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Plant Floor Mobility Maintenance App for Quick Access to Data, Resources, Schematics and KPIs on an iPad or iPhone with the Ability for Screenshot And Live Streaming Resolving Downtime Events Faster

Bob Meads
Chief Executive Officer & President

iQagent, Inc.
www.iqagent.com

Contact:
Bob Meads
770.754.0427
bob.bmeads@iquestcorp.com

Interview conducted by:
Lynn Fosse, Senior Editor
CEOCFO Magazine

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> **- Bob Meads**

CEOCFO: Mr. Meads, what is the concept behind iQagent?
Mr. Meads: iQagent is a mobile app for mobile devices like iPads, iPhones and Microsoft Surface. It is meant to be used on the manufacturing plant floor. The app uses QR codes or bar codes to 'recognize' the equipment that the technician is working on and immediately display all the information that they have in their various plant systems relevant to that piece of equipment. Live data out of the automation system, documents, schematics, data entry forms, videos that might help the user perform some task; pretty much any information they already have. The reason we do this is so that if the person is trying to do maintenance or repair or check on the equipment, they do not have to leave and go to these different systems to find it, so it gives them immediate ROI; they are not wandering all over the plant trying to find the resources needed to complete the task.

CEOCFO: Have people in manufacturing been looking for a better way? Have they even thought it might exist?
Mr. Meads: That's the thing. When you have a problem for so long sometimes you cease to view it as a problem. This problem came about really just because of how plant systems are laid out. You have your automation systems and you have your human machine interfaces, which the operators use to control the process. You have maintenance systems. You have reporting systems and production systems. All of these applications allow users to access resources based on *function*; if I want to go see data about how the equipment is actually running then I have to go in the automation system. If I want schematics, then I go to the documentation system. That is how people have been designing applications for thirty years. They write it based on the function it provides and that has been fine, because people are used to going back to a computer somewhere to go look stuff up. However, now we have mobile devices, which are, well, *mobile,* and I can use them anywhere. Therefore, if we have the ability to view this information on a mobile device then that is convenient because I don't have to go to a specific place to access the resources on a PC or terminal. However, that means that I still have to log in to a dozen different systems to get a complete picture. The idea behind iQagent is kind of a jump where we say, "*What if we have an app that recognizes where we are, and then it just goes behind the scenes to all the plant applications, gathers up all the resources based on the user's location, and displays it on the user's phone.*" I do not know that a lot of people were looking for it, because I think that they have been with this problem for so long that they just did not realize there was a way to solve it, and there was not until we had mobile devices. That is how the concept of iQagent came about.

CEOCFO: What is involved with implementation?
Mr. Meads: It is actually pretty easy. One of our driving factors was to make this an off the shelf system, so that we did not have to get developers or programmers involved with actually implementing it; that we could have a solution that could

just be sold to a plant and their engineers could configure it if they wanted to, or they could pay us to do it. There are only three steps to implementing iQagent. First you have to decide in your plant what your points of interest, which we call POIs, are going to be. A point of interest can be anything that can be characterized by data or resources. Therefore, a point of interest could simply be a piece of equipment or an asset. It could be the output of a production line. It could be a warehouse shelf. The hardest part is looking around your plant and saying, "How do I want to organize this data?" Then, you use our configuration tool to create a point of interest for each entity. Then you just associate your documents, your resources, your forms and your videos with that point of interest and also your live data out of your SCADA systems. SCADA is an acronym for Supervisory Control and Data Acquisition. This is your live data. Therefore, we create our points of interest by associating data from these systems using standard interfaces. Finally, each point of interest in the software produces a QR code. We mount the QR code on the resource that it represents. Then users simply use the iQagent mobile app to scan the QR code, which then displays all the information that we have configured for that point of interest.

CEOCFO: *For people who are using an iPhone as opposed to an iPad or a tablet, is somewhat small to see some of what is available?*
Mr. Meads: It is interesting that you ask that! With our earlier adopters, one was a major global pharmaceutical company and another one is a US automaker and they use iPads, because there is a lot of real estate. You can really open up a set of schematics or whatever. However, we have another very large company that has just signed on and they use iPhones. They use the later iPhones that have a bigger screen. The do it because everybody has one and they implement BYOD. You can use your own phones. They seem to relate to these and many times they are just getting quick information, so they can look at schematics. Because mobile devices allow you to pan and zoom and things like that they are able to get the information they need using an iPhone. So, there are a few companies that predominantly use smartphones. We have another feature that we call practical augmented reality and it allows you to record the environment. If you are on an iPad, you can have a set of schematics and you have a live video feed and you can record this, so that you are able to draw on the screen and make notes. We use this to show a problem to a technical resource that may be remote. Therefore, we can actually make this holistic recording that has got the process data overlaid over live video, the audio is folded in and the drawings on the screen are folded, so that someone that is remote can get this information and maybe analyze it and offer a way to solve it, without actually being at the plant. We do not do this feature on the iPhone because, as you said, there is a real estate problem and in order to show data, analyze video and everything; there is just not enough screen. Therefore, some of the customers; they want to be able to grab the documents very quick, they can use an iPhone. If they want to be able to communicate they use a tablet.

CEOCFO: *Would you tell us about security?*
Mr. Meads: Yes, it is something that always comes up. That is really one of the big push backs that we get from IT departments or that anybody with a mobile solution gets from IT departments. If you are introducing mobile devices on to the manufacturing plant floor, IT is going to ask, number one, about security. It is why, I think, that Apple is very good at how they do security. They sandbox their apps, whereas the idea that maybe some of the other platforms are a little bit more prone to viruses and stuff. I am not sure if that is true, but that is the idea that is kind of out there. Now, one of the things we do about security is that we use https encryption as part of our client server communications. If they want that they can enable that. Another is that we do not allow our apps to write back to the process. Here I am talking about live data. I would not be able to actually turn the pump on or do things like that, simply because that is the realm of human/machine interfaces and many people do not want to enable that say, on a mobile device, or they are concerned that someone might hack into their system. The other thing is that you have to register the device with the system. This means you have to be in front of the computer with admin privileges to allow a device to have access so it prevents "man in the middle" attacks. Our software itself, the configuration software, is not prone to certain attacks like SQL injection attacks by entering things into the user interface fields. Therefore, we have put a lot of security into it. Security also boils down to the security policies of the companies that implement it, making sure that people keep their passwords and have a sane password policy in place and that they are policing that. However, security is very important and we have a pretty good story to cover that.

CEOCFO: *What is iQagent Lite that you just released?*
Mr. Meads: The product that we have been talking about is our flagship product, iQagent Enterprise. It is for manufacturing plants that have a lot of automation, because it allows people to get this data anywhere on the plant floor and it is relevant to where they are working. It makes it available to users who ordinarily might not even be exposed to this data. However, some manufacturing plants do not have a lot of automation. Their automation system PLCs aren't networked, so live data is not a big deal to them. Also, many plants do not really have a comprehensive wireless network, which iQagent Enterprise relies on. If you are going to run around with an iPad and get information you have to be

connected to something. Therefore, iQagent Lite is an offline version. There is an online portal at https://lite.iqagent.com that allows you to create a free account. You get one mobile device license free. You can create your own points of interest and upload your documentation, or create links to your documentation in your plant that includes videos and documents and forms and things like that. You download everything as a project directly on to your mobile device. Then once you do that, all the POIs and all the documents and things are internal to the mobile device. You print your QR codes and mount them, and now people can use iQagent without a wireless network connection. Now, one thing people bring up is, "*Well, I do have my documents on my network and I do not want to upload my documents to the internet.*" If you do have wireless, then you can just create a link that is valid on your network, and iQagent Lite will be able to access it. However, primarily iQagent Lite was developed in part so that you can operate in offline mode if necessary; you do not have to get access to a wireless network to use it. It is targeted for original equipment manufacturers -- OEMs, where they can place QR codes on the equipment that they are selling to customers and then they give them an iPad as their maintenance package. They have the ability to pull up documents and schematics on different areas of the machines or maybe videos and then they have these great features where they can create snapshots or recordings and communicate about problems back to the OEM. It's a lot of added value for little cost to the OEM.

CEOCFO: *What is your business model?*
Mr. Meads: The client application is free for both iQagent and iQagent Lite. Those are free to download and it has got a simulation mode; we can give the potential customers QR codes that they can scan and see it work. Basically, we sell a perpetual license to the software to our customers and they install the configuration tool and the iQagent server on their machine behind their firewall, so they have complete control. We sell it based on the number of devices that they want to connect to the system. This is for iQagent Enterprise. Therefore, for about seventy-five hundred dollars they can get a base package that allows five devices and they get all the software they need to make it work. Now, with iQagent Lite it is handled with a license for the mobile device. The first one is free, so anyone can use this right now for free. They just register at https://lite.iqagent.com and then if they want to buy additional licenses they can purchase those for each device online using ecommerce.

CEOCFO: *Do you work directly with your clients or do you go through resellers or partners? How do you engage?*
Mr. Meads: For most or of our customers we engage directly. We basically do our research and reach out to manufacturers and OEMs and industrial spaces that we feel could use our product. We are able to demo it directly to them right over the internet. Therefore, for all of our customers we are direct. We do have a couple of resellers that are coming along. One has a brand label of our product and they have kind of a niche. They are manufacturing their own enclosures and they use iQagent inside their enclosures and sell it as a maintenance package. We are looking for other resellers who are in the manufacturing and industrial space that feel like iQagent would be a great part of their arsenal as they talk to these customers. We are in some talks with a couple of big manufacturing vendors to be resellers for iQagent Lite, for OEMs as well as regular iQagent. We are hoping to build the reseller part of our business quite a bit this year.

CEOCFO: *With so much technology coming at people everywhere, how do you get a foot in the door?*
Mr. Meads: That is the sixty-four-thousand-dollar question, is it not! It is ROI. There is a lot of really cool technology. There is augmented reality and virtual reality and all of this stuff looks cool and people are excited by it, but it does not sell. I cannot go to a plant and say, "*Look, I have got this thing that is really flashy, do you want to buy it?*" They may be interested in it, but flashy does not really solve problems or provide ROI." I have a saying: *Return on investment should be an integer, not an emotion.* You have to show that what you are selling will solve problems they actually have. They need a return on investment to justify the cost, and that is what is great about iQagent: we solve two problems that every plant has. Number one; they go up to a piece of machinery and they do not have all the information they need to make a repair or do the maintenance and they have to walk away to find it. I tell potential customers that we have found people spend thirty minutes or more away from equipment looking for resources required to fix the equipment. I ask: "*Do you have that problem?*" I have never heard a 'no'. Now, multiply that by how many people you have, and multiply that by the average salary. If you have fifteen technicians and they spend thirty minutes away, and you are paying them thirty-five dollars an hour -- that is almost one hundred thousand dollars a year in lost time. iQagent basically saves you that time. Then the other main feature helps reduce unplanned plant downtime through better communication. Every minute production is down, it costs the plant hundreds or thousands of dollars. We have this great communication tool that allows users to get help from remote resources who may be able to analyze and fix the problem much faster. These are the two selling features where we say, "*We can quantify your ROI.* If I can reach people with that message and they know that they have these problems. When they see the application, they see that, *yes, it will solve those problems*; that is what typically gets our foot in the door. It's because we are giving them return on investment on money they have already spent on their existing plant systems, their SCADA systems and their documentation systems. We are giving them new ways to reach

new users with that data, and they can get more out of that data. They get more return on what they have already spent, and then with iQagent and the benefit it brings, giving you these resources on your mobile device and better ways to communicate, it gives you more ROI there. In short, the key to getting your foot in the door is proving return on investment.