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Q&A with Dan Magy, CEO of Citadel Defense Company bringing to market a Low Power, Easy to Deploy and Use Drone Mitigation System that does not interfere with Wi-Fi or Bluetooth for Governments, Militaries and Stadiums providing Real-Time Threat Protection

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"It is easy to overlook just how complicated it is to effectively detect and defend against drones. We have built a very talented team with specific expertise who work extremely hard to and make drone mitigation look easy. Often times, people just see a box that works when you turn it on. When that happens, it means we have done our job."- Dan Magy

CEOCFO: ***Mr. Magy, would you tell us the concept behind Citadel Defense?***
Mr. Magy: Citadel was born through my experience in the sports and entertainment community. Our technology was originally designed to protect stadiums and large public gatherings from rogue drones or people with either malicious or non-malicious intentions, flying drones into sports stadiums. In the late fall of 2015, I was asked by multiple sports stadiums, both professional and collegiate, to help them stop the problem of people flying drones into their stadiums. I looked at the marketplace and I asked the heads of security at these stadiums what they would want from a counter-drone solution. They told me they wanted a small, minimally invasive, fully automated solution that would not interfere with Wi-Fi and other communication systems. The members of the security team would always joke that attendees would rather die than lose their Wi-Fi. Understanding their requirements and seeing that there were not many existing solutions in the market that would satisfy these requirements, we began to develop a lightweight solution that could just be plugged in, turned on, and left to operate on its own. What we later discovered was that current federal regulations weren't evolving fast enough to address the need to keep nuisance drones out of stadiums. Fortunately for us, we found that the military and federal government had real and immediate needs for the capabilities we had developed.

CEOCFO: ***Where were the biggest challenges, and once you knew what you needed, was it relatively easy?***
Mr. Magy: It came down to getting the right team in place. Luckily, we have an incredibly strong founding team with a background in encrypted radio control technologies on the commercial side as well as an extensive background in systems development for the typically larger military drones, also called UAVs. If you understand how drones, big and

small, work and communicate, you can find out ways to harness them. We have been told by our customers that there is nothing worse than detecting a drone when it doesn't exist, also known as a false positive. Minimizing false positives while making sure you are actually detecting drones that are in the air is a tough technical challenge. Citadel has invested very heavily in our proprietary digital signal processing and machine learning teams to address this problem and minimize false positives.

CEOCFO: ***What might cause a false positive?***
Mr. Magy: Many people take an approach of using a library to match signals. We apply a different approach that applies deep neural networks and machine learning to look at the physics around a certain signal. False positives can arise when our system is set up too close to something that creates extraneous noise, such as a Wi-Fi router or a power line. To address this technical challenge, we have utilized machine learning and real-world data from systems deployed in the field to reduce false positives while also making our system better and more responsive.

CEOCFO: ***Are the drone makers trying to circumvent how someone would normally detect, or is it not that sophisticated yet?***
Mr. Magy: I think they understand that drone defense is going to be a huge industry. With some software tweaks anyone can get around many of the preloaded software governors placed on commercial drones. If you know what you are doing, you can find a way to use the drone in an inappropriate way. Our job is to stay one step ahead of that.

CEOCFO: ***'Deploy, Detect, Defeat'. Would you tell us about the Defeat portion of what you do?***
Mr. Magy: It is truly unique. What we have been able to do is build a system that, with very low power, can mitigate a drone in a way that does not interfere with Wi-Fi or Bluetooth. Of course different laws allow different use-cases of our mitigation technology, but the focus we had when we were setting about designing the system is ensuring a minimal impact on any other electronic devices considering we were designing a counter drone, or C-UAS, for sports stadiums. People do not want to lose their Wi-Fi and they do not want to lose their Bluetooth. For us, we started with that minimal engagement for mitigation piece and it has turned out to be a great investment of our time and energy because it is a truly differentiated part of the technology and is relevant across many more applications than stadiums.

CEOCFO: ***How does someone know what the intent of the drone is; how does the system detect the potential threat?***
Mr. Magy: It is tough. To do that, you would need to know more about what is on the drone and the person flying it. Our belief is that because a drone can be put in the air and flown into a stadium from one half a mile away in 45 seconds, you do not have a lot of time to make a decision. You cannot treat the problem like you have a flight tower communicating with a pilot. Many times a kid happens to be flying a drone at a park near an airport and will try to see how high they can fly it not knowing they are directly in the flight path. What we view our system as doing is being a great way to actually enforce federal, state and local regulations that limit where and how drones can fly. If you are flying near a stadium there are federal laws that dictate you cannot fly within 5 miles of the stadium during a ball game. The mere act of putting a drone in the air near a

stadium during a game, is breaking the law. Our system is more of an enforcement mechanism for existing laws than a method of determining the motive of someone flying a drone. The real question is how can we effectively educate new drone pilots where they should be flying. Too many people just go to Best Buy or go to Amazon and buy a drone, take it out of the box and start flying it with very little regard as to what is legal.

CEOCFO: ***What are you preventing from happening with the drone?***
Mr. Magy: Our approach is to drive the drone into its fail-safe behavior. Ninety percent of drones are programmed to return to where they took off if they lose their control link. From a risk mitigation standpoint, we have had some of the largest insurance companies in the world tell us that if you try to take over a drone, you become liable for what happens once you assume control. Our approach limits this liability while preventing drones from going where it should not fly.

CEOCFO: ***Would you tell us about your various interactions with government agencies?***
Mr. Magy: We designed our system for the sports world. About a year ago our first special operations group found our technology, put us on contract, and started buying and sending our systems overseas to protect American soldiers from people who are using commercial drones in nefarious ways. They were either weaponizing the drones by attaching and dropping 3-D printed bombs, or using them to call in mortar attacks or tell suicide bombers to drive and detonate trucks packed with explosives. We found working with the government to be incredibly rewarding because we are keeping soldiers safe and we predict that this will become a domestic threat at some point. We are learning how our enemies are using off-the-shelf products for nefarious purposes, and we will be prepared. The other great thing about working with the government is they are unbelievable validators of our technology. The customers we have are actually investing themselves in our development process by buying early systems giving us the validation and that proof of concept we need to grow within the greater market.

CEOCFO: ***Do you experience challenges in working with the government and if so, what are they?***
Mr. Magy: The sales cycle is very different from commercial. We understand based on how the market operates that the government is the only sector that has the authority to purchase C-UAS right now for active mitigation. For us, getting to the people who are decision-makers that will validate our technology and influence policy domestically within the government is very important. I think everyone sees the privacy and security threat that drones create. While the sales cycle is longer for the government, making sure that they validate us as a trusted agent and our solution as a trusted product puts us in a position to succeed at a high level, because the government will make substantial purchases of technology once they are comfortable with it.

CEOCFO: ***How are you reaching out to the non-government market and how do you standout?***
Mr. Magy: We are limited in what we can sell commercially to non-government or non-local and state entities at this point because of the rules and regulations around counter UAS. It is political now and it will take a few years for the laws to catch up to the realities of drones. We stand out right now because of the customers we work with and the fact that we have had purchased systems deployed domestically and in

active war zones. We have successfully demonstrated in active combat that our systems work. There are a number of big defense contracting companies who have had systems fail in the same environments. Our engineering team has done a tremendous job taking the requirements that we have created, the autonomous operation, the small size of the unit, the limited interference, and turning that into something that we can sell.

CEOCFO: ***How are you able to be compact when others are not?***
Mr. Magy: It is all about software. We have invested heavily in our machine learning and AI departments. As long as we can get the data that we need, we can process it and make a decision on what we see. Part of what I took away from working with sports stadiums is that everything needs to be small, non-descript, and very easy to set up. This is exactly what I asked of our engineering team as we developed our system.

CEOCFO: ***When you are speaking with a potential customer, do they care how you do it as long as they believe you can do it?***
Mr. Magy: Yes, I think they do. One of the things we can pride ourselves on is our multi-drone engagement. There are a number of products out there that have a difficult time the instant you put multiple drones in the air. The other systems are good at catching one drone or stopping one drone. What we have learned from our contacts in the commercial market is that they will regularly see two, three or four in the air at the same time during their events. If you can only stop one drone at a time you are not doing your job. There is a story that came out of Iraq during the conflict with Isis in the city of Mosul. They had 30 drones in the air at one point. It was a swarm attack. If you can only stop one of those drones, 29 drones are going to get through. What we have developed at Citadel is not just an R&D project. We understand that the difference between stopping a drone, or not, can be life or death. Our system is a real-life product that has been tested, iterated, and used in the field. We have insight into what our customers are going to encounter in the field as opposed to theoretical talk from an engineer developing in a bubble in a lab. Our team really prides itself on how we have developed a C-UAS system that is focused on addressing real-life scenarios.

CEOCFO: ***Are you working with countries outside of the US other than what you are doing with the military?***
Mr. Magy: We do see the international market as an opportunity we can tap into in the future. Today our focus is making sure our US-based customers are happy with our product.

CEOCFO: ***Are you seeking investments, partnership, funding?***
Mr. Magy: We are always open to partnership opportunities. We raised a Series A round last summer. We believe we have an idea of where this market will go in the coming years thanks to strong relationships with our current customer base. At some point, we may look into raising more money.

CEOCFO: ***What, if anything, might people miss when they look at Citadel Defense?***
Mr. Magy: It is easy to overlook just how complicated it is to effectively detect and defend against drones. We have built a very talented team with specific expertise who work extremely hard to and make drone mitigation look easy. Often times, people just see a box that works when you turn it on. When that happens, it means we have done our job.