Will Curran:
Hey, What's up everybody? This is Will Curran from Endless Events. Unfortunately the venomous Brandt Krueger can't join us today, he's out on site at events, as we always do. As I've told you many times before, we all actually are event producers, so you know, when a show calls, a show calls. But the show must go on, and this week's episode we couldn't reschedule it, we had to do this because, my gosh, you guys are going to learn very, very quickly why this man is such an awesome guest to have on this podcast.

Will Curran:
Today we are joined by Scott Mirkin, the co-founder of ESM Productions. This guy has done some amazing productions. He pretty much has that resume that he could hand to anybody and probably get any job, at any event, any time he ever wanted to go. I'm going to give you three names, and I guess in terms of power, we'll start at the smaller end and go a little crazier. He has done work for Jay Z, I mean alone that would be enough for most people to walk in any room, but has also done work with President Obama, many presidential candidates, and also done, and been the executive producer for, Pope Francis for one of his visits to the States as well. I mean that sort of resume, incredible. You're going to learn very quickly.

Will Curran:
But today we're talking a little bit about live streaming. A little bit, I mean a lot. And we've done live streaming 101, if you haven't watched that episode, or listened to that episode, make sure to go listen to it in our archives before you get into this one, because we're going to get down and dirty in the gritty and the more advanced and tactical we can. Because Scott is amazing, he's got so much knowledge for you guys. I just can't wait any more, Scott, thank you so much for joining us today on the Event Tech Podcast.

Scott Mirkin:
My pleasure, Will. Really glad to be here, thanks.

Will Curran:
Okay, I want to dive into this, because you've done so much great work over the last few years, I've got to know. Out of all of the productions that you've done, what was the most stressful live stream you ever had to do?

Scott Mirkin:
So I'd say the most stressful live stream I've ever had to do... that's a tough one. I think certainly the global... knowing that we had, I think it was something like two billion eyeballs watching the stuff we did with Pope Francis a couple of years ago, and we also had some interpretation, like different languages tracks going to different feeds.

Will Curran:
Oh wow.

Scott Mirkin:
Different encoding profiles going all over the place. We had a great team, so we had lots and lots of folks. But I think the pressure was on, pretty much there. And I would say... Stressful, I think I thrive on pressure, and so stress to me, it was actually quite a pleasure. But there was constantly the butterfly, the butterfly in the stomach.

Scott Mirkin:
But that happens every day, on every live event. I think that's part of why those of us who do live events, and live broadcasts, and live streams, that's why we do it. It's very, very different than filmmakers, who have a completely other amazing talent and art form, but they also have weeks, months, years to perfect. We have a thirtieth of a second, if we're lucky, to perfect.

Will Curran:
I was going to say, if you're lucky you have, what is it, the delay in it. So then that way if something goes wrong you at least have 10 seconds to maybe figure out what's wrong and fix it before it goes live, right?

Scott Mirkin:
Yeah, if you're lucky, right, exactly.

Will Curran:
If you're lucky. When dealing with streaming out to, you say, like 10 billion people, even just thinking about a million people, people get stressed out streaming to a quarter million people. What sort of stuff is the things that people don't think about when you get to that scale of streaming? That scale of broadcast, period. What are people not thinking of that people would be kind of surprised about?

Scott Mirkin:
I think the magic word for all of that, on the live side, on the live side large audience, is redundancy. People are people, and humans, we're all going to make mistakes and hit the wrong button, and do things that human beings do. Electronics are, 99% of the time, pretty reliable, way more reliable than they used to be when we were working in more of an analog world back in the day, with tape machines and things like that. So there's less moving parts, which equals less breakdown, but things fail.

Scott Mirkin:
Transmission is really the most important part of getting the feed out there to the world in different flavors of profiles, and encodes, and regional distribution, all those things. So eliminating as many or all single points of failure in the signal flow and the transmission is really,

really important. And that manifests itself on a big show like we were describing. Multiple satellite up-link facilities. Multiple broadcast fiber. And multiple IP encode.

Scott Mirkin:
So there's three ways to get the stuff out there. And so if any of them fail, and of course satellite is susceptible to weather, in certain parts of the country it's a little harder than others. Fiber is susceptible to... most of the time when fiber fails on a broadcast it's a computer error. Somebody thought that they needed it till two o'clock, and they really needed it till three o'clock, and it just turns off and it's automated.

Scott Mirkin:
And then lastly IP, which we don't really do very much at all. We never do it for a primary transmission path. So the signal flow for a live stream, every day, we do them every day, we do about 100 of them a year, up unto, and including the point of encode, at our network operations center, it's HD, broadcast quality, HD-SDI television.

Scott Mirkin:
And so it leaves the site, whether it be the stage we built in Philadelphia for the Pope, whether it be the Barclays Center for Title's Rock the Vote show, or any of those things, it's a television show that could be on any linear television network on the planet, if it wanted to be.

Scott Mirkin:
But instead what we do, and sometimes we do both, for the Barclays show this past October Alicia Keys' performance was also part of the Jimmy Kimmel Show on ABC, so we actually did a little bit of both. So it's the point of encode, it's the place where we take all that and encode it for all the different profiles in the mobile space, and the desktop space, and the tablet space. And then it gets inserted into whatever player.

Scott Mirkin:
And then the most important part about that for larger audience, once all that's happening, and those are redundant paths all the way through. The CDN, the content delivery network, Akamai being one of the largest on the planet, right?

Will Curran:
Yeah, they're like the standard.

Scott Mirkin:
Yeah they are, they're it. "Akamai equals the internet," I say to some folks when they're like, "Who's Akamai?" But what they really do, and the way that we run these all the time for large audience, is Akamai is distributing to all of these CDN points, and edged servers, everywhere. And if there's congestion, I there's traffic, if there's any kind of trouble, we also have an active monitoring engineering force, real-time.

Scott Mirkin:
So, if you do have any kind of problem in that pipeline that I just described. If you have to make a phone call to try to troubleshoot, it's over. You need everybody on a bridge the whole time. The engineering team at Akamai-

Will Curran:
If it gets fixed, it gets fixed instantly and they know.

Scott Mirkin:
Yeah, and often they know it's coming, right? Especially if you're seeing... Because we do this we're very fortunate that we don't have too much of this ever happen, think of Akamai as like the traffic... They run the highways and they're also the traffic reporter. So they can see, they're like, "It's getting a little bit yellow over there on that road." Well then they can re-route. So before it ever becomes red, or a shutdown.

Will Curran:
Interesting.

Scott Mirkin:
So, all of that in addition. There's obviously a pretty major technical operation going on that's got nothing at all to do with the creative, right? And then of course the creative, with all of that, needs to keep the audience engaged. So it's great if we can get the signal of whatever's happening to a million people, hundreds of thousands of people, whatever the case may be. But whatever's going through that pipeline needs to be engaging.

Scott Mirkin:
Now Pope's easy. That guy, he's engaging. But you know, you still have to shoot it right, or the mist engaging people in the world won't be interesting if you're just shooting them through a surveillance camera, as we sometimes say.

Will Curran:
That's awesome. Literally I wrote down 100 questions based on everything you just talked about, so I'm going to just chunk through them. I have so many good things I think you could share I think our audience would be really curious about. Starting with, you mentioned that basically everything you're doing, up until the point of encoding, where basically it's going to the internet to hit the servers and everything like that, pretty much everything's a TV broadcast to you.

Will Curran:
I'm curious to know, beyond obviously the encoding and what goes to the internet part, how is this different for you, having a background in TV to what you do now? What's different between it and TV? I think there's a simple answer to this, but I'm just curious.

Scott Mirkin:
Well, there's not much of a difference at all, quite honestly. Especially, we do a lot in the music space. And on the music side we shoot about 100 concerts a year, and the average, just to give you a sense what things look like and what that complement looks like. It's about 40 to 50 people, full crew-

Will Curran:
On site?

Scott Mirkin:
On site, correct.

Will Curran:
Including, like, the server admins?

Scott Mirkin:
No, I'm just talking about up to transmission. Transmission happens... yeah I'm talking... So-

Will Curran:
Can you walk us through what the crew... all the different roles and everything?

Scott Mirkin:
Yeah. So I have 15 assistants that get me coffee every five minutes, so there's 15. No, I'm just kidding.

Will Curran:
Well you got to have that, you've got to have that.

Scott Mirkin:
No, so it starts off, a lot of times, too, when we're doing the music stuff, the way to make it really happen and sometimes you have no choice. Because we all have gone to plenty of concerts where five o'clock, six o'clock, seven o'clock in the morning, here comes a bunch of tractor-trailers loading in your favorite band to your neighborhood arena. And then magically by three o'clock it's sound check, and they're ready to go. So it's not like you have... We don't have any more time than that, so we're usually day-of as well.

Scott Mirkin:
So first thing in the morning we do something called park and power. There are utility positions that are both on the video side and on the audio side, that follow about a 45 page technical specification, tech-spec as we call it. And most of what we're doing is mobile, so there's trucks, right? So you're going to have your A unit broadcast truck, which is going to have your cameras, all your camera controls, switcher, production audio, record, playback, all those things.

Production, that's the back bench where I sit and look at all the monitors, and all that kind of stuff.

Scott Mirkin:
Then you have a B unit that has all the maintenance and camera lensing and cabling, and all those kinds of things. We also bring redundant power, so that-

Will Curran:
And generators and all that.

Scott Mirkin:
Yeah, redundant though, like the entertainment quiet generators, that one of the motors can completely shut down and still the load continues, so they have a very high success rate. And the reason we do that, even if it's a place that has solid power is that if a show loses power on stage, it's happened, we've all been to concerts where that happens. If the truck were to lose power, the broadcast lose power, it can take like 15 minutes for everything to come back up. So you really don't want to have that happen. So having clean, redundant power, separate from anything else that's happening is really important.

Scott Mirkin:
For music, also, in addition to our production audio that's in the production truck, often there's a separate mix facility. So some of these artists are 48 or 96 channels. And something that some folks know and some folks don't know, the mix for broadcast is a very different mix than the front of house mix. Because-

Will Curran:
And that's because the arena sounds totally different than someone's pair of headphones at home, right?

Scott Mirkin:
Yeah, if you think about two things, right? Number one, the job of the front of house audio engineer at a live concert is to adjust the sound to the desired levels of each of those channels, based on the environment. Which is people and concrete and glass, usually. And so certain frequencies need more, certain frequencies need less. None of that means anything on a television, or in your home theater, or on your headphones.

Scott Mirkin:
The other thing that's really, really important, it goes back to the engagement side, it goes back to the creative, and I think it's more and more all the time, is that, on a live show the audience is, whatever you want to say, the fifth member of the band, or whatever. So the audience-

Will Curran:
Like the screaming element when they get on stage?

Scott Mirkin:

Yeah, so the way we mic the audience is pretty specific. And how that's mixed is important. And how all the rest of it is mixed is really, really important. So we have all that going on that basically gets mixed down into, depending on the nature of the broadcast, it gets mixed down into either a surround 5.1, or gets mixed down into stereo at the production mix.

Will Curran:

Are you guys often... oh my gosh, I just feel like I'm going on a tangent with this one. Feel free to give this one a simple yes or no, but you guys often do surround mixes for these live streams?

Scott Mirkin:

Yeah, so Title Music Streaming, which I serve as the head of live production for, is kind of a pioneer in that space. And we've been experimenting and have done a few things with immersive audio. And I think there's some things in 2020 that'll really come out there. There's a lot of recorded stuff that's out there, and then we're also recording live shows that then in their post-production are turned into a 360, or immersive stuff.

Will Curran:

Wow. I have a feeling we're going to have you come back in 2020 to talk a little bit about what you guys are up to. Because that's something that I know Brandt and I have talked about doing a full episode on, is immersive audio for the live space. Love to have you talk about it definitely for the online, live stream space too. But we'll come back to that one for sure, because that's so cool.

Scott Mirkin:

Yeah, yeah, please we can do a whole hour.

Will Curran:

I'm trying not to get super-nerdy on it. But you were talking a little bit about the different roles. So you were talking about how you have an audio engineer who's doing a separate mix just for the live stream. What other continually roles do you have on that sort of team.

Scott Mirkin:

So there's people running cables, the utility team is running cables. And not just running cables, but patching them. Really it's pretty specific on where they're going and how they're patched and what they're plugging into, how that's being configured.

Scott Mirkin:

Another really, really, really important element to a live show like this are the communications, the comms. So the intercom configuration is complex. There are many, many channels, and in the truck there's all sorts of ways for the director and myself to talk to whoever we need to and

not hear who we don't need to hear. All of that. And that's a task amongst itself, it takes a fair amount of time, and some pretty skilled folks.

Scott Mirkin:
So then you've got cameras. For the average music show it's somewhere between eight and 12 cameras. And so-

Will Curran:
What do those positions look like?

Scott Mirkin:
There's typically at least two cameras on or near the front of house position, sometimes three, depending on the nature of who's on stage. So you always have a wide and a tight and a two-shot that you can work with. We run, typically, another two or three cameras on stage that can be reverses, and they're often on tripods, but can come off and be hand-held as well, depending on the band.

Will Curran:
When you say reverses, what do you mean by that?

Scott Mirkin:
You know, kind of shooting over the shoulder of the bass player, and you can see the crowd behind them.

Will Curran:
Okay, cool.

Scott Mirkin:
And you can see the crowd jamming and cheering, those are reverses as we call it. And then we very rarely do a show that does not have a Steadicam. They have Steadicams all over the place, it's usually on stage and then down in the moat, or the barricade line, right there at the pit.

Will Curran:
And it gets those nice smooth cinematic kind of shots.

Scott Mirkin:
Oh yeah, yeah.

Will Curran:
But the guy could be running around, literally, and still look smooth.

Scott Mirkin:

Running around, yeah. And sometimes in a big arena, you'd take that Steadicam to that first horizontal aisle, that's behind the first six sections, and you just run real slow. We call it the poor man's dolly shot, because it looks just like a dolly. And you can do that a few times, you could run up and down aisles, and the Steadicam's a tremendous tool that we never work without.

Will Curran:
I was going to say, is that pretty common now, for the large-scale productions that you're like, "We have to have Steadicam now to do it"?

Scott Mirkin:
Oh, we don't do anything without it. On music side, music we don't do anything without it. And we don't do anything without at least one jib, and sometimes two, depending on the arena.

Will Curran:
Before I get into the jib side of things too, I want to share an experience that I had. So I was at ACL this year, and I saw probably the most amazing Steadicam operator ever was shooting Childish Gambino. And this guy was just going on and off stage, up and down stairs all night. Literally going all the way down the moat. It felt like it was probably the most intimate video camerawork I had seen in a long time. Because I was hundreds of people back, I wasn't even in the main audience, and I felt like, "Oh, I could go up and..." Y feel like he was so close. So, man, I am a huge advocate of Steadicams now, I feel like, for these kind of productions.

Scott Mirkin:
Yeah, and it's very, very hard, physical work. The live rigs.

Will Curran:
Oh gosh, those guys are heroes, for sure.

Scott Mirkin:
Yeah, you know it's really great. I mean the live rig, there's some other stuff out there that you see on the cinematic side of video that's really neat, that'll work with some of those smaller Arri cameras, and things like that. But for the TV, the live, a larger camera body, the rig for that is quite a thing.

Scott Mirkin:
We have a stable of some of the best Steadicam folks that we work with all the time, based in either New York or LA. And one of our favorite folks in LA is this big, 6'3", super fit guy. Big guy. And he's amazing. And then we have, there's an operator in New York who is... Both of them are fantastic. She's about 5'1", and can sneak around and get places where maybe the larger guy can't. And it's an amazing... and I respect that craft a lot.

Scott Mirkin:

I've also seen, that's pretty neat, we try it when we can, it's hard because there's risk and you've got to make sure safety comes first. But I've seen Steadicam operators on a Segway, riding. It's like they're on a skateboard, they're just flying to the stage. It's a super-cool look, and a shot that when we do it I'm like, "Let's just do it twice." I don't want any accidents, you know?

Will Curran:
Totally, totally. But that's going to be the shot that's probably going to make it into the trailer of the whole concert.

Scott Mirkin:
Yeah.

Will Curran:
And to a music video, for sure.

Scott Mirkin:
And the jibs, you know?

Will Curran:
Yeah.

Scott Mirkin:
And we use them in all sorts of... Look, we didn't invent any of this stuff, but we use them in different ways to really do some different angles. And you can-

Will Curran:
It sounds like jibs, for you, it's a must have for you guys. I've been hearing more and more people saying that kind of shot feels overrated in some ways. Do you feel like it's overrated, or do you feel like, "Oh no, it's a must have"?

Scott Mirkin:
It's a must have for us. And I think that our style on music is pretty unique, and you very rarely see a shot that's sitting still, but at the same time we're not doing what MTV did, when they did music. Every time you turned around there was like this glitchy Dutch-angle, almost looked like mistakes. We don't do anything like that, but everything we do it moves.

Scott Mirkin:
We spend a lot of time, another position is our AD, and sometimes more than one associate director, where we're breaking down the music. So we know... we're cutting to the beat. We know when the solo's coming, we know what's going on.

Will Curran:

Oh nice. So are your directors listening to the music beforehand? So for example, let's say you're going into cut, and you know Tame Impala's playing. Are you listening to all Tame Impala's music beforehand so when a song comes on you... Just like the L1, the lighting engineer, they know the beats of the music, are you guys doing that same thing as well?

Scott Mirkin:
Yeah, we're doing that, yeah, yeah, yep. Yeah, and when you do that, then you need all these different tools. And then I would say, not to brag or whatever, but I've never heard anyone say to me that our jib shots are unnecessary or overrated. So maybe it's how you use it.

Will Curran:
Yeah, no totally, totally. I'm just always curious. Maybe it's more from a post-production standpoint, that people who are just, they're so used to seeing that over the crowd shot. I know when I saw my first jib shot on a live stream at a concert, I was like, "Whoa, that's crazy, I've never seen anything like that before." And obviously I've seen a lot of crazy stuff, so if it impresses me, it usually impresses 90% of people, right?

Will Curran:
Okay, so you kind of talked about the director roles and the management level, so you have all of this video guys and everything like that, audio guys. What is your go to, I guess the management layer of the live stream? So you talked about the director, sometimes you have the EP. What is your crucial roles, and what are they doing separate from the technical people in charge of audio, video, etc?

Scott Mirkin:
We have, I guess on the top of the org chart for these shows there's the executive producer, which is myself.

Will Curran:
And what are you worrying about usually?

Scott Mirkin:
I am responsible for the final product. So I spend a lot of time staring at the monitor. And I may give my director some notes, a quick little, "Hey, let's do this. More of this, less of that. Get that idiot out of my shot that's on the phone." Whatever, right? Stuff like that. And also I'm there to, if we hit any kind of turbulence I'm there to make the decisions, of what we're going to do to stabilize.

Scott Mirkin:
By the way, I call it turbulence but that could be any number of things. From where's the performer that's supposed to be on stage right now?

Will Curran:

Totally, your going to have to learn to by time.

Scott Mirkin:
If it's a festival, which we do a lot of festival broadcasts, and those things are amazing, and the folks that work on those festivals. Some of these festivals have 50, 60 artists a day. And they're not all sitting backstage at eight o'clock in the morning waiting to go on. It's a just in time inventory where they're getting rushed from the airport, whatever's going on, or whatever, going to the hotel.

Scott Mirkin:
And so being able to communicate and deal with whatever changes might happen, and make decisions, content on-air decisions. If there's a problem, how to take command of the situation, so that you can make sure that folks are dealing with it and getting reports. Mostly, though, it's overseeing and loving, which is what I do. Making sure I love what we're sending to the audience.

Scott Mirkin:
And then a technical producer oversees all of that crew, authors that tech-spec that I described earlier, and there are milestones during the day. But this is all usually, as I said, festivals sometimes you have a little bit more time, because it takes... some of these festivals you're running miles and miles of cable, so you need a day or two. But many of these things, if you're in an arena, or in a theater, or something like that, it's all one day.

Scott Mirkin:
So you have milestones. It's like, "We're going to park at this time, then we're going to look at cameras at this time, and we're going to do a transmission test at this time." So technical producer's really making sure we're hitting those points, and solving problems that may arise.

Scott Mirkin:
And reporting to that technical producer would be the production coordinators, who are coordinating, like I said, about a 30 person or so crew. Meal breaks, and all those kinds of things, and sign-in and sign-out, payroll, that kind of stuff.

Scott Mirkin:
And then director is really... I work hand in hand with the director, but the director is obviously in charge of calling... Many of these shows, once the music starts it's pretty much we're shooting the music, but a lot of them we'll produce an open to the show. We may have some interview segments, so he or she would be calling in those cues and making sure that everybody's on the right track. That we're going to play a package from EVS red, and that the production audio engineer's going to put up that right fader.

Scott Mirkin:

So he or she will call for that if we're looking for lower thirds. Anything that needs to be commanded. Obviously the camera direction is first and foremost and primary. So he or she is going to be talking to those eight to 10 to 12 cameras. And there's a camera meeting ahead of time, so that everyone knows what we're in for. And sometimes, depending on where we are on Planet Earth, sometimes we know every single one of those camera people and we work with them every day, and sometimes we've never met them. And sometimes it's a little bit of both. And so having that camera meeting and making sure that everybody's on the same page of what they're covering, what they're protecting, understanding the shorthand lingo that we're going to use on the intercoms, and to get that happening. And that's where the magic is, because it's all about getting great shots.

Scott Mirkin:
Video engineer is also often referred to as the shader, is also an invaluable position. That's the person that's matching, in real time, 12 cameras, right? Color temp, iris, whatever it might be.

Will Curran:
They have the best eyesight out of anybody on the entire team.

Scott Mirkin:
Yeah, it's amazing. And there are many things where if you're doing stuff outside, you're chasing sunset, and so the color temp's going to change. You've got to continuously pink these cameras. And it all happens, and the audience has no idea.

Scott Mirkin:
It looks so easy, and that's why sometimes people are like, "What do you need, like two cameras and three people there, you're live streaming?" We always joke and say, "Oh, live streaming, yeah, what do you need, like some pipe, a drape and a TriCaster, right?" And we're like, "No."

Scott Mirkin:
So it is, we're on the high quality side of this. We're on the broadcast quality side of it, and that's how it's done. And the show happens. It's like mission control with all those things. We have another half-dozen people at the encode site.

Scott Mirkin:
And globally there's some folks that we have a conference bridge, obviously, during the whole show, where there's folks globally from whichever platform we might be broadcasting to, which on the music side 90% of the time it's Title so we have people from the Title platform on the line, as well as Akamai and the encoding folks at the NOC, all just together for however long it takes for the show to start and stop. And that's quite a group of people.

Scott Mirkin:

For the Made in America festival, which we've been broadcasting since its inception in 2012, that's four stages times two days. And it's a big outdoor site on the Ben Franklyn Parkway in Philadelphia, so it's 3,000 feet apart, some of these stages. So it's all kinds of cable, it's all kinds, there's multiple trucks. We have, on our crew for that show about 200 people, just to give you a sense.

Will Curran:
Wow. Wow. I just can't imagine a 3,000 foot cable run in any sort of fashion. That just sounds... I definitely don't want to be that guy who has to put it down.

Scott Mirkin:
Well yeah. It's a pretty regular occurrence on outdoor music festival, if you think about it. Anything that has a couple of stages. You've got to be a couple of thousand feet away from each other, so that they don't bleed, sound-wise, right?

Will Curran:
Yeah, that makes sense, that totally makes sense.

Scott Mirkin:
And it's fiber, so it's not like you're running a million-

Will Curran:
Yeah, true.

Scott Mirkin:
You're still running, we use TAC... this is where my... some kind of TAC... Those are tactical fiber, that has multiple-

Will Curran:
That's where my knowledge fizzles out too.

Scott Mirkin:
Different... I mean back in the day, and sometimes depending on where we are, there are still... Triax, is another form of cable that comes from the broadcast world, and that was the big step between... Before Triax existed you were running, back in the day, this might be-

Will Curran:
Like six cables.

Scott Mirkin:
... this predates streaming a little bit, but yeah, you're running a bunch of different video cables, power, comm, audio, all this stuff. CCU, all that stuff, and now it's in one tiny little... about the size of a shoelace.

Will Curran:
Yeah, for anyone who doesn't know what Triax is, it's basically a bunch of different cables combined into one single cable. It's almost like your God video cable in some ways.

Scott Mirkin:
Yeah, and so the fiber stuff is... and it's a little bit more rugged, so that's why the military stuff, it's designed to be run over by tanks, or whatever, so it can usually hold... Although it is funny, every year, and it just happened this year at Made in America, we lost some fiber to a street sweeper. Street sweeper 1, fiber 0.

Will Curran:
Oh God, the worst. And people don't realize, too, this fiber cable's expensive, too. So when it gets lost, not only are you just, "Oh my gosh, this has gone down," but then you're also... you just see like $1,000 per... just go blink before your eyes. It's just crazy

Scott Mirkin:
Yep, no doubt. Yeah.

Will Curran:
My follow-up question to the ones about all the positions, is which position do you feel like is the most underrated position on your team, in that people really just don't think about that's totally underrated?

Scott Mirkin:
Well I think I might have tipped the hat a little bit. I think the video shader is... If you're in the business, everyone knows that's a major, major position. In the business meaning behind the scenes like we are.

Scott Mirkin:
We try never to find ourselves in this situation, where we're sitting with a planner or a corporate client, going down the list of crew, and then the person go, "What's a shader? Will we really need that? Can't we just set the lights right?" And then you have to try to explain to them, "These are all the things that we do that makes it look like we're not doing anything." So the shader is a super-important position.

Scott Mirkin:
The other really important position, again, mostly on the music side, but really on any side, especially if we're partnering with... Like we're covering these music festivals, we're not... sometimes we are and sometimes we aren't, but often we're not producing the actual show. We're really producing just the broadcast. So we still have a stage manager position, and that stage manager is really a delegate and a diplomat to the production stage, or whoever's running the concert, or whoever.

Scott Mirkin:

We just need to know what's going on, and we can coordinate. So that's an extremely invaluable position that, again, if someone was looking at a bunch of positions and they were trying to scrutinize, they'd be like, "Well we have a stage manager." Like, "Yeah, well we need to talk to your stage manager, and the only way to do that is when they're standing next to each other on stage." So that's an extremely valuable position.

Scott Mirkin:

And when you have 50, 60, 70 person crews, or like a 200 person crew, making sure especially in the summertime or whatever, having folks to make sure that that crew has all the creature comforts. That they have water, that's not a creature comfort, that's a necessity. And that we're-

Will Curran:

Yeah, like some snacks and things like that.

Scott Mirkin:

Yeah, and you can make a mistake very easily in one of these shows that would cause a meal penalty that can really cascade the budget downward out of control. So you've got to really have a good production coordinator team to keep an eye on that, and to really watch and keep the crew moving, and the machine oiled, and all those kinds of things.

Scott Mirkin:

So I think everyone knows that there's a producer and director, and those folks. So I think important positions, shader, stage manager, and the support team is probably the most important, so that all these folks can really perfect their craft. They're artists, every camera operator, every audio mixer, every shader, everybody's an artist. We are all artists, and artists don't create very much art if they're trying to figure out what time's lunch? If their getting hangry, and their thirsty, or whatever else.

Will Curran:

Yeah, absolutely. Absolutely. Oh my gosh, so I have a million other questions, but I think this one pivots well off of that underrated position, and kind of you talked a little about it. The shader is one of the things that people try to get rid of, but what pieces of a live stream do you see people try to get rid of that they absolutely shouldn't? That you're like, "Don't get rid of this." I mean you talked a little about the shader, but this could also be equipment as well. What pieces do you feel that people try to get rid of that they shouldn't?

Scott Mirkin:

Yeah, so I think what often happen is, like most of us in this industry, we all probably put our time in, I know I certainly did, in good old AV. Corporate AV. And that's where I started. And probably had some of the most valuable training I could have ever had. And I'm going back several years, early 90s, late 80s, right? So the technology was different. Took two hours and

somebody who really knew what the heck they were doing to get a video projector to even look half decent.Now it takes 15 minutes and the thing looks amazing, right?

Scott Mirkin:
And so, just the whole notion of having a list of stuff that you know you need, and then usually sitting across the table, with all respect to our audience, from folks who might not know what those things are. So it's difficult, and so we're fortunate now, most of the time, that we don't have to defend. We bring a product, we don't have to defend every component.

Scott Mirkin:
It's hard to defend components, but some of the common things that you see would be, let's say it's a panel discussion of three people. I'd still shoot that with four or five cameras. Because you have an audience, too. And often a person might be thinking more about video conference, like, "Hey, I just did a Skype last night on my phone and blah, blah, blah, what do you need all this for?"

Scott Mirkin:
You're like, "Well, there's a psychology to audience retention and it has to be interesting. And you have to give them... think about if you sit in an audience at a concert, or a seminar, or a panel discussion, you're looking around. You're looking at things that are interesting. You're looking at the set, you're looking at how people are interacting. Maybe you're looking at the reaction of the person who just asked the question, as opposed to the person answering the question. Maybe the person's saying something so controversial that you'd like to see what the audience is thinking. This is a member of any audience, whether it be a corporate audience, or an education audience, or a music audience."

Scott Mirkin:
So our mission, typically, on these things is, we are trying to create and amplify what the audience in the venue is experiencing. And they're not looking at it through a roll of toilet paper, right to the person who's talking, like one camera would look like. They're looking at it in a much more sensory perception type of way.

Scott Mirkin:
And so when people start crossing out cameras, I get angry. Not angry, I get annoyed. Same thing with audio. And the appropriate redundancy in switching and signal. Like if you have video, or slides, or whatever you might have, you need the right switching, you need the right stuff so that it just doesn't look clunky, either A, to the audience that's there, or B, on the air.

Scott Mirkin:
So that requires more sophisticated stuff, so you're not doing hard cuts, you're doing real... we don't do a lot of dissolve, but if it's just like a nice cut, or a quick little dissolve. But also having enough spigots to have a backup machine running, whether it be for graphic content, or whether it be for video playback, redundant machines. All going through a proper audio scenario.

Scott Mirkin:
And when people start taking that stuff, and they're like, "Well can't we just hold the camera in front of the laptop?" We usually try to leave the room if somebody says something like that. And then again, there's also this whole thing where, let's say we have a client that understands, or at least trusts us to say, "Oh yeah, we need four cameras." And then they didn't do anything to light the place. And now we've got to tell them, "Well what's the lighting?" And even the-

Will Curran:
And something that you're not necessarily controlling directly.

Scott Mirkin:
Yeah, well, what we try to do, most of the time, not everybody can do this, I think it has to do with the maturity, the age, of our company, or whatever. We ask those questions, we try, we've got to ask them early and try to figure out if this is the right engagement for us.

Scott Mirkin:
We set out, and our company's just entered it's 24th year, and one of the things that we did from day one and still do is, if a client doesn't see the value in what we do, we going to try to figure out how to not have them be a client. And it's a very hard thing when you're just starting, and you're trying to bring revenue in, put points on the board, or whatever. But it's really, really important, that.

Scott Mirkin:
Because if you went in there and you didn't win that argument, and you went in there and you pointed all your cameras at a dark stage, or a badly lit stage, which is worse, where it's just everybody's all blown out, it's worse than dark. And then the big boss is watching the stream, and he goes, "This stream sucks! Who did this?" Our name's on it, and so we are responsible, so we always want to... we sometimes say, "We can't come into any of these things with one hand tied behind our back."

Scott Mirkin:
And I always try to give that advice to anyone, whether it be in our company or anyone who's ever asked. It's like, "Sometimes it's okay to not take every single job, to be the client." We've had clients call us back after we're sort of, "Sorry, we can't help you." And they're like, "Okay, we learned our lesson, can you help us now?" And so that's an important thing. You've got to do what's right so that... I also call it the circle of responsibility.

Scott Mirkin:
If the person on the other end is watching sound and picture, and I'm providing that sound and picture for the person on the other end. Everything that is utilized to create that sound and picture, I need control over. Control over it not in a way that's maniacal. Control over like, "Hey, we're going to start when we say we're going to start. Where are you going to stand? Are you

going to play video?" Those things, so that we can appropriately broadcast it, so that we don't get... it doesn't look bad on us, or the client. That's a very important guideline for us to do business.

Will Curran:
That's awesome. I love it. I think that mature vendors should be able to do that as well, is that not just look at it as, "Hey, here's my lane, here's only what I'm talking about." But be willing to step up and say like, "Look, this is my experience across," in your case like 20 years of doing all these epic-scale live streams, and saying like, "Look we want to make your stuff awesome. This isn't exactly what I'm in charge of, but it's going to make us look bad, and it's going to make you look bad. Let's fix it."

Will Curran:
Oh my gosh, I have so many questions, and so little time. I want to kind of hone in on an area that you've mentioned a lot throughout, but I want to tie into, so that people can see the amount of, I guess, thoroughness for which you do this, and that's redundancy. And you talked a little bit about power redundancy, but can you go through all of the layers of redundancy that you have? And why do they exist, and what are all the different layers?

Will Curran:
So obviously you talked a little bit about power redundancy, with having those entertainment generators, just in case the venue power goes off, because it's going to take 15 minutes to boot all these livestream systems back up and good to go. Whereas maybe if the venue power goes up, it's going to take two seconds for the audio board, the sound system to click back on, everything like that. They can start playing immediately. What other sort of redundancy systems do you have in place, and why do they exist?

Scott Mirkin:
You're right, power's obviously the big one, and we start there. And if you think about it that's the beginning of the chain. We've got to plug the stuff into the wall, if you will. And so how many plugs run into the wall and how that's being powered, eliminates any single point of failure. So there's no single point of failure any longer in the power. Now of course you could have a double point of failure, and then you're going to have some challenges, but the risk mitigation is well within the parameters to do it that way.

Scott Mirkin:
And then the other big, on the other side of that funnel, on the transmission side, getting the show out of the arena, or wherever to the rest of the world, transmission. That's the other place in which there's a tremendous amount of redundancy. Depending on where we are, and how we're getting our signal out, that could mean two discrete, separate, satellite up-link units, hitting two discrete, separate either transponders on the same satellite, or sometimes, two different satellites altogether.

Will Curran:
And that sounds expensive, but what does... for most people who don't understand the technical side of the internet side of things, is that very expensive to do? Hard to do? That's a leading question.

Scott Mirkin:
Yeah, I think that I'm describing what a first class production looks like, and I think the client, whoever's responsible for funding these kinds of things has to understand the expectation. Again, maybe we're lucky or whatever, i can't remember the last time I was in a situation where a client is like, "Okay, we don't really need the redundancy on the transmission." It's one of those things where I usually sit down and I try to walk them through the scenario of transmission failure.

Scott Mirkin:
If there's a transmission failure, and you're off the air, if it's ever happened to you or anybody in our audience, I'm trying to recreate the feeling that we've all had, even when like a sound system goes off in a ballroom, or the video doesn't play. Things that just make us all quiver, in our live business. Often the thought that runs through everybody's head, clients in particular, if they could write a check at that moment for any amount of money to make that problem go away they would.

Scott Mirkin:
So let's just do it right from the beginning. And that way you don't even see a failure, right? And so redundant transmission is an absolute requirement if you're producing for network television, which we also do. It's a requirement. They basically say to you, "Whatever the budget is, you must include these things." And redundant transmission is one of them.

Scott Mirkin:
By the way the redundant transmission is also redundant on the receive side. So there's multiple encoders receiving. And there's multiple insertion points into the player, so that there's a fail-over system that's seamless. It's like taking the anti-lock brakes, or taking the front brakes off your car. You can't go to a car dealer and say, "I really love this Porsche, but I want to save two grand. Take the front brakes off." They won't do that. Well we won't take the redundancy out of that.

Scott Mirkin:
And then other redundancies which I think we all in the live space, in the physical space, backup equipment. Backup microphones, backup mix, just backup gear. And depending on what it is, online and playing. I'm sure you've done it, we've all done it. Whether we're playing to a very large audience and we're playing a tape. It's not really a tape anymore, but we're playing a segment. Well you could have a backup scenario where you actually have two machines playing, and if one machine decides to die, the other one will take over. No-ones's the wiser.

Scott Mirkin:

And those things ar really, really, important. Redundancy, I think, having multiple cameras gives you an opportunity if you do have a camera technical problem, technical failure, part of that 40 person crew, and I mentioned them earlier on in the process, the utilities, these are maintenance professionals. So like if a lens freezes up, if a viewfinder dies, the things that could happen to a camera during a live show. There's a utility three feet away from this camera operator, who can take that camera and typically get it back online within about 90 seconds. So if you've got 10 cameras, you can do without one camera for a minute while you're fixing it, so you've got your built-in redundancies in that regard as well.

Will Curran:

That's awesome. I think it goes to show in the events industry, I think we all could start expanding budgets more towards redundancy, before we start to look at flashiness, too. I think far to often we go towards the things that we're like, "Wow this is exciting, and ooh." But no-one really gets jazzed about, "Oh my gosh, yeah look at this second internet connection I'm paying for just in case things go bad."

Will Curran:

You might not ever need it, but like you said, I love that you mentioned that anyone would be willing to write a check for any amount, had things gone wrong. But the problem is with redundancy is that you can't do that in the moment. It has to be done ahead of time.

Scott Mirkin:

Yeah, it's too late. If that's the point, you're 100% right, it's too late. And that's, I believe, the job of the event producer, and this is what we do every day. Aside from the live streaming piece, the job of the event producer is to work with the client on the budget, and then properly allocate that budget in the appropriate areas. And we always start with the technical infrastructure. Because at the end of the day, that's really what matters.

Scott Mirkin:

On the corporate side it's really important, really important. And so we start with that, and we kind of educate the client from day one, "That's how we're going to do this." And we share with them our designs and technical specs. Most clients, or the planners, whether they're internal planners or corporate team folks, in some of our corporate clients, I think they read through it and I think they're interested. They don't really understand it, and that's not a did on them, it's not really what their expertise is. But the fact that we've gone to all that work, they can see it.

Scott Mirkin:

They can see it in our CAD drawings, they can see it in our tech-specs. They can see it in all of the products that we produce, the work product for every single event, regardless of the size. And they feel like, "Okay, we're comfortable, we have the expert." And they value our opinion. And if a client has whatever you want to say, $10 to spend, which we hope they have more, by

the way, but if a client has $10 to spend, you can't spend eight of it on talent. And you can't spend eight of it on centerpieces.

Scott Mirkin:
By the way I only know like one florist in the entire country that likes me, because I'm always like, "We don't need anything on these tables." And so it's like, "What's our mission?" Our mission is, we're delivering a message, well let's make sure that the folks that we put in the room can see and hear, and that the video is appropriately positioned, and that the stage is lit, and that the presenter walks out there and has the tools he or she needs on stage. Like confidence monitors, and fold back audio, and all the things that make that presenter comfortable, so that they can do their job.

Scott Mirkin:
And when all that's in place, and we've got the systems, and the redundancy, and the appropriate crew, yeah great, let's bring in the centerpieces after that.

Will Curran:
I love that. Oh my gosh, I was going to literally have you do one more tip, but I feel like that needs to be the tip. That is the thing that everyone I think needs to hear on the technical side is, you've got to focus on the basics before you start focusing on the fancy flashiness.

Will Curran:
Real quick, Scott, I have one more question for you, and then we'll get you wrapped and gone, because I know how busy you are, and also I'm feeling we're going to have to do a Part Two of this one, because I have a list of questions still to go, but it needs its own episode, I feel like.

Will Curran:
When it comes to events, what is some piece of technology that has you absolutely excited right now? And maybe it's related to live streaming, maybe it's not. What sort of event technology has got you the most excited?

Scott Mirkin:
I think that there's a couple of things. One, the evolution that's occurred in video LED and lighting LED over the last what, Five, six years has been tremendous. The video products that are out there that are in the neighborhood of, what are they now? Two millimeter pitch, right? Those things are tremendous, and just so many things you can do with those. And same thing with LED lighting.

Scott Mirkin:
That's beginning to have a tremendous impact that people don't often think about, which is, that stuff requires less power, therefore the cabling and things that go along for the ride on these big tours and things is going to start to become smaller and lighter, which is an environmental thing.

LEDs themselves are an environmental thing, we're not burning lamps as much, we're burning less power. So, that's kind of neat.

Scott Mirkin:
And then audience engagement stuff. The appropriate audience engagement stuff, I love. This is not usually in the house, it's usually a pre-event thing and a post-event thing. Or if it's a straight-up hospitality event, they're great. But all of these, I guess the term is photo booth, but they've really evolved, and they're really cool, and you know what? You can do the animated gifs, and you can really leverage the social media impact of your event in a real-time way with those things.

Scott Mirkin:
So those are pretty exciting. And I think also, and this may be a twist on an answer for you. We also, with all this technology, and all these things, I'm hopeful and I think we'll see a trend of, "Hey folks, turn your phones off. Why are you looking through the lens of your phone to watch a concert? To prove to everybody you were there, and you're not actually watching the concert, and your phone is in everybody's face." So go to a live experience and experience it live, you cannot recreate a live experience with your phone.

Scott Mirkin:
So that's a piece where maybe the technology's gotten a little off-course. But we love when folks take stills and do Instagram shares, and stuff like that, and that can be really great, but let's unplug and enjoy music without recording it to prove to all your friends you were there, I guess. I don't know what that whole thing is.

Will Curran:
Preach. Preach. And I think that's funny too, because coming from the guy who creates live video experiences when there's obviously something physical like in. But your whole job as a live stream is to try to recreate that experience through the live stream. So I think it's just awesome that you're the one saying that.

Will Curran:
And I can't agree more. I can't agree more. You always see that meme of like, "Back in the day it used to be everyone had their fists in the air, then it was lighters, and then it became everyone's flashlight on their phone, and now it's just the iPad."

Scott Mirkin:
Yeah, and something that we didn't really touch on, which might be kind of a good pin to put here is that, of all the things that we do when we're doing these shows, we work really, really, really hard and we're successful 95% of the time, if not higher, in keeping our own cameras out of the shot. And then when someone's standing there with a camera in our shot, I get cranky.

Will Curran:

I love it, I love it. Oh my gosh, Scott, seriously, this has been such an amazing conversation. Like I said, I feel like there's so many more questions I have to ask, but I feel if you've made it to the end of this episode, and listened to this entire thing, I'm sure you got as much value from it as I have. Got a little bit nerdy, and I allowed you to get technical, which I think that our audience is really going to be excited for. Man, this was just so awesome.

Will Curran:
Scott, thank you so much for being on the Event Tech Podcast.

Scott Mirkin:
My pleasure, Will. Yeah, let's do it again.

Will Curran:
I love it, I love it. Well, we'll definitely come back. Make sure, Scott, just so that everyone knows, if people want to reach out to you and ask you more questions, what's the best way for people to reach you?

Scott Mirkin:
So, we're ESMProductions.com is our website. And something that we do, and maybe not a lot of people do, is you can find folks on that website and find their email. So you can find me at ESMProductions.com. You can also follow me on Instagram, and that's SMirkin, like smirkin, S-M-I-R-K-I-N 01 on Instagram. And I do a little bit of behind the scenes stuff on my Instagram that people might find enjoyable.

Will Curran:
I love it, they get to see those miles and miles, and 3,000 foot cable runs, yeah. I love it. I love it, Scott. Thank you again for being on the show, we can't wait to have you back.

Will Curran:
And thank you, audience, for sticking until the very end, and listening to all the awesome stuff. We got a lot of awesome things planned for you guys in the next, upcoming episode, so stay tuned. And seriously just such an awesome episode.

Will Curran:
If you really enjoyed this episode, you want to get more show notes, see some of the cool stuff that Scott mentioned that we're going to link down below, make sure to head to eventtechpodcast.com. That's your home and resource for everything, transcripts, all those things like that.

Will Curran:
If you're listening to this on YouTube or Spotify, and you want to find a better place that you would enjoy listening us to. Or maybe you're listening to us on the blog, you know you can always get all the subscription links right on eventtechpodcast.com.

Will Curran:
Make sure to leave us a review, that helps with discoverability and people finding us. Just go to eventtechpodcast.com. And also, as always, reach out to us, shoot us an email, eventtechpodcast@helloenlist.com. Shout-outs to everybody who's been emailing us, and we're going to be giving you guys some shout-outs in the future, so stay tuned and send us an email if you ever want to hear something. Or if there's a followup question that you have for Scott, that you want to make sure we answer in Part Two, make sure to let us know.

Will Curran:
But thanks again everybody for listening to Event Tech Podcast. This has been Will Curran, signing off. We'll make sure that we get Brandt back here next time, why don't we? So we'll catch you guys all next time, and we'll see you later. Event Tech out.

Thanks again for listening to the Event Tech Podcast. Be sure to rate and review us on your favorite podcasting app. Also, be sure to head to eventtechpodcast.com and leave us a comment about this week's episode. We'll see you next week on the Event Tech Podcast.