



Desktop video setup using a webcam and Brightline monitor light.

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# 3 Essentials of Effective Mobile Videoconferencing

*As Bandwidth Improves and Processors Advance, Learn How To Make Desktop and Mobile Videoconferencing Work for Your Organization.*

>>>by John Laughlin

The broadband boom has made mobile video conferencing a reality. More and more organizations, including Conference Technologies, are bringing staff into meetings via PC-based video calls, and they are evaluating smart phones and tablets as platforms. The quality of the experience is not always what people hope, so I'd like to make a few suggestions that can make a big difference.

## 1 DON'T SCRIMP ON HARDWARE OR SOFTWARE

First, be aware that a desktop or mobile-based system works best when just one person is calling in. If two or three people will use it regularly, you want to invest in a room-based video conferencing system.

There are three classes of software that support video conferencing on a mobile device. Consumer products, in many cases available free of charge, include Skype, Tango and Qik Video. Professional products include LifeSize Desktop, Cisco Movi, Polycom CMA Desktop and LifeSize Mirial, which is unique in that it supports Apple iPad, iPhone and Android mobile devices as well as laptop and desktop computers. Microsoft Lync and some other unified communication systems are also very popular for desktop video.

One crucial difference between these products is whether they support connection with standards-based room systems. So far the professional products do and the consumer products do not. Lync can connect to room systems via a Radvision gateway.

While it's always important to check a package's system requirements, all require fast processors and large amounts of memory to operate at peak performance. For mobile connections, you'll need a recent Apple or Android model with a front-facing camera. The Mirial website lists specific smart phones and tablets that are compatible with their software.

Bandwidth is a factor. You will need at least one megabit per second up and down for a high definition video call and 384K for standard definition. That's not hard to provide in an office or home, but it can be a problem in a hotel or public hot spot. If

you're making the call with a mobile device, you'll definitely want 4G service or a fast WiFi connection.

The camera you choose is crucial, and given the low cost of webcams, we suggest you buy the best that will work with your computer system. Logitech and

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Microsoft have excellent products that provide a great value.

The best webcams have auto focus rather than fixed focus lenses, good microphones and software that includes echo canceling. Resolution is very important. We believe a 1080p camera is worth the extra cost, even though you'll probably be connecting at 720p or lower.

I personally prefer using the microphone built into my webcam, rather than the one built into my laptop or a separate microphone or headset. The positioning of the webcam mic at the top of your monitor screen is ideal, as you normally will be facing the camera and projecting your voice forward.

I don't like the mic in my laptop because it's too near the keyboard, a position less than ideal for voice but where it picks up distracting key clicks and rustling papers. A separate mic can work well, but it's one more thing to carry around. If you buy one, consider a lavalier rather than a desk mic.

A headset with boom microphone will give you good audio pickup but does not look good and can be distracting. A Bluetooth ear bud with microphone, on the other hand, is less noticeable and higher-tech. It's a good compromise if you need to increase the performance of your audio pickup, and it's definitely the way to go with a tablet or smart phone.

Many laptops come with webcams built in, and that can be a major convenience on the road. Again, pay close attention to the quality of the camera and the position and quality of the microphone. Note, too, that if you'll use your laptop with a docking station, you may need an external webcam as well.

## 2 PAY ATTENTION TO YOUR WORKING ENVIRONMENT

Since a PC or mobile-based system will be used outside of a controlled video conferencing environment, it takes some extra effort to look professional during the call.

You'll want to move the clutter off your desk and clean up any other areas visible to the camera. Turn off fans, radios, phones and TVs. If your chair squeaks, fix it. Pay particular attention if you call from a home



## Rapid Deployment

The Panasonic Tactical VTC solution combines a Panasonic plasma display (native contrast ratio of 5,000,000:1) with Polycom's HD videoconferencing and JELCO's custom mobile lift case for a mobile solution. Panasonic is positioning the Panasonic VTC solution as the "ideal choice for the Department of Defense and other government agencies."

office. A child walking unannounced into your conference or the noise of a lawn mower can spoil your professional image. If you're calling from a hotel, you want to post the do-not-disturb sign outside the door. The equivalent in a home office can be very helpful as well.

Be aware that webcams are normally much closer to your face than the cameras used in a conference room setup. For that reason, your personal grooming will make much more of a difference in a PC or mobile-based call.

For the same reason, think carefully before using a webcam with a dual-monitor setup. It's great to have the extra display to preview presentation materials. Depending on the meeting, it may be tempting to work on something else while ostensibly paying attention to the call. Since the camera is so close to your face, however, it's very obvious when you look away to the second monitor.

## 3 PAY ATTENTION TO THE LIGHTING

You'll need to pay special attention to the lighting in a home office, hotel or public site, since lighting quality makes a big difference in how professional you'll look in a video call. It's particularly important because webcams and the cameras built into tablets and smart phones do not perform well in low light.

For best results you'll want a bright, diffuse light source

above and behind your webcam shining directly onto your face. A shaded lamp or two will work well, as can a window, depending on the time of day.

Avoid unshaded desk lamps and other harsh light sources, as well as lights directly overhead, which will produce dark shadows under your eyes, nose and chin.

A lamp or window behind you will force the camera iris to close and make you appear dark. I've been in conferences where a participant closes blinds in a window behind him, but the blinds leak light around the edges and the image looks terrible. Install good drapes on any windows in your home office if you can't position your webcam to avoid backlighting.

Brightline offers a very nice option in their i-Series LED Monitor Lights. These are lightweight fixtures of various sizes, starting at 16 inches wide and 1.7 inches high. They can mount on your wall, desk or computer monitor directly above your webcam.

At Conference Technologies, we're using PC-based video conferencing regularly, and we've been surprised at the quality possible from a smart phone or tablet. There's no question that desktop and mobile video conferencing will continue to mature at a rapid pace as bandwidth continues to improve and mobile processors become more powerful.

Take care of the details and I think you'll be happy with the results you get.

John Laughlin, CTS, is President and CEO of Conference Technologies, Inc., a provider of audio visual design, integration, video conferencing, rental solutions, and technical service support, with nine offices throughout the United States. Please contact CTI (<http://www.conferencetech.com/contactform>) to learn more about mobile video-conferencing.

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