MOTOROLA *SOLUTIONS*

Barclays Global Technology, Media and Telecommunications Conference
Wednesday, December 11, 2019

PARTICIPANTS

Motorola Solutions Executive Participants

Kelly S. Mark – Executive Vice President, Services & Software
Andrew Sinclair – Senior Vice President, Software Enterprise

Other Participants

Tim Long – Analyst, Barclays Capital, Inc.

MANAGEMENT DISCUSSION SECTION

Tim Long, Analyst, Barclays Capital, Inc.

Thank you for joining us for this session with Motorola Solutions. Tim Long here, IT, hardware, comm equipment analyst at Barclays. Happy to have to my left, Kelly Mark and Andrew Sinclair. Kelly runs the Services & Software business at Motorola. He's been there for 20 years. Andrew is relatively new, two years at Motorola running the Software business, and he was a 15-year veteran of Microsoft before that. So I'm going to throw it over to the two of them to give a brief introduction, and then we'll start getting into the questions.

Kelly S. Mark, Executive Vice President, Services & Software, Motorola Solutions, Inc.

Sure. Thanks, Tim. Thanks for having us. So as Tim said, my name is Kelly Mark. I'm responsible for our Services & Software business. Just to give you a little context as you think about Motorola Solutions and who we are, roughly $8 billion company in revenue, two-thirds of it is related to our products and our implementation of the products, including video and all of our radio communications and mission-critical communications. The other third of the business is the services and software component of the business, which is what Andrew and I are here to talk about today. The services is all the services we do to help maintain, manage and operate mission-critical communication systems around the world, from every single corner from pole-to-pole we'll run, manage, secure and operate those systems. And the software component is the command center software component of the business. That's what Andrew is responsible for running. I've been at the company for 20 years, as Tim said, and held a number of positions, inclusive of strategy and other things, and then took on the services business and more recently added the software component to it. So that's what I oversee and run. So Andrew can introduce himself on the software side.

Andrew Sinclair, Senior Vice President, Software Enterprise, Motorola Solutions, Inc.

As said earlier, I'm the new boy. I've been here two years, three years in March, I think. I came from Microsoft and Skype, many years there, through a bunch of acquisitions. And I run the Software business. And our Software business really is everything from incident, awareness to incarceration. So everything from the 911 call coming in, routing that call, operators sitting there talking to citizens, through Computer Aided Dispatch. And you should think of Computer Aided Dispatch as the person on the other end of the radio, talking to the officer as they run into a situation or the fireman as they run into a fire, just sitting there with all of the situational awareness. They have the ability to manage resources, sending extra units together. They have cameras, eyes on the street, they have IoT interfaces so they can see things such as in New Orleans they can see flood zones and all this sort of stuff. They even have technology where it's been pumped right to them, where they can see whether an officer is down, whether their vest has been penetrated, so on and so forth.

That, of course, is underpinned by our records and intelligence business, our records management, which now these days is really the platform for our end-to-end public safety suite is that big data platform. Then we have technology such as field reporting, mobility, the ability to fill in reports on the street without returning back to the station. And then of course our public safety, like everything else is becoming data-driven, the ability to do analysis, the ability to predict where the crime is going to occur, the ability to do link analysis between people who have committed crimes, the ability to create routes that you should patrol that will reduce crime, and so on and so forth, or the fastest route to a fire. All that analysis is done there, used by investigators, et cetera, all the way up to jail management where we have shared systems managing the people who are in prisons, doing things like collecting tattoos to look at gang affiliations so they know who to put in which cell and who not to put in a cell. End-to-end system underpinned by our Unified Communications platform which is the technology underneath FirstNet, ESN in the UK, so on and so forth.

So this is an end-to-end suite. We like to refer to it as ERP for public safety because it really is being acquired and used in that way to manage that end-to-end flow of information.

QUESTION AND ANSWER SECTION

<Q – Tim Long – Barclays Capital, Inc.>: Okay. Great. Maybe, Kelly, this end market is a little bit different for some tech investors. Talk to us a little bit about when you're thinking about the – I think, services is pretty logical because you're in the systems business, that's pretty logical overlap. But maybe talk about software and how it fits in with the rest of the public safety business, synergies with the radio and the video business, and how that all works together for Motorola for majority of the market?

<A – Kelly Mark – Motorola Solutions, Inc.>: Sure. So those are really the critical platforms you just mentioned which is our radio communications, our video and then of course our software business, and all of that surrounded by the operations we do in our services. They interlink quite a bit actually. We have a heritage of being the leading mission critical communications provider for public safety. We have a sales team which covers the world. They have deep affiliations with public safety. Command center is really what connects to the communication system. I mean, that is the point when the 911 call comes in and then it goes into the command center, it has to be enriched with intelligence, video, location information, pictures, text, the 911 call itself.

From that point, the communication goes out to the land mobile radio to the communications that police or fire are using, and that interaction goes back and forth, all that has to be captured and has to go into the command center. Our sales team who has sold radio communications for a long time has strong relationships with the customer. They're also capable of selling our Command Center Software. We also have a specialized sales team which will engage and more in-depth engagements around that software to work with our extensive sales team that's out there with the relationships to help them in case they need somebody with an additional in-depth experience. Video is just another thing that feeds into the command center. So it's a natural attachment. If you look at what a customer wants in their public safety operation, they need communication, they need video, they need data management, they need a command center to manage it all and run it all. All that feeds together, which is why those platforms are areas that you've seen us invest.

<Q – Tim Long – Barclays Capital, Inc.>: Okay. Maybe Andrew, talk a little bit about – you've got this slide here with the products. Talk a little bit about the suite, how that's differentiated from what's out there, it seems like a very fragmented market, and maybe talk a little bit about the sales cycle. I know there's a lot of legacy systems out there that probably still have a lot of life to them. So maybe if you can touch on some of those.

<A – Andrew Sinclair – Motorola Solutions, Inc.>: Yeah. It's helpful to understand how people buy things, and it really is as it's laid out there. They will buy a 911 call answering system, so they'll buy something like Vesta. They'll buy a Computer Aided Dispatch system, they'll buy a record system and really jail management comes with record systems, and then they'll buy analytics products on top of it. So just things that are required. They have different sales cycles. So 911 has a different sales cycle to CAD. Typically, they've been bought on a CapEx model, which of course means that the agency, answerable to tax payers has to sweat the asset. I mean they really have to wait until it comes to the end of its lifecycle. We have customers who'll have the same system for 30 years, I don't live in those jurisdictions. I go to a more modern jurisdictions, but typically they'll have it for 10 years to 20 years, and you will see a natural refresh cycle happening, and we're seeing those refresh cycles happen all the time.

We are seeing more money coming into 911 due to central government and the federal government pushing money to modernize that system. Today, apart from a few agencies, you cannot send a text message to 911. Next generation 911 moves to IP, use the modern systems so you can start doing that, you'll be able to send videos, so long and so forth. And that is driving that sales cycle. CAD, as I said, is driven by the natural replacement cycle. Typically agencies buy CAD and records together, and then analytics is the new function that we're putting on top of it. The change that is happening though is we're seeing an awful lot of land and expand happening here. So customers previously would buy this à la carte from a bunch of different vendors. We were the first vendor to build the end-to-end suite. So they now have the option to go into a vendor for the whole suite. And just as you wouldn't buy Sheets from Google and Word from Microsoft, you're either at a Microsoft shop or you're a Google shop or you're an Oracle shop or whatever. We're starting to see that trend happening. We're starting to see customers understand that there is value in these systems working well together.

And we've invested a lot in making sure there are integrations, things like call control flowing through the end-to-end system. We've invested a lot, and this is probably the most important thing you'll hear in the data platform. We have built a big data platform on Azure for these systems so that information flows end-to-end so that you no longer have this ridiculous situation where you have swivel chair integration, where literally you'll see a 911 operator take a call on one screen, write things down on a piece of paper, turn to the next screen and then copy it into the next screen. Flow of information through – which allows them to share information, we just launched universal search, which means you can search across all of these systems. It is bizarre that it did not exist beforehand, but it's there now, allowing them to really become much more efficient. And in public safety, that efficiency leads to lives being saved, more officers on the street and fewer crimes, and that's how they measure themselves.

<Q – Tim Long – Barclays Capital, Inc.>: Could you talk a little bit about how modular the suite is? So you go in to a PSAP today and you sell them 911, but they're not due for the other packages yet. How easy is that resale, and how much of an advantage do you have when it is coming up for bid?

<A – Andrew Sinclair – Motorola Solutions, Inc.>: So typically, and if you go back a few years, everything was modular. There was the 911 systems, CAD systems, record systems if they have them, and then jails systems nobody had analytics other than people doing it on paper. We have integrated this together, but we will still sell you each individual component by itself. That expand motion has started to become very attractive to customers. If you already have a P1 CAD system, then you got to really have a good reason not to buy VESTA from us, because if you don't buy it, you're not going to have that integration with the data platform. You're not even going to have simple things like call control.

So the call comes in here, you'd hand it over to the CAD operator, and today you'll lose the call. With our system, with our integrated call control, the call is passed to the CAD operator, so that if they need to talk to the citizen they can do it rather than having to refer back to, and then there's just richer information being flown. So because of that integration, you're seeing agencies just start to prepare to buy that, or they'll move to a single source-type agreement, and there are various instruments around the country where you can use to do that. And all that is that people say, you never used to get fired for buying IBM. These days you've got to have a good reason not to buy the next piece of the suite.

<A – Kelly Mark – Motorola Solutions, Inc.>: Two things I'd really point to Tim that I think help bring us together in the suite. First off, common user interface across it as well. So for training and usability across these – everything you see on the screen regards to the various components, we're building a common user interface, so the way it looks and operates will function very well together. The second component is integration like Andrew said, which is making sure that data passes seamlessly throughout the whole thing and could be managed. And the third thing is the data platforms and underneath it, which you'll be able to take all that data and continue to have it for searchability components. But right now what users have is through all their various pieces of software, each one of them has its own data platform, which makes it really difficult to unify that together for a records case that they all have to have and manage. Now, we'll be able to do that through one data platform, be able to pass that data through and add it on and build it on to a record throughout the whole thing. So really, the way we think about it is, if you have a piece, like Andrew said, it should make us, put us in a good position. Hopefully, our customers see it that way as well to keep buying all the various components of the suite that they will have and eventually buy the fully integrated suite.

<Q – Tim Long – Barclays Capital, Inc.>: Okay. Are you seeing a CapEx to OpEx model shift from the customer base?

<A – Kelly Mark – Motorola Solutions, Inc.>: Yeah. We are. We'll continue to build to operate both ways, and we'll build to operate on-prem, we'll also build to operate on the cloud and as a service. A bit of it is whether or not our customers either through legal restrictions they have or actually their desire want to operate that way. For us, it's important to be flexible with the way they either, A, need to purchase, or B, have to operate to be able to function both ways. The way we're building the system and what Andrew is launching is giving us that flexibility. So if a customer wants to operate it on-prem and they want to buy in a CapEx way they can, we think it's better to eventually move it to an as a service model and also run it into the cloud for various security reasons, update reasons, manageability reasons. But it's up to our customers and we'll be able to manage that whichever way they want to go.

<Q – Tim Long – Barclays Capital, Inc.>: Okay. And then just on the budgeting front, it sounds like, Andrew, a lot of what you're describing is an upgrade of a system that it's going to be budgeted for. But I'm sure, some of these things like video analytics for license plate recognition might be nicer things to have for the municipality. How do you see towns, cities attacking, because I'm sure everyone wants cameras all over the place? But how do you see the budgeting for some of the software add-ons?

<A – Andrew Sinclair – Motorola Solutions, Inc.>: Well, some of these things, particularly on the 911 are coming through tax initiatives, and you can see a lot of that. Some of it is coming through grants either local or federal grants, again, through that, and then just the natural shift to OpEx. The CapEx model whilst used to be predictable in the past, it's a heavy lift for a lot of these things. Putting it into the general running budget, moving it to OpEx becomes a lot easier, and it can spread the cost over time. And everybody has done the OpEx calculations, they actually end up being cheaper for them over time, they're more up-to-date. But some of the technology changes are forcing them towards that.

You see the rise in cameras out there. There's cameras on the streets, our WatchGuard acquisitions is the leading in-car camera solution, that can be as many as nine cameras. The volume of data that's now being ingested by agencies is so high that they really have to move to one of these OpEx models so they can expand with that data, which is a little unpredictable at times. And also the amount of compute and storage that they need to do that has become so prohibitive, they can only buy it in the cloud, people only buy the cloud on our OpEx model, so they are naturally being forced to shift to that.

<Q – Tim Long – Barclays Capital, Inc.>: Okay. Good. Maybe we'll go over to services for a little bit, Kelly. Talk a little bit about, your customer base is different, in that they might not always be sophisticated with the technology. So could you talk a little bit about, as you have this strong LMR network out there, but as municipalities or cities want to incorporate some features from 4G or 5G with video streams or

whatever, how does that complication make your service sale more easy to get done, because it's just complexity and complexity being added to these networks making it harder for them to manage the networks themselves?

<A – Andrew Sinclair – Motorola Solutions, Inc.>: Well, our customers are quite adept at the technology, but I would still say, as the systems get more complex – and frankly, also when you're trying to bring a lot of them together and integrate them and have them integrate into a command center where the video may flow into and the communications may flow into it, maybe multiple types of communications, whether or not the push-to talk over or Kodiak or through our Land Mobile Radio, ASTRO or TETRA systems, they look to us to help them solve that complexity, they look to us to help monitor that, help secure that. Those are things that we have teams that are dedicated to, and are always facing staying on the – always trying to stay on the cutting edge of the environments that we have to deal into. And for each individual agency to do that, eventually that just becomes an unscalable proposition for them. So they can turn to us, we can do it, provide them with better outcome at a lower cost. So I think that's what makes our services overall more attractive. It's just, frankly, it's complexity actually is something they can turn to us to help to mediate.

<Q – Tim Long – Barclays Capital, Inc.>: Right. And what are you seeing on the trend towards more managed services and network-as-a-service where Motorola owns and operates the network, are you seeing that trend continuing?

<A – Kelly Mark – Motorola Solutions, Inc.>: We see it. I think it's certainly something that we let each jurisdiction make a decision around, and we do have some jurisdictions that there – for example, I'll say it, red state, blue state in nature in regards to whether or not they think it's something they want to manage and do with their team versus outsource to us. I think what we've been doing in our services is adding a lot of new value-added services, system upgrade agreements. We've been adding cybersecurity capabilities, monitoring capabilities and enhancing our managed capabilities such that they look at us and say ultimately they come to the belief that Motorola could be a better operator and work with them as a partner to do it because of our history and our heritage of working with them. So it's not, I guess, I'll call it trend where you see a lot of folks switching over to manage, but it is something we've been seeing a gradual increase of.

<Q – Tim Long – Barclays Capital, Inc.>: Okay. I'm assuming the more of those services you offer, the stickier the business becomes, and the longer life you have with that customer.

<A – Kelly Mark – Motorola Solutions, Inc.>: I'd like to think our stickiness comes from being able to provide a great outcome to them versus – but I mean, certainly when they see the variety of things we can do, I like to think that it makes us a very compelling solution for them that they want to stick with us for a very long time because they just recognize there's nobody who can bring together the communications expertise, the management of those communications, the integration of it into the command center, the linkage into video such that it all works in a mission-critical operation that they need to help run their cities as efficiently as possible.

<Q – Tim Long – Barclays Capital, Inc.>: Okay. You mentioned video several times, and I know you guys aren't on the camera side. But can you talk a little bit about, as all those video pipes into the command center, are you viewing that as like another pillar on this chart or does a piece of it, and how you integrated the analytics engine from the acquisition?

<A – Andrew Sinclair – Motorola Solutions, Inc.>: That's actually one of the, what I would say, was the key advantage we have. And the video assets, such as VaaS, originally came into the software and we moved it across. We have a single data platform for everything, not just command center. It's a single data platform for a WatchGuard. The WatchGuard asset we picked up, the video that we're taking out of WatchGuard is now being packed into – we're in the process of getting it to pipe directly into our big data platform. Even the feeds we have, the Avigilon feeds now show up in the Aware solution. This is all

integrated, and the fact that we can have a single repository, not just for video but for audio, transcription of 911 calls, every record, every document, every piece of digital data that can be collected goes into the same repository, which can then be searched, indexed, we can tag it in metadata, whatever we need to do, and then run analytics over the whole thing, we have a single analytics engine for the company. A nuance there, we actually pushed some of that engine down onto the cameras in case of Avigilon, the machine learning group that we have, built it for the company, built it on top of command center and then it's used everywhere. So it's that platformizing of the company as much as platformizing of the products that is giving us an advantage as we bring in these new assets, such as video and analytics and all these things become more and more important.

<Q>: Okay. Anyone in the audience has a question? Yes.

<Q>: The world is getting used to Google apps and they're so easy to use and so forth. And I'm assuming that you are in this business for a very long time. So there is some legacy software that you still have in there. Are you feeling or seeing any pressure in terms of people wanting a more state-of-the-art sort of user interface, and the way to manage data and so on? What is the competitive landscape? Are you seeing any new players, who will be that you are competing with?

<A – Andrew Sinclair– Motorola Solutions, Inc.>: I'm sure you haven't used the software. You tend to be on the other end of the software when you use it, usually with a speeding ticket. But that aside, so that's actually one of the things that we really focused on upfront, is modernizing that user interface. There's a lot of churn in a PSAP, public safety answering point which is where people take 911 calls, there is a lot of churn in those environments because it's a very stressful job. If you think of a 911 operator, they spend their entire life listening to people in distress, so they churn. So because of that churn, there has to be a very easy adoption curve, training becomes important, and they have to be able to use the software very quickly. So we have what we call the cobalt design language which spans all of our products, which makes it easier for them to use across the product. It's a very modern design language. It even has dark mode. We know that's a fad that it'll go away, but it even has dark mode.

And if you think of it as, just as Google have a consistent user interface or Microsoft has a consistent user interface, so do we, and it's important. And then the last thing to remember is that people who are now starting to populate those PSAPs, or the people who come into work is the next generation who were brought up on those apps. So our design team is very much in tune with how people expect things to work and design them that way, even down to our mobile apps, which are dominant in places like the UK and Australia. That's a modern mobile app designed using all the modern design technologies. They're all native apps on whatever devices. It's easy to use. People often think of public safety as being sort of, I don't want to say dinosaurs, but it's sort of out-of-date with these things, not really, not anymore. The technologies that are getting used in PSAPs are very advanced modern technologies. If you look at the analytics that's being done, this is modern analytics. You look at the need for efficiency and speed, it's the same as consumer. We just launched ViQi. ViQi is effectively Alexa for a radio. This is modern technology.

<Q>: Who do you compete with?

<A – Andrew Sinclair – Motorola Solutions, Inc.>: There's really one main competitor which, bless them, following exactly the same strategy with us and that's Central Square. They've gone down the acquisition path. They've built some organic and they're following us there.

<A – Kelly Mark – Motorola Solutions, Inc.>: There's other ones out there, Hexagon, Axon plays into it, Tyler plays into it. But really there's nobody who has as much as the end-to-end as we do across each and every piece of the portfolio that touches this entire workflow you see on the screen. Yeah.

Tim Long, Analyst, Barclays Capital, Inc.

Okay. I think we're bumping up against time. So thank you guys. We really appreciate your time.