

Lights, Camera, Action!

By [Kenneth Wacks](#) August 18, 2020



Introduction

CABA members' skill sets focus on high tech issues like automation, communications, energy management, and cybersecurity. With the necessity to conduct business, conferences, and trade shows remotely, we now need additional skills in video production. Of course, most of us have participated in conference calls with typically a dozen or so talking on an open line. Conference



calls have migrated to teleconferences that allow sharing of documents so we can view slides or jointly edit a document. Occasionally, someone’s face would be visible through their laptop camera, but this was usually not intended.

In the past few months, video for business has become an important addition and sometimes a requirement for effective business meetings that must be conducted remotely because of the pandemic. We all learned effective audio communications using a telephone, but very few of us have produced TV programs or movies. Let’s examine some of the basics for effective video communications.

The Virtual Conference Room

Most of us have been invited to an online webinar or panel discussion with one or a few presenters and lots of passive viewers. Someone in the audience might ask a question or submit a chat question. An effective business meeting, as opposed to a teaching environment, requires maximum participation. So now we all need to be audible and often visible. Some of the popular software systems for a virtual conference room are:

- Gotomeeting, by LogMeIn
- Microsoft Teams
- Webex, by Cisco
- Zoom, by Zoom Video Communications

Participants are encouraged to use a camera. The most convenient is a webcam built into a laptop computer. A smart phone camera might work if held with a secure mount located optimally. Here are problems we typically encounter and some simple remedies for improving a teleconference:

Improving a Teleconference

Problem	Remedy
Poor lighting	Light your face, not your room
Too bright	Pull down the shades
Harsh shadows	Place lights at eye level or slightly higher
Washed out face image	Place a light to the side to add some depth
Messy background	Clean the room! Sit with your back to a blank wall
Sound with echo	Use the laptop speaker or headphone, not both
Sagging chin and neck	Raise the laptop on books so camera is at eye level
Disheveled appearance	Get dressed! Comb your hair!



As with an in-person meeting, the productivity of a virtual conference depends on an effective leader. It is always good to work from an agenda. I prefer an agenda with some flexibility to encourage the introduction of new ideas or to challenge established dogma, which might have become stale. A key responsibility is to engage all the participants by asking questions or soliciting opinions. Some meetings can become interminable. Two to three hours without a break is about the limit of a productive meeting.

My biggest challenge has been scheduling meetings across time zones. For an international standards meeting last May I conferred by email with about 25 participants in advance to pick a time that required some compromises. We finally all agreed to the following:

Teleconference Across Time Zones

Location	Time (24-hour clock)
Western Canada and the USA	7 AM (07:00)
Mountain Canada and the USA	8 AM (08:00)
Eastern Canada and the USA	10 AM (10:00)
Ireland and the United Kingdom	3 PM (15:00)
Central Europe	4 PM (16:00)
Kenya	5 PM (17:00)
India	7:30 PM (19:30)
China	10 PM (22:00)
Japan and South Korea	11 PM (23:00)
Sydney, Australia	Midnight (00:00) (next day)

Ideally, it would be great to have an IT (information technology) person present or available to deal with inevitable problems such as loss of connectivity. This may require a phone link to access participants and help them resolve connectivity issues or learn some basics like controlling the mute function. The IT manager might need to mute participants who are not speaking if there is excessive background noise such as a barking dog or phone ringing.

For an important presentation recently, I used two computers. One provided the audio and video for the audience to see and hear me and read my PowerPoint presentation. The other was also logged in, so I could monitor the audience view and verify that I was advancing my slides properly.

A Quality Video Production

Home and building automation involves selling new concepts to home builders, building owners, building managers, real estate agents, tenants, and buyers. Delivering an effective presentation may require a coordinated group presentation or a tour of a property. We have all been raised



with TV and movies, but we probably don't realize all the careful planning required, whether we are viewing a 30-second commercial or a TV segment. Now we are called upon to do this ourselves or with a small group of colleagues. So here is a quick course in video production.

Your audience may be less forgiving than you would like because their expectations have been preset from infancy. Most of your customers and colleagues have been raised on Sesame Street, MTV videos, action movies, and fast-paced sitcoms. Long scenes with a single camera focused on a single talking head will lose an audience quickly. Even the driest content needs some entertaining or visual elements to engage the viewer. Here are some of the steps required for planning an effective video.

Producing an Effective Video

Sequence step	Explanation
Develop a plan and story board	A story board is a graphical sketch of scenes
Choose live versus pre-recorded	Insert relevant video clips
Develop a script	Include the sequence of events and timing
Select the venue	In a studio, at home, at a building site?
Acquire equipment	Cameras & switchers, microphones, lights
Plan camera blocking	Which camera, angle, actors for each scene?
Ensure Internet access	Upgrade upstream, Wi-Fi, add Ethernet
Select production software	Sequence the scenes and transitions
Choose a producer	Selects actors, schedules, budget
Choose a technical director	Selects and operates equipment, edits content
Choose an IT director	Fixes streaming and Internet problems
Provide for people with limitations	Captioning, descriptions, magnification
Distribute ancillary material	Brochures, floor plans, spread sheets
Plan for rehearsals	Practice, revise, practice, and more practice!

A Sampling of Video Productions

The closing of public venues for performances during the pandemic has created a massive cultural gap in our lives. Technology is helping to bridge the gap until we can again gather for music and theater. Many artists have chosen to offer free performances as a public service. Some of the videos are remarkably good even though produced at home.

I'll share with you some outstanding performances from classical music and theater. All these selections are available on YouTube in 720p or 1080p high-definition resolution by clicking the URLs listed below. Please note that many YouTube video clips begin with commercials, most of



which are short or can be skipped after a few seconds. For best viewing, click the square icon in the lower right-hand corner of the video to display it full screen.

It is possible to download YouTube video clips using a tool available free from:

<https://www.youtubedownloaderhd.com>

As you will see, not all of these productions follow the guidance above about lighting, background, etc., but I found them all entertaining with redeeming values in composition and content.

1. Saint-Saëns, The Carnival of the Animals, “The Swan”

This is a performance by 24 cello students synchronized across 12 countries.

<https://www.youtube.com/watch?v=hE1enPDh3nM>

2. Tchaïkovski, Nutcracker, “Waltz of the Flowers”

The harpist interrupted brushing her teeth to join a performance of the National Orchestra of Metz, France.

<https://www.youtube.com/watch?v=WveX3MxZFIs>

3. Rogers & Hammerstein, Carousel, “You’ll Never Walk Alone”

This performance includes 300 people from 15 countries.

<https://www.youtube.com/watch?v=6gpoJNv5dlQ>

4. Pacek & Paul, Dear Evan Hansen, “Waving Through a Window”

The road-show star of this Broadway play, Ben Levi Ross, sings from his kitchen. The audio quality is not great, yet his voice shines through. For comparison the second URL is a studio performance of the same song by the same artist. Note that a good microphone makes a significant improvement in quality and fidelity.

<https://www.youtube.com/watch?v=02KA4tF6NEk>

<https://www.youtube.com/watch?v=impbuBXweAk>



5. Kylie Flavell, The Dolce Vita Diaries, episode 2

I cancelled travel to Italy planned for March 2020, so I was viewing travel videos and found this production of the spectacular Amalfi Coast near Naples. The woman who posted this professional-looking video (and many others) explained that she did all the steps I outlined above herself: planning, selecting equipment, photography, editing, etc. See if you can spot the amazing scenes she filmed with a drone-mounted camera.

<https://www.youtube.com/watch?v=enHFuue0viY>

As you probably heard, the Consumer Electronics Show, usually held each January, is being replaced with an online digital show in 2021. I am hoping to see lots of creative videos that will provide a virtual tour of innovations we should expect in home and building systems next year. Of course most of us need to focus our energies on design, management, engineering, marketing, or sales. Invariably we will need to present our work effectively, but remotely. So let's incorporate some quality video production techniques that showcase our achievements for management and clients.

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Dr. Kenneth Wacks has been a pioneer in establishing the home systems industry. He delivers clear and practical advice to manufacturers and utilities worldwide on business opportunities, network alternatives, and product developments in IoT and AI for home and building systems. The United States Department of Energy appointed him to the GridWise® Architecture Council to guide the electric industry toward smart grids. For further information, please contact Ken at +1 781 662-6211; kenn@alum.mit.edu; www.kenwacks.com