

AST SpaceMobile (ASTS) / 17 May 22 / 2022 Q1 Earnings call transcript

Company Profile

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Scott Wisniewski	Chief Strategy Officer
Abel Avellan	Chairman and Chief Executive Officer
Sean Wallace	Chief Financial Officer
Bryan Kraft	Deutsche Bank
Chris Quilty	Quilty Analytics
Andres Coello	Scotiabank
Landon Park	Morgan Stanley
Griffin Boss	B. Riley Securities

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Operator

Good day and thank you for standing by. Welcome to the AST SpaceMobile First Quarter 2022 Business Update Call. Please be advised that today's conference is being recorded. I would now like to hand the conference over to your speaker 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 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 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 31, 2021 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 maybe discussed on this call. Also, after our initial remarks, we will be starting our Q&A section with questions submitted in advance by our shareholders. With that, I would like to introduce Chairman and CEO, Abel Avellan, and our new Chief Financial Officer, Sean Wallace to the call as well. Abel, over to you.

Abel Avellan

Thank you, Scott.

For those of you who may be new to our company, I want to take a few minutes to explain our mission on what is actually what we are doing. AST SpaceMobile is building the first and only global cellular broadband network in the space to operate directly with standard modifying mobile devices based on our extensive IP and patent portfolio.

Our engineers and space scientists are on a mission to eliminate the connectivity gaps faced by today 5 billion mobile subscribers and finally bring broadband to the billions who remain unconnected. We believe this to be a very large opportunity and allowed us to participate in the 1 trillion annual wireless service market.

While it has been only a short 6 weeks since our last public update, we have made strong progress, and I would like to take you through that now.

Turning to Slide 4, technology and industrialization update.

We're on target for our planned BlueWalker 3 summer launch. In preparation for this milestone, we have completed over 700 BlueWalker 3 tests to the date. Once in orbit, we're expected to test cellular broadband globally with participating cellular operators in the U.S. Japan, Europe, Africa, South America and Asia. This effort will be supported by ground control centers in Maryland, Colorado and Australia that have been ready to support BlueWalker 3 post-launch operations.

We are also putting in space ground stations and approvals to support the planned BlueWalker 3 summer launch, including the FCC experimental license, which was recently granted by the FCC.

We are on target for the completion during 2022 of our extension production facility, Site 2 in Texas to support our target of up to 6 satellites per month. We had increased to more than 2,300 patent and patent pending claims supporting a strong and expanding competitive advantage.

Turning to Slide 5, business update.

We have successfully added a new MOU with Globe Telecom, an operator in Philippines with 86.8 million subscribers.

We have now more than 1.8 billion subscribers represented by mobile network operators with whom we have agreements and MOUs. We recently received an FCC experimental license for BlueWalker 3, space-to-ground testing in the United States using 3GPP low-band cellular spectrum and Q/V-band frequencies. And also recently, we had added a \$75 million committed equity facility with B. Riley that provides AST with the right, but not the obligation to raise equity capital over the next 24 months.

Before I hand it off, I wanted to thank our retiring CFO, Tom Severson, for all his time and for building AST SpaceMobile over the last 5 years.

We have worked over the last 6 months to find the best partner for the next phase of growth to the company. And I am now happy to introduce Sean Wallace, our incoming Chief Financial Officer. He brings to the team deep telecom, financial and capital market experience to be added to the team to support our future growth. With that, let me transfer to Sean now.

Sean Wallace

Thanks, Abel.

Sorry about that. Good afternoon, everyone and I wanted to share my excitement about joining the AST team.

As an experienced telecom CFO and banker, the work I did to understand the AST story continue to lead me to conclude that this project, given its global ambitions has the potential of making a large and profound impact on the world's connectivity ecosystem by solving what is probably the most critical problem faced in the mobile industry today, providing global cellular broadband coverage directly to standard unmodified mobile phones. In support of this ambitious plan, I met a strong and innovative management team that has attracted a deep bench of talent. I was comforted by the significant strategic sponsorship of leading telecom companies such as Vodafone, American Tower and Rakuten. I was impressed by how quickly this team has developed relationships with leading MNOs across the globe that have more than 1.8 billion subscribers in total. And as we have discussed today on this call, I have to congratulate the team on its continued progress towards meeting important milestones, which indicates a strong execution capability. I want to provide an update on a series of activities that the company has been focused on and highlight some of the liquidity and financial metrics for the first quarter.

As we have stated before, a key innovation proposed by AST is the development of an industrialized procurement and manufacturing process for our planned satellite fleet. Historically, satellites have been manufactured one at a time in job shop facilities. AST is developing a state-of-the-art assembly line process designed to enable AST to scale the procurement of parts, lower assembly costs and materially speed up the volume of production. These efforts are expected to enable AST to lower the cost of its satellites and enable the company to meet its goal of ultimately building up to 6 satellites per month.

As part of this goal, I would like to highlight some of the activities the team has accomplished during the first quarter.

First, AST has made progress in reconfiguring its new Texas AIT facility designed to house the satellite assembly and test line. The company has retrofitted and remodeled the facility, built a clean room for critical assembly processes and the facility is now ready to house and support inventory from manufacturing as well as the assembly and testing line.

Our efforts to integrate an ERP system to support our inventory management and manufacturing process continues at pace, and we believe that the entire system will go live during the second half of this year.

Just as importantly, we continue to hire experienced leadership and make human capital investments across all functions and offices.

Let me discuss some of the highlights regarding our liquidity and expenditures. We ended the first quarter with \$255.1 million in cash. We believe this cash is sufficient to support our cash expenditures for more than the next 12 months.

As you saw from our recent announcement regarding our B. Riley committed equity facility, we continue to evaluate a variety of capital raising efforts to extend the runway of our liquidity.

We are focused on exploring a wide range of options and remain confident that we have a broad set of funding opportunities.

For the first quarter, we had GAAP operating expenses of \$32.7 million versus \$31.3 million in the fourth quarter of 2021, including non-cash operating expenses of \$3.4 million and \$2.7 million, respectively.

We expect to continue to expand that level for the next several quarters. The \$1.4 million increase in costs during the first quarter was related to increased employee costs and other research and development and engineering expenses as we ramp up the development and infrastructure investments to support the BlueBird 1 program.

For the first quarter, we made capital expenditures of \$21.6 million, which includes a payment to SpaceX for BlueWalker 3 technical adjustments in connection with the previously disclosed SpaceX multi-launch services agreement.

As mentioned earlier, we have substantially completed assembly and testing for BlueWalker 3 and are turning our investments towards the production of our BlueBird satellites. And with that, I will turn it back to Scott.

Scott Wisniewski

Thanks, Sean.

Before we go to the queue of analyst questions, I would 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

Thank you. Brian from Toronto asked when will you know definitively that the technology actually works from space?

Abel Avellan

Thank you, Brian, for the question. After we launched, we expect to within a week – within an hour or two to know we are successful launch and put into the orbit that we are expecting. After that, we will wait for the right timing to basically deploy the satellite, which is basically opened the satellite into its final configuration. That would be within a week or two after the launch. That's obviously a major phase and it's something that we will know within a week or two of the launch. And after that, we go through a 6-month process of testing with the operators.

We have selected locations around the globe in the U.S., Europe, Africa, South America and Asia, including Japan.

We will be doing testing with the selected telecom partners.

Operator

Thank you. Christopher from Florida asked if BW3 fails, will BB1 serve as the next test satellite to continue optimizing the new system, if not, then how long would you expect it to take to build and launch another test satellite?

Abel Avellan

Thank you, Chris, for the question. Well, first of all, we have built redundancy into BlueWalker 3, satellite across many of these systems, and we have conducted extensive testing to position the spacecraft to success in orbit.

Our BlueBird program had been advancing alongside the build and test of BlueWalker 3. We anticipate that our next launch after BlueWalker 3 will be a BlueBird satellite, incorporating the many lessons and advancements that we learnt during the build of BlueWalker 3.

Our plan is that our production satellite phase will continue to advance with the launch of BlueBird satellites are currently planned even in the event of any complication with BlueWalker 3, which we don't anticipate, but the next satellite will be a BlueWalker 3 followed by a BB1.

Operator

Thank you. Rick from the Netherlands asked, what is the desired situation to exercise the financing option? Is there a minimum stock price to exercise the deal? Can you elaborate more about the deals terms?

Sean Wallace

Abel, why don't I take this?

Abel Avellan

Yes, go ahead.

Sean Wallace

Thanks. The agreement with B. Riley provides us with access of up to \$75 million of additional liquidity through our committed equity facility. It's accessible over 24 months, it gives us the right, but not the obligation to sell and issue shares of our Class A common stock to B. Riley at a 3% discount to what's known as the volume weighted average trading price for the performance measurement period. This is a tried and through an extremely efficient way of raising incremental capital. And it's really a function with our line of maintaining regular and diverse access to various capital markets, while preserving our existing cash for building our BlueBird production satellites. It's highly flexible, but also as I said earlier, we will continue to look at a variety of sources of capital whether it's credit or equity from governmental financial institutions, commercial partners as well as the equity debt and hybrid capital markets to continue to fund our plans going into the future.

Operator

Thank you. Terry from Georgia asked, do you have any plans to potentially transport multiple BlueBird satellites on a single launch?

Abel Avellan

Yes, we have carefully planned our launch strategy together with the development of our satellites.

For us, it's critical to be able to launch multiple satellites on a single launch.

We have done – saw based on multiple launch vehicles in order to be launch agnostic, which allowed us to have access to multiple providers in order to give us flexibility. We ramp up production.

We expect that we will be using large launch vehicles that can support multiple BlueBird satellites.

We are very encouraged by the many large launch vehicles that are coming into service from SpaceX and other launch providers.

Operator

Thank you. Steve from Arizona asked supply chain problems have been creating havoc since the pandemic began. How resilient is your supply chain? How many critical components have only a single vendor available? Have you been stockpiling these components?

Abel Avellan

Yes. Well, supply chain is obviously something very important.

We are actively engaged with third-party vendors to secure our supply components and materials for BlueWalker satellites. We had agreements for all the major subsystems for the constellations.

We have and will continue to invest in all the long lead items that we require for the system.

We have also mitigated the recent supply chain by using FPGAs and systems that are configurable and available now.

We will – we feel that we can continue to execute on our plan despite any potential supply chain issues.

Operator

Thank you. Steve from Arizona asked. Are neon gas shortages caused by the Russian invasion of the Ukraine, causing any concerns about semiconductor availability needed for the BlueBird builds?

Abel Avellan

Yes. I have said before, we're basing our satellites based on FPGA, which are basically configurable and flexible.

So we are not exposed to potential market shortages of semiconductors. Delay the BlueBird ones, which we're looking our own chips will be based on using TSMC technology for our ASICs.

So the first BlueBird ones will be based on FPGA, the second will be based on our own ASIC, which is part of our own development.

Scott Wisniewski

Great. 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

[Operator Instructions] Our first question comes from Bryan Kraft with Deutsche Bank.

You may proceed.

Bryan Kraft

Hi, good afternoon. I had a few. I guess, first, in light of the deal with B. Riley. Can you talk about the relative attractiveness of issuing equity versus the other capital raising alternatives you have? And how you're thinking about the timing for raising capital given the rising rate environment? And then, I guess, a little bit separately, if you could share any additional specificity around timing for the BlueWalker 3 launch? I know you said this summer. I was wondering if you could narrow that at all. And then finally, what does the timing look like at this point for the BlueBird commercial satellite launches? Thank you.

Scott Wisniewski

Thanks, Bryan. I'll take that.

You want to take that?

Abel Avellan

Go ahead, Scott.

Scott Wisniewski

Bryan, I guess I'll take the first question on the use of equity and the use of equity versus other capital.

I think for us, as we said, we have a diverse set of available sources of capital. And I think at this stage, we're eager to put a few of those in place small pieces, equity. And as Sean alluded to, other sources of capital, too.

So for us, this is a flexible tool. It's something we can use at our election, and it's something that we want to use to make sure we can preserve our capital, \$255 million at quarter's end for BlueBird's.

So I think this is a good thing to have in our back pocket, and we'll use it as we see fit and other small pieces of capital this year are also available to us.

The second question, I think, was on BlueWalker 3 timing specificity. I'll give a little bit of clarity on that. I mean the way to think about our timing, Bryan, is the satellite needs to leave for the launch pad, call it, up to 4 weeks before we launch.

You can go a little tighter, but that's how we think about our internal planning. And as we work towards that, the satellite is going through final testing and we felt comfortable reaffirming our summer timeline.

We're not waiting on any parts or subsystems at this point. And as we've talked about before, we have contractual commitments with SpaceX on timing within a range, but final timing is always subject to various steps and considerations and changes can occur.

So for us, the process of managing that timeline is a very detailed, very technical launch checklist and we are doing that as highest priority to the company right now.

So for us, we look forward to updating everybody in due course, but we reaffirm the summer timeline. And then the last question was on BlueBird timing. I'll jump in there. No change from our last call.

We're very focused on building and investing in our infrastructure. Abel mentioned, Site 2, and we're working towards the goal of getting those two facilities and our supply chain to deliver up to six satellites a month, and that's a goal that we have to achieve for 2023.

So for us, we're raising towards that goal. And our intent will be to ramp up to that level during 2023. And thereafter, 2024 is a very important year to scale the constellation and achieve global coverage.

Bryan Kraft

Thanks, Scott. When would we expect the first BlueBirds to be launched actually?

Scott Wisniewski

So we're starting construction of those this year on top of the investment that we're making now, and we haven't announced yet in 2023 when we plan to launch our first one.

Bryan Kraft

Okay. Thanks very much.

Operator

Thank you.

Our next question comes from Chris Quilty with Quilty Analytics.

You may proceed.

Chris Quilty

Thanks, guys.

Just wanted to clarify, I did not ask the Christopher from Florida question before.

First question, as you roll out the testing on the BlueBird satellite, what do you have to invest in terms of CapEx? And what is the staging to build out the sort of gateway infrastructure for testing?

Abel Avellan

Chris, are you referring to gateways for BlueWalker 3 or gateway for the constellation?

Chris Quilty

Just for BlueWalker.

Abel Avellan

Okay.

So for BlueWalker, basically, we have three ground control centers, Maryland, Colorado and Australia. And then we have approximately 20 gateway stations that are pretty much getting online as we speak to basically get access to the spacecraft for telemetry control reasons. And then we have – as you know, we recently got the SEC approval for our testing.

So we have gateways here in Midland and in Hawaii for access in the United States, our Q/V gateways. And also, we have been assigned for spectrum for do testing directly to the cell phones through the experimental license that we just got.

So all of that is on time for our planned launch this summer. And it will be designed to basically take broadband capability directly to the handsets using our next satellite launch.

Chris Quilty

Got it. And can you remind us, as you move to the BlueBirds, who handles that ground station CapEx? Is that fronted by your partners? Or is AST responsible for that spending?

Abel Avellan

Yes, we had an agreement with American Tower for having to carry neutral locations where we actually place the gateways. Typically, the gateways CapEx, the NOVs, the court and interconnection of all of that, it is actually part of the agreement to be fulfilled by the operator. We do install the actual gateways the antennas typically in a carrier-neutral location either owned by American Tower or owned by the operator itself.

Chris Quilty

Great. And can you remind us how do you eventually migrate once you go through the experimental testing on both the gateway feeder links and obviously, the user links to a fully operational FCC, ITU approved usage of the spectrum?

Abel Avellan

Yes. Well, we have our filings on the ITU and then, as you know, every country provide their own approvals for the use of our spectrum or the use of the seller-operator spectrum.

So in the case of United States, we have the gateways that will be co-located in American Tower locations. Those gateways, they are subject to their own license. They are using satellite spectrum, V-band, Q/V-band in order to connect from the gateways up to the satellite. And then we will work with our partner – operator – with our partner cellular operator to use their spectrum in the area where they don't have the respect to deploy. That's the basic setup. That is what we have been doing very actively in many countries, starting with the country that will be first in operations. And that seems to be a process – a regulatory process that is working for us.

We're very encouraged by the experimental license we got from the FCC. But we continue country by country, getting these grants for operations of our system.

Chris Quilty

And specific to the Q/V-band gateway feeder links, that's a relatively new deployment, I think EchoStar is also using that on their Jupiter 3. What have you done in terms of testing, either ground testing or optimally the satellite testing to ensure the strength of those feeder links?

Abel Avellan

Yes.

Just to put it in context, I mean, these feeder links are for the gateways.

You get – in the United States, you need two, three for redundancy, to add redundancy. And the coverage area of these links are very, very small within a few kilometers.

So it's – they are basically designed where you place your gateways and then you get universal coverage through the cellular spectrum. V-band is very attractive because of the amount of capacity that has allowed us to group a significant amount of cellular spectrum into the gateways where we interconnect to the cellular operators. And we have done – we have actually installations of these type of gateways already.

We have the equipment that we have procured to basically access this spectrum. And we will continue testing them with the launch of BlueWalker 3 and with the experimental license that we got from the FCC.

Chris Quilty

Thank you. And just if I can, one final question due to the Ukraine war, there's been a bit of a shortage of access on Antonov aircraft, which are typically moved to – used to transport satellites. Were you planning on using air transport? Or given your location in Texas where you're already planning on using ground transport for the satellites?

Abel Avellan

No, we're planning to use ground transportation. The container for BlueWalker 3 is actually – already built.

We will be talking from Midland to Cape Canaveral. It will be 1 day, 1.5 day trip.

We also are in contact with the city also to bring train rails into the facility, we plan to connect it to the train system that we get towards our six satellites per month capability. But at the beginning, our baseline launch are based on U.S. launches, and we plan to use ground transportation for that.

Chris Quilty

Great. Thank you.

Operator

Thank you.

Our next question comes from Andres Coello with Scotiabank.

You may proceed with your question.

Andres Coello

Yes. Thank you very much. I'm wondering if you could comment on how your MOUs with wireless carriers all over the world, will actually translate into a business opportunity once all the testing is over, if everything goes well. How did you translate the MOUs, for example, in Latin America with Millicom, Telefónica and other players? How do you translate them into a business opportunity? Or put it differently, if those MOUs imply an obligation by the wireless carrier to actually start working with you.

Just any comment around the MOUs. Thanks.

Abel Avellan

Yes.

Okay. Well, the terms of the MOUs barrier partner by partner, participating MNO – by participating MNO. By and large, they're basically based on a revenue share, where we share the revenue that is being generated by our service inside the operator's network.

So the operator retain the retail capability, they market and they sell the service. The advertising service is through sending a text message to the user when the user gets out of coverage or by other means in the retail capability. They provide the spectrum. We provide the network. And based on that, there is a split on the revenue that is generated by that.

So when we count number of subs that we can access through the MOUs. When we say we have access to around 1.8 billion subscribers, what we are referring to is that the operators which we have agreements or MOUs, they do have 1.8 billion subscribers, and that – those subscribers become accessible to us through this revenue share agreement. Then there is a retail pricing that's agreed between us, between the operators ourselves, that it depends on what the kind of service is. If it's – whatever you go plan, whatever you're located, you get a service through SpaceMobile, that service get priced on a retail basis based on the contrary, and other factors. And then you have also the services that are target to serve people that live and work in places where there is no connectivity all the time.

So the fundamental is 90% of the air surface do not have several broadband. Within that 90% of the air surface, you have half of the world population that do not have cellular broadband and you have three-quarter of 1 billion people approximately without noticing. That's how we capitalize these agreements with our MNO through our technology.

Andres Coello

Thank you. And – but just to clarify, if the testing is successful, the MOUs create an obligation by the carrier to start using your services? Or if your understanding is just optional. I mean once you deliver the positive testings, and once you have your constellation ready, is there a clear commitment towards working with you or can they still pull out?

Scott Wisniewski

Sure. I will take this one.

So, our commitments and our agreements and MOUs vary.

Some of them are binding agreements, but some of them are not. The purpose of these agreements, of course, is to align interests.

We have been signing these since 2018 and to ensure that they participate in the development of the technology and regulatory approvals and also thinking through the business side as Abel took us through. At this point, though, as we get closer to launching service in each country, there will be definitive commercial agreements put in place typical for the telecom industry. Those are not ones that you saw in years in advance. They don't generate good terms for the seller or the capacity in that case.

So, we have some agreements that are binding and the others are MOUs. And those are agreements that we want to make into more definitive commercial agreements with clear pricing levels and clear SLAs among other terms.

So, that is a next step before we launch commercial service in any given country.

Andres Coello

Thank you very much. Very clear.

Operator

Thank you.

Our next question comes from Landon Park with Morgan Stanley.

You may proceed.

Landon Park

Hi everyone. Thanks for taking the questions. I was wondering if we could start out just in terms of the opportunities that you guys see ahead. How are you guys thinking about the non-consumer market in terms of the opportunity there, whether it's on the government military side or the enterprise side what type of role do you think you can play in those markets? And do you also expect to be eligible to potentially receive any funding from the B program here in the U.S.?

Abel Avellan

Okay. Well, we obviously see that a significant number of other opportunities besides the consumer opportunity.

However, we believe that the largest opportunity is the 5 billion people that move in connectivity every day and the 0.75 billion people that live and work in places where there is nothing. But having said that, there is IoT, defense and other type of opportunities that are going to be available to us, obviously, providing universal connectivity in countries, in whole continents, in areas where there is not any other means of connectivity directly to handsets, a very, very large opportunity that goes beyond the consumer opportunity. To your question, yes, we plan to participate in the progress from the FCC, as it relates to extending 5e universally in the United States. We do believe that, that's important for the country. There is a lot of political will to make sure that every citizen get connectivity, regardless where they live and work, both on a fixed type of connections and more into what we do, which is on a wireless cellular connection.

So, yes, we do have plan to connect. All our models are primarily based on the retail, consumer opportunity, but of course, there is many other verticals that we will be able to tap as we develop our network.

Landon Park

Just a follow-up on that. Are there any particular use cases that would stand out to you as particularly attractive within the government and enterprise markets? And is there any – do you think that some of those markets would offer higher yield on your capacity against the consumer market, or how are you thinking about that?

Scott Wisniewski

Yes. It's Scott here.

So, as Abel said, it's a little unique for a satellite company to be going after this new market, right, the wireless market. And it's a very large market relative to legacy satellite opportunities even if some of those opportunities are nice.

So, we really like the mass market opportunity. It's one that our MNO partners are really key towards. But when many of our MNO partners are also very good at those other verticals you are talking about. They are developing IoT government, enterprise depending on the company and depending on the region.

So, there are opportunities that are really strong.

We have intentionally not highlighted which ones might be best because we want to focus on the mass market opportunity, but the interest is strong there. We get inbounds on resiliency, obviously, emergency backup. And then, of course, the fact that our network functions without a terminal remains a real cornerstone of a lot of the interest and non-interest we get even outside of the mass market opportunity.

Landon Park

Great. Thanks for that color.

Moving on to just some follow-ups on the questions regarding the feeder links. How many feeder links will each satellite have? And what is the channel sort of size in terms of gigahertz for those feeder lines?

Abel Avellan

Yes.

We have, per satellite, up to four feeder links. Each feeder link is around 10 gigahertz per polarization.

We have two polarizations on – per antenna, on the spacecraft and then they down – connect down to the gateways in country. Typically, depending on the size of the country, we have between two or three gateways or locations where we bring down those feeder links into the core network of the operators.

Landon Park

Okay.

So, it's up to four links of 10 gigahertz and two polarizations. What type of modulation level do you think you can do in your feeder links?

Abel Avellan

Well, the way that the system is designed is basically to be a transparent being former, so basically the same modulations that we have coming from the phone app to the spacecraft and then translated into frequency to bring it down to the gateway.

So, are the classical modulation that you will see on the downlink from the spacecraft to the phone and from the phone to the spacecraft.

So, there is actually – it's a bent pipe, it's the same modulation that you get on the UE.

Landon Park

Yes. I am just wondering what – so the feeder links will have the same – so what is that modulation or how – and what's the – you are expecting?

Abel Avellan

Yes. Right.

So, it depends on many factors, but it's somewhere in the downlink between 3 bits per hertz to 6 bits per hertz and between 1.5 bits per hertz and 2 bits per hertz on the uplink.

Landon Park

Great. That's – the uplink being the feeder link, you are saying?

Abel Avellan

The uplink is the – is from the phone into the spacecraft.

Landon Park

Okay. Great. Thank you. And on the BlueBird program, I can't – I don't know if you reiterated the expense guidance up top. But given the expense issues we have seen in other parts of the industry.

So, what gives you the confidence that you are not going to see some amount of inflation come through over time? And do you think that there is any reasonable risk of that occurring over the next 12 months, 24 months?

Abel Avellan

Well, first of all, I mean for our technology, we are highly vertically integrated.

We have control of mostly every component that is in the spacecraft from reaction wheels, torques, flight computers, the micron in cells, which is a self-contained system, solar panels.

So, our – we are as vertically integrated as we think makes sense in order to keep costs and keep control of the cost.

Our costs at this point is very well known, not only with the build of BlueWalker 3, but this is a substantial advancement that we have and the agreement that we had in place for the provisioning of parts for the constellation.

So, on the last call, we reiterate our cost bases for BlueWalker – for the BlueBird satellites.

So we see no change in those at this point.

Landon Park

So, do you see that – is there any significant risk in your mind to the upside over the next year, or you feel quite confident in those expense numbers?

Abel Avellan

We feel quite confident given where we are on the procurement phase of those parts.

Landon Park

Great. And Sean, just one last question for you, can you just go more into what attracted you to the company and perhaps any sort of diligence that you did on your side to get comfortable with the opportunity that the company has discussed?

Sean Wallace

I think I gave you an overview. I mean it's tough to do this over a call, but it's I had – I have extensive contacts in the industry as a banker for quite a long time.

So, I did a lot of industry checks, was able to talk with industry experts who had either been in the industry or analyze the industry. I spent time with a number of wireless operators who knew about the project. And it was a variety of market, technology, regulatory and getting to know the team and understanding it. And as I see it in my career, I saw almost 10 or 15 different projects to try to do something similar, but always had a challenge of a very, very expensive and customer equipment to take the downlink from the satellite. And this is an incredibly exciting opportunity to do something where you will be able to go after the entire cellular market and continue to help the 3 billion people around the world who don't have that gap.

So, a lot of work and discussions with industry people, regulatory, finance, etcetera, and made me very, very comfortable. It's exciting opportunity.

Landon Park

Great. Thanks very much for that color. Thanks for taking the questions.

Operator

[Operator Instructions] Our next question comes from Griffin Boss with B. Riley Securities. Sir, you may proceed.

Griffin Boss

Hey. Thanks for taking my question.

So, staying in on competition, Lynk is really the only player out there at the moment at least that I know of. And I understand it's a very large market, but are you seeing them in the market at all, or have they come up in your conversations with MNOs? Just any color you could provide on that front? And then similarly, on the MNO front, I believe you have said your partnership with Vodafone includes 5-year exclusivity. I was just curious, could you remind me, does that exclusivity timeline begin when commercial service starts?

Scott Wisniewski

Sure. Hi Griffin, I will take that.

So, second one first. With Vodafone, you are correct, the 5-year mutual exclusivity in their 24 different markets around the world that starts at service initiation.

So, it was signed years ago, but that 5-year period starts with service initiation. And in terms of other players that we run into, we don't really run into other players at this time.

I think we have had success building the relationships with the mobile network operators from the early stages of the company. It's an opportunity, like Sean highlighted, that is really differentiated and the mobile network operators who have – many of them have bad experiences with satellites historically saw this as solving a lot of the problems in the past.

And so it's one that's always resonated well, and you can see that in the success we have had adding more and more mobile network operators over the last few months, some of whom have over 100 or multiple hundreds of subscribers under their belt today.

So, I think our opportunity resonates very well.

I think as we approach our summer launch and plan for our constellation next year and the year after, the volume with the mobile network operators is growing, and that's really exciting to see. But we don't – when we are working with the mobile network operators and thinking about the opportunity, it's not really one that they are benchmarking against anyone else at this time.

Griffin Boss

Got it. Thanks Scott. That's really helpful.

And sort of sticking to the MNOs and jumping back a little bit in time here, but I know Verizon and T-Mobile had both filed petitions back at the end of 2020, I think November 2020 it was. Do – did the FCC to deny the AST service. And to the extent you guys can speak about ongoing conversations or anything like that, have you had any progress with either of those two MNOs since then. I mean, as you have – I mean obviously, you guys have come to numerous agreements with other MNOs since then. I didn't know if that more so validated the service to them and if you guys had sort of struck up conversations again at all?

Scott Wisniewski

Sure.

So, I think the filings around the FCC docket were not unexpected more than a year ago now where folks typically lay out their positions relative to where they sit in the market. We think the U.S. market supports multiple providers for us for sure, and that's something that we want to approach. But we have not announced any conversations with any of those U.S. providers. And it's – but I think our solution fits really well. And the U.S. market, in particular, is very interesting for our solution given the nature of the country and the distribution of coverage today.

So, I think the big three will certainly have a need for ourselves.

Griffin Boss

Got it.

Okay. That's great. Thanks a lot. And then maybe just one more quick one for me. Sean mentioned earlier that you were substantially completed with the BW3 investment. And I know on the last business update call, you said we should assume a little more than \$80 million of overall investment in that.

So, I just wanted to make sure I understood correctly. When you say you are substantially completed with that investment, does that mean as of right now or at the end of Q1? I am just trying to get a better sense of whether we should assume any additional investments for BW3 in Q2 at all?

Scott Wisniewski

That was referring to as of today.

Griffin Boss

Understood.

Okay. Thanks a lot guys.

Operator

Thank you. At this time, I am showing no further questions. I would now like to turn the call back over to management for closing remarks.

Scott Wisniewski

Great. Thank you, operator.

Our company is building a space-based cellular broadband network designed for use of the phone in your pocket today. I want to thank everyone for joining both the shareholders and the research analysts for their questions. And I hope everyone has a great rest of the week.

Operator

Thank you. This concludes today's conference call. Thank you for participating.

You may now disconnect.