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*Announcer:* Welcome to M2M Radio, with your host Peggy Smedley.

*Peggy Smedley:* The many ways that M2M technology can benefit consumers is something that we love to talk about on this show. Unfortunately, we have had a lot of great companies on this show that has helped us showcase innovative, new technologies and solutions, specifically designed to do just that: benefit consumers.

But every once in a while, we like to step back and kind of look at things from – I like to think about a broader perspective. You know, really examine just how this technology is going to impact not just how we go about our daily lives, but how we think about things moving forward. The tricky thing about M2M is that there are many ways to describe this technology.

So, what I would like to do now is really take a look at what M2M is, and where it is going by talking to a company, and kind of an individual, who knows a thing or two about advanced technology. With that being said, I would like to welcome to the show with me today, Kittur Nagesh, who is the director of service provider marketing for Cisco Systems.

Nagesh, I'm so excited to have you with us because the last time you and I were on the phone, and we just talked. We couldn't stop talking. And what is so funny for our listeners is your PR firm wanted to end the conversation, and you wanted to stay on the phone and keep talking. So, welcome to the show.

*Kittur Nagesh:* Thank you, Peggy. It's my pleasure to be on your show.

*Peggy Smedley:* And you know it's funny because typically I have to tell all of our listeners this: We have really great minds that we talk about M2M. It's exciting to have great thinkers who talk about the industry, and we get excited. Usually, when you guys have a set set of time, the PR firms say, "Okay, it's time to end it." And usually, you guys have to go and that's it, and the PR firm says, "Okay, we have to cut it off now."

It was really exciting that you were saying, "No, I want to continue. I want to keep talking." So, we enjoyed that call. That's why today we want to have you on the show because we want our listeners to have an opportunity to hear some of your ideas. Because when we were talking about M2M and we were just talking about what really is M2M, and really, when people think about M2M, and to be very candid, the first thing that doesn't come to mind is Cisco.

So, we really wanted – the very first question I wanted to put out there is what does it really mean to Cisco M2M technology? I wanted you to kind of start with that.



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*Kittur Nagesh:*

That's actually a good question because there are multiple interpretations for it. M2M sounds a little nerdy, but other appropriate euphemisms could be the "Internet of Things" that really drive productivity for the consumer. There is value for the consumer of these types of services. Then there's value for innovation in terms of business models that roll of the service provider.

Overall, there is a value in using all of these in a meaningful, policy-based control to make our lives better, whether it's in transportation, whether it's in retail, whether it's in healthcare, whether it's in the connected home. That's really what the embodiment of M2M is.

And Smart Grid is just one example of some of the power of bringing the intelligence of some of these types of smart devices into a smart network of network framework, but the applications will show value in terms of productivity, monetization and bringing all the communities together. That's really how we like to view M2M.

*Peggy Smedley:*

Well, think about it in the bigger picture. We talked about it in improving data communications across the network. What does that mean to the average consumer or business that is really trying to understand M2M? How do you embrace it in that aspect?

*Kittur Nagesh:*

That's a very good question. If we all collaborate and do this right, the end consumer would just be the beneficiary of these capabilities. And a lot of magic happens in the ecosystem, and that's where I do want to emphasize that the service provider has a tremendous role to play in bringing machine-to-machine, Smart Grid and those type of things, really to live

So, I wanted to make sure that the ease of use and automation and policy control is taken very seriously, but the network intelligence is what really makes it all seamless, and makes it happen regardless of whose network you're on, regardless of what location. You will reach a world where this Internet of Things are harmoniously collaborating towards meaningful applications, and the network is at the heart of this because it has intelligence. It'll provide the scale. It'll take out the grunt work. It'll move the industry towards open, interoperable APIs. And the data communications, whether it's low data rate from things like meters, or even policy control of capabilities of border patrol, where it may start off as low data rate, but once a signature is sent it must shift into a high-performance video stream.

So, the network is extremely critical in understanding the explorations on machine-to-machine, and making them all meaningfully come to life.

*Peggy Smedley:*

So, for the average person, you know, I always like to say when M2M is most effective, nobody really notices. And that's kind of what you're saying.



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*Kittur Nagesh:*

Good.

*Peggy Smedley:*

So, when we're really talking about this, do our listeners really need to understand what are the capabilities required for a network? I mean a business does. The IT folks do, but do they need to understand what's able for the support, and then manage the transfer of this two-way data communication? Are we talking about do they need to get into the thick of all of this? What do they really need to understand?

*Kittur Nagesh:*

That's a very tough, exciting question. I think different members of the value chain need to understand different things. This is not a topic where one constituent will understand all of it, nor should they. If I am using machine-to-machine capabilities in my house, the last thing I want to do is understand how all these things work, correct?

I need to communicate my requirements, whether it's from my connected home, whether it's for surveillance or nanny cam, or different machines like refrigerators, washers and dryers, and other smart machines that I may have in the house, or make them available from where I am, whether it's on the road, or even at work for a small or medium business, etc.

So, the end user respondent burden ideally should be zero. If you move up the chain, then the service provider has the onus to making it happen, and one way to look at it is all of us should keep in mind the DNA to make this happen. Correct? There are these devices.

The consumer has a role in promoting certain type of devices. The businesses have a role in promoting those types of devices, whether it's green energy, whether it's the integration of different wireless and wireline capabilities so that you cover a gamut of applications. I can go on and on about the devices. I think we haven't seen the innovation that will come in the devices area going forward, and all of them will be network-enabled, with the metrics being productivity gains, ease of use, and innovating new applications.

So, that is a key part of the DNA. Then there is the network part, and this is where the network is the heart of the Internet of Things, in term of intelligence, the scale, the redundancy of determining the part from social destination or from the provider of the service to the recipient of the service. You can how make a case that there has to be a graceful integration and rendition of these services, and that's where I'd like to say that this is one of the most compelling reasons to move to IPV6.

Of course, we are running out of IPV4 addresses, but for the consumer in terms of value, IPV6 implementation from their providers and their enterprises



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and other businesses needs to happen in order to make this happen. The applications will drive new business models because some of these applications may be of value to the consumer.

Some of these could be actually valued to a provider of the services in terms of cost containment, decreasing their OpEx, decreasing their CapEx, but achieving the scale and integrating all these pieces across the value chain together, and that's where the network is at the heart of making the devices part of the DNA and the applications part of the DNA come together in this new world of machine-to-machine and data communications.

Did I answer your question on that?

*Peggy Smedley:*

Yeah, absolutely. I guess to kind of simplify it a little bit, we kind of talk about the cell phone. The reality is the average consumer, if you think about it, really doesn't care how the cell phone works. They really just want to know that it works. Wherever they are, and no matter where they are, they want to know that it works.

In the same vain with M2M, what we're really saying is the technology behind M2M is really what the average consumer is going to want to know. They want to know in-home security and Amber Alert, whatever it's going to be, they want to know the technology is going to work.

So, if we're talking about this, what are some of the specific instances where you're seeing the biggest impact from M2M technology regards to like improved business processes or increased productivity then?

*Kittur Nagesh:*

This is seriously a billion-dollar question in many markets. I will dissect my answer into two parts. I'll first talk about the use cases, some of them obvious and some of them less obvious. And I'll link them to certain aspects of network so that the audience on this call understands that all of the network and the providers to make these use cases happen.

For example, automotive tele-matics, fleet management, positioning and tracking are often associated with machine-to-machine. In an industry of automation area, these are the devices that you might like to control remotely, but those are fundamental to your workflow and processes. Fleet management with location-based services would help the company deliver an operational excellence, and lower their costs.

If you look at healthcare, the machine-to-machine portion of it, I think will redefine healthcare and how services are rendered, but with all the healthcare debate going on, bringing in automation for –



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*Peggy Smedley:* Nagesh, I think we're running out of time. We're going to have to get you back on our show.

*Kittur Nagesh:* I'd love to be back on it. But I'd just like to summarize that the possibilities of machine-to-machine are enormous

*[End of Audio]*

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