

AST SpaceMobile (ASTS) / 15 May 23 / 2023 Q1 Earnings call transcript

Company Profile

[Transcript menu](#)

Scott Wisniewski Chief Strategy Officer

Abel Avellan Founder, Chairman and Chief Executive Officer

Sean Wallace Chief Financial Officer

Mike Crawford B. Riley Securities

Caleb Henry Quilty Analytics

Print



Operator

Good day and thank you for standing by. Welcome to the AST SpaceMobile First Quarter 2023 Business Update Call. Please be advised that today's conference is being recorded.

I would now like to hand the conference over to your host today, Scott Wisniewski, Chief Strategy Officer of AST SpaceMobile. Please go ahead.

Scott Wisniewski

Thank you, and good afternoon, everyone.

Let me refer you to slide two of the presentation, which contains our Safe Harbor disclaimer.

During today's call, we may make certain forward-looking statements. These statements are based on current expectations and assumptions and as a result are subject to risks and uncertainties. Many factors could cause actual events to differ materially from the forward-looking statements on this call.

For more information about these risks and uncertainties, please refer to the Risk Factors section of AST SpaceMobile's annual report on Form 10-K for the year that ended December 31st, 2022, with the Securities and Exchange Commission and other documents filed by AST SpaceMobile with the SEC from time to time.

Readers are cautioned not to put undue reliance on forward-looking statements and the company specifically disclaims any obligation to update the forward-looking statements that may be discussed during this call. Also, after our initial remarks, we will be starting our Q&A section with questions submitted in advance by our shareholders.

Now, referring to slide three.

For those of you who may be new to our company and our mission at AST SpaceMobile, there are over five billion mobile phones in use today around the world, but yet many of us still experience gaps in coverage as we live, work and travel.

On top of this, there are billions of people without cellular broadband who remain unconnected to the global economy. The market opportunity for us is large and the problem we are solving is important and touches nearly all of us. In this backdrop, AST SpaceMobile is building the first and only global cellular broadband network in space to operate directly with everyday unmodified mobile devices. And this is supported by our extensive IP and patent portfolio.

Over the last few weeks, we have made significant steps to confirm our technology, opening new business opportunities. It is now my pleasure to introduce Chairman and CEO, Abel Avellan, who will summarize what we've been up to since our last public update six weeks ago. He'll be providing important context for what these activities mean to our company, our partners and our shareholders. Abel?

Abel Avellan

Welcome to our Q1 2023 key highlights. We had an important quarter here to report. To get us started, we wanted to hit on the key messages for our update today. Number one, we have made history recently, successfully completing the first ever direct voice connection from our BlueWalker 3 test satellite to everyday smartphones, certifying our leading position in the market we invented.

These were not just a major achievement. It's significantly the risk our business and create new important opportunities for us. The success of this first call validates our technology. We now know that we can move forward with our 16 approach, confirming the ability to potentially access the over 5 billion mobile devices in circulation.

Lastly, the first call expands our potential opportunities to fund our business, including new options that we are always exploring. In short time since we last spoke AST SpaceMobile made history. We successfully completed the first ever direct voice call from our BlueWalker 3 test satellite to everyday smartphones, utilizing AT&T spectrum and using a Samsung Galaxy S22 smartphone and other phones.

This was a major technical achievement and the result of years of R&D, hundreds of millions in investments and backed by an extensive patent portfolio covering over 2600 patents and patent pending claims.

We are proud to have AT&T, one of our close network partners.

As you see in this graphic on page five, AT&T have put us in significant historical context, comparing our achievement with the first ever phone call.

First television transmission, first transmission of content over satellite among others. This is truly unbelievable.

We continue strong momentum with the wireless industry. This achievement has allowed for continued strong momentum with the largest players in the wireless ecosystem. Margherita, the CEO of Vodafone, also put our achievement in important historical context versus the first ever text message sent by Vodafone 30 years ago. And Chris, who runs AT&T Network, echoed historical sentiments.

At this point, we had approximately 40 MNOs Mobile Network Operators around the globe under preliminary agreements representing the top leaders in the wireless industry.

Some of these relationships are deep with a strong executive support. They are truly in the room with us helping to bring this technology to reality.

As this -- and this technical milestone we have just achieved will accelerate our relationships. Implications of this historical technical milestone.

So what does this technology milestone means? It validates our system architecture. There is no need for us to change our approach or redesign our satellites.

Specifically, it confirms that no major changes are needed to the design of our Block

1 BlueBird or our technology roadmap. Accordingly, we are ramping, manufacturing and materials sourcing at our Midland facilities. The successful first call also confirmed that our technology works with everyday smartphones, the phone that you have in your pocket.

We also confirm our ability to integrate with existing wireless ecosystem, including spectrum.

The big question for BlueWalker 3 is what comes next? And that is demonstration of 4G and 5G capabilities for download speeds, which we are ramping towards and demonstrated that we can support signal strength in line with 4G and 5G speeds. Testing confirms technology ability to work with everyday smartphones and devices.

While older architecture will potentially target SOS or text only features or require additional hardware to potentially work.

We're building the first and only system that will use low earth orbit satellite to connect to cell phones you use today at broadband speeds.

Our technology is designed to work with the over 5 billion phones in circulation on carrier spectrum and without any modification to the phones, without requiring any special frequencies, app or chipsets.

Our plan is that you can simply download or dial without any intermediary steps. This gives us access to the 1.1 trillion wireless industry. This is truly a game changer in a market we believe we have a very significant first mover advantage.

Now moving to the update on industrialization of our patented technology.

First, I'm glad to report that our production for our next five Block 1 satellites are on target for a Q1 2024 launch. When it comes to the manufacturing of our satellites, we have production up and running at our facilities in Midland, Texas.

The pictures on this page are site two.

Our second production site and represent a look at some of the initial manufacturing underway for Block 1. We remain on track for the planned launch of five Block 1 satellites in Q1 2024.

Now let's talk about our technology roadmap, which is designed to be a stage and as we build and design new advanced satellite architecture, we continuously improving both our unit cost or cost per gigabit delivered to end user, but also we improved the capacity that we're able to deliver into the network.

So with BlueWalker 3, we have demonstrated using our current architecture, the ability to connect directly to handsets with Block 1 days of improvement of ten times capacity being able to be delivered as compared with BlueWalker 3 and then there's another ten times capacity improvement with the Block 2s.

So what we see, we are not only improving our unitary cost, we continue to improve our technology, but we're also improving our capacity and our network capacity as we add more satellites. This is thanks to our patented technology, our integrated, our vertically integrated approach to build and design our satellites and also the fact that we own our own software firmware and custom ASICs in order to get to this point.

And with that, I move it to Sean to do the financial overview.

Sean Wallace

Thanks, Abel. Good afternoon, everyone. Since our last earnings call, AST has made history with the first voice calls connecting everyday smartphones to our BlueWalker 3 satellite. I want to congratulate our team on this groundbreaking milestone, and it's great to see such a feat to be supported and confirmed by some of the most sophisticated wireless companies in the world, including AT&T and Vodafone.

Beyond making wireless history, we also continue to drive our plan of execution. We made continued progress around our manufacturing milestones, and we are excited about the next 12 months, which should see the launch of five Block 1 satellites and progress towards the initiation of commercial service.

Let's spend some time discussing a couple of our key operating metrics for the first quarter that are displayed on slide 11.

Looking at the first chart, we see for the first quarter of 2023, we had non-GAAP adjusted operating expenses of \$40.3 million versus \$39.1 million in the fourth quarter of 2022.

Non-GAAP adjusted operating expenses exclude non-cash operating costs, including depreciation and amortization and stock based compensation, which totaled \$3.5 million and \$4.3 million for the fourth and first quarters respectively.

Our first quarter non-GAAP adjusted operating expenses increased by \$1.2 million versus the fourth quarter of 2022.

Our research and development expenses climbed by \$1.7 million primarily as a result of increased activity with Nokia where we are developing our gateway infrastructure.

Our engineering services expenses rose by \$0.6 million.

Our G&A expense fell \$1.1 million, primarily as a result of cost controls and discipline. We currently expect that the level of non-GAAP adjusted operating expenses will remain in the high 30s for at least two more quarters as we continue to pursue important R&D projects for our BlueBird satellites and pursue the construction and planned launch of five Block 1 BlueBird satellites in the first quarter of 2024.

Turning towards the second chart.

Our capital expenditures for the first quarter were \$13 million versus \$10.4 million for the fourth quarter. This increase in capital expenditures was directly related to our focus on building the five Block 1 satellites and the figure includes materials which are capitalized and the continued investment in our satellite assembly process.

Our capital expenditures, which have been averaging around \$10 million to \$13 million per quarter will begin to increase to fund the development of our Block 1 satellites, which we currently expect to launch in the first quarter of 2024. Overall, we continue to expect our total capital expenditures for our five Block 1 satellites to be between \$100 million to \$110 million.

As of the end of the first quarter, we have already expected \$40 million of those projected amounts. In previous quarters, we had provided estimates for the capital costs of each of our Block 2 satellites, which includes materials and launch costs. In the last quarter, we estimated that the costs would be \$16 million to \$18 million.

Going forward, we expect to provide these estimates once a year unless there are material changes, as we believe annual reviews provide more meaningful views on the trends of these long lived assets.

As of the end of the first quarter, we had capitalized costs totaling \$92.5 million for BlueWalker 3. Based on the successful testing regimen, including the voice call I mentioned earlier, we have determined that the BlueWalker 3 is now operational for accounting purposes and we will begin to depreciate this asset over the next 16 months.

This depreciation will increase our non-cash depreciation charges by over \$17 million per quarter until this asset is fully depreciated. And on the final chart on the slide, we ended the fourth quarter just shy of \$185.7 million in cash on hand.

As we stated in our 10-Q, we believe this cash as well as our ability to raise capital through our existing facilities is sufficient to support our expenditures for at least the next 12 months.

We have also received numerous questions about where we maintain our -- and invest our cash.

Our cash investment policy implemented last year has three investment objectives and I list them in order of priority principle protection, liquidity and lastly returns. We currently invest most of our cash in one of the largest US government money market funds in the world managed by JPMorgan Asset Management, who is our custodian of these funds.

On the next slide, I wanted to provide some history and context on our capital raising efforts to-date. In total, since our founding, we have raised over \$700 million in capital to help fund our development. I would like to point out several aspects of these capital raising efforts. In the first column, you will see that our Founder and CEO, Abel invested the initial risk capital to fund the business.

He remains the largest shareholder in the company and does not draw a salary. Abel's future returns and most of his management teams will be driven by the performance of AST, which means he is highly aligned with his shareholders. The next part of the chart I would highlight is our list of strategic investors and partners.

Vodafone, American Tower, the Cisneros Group and Rakuten are sophisticated world class operators. They all have representatives that sit on our board of directors and they all have made two investments in AST. The next column I would highlight is our sale of our stake in Nano. We identified, invested in and helped grow the space company. When we determined this company was no longer strategic to AST, we decided to sell this asset, recognizing a nine times return on invested capital.

And finally, on the fundraising chart, I would highlight that we tend to target our fundraising efforts as we de-risk our business through the successful completion of milestones.

Our recent equity raise in the fourth quarter was completed following the successful launch of BlueWalker 3 and the subsequent unfolding of its large scale array.

We believe that investors will continue to see our milestone achievements as good times to consider new or additional investments in us.

As we contemplate raising additional capital for AST, we are working very hard to explore a variety of wide variety of sources of capital designed to fund our operations in an efficient manner. And while these efforts are preliminary and there can be no assurance that additional funds will be available to us on favorable terms or at all, we are encouraged by these initial efforts.

On the debt side, we are exploring raising capital with export-import agencies, structured debt providers and over time potentially accessing the debt capital markets or loan markets. We believe that the modularity of our business plan creates the potential to reach operating cash flow with a modest portion of our planned constellation.

Producing operating cash flow before completing our constellation may enable us to access the debt markets to support the build-out of our constellation.

Another area we are focusing on is raising capital through players in the wireless ecosystem. A key component of our strategy is to develop close relationships with important parts of the wireless industry, including MNOs, electronics manufacturers, space companies and others.

We believe we are developing the next growth leg in the wireless industry and we are working with these strategic players to evaluate their interest in helping us commercialize our business and fund our plans.

And with that this completes the presentation component of our earnings call and I pass it back to Scott.

Scott Wisniewski

Thank you, Sean.

Before we go to the queue of analyst questions, we'd like to address a few of the questions submitted ahead of the call by our investors. Operator, could you please start us off with the first question?

Operator

Josiah from Michigan asked how does AST SpaceMobile plan to maintain their lead in the D2D market?

Abel Avellan

Thank you, Josiah, for the question. Well, first, we are the first and only space based cellular broadband system.

Second, we invented this new cellular broadband market and hold over 2600 patents and patent pending claims.

Third, we are currently operating the largest communication array in low earth orbit for commercial use and have validated our technology in orbit.

We're far ahead of any other system with approximately 40 wireless operators around the world on the preliminary agreements and agreements of understanding. These relationships continue to accelerate as we continue to meet our technical milestones. Fourth, we have a system that works with the phone in your pocket to support access to over 5 billion phones in circulation today.

And fifth, we are deeply invested in vertical integration. We own our own ASIC development software and literally we start with metal and composite and manufacture the majority of our satellite parts. We believe all these points provide us with a strong lead in this market for years to come. Thank you.

Operator

Okay. Leyden from New Zealand asked what are some upcoming FCC milestones that investors should look out that are relevant to AST?

Sean Wallace

Thank you. I'll take that one.

We have been in front of the FCC for several years now talking about the potential for cellular connectivity from space and also the unique capabilities that our technology is designed to support.

More recently, over the last six months, the FCC has taken a handful of steps that we support, including starting a rulemaking process specifically for cellular connectivity from space. And they've also dedicated more resources to reviewing space applications by putting in place a standalone space bureau.

And then just last week, we took important steps on two different regulatory processes with the FCC.

First, we and AT&T made filings regarding a spectrum lease agreement between us, one that covers the vast majority of AT&T's low band spectrum assets. This filing requested a waiver to lease AT&T spectrum to us for space mobile service.

And second, we and AT&T and others also submitted comments for the ongoing rulemaking process for supplemental coverage from space.

Operator

Brian from Connecticut asked. There are some concern about finding confirming launch dates and costs. Can you provide details of the ongoing discussions with launch service providers?

Scott Wisniewski

Sean, I'll take this. Thanks, Brian. We signed an agreement in February of this year to launch our Block 1 satellites on a dedicated SpaceX Falcon 9 rocket in the first quarter of 2024.

In terms of future launches for Block 2, we are in active discussions with a variety of operators who we feel have enough capacity and manifest openings to support our plans.

In order to increase our flexibility, we have also developed a configuration which makes our Block 2 design compatible with multiple launch vehicles. And look, as the launch market evolves, we believe we are a very interesting customer to launch providers who are looking for anchor customers who have the volume and cadence to drive their business.

Operator

Leyden from New Zealand asked how many months post launch are BB1s expected to need before they begin commercial service?

Abel Avellan

Thank you, Leyden. After all the learnings that we have had with BlueWalker 3, which including the initial deployment, initial flight optimization and then the initial broadcasting of cellular signals, we estimate that it will take three to four months to activate for commercial service, post launch separation. That includes the in-orbit acceptance test of the spacecraft and the initial fine tune of the system prior to starting utilizing the service interacting directly with end

users.

Scott Wisniewski

And with that, I'd like to thank our shareholders for submitting these questions. Operator, let's open the call to analyst questions now.

Operator

Thank you. [Operator Instructions] Thank you.

Our first question comes from the line of Mike Crawford with B. Riley. Please, please proceed with your questions.

Mike Crawford

Thank you. With BlueWalker 3, I know you started the optimization process by turning on kind of one micron of the array at a time. And until doing those first calls, but with a fully integrated array, how would you characterize the capacity that you now expect to achieve with that satellite and what you maybe theoretically thought you would get out of that satellite prior to launch? And then kind of where we are on that process today with that BlueWalker 3 satellite.

Abel Avellan

Basically separate, deployed, light pointing [indiscernible] to the earth and test our end-to-end doppler delay compensator.

Our patented doppler delay compensator. Then we start the process turning up the array from two elements to the full type of elements. At this point, we have completed all that process culminated into doing end-to-end connectivity directly to Samsung devices, but others as well. And at this point also we have completed measurements of signal strength at the full array level where we are getting around three bits per hertz, a sufficient to support 4G and 5G data rate speeds, which was the intended purpose of BlueWalker 3.

Mike Crawford

Okay. Thank you, Abel. And just to clarify, the order of magnitude improvement in capacity you expect with the Block 1 BlueBird. Is that per satellite or is that for the Block of five?

Abel Avellan

No, that is per satellite. I mean, each satellite in Block 1 will have ten times capacity of what we can get with BlueWalker 3. Block 2, we have another ten times, 100 times a capacity improvement compared to BlueWalker 3. This allowed us to really continue adding significant cost reduction per unit cost delivered to the cell phone. And that is thanks to our vertical integration.

So we're fully vertically integrated. We own all the software, all the hardware, all the custom ASICs that allow to get to this point. Also that combined with the size of our array that allowed us to basically scale significantly the capacity as we continue to develop our technology from Block 1 to Block 2.

Mike Crawford

Okay. Thank you. And the last question for me just relates to Beamforming.

So you can dynamically point where you want to put the power down to make a connection. And I'm wondering if you could share how accurate you're able to do that versus expectations and then signal strength say in the center of a beam versus on the edge once you're trying to support multiple call from same locale.

Abel Avellan

Yeah.

So one of the key features of our technology is the ability to reuse terrestrial spectrum.

So basically the ability to direct very precisely the signal into particular directions where there is no terrestrial signals that allow us to basically use a spectrum from the global terrestrial operators in areas where they don't have a deploy or where it doesn't work properly.

So that had been demonstrated with BlueWalker 3.

We recently have leased -- we have filed an agreement with the commission, with the FCC of actually our usage of a spectrum in combination with AT&T, which is actually in use of this feature, allowing us to basically precisely point the signals into the directions where the terrestrial footprint is not in use or is not working properly.

So the precision of that is within one, one and a half degrees to two and a half degrees depending on the size of the array. And it is designed to dynamically reallocate the spectrum as our system is a software defined system that allows us to turn on and off and actually point a capacity as is needed by the operator.

Mike Crawford

Excellent. Thank you very much.

Operator

Thank you.

Our next question is from the line of Caleb Henry with Quality [Space] (ph). Please proceed with your questions.

Caleb Henry

Hey, guys. A few questions from me. I noticed in your 10-Q last quarter and this quarter that the description of the total constellation size is now 95 satellites, not 110.

So I was wondering if you could walk us through some of the changes to the architecture that are now based on a slightly smaller constellation.

Abel Avellan

But we have now confirmation of the signal strength by elevation, and we were reserving some margins on how to do this. Also we feel that with the signal strength by elevation, which is basically what relates to the number of satellites that you need for continuous service on a global basis.

Now we are confirming that we need around 90 satellites for global broadband connectivity directly to handsets on a global basis. Both classes have [indiscernible] global basis.

Caleb Henry

Okay. And can you also going to share. It looks like there's 25 BlueWalker 3 kind of clones before the transition to the BlueBird.

So kind of is there a reason why that transition was made as well?

Abel Avellan

No, there is five which are in construction that what we call Block 1s. They had a ten times capacity improvement even though that they are the same size as BlueWalker 3. The follow on next batch of satellites 25 Block 2. They are larger than the current BlueWalker 3. The reason for being larger in combination with our custom ASICs is the ability to have another ten times capacity improvement in term of total amount of user total amount of gigabytes that each of the satellite will support.

We continue to add them into the constellation.

Caleb Henry

Okay. And does that mean between the slightly larger satellites and the better than expected quality of the spectrum usage, does that mean that you're going to get more than 9 to 13 gigabits per satellite? I think that was the previous benchmark.

Abel Avellan

We're not providing guidance, but -- to the new capacity, but we are still within the range that we have provided before.

Caleb Henry

Okay. And then my last question is just if you could provide an update on the ASICs.

I think during the last call, you said those were nearing completion. Do you have a sense of are those done or those finalized today or if not about how far away do you expect that to be?

Abel Avellan

We are at the very last end of the development nearing enter into the phase where you go to [indiscernible] which is the last phase of development. The system have been validated. Basically it's a very similar approach and use the background of what we have done on BlueWalker 3 on PGAs that allowed us to basically confirm our way of implementing our calibration and our beamforming in BlueWalker 3 and then [indiscernible] in PGA -- in the ASICs that we're developing.

So we're at the last stage of the ASIC. But we're counting on them for our Block 2s, which are going to be larger and with our ASICs. And that again, that give us a ten times capacity improvement compared to the current satellites in construction Block 1s.

Caleb Henry

All right. Thank you.

Operator

Thank you. At this time, I'm showing no further questions. I'd like to turn the call over back to management for closing remarks.

Scott Wisniewski

Thank you, operator.

As Abel discussed, this was a historic quarter for us, completing the first ever space-based voice calls using everyday unmodified smartphones. We really appreciate everyone for joining the call and we appreciate your support and questions. Thank you.

Operator

Thank you. This concludes today's conference.

You may disconnect your lines at this time. Thank you for your participation.