

Sound Healing Global Summit™

Illuminating Sound Therapy at the Cellular Level

John Stuart Reid

Alec: Welcome back to a new session here at The Shift Network Sound Healing Summit. Thank you for joining us. Our guest this time around is John Stuart Reid. Acoustics pioneer John Stuart Reid, is a man on a mission, mission to educate, inspire and excite the world in the field of visible sound. His career has spanned five decades, and he's widely acknowledged as an authority in the field of cymatics on which he speaks at conferences all across Europe and America. John, welcome. Thank you for joining us.

John: Thank you. It's a great pleasure to be with you today.

Alec: Thank you for working it out with the time zone differences here. You're over in the UK at the moment, yes?

John: Yes. It's getting towards dinnertime here.

Alec: We will try to move right along, so you can get your dinner in a timely fashion. But we've got a lot of great stuff to cover here because I do want to take a deeper dive into your personal work. But before we do that, I just wonder if you'd like to say a little bit about the history of the field you work in. For those who may not be familiar, what is cymatics?

John: Cymatics is basically the study of visible sound or sound made visible. I think it's quite an easy concept to understand because whenever there is a sound vibration in the air and it impinges upon a membrane, whatever that membrane might be, it could be your skin or the surface of water or even a metal plate surprisingly because you would think metal plates can't be that flexible, but basically whenever sound impinges on a membrane, a pattern of energy will form on that surface. Of course, it's not usually visible to the naked eye, to the unaided eye, but with special equipment or even just simple sound, if you sprinkle sand on a membrane and then make sound, you will see a pattern forming because the undulations on the surface of the membrane will cause the

little sound range to move into positions and that is, in a sense, simply visible sound. Sound has made that vibration visible. The whole science really started, kick started with Leonardo da Vinci. We're going right back to what, 1500s, somewhere around there. He noticed that when he vibrated a table on which there was some dust, that it created a little helix. He noted that down in one of his notebooks, and that's come right down to us today. Then if we fast forward, a lot of other people in the story but just making it short, if we fast forward to around 1800, the German musician physicist Ernst Chladni invented something that's now known as a Chladni plate. It's just basically a sheet of small area of brass metal centrally held on a stand. When you sprinkle sand on that plate and then play the plate, literally play the edge of the plate, with a violin bow as he did to audiences all over Europe, then you get a beautiful pattern forming on the plate. He showed it even to Napoleon, and he was very impressed. Napoleon put out 3,000 Franc prize to find a mathematical explanation for all of this. Then there are lots of other people in the story. Michael Faraday, a little bit later than Ernst Chladni, he worked on it, but he didn't call it cymatics neither did Chladni, of course, in those days. But it wasn't until we get to the era of Hans Jenny in the 1960s. He actually coined the word cymatics, and he did a lot of really wonderful foundational work. My own work is taking the work of Hans Jenny forward.

Alec: That's brilliant. Thank you for that. Cymatics is very inspiring, one of the simplest level, that concept that sound creates form which has a lot of really fascinating implications and possibilities to continue to work with which you have been continuing to evolve the field and taking it from those, working on plates and whatnot to actually working into understanding of the biological mechanisms that underpin sound's ability to trigger the body's healing response. What's going on there, and how does cymatics relate to that?

John: The story begins in 1997. I had been an acoustics engineer all my life up to that point, which was about 30 years, in the acoustics industry. But in 1997, I obtained permission to carry out a series of acoustics experiments in the Great Pyramid. But about three weeks before traveling out to Egypt, I injured my lower back quite severely, right to the point where I was in extreme pain. I thought I would actually have to cancel the whole mission. But anyway, I didn't. I took a lot of painkillers, probably more than I should have done and somehow I managed to get into the pyramid in great pain and set up the equipment. One of the experiments that I had designed involved stretching a PVC membrane across the open top of the granite sarcophagus. This is a 3.7-ton granite box that's been hollowed out, supposedly, for the Pharaoh Khufu to spend eternity, although I know there's a lot of people who disagree with that view. But anyway, it's a granite box. If you're in, it's a very, very strange acoustic in the king's chamber. If you strike the side of a granite box with your fist, it rings like a low-pitched bell. It's a really beautiful sound. As an acoustics engineer, I was very interested in

studying that sound and what the vibrations might look like if we made them visible.

In order to do that, I stretched a membrane across the open top of the sarcophagus. I have placed a small speaker inside it, inside the bottom of sarcophagus, and then sprinkled sand onto that PVC membrane and started the sound, injected a sound into the speaker from an electronic oscillator. Well, the whole point of that experiment was really to make visible the resonances in the sarcophagus because the sand will automatically take up positions based on the resonant behavior of the granite. At best, I expected to see some geometric patterns to reveal aspects of the sarcophagus. But instead, and this is going to interest listeners that have not heard this story, a whole series of ancient Egyptian hieroglyphs appeared in the sand. Every time I changed the frequency, a new hieroglyph would appear, which, of course, astonished me and completely astonished the antiquities inspector who was with me. But about 20 minutes into this experiment, I noticed that all the pain in my back had totally left me. It was these two events, seeing the hieroglyphs and becoming pain free after 20 minutes, that just completely changed my life forever. Seeing the hieroglyphs inspired me to create a new type of scientific instrument which is the Cymascope. That's C-Y-M-A and then scope like microscope, that will make sound visible. Then the healing of my lower back by sound inspired me to attempt to discover how sound can heal.

Alec: Outstanding. There's a lot of beautiful things to contemplate there on the tangent of there's a lot of speculations about the profound knowledge of sound and vibration that was, I believe, definitely present with ancient cultures. Your experiments with hieroglyphs appearing in response to sound in the way interacted with the geometry of the chamber, the sarcophagus, that seems to be another clue into that. That's beautiful. We'll continue with the Cymascope in a moment, but just think about the nature of sound itself because you have a beautiful concept about the spherical nature of audible sound. Can you explain a little bit about that, which evolves the concept? We typically think of sound as a wave, but there's a lot more to it than that, isn't it?

John: There is indeed, yeah. It's a bit of a misnomer. Basically, sound in air, if we define it, first, sound in air is transfer of periodic vibrations between adjacent colliding atoms or molecules, which may sound a bit of a mouthful and a bit rather grand, but basically it simply means when atomic particles bump into their neighbors, they pass on the vibrations. This transfer of vibrations between any two adjacent atoms or molecules is what we know as sound. The energy in a sound event, for example, if we clap our hands, the energy expands away from the sight of those collisions, in this case, the impact of skin molecules on skin molecules equally in all directions. In other words, it's expanding as a bubble. This sound bubble naturally expands at the speed of sound which is roundabout 768 miles an hour,

20 degrees centigrade or whatever. Its outer surface is in a state of radio pulsation. In other words, the bubble is pulsating in and out, meaning that it's expanding and contracting. It's the bubbles' pulsations that are the same as those periodicities that are created by the impact of the two hands as they come together and make that clap sound. In fact, it is the pulsations of the bubble that are the sound.

I suppose you know, at this point, you might be thinking, well, what about sound waves? Where do they come into the equation? Well, actually, the model of sound waves is incomplete, as well as a misnomer, because really it's referring to the graphical representation of the mathematical law of the sound energy. In other words, while the term sound waves is correct in terms of its graphical representation, it's not actually how sound propagates or travels. The concept of sound as a wave is simply a label that is used to describe the fact that a sound bubble or sound bubbles pulsate in and out rhythmically. It's this pulsation of the bubble, the bubble's outer surface that is typically illustrated as a way of wave-like graph. But if I put it a little bit differently, when teachers and scientists describe sound as a wave, what they're really referring to is this rhythmic pulsation depicted graphically, not its actual shape in space. I know it's a little bit confusing, but this is the reality. Sound is actually a bubble, or we can call it a spheroid or whatever, but essentially it's a bubble. The result of this confusion, of course, is that most people incorrectly visualize sounds wiggling their way through the air rather than visualizing beautiful, shimmering sound bubbles.

Alec: That's outstanding. To help with that image, I know on your website, which is cymascope.com, which is simply C-Y-M-A and scope as in telescope, cymascope.com, if you go over there, for anyone listening on the replay, you can just pause for a moment, put cymascope.com and click on the physics tab on your top menu. That gives a beautiful image of what John was just talking about, how sound radiates outward in a sphere, not some sort of abstract flat wave as is often depicted. I highly encourage to go over to John's site and take a look at those images there that may help add the visual to the description he just provided. Good stuff. That's just such a wealth of information on your website as well. We could spend the whole time at any one of these topics. But one article that caught me about the therapeutic power of vocal sound, which you talked about sound giving birth to light, can you tell us a little bit about that concept and how that relates to healing?

John: Yes, indeed. First, it's important to realize what happens at the moment when any two atoms or two molecules or an atom and a molecule when they collide. Let's just think about air, which is a mixture of molecules and atoms. When you make a sound, however you make that sound, whether it's just with your vocal apparatus or with a hand clap or whatever it is, you will be passing vibrations on from one atom to the next or one molecule to the next and so on, like a set of

dominoes. This is, obviously, very common knowledge how sound propagates. The vibrational aspects of the sound, whatever it is, will be passed on in that domino kind of fashion, in a spherical form as I've just described. But the other thing that happens, which is almost like magic, in a way, these kinds of collisions, in physics what is termed as inelastic collisions. An inelastic collision means that some energy is lost during the collision process. How it's lost? Well, it's mainly lost through heat. This is why when you make a sound, let's say, you go outside and you sing or you shout at the top of your voice, that sound will be lost within about a mile or so at the very most. It's not going to travel any further than about a mile because energy is being lost the whole time with every collision between these adjacent atoms or molecules. What about the heat element? Okay, well, what's happening is this: When any two atoms or two molecules collide, they're passing on the vibrational information, which is the sound, but also there is friction between these atomic particles and that friction creates heat. The heat that's created is typically, for most earthbound sounds, in the infrared spectrum. In other words, it's red light but not red light that we can see below the frequency of normal red light and into the infrared spectrum. What happens with that infrared light is it’s modulated in amplitude by the sound. Now, if you go outside and you sing, let's say, to the sky, what's happening is, yes, your sound will go about a mile up into the atmosphere and eventually just disintegrate into noise. But the infrared component of the sound will actually zip through the atmosphere because infrared is not unduly attenuated by the atmosphere. It will zip through the atmosphere carrying your song out through the atmosphere and into space. Electromagnetism, which is really what we're talking about here, infrared electromagnetism, and because electromagnetism travels through space without any medium at all, it's just a vacuum of space but it can travel through space. It means literally that your song will one day reach the stars which is a nice poetic thought.

But coming back to the subject that we're talking about here, which is sound therapy or sound healing, what does it mean for the human body? There has been a lot of research conducted in recent years into the means by which cells communicate with each other in our bodies. It turns out, one of the prime mechanisms by which cells signal to each other is in the infrared spectrum. In other words, they're signaling with modulated infrared light from cell to cell and sending messages through your body, through your tissues in this way. From whatever message your cell wants to send, it will send it in that infrared spectrum. What does this mean for healing? Because when sound therapists or sound healers apply sound to one of their patients or one of their clients, it's not only the sound, the mechanical pressure of the sound that's entering into that person's tissues but also the infrared component of the sound. Then we have to ask the question, is it the mechanical pressure of the sound that's triggering the body's healing response, or is it the infrared component of the sound that is triggering the body's healing response?

Alec: That is fascinating because I actually never thought about sound from that angle before. But typically, when people talk about sound and light, and I've been one of those people, often try to deal with the problem of correlating sound to the ROYGBIV spectrum of visible light, but this concept of sound transducing into infrared light is very thought-provoking. Thank you for that. That's good. In more practical ways, how that spins, earlier on you talked about your pain relief experience with the Great Pyramid soundings. Can you say a little bit more about how sound can help mediate pain in general?

John: There are two major mechanisms involved in not only mediating pain, which has happened for me in the Great Pyramid, of course, but what also happened for me in the Great Pyramid was not just a mediation of the pain, that you could call a blocking of the pain, but I think that was definitely one of the mechanisms that occurred for me in 1997. But the other one was an actual shift in my tissues in terms of healing, a natural healing response. Let's talk, first, a little bit about the mediation of pain and how sound mediates pain. The first thing to know is that right throughout all our tissues are things called nociceptors. These are the nerve endings. There are millions of them all over our bodies. There are 100,000 in your hands alone. This is why your hands, of course, are so very, very sensitive to, well, any pain or heat or whatever. Different types of nociceptors are connected into what are termed afferent fibers. These are different types of nerve fibers that each type of nerve fiber is sensitive to different types of energy, different types of sensation, but all these different types of afferent fibers are sensitive to mechanical pressure. When we think about sound, that's exactly what sound is. It is a mechanical pressure. If we get the right frequencies of sound, we can stimulate those nociceptors and send signals through the afferent fiber system to the brain. In fact, most of these fibers terminate in the midbrain. What actually happens if you get the frequencies right, there's a specific frequencies of sound that will trigger this particular response, this pain mediation response in the body, if you get the right frequency, then the midbrain will generate and create opiates literally as a means of blocking the pain. In other word, it's effectively shielding the brain from receiving further pain. We know this to be true not only from the scientific viewpoint of all the studies that have been conducted in relation to audible sound therapies and how they work in the body, but we also know just from our normal day-to-day experience. If you hurt yourself in some way, let's say you hit your thumb with a hammer or something and that's very painful, we knew that. We automatically go to put pressure on that point, won't we? We squeeze it hard. What that's doing is that is doing exactly what sound of the correct frequency would do. It's putting pressure on the nociceptors, sending a bunch of signals through the afferent fibers to the midbrain, and the midbrain is saying, haha, I need to create opiates to prevent this pain to block it. That's why when you hold your thumb having hit it with a hammer, it feels a whole lot better. That's one mechanism.

That's the kind of fundamental mechanism for the mediation of pain. But what about the the bigger question of how sound triggers the body's healing response?

Alec: In addition to what you said about applying pressure, also the natural reaction is to make a sound when you have a pain, to go ow or to groan. Would that vocalization also help contribute to the fact that you're talking about?

John: I think that's very true. It hadn't occurred to me actually, but you're absolutely right. If you hit your thumb with a hammer or whatever you do, you knock your shin on something or whatever, then yes, you do shout out. You're probably right. It hadn't occurred to me, Alec, but I think you're right, that that is another part of the mechanism by which pain will be mediated. But moving on now to how the body's response to any kind of illness is supported by sound, how the body's healing response is triggered by sound. I'm going to keep this pretty simple, but in essence, and also, by the way, I'm going to keep cancer out of this because any tumor, there is a different mechanism and I could talk about that but just put cancer to one side for the moment and think of a whole range of other illnesses. What happens in your body when you have an illness, typically, is that the system of cells in your body will shut down. They literally go into a kind of sleep state. In medical term, this state is called the G0 phase of the cell cycle. If you had a whole system of your body that shut down, why is it shut down? Well, maybe there's been an invasion of pathogens into that particular system of your body, or maybe you've injured that area of your body by some physical trauma or maybe just toxicity. You've imbibed some toxic substance or whatever. But whatever it is, that system of your body has shut down and has gone to sleep. Why has it gone to sleep? Well, because of wanting to heal itself basically and it takes time for that healing process to occur naturally in your body. In that process, the cells are in the sleep state called the G0 phase.

If you read the medical literature on this, you'll find that in order to shift a cell out of G0 and into what's called the G1 phase where the cell is kind of building up to replication and so on, rejoining the cell cycle, as it were, in order for that to happen, the medical literature will tell you, you're going to need time, in other words, sleep or rest. This is why medical doctors very often talk about all you need is a good rest. Of course, there's a lot of truth in that because your body does need time to naturally heal. But the other aspect to all of this is nutrition. The medical literature will say, if you have a really good injection of nutrition, that can take the cell out of the G0 phase and into the G1 phase. But what I'm saying is there's a third mechanism, and that third mechanism is sound. The reason that sound of the correct frequency or frequencies is able to trigger the body's healing response in this way is simply because sound is a form of energy, in the same way that the injection of nutrition is a form of energy that can effectively awaken the cell from its sleep state and get into the G1 phase where

it's preparing for replication or mitosis. That's all that's needed, sound of the correct frequency. That's what happened for me in the Great Pyramid. First, there was a mediation of the pain, so all that pain left me. I thought at the time, in that moment, ah, I know what's happening here. I'm very happy because I've seen these amazing hieroglyphs coming out on this membrane, so I was really happy. There's no doubt about that. I was very excited. I was thinking, ah, these are endorphins moving through my bloodstream, blocking the pain, and so on. But, of course, at that time in my life in 1997, I knew nothing about pain mediation through opiates in the midbrain and so on. Now, after these many years of research, I now know that we've got that basic pain mediation mechanism, but also all of these cells that were in spasm in my lower back were being gradually shifted out of G0 and into the G1 phase. That's the fundamental, primary mechanism by which sound triggers the body's healing response.

Alec: That's brilliant. There's a lot of profound implications of what you just said for the possible future of sound therapy in clinical settings. Another case study I want to make sure we get into that I also think is very powerful documentation of the power of sound is your recent work with the effects of music on blood. Would you like to say a little bit about that?

John: Yes. This was actually a lot of people know that the Pythagoras, about 500 BC, said that music could be used in place of medicine. It's fairly common knowledge that Pythagoras said that and that he was indeed using music as a form of therapy to heal people and so on. But most people have never really studied that, put that to the test, as it were. I decided some time ago that I would, in fact, put it to the test. But the particular method that I decided to use was human blood. I had this hunch, it was just an intuitive hunch, that the lifespan of red blood cells would be extended if we immersed those red blood cells in a musical environment. This was the basic test that I decided to use. It's a very simple protocol. I was assisted in this by Professor Sungchul Ji, who is at Rutgers University in the USA. He came to our lab over a year ago, and we worked for several days developing the protocol for the experiment. But in essence, and I just explained in simple terms how the experiment works, you take a test tube of human blood, a full test tube, and then you decant that into two test tubes, two smaller test tubes and you put one of these test tubes into a very quiet environment which, in our case, is a Faraday cage which is simply a small room that is lined with metal sheeting and that metal sheeting is earth, but also the Faraday cage is aligned with acoustic materials that make it extremely quiet. It's a very, very quiet environment, quiet as in the quietest bedroom basically.

The other test tube is placed in a laboratory incubator. Oh, by the way, both test tubes are in incubator. The one in the Faraday cages is in an incubator, and the other one in the laboratory itself, part of the laboratory in an incubator. But in this laboratory incubator, we have a small speaker and into that small speaker,

we can play music. We can immerse the second test tube in music. In fact, in the recent experiments, we use many different types of music to immerse various test tubes of blood in. I'm talking about music right from the classical types of music right away through to heavy rock and everything in between basically and not just in the standard 440 concert pitch, we also use 432 concert pitch and 444 concert pitch, all these different types of music. We also tried noise, white noise which is a kind of rushing sound that you get when you stand by the ocean or by a waterfall. What we found was really quite astonishing. With all of these different types of music and the different levels of noise that we tried, in every case, with one exception which I will explain, the ratio between the numbers of red blood cells in the quiet environment and the numbers of red blood cells in the music environment was significant, never less than four to one, in some cases, 24 to one. It was really huge number of red blood cells living after immersion in music as opposed to in the quiet environment.

Of course, we have to ask, well, why should that be? Why should music be able to extend the life of red blood cells to such a degree? We don't yet know all of the answers, but one hypothesis is this. First, I should explain how do we count the number of red blood cells that are living in both the quiet and in the music environment? It is quite simple. After the blood has been immersed in either the quiet or the music, then we diluted in a particular ratio because there's actually too many cells to count in real neat blood, whole blood. We have to dilute it first by a particular amount. Then we mix it with a special kind of stain called trypan blue. This stain is able to get inside any cell, any red blood cell that is dead or any red blood cell that's on its way out. It's not dead, it's not fully alive either, but it's going towards death, let's say. This is the normal cycle for red blood cells. There will always be millions of red blood cells that are dead in a test tube of blood, millions that are alive and well, and also millions that are in this in-between stage, that sort of mostly dead, you could say. Anyway, so the stain will penetrate all the cells that are dead, it will also penetrate those that are mostly dead, but it will not penetrate those that are alive. We have a special cell counter, an automatic cell counter. We put a microscope slide with some blood on it into the cell counter and it counts the cells.

How we think this is working is that when the red blood cells are immersed in the music, that the additional oxygen that is released within the blood in the presence of the music actually aids the repair of the red blood cells that are in this transitory state between death and life basically. It repairs the outer membranes of the red blood cells to such a degree that the blue stain cannot get in. This means, in essence, that the music is healing the red blood cells. Of course, it may not simply relate to red blood cells. This same mechanism may relate to all cells. We have to establish that. But anyway, it was an extremely interesting result. We published that on the experiment.com platform. It was

also published in various other places, various magazines around the world, online and paper magazines.

Alec: Wow. That is all so fascinating. As you're sort of hinting out there, I can't help but speculate that if the effects were that remarkable with blood isolated in a test tube, how it may be even more potent, the effects of sound, music, vibration when they're working synergistically in the whole field of a functional organism where the blood isn't just sitting there but also being generated and circulated in a constant basis as well.

John: Exactly, Alec. The other amazing thing that I should mention for listeners is this: that there have been experiments conducted in the past, I'm sure most of your listeners will know, on plants, for example, where rock music was played to some plants and classical music was played to other plants, and it turned out that the plants that received the rock music actually wilted and the plants that received the classical music flourish. Well, I didn't find that. Actually, I found the exact opposite. I think there's a good reason for it, which I'm about to give you some insights into. When you think about it, the heavy beat of rock music or any kind of pop music that has a throbbing beat, that beat is actually very similar to a heartbeat. What happens in your body when you have a heartbeat, that creates a pressure wave throughout your whole circulatory system, and that pressure wave is what allows the hemoglobin in your red blood cells to absorb more oxygen that's already dissolved in the blood. If you didn't have a heartbeat, of course, you would pass out within seconds. If your heart stops, of course, you would pass out, you would black out because your brain will be starved of oxygen. In other words, what we found was that all the pop music tracks that we immersed music in create a much larger ratio of living cells versus dead cells than, for example, classical music. That was really a very, very interesting result. Of course, you have to keep the sound level moderate. You wouldn't want to play these sound levels to blood in a very high sound levels. You got to keep them moderate, but provided the sound levels are moderate, then these amazing results are what you will find.

Alec: I love that. Let's hear it for the healing power of rock and roll because I believe that any form of music can be beneficial depending on the appropriate setting, but that framing that you sketched out makes sense, the energy transfer via the rhythmic elements of the pop and rock music. That makes sense. But on that note, drawing near the end of our time here together and there's so much more we could continue with, but for those people who would like to take a deeper dive into your work, the best place to go is the site that some people may have already visited, cymascope.com, yes, which is C-Y-M-A, cyma, scope like in telescope, cymascope.com. Speaking of visiting your site, I believe you also have a special offer here for listeners of this program. Would you like to say a little bit about that?

John: We do have a special offer. One of the ways that we support our research is by imaging people's voices. We call this our voice mandala service. Our DNA is responsible not only for body form, our physiognomy, our hair color, our eye color, and so on, but our DNA also determines our unique voice. Everyone's voice is absolutely unique. When that voice is injected into water in the Cymascope and we use only pure water in the Cymascope, then all the periodicities in that unique voice become exchanged or transposed or transformed into water wavelet periodicity. In other words, we create a beautiful pattern literally from the periodicities of the person's voice. Every person's voice creates a unique voice mandala. No two can ever be alike. This voice mandala service is normally $144 for which you receive a free hundred dots per inch file, a very high resolution file that you can take to any printer and have it printed, any size up to about three feet square. Anyway, the special offer is $99 for that same voice mandala service. You just basically go to our normal site which is soundmadevisible.com and then at the checkout for voice mandala, just enter the code VoiceMandala99 with a capital V for voice and a capital M for mandala, followed by 99, no spaces, VoiceMandala99, and you will get that beautiful voice mandala which you can give as a gift to a loved one or just treasure it yourself. It's really something special to have.

Alec: That's a beautiful offer. Thank you. When people go to the site, they'll see how these images are stunningly beautiful. All across the site, you have images of various geometries and sacred images. But this is a chance to get a unique piece of art patterned after your own voice. An alternate link to visit, which may be even simpler, and there should be a link to this down below on the screen, but you go to soundhealingglobalsummit.com/john. As John mentioned, use that coupon code, VoiceMandala99, and that will get you moving in the right direction for your own unique Cymascope piece crafted from your own voice. John, I believe that is our time for this session. I'd love to continue and encourage people to continue studying your work at cymascope.com but thank you for joining us here today. A lot of brilliant stuff.

John: It's been a great pleasure, Alec. I do hope that my work has inspired some of your listeners and maybe joined some dots for them because I know that a lot of people like myself have questions unanswered and we search for information to help us on our journey of exploration.

Alec: Beautiful. Certainly, it's several really significant new points for me here that I'll keep thinking about and hope for the same for everyone listening. We thank you all for joining us here once again on The Shift Network Sound Summit. Great to have you with us. Please come join us again for the next session.

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