Episode 141: Freight Security with Bloodhound's CEO Curtis Spencer

Curtis: [00:00:00] The biggest problem, in supply chain tracking is what happens if I don't have cell signal? What happens if I can't see the satellite?

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Richard: I'm Richard Howells and this is The Future of Supply Chain, a podcast where we discuss hot topics, best practices, and the latest innovations in today's global business. And in this week's episodes with cargo, theft and tampering, incidents increasing and surging around the world, we'll be discussing the future of freight security. To do so I'm excited to be joined by Bloodhounds Curtis Spencer. So it's great to have you on the podcast today, Curtis, welcome.

Curtis: Thank you so much my friend. I appreciate it.[00:01:00]

Richard: Maybe you could introduce yourself and tell us a little bit about your company.

Curtis: Sure. So Bloodhound tracking device was created three years ago by a couple of. 40 plus year veterans in the supply chain world myself and Steve Sheinberg, and we partnered with some NASA engineers and a DOD veteran. The four of us created the bloodhound tracking device because we had looked for two decades to try to find something that could actually accurately track shipments and be a security device. We couldn't find that, so we invented it. Thank God for the NASA engineers. They brought in better engineers and we were able to create something that, quite frankly, is it's, it is the game changer in, in global tracking, tracing, and high level of security in a covert package with [00:02:00] encrypted backend.

Richard: Okay, I really am talking to a rocket scientist or somebody that works with rocket

Curtis: Yeah. Yeah. It's the guys in the room that we don't let anybody in or out, keep those engineers focused.

Richard: Exactly. In the intro I mentioned the fact that cargo theft and tampering incidents are on the rise and this results in millions in costs for logistics providers each year. So how are you seeing this manifest itself across supply chains?

Curtis: Well, it is interesting our sales process started about a year ago and about, I would say eight months ago, the volume of requests for trials of our product increased dramatically, and it increased right in line with the emergence of the cargo theft that was going on. It's just you mentioned it. It's just gotten to be an epidemic out there in both trucking, in intermodal rail here in the [00:03:00] US and in just in overall cargo theft. And it's not just the bill of lading spoofing that's going on with the truck brokers going down and you have a valid truck driver showing up with an invalid bill, but he shows up and he's given the load. It's more than that. It's knowing where that load is at all given times. Well, that will tell you right now if something's going wrong with that load. The second thing is that the security device we have is literally a camera that provides proof. Of the breach and who breached it?

Richard: So we're seeing digitization everywhere in supply chains, and it seems to be the buzzword in the last two or three years. So how is digitization reshaping the way companies think about freight security, especially in a post pandemic era?

Curtis: Well, the whole thing about digitization starts with what is the data? How valid is the data? And there, [00:04:00] there is phenomenal work going on and billions being spent in upgrading TMS systems and digitizing the entire platform from purchasing to booking the freight, to watching the freight move, to receiving the freight, et cetera.

All that's being digitalized. The value of the data stream that you're getting is where we come in that. You can't have a good quality data system digitized or not if you don't have valid data. What Bloodhound tracking device in a full fleet environment gives that kind of customer is super accurate, global cell Satcom, GPS and IOT Mesh. Nobody has all that combined together in a self-contained unit that talks to each of our other units through the IOT mesh and never goes dark. That's the biggest problem, in supply chain tracking is what happens if I don't have cell signal? What happens if I can't see the satellite?

Well, [00:05:00] in our case, we mesh together and we'll find that one that can't see the satellite and we never lose data. That's the key. Our system never lose data because it's packet technology

Richard: , You mentioned the importance of data, and it's not just accurate data, it's real time data.

Curtis: a hundred percent.

Richard: Up to a minute. So, what are companies doing to address these challenges and how are freight visibility technologies evolving to address these challenges?

Curtis: Yeah, in my opinion a lot of companies that compete with us are looking at how do we improve? That transformation of data to accuracy. And so there's talk in the trade, if you will, of more and more companies getting a more accurate view of the sky. And quite frankly, that's why we're here. That's why we're here, that everybody else is just doing cell GPS [00:06:00] in general. And Bloodhound is doing cell plus SAC com, plus IoT Mesh. I think what ends up happening is that the rest of the world out there, the rest of the technology providers are starting to see the light and say, Hey, maybe we have to improve what we are providing.

Richard: I'm assuming also Curtis, that it's not just visibility one tier up, or one tier down the supply chain. You need visibility of your complete supply chain

Curtis: The whole thing. Yes. And that's one of the things that, because our units fit onto the conveyance. Whether that's a trailer, whether that's a intermodal domestic box, an intermodal global box, it's going to go with that freight from the manufacturer through shipping, through delivery, and then freight needs asset optimization. So now the empty, a lot of these things were taken off in the old days. They'd have a tracking and would taken off now. But [00:07:00] what does the fleet operator need? He needs to know, Hey, where exactly is that empty? Has that empty been there too long? Has the lessee of that empty, holds me to merge in detention?

I need my units back. I need to know exactly where they are. The bloodhound tracking device is never off. It's always on. So your dwell time meter is built into our dashboard. We've got a dwell time meter, we've got a linger meter, we've got a breach event that pushes the data. And compared to our other competitors, we're pinging eight times a day on land and once at sea, our competitors are pinging.

Once, you look up the stats of some of these guys, they say, oh, we have 10 year battery life. Well, what's your ping rate? Once a day. Well, hello. Yeah. I can

get 20 years if it's once a day on my box, but at eight times a day, or even down to 15 minutes, we're getting three and a half to five year battery life.

Richard: So many companies rely on traditional [00:08:00] GPS tracking systems.

What's missing from these legacy systems that modern freight security demands?

Curtis: Well, we're in a global environment and cell service. Yes, you can get cell service in every city, but how often have you and I traveled even in the United States or across Europe, and our cell service goes out. We went from one tower to another. When you have Bloodhound device, we constantly upgrade and the minute cell doesn't work. We go to sat. The minute SATCOM doesn't work. And that's Iridium satcom. That's the top of the line satcom. We go to Iridium. If Iridium can't be seen, we go to our IoT mesh and we never lose the data. That's the NASA piece. The engineering that was absolutely revolutionary is we don't lose data.

Even if there's a darkness, even if we can't see the sky, our units store and forward that data till the next time that they can or till they reach [00:09:00] another one of our devices through our IOT mesh. Nobody else has that technology. If there was a breach event, if there was a high temperature event or a high humidity event, our units will time and location stamp that and then gets it to the back end as soon as they can see the sky.

Richard: Does that mean that it also helps manage the cold chain for certain supply chain?

Curtis: 100% and we're self-contained, so we're not relying on the power from the reefer box or the reefer truck to run. Our system is completely self-contained.

At the conveyance level.

Richard: And what do you mean when you say conveyance level?

Curtis: Whether it's a empty tractor, a trailer trailer chassis container. So these are non-powered assets that are the conveyances. When you have a tractor, when you have the cab, you've got the ELD and all kinds of connectivity back to home base, right? But when your [00:10:00] tractor's not connected to the

trailer, then that trailer is vulnerable. Our devices go on the trailer, our devices go on the container, the non-powered asset.

Richard: So. Technology plays a large part in supply chains today. I talked about digitization. You talked about the importance of the real time and accurate data, but how emerging technologies such as AI driven sensors, even block chain or digital twins affecting the supply chains that you are monitoring and which show the most promise in preventing cargo theft and shipment tampering.

Curtis: I will tell you what we're working on. Our backend has an AI machine learning process that's looking at patterns of life. Way back when Operation Safe Commerce came along, DHS said, let's look at a supply chain and figure out what the patterns of life are. What are the significant custody transfers. And where do those go awry? Because, these things [00:11:00] happen all the time. A container misses a ship deadline a, the carrier issues a blank sailing notice. So these anomalies occur all the time. When you have all that data in the backend, then you can look at patterns of life and start determining, Hey, when my trucking company goes from Monterey, Mexico to Detroit with a load of auto parts.

How come it sometimes takes six days and sometimes takes four days? What's going on with this? What? What's happening? Well, we can determine that super easy and the AI machine learning, which we're employing on our backend will dictate and tell you exactly what's going on and why those deviations are occurring.

'cause freight at rest is freight at risk.

Richard: What's the most interesting use of the data that gets captured that you are seeing that you weren't expecting to be useful?

Curtis: One of the things that's really been amazing to us is the ability for us to see into supply chains that when you draw it out on a [00:12:00] piece of paper, when you put it into a PowerPoint and you think it goes this way and you find out it goes this way and you go, holy crap. That's the reality of what I thought my supply chain was doing, and now here's what's really happening. The second thing is fleet optimization rules dictate. I've got to know exactly where my assets are so that I can better swing those in terms of utilization, I've done a lot of work with ocean carriers over my 40 years in logistics. A single container in any kind of global trade and let's say Asia, north America Europe, back to North

America, and then back to Asia. Let's say that's a typical container. The turns that container gets. Loaded turns four to five times a year.

Now that's 365 days divided up into four turns. That's terrible utilization. If [00:13:00] I know where my container is exactly, and I start working matchback opportunities. That utilization rate, if I get one more turn a year, that's 18% improvement in my revenue. My top line.

Richard: I would imagine on a similar point the ability to reduce the dead miles, the dead trips of empty truck

Curtis: bingo.

Richard: traveling around, or empty containers going anywhere.

Curtis: Oh yeah. It's amazing when you look at the total number of containers out there in the market and the number of container trips, you go, wait a minute. That doesn't add up. That doesn't add up at all. There's a hell of a lot more. So my, my theory is that we will start to see these tracking devices have much more benefit to the carriers, to the trucking companies themselves. And even chassis. Think about this. What about chassis utilization? That's been a fight for years and years. And questions about detention demerge, I [00:14:00] don't have any more questions about detention demerge. If I've got a bloodhound tracking device on my unit, oh excuse me, Mr. BCO, you say you only had it for two and a half days. It's showing up on my dashboard at four days. Guess what? You owe me a day and a half.

Richard: Yeah.

Curtis: And there's no argument.

Richard: The reason that we started talking and to get you onto the podcast was because of a DHL competition that you were involved in. And I know bloodhound tracking devices were named as one of the top three finalists in that Fast Forward Logistics Challenge. So maybe you could tell us a little bit about the challenge.

Curtis: Sure. So what DHL does every year is they'll broadcast to a lot of different companies out there in the technology side. And they'll say, Hey, we are looking for the top new, innovative technologies in the supply chain. And that's everything from robotics to AI to our tracking device, and they had 65 entrances [00:15:00] in 2025. They called it down to about a couple of dozen,

and then had interviews and more information provided, and we ended up being in the top three. It was wonderful. We got to present at the Now and Next conference in Austin and meet some of the top customers for DHL, and we've got ongoing trials that happen just like that. It's only been three weeks. We've already got two trials going with DHL's top customers because everybody said this is phenomenal. We gotta have this covert security and tracking nobody else has that. They've got tracking. Nobody else has covert and secure tracking, and that's what we provide. Funny story. This is a great story. Trial is going on in a container carrier, ocean carrier in Florida to Mexico. We put eight units on there. They get to Mexico, one of the units [00:16:00] reports in, Hey, I've been tampered with. So if you try to remove one of our units, it screams I've been tampered with. Well, it also takes your picture. So the guy who took the unit off with a crowbar and a sledgehammer, we got his picture. We got his picture of him walking us to his truck. The customer ended up finding the unit and getting it back to us. But the outside unit, the covert unit was never detected by the thief and it was telling us all day long, here's where my container is here I am here's today, I'm not moving. But we caught the thief, we got the unit back, and that's proof right there in a real life trial. That secure and covert tracking is key to the supply chain right now.

Richard: So, we've covered a lot of topics . But what's the next wave of freight security from your perspective?

Curtis: Well, I'll tell you two things we're working on. Everybody loves the [00:17:00] camera so much. We're gonna add a second camera that's a nighttime infrared camera to our units. When one of our early prototypes, we had two cameras and one was infrared and it takes a picture inside the trailer or container, president Trump has done a fantastic job of shutting the border so the people are not walking across. That's not gonna deter the bad guys from trying to get people across, they're gonna come in a conveyance, they're gonna come in a box car, they're gonna come in a trailer, they're gonna come in a container. Our units sniff out CO2 to the point that if I stuck my, well, don't tell anybody, but when I stuck my eight engineers inside of my container and close the door, I watched that CO2 level rise to the threshold point and it determined right there that there's people inside that container. Now human trafficking is something we [00:18:00] all need to work to stop, and bloodhound has that as part of its initial mission statement. Second thing we're working on is a fentanyl sniffer. If we can sniff fentanyl in a container or in a trailer, it's gonna revolutionize cross border trade. It will revolutionize how that works because CBP DHS, they're all over it.

Richard: A final question for you, and it's a general question, and we're talking about a very specific topic I know, but. With everything that we've discussed in mind from a freight security perspective, what's the future of supply chain?

Curtis: Here's the thing, and this goes way back probably thousands and thousands of years. We figure out something that helps us move faster. The bad guy figures out a way to degradate we figure out another technology. The bad guy figures out this is a constant problem. We got our nose smashed in with the freight [00:19:00] problems that exist right now.

But there are solutions coming up that are gonna dictate that. I just read something in the news yesterday where a freight brokerage system and a freight cybersecurity system have now melded together to provide brokerage with cybersecurity that protects the trucking industry from false phishing and false bill of ladings. That's ginormous. Right there is a strike in the blow against that kind of theft physical security on the units is what we provide and that I believe is the next level.

Richard: Okay, Curtis, thanks for a great conversation. It's been really interesting

Curtis: Oh man, I appreciate it. I really do. You ask great questions.

Richard: No problem. And thanks everyone for listening. Please mark us as a favorite. You can get regular updates and information about future episodes, but [00:20:00] until next time, from Curtis and I, thanks for discussing the future of supply chain.