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THE COMPREHENSIVE GUIDE TO ONSITE HYBRID EVENTS PRODUCTIONS

Virtual events veteran Matthew Ley brings his decades long experience executing hybrid events to help you understand the pro tips and potential points of failure of producing a professional hybrid event. He's made all these mistakes, so you don't have to.

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When you set up to stream an event to webinar.net from a new venue whether it be a client's office or any other site with which you are not well acquainted, there are certain key aspects you need to consider ensuring success. To use a baseball analogy, you are about to play an "away game" in a new stadium and everything from the line of site from the dugout to the way the ball bounces on the turf, needs to be taken into consideration. It can make the difference between winning or losing. In other words, you need to be prepared.

When I began working in webcasting back in 2007, onsite setup was a much more arduous process that would typically take hours of meetings with IT, a great deal of testing, and frequent alterations to the location's network protocols.

Luckily for all of us in this game, the world has changed with the proliferation of webcasting and hybrid events, so things are a lot easier today.

That said, you still need to be ready!

THE POWER OF YOUR INTERNET CONNECTION

Your internet connection is the most crucial element for your onsite setup. You need to confirm in advance that you have the necessary bandwidth to start your stream with sufficient overhead to handle other onsite responsibilities such as uploading last minute slide changes, updating webcast pages or pulling in remote speakers on webcam to your event.

The rule of thumb is to request 2x bandwidth required by your event. So, if you are doing 2x 1mbps streams to the webinar.net, platform then you should ensure accessibility to 4mbps in upstream on the provided network connection.

PRO TIP:

We find it easier to request 10Mbps symmetrical (up and down) at any location that we enter.
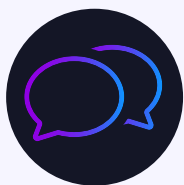
Consistently 'Communicate' with your Network Manager:

It is common that your client or venue contact is of non-technical competency, often you'll hear them say things like "we stream out of here all the time" or the "internet is great." To validate the network's speed performance, you can do a quick test using free services like

www.speedtest.net, but this will only partially confirm the network's speed . So, it is important to ask your venue contact to share valuable information provided by their network manager, as well.

PRO TIP:

The connection should be solely dedicated to you. If there are other users present at the venue using the same connection, the speed can fluctuate and lead to disasters as the event goes live and hundreds of attendees in the room begin sharing your bandwidth.
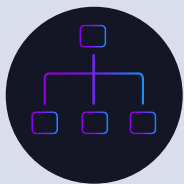
It's best if the connection is "wide open" with no port restrictions:

At public venues like hotels and meeting facilities, you will almost always be able to access a wide-open internet connection with no port restrictions but, once again, you should verify this with the technical contact.

It is very common for Venues have port locking on the connections they provide. It's frankly a cash grab - but you need to know if you can put an external switch on the one circuit to connect multiple devices, or if they are going to tag you with more than one. This is not something clients are happy to hear about once onsite if they find out they must pay double (or more) than what they thought they were paying for internet.

PRO TIP:

If the connection does have limitations, you will want to ensure that port 1935 is open as this is the port over which you will be sending the stream. At a client location with stringent network rules, you may also need to provide them with the webinar.net whitelisting guide to verify where you are sending the stream.

Network Checklist:

- ✓ **Internet connection with a minimum 10Mbps up and down**

- ✓ **Internet connection must be dedicated and cannot be shared with others at the venue**

- ✓ **Access to internet connection via hardwire with an access point less than 100 feet from the tech table**

- ✓ **Internet connection should be wide open with no port restrictions**

- ✓ **If port restrictions are in place, please ensure that port 1935 is open**

MAKE SURE YOU AND THE AV COMPANY ARE FRIENDS

When something goes wrong there is nothing worse than having two contractors point fingers at each other. This kind of conflict can be a disaster and must be avoided.

With an onsite webcast or hybrid event, the AV company and the webcast company are typically hired separately and occasionally have conflicting agendas.

The AV company's primary concern is the in-room audience while you will be concerned with running a smooth event for the virtual audience. It doesn't matter if you're streaming audience numbers 2,000 and theirs is 200 in the room. They are often a much bigger (and relatively more expensive) operation. So, rather than being in a dispute about your needs versus theirs, work collaboratively to ensure the success of the event.

What you will commonly need from AV:

If you are working with the inhouse AV or the customer's "AV" team who are generally IT and not actual Audio-Visual professionals, they will be the key to almost everything you need. Since this is all standard procedure, you don't need much in terms of preparation. But, you do need to communicate clearly and in terms they will understand to get what you need.

PRO TIP:

It doesn't disadvantage you to jump on a call especially when you are working in a venue for the first time.

Your workspace or 'Tech Table':

It is common for onsite encoding kits to have a very small footprint, yet you should still request a six-foot table to set up your gear. You may want to request a power drop/electrical outlet at your tech table to avoid running extension cords or be obligated to share the drop with the AV team and all its gear.

Word of warning: In our experience, when you share a tech table with AV, they may put an audio tech or switcher next to you to in order to facilitate better

communications. But, because AV companies often require a different person to do every task, the person at your table may have a lot more free time. It may be difficult, and you should try not to be rude, but this can be a distraction if they like to chat while they are idle. This happens more than you might think.
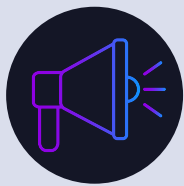
Audio Video Feeds

Be clear about what you need from AV in advance. Much as this should be standardized, but too often, it isn't. Ultimately, you are responsible for how the video looks and sounds on the webcast, even if they are the ones providing the feeds. Always ensure that the feed you are getting works best with your onsite encoding rig. We like to request an SDI feed from the camera or switcher with audio embedded in the video.

PRO TIP:

If audio cannot be embedded, then we typically request a second line level XLR audio feed of the program audio.

Now, you may be thinking, XLR? What is this guy 100 years old? Well, I am not 100, but I am wise enough to understand that NDI and virtual inputs can accomplish the same thing without the need for cumbersome cables and capture cards in your rig. Nevertheless, I can assure you that ESPN on Monday nights with a budget 100,000x times larger than yours or ours, is not using NDI to get their signals to the TV broadcast. So start with what you know is going to work

and use these newer options on bad days (more on that later as things of course will go wrong at some point!).

Get on a call with AV before you go to the event

Every requirement I have outlined above, from the table to the AV feed, can be outlined in a quick email, but I still suggest that you get on a call with the AV team in advance of the event. If the customer, venue, or AV team are new to you, I strongly recommend that you include the client on the call, as well. This call will save you a lot of back and forth over email leading up to the event and will ensure that everyone is on the same page beyond the simple logistics of where you are going to sit and how you are going to receive the feed.
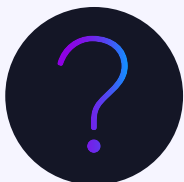
What is the logistics for load-in & testing?

Even if your whole encoding kit fits in a laptop bag or a small road case and you don't need access to a service elevator, you still want to ensure that you are at the venue with the AV team during a window that will allow you to test what you need to test with their assistance.

This becomes especially challenging when the venue has a labor union, or you are working for a customer that has a very extensive speaker walkthrough planned.

You want to get into the venue, set up your gear and test your stream with audio and video that does not impact the other testing in the room. You don't need a lot of time, usually about 20 minutes but you need to ensure it is written into the production schedule.

I remember one specifically challenging event where the customer had a three-hour speaker walkthrough leading up to the event. During this time, we were getting terrible audio levels, but the audio tech was not able to deal with us while he was handling the in-room sound and microphone levels for the speaker.

PRO TIP:

It is not acceptable to simply receive music or some other audio testing source from the AV team. You want the audio from the live microphones that will be used during the live event.

By the time they finished, and we began to troubleshoot our issues, the audience was filing into the auditorium and we could not get a live feed from any of the microphones on the stage.

We basically had to troubleshoot when we went live, which meant terrible audio for the first 10 minutes of the broadcast. Believe me when I tell you, we had to answer for this afterwards with the client, despite the fact that the rest of the event ran flawlessly.

The run of show can have nuances your customer is not aware of

Many of the events we do are much simpler. There is a locked off camera, a microphone or two on the stage and PowerPoint slides.

In this set up, there is not much to worry about other than getting a clean audio-video feed and making sure slides are ready. That said, we now live in an age of technical marvels and a lot of customers want to take advantage of available technology including streaming remote presenters and pre-recorded segments. We recently did a planning call for an event that included holograms.

PRO TIP:

In such cases, the program feed out of the switcher may not be exactly what you need to allow the remote audience to see on the Webinar.net platform what the live audience is experiencing in the physical space. A call with AV will verify what you will get on the program feed and allow you to advise what tech you need to realize the customer's vision.

It is not typically your responsibility to add a switcher between you and AV company. They should give you the feed you need. But without this call you could end up onsite without the necessary technology to make the webcast work. In the end, because you are the webcast producer, responsibility will rest on your shoulders.

AV Checklist

- ✓ **Six-foot tech table**

- ✓ **Table located close to power drop and hard-wired internet feed**

- ✓ **AV feed from camera or switcher, ideally with audio embedded. If audio cannot be embedded, then separate line level XLR feed of program audio**

- ✓ **Pre-Production call to review load in, testing and run of show**

ENSURING THE SUCCESS OF THE BROADCAST

If I sound overly negative, it's because I have learned many of these lessons the hard way trying to overcome situations out of my control. I can tell you that in almost every situation, the customer was not entirely wrong when they insisted that we should have "anticipated the unexpected." The preparation outlined thus far will get you 99% of the way there, but there will always be that 1% – that X factor – that is out of your control. You will still want to mitigate whenever possible.

When I started doing onsite events, encoders were servers. What we did, was considered rocket science by many of our

customers and as such, there was an aura around us that we were like scientists doing a very complex procedure. This meant that everyone else working on the event had to pay attention and work diligently to help us achieve success.

Today, not so much. Now that our parents can stream live on Facebook or Instagram from their handheld devices, the idea that we cannot make a webcast work when we are faced with some small change in plans, is not acceptable in the customer's eyes. This is supposed to be easy, even though it very often is not.

Redundancy, backups and fail safes

The savvy customer who had onsite issues in the past, will ask questions in advance about the various points of failure. As a professional in this space, it is your job to anticipate these and address them proactively in your sales calls or pre-event tech calls. This will put the customer at ease and signal that you are a serious professional and that their event is in good hands.

Onsite, there is what may seem like a small army making the event work. Your customer has five or six people working on the event, there is a full team of AV staff, and the venue may also have a couple people milling about making sure everyone has what they need.

The webcast has one person, you. So, you need to be as possible to handle whatever comes your way.

Always test before you leave your shop:

Even if your rig has stayed in its case untouched since your last successful event, always do a thorough rig check. Make sure that you have all your gear and power up your encoders to ensure that things are working as expected. In our shop, we have one person who is

responsible for the general upkeep of all road gear, but we still make it the responsibility of the onsite technician to check their rig in advance.

PRO TIP:

If the event calls for something that is nonstandard, something you have never personally done on site in the past, then you should first replicate that setup in your shop, where you have a controlled environment and can verify that all is working as expected.

The four-hour rule:

We have made it a requirement that if we are asked to set up on the same day as the show, we need at a minimum four hours before the show goes live to set up and test. If we cannot gain access to the room four hours in advance (especially if it is our first time working at a

venue), we advise that we must gain access the day or evening before the event to set up and test. Setting up the day before requires an additional half day charge for the producer's time, but it is a safeguard that protects us and the client from an event failure which nobody wants.

Point of failure # 1: Hardware

You should always have a main and backup encoder feeding the webinar.net streams. Encoders are commonly laptops these days, which is completely acceptable, but laptops can fail, and you need to be able to switch quickly to a backup feed if there is an issue. On a single-language event, we will always have two encoders running, feeding the main and backup streams.

We will also have a third laptop on the tech table. This third laptop is the producer's work machine which is used to message the office during the event, upload slides and handle light-weight tasks like pushing slides or starting and stopping the webcast on the webinar.net platform. That machine, by the way, is also set up to be a third encoder. Configured like the production encoders, in a pinch, it can be used as the backup encoder if one of the encoders we have brought onsite is damaged in transit or experiences an issue.

Point of Failure # 2: Internet

If the internet goes down, your event cannot continue. It is that simple. This is not something that you can control but you can troubleshoot: advise the customer, venue etc., inquire about getting a redundant internet feed (not generally an easy task).

We keep a couple of wireless internet hubs in our storage for situations where we are concerned about the internet connection and have not been able to physically test the connection or if we have a customer that is overly risk adverse. We will bring it with us and advise the customer of the cost to use the hub if the venue's internet fails.

I do not recommend you use a wireless hub as your primary streaming source. That said, we have done it with success in the past when customers asked us to stream from an outdoor venue or an unique location where there is no solid connection. But when we do this, we let the customer know about the risk in advance. As I have mentioned, I have been doing this for a long time, so I do everything in my power to talk customers out of going this route.

Here's why: A few years ago, we had a contract a major political party. We were streaming a rally in the lead up to election day from a ballroom that did not have an

internet connection. We went to the venue in advance with our internet hub to test the signal. We had 20Mbps up and test streamed an HD signal for 30 minutes without any issues or even frame drops.

When the event started, we had a similarly high-quality broadcast going out.

Then, disaster struck. Organizers introduced a surprise guest, a former Prime Minister who was still an incredibly popular figure in the party. When he stepped on stage, the crowd erupted, and everyone took out their cell phones to take pictures and videos, uploading everything to their social media accounts. The problem was they were sharing the same cell tower on which we were streaming and with 1,000 people now uploading large files, our stream segregated immediately and we were unable to stream for the entirety of that section of the rally.

It was a failure I never want to see repeated.

Expecting the unexpected

Even if you have no hardware issues and the internet is rock solid, there are other things that can come up and you may be the only person who can address it. You cannot plan for every eventuality, but your kit should include a few items that will help you get out of a pinch.

Turn-arounds and connectors:

A small case of AV connectors and turnarounds will help you in the event your camera person or AV team don't provide you with the feed you mutually agreed upon.

Power bar and extension cord:

I know you already asked for a power drop at your table, but it doesn't always work out that way when you get onsite, so bringing a bit of extra power can help in a pinch. I would also recommend using standardized laptops and screens so you can swap power supplies easily in your shop or onsite when needed.
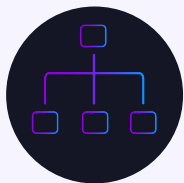
A small mixer or USB Audio interfaces:

Once again audio is not your concern, but if the AV company cannot give you the exact audio signal you need for the webcast, having a small audio mixer on your tech table that gives you some amount of control on levels, is a useful tool to keep between you and the program audio feed you are getting from AV.

PRO TIP:

We recently replaced these small mixers with one or two input USB audio interfaces, which are easier to travel with and take up less room in your onsite kit.

Lightweight digital switching software on your encoder:

Most encoding software these days have several other features and some even promote themselves as turning your laptop into a production studio. The technology has come so far so fast that many people forget that switching cameras, pulling in remote presenters, encoding high quality video and adding lower thirds or on-screen graphics, takes up a lot of processing power. For this reason, even though we are big fans of these app's and use different iterations of VMIX (https://www.vmix-.com/) in our production suite, we keep to a minimum what we allow producers to do with the encoding laptops.

All encoders have VMIX running on them which gives us the ability to run some video rolls if we need to, adjust audio feeds and even add some on-screen graphics if required, but we stop there.

If the event calls for us to switch cameras, pull in remote speakers via video or do anything more complex, we advise we will need to bring in our production switcher

version of VMIX which runs on a much more powerful computer so that we can continue to run our streams on the standard encoder rigs.

Onsite Encoding Rig Check List

- ✓ **2 x encoding laptops with light weight video production software i.e., VMIX**

- ✓ **2 x Capture Device**

- ✓ **1 x laptop for email, messaging, and slide management**

- ✓ **A small kit of AV connectors and turn-arounds**

- ✓ **2 x power bars, 1 x extension cord, 1 x extra power supply**

- ✓ **2 x 10-foot ethernet cables**

- ✓ **1 x small six-channel mixer or USB audio interface**

- ✓ **Internet Hub if required**

FINAL THOUGHTS

Because anyone with a laptop and a dream can stream onsite, this does not mean that everyone is an onsite streaming professional. If you are following these guidelines for equipment, process, testing and redundancy, you are a professional - and professionals need to get paid for what they do.

The extra time, testing and equipment I have laid out here costs your company money, but also ensures that events are successful. So, you need to ensure that your rate card reflects this level of professional-ism. Will there be other companies or contractors who will charge less than you? Yes, there will. But in our business, if things go wrong, you never get a second chance. So those vendors will have a much higher failure rate and a lot of customers will never use them again.

The first managed event, especially those with onsite requirements, will always take more time in planning and pre-work. Don't expect to make much money off that first event compared to the amount of time you spent. But if you do it right, you will make more on future events, customer referrals and the long-standing relationships you create because customers know they can count on you anytime they need to conduct a webcast or hybrid event.

When you have been doing this as long as I have, you realize that even when platforms fail or change, or your contact leaves the company, if you follow these steps and always ensure you are mitigating the chances of failure, you will get bookings for a very long time.

That trust exceeds a discounted price every time.