

AST SpaceMobile (ASTS) / 16 Aug 21 / 2021 Q2 Earnings call transcript

Company Profile

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Scott Wisniewski executive

Abel Avellan executive

Thomas Severson executive

Bryan Kraft analyst

Operator

Hello, and welcome to the AST SpaceMobile business update for the second quarter of 2021.

As a reminder, this conference is being recorded. It is my pleasure now to introduce the company's Executive Vice President and Chief Strategy Officer, Scott Wisniewski. Thank you. Scott, you may [Print](#).

Scott Wisniewski

Thank you, and good morning, everyone.

Let me refer you to Slide 2 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 made on this call.

For more information about these risks and uncertainties, please refer to the Risk Factors section of AST SpaceMobile's Form S-1 filed in June with the Securities and Exchange Commission as well as Form 10-Q for the second quarter of 2021 and others often 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.

With that, I'd like to introduce Chairman and CEO, Abel Avellan; and Chief Financial Officer, Tom Severson, to the call. Abel, over to you.

Abel Avellan

Thank you, Scott. I'm really excited to be here, provide you, our shareholders and the broader community an update on our progress. This is our first quarterly update and a really special milestone for us as a public company.

As many of you know, AST SpaceMobile is my life, and our team could not be more fully committed to our mission, and we work day and night to deliver on it.

Space-based solutions are increasingly becoming more important and part of everyday life, but it is our belief that the best and most relevant solution for the long term will be the one using the phone that you already have in your pocket.

As usual, it will not incur on an additional cost for specialized phone or satellite equipment.

There are already more than 5 billion mobile phones. Over 600 million people are without any cellular coverage. And approximately half of the world population, it is without cellular broadband.

As we talk today, we will try to remind you of some of the highlights of our company plan and strategy, and we also plan to talk about our second quarter financials. But I thought I will start first with an update on our business execution, where I focus every day.

Starting on Page 4.

Our strategy breaks down into 3 parts: industrialization, commercial and organizational. Industrialization, we divide into BlueWalker 3 efforts, which will mark the conclusion of our development phase; and then BlueBird 1. Commercial, we split into 2 parts: getting market access in countries where we want to operate and signing agreements and MOU with mobile network operators for access to their subscribers. And organizational for us is about getting the right people in place for execution.

Starting with BlueWalker 3, we expect to launch in March 2022 from Cape Canaveral. BlueWalker 3 is our next prototype spacecraft with 693 square foot phase array. Chain launch service provided to SpaceX in order to increase certainty of launch timing and simplicity delivering of transportation to our launch site. The successful launch and test of BlueWalker 3 will mark the conclusion of our first development phase and the commencement of our production phase.

Now into BlueBird 1. BlueBird 1 is our production spacecraft, which we expect to be the largest communication phase array ever deployed into space.

Over the second quarter, we continue to make progress in finalizing the design of BlueBird 1 as well as making investments in our Midland, Texas, facilities and global supplier development. Once at full rate, we anticipate that our Midland facilities will be able to produce up to 6 spacecraft per month.

On commercial.

We continue to have a broad based disclosure with mobile network operators and regulators globally, both directly and through our partners. We recently signed new MOUs with Smart Communications, Africell, MUNI, UT Mobile, LIBTELCO and others.

As a result, we had increasing subscriber count with mobile network operators under MOU from 1.5 billion -- up to from 1.3 billion at the end of the first quarter. And while it's still early, we have regulatory approval granted in 6 countries to the date, with total population of over 360 million.

And in terms of organizational progress, our hiring plan continue in order to support scaled spacecraft production. In the second quarter alone, we grew by 62 employees across all of our offices, significantly enhancing our in-house engineering, manufacturing, procurement and corporate activities. This bring our team to 452 (sic) [454], including 261 full-time employees, 49 full-time contractors and 144 working at third-party engineering services dedicated to AST Space Mobile.

We also opened our office in the U.K. We had employees there for some time, but we felt now was a good time to open an office and that will support our business development, engineering and regulatory functions.

Thank you. With that, back to you, Scott.

Scott Wisniewski

Great. Thank you, Abel.

Over the next couple of minutes, I want to briefly frame the opportunity and solution that AST SpaceMobile is working towards and link back to what we are working on now to the launch of BlueWalker 3.

Some of this may be a little repetitive, but as our audience continues to grow, we want to ground our first quarterly update on the fundamentals.

Turning to Slide 6. I'll start with our market opportunity and what we're playing for. The wireless services market has over \$1 trillion in annual revenue. That comprises all of our monthly service payments to the phone in our pocket. This is a market that is evolving dynamically but experiences the same strong demand fervor that you see across telecom, and this is an industry that wrestles with issues around coverage reach and rural connectivity.

Some of the numbers we think that are relevant to understanding where our service like ours would fit, our first 5.2 billion unique cellular subscribers. These are people with mobile devices who are paying mobile network operators and move in and out of coverage as they live, work and travel.

So this is a big number. And keep in mind that 1.2 billion of these subscribers are not even using broadband today.

Another key number is the 3.8 billion people who do not have cellular broadband service, half of the world's population.

As you unpack this number, there are a lot of reasons for what's called the usage gap across age, gender and income. But notably, it includes over 600 million people who fall into what's called coverage gap. They simply are not in range of cellular broadband. Intuitively, we know that Earth is big and coverage gets increasingly harder with tougher unit economics for terrestrial networks as you go to lower and lower population countries. That is one of the reasons you are seeing governments present policies with universal coverage requirements and often attaching subsidy programs as well.

So we look at the state of play in cellular broadband, and we see a huge installed base of users and unmet needs.

Flipping to Slide 7. It's with this context that we are so excited about SpaceMobile. Simply put, we are building the first and only space-based cellular broadband network. This means that there is no terminal or a satellite dish to buy, no modifications to the phone in your pocket.

You will be able to just connect directly to our network.

For those less familiar with solving global telecom network pinch points, bypassing this need for an expensive extra device is very special because it changes the unit economics when a user considers adopting the new service. And once you have put aside a several hundred dollar purchase requirement for the user or a subsidy by the network provider, you can start thinking more about offering service at lower price points and expanding the potential user base.

So we think SpaceMobile is a very compelling solution to this evolving and perfect networks that we just talked through, and this need sits against the user base that is hungry for coverage and bandwidth and now pays for connectivity prioritized above most other household needs.

Looking to the topic of competition. We believe the nature of SpaceMobile service is differentiated relative to any other existing or planned service offering, and this differentiation is backed by over 1,200 patents and patent-pending claims as well as our first mover advantage.

As the telecom ecosystem continues to evolve, macro cell towers, small cell towers, fixed wireless, WiFi hotspots, fiber-to-the-home, satellite fixed broadband, satellite backhaul, these are all great solutions for users as well and will help fill a tremendous market need, but they will not be able to match the type of service we believe we can offer.

Another element of the competitive moat here is that building a global business is hard, which is why we're not doing it alone but alongside really incredible partners, partners that have made investments and contributed important development and commercial relationships, partners who are the leaders in the industry and significant innovators. These are Vodafone, Rakuten and American Tower, to name a few.

Shifting to the commercial side of the business.

Our go-to-market strategy is pretty simple, and we plan to build and organize our network and service offering so that it looks and feels like a cellular service, and we partner with mobile network operators to deliver that service to their existing subscribers.

In terms of user experience, we believe in reducing friction to the absolute minimum, which should also serve to speed adoption. Cellular networks today have the capability to program text messages that will offer space mobile service that can be turned on with a simple yes text message response offered at precisely the time when our service is needed.

So our mobile network operator relationships are very important. They are at the core of our technology solution and the scalability of our business. They offer a built-in, sub-subscriber customer base ready to be turned on.

As we sign more agreements and collaborations, we will provide updates. But to date, we have MOUs with almost 20 different MNOs who cumulatively have 1.5 billion subscribers. Overall, we believe we have a revolutionary technology matched with an elegant commercial approach.

Moving to Slide 8.

So what's next? A couple of weeks ago, we announced our expected March launch for BlueWalker 3 with SpaceX out of Cape Canaveral, and we are thrilled to be launching from our own backyard.

As a refresher, our test satellite, BlueWalker 1, launched in 2019, was used to validate our network architecture and was capable of managing the effects of Doppler and communication delays from low Earth orbit using 4G LTE protocol. Building on this, now BlueWalker 3 is planned to demonstrate the SpaceMobile end-to-end system design, communicating directly with cell phones via 3GPP standard frequencies. This spacecraft is notable as it features one of the largest phased arrays ever deployed in the space, measuring 693 square feet or about the size of a studio apartment.

The size here is a key attribute in order to generate the power and signal strength required to communicate with a relatively small and low powered mobile phone hundreds of miles away. Overall, manufacturing assembly and testing continue to progress, and we believe we're on target for a March time frame, with over 75% of planned project CapEx incurred and paid, including nonrecurring engineering expenses.

We will provide more details as we get closer to the launch date, but to give you a sense of what happens after launch, there are a couple of elements of the spacecraft test plan. Immediately following launch, we will be doing some health and wellness checks, including orbital placement, deployment and basic connectivity. In the months following launch, we will be doing full system testing in Texas, Hawaii and other locations globally. Ultimately, the goal of BlueWalker 3 is to configure ground equipment to ensure SpaceMobile's production spacecrafts. We'll be able to interconnect with mobile network operators for backhaul and with unmodified 4G and 5G mobile phones.

Moving to Slide 9, and before I hand it off to Tom, I want to leave you with a few key points of differentiation for AST SpaceMobile and put it into a broader context. With lots of investment flowing into space tech, we think that shows the importance of space-based solutions to telecom networks, and AST SpaceMobile is the only pure play for public investors in LEO broadband.

We are also playing in a very large market with a solution that is applicable to over 5 billion mobile phones and a related \$1 trillion TAM, and we are jointly going to market with industry giants, and we are not competing with them.

We have a revenue share business model designed to allow users to sign up with a simple text message, and we have approximately \$400 million cash to fund business operations and the first phase of production spacecraft.

Now with that, it is my pleasure to hand off to Tom.

Thomas Severson

Thank you, Scott.

First, I too, would like to welcome everyone to our second quarter business update, which is our first conference call as a public company.

On April 6, we closed our business combination with New Providence Acquisition Corp. and started trading on NASDAQ under the ticker ASTS. The transaction provided \$416.9 million in net proceeds, which will be used to fund the operations of the business and to construct our first phase production satellites.

As of June 30, 2021, we ended the quarter with \$402.6 million of cash on hand, and the company is currently debt free.

The proceeds from the transactions were derived from cash in the New Providence Trust account and also through the sale of a \$230 million pipe financing.

In addition to new investors, the pipe financing was supported by our pre-transaction investors, including Rakuten, Vodafone, American Tower and Cisneros. This transaction was extremely important to the company as it eliminated the funding risk associated with the delivery and proof of our space-based cellular technology and also provided capital for the first phase of our production satellites.

Now with the public currency, we are well positioned to raise the additional capital required to complete the SpaceMobile constellation of 168 satellites.

I'd now like to turn over to financial highlights for the second quarter and give some color on our ongoing operational initiatives and trends we expect to see as we look forward into the second half of 2021 and into 2022. Cash operating expenses, including engineering services, R&D and G&A, increased from \$11.5 million for the first quarter of 2021 to \$24.5 million for the second quarter of 2021, a sequential quarterly increase of \$13 million. This increase was primarily due to R&D expenses, which were \$9.1 million for the second quarter of '21 compared to \$300,000 for the first quarter of 2021.

During the second quarter, we aggressively engaged with our third-party technology partners and ramped up our efforts relating to long lead time engineering work items in order to meet our constellation timing goals. I would expect third-party R&D expenses to continue through the remainder of 2021 and 2022 as we seek to complete and optimize the electronic design of our production satellites.

In addition, Q2 G&A increased to \$9.2 million from \$5.5 million in the prior quarter as we incur expenses relating to becoming a public company, including D&O insurance, legal, corporate staff and other related expenses.

Engineering Services increased to \$6.3 million for the second quarter of 2021 compared to \$5.7 million for the first quarter of 2021.

We expect engineering-related expenses to continue to grow as we add additional engineering staff and also ramp up our team responsible for satellite assembly, integration and testing, which we refer to as AIT at our facility in Midland, Texas.

We are currently in the process of industrializing our AIT process in order to meet our full-scale production requirements.

In terms of our engineering and AIT employees and full-time consultants, total head count grew from 156 at the end of Q1 to 193 at the end of Q2.

We expect this to grow approximately to 300 by the end of 2022 as we ramp our AIT capabilities.

In terms of our CapEx, to date, we have invested \$51.7 million in the construction of the BW3 satellite, and we expect to incur an additional \$14 million to \$16 million to bring the project to completion. A significant portion of the total project cost of BW3 is nonrecurring development and also includes satellite componentry and watch costs.

Total investments in our property, plant and equipment were \$15.7 million through the end of the second quarter. And we're happy to report that Phase 1 of our AIT facility in Midland, Texas is substantially complete. And we are currently in the process of assembly integration and testing of the BlueWalker 3 satellite, which we plan to have ready to launch in March next year.

As we prepare to move into full-scale production, we will continue to expand our AIT capabilities in a manner that will support our production and launch timing goals.

Finally, as it relates to our CapEx spending, we are engaged in the procurement process for our first phase production satellites, and we expect these investments to begin to ramp up as we close 2021 through 2022 and through the first half of 2023. We still reaffirm our cost estimates to build and launch the first 20 satellites with each satellite in the \$13 million to \$15 million range. And for the constellation of 168 satellites, our average cost per satellite is currently expected to be in the \$10 million to \$11.5 million range.

As we move further into the procurement process and close our production satellite design, we remain confident with respect to the execution of our plan, the cost of our plan and our ability to deliver our technology.

And with that, operator, let's open the call for questions.

Operator

[Operator Instructions] For our first question, we have [Chris Crilty] from [Crilty Analytics].

Unknown Analyst

First question for Tom. Since I didn't hear you make any changes in the CapEx profile, I'm assuming there was no material cost increase from switching over from Soyuz to CapEx or to phase [indiscernible].

Thomas Severson

That's right, Chris. Nothing material. We obviously had to do some engineering changes, which we did.

And so in terms of the total cost for BlueWalker 3, you see we have 12 to 14 to go, and we're 75% complete.

Unknown Analyst

Great. And just around that actual event, are you still planning on doing a rideshare launch? And if you can remind us, is that going to be an equatorial launch or an inclined orbit? Does it matter for your testing purposes? And what's the availability if it's a rideshare for both of those types of orbit insertions?

Scott Wisniewski

Chris, I'll start.

We are not the primary payload, but we feel comfortable with the window that we've been provided and the number of launches that SpaceX plans to do that we're pretty protected, and that was one of the motivating factors for going with them as it will increase timing certainty.

So we feel good about that even though we're not the primary payload. And in terms of the orbit, I don't know, Abel, do you want to...

Abel Avellan

Yes, it's a 400-kilometer orbit, and it's an inclined orbit, very well representative of what we want to take with BlueWalker 3.

Unknown Analyst

And the 400-kilometer orbit, which is lower than the planned operational altitude, presumably that, that calculation was made with a smaller antenna size to simulate what it would be with a larger antenna from a higher altitude?

Abel Avellan

Yes. Well, basically, the difference between 400 and 700 doesn't change the capability to connect directly to the handset. Basically, what it change is the time that you have available for testing, both sides, BlueWalker 3 and BlueBird 1, being designed to connect directly to the handset broadband speeds. And that's -- we can achieve that, the 400 in a range of 400 to 700 kilometers of altitude.

Unknown Analyst

Great. And Abel, while I have you, I guess, congrats on the recent MOUs and regulatory approvals. I guess the elephant in the room is the FCC. Can you just kind of give us an update of where you stand in the process of your regulatory waiver and expectations on when we might see some progress milestones?

Abel Avellan

Yes. Well, just as a reminder, the -- we get to service in the U.S. later after the equatorial countries. The FCC actually approved our application and is subject to comments around November, and so we're expecting to hear from them about the next step after the commentary period in November. But our application is actually in process with the FCC.

Unknown Analyst

And the -- I know there were some issues around your intended altitude and the NASA A train. Can you give us an update on that situation?

Abel Avellan

Well, the -- actually, NASA officially communicated to the FCC that they will not oppose our application.

We have built a working relationship with them. We had agreed to share the position of our satellites with them and anticipate a long-term relationship with NASA with regards to the operation of our satellites.

So -- but that issue was completely resolved many, many months ago.

Unknown Analyst

Great. And global chip shortage, clearly you're not in production mode now. But as you look at your supply chain and suppliers, do you anticipate any issues, critical parts or components or chips that you're currently looking to source?

Abel Avellan

Yes.

For BlueWalker 3, we don't.

We have all parts on hand. We're actually in the final stage for integration and testing on BlueWalker 3. All the electronic parts actually we purchased approximately a year ago.

For BlueBird 1 and for the constellation, we had a plan where we are developing our own ASICs.

We also are procuring in advanced long lead items in preparation to the production of the BlueBird 1s, the production satellites. It's an issue that we are monitoring very closely. At this moment, we feel that we can manage it by basically procuring long lead items in advance.

Unknown Analyst

Great. And I guess a final question. The projected cost now on BlueWalker 3, substantially more than what you expect the production units to be. And understandably, a significant portion of that is probably NRE that I assume is applicable to the BlueBirds also. But beyond that, I mean when you look at the projected cost of BlueWalker 3 and compare it to production satellites, is the cost reduction driven primarily around volume? Or are there other elements that get you to your targeted price?

Abel Avellan

Yes. BlueWalker 3 is heavily, heavily loaded in NRE. Basically, some pre-metal satellite where we went through a development phase to get to the design that we have now.

We will know the cost of BlueWalker 3. And we had a very, very close estimation for Bluebird 1 simply because of the construction of BlueWalker 3.

There are some advantages for some part, in some cases, significant that has to do with volume. The transition from FPGAs to ASICs is one of them. Also, the solar panel that we're using for the production satellites are much more cost effective than the one that we're using for BlueWalker 3. And as I said at the beginning of this conference, I mean we're focusing very hard on industrializing the process to target the cost of BlueWalker 3 at the prices that we have. We had a lot of confidence on the developed material and the design basically as we are in the last stage with BlueWalker 3.

And one thing that all we want to remind people when they think about our satellites, our satellites are modular. They are built with identical parts that use as much as possible equipment or technology that is also used on the ground in order to lever consumer electronic pricing for components.

We are a fully vertically integrated design where we pretty much manufacture or design or buy in volume all the components and the electronics of our system.

So we have our own electronic system.

We have our own solar panel system. We had our own reaction wheels to be produced en masse in order to make the cost that we're anticipating for BlueBird 1.

Unknown Analyst

Actually, that brings up a separate question.

I think in the script, you mentioned a targeted production capacity of 6 satellites per month. And I guess the question given the size of the global constellation, is that production rate intended through sort of the first phase of equatorial and you would ramp production from there? Or do you consider that the full rate production that you'll target for the full time?

Abel Avellan

Yes, that is our production capacity in 2023.

We will continue to increase it. But before we run, we need to walk.

So we had an 85,000 square feet facility in Midland.

We will be expanding that to support the 6 satellites per month. That roughly would allow us provided that availability of launches is available, allowed us to launch 50 to 80 satellites a quarter with production capacity that we're designing. In order to achieve that, we are working in a fully modular system for the satellites. All satellites are pretty much identical. We follow manufacturing process closer to automotive rather than space in order to be able to produce this number of satellites in the time frame that we're setting ourselves to do, which is roughly allowing us to launch between 15 and 18 satellites every quarter.

Operator

For our next question, we have Bryan Kraft from Deutsche Bank.

Bryan Kraft

Abel, as you know, there is some skepticism out there among some in the satellite industry regarding the viability of your satellite design, namely around the size of the array. Can you just help us understand why those skeptics are wrong and the confidence you have at this point in the efficacy of the design and the engineering, including an assessment, if you don't mind, of where maybe you're still kind of figuring it out versus what you think you already have figured out at this point?

Abel Avellan

Yes. I mean the satellite industry, in general, have been a very conservative industry, pretty much doing the same for over decades. Again recently, a company like ourselves, SpaceX and others are just starting to change the model on how to build hardware for space.

I will say, our design is completely different than any other previous design of spacecrafts before. That's the reason why we have around 1,200 patents and patent claims in order to support our design.

So thermally, mechanically is -- in term of weight, the ability to produce enough power and gain to connect directly to handsets, it is a new design compared to what the industry has been doing.

What we can say, we have tested the viability to connect directly to a handset with our first test satellites. That was the whole purpose of that. That satellite is something that we have reviewed extensively with our wireless partners, Vodafone, Rakuten, American Tower.

Then BlueWalker 3 will be roughly 683 square feet phase array. That is part of what makes it tricky to connect directly to a handset. It's already one of the largest -- it will be one of the largest phase array to be deployed.

We have spent over 1.5 years testing that deployment on the ground, so we've very confident that we will deploy and the support of that technology.

So at this point, we're very confident in the viability and the feasibility of the technology, and that is basically a novel approach to build satellite module really in order to be able to produce enough power and gain to connect on a broadband speed directly to handsets. And the reason why nobody has done that before, somebody needed to break the code. We did it.

We are basically closing the development phase with the launch of BlueWalker 3 and moving -- starting to move into the phase of industrialization, which we've basically been able to produce these satellites. Even though they are multi-ton, they are large. We produce them fast at the rate of 6 per month.

Bryan Kraft

If I could ask one follow-up. Will there be any test launches of BlueBird 1 to just sort of test the whole design in a space environment to see that it unfolds correctly and you can deploy it into orbit without any issues before you launch many satellites at once in case there are any modifications that need to be made after the first one? Or will you be starting -- or will you be going right into commercial launch where you're launching multiple commercial deployments in one launch? I hope that came across okay, but just trying to understand how much risk you're kind of putting in the first tranche.

Abel Avellan

So no, that's a great question.

So our plan is, well, obviously, launch BlueWalker 3 in March. Then there is a way for us to launch up to 18 satellites in a single launcher, or 4 in a smaller launcher with the same vehicle.

We will not be doing that.

So we will launch BlueWalker 3. By the end of 2022, our plan is to launch a handful of BlueBird 1s for which we're purchasing all the long lead items and parts that we would require to do that.

And then pending launch availability and other things that we need to line up will be to launch 15 to 18 in Q1, Q2 2023.

So we will not go with the whole -- with the capability that we anticipate for launches to take on our satellites, which is up to 18, at the first launch.

So BlueWalker 3, one satellite, then a few in 2022. And then at that point, we hope to be able to launch between 15 and 18 per launch.

Operator

We don't have any further questions at this time, and that concludes today's conference call. Thank you all for participating.

You may now disconnect.