

A Zoom for Windows teleconference guide for Presenters

How to make your webcam, slide deck, or any app, visible to others using Zoom

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2020 is the year of teleconferences for all sorts of groups. The virus emergency has forced teleconferencing upon us, and many suburban dwellers have what it takes at home to make video teleconferences work: computers, applications, high bandwidth Internet service, and webcams with microphones.

Zoom cloud teleconferencing software pulls it all together, and offers some surprising advantages for creative presentations.

Zoom is not the only video teleconference package out there. *Skype*, a Microsoft product, is widely used in large companies, but does not support participant video. *GoToMeeting* and *Google Hangouts* also offer similar capabilities. *Microsoft Teams* also is being adopted; I am told that does support participant video.

For the **Potomac Area Technology and Computer Society (PATACS)** and for the **Osher Lifelong Learning Institute (OLLI) at George Mason University**, Zoom is the standard video teleconference package, and is the way for presenters to reach a **PATACS** or **OLLI** audience. Zoom is also the standard for remote learning at Northern Virginia Community College.

I am going to make a couple of references here, to help you get started.

Read **How To Join A Zoom meeting**. This will enable you to install the Zoom software on your Windows or Macintosh computer. You *do not need* a Zoom account in order to Join a teleconference using the Zoom app. However, *for presenters*, a Zoom account is essential.

Read **How To Create a Zoom Account**. The free Zoom account will enable you to *initiate Zoom Meetings*. Owning a Zoom account ensures that you are able to connect and make a presentation for a Zoom teleconference started by someone else.

You may find two other documents that can be useful to you. One explains how to test your webcam, microphone and earbuds/headphones/speakers with Zoom for Windows offline, before you join a meeting. Another provides a single page list of all the Zoom for Windows shortcut keystrokes.

These and many other useful documents are available on <https://www.patacs.org/zoom.html>.

After you install Zoom and create an account, you can try out Zoom, and test its capabilities to share your slide deck.

Good news: you can do that test with nobody else watching. I call this a solo test. You can learn how to share your slide deck now so, when you appear before an audience in a **Zoom teleconference**, you can concentrate on presenting your subject matter.

The simplest solo test approach is to install Zoom on two adjacent computers, or a computer and a portable device. Free Zoom apps are available in the iPhone/iPad App store and in the Google Play store (Android).

The rest of this document assumes you have the basic Zoom account, with Zoom installed on your computer and one other device, and you know the **Meeting ID** that Zoom assigned to your account. The Meeting ID is the string of numerals at the end of your unique Zoom URL. You need the URL in order for a second device to log into your Zoom meeting.

An important term to know is **Meeting Host**. That is the person who owns a Zoom account, schedules a Zoom Meeting, and launches the Zoom Meeting. In the following instructions, you use your own account to start a meeting, so you act as the Meeting Host.

STEP 1. Start the Zoom application. I used a Windows 10 computer to capture these screens, so the Windows version is depicted in this document. The Zoom app comes up as shown in **Illustration 1**.

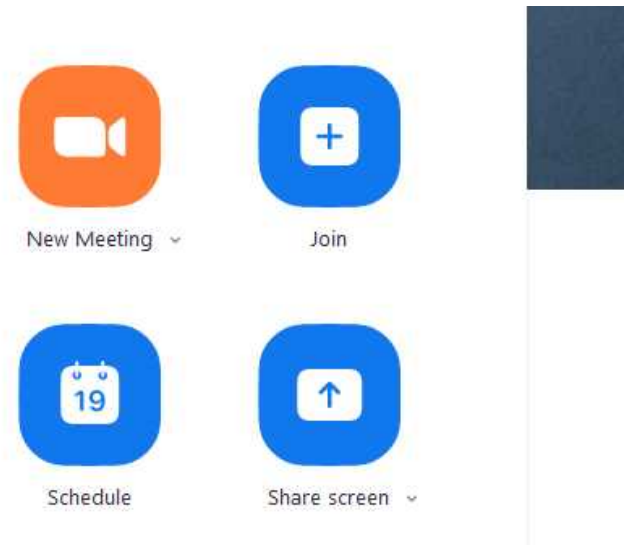


Illustration 1

STEP 2. In the app, click on the **New Meeting** button. This starts a **Zoom Meeting** using your personal **Meeting ID**.

A second window opens. This displays your webcam, assuming you have one. **Illustration 2** depicts my own **Zoom Meeting**. Initially, a dialog appears, asking you to connect to audio either with computer audio or by phone. I chose computer audio. That choice works if your webcam has a built-in microphone, or if you attach a mic to the computer.

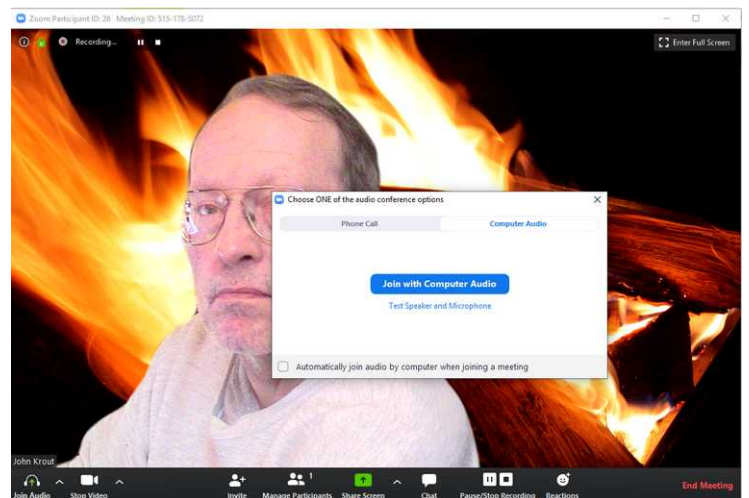


Illustration 2

STEP 3. The Zoom window reverts to a clean display, mostly video, with few icons visible, as shown in **Illustration 3**. **The Zoom task bar is not visible.**

When others join the **ZOOM MEETING**, the Zoom window will show a video icon of each participant, with their name superimposed in the lower left corner. The full screen can display 25 video icons, and can be scrolled if the meeting has more participants.



Illustration 3

STEP 4. Whenever you need to access the full task bar with its many icons, just *move your mouse to the bottom of the window*, and the task bar reappears. See **Illustration 4** for an example. Get used to that mouse tactic; you will use it often.

In Zoom for Windows, you can lock that task bar onto the window by tapping the ALT key. You can also remove the task bar by tapping the ALT key.



Illustration 4

STEP 5. Stop the video recording. The Zoom video recording capability starts automatically when you start your meeting. A recording may be useful when archiving your actual presentation including audience interaction.

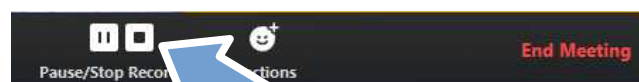


Illustration 5

I looked for and could not find a config setting to force Zoom not to start recording at meeting startup.

For practice purposes it is not a good idea to clutter up your hard drive. Click on the square **Stop Recording** button in the Zoom task bar, depicted in **Illustration 5**. The arrow points to the **Stop Recording** button.

At that point, the recording stops and the icon changes to a round Start Recording button. After the end of the meeting, Zoom attempts to convert and store the recording. At that time, you can tell Zoom to abandon that storage effort.

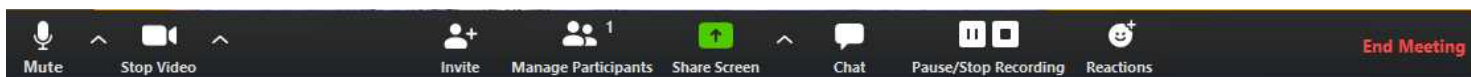


Illustration 6

Illustration 6 depicts the Zoom task bar for account holders. From left to right, the other icons in the task bar are:

MUTE/UNMUTE MIC. This comes up in live (unmuted) state at meeting startup *for the meeting initiator*. For all others, it comes up in muted state and must be changed. They can do **unmute temporarily by pressing the space bar**, or permanently by clicking on the icon in the task bar. You may have to tell them how to unmute themselves when they are called upon.

STOP/START VIDEO. Analogous to the mic control, but for your personal webcam. It comes up as live video initially, if a webcam is connected to the computer.

INVITE. This enables you to send meeting invitations during meetings. You need a list of email addresses for this purpose.

MANAGE PARTICIPANTS. This enables you to see a list of participants, and to mute and unmute participants through the Zoom server system. This does not affect the Mute/Unmute icon on the participant's Zoom app. Only the participant can control their Zoom app's mute/unmute, which is a separate issue. In a nutshell, for the participant to speak, **the participant must unmute the participant's mic, AND you must ensure that the Zoom server also unmutes that participant.**

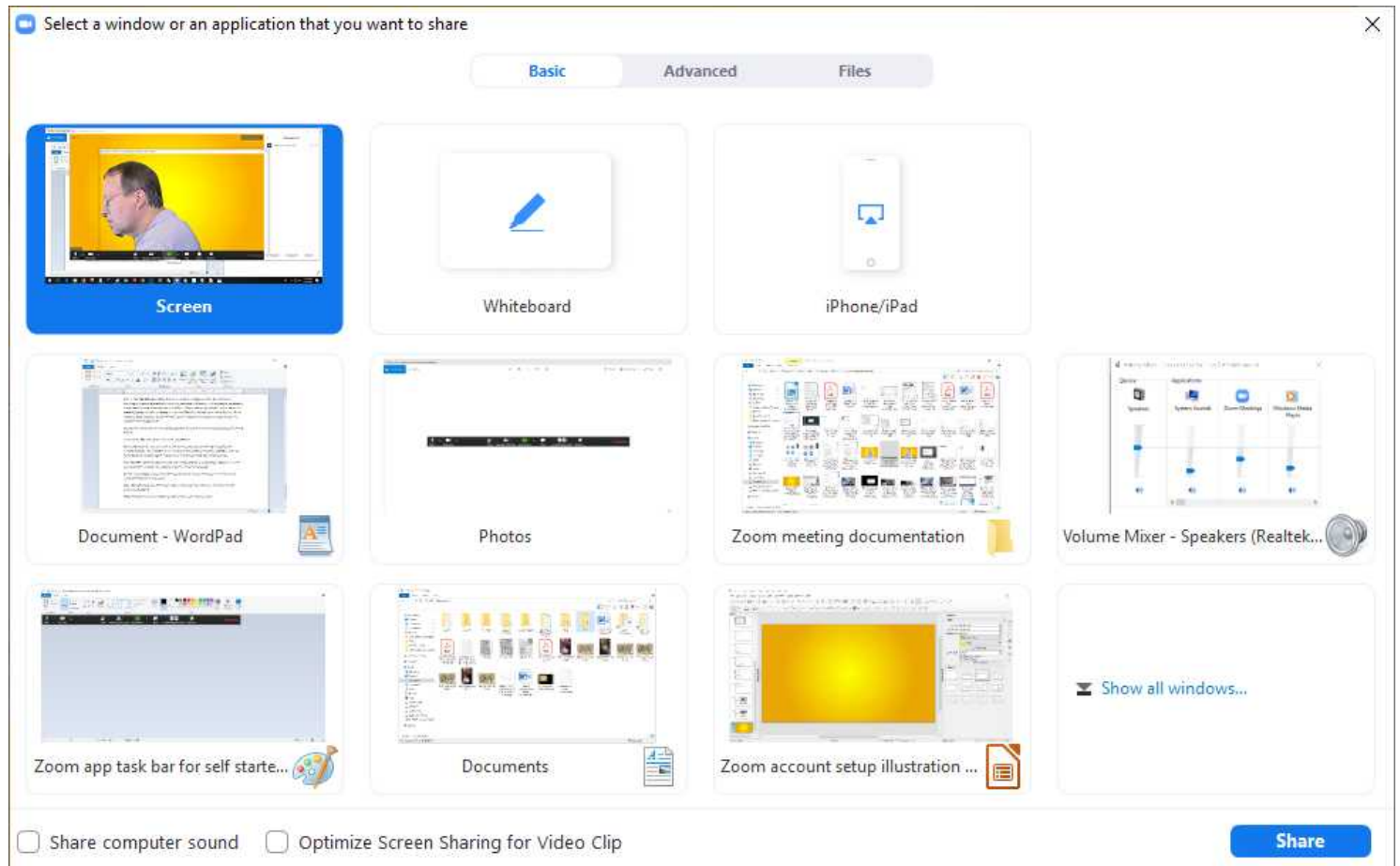


Illustration 7

SHARE SCREEN. *This is the most important Zoom task bar icon for you as a presenter.* Click on it, and it pops open a window enabling you to share any application already open on your computer, and to share the entire computer screen if you wish. **Illustration 7** depicts an example **share selection** window on my computer. Your Share window contents will vary depending on the specific applications running on your computer.

A tip for presenters: make sure your slide deck is open and ready to run **before** you connect to any meeting. That makes it easy to select the slide deck in this dialog window. **Shut down all other apps on your computer.** Only Zoom and the slide deck and any software you want to demonstrate should be running, so that Zoom has all the computer power it needs.

In the **share selection** window, click on the running program you wish to share, and then click on the **Share button in the lower right corner.** That causes Zoom to display the running program to other meeting participants. It also displays your video image in the upper right corner. See **Illustration 8** for an example.

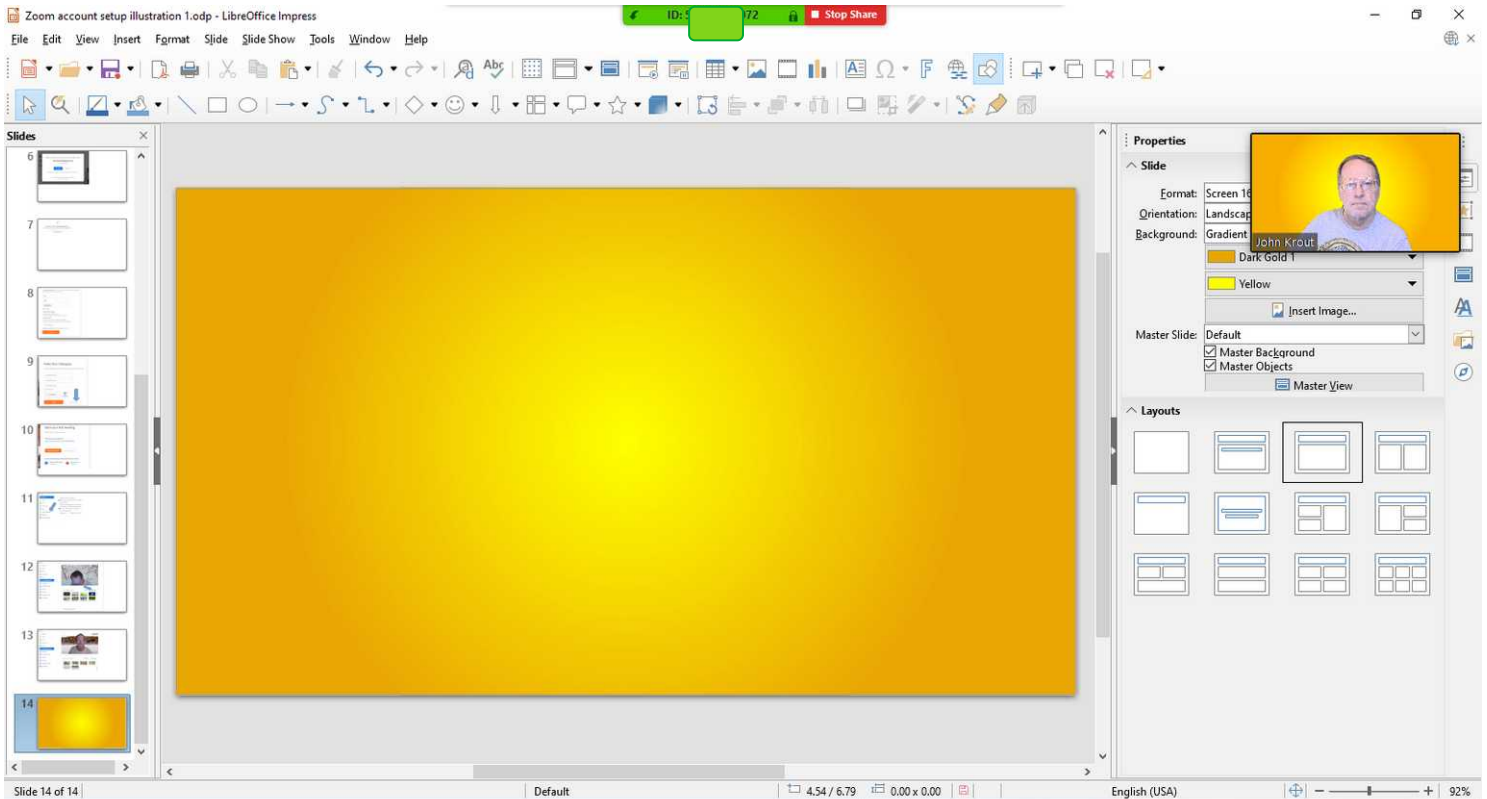


Illustration 8

For this documentation, I chose to share LibreOffice Impress. Zoom also provides a video icon of my own video feed to the **Zoom Meeting**.

Note two Zoom controls at the top center of the shared screen. The red control on the right enables you to **Stop the Share** of the application or the full computer screen. The green display on the left reports the current Meeting ID. I have blocked out that info.

During your test meeting, I suggest you log into the meeting from a second device, to confirm that your shared application can be seen by other meeting participants. You can use either a second computer or a portable device.

A TIP ABOUT SHARING A SLIDE DECK. When I present in person in a physical meeting room, usually I run the slide deck in full screen mode for maximum visibility.

In a **Zoom Meeting**, when I display the slide deck in full screen mode, the slide show application overwrites the entire screen with each new slide. The **Stop Share** control and the video image both simply disappear. Audio continues to work as is: you can still hear any unmuted participants, and you can still talk to them.

But to reach Zoom controls using Windows while a slide deck is running on the full screen, you have to **ALT-TAB** and select the Zoom video window. And the slide deck will erase all of that as soon as you display the next full-screen slide. Ideally, then, the best thing to do is stop the slide show, and then unshare the app.

It gets worse when running a slide deck that advances *automatically on a timer and repeats*. Then you are able to access your Zoom video window and its controls only for a few seconds before the next slide appears automatically. That is not likely to happen during meeting presentations, because slides are not advanced on an automatic timer. But I was caught in that dilemma while running the automatic per-meeting slide deck for **PATACS**.

So here are a couple of possible workarounds while running full-screen slide decks.

One is to log in *twice* to the **Zoom Meeting**, on two different devices, just as you did in the solo test described above. You use one strictly to show the slides, and the other to see the participants.

Another, often available on laptops, is to run dual screens: one in which you run the slide deck in full screen mode, and another other in which you run the **Zoom Meeting** window and initiate your **Share**.

EMBEDDING AND SHARING MEDIA IN A SLIDE DECK

While PowerPoint enables you to embed audio and video in a slide deck, recent experience has taught us how to share slide deck media effectively in Zoom. The bad news is that video won't be received as full motion video.

First, if you embed audio only, there is a way to ensure that your shared slide deck can be heard as well as seen. It is built into the dialog box for choosing an application to share. Take another look at **Illustration 7** above. In the lower left corner, there is a check box labeled **Share Computer Sound**. To share application audio, click on that box so a check mark appears in the box. Then choose your application to be shared.

Sharing application video is a more complex issue. When you use a computer application to share video, a couple of important things happen behind the scenes. The application decides the output video resolution, and then renders (draws) frames as fast as possible given the CPU power, video Graphics Processing Unit (GPU) power, and RAM available on your computer.

PowerPoint, in particular, displays full screen slide shows. In that behavior, it draws video frames at full screen resolution. The consequence is that Zoom transmits only a couple of frames per second, which look like still photos rather than video.

The bottom line is that I do not embed video in a slide deck for sharing in a Zoom teleconference.

When you are presenting, it is a good idea to shut down all computer applications other than the one or two that you need to share. That way you can minimize the application demand for CPU power, video Graphics Processing Unit (GPU) power, and RAM.

In experiments with *other* applications running video in small windows, Sharing those apps for a Zoom teleconference forces the lower resolution video display in the small window to be rendered, and the result is a much higher frame rate, though not as high as say 15 frames per second. On the receiving end, in Zoom clients, it appears at low resolution but is recognizably video.

The experience at the receiving end can vary because some users have a relatively low incoming bandwidth, or are running many applications, or have a computer with minimal CPU power, video Graphics Processing Unit (GPU) power, and RAM.

OTHER ICONS IN THE ZOOM TASK BAR

RECORDING CONTROLS include **Stop Recording**, which is discussed above. When recording is stopped, a **Start Recording** icon is visible. During recording, a Pause icon, two vertical bars, is visible.

If you are not the meeting host, which is normally true when you act as a presenter, then you have no recording control, only an indicator showing whether or not the *meeting host* is recording the meeting.

REACTIONS simply allows a participant to display either a clapping hand or a thumbs up. When clicked the hand appears in the upper left corner of the video screen. It does not provide any noise accompanying the displayed clapping hands. The icons in the screen corner disappear automatically after a few seconds.

LEAVE MEETING, as you might guess, enables you to terminate your connection to the **Zoom Meeting**. When you do that, the video screen closes and Zoom begins converting its video recording; it has at least a few seconds recorded, before you

stopped video recording. During conversion, you can click on the Cancel button to avoid using up a lot of hard drive space for a useless recording.

That's it for **Zoom Meeting** task bar icons.

ZOOM WEBINARS

Zoom also offers a more structured meeting environment called **Webinars**. It works with the same Zoom app. Your free account does not enable you to initiate a Webinar; in fact, the Webinar monthly license fee is fairly steep.

Groups like **OLLI** and **PATACS** have elected to buy Webinar licenses, so it pays to understand the different features of **Zoom Webinars**.

First, in each **Zoom Webinar**, there are two groups of participants: **Panelists** and **Attendees**. **Panelists** have greater Zoom controls, are permitted to **Share** applications using the **Share Screen** icon in the Zoom task bar during the **Webinar**, and appear in the video icons. **Attendees** do not appear in video icons, and are muted unless specifically called upon by a **Panelist**. **Attendees** cannot share an application or screen for others to see.

Because **presenters** need to share slide decks or demonstrate applications, a **presenter** is sent a Panelist invitation in advance of the **Webinar** start, or is promoted to **Panelist** after the presenter joins the **Zoom Webinar** as an **Attendee**.

As a **Webinar presenter**, please be aware that each of the following Zoom task bar **Attendee** features can be enabled or disabled by the **Zoom Webinar host**. The **host** may choose to do so based on the group dynamics of the meeting or course.

In general, as a **presenter**, you will likely find that a **Zoom Webinar Panelist** is acting as a meeting manager, facilitator, or master of ceremonies, and will manage the activated **Attendee** features for you. The main thing to know here is that these features exist, and the separate purpose of each one.

CHAT is valuable as a social interaction forum. Lots of side conversations can be conducted on Chat without interrupting the presenter. Some groups elect also to use this for questions posed for the presenter, but there is another way to do so without "signal to noise ratio" impact of mixing side conversations with questions.

In addition, two other features are available for use in **Webinars**.

Q&A allows the **Attendees** to write questions for the **presenter** to answer. The **presenter** can elect to answer at the end of the presentation. The A in Q&A implies that answers can be provided in writing, and that is correct. It is a good idea to read questions and answers aloud so that all **Attendees** can benefit, and the Zoom recording includes that valuable dialog.

RAISE HAND is a request from an **Attendee** to be given the floor (i.e., unmuted) for asking a question directly. This is a good alternative to Q&A in the sense that each question and answer is vocalized and recorded.

Ideally, it seems best *not* to force the **presenter** to handle responses for any of these **Attendee** interactions directly. The *meeting facilitator* can manage that for you, and probably should do that since you are on hand to provide your subject matter expertise and your slide deck.

A reminder, as noted above, the **Zoom Webinar** initiator may choose to *enable only one or two of these Attendee features*. The group dynamics vary considerably across the huge number of weekly **OLLI** meetings, for instance, so some of these three Attendee features may suit one group and not another.

OPTIMIZE YOUR COMPUTER FOR BEST PRESENTATIONS

The key to making an effective presentation via Zoom on your computer is to shut down all computer apps that are not going to be shared during the presentation. It is especially important to shut down any app that uses Internet bandwidth,

and most especially any app that accesses internet video, such as Netflix or YouTube. Shut down all web browsers and email applications.

MICROPHONES

If you want your voice to sound good during a presentation, meaning good dynamics and good frequency response, use an external microphone. The simple fact is that microphones built into phones, webcams, cameras, headsets and camcorders, are inadequate for that purpose.

Buy a \$30 wired hand-held microphone, or a lapel microphone, or a USB tabletop microphone, or a Bluetooth tabletop microphone. Connect the external microphone to your computer. You will sound much better, and your audience will pay attention.

LIGHTING

For the times when you are on camera, not Sharing an application, it is important for you to be recognizable. This requires good diffuse lighting.

For daytime Zoom teleconferences, natural skylight, not direct sunlight, can provide good diffuse lighting. You need to face a fairly good sized window, so you get plenty of that skylight.

For evening Zoom teleconferences, consider buying a simple Shop Light with hemispherical reflector and a large clip. The idea is to clip the shop light so that it shines light at the ceiling. Most light colored ceilings diffuse light so that the light washes out shadows. Some of these are available at Home Depot for roughly \$10 and on Amazon for as little as \$7. Use a Compact Fluorescent Lamp (CFL) bulb or an LED bulb to minimize heat produced while you use the light.

CLUTTER BEHIND YOUR VIDEO IMAGE

There is a way inside Zoom to minimize the clutter behind your video image.

It is called Virtual Background. You see examples above, behind your author. You will find documentation to let you accomplish that in the PDF file **Create a Virtual Background in Zoom for Windows**.

That and many other useful documents are available on <https://www.patacs.org/zoom.html>.

MAXIMIZE NETWORK BANDWIDTH FOR ZOOM

It is also important to keep in mind that your computer can be slowed down by running many apps during your presentation. That can disrupt your video and audio feed to the **Zoom Meeting**. Shut down applications other than the **Zoom** app itself and any software you use for the presentation, such as Powerpoint.

If you use a VPN client on your computer, shut that down also. Recent experience has shown that the overhead of a VPN client and its encryption/decryption can reduce your outbound network speed by as much as 70%.

Secondly, if there are idle devices on your LAN, those idle devices can siphon away the network bandwidth needed by Zoom. Shut down or disconnect any idle devices such as HDTVs, blu ray players, Roku boxes, and other computers. Disconnect your mobile devices from WiFi.