

## IoT Visualization Real-Time Innovative Platform provides 3D Security for Infrastructure, Data Centers, Enterprises, Carriers and Governments



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CEOCFO Magazine

### **CEOCFO: Mr. Ahy, what is the concept behind nuPSYS?**

**Mr. Ahy:** nuPSYS' innovation significantly enhances user experience & operator effectiveness for the IoT and physical security markets, just like what iPhone did for the consumer market. nuPSYS' innovative patented solution visualizes IoT physical infrastructure, network & security, at speed & scale:

Fastest in the world & scalable to massive IoT infrastructure & networks:  
All viewed within a single dashboard, including an interactive & dynamic 3D-model.

We see a great need in the marketplace & pent up demand for sorting out complexity in an elegantly simple manner. If you think of the old phrase, "A picture is worth a thousand words," that is what nuPSYS is all about. When you are looking at a very complex and highly dynamic set of environments, such as the Internet of Things (IoT) and the infrastructure for IoT, including physical security, you are dealing with a massive network and an equally massive amount of data, so called IoT-big data. It is very time consuming for the traditional means and methods to sort out what is critical, particularly in time sensitive, mission-critical applications such as security. nuPSYS' value is deploying visualization to instantly sort out time-critical info, in a very complex set of big data and dynamic IoT physical & network environments.

### **CEOCFO: Would you give us some examples of what you are doing, such as with nuSIM™, nuGEN™ and nuVIZ™? What will people actually see and what do they want to see?**

**Mr. Ahy:** In this discussion we will focus on nuSIM for IoT & physical security applications & markets. nuSIM is our IoT-physical security solution. nuGEN is our IoT-Network monitoring solution. nuVIZ is our Data Center solution. For IoT deployments, for data centers, financial institutions, government buildings, enterprise buildings, utilities, oil & gas, or infrastructure; physical security is extremely important. For example, if you walk into a data center, the physical security of a Google data center or an Amazon data center is on par with the most secure government buildings in the world. The IoT / Physical Security market is exponentially growing (partially due to global trends), for smart-buildings, smart- community & smart-city. What we bring to the table is the ability to instantly visualize & correlate to the physical environment, what happens as an event unfolds real-time, monitored by video streaming cameras & sensors. The 3D-physical model of the environment is the interactive & dynamic framework, within which all the cameras & sensors are viewed. This is your nuPSYS' dashboard. You are seeing a real-time 3D-model of the building (campus or city) that you can interact with. Within that 3D-model, all of the cameras and sensors are installed, & you see all of the output data (including streaming videos) within the same dashboard. nuPSYS' solution is the single pane of glass encompassing your dynamic and interactive 3D-model of what you want to monitor, for example an airport, a building, a campus, or a city. Within the same

window you can click on any camera that is depicted, see the streaming from that or any other cameras simultaneously, and the sensors. For situational awareness, it has instant ability for the security operations center & the security staff to much more rapidly understand the event in real-time, zoom-in on the event location in the 3D-model very quickly via our fly-to-mode, so that they can swiftly take corrective action.

**CEOCFO:** *Is it somewhat intuitive when looking at the screen to be able to see everything at once and know where to click? Is there some training involved, is there a learning curve or can people jump in and get it very easily?*

**Mr. Ahy:** nuPSYS dramatically enhances user experience & operator effectiveness for the IoT and physical security markets, just like what iPhone did for the consumer market: very intuitive; very short learning curve, and works out of the box, empowering you instantly to get on with what you need to focus on. The security operations staff are not paid to focus on learning a tool. Their best value is to actually use the tool to create security for the entity being monitored. That is what nuPSYS enables. It is very intuitive, just as you described. It is very easy to learn. In fact the number of buttons on the dashboard, which includes the 3D-model, all the cameras, all the sensors and the whole IoT environment in an interactive and dynamic manner, is extremely simple to interact with. For example, if you want to focus on a particular area you do one click and you focus and zoom it right in, to that particular area. If you are focused on a particular camera you just click on that camera and it flies right to that camera. As an example, one of the unique aspects of our product is the instant location identification of the streaming videos coming from the cameras. There is a button on the upper hand corner. You click on that. On the right side of the split screen is the video streams “wall”, and on the left side is your 3D-model. It flies exactly to the location & the camera which is showing the streaming video. It is very simple and very intuitive, allowing the security operator to focus on his/her best value: security.

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**CEOCFO:** *Have there been systems that attempted to be as comprehensive? What is the state of the industry right now and potential competition?*

**Mr. Ahy:** This has actually been the dream of the industry for years and we have delivered! The industry has been talking about 3D-visualization real-time for IoT, in particular in physical security. You can see how it can create value. If you have an interactive and dynamic 3D-model of the entity you are monitoring together with all the cameras, sensors, video streams...; all integrated, this is the ultimate Holy Grail in terms of physical security and IoT. That allows you to focus on addressing the events and taking action quickly. Therefore yes, the concept is not new. However, delivering the solution, technologically, is a lot more challenging than the concept itself. It is all about execution with innovative technology as part of that. This is where we stand out really well! The patented technology that nuPSYS has, empowers the instant ability to see, to monitor and to enable taking appropriate action, via visualization, real time for IoT and physical security. The technology that we built, the engine and the execution on development is a real value-add solution, now deployed by some Tier-1 customers worldwide.

**CEOCFO:** *Would you tell us about your relationship with Bosch?*

**Mr. Ahy:** We are pleased to be collaborating with Bosch as a top two players in the IoT & physical security markets worldwide. Bosch’s corporate strategy is aligned with nuPSYS’, focused on IoT including intelligent buildings, as substantial growth markets. Bosch security systems in Germany & US are working with nuPSYS. Bosch security systems had over \$1.5B in 2016 sales & has a prominent presence in physical security. Bosch manufactures cameras, video management systems and all aspects of physical security, as a major player. We have integrated our advanced visualization & 3D-mapping into the Bosch’s video management system (BVMS). We are pleased to be working very closely with Bosch’s technical team, product management, product marketing, & the sales team. nuPSYS & Bosch are now working closely on our mutual customers, both existing as well as new opportunities, which are BVMS users. nuPSYS’ solution instantly adds value in terms of the ability to have 3D advanced mapping as part of BVMS, substantially enhancing the user experience & operator effectiveness.

**CEOCFO:** *Do you anticipate working more with partners?*

**Mr. Ahy:** Yes. Our business model is to work with Tier-1 partners. We are working with other partners & on creating value for the industry. The IoT & Physical Security markets are poised for enormous growth because of the events around the world and the pent-up growing demand in the data center, smart city, enterprise, infrastructure, oil and gas and utilities. This is a very large market and about to become much larger. Our business model focuses on working with Tier-1’s.

**CEOCFO: *Is it easy to get a foot in the door to present what you are doing for these Tier-1 people? How do you reach them to at least whet their appetite for what is available?***

**Mr. Ahy:** There has to be a market pull & a substantial market opportunity to motivate a Tier-1. We are pleased to see enormous interest working directly with Tier-1 partners, having direct touch with Tier-1 end customers such as airports, governments, enterprise, & service providers. What motivates Tier-1 partners or prospective partners is the end customer, demanding such an advanced technology due to its impact. This is how these relationships are happening. We engage with airports, we are deployed by US government; EMEA governments, infrastructure & public safety. It is really the market that determines the appetite for partnership. As an example, when an airport customer says, they must have 3D visualization real-time and 3D advanced mapping, which motivates the Tier-1 partner involved.

**CEOCFO: *Can you integrate with virtually anyone? Is it just a matter of figuring out how or are there some systems that might not adapt?***

**Mr. Ahy:** We take pride in our scalable, modular architecture with industry standard interfaces / API that can seamlessly integrate very quickly with properly designed partner architectures & products. Bosch has done an excellent job in their architecture and therefore we are successfully integrated. The key requirement, the ingredients for a successful integration and market roll out / go to market is that the architecture of the partner also has to be up to par in terms of the industry standards and most importantly APIs / interfaces. Once that is in place the answer is yes. Indeed we have the ability, based on the way we have designed our product, to be basically a plug in or a companion to the Tier-1 partner's product.

**CEOCFO: *What changed as people are starting to use your products? What have you learned from real life, as opposed to the theory?***

**Mr. Ahy:** I will give you the example that we have seen ourselves, which is in a mission critical, Tier-1 end customer deployment, such as an airport, a presidential palace, a government building, enterprise, & data center. For physical security in the real world, we have bench marked our solution with one of our marquee customers, a government entity that also operates airports and infrastructure. We have demonstrated dramatic reduction in event location identification of a video stream coming in. Bear in mind, for these infrastructures such as a presidential palace or an airport, you have hundreds if not thousands of cameras simultaneously providing live streams. Therefore if an event happens, security staff's ability to quickly find out where it is within the actual environment, is very crucial. For this major customer, nuPSYS reduced the time to locate the camera dramatically from four minutes using traditional techniques, to 4 seconds using nuPSYS, in a large complex scenario with large number of cameras streaming. The customer was absolutely excited, because as you can imagine, in an airport, in a train station, in a palace, a government building, in an enterprise & a data center, if a security breach happens, you want to know what, when & where instantly.

**CEOCFO: *Why is nuPSYS such an important company?***

**Mr. Ahy:** We believe we are a small piece of the puzzle of a substantially growing market. But this piece is very important because when you deal with highly dynamic environments much more effectively & quickly, such as a data center, a smart city, smart buildings and infrastructure; these are all very mission critical applications of IoT and physical security. We are important because we bring instant visibility for any undesirable event or monitoring of desirable events. Time is of the essence. Therefore, the ability to correlate the event much more rapidly, which is what we do, in physical & streaming-video domains and in a network view simultaneously and the ability to provide situational awareness for your IoT network, infrastructure and physical security specifically, is very valuable. In other words, we put the 3D-model of buildings, airports, or data centers in front of your eyes and within that 3D-model we provide all the live streaming and all the sensors, from motion sensors to door sensors..., all in front of your eyes and in the same dashboard as well. It is basically a drag and drop, point and click and plug and play operation: very intuitive, very simple to navigate within the 3D model and go exactly where the event is happening so you can focus in a much more rapid & effective manner, as in the example that I gave you, going from four minutes to four seconds with nuPSYS, focused on the event when it is happening, where it is happening and take the proper actions. That is why we are important, because this deals with the massive amount of data and massive amount of infrastructure and constructs, right in front of your eyes. IoT-Visualization provides a very effective tool. A picture is worth a thousand words in real time. The instant ability to see the events & their locations real-time in an interactive & dynamic 3D-model, accelerates understanding it, to take the proper action; nuPSYS' innovation significantly enhances user experience & operator effectiveness for the IoT and physical security markets, just like what iPhone did for the consumer market. nuPSYS' innovative patented solution visualizes IoT physical infrastructure, network & security, at speed & scale:

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