

Using Videos in PowerPoint

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Having video in a powerpoint presentation can add interest and help present material such as eye movements which are much better demonstrated in a video. So how do you get video into powerpoint? There are 5 steps involved:

1. RECORDING
2. TRANSFERRING
3. EDITING
4. INSERTING
5. PRESENTING

We will discuss each step.

1. RECORDING

Somehow you have to get the recording made. You might use a digital camera that lets you make movies, or better still a camcorder. A cheap way to go would be to use a web camera that plugs into your laptop. Let's discuss each. If you use the camera, you will be recording to some kind of flash memory which is usually removable. The disadvantages with cameras are that many have low frame rates (15 frames/sec or less) and usually limited zoom and often no sound recording. Smooth video presentation requires 24 frames per second (fps) or better. One camera that you can buy for about \$160 is the Canon SD1100 and this takes good video with sound which can rival some camcorders. Using a web camera is the cheapest way, but likely also results in the poorest quality recording. Most web cameras come with software to record movies to the hard drive. The gold standard is the camcorder and there are many styles and kinds. I personally like miniDV tape format, but for recording patients almost any camcorder will be adequate and can be had for under \$400. Ideally you should use a tripod and have adequate lighting on the subject. Some camcorders allow the lcd screen to be flipped so you can be at the patient's side while watching what is being recorded. Some also come with remote controls allowing for remote zoom and start/stop. Sound is also recorded so you and your audience will know what you're instructing the patient to do. It's often helpful to write out on a paper the patient's name, date, diagnosis and then record this on video either before or after recording the patient so that you will remember what you recorded years later.

2. TRANSFERRING

How you transfer your video to the computer will depend on how you created it. If you have a web cam then the file was created on your computer. A digital camera usually requires a cable to connect to the computer and you copy the files to the computer. After connecting the cable you usually run some transfer program or just move the file from the mounted drive to the computer desktop. I like Picasa (a free download from www.picasa.com) for moving the files from the camera to the PC and arranging them. It works with both photos and videos. If you use a camcorder you will also require a cable

to the computer. Often this is a firewire (IEEE 1394) type cable that requires a firewire connection on your computer. If your computer lacks this you can buy either a PCI card with a firewire input or a PCMCIA card for your laptop (Adaptec makes these) which will allow the camcorder to connect. Some camcorders record to a DVD or an internal hard drive. A DVD can be put in your computer's DVD-ROM drive and the file copied to the computer. Once you have the cable connected (miniDV or hard drive type camcorder) you need to capture the video from the camcorder. On the PC I use Windows Movie Maker (a free download from Microsoft) On the Mac you can use iMovie. In Windows Movie Maker you click "Capture from Video Device" and if the camera is connected correctly it will ask for a name for the file and allow you to pick the quality of the encoding. You can choose DV-AVI which is uncompressed video but be aware that the file will be about 10-12 gigabytes for 1 hour recording. This is too large for PowerPoint but useful if you plan to edit much. If you just want video for PowerPoint choose "Other Settings" and "video for local playback 1.5 MBPS NTSC" and then capture the file. When naming the file, stick with filenames with 8 characters or less (not including the 3 character extension). The created file will be Windows media (.wmv) format and about 10 mbytes per minute. Powerpoint uses a program called mplayer2.exe (in windows) to play video and sound and you can run this program separately from PowerPoint to view your video. Simply choose Start menu-> Run and then type mplayer2.exe to bring it up. You can then load the video file and make sure it runs correctly.

3. EDITING

When you review the transferred video file you often only want a portion of it for presentation. You need to edit the file and sometimes you may want to change the type of formatting. This is called transcoding. Video files are usually compressed and the term used for the type of compression is CODEC (compressor/decompressor). PowerPoint will only work with a subset of codecs and the two that work across platforms are MP1 (mpeg type 1) and Cinepak. Another popular code is QuickTime but that requires a bit more effort to get to work in PowerPoint on a PC. If you used Windows Movie Maker to transfer your file, you will see it in the collection area. By default, Windows Movie Maker breaks the file into separate pieces at transitions that it finds. Transfer the clips to the story line below to create your video.. You can trim sections and join differing sections. Next you finish the movie by writing it to the hard disk. You can choose the same or a different format to save the file to. Usually you want mpeg1 or cinepak as the codec but wmv is also a reasonable choice. These instructions are necessarily brief and more information can be obtained from the help menu in Windows Movie Maker (or iMovie on a mac) and even more information online. Another program that you can use to edit files on the PC is Virtual Dub. It is more difficult but more powerful than Windows Movie Maker. QuickTime on the mac (you need the pro version which you can buy for \$30) also allows you to edit files as does iMovie.

4. INSERTING

So now you have the file in the correct format and edited. You should keep the PowerPoint file and all associated video and sound files in the same directory. This is

easiest if you create a folder for the presentation and put everything in it. Now start up PowerPoint and load in your PowerPoint presentation (or create a new one) and go to the slide where you want to show the video. On the menu select Insert-> Movies_and_Sounds then Movie_from_File. A rectangle will be put in the slide with the 1st frame of the movie. This can be resized by dragging the edges but be aware that if you make it too large it might look pixelated or may run slowly (depending on your computer's resources). You need to decide if you want the movie to start when you first go to the slide or more commonly to start after you click on it. Next try it out. Click the "slide show from current slide" icon in the lower left corner of powerpoint and your movie should run (you might need to left click on it).

5. PRESENTING

The major pitfall is that in reviewing your PowerPoint presentation by flipping through the slides, you might see the first frame of the movie and think all is well. Be aware that *THIS IS ONLY A LINK* to the real movie file. The movie is *NOT IN POWERPOINT* but in the original file (and directory) you created. That is why you need the video file to be in the same directory as the PowerPoint file (or the same relationship as when you created the link) so that PowerPoint can find the movie and run it. The program that shows video in PowerPoint on a PC is not Windows Media but rather mplayer2.exe. If the movie seems to run slowly try making the window smaller on the slide. To get the sound to the audience you will need to have some connector from your laptop's sound output (line out or headphone out) to the presentation's sound system. Typically this is a miniature stereo plug. The sound system will depend on the venue. Sometimes it is simpler to bring a small amplified speaker just in case.

The purpose of this exercise is simply to present one way of getting video into your presentation. There is plenty of advanced information online including tutorials. Have fun impressing your audience with your digital prowess.

Bibliography

Radiology powerpoint