

## Remote, Targeted 30 Foot Energy Delivery to Multiple Devices

### Technology Wireless Power

**Ossia, Inc.**  
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**Hatem Zeine**  
CEO

**BIO:** Hatem Zeine, is the founder and CEO of Ossia Inc. He is also the creator of Cota technology.

As CEO of Ossia, Hatem directs a team of elite engineers and technicians set to revolutionize consumer electronics worldwide. Hatem has built the company from the ground up with an entrepreneurial spirit and a zest for innovation.

His passion for technology spans over two decades. He relocated to the United States from Jordan in 2004 to work as a principal test architect and engineer for Microsoft, where he spent seven years working on the Windows operating system.

Prior to moving to the U.S., Hatem founded Estarta Solutions, formerly Zeine Technological Applications, which is the largest systems integrator in the Middle East today. Estarta was the first company in the region to receive direct investments from Microsoft and Cisco Systems. He also served as Vice Chairman of the Information Technology Association of Jordan. Hatem holds a Bachelor of Science degree in Physics from the University of Manchester in the U.K.

### **About Ossia, Inc.:**

Ossia is challenging people's imagination about what is possible with wireless power. Ossia's flagship product, Cota, redefines wireless power by safely delivering remote, targeted energy to devices as far away as 30 feet without line of site. Built on Ossia's patented smart antenna technology, Cota automatically keeps multiple devices charged without any user intervention, enabling an efficient and truly wire-free, powered-up world that is always on and always ready. Headquartered in Redmond, Wash., Ossia operated in stealth from its founding in 2008, and launched to the public in September from TechCrunch Disrupt 2013 in San Francisco.

### **Interview conducted by: Lynn Fosse, Senior Editor CEOCFO Magazine**

**CEOCFO:** Mr. Zeine what is the overall concept of Ossia?

**Mr. Zeine:** Ossia has a technology we developed called Cota, which has the ability to deliver power to charge multiple devices at a 30-foot distance. Imagine powering your home with a single device, called the Cota charger, that will power equipment and

batteries around your home. It can keep all your equipment charged and ready without any action from the user, so you no longer have to plug in or replace batteries in your equipment at home. Cota will give you devices that are truly wireless where they never have to be charged or connected to a wire any amount of their life. We feel that this is a technology that will have a tremendous impact for cellphones as well as many of the wireless devices that we are adding to our homes every year.

**CEOCFO:** This took a long to develop; can you briefly explain how you are able to achieve wireless power?

**Mr. Zeine:** RF frequency energy has posed a lot of challenges to people trying to deliver power across a distance, because typically, RF power dissipates and loses its energy very quickly over distance. If you want to charge your phone with one or more watts of power, you typically have to emit an excruciatingly large amount of power that would make it unsafe. The breakthrough of our technology is that we literally have to emit very small amounts of power, almost equivalent to the power emitted from two or three phones to actually charge another phone. We are not using phones in particular; we are using our own charger unit, which is typically around the size of an audio system's subwoofer and is able to deliver power to devices such as cellphones at a distance of 30 feet. The reason I say that it is equivalent in power to three cellphones is to accentuate the point that this is a very efficient, low power technology that has a fantastic efficiency and very safe – well below the limits of RF safety, as noted by the

FCC.. They do not have to fear any kind of radiation or any kind of aspects that are anywhere beyond what they expect from a Wi-Fi hub or a Bluetooth headset.

**CEOCFO:** How were you able to do it?

**Mr. Zeine:** We have been awarded four patents in the US. We have been also been awarded patents globally. The core technology is that we have made breakthroughs in controlling thousands and thousands of antennas in a small enclosure, which about the size of a subwoofer. Our subwoofer design utilizes about 10,000 antennas that are working in unison, controlled individually to deliver power to devices around the house. Many antennas working together are typically called smart antennas. A typical smart antenna in the industry today has anywhere between 3 and a dozen antennas. In our case, we are talking about 10,000 antennas working together, and that is really the core feature and the breakthrough that makes this technology happen.

**CEOCFO:** Once you realized that this was the way to go, how long did it take after that? What were some of the steps in putting it all together for you?

**Mr. Zeine:** I realized that this technology was possible about ten years ago, and the next two years I spent in trying to see if we can engineer it – if it actually can be put together into a system that can be placed in a human environment. Is it going to cost a million dollars? Is it going to be something that can be placed in a room without displacing the occupants? These were very important questions, and I spent about five years detailing the solution. We filed a patent in 2007. One of the challenges I faced with this technology was that it has always been considered like a science fiction technology, to deliver power at a distance. That made it more complicated to raise money for the company, because people did not

even believe initially that it was possible. When they thought it was possible, they thought it might not be safe enough, and if it was safe enough, then they thought it would not be efficient enough. We had to go over many hurdles trying to show and convince people that this was possible. Initially, I had investments from friends and family, which we used to build the proof of concept that proved that this technology is possible, is safe, is efficient, and so on. That reduced the hurdles of raising more funds and building a complete technology and theme to build and deliver the technology to the market.

**CEOCFO:** Did you ever doubt that

**“We feel that this is a technology that will have a tremendous impact for cellphones as well as many of the wireless devices that we are adding to our homes every year.... We delivered the first ever truly remote wireless power to devices. We are not talking about you having to consciously do anything about charging your devices. Your devices will charge on their own and get powered so that you can have full access to them. How many people go on a trip with a digital camera only to find out that they forgot to charge it beforehand? That is the kind of solution that will never happen again, not only for the picture takers, but also for all kinds of applications in our life. I bet you that in a few years we will say, ‘How did we live without Cota?’”**

Cota would work?

**Mr. Zeine:** Initially, and there were some times where we were facing technical challenges that put into question how long will it take us to finish this technology, or the proof of concept or prototype. I never doubted the technological capabilities myself and I knew that the physics behind it was quite sound, and the simulations and other work we did proved it without doubt that it should work. The questions were more engineering aspects, and that is where doubting our ability to execute has always been something that allows us to want to be better in engineering and better in describing the technology to others. These are the challenges we faced.

**CEOCFO:** Where are you today?

**Mr. Zeine:** We are currently doing two things. We are designing the first generation product to deliver to the market after we announced our prototype at the TechCrunch Disrupt conference in San Francisco, and we are also raising funds for the company, where we are talking to many investors who have approached us after our launch at Disrupt. There has been a tremendous response resulting from our initial launch in September, where we have attracted, really, a lot of interest from the investor market, as well as the partner and customer market who want to implement our technology for their products and services.

**CEOCFO:** How do you, from the business side, evaluate the opportunities and the choices and make a decision? Given all things being equal, how do you weigh where you go with something that obviously is so disruptive?

**Mr. Zeine:** Disruptive technologies are both good and bad in some ways. While the good part is that people understand the value proposition, being a disruptive technology, means it will change fundamental part of technology we use, which takes a long time to have full impact.

We believe that we need to find the part of the market that is hurting most without our technology, while adopting it will result in quick gains for the customer, it becomes a showcase for our technology’s impact and usefulness. Some of the pain points in markets today are commercial uses of wireless power such as industrial sensors where wire installations are extremely expensive, and in retail applications, where handheld RF or Barcode readers’ dependence on batteries hurts the business due to delays of loss of battery charge. We have identified a few immediate markets and have started engagements of leveraging our

technology as a first step, which will lead us to address the broader market at a later stage.

**CEO CFO:** Do you face the people who are making all the charges now not wanting something new, or would they be the people likely to embrace your technology and come out with products that would replace what they have?

**Mr. Zeine:** The traditional way of doing things, the wired chargers and so on, have lost their glamor in people's eyes because they are expensive and they give little utility. Let's use batteries as another example here. As consumers, we used to buy four AA batteries in 1992 for something like \$12. Today you buy 100 alkaline batteries for \$10 from some electronic store somewhere. What is happening is that batteries are losing value from the manufacturer's perspective and from the customer's perspective. Our technology would bring back the value in the concept of charging, and the people who want differentiators in their devices, phones, or whatever would love to have a way to one-up the competition with a feature that others do not have. This also gives the user something to want to upgrade their phones and devices. We feel that there is definite need in the market for this technology, and we have been approached by almost everybody in the industry who makes an electronic device or a cellphone or something related, and we find that we are not displacing something that has value; we are displacing something that has lost its value in people's eyes.

**CEO CFO:** How do you deal with the frustration of knowing what you have got and knowing that it takes so long to get from A to B?

**Mr. Zeine:** We look at multiple paths. We look at what are the early wins we can create with the technology, and that would help us create the momentum. Building momentum is what we are trying to achieve at this moment, and getting people behind the technology to implement and design it will follow.

**CEO CFO:** What are the next steps? What will happen in the next 6 months to a year?

**Mr. Zeine:** The next step for us is to release the first consumable form of the technology, where it is small enough and affordable enough to be implemented and used by customers in different places. You can imagine the next time you go to the airport or coffee shop that you would not have to look for sockets, but you will need a dongle for your phone that would charge your phone as you walk around the airport or as you sit anywhere in the coffee shop, so you do not have to look for the power socket for you to do so. So let's say our first step is to deliver it in a form that is easily consumable by people without them having to think about where they are going to put the subwoofer device and so on. One thing about the technology that I did not mention is that it works in a multi-room house, without having multiple devices, meaning that one single charger would power all your devices in your home, without needing multiple chargers for every room.

**CEO CFO:** Why is this the time to pay attention to Ossia and Cota?

**Mr. Zeine:** One of the driving forces in consumer electronics as well as medicine and so on is something very similar to what people call the internet of things. In my home today, I have about 40 devices that require power or charging of some sort, and more and more of these devices are being connected. For example, the latest kids handheld games come with internet connectivity. We have remote controls, we have lots of different devices, and I have doubled the devices in my home in the last seven years. In another seven years, imagine having 80 to 100 devices in your home that need power. That solution is not going to happen on its own. It needs a way to power all of these electronics, and the internet of things revolution needs to be powered. We feel that we have a solution that will enable many new levels of solutions for the consumer and for medical applications as well as industrial, etc. that are based on the Cota technology. We delivered the first ever truly remote wireless power to devices. We are not talking about you having to consciously do anything about charging your devices. Your devices will charge on their own and get powered so that you can have full access to them. How many people go on a trip with a digital camera only to find out that they forgot to charge it beforehand? That is the kind of solution that will never happen again, not only for the picture takers, but also for all kinds of applications in our life. I bet you that in a few years we will say, "How did we live without Cota?"

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The logo for Ossia, featuring the word "Ossia" in a bold, black, sans-serif font. The letter "O" is stylized as a circle with a gap on the right side. The letter "i" has a dot above it. The letter "a" has a tail that curves to the right.

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