PARTICIPANTS

Motorola Solutions

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DISCUSSION:

Paul Chung: My name is Paul Chung. I'm the applied emerging tech analyst here at J.P. Morgan. Pleased to have with me the CEO and Chairman of Motorola Solutions, Greg Brown. Thanks. Thank you, Greg.

Greg Brown: Thank you, Paul.

Paul Chung: I guess just to start, just a brief overview of the firm.

Greg Brown: Firm is almost...

Paul Chung: [laughs]

Greg Brown: 100 years old, has totally transformed itself from what people would remember to be the cell phone commodity device business to end-to-end public safety communications, end-to-end command center software, and now also all things video security and access controls. It's a totally different company.

Last I checked, about two-thirds of the employees, believe it or not, Paul, are new to the firm. In the last five or six years, we've aggressively bought back shares. When Motorola split, January 1 of '11, Motorola Solutions was RemainCo.

We spun off the cell phone business, the mobility business. And since that split, we have spent about 14.5 billion, reducing the float by 51 percent at a stock price of about $65 or $66. While at the same token, in the last six years, spending about five billion on acquisitions.

We've deployed capital organically, opportunistically, inorganically. It's a brand new company. Much more software and services-centric, but yet with a strong, incumbent position in the markets we serve.
Paul Chung: Pretty busy. Just a quick update on some macro trends. What are you seeing on the supply side now? Are you seeing constraints ease a bit? Where are you seeing specific shortages?

Greg Brown: I would say taking a step back, 30,000 feet, this is an interesting time for the firm and in general. On the positive side, we exited Q1 with record backlog. Had record sales. Had record Q1 orders.

As I've said, Paul, in the last couple of earnings calls, demand is as strong as I've seen it maybe ever. You look at the funding environment for public safety, particularly in North America and with the American Rescue Plan, funding is extremely robust. That too is probably better than I've ever seen it. That funding for the US, depending upon the category and type of funding, actually goes through the end of 2024. You think about demand. You think about orders. You think about organic investment. You think about an incredibly healthy funding environment.

The flip side to your question is semiconductor constraints. I don't see it getting worse. We are planning on it to be consistently challenged throughout 2022. What happened in Q1 on the positive side, I wouldn't say supply increased per se. I think it moved forward. We were able to get certain allocations from critical chip suppliers a little earlier, which allowed us to over-perform.

At the same time, in this environment, we're raising prices surgically and responsibly. We started last year. We continued in Q1. And we're continuing this quarter, for price increases to make sure that we keep pace and continue to financially perform within the envelope of expectations.

We've had and implemented some targeted cost reductions in real-time too. Again, very modest but, at the same time, appropriate.

Then lastly, given, Paul, the supply constraints, really semiconductor constraints, we're prioritizing mix to some of the higher-priced products, particularly in North America, APX NEXT devices. Where if we can only ship a certain fixed amount of product, we're going to index toward the higher ASP and the higher margin to ensure we deliver on the profitability and revenue expectations that we've guided both for the quarter and the year.

All things said, tremendously good things going on. Obviously, semiconductor remains a challenge, the unpredictability of Russia-Ukraine. By the way, we're out of Russia. We did about 23 or 25 million last year in Russia. We're out.
Then we also keep our eye on the COVID lockdowns in China, although I'm also pleased to say -- we did this over the last several years -- we're effectively out of China. We have about 50 people there, 50 or 60 million of revenue. If I rewind the tape for mother Motorola back in the day, Motorola was one of the most consequential investors in China. Given our and my experiences with intellectual property theft and patents, we made that decision a decade ago. No manufacturing, no software engineering, no product development, product management. Exit that theater. Given the nature of what we do, it doesn't make sense to deploy capital there, given the risk-return.

**Paul Chung:** Then, I guess, sticking on some of the macro, talk about freight and FX. You talked about some price increases. How are you seeing those trend as we sit here today and through the year?

**Greg Brown:** Since our February call on the end of the year and then to our earnings call a few weeks ago, FX is a bad guy to the incremental tune of 110 million on revenue headwinds, according to spot rates that day. Freight's higher to the tune of 40 or 45 million. We made an acquisition in cloud-based fixed video, which is dilutive to about 10 cents. Those are the bad guys.

On the positive, we are continuing to raise price. We think the pricing actions taken last year, this year, and that we continue to take get better traction in the second half of this year as we burn through backlog that was priced at previous rates.

Pricing, mix, and targeted cost reductions are the way we're navigating to get from here to there, while we, even with those incremental headwinds, held the full year on revenue and earnings guidance for 2022.

**Paul Chung:** You kept gross margins flat for the year, which is pretty impressive given all those headwinds. You just announced a long-term supply agreement with GlobalFoundries. Can you talk about what that means for Motorola?

**Greg Brown:** Yeah. I wouldn't call it a material announcement per se. I think Tom Caulfield does a good job at GlobalFoundries. They provide us a low-single digit, if I took our chip volume, of production. Sorry, of procurement. I think they are in the low-single digits in terms of size, but they have many common components that go throughout our radio portfolio.
The LSA, the long-term supply agreement, I'm pleased with. I think it's a representation of the relationship that the two companies enjoy. I wish we had a few more long-term service agreements in the semiconductor space, but I was pleased with the one our two companies were able to strike.

**Paul Chung:** Let's jump into LMR. Talk about your current footprint, how you've built this to have such high barriers to entry and very sticky relationships here.

**Greg Brown:** I love LMR, or land mobile radio, because a lot of people just still, to this day, don't understand it. You think of all these public safety networks or LMR networks. There's thousands of them installed. They're not cellular networks. They're not Verizon, AT&T, T-Mobile, or Vodafone or others.

They're private, encrypted, dedicated, reliable, redundant, architected in a unique way so that every public safety official has always-on, constant reliability, superior audio quality. The bigger the footprint, the more opportunity for growth.

You then put devices on those networks, radios. Those radios, on average, in the US, have a life cycle of about seven or eight years. Then we continually refresh the devices, much like cellular devices, Samsung, Apple, and others refresh their devices.

We have these dedicated networks. They're purpose-built. Cellular today, 4G, even 5G, cannot do what those public safety networks do. We grow the number of networks. We put the number of subscribers or devices on that. We then refresh those devices. Then we add services to that as well and monetize the services.

In some cases, we manage public safety networks for our customers, Airwave, Norway, parts of Australia, South Carolina, the state of Illinois. Sometimes, we're owning and operating the network as well.

The durability, predictability, criticality. Land mobile radio networks are a need to have, not a nice to have. They're the communications foundation that protect communities, counties, states, in some cases countries.

**Paul Chung:** What kind of tech innovations are you doing in this space? Do you see any kind of emerging competition at all?

**Greg Brown:** The tech emergence is pretty impressive. We just announced a high-tier APX NEXT device.
The APX NEXT device, which Jack Molloy mentioned on the earnings call, is probably in its second inning. It's a high-tier device, primarily North America-centric. It's refresh and replaceability are in the early innings.

The ASPs of the APX NEXT are comparable to slightly higher. You get a more fully featured radio, more spectrally efficient. You can do over-the-air software programming. It's got LMR and LTE dual band.

If a first responder, in the US or wherever he or she is located, needs situational video or data pumped to that device, even though it's on an LMR network, it's got a dual band that can take that 4G feed and provide situational awareness to the device.

It's got great traction. We had 170 million of orders, I believe, to date. Then the other innovation is we will refresh those P25 devices. We'll have an APX mid-tier device by the end of the year. We've also refreshed some of the devices on the TETRA side and PCR, professional commercial radio.

We continually update, modernize, and refresh the device portfolio that serves these thousands of dedicated public safety communications and enterprise communications network. That's a favorable trend to us.

Paul Chung: It sounds like you have a very strong position. On the competition side it is pretty light.

Greg Brown: Competition in the US is primarily, on public safety, Harris, which is now L3Harris. On the TETRA side, on the device side, it's Sepura, which is a Chinese company, by the way, owned by Hytera. We could talk about that too. We're in litigation with Hytera for trade secret misappropriation, source code copying, patent infringement.

We've had rulings here that have awarded us in excess of 650 million, a judgment against this company, Chinese company, Hytera, most recently a ruling by the judge in Chicago for historical royalties that are owed to us, July 31st, of about 45 million. That would go into escrow subject to the final hearing on appeals.

Hytera systematically stole, cheated. It was a multi-year campaign. It involved many individuals. By the way, separate from our civil case, the Department of Justice just released a 111-page criminal case against Hytera that is totally separate. Hytera is bad actors. We're going to hold them accountable.

I think we're the only US multinational company to sue two Chinese companies for patent infringement and
trade secrets, which is also, correspondingly, why we made the decision a decade ago to exit the Chinese theater. Hytera is still a competitor and is still infringing on our product in the PCR business.

Kenwood and Icom is a competitor as well, on the radio side, for the enterprise side. We've got competition on the radio side and, of course, different competitors in command center software. Think of more companies like Tyler and CentralSquare, on a much smaller level Mark43 for cloud-based CAD.

On fixed video and access control, we compete with Axis, which is owned by Canon, A-X-I-S, Hanwha, South Korean company, Bosch. One last thing. Sorry for the long-winded answer.

Paul Chung: No, that's OK.


Hikvision and Dahua are two of the largest video surveillance companies in the world, fixed video. They are banned by the NDAA for use in the US federal agency or with grant money used by the federal government.

The FCC currently is considering rules, as a byproduct of the Secure Equipment Act, that they may take action as well against those banned companies, that could, if they promulgated rules that were replicating the NDAA, could also limit or ban the use of Hikvision, Dahua, and Hytera for enterprise use as well.

We're the market leader in land mobile radio. We're the number-one provider in North America fixed video and access control. We have a very strong position in command center software.

More and more countries, US, UK, Australia, and others, New Zealand, that are concerned about the deployment of certain Chinese electronics or Chinese gear in mission-critical industries is a tailwind to us over time.

Paul Chung: Can you also provide an update on the CMA investigation in the UK?

Greg Brown: Yeah. CMA, the Competition Markets Authority in the UK, is looking at our role with both
Airwave and ESN. Think of ESN as the UK version of FirstNet. Loosely, but that's how I would describe it. We've been actively engaged with the CMA for the last several months. We're educating them on our role in both Airwave and ESN. Airwave is a company we bought in 2016.

We expect a provisional decision in June by the CMA, with a final decision in September. At the same time, we, Motorola Solutions, continue to deploy capital and invest in both Airwave and ESN. We're working as closely as we can with them.

The only other thing I'd say is whatever ultimately they decide -- we have to work with and have conversations with them -- it's prospective. It's not retrospective. More work to be done with them. We've stayed actively engaged.

**Paul Chung:** Then sticking on the international front, you already touched on it. Where do you see the most strong potential there and discussions accelerating?

**Greg Brown:** We have good engagement throughout Europe as well as the Middle East. I would say EMEA. Of course, Australia has remained a stalwart, foundational theater for Motorola Solutions for quite some time. Parts of Latin America as well.

As Europe has been destabilized with the war, while we've exited Russia, we also have had and seen some uplift in the deployment of public safety communications within certain countries or regarding border control. Think about the deployment of infrastructure to improve safety overall.

I think EMEA remains a quite attractive theater for us. Australia, certain parts of Asia, and certain countries in Latin America as well. Of course, North America is our anchor tenant.

**Paul Chung:** I guess for LMR, can we talk about the revenue and profitability over the life, the setup of the network, the devices sold, the software, and how that trends over time and how it becomes very, very sticky for you?

**Greg Brown:** Land mobile radio networks are installed for a long time, in some cases decades. We also have services contracts, often, that are 7, 10, 15 sometimes 20 years in duration. They're installed for a long time. They are upgraded with more current software releases that we put out to the systems.
They're also upgraded with more modernized and feature-rich devices that capitalize on the feature functionality of the system or, in some cases, spectral efficiency. They're installed a long time. They're very sticky. They allow platforms for us to invest, modernize, improve, and provide increased security for the customers we serve.

Paul Chung: Let's switch to video. Video security and analytics, very strong demand trends. Talk about the evolution of the business from when you acquired Avigilon to now.

Greg Brown: Four or five years ago, we were zero in video security and access control. We've made about nine acquisitions, started by Avigilon in 2018. Take a step back and say, "Well, what do you mean by video security?"

Think about fixed video security, mobile video, prem-based video, cloud video, access control. We have built up, in my opinion, the broadest and deepest video security and access control portfolio compared to anybody else. We have competitors, obviously, in different points of the world and in different categories, but we have the deepest and widest product portfolio.

We measure the business along three technologies. We report two segments, products and systems integration, software and services. We unpack them to three technologies. All things land mobile radio, product and services, we expect that to grow mid-single digits.

Video security and access control, we expect to grow 20 percent this year. We continue to take share because we're growing at a multiple of that market. Then command center software, North America-centric, we expect to grow low-double digits. That's also higher than the market rate as well.

I think the trends around video security, you see it. We talk about device refresh on radios. All these black globes you see deployed, either in a city or in an enterprise, like this hotel. Those cameras typically are older in duration.

Their refresh cycle is more three or four years. All of that device and camera refresh, we're eligible for, but we're also providing the VMS, the video management software, the edge devices, i.e., the camera, and the analytics to go with that.
The thing I love about our position there is it's the largest addressable market that we have. It's $18 billion-plus this year. That's zeroing out China. We have no illusions about competing in mainland China. We zero out that addressable market.

It's the largest addressable market, growing the fastest, with us taking share. We continue to invest both organically and through acquisition. We have on prem solutions. We have cloud solutions.

I also think -- yes, I'm biased -- we have super-talented people running that organization. one of the executives, homegrown and Motorola, but also the Chief Technical Officer and architect for the firm actually came from our first acquisition, Avigilon, in Canada, Mahesh Saptharishi.

Mahesh continues to do a fantastic job on architecting, integrating, and ensuring that our analytics, on top of that infrastructure, on top of that product portfolio, is distinguished and competitive.

Paul Chung: Where are you seeing relative strength across the industry verticals that you play in?

Greg Brown: Education is strong. We see them throughout most verticals. Education is probably one of the strongest. Really, really strong growth. North America, Europe, parts of Middle East. Video security, there's an insatiable demand for it right now, and I think we're in a really good position. We'll continue to invest and deploy capital both organically and inorganically to capitalize on those trends.

Paul Chung: How are you taking share? Judging by your revenue strength, seems like you do have some pricing power here. If you could expand on that...

[crosstalk]

Greg Brown: There's a couple things. Let's start with...When we bought Avigilon, an end-to-end fixed video provider and access control, they were basically 100 percent enterprise. They didn't sell to public safety.

On the other hand, you think of Motorola Solutions, particularly in North America, with our go-to-market direct organization, direct sales, and all of the sophisticated and robust indirect channels. We take that product, put it on the conveyor belt of common sales motion into public safety.
And now, at least last year, I think Jack Molloy said about 350 million of our total video security and access control revenue was government-derived. One is take a best-in-class asset. Invest in it with more R&D. Expand the go-to-market by 40 or 50 percent with more feet on the street. Drop it into the relationship infrastructure that we enjoy on the government side. Watch that growth get traction.

In addition to that, simultaneously, we had the structural tailwind with the Hikvision and Dahua ban with the US federal government to be deployed in those agencies and then, secondarily, to have US grant money fund Hikvision or Dahua. We'll see what the FCC does.

Number one, the overall market is really hot and growing. Number two, we've refreshed and put more R&D to refresh the product portfolio of some of the acquisitions. Number three, we've added go-to-market.

Number four, there's a structural tailwind with anti-Hikvision and Dahua preferences in the deployment of certain video security and access control. Those ingredients into the blender lend itself well for us to continue to grow.

Paul Chung: Let's switch to body cams. Talk about the focus there against a pretty strong incumbent. How are you looking to take share there?

Greg Brown: Obviously, a very strong incumbent. Over two-thirds of the officers in the US probably have a body-worn camera already. Might even be a little bit higher. On the other hand, the market wants an alternative. They don't want a sole source, dominant provider. They want a better-priced alternative.

I think we've been doing that. I think you'll see us do a little bit more competitive pricing against that incumbent. And quite frankly, there's a lot more growth to be had internationally as well. We have a very competitive offer there with an acquisition we made of a company called Edesix. We reported last year was the largest body-worn camera sale that we were aware of, with the French MOI.

We look to capitalize on international opportunities, continually stay aggressive on price, have a very competitive alternative where people want it. In secondary and rural markets that may not have body-worn camera, we think we're a viable alternative to be considered.
Mahesh also continues to work on ensuring that the back-end digital evidence management that stores and captures, redacts, and manages all that video is as competitive as it can be as well.

Paul Chung: Let's switch to command center software, overview of the offerings and where you see growth in that business.

Greg Brown: There's about 6,500 PSAPs, public safety answering points, in the US. Our command center software strategy is anchored in the US. We have about 3,500 of the 6,500, where they are using a module or some software product from Motorola. Mahesh continues to build out the suite. It takes a long time, a longer sales cycle.

Probably the longest one we sell into is command center software because that software is uniquely customized around workflow, by city, by county, by municipality. Any replacement needs to be seamless. Obviously, lives matter. You can't drop a 911 call. You can't have any dislocation or disruption, so the sales cycle is longer. It's very purposeful, in command center software.

We have on prem solutions. We're building a cloud solution. We see, Paul, that market growing about seven percent, maybe eight, but I think it's anchored around seven this year. Our expectation for this year around command center software is low double-digits. That too is a technology where we expect to continue to take share.

I think you'll see us use our incumbent position where we have a foothold in or at least a presence in 3,500 of the 6,500 and look along the timeline of migration that's conducive to the customer to have more and more end user customers buy additional modules to add to that 3,500.

Paul Chung: Let's jump into the P&L. You touched on this earlier. How are you keeping margins flat for the year? As some of these temporary costs go away, do you hit 50 percent-plus? What are you doing structurally to change the margin profile there?

Greg Brown: The bad news is there's a lot higher cost this year, but Jason and I think many of them are temporary. As an example, take semiconductors. Still a challenging environment.

We have to buy parts on the open market, where we can, in the broker market. Second, we have to look for
product substitution. Third, where possible and if there's enough time, we do product redesign.

The purchase price variance, we said, at the beginning of the year, we, the firm, would have 120 million of higher incremental PPV cost for semiconductors, 50 million in Q1, 50 million this quarter, in Q2, 20 million on the back half.

We think overwhelmingly most of that 120 million is temporary and will mitigate over time as the semiconductor situation normalizes. We don't know when that is but the reason we absorb 50 million of higher PPV. We're absorbing 50 million of higher PPV in Q2. Hence, the margin contraction.

How do we gain it back in the second half? One, PPV is mitigated to a much lower number as we lap previous year higher comps. Two, we're prioritizing mix into the higher-ASP, higher-tier devices. Three, pricing increases take hold largely in the back half as we burn through some of the existing backlog. Lastly, we'll do targeted cost reductions.

Our expectation is that gross margins will be comparable this year, even with all of those interesting headwinds. Our expectation is to have operating margin slightly up, all in, for the year, fiscal '22 over fiscal '21. Lot of hard work. I think Jason Winkler in finance, the supply chain team, a lot of people doing some great things. I like where we are.

Paul Chung: On the product side, you mentioned these price increases. What about on the services side? Is there more fluid, dynamic price changes available on your services side?

Greg Brown: We're very mindful of managing multiyear relationships on the services side. Many of our long-term managed services contracts have cost-of-living increases. We expect software and services to grow high single-digit this year, is the overall segment perspective.

Services was actually mostly flat in Q1, but we expect that services growth, particularly for the back half, to return nicely to more historical growth rates.

Paul Chung: Let's talk about cash flow. Super-consistent, on track for another annual record despite some elevated inventory. Talk about how you've been able to consistently drive this reliable cash flow.
Greg Brown: By the way...

Paul Chung: [laughs]

Greg Brown: just so Tim Yocum doesn't kill me, software and services is approximately 10 percent growth...

Paul Chung: [laughs]

Greg Brown: this year. I don't want people to be like, "What? He guided down." No, I didn't. It's staying at 10 percent. Jason and I work really hard at capital deployment and cash flow. We've obviously built up working capital and are carrying higher inventories, given the volatility and some of the uncertainty, to mitigate semiconductor supply between now and the rest of the year.

We are looking at the discounted cash flow of the business against the backdrop of the LRP, with a rising cost of capital, obviously, as interest rates go up. We decide whether we're going to deploy capital buying back shares or we're going to buy companies. It's constant. We're always looking at it.

In Q1, we spent about 500 million on acquisitions and about 500 million on share repo. We don't have the free cash flow to continue share repurchases at that level. It was indexed and front-end loaded.

On the other hand, I would say -- and I think some of you have heard me say this -- these are interesting times. Market's continuing going down. What's going to happen with Russia-Ukraine? Is the Fed going to get the soft landing right or not? What about China lockdowns and Xi Jinping’s no-COVID policy? When do semiconductors alleviate?

At the same time, that uncertainty and turbulence presents us great opportunity to deploy capital. I think with turbulence, comes opportunity. And we will continue to deploy the capital along those lines. The best thing you can do with capital is to invest in the business.

And we have great businesses to continue to invest in and grow above-market rates, then return it to the shareholder, and also make accretive, sustainably differentiated acquisitions to keep our competitiveness going forward.
Paul Chung: We're out of time here. Thank you for your time today.

Greg Brown: Thank you, Paul.

Paul Chung: That's a wrap. Appreciate it.

Greg Brown: Thanks for coming.