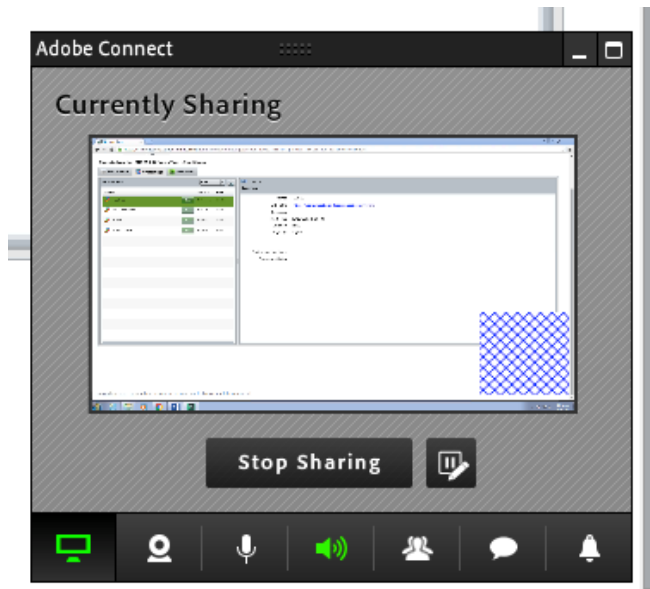
STEP 9: SHARE SCREEN

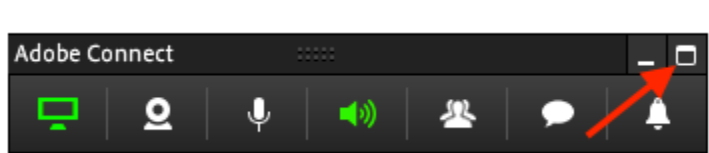- Click the "Share My Screen" button in the "Share" pod.

- Choose share your "Desktop" and then choose the "First Monitor."
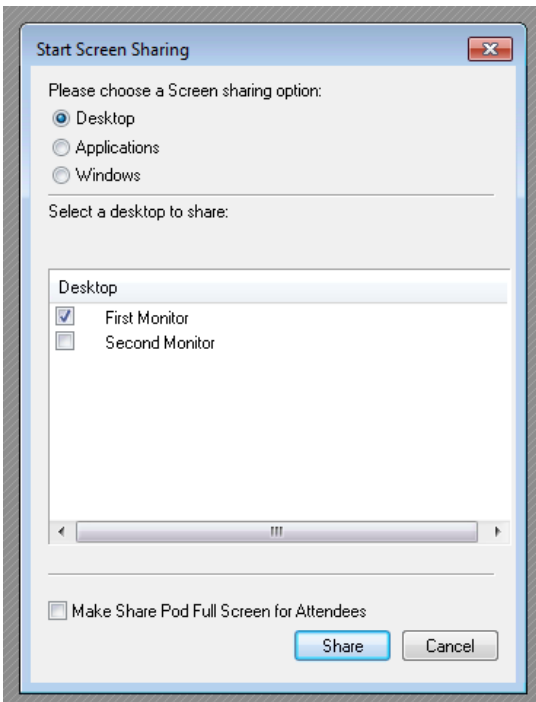
- The Adobe Connect window will minimize to a small preview window and then shrink to a basic tool bar.


- Click the "Maximize" button to restore the Adobe Connect window to full size.

With the window restored and spanning across both displays, you should have the camera feeds on the right display. Every application that you open on the left display will automatically be shared with all participants.

STEP 10: RECORD MEETING

- To record your meeting, click the "Meeting" menu at the top and then choose "Record Meeting."
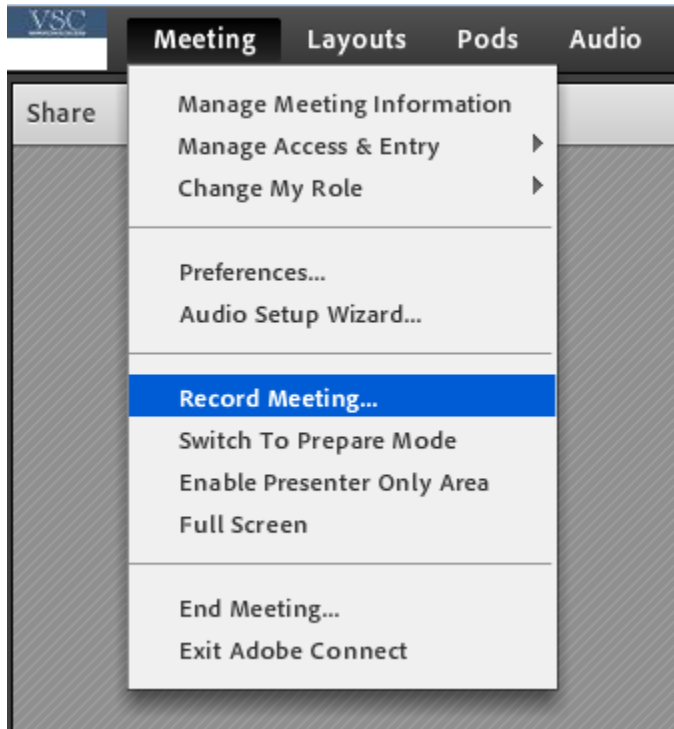
- It will prompt you to give the recording a name, we recommend using something like the current date and the name of the course (Example: 2015-10-21-CourseNumber).

STEP 11: ADJUSTING SPEAKER VOLUME

- To control the ceiling speaker volume, adjust the volume in the Windows taskbar (in the bottom-right corner near the clock).
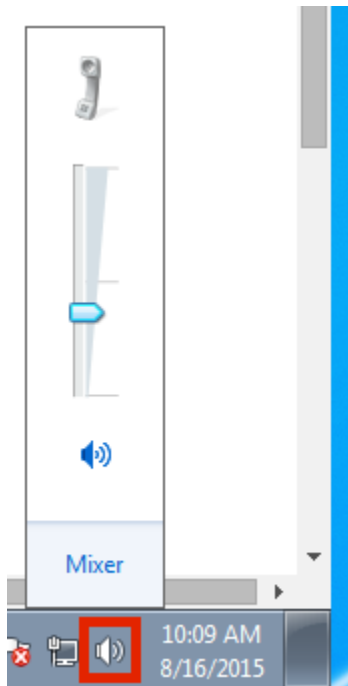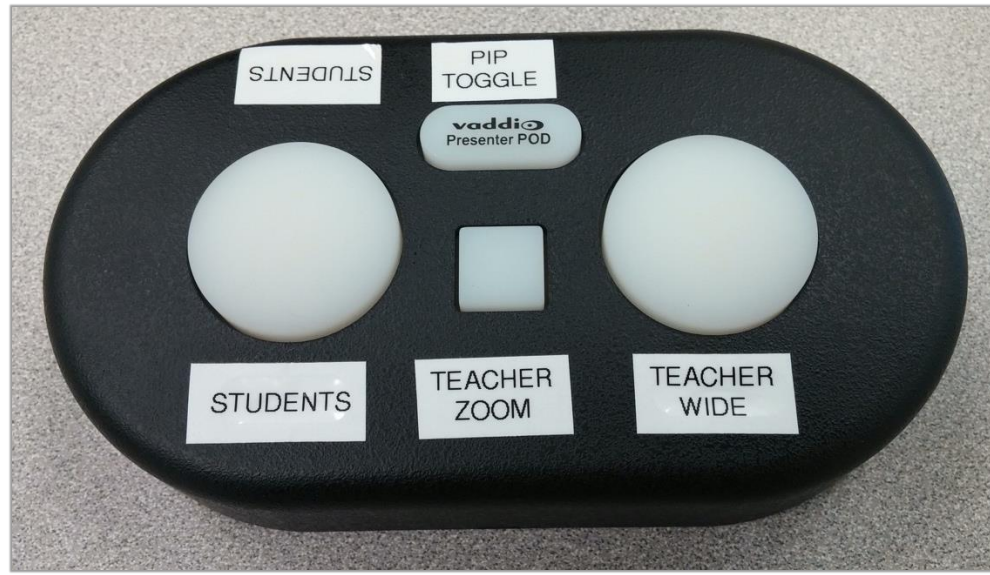

- Please adjust the volume a little at a time, DO NOT turn the volume up to 100%.

- **NOTE:** Every time you adjust the volume, you will hear a tone displaying the volume level.

STEP 12: CHANGE CAMERA ANGLES

- There are two ways to change the camera angles in your classroom.

POD

- **Left Button:** Student Wide Angle
- **Center-Top Button:** Picture-In-Picture Toggle
- **Center-Bottom Button:** Teacher Zoomed Angle
- **Right Button:** Teacher Wide Angle

FLOOR MATS

- The black floor mats under the TV's and near the instructor computer will automatically change the camera angle when stepped on.

STEP 13: END OF CLASS PROCEDURES

- When class is over, go to the "Meeting" menu and choose "End Meeting."
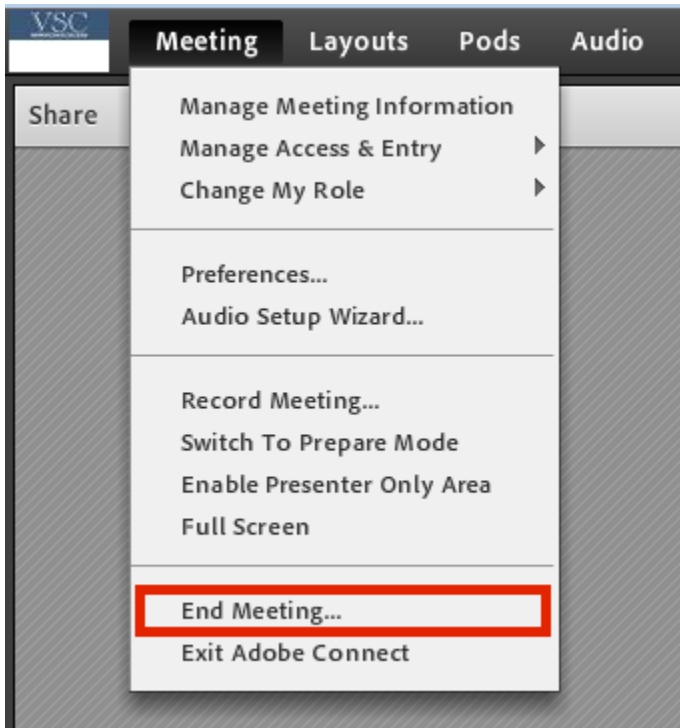
- Turn off both of the TV's.
- Turn off all of the microphones.
- Remove batteries and place them in the charger.