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Mike Bishop

PRESENTATION

Mike Bishop

All right. I think we're ready to begin. Hello, everyone, and welcome to Atomera's First Quarter Fiscal Year 2022 Update Call. I'd like to remind everyone that this call and webinar are being recorded and a replay will be available on Atomera's IR website for 1 year. I'm Mike Bishop with the company's Investor Relations.

As in prior quarters, we're using Zoom, and we'll follow a similar format with participants in a listen-only mode. We'll open the call with prepared remarks from Scott Bibaud, Atomera's President and CEO; and Frank Laurencio, Atomera's CFO. Then we will open the call to questions.

If you're joining by telephone, you may follow a slide presentation to accompany our remarks on the Events & Presentations section of our Investor Relations page on our website.

Before we begin, I would like to remind everyone that during today's call we will make forward looking statements. These forward looking statements, whether in prepared remarks or during the Q&A session, are subject to inherent risks and uncertainties. These risks and uncertainties are detailed in the Risk Factors section of our filings with the Securities and Exchange Commission, specifically in the company's annual report on Form 10-k filed with the SEC on February 12 -- February -- excuse me, February 15, 2022. Except as otherwise required by federal securities laws, Atomera disclaims any obligation to update or make revisions to such forward looking statements contained herein or elsewhere to reflect changes in expectations with regard to those events, conditions and circumstances.

Also, please note that during this call, we'll be discussing non-GAAP financial measures as defined by SEC regulation G. Reconciliations of these non-GAAP financial measures to the most directly comparable GAAP measures are included in today's press release, which is posted on our website.

Now, I'd like to turn the call over to our President and CEO, Scott Bibaud. Go ahead, Scott.

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Good afternoon, and welcome to Atomera's first quarter 2022 update call. I'm sure you've noticed the momentum that's been building over the course of this year, and I hope to share some details of that with you today. And after providing some insight into latest industry trends and how they affect us, I'll turn the call over to Frank to briefly review the numbers and outlook.

As you recall, we entered into a joint development agreement in January of last year with a large market-leading semiconductor provider. The goal of the agreement was to install MST capability in their fab to work with their R&D team to validate MST's performance benefits while simultaneously proving that it could meet their manufacture ability requirements.

This opportunity arose because one of this customer's business units had found MST's capabilities compelling and subsequently referred us to their R&D arm, whose job it is to vet incoming technologies. This customer invested a lot, including production tool resources, engineering, time and money into the initiative. And working together, we were able to install the MST technology in there fab.

Two weeks ago, we were proud to announce that we had successfully met or exceeded all of the requirements of the JDA, resulting in 2 important outcomes. One is, obviously, the milestone payment from the customer, which are recognized as revenue in the first quarter. The more important step is the ability to work with the customer's business units to eventual production.

As you know, Atomera's #1 goal is to ship MST-based products, resulting in royalty payments. Successful outcome to this JDA was necessary so we can start moving those business units forward on MST integration and towards commercial royalty-bearing production. Comparing the phases in this JDA with our standard business model is not appropriate as BUs will have to go into integration before moving into qualification and later into production.

We will continue to provide updates as best we can, but as our followers know, there's a high degree of confidentiality demanded in this industry and this customer is especially sensitive. Further, as everything in this JDA has taken a bit longer than our initial expectations, we're not guiding to a time frame on these next steps. However, since they completed the time consuming EPI installation process and will not have access -- I mean will not have to send wafers to Atomera for MST deposition, future integration process cycles should be shortened.

An hour ago, Atomera announced that we had entered into our second JDA, this time with a large semiconductor foundry, who have been working with us in Phase 3 for a number of quarters. After extensively reviewing our technology, our TCAD simulations, MST-enabled wafers and the impact MST can have on their designs, this customer decided to enter into a joint development agreement with Atomera, purpose of which is to define exactly what steps will be taken with high priority and with a full set of resources to take MST-based products into production if the results of our latest experiments meet their expectations.

In our business, we expect each engagement to differ and therefore each JDA to have unique properties. So I'd like to note that this JDA is different from our first in some important ways. First, it's not being administered by a central R&D group but by one specific technology area. So we believe this customer has the ability to move faster than our prior JDA partner on a first product.

Second, this contract was structured to smooth the path towards productization after we pass the next milestone. So there is no revenue associated with signing. The customer has committed to prioritize our wafers and dedicated team who can help move the process to production quickly. And it clearly spells out the revenue expectations coming in the later phases of JDA.

As I said, if we're successful on this JDA, we believe the customer will move expeditiously towards commercialization, because all the legal and contract delays should be behind us.

So with these 2 JDAs underway, I'd like to take a step back and review where we are. We have 19 customers and 25 engagements in our pipeline, of which we have 2 JDAs and 5 paid licenses. We've had one new customer move into Phase 2, offset by another engagement that was consolidated as a customer combined 2 programs into one. All of our announced customers are foundries, which will help us make MST available to a wide set of fabless companies targeting many different applications.

This has been a goal of Atomera's for the last year, and we're making good progress in that direction. Unfortunately, I can't go into the exciting details of each engagement because we are working on some high potential areas which can provide significant competitive advantage to our customers, making them especially sensitive to confidentiality. I can say that we are getting very promising results, which has led these customers to deeper engagement, and hopefully, to more JDAs and licenses.

The pace of the activity in our facility has increased over the past 6 months, and our goal, as always, is to move each customer towards commercialization as quickly as possible. We believe the advancements in our JDA program will spur competitive pressures on all of those in our pipeline to move faster.

Last quarter, our technology was recognized by some important third parties, which has resulted in several key marketing initiatives. Towards the goal of moving customers faster, Atomera created MSTcad simulation software, which rides on top Synopsys's industry-leading Sentaurus TCAD tools. Last month, Synopsys hosted a joint webinar on how the MST tool set can be used to model MST's optimized transistor performance.

Working together with Synopsys, we have already helped industry players gain a much better understanding of how MST can be integrated into their semiconductor manufacturing process. This webinar has directly led to several incoming inquiries about using MST and new customer designs.

Also, we submitted a paper showcasing the results of our MST SP technology to a very prestigious IEEE power conference. The ISPSD Conference is the premier international forum for technical discussions on all aspects of power devices. Although thousands of papers were submitted, ours was one of only a few selected for the conference in May. There is no doubt that our submission will expand interest in MST SP for the key players in the power semiconductor industry, who we know will attend this important conference in May.

Our work on RF SOI technology, which is critically important to 5G cellular, continues to consume a lot of our time and resources because of its great commercial potential. We hope this area will be one of the earliest to adopt MST and to bring it to production considering the significant improvements we can bring to designs. Likewise, we continue to believe our technology has excellent potential in memory and for advanced nodes.

Now I'd like to address some recent developments in the semiconductor industry, which I believe create an exceptionally favorable environment for Atomera. Well, the big headlines tend to focus on how TSMC, Samsung and Intel are competing to bring the 3-nanometer or 2-nanometer nodes to market. The industry has recently been recognizing the importance of the legacy nodes and of particular fabs running 200-millimeter wafers. Given the chip supply shortfalls, it seems obvious that the industry needs to add capacity in this area, and 200-millimeter fab capacity is forecast to grow 21% to mitigate the supply imbalance.

There are a few problems. First, the vast majority of 200-millimeter lines have been operating in fully depreciated fabs, which can be very attractive financially when operated near capacity limits. Building new fabs is very expensive and 200-millimeter equipment, which has had very limited production over the last decade, is in short supply and is priced at a premium. This situation will place substantial margin pressure on these companies for many years until they can defray the very expensive build costs.

So these new fabs can't easily get equipment, and when they can, the associated CapEx costs will drive lower profitability than they've experienced in the past. MST can help solve these problems for both the fab owners and their fabless customers by allowing them to shrink die and thus boost throughput with only a minor increase in tool costs. 200-millimeter EPI tools are available and MST will allow operators to continue utilizing their depreciated fabs with the associated good economics.

Foundry capacity is forecast to stay tight, while industry-wide CapEx is forecast to grow by 24% in 2022, primarily in 300-millimeter wafer fabs. Deal with the capacity crunch and pay for the CapEx, fabs are raising prices on their wafers up to 20% now. Industry insiders say that price rises are not transitory. They are permanent. This situation, as fabless semiconductor makers will tell, the need to get more die per wafer is imperative. MST provides a path to get to these improvements that is both easily implementable and at a more reasonable price than most other alternatives.

Atomera is spreading this message to industry players, and we believe that it will lead to widespread adoption over time. We remain laser focused on getting the first player into production, which we believe will drive the domino effect that's been predicted for some time. As I've said in the past, we believe industry conditions have reached a point where both near- and long-term structural changes will provide exceptional opportunities for Atomera.

In our Q4 call, I said that we were entering into 2022 with strong momentum, and I think you will agree that it has continued with a new licensee, successful execution on our first JDA and the opening of a new JDA. On the technical development side, we also continue to make good progress as recognized important third parties in the industry. We still do have more JDAs and licenses in our pipeline, which I believe will help illustrate our gathering momentum as we move through the year.

Now Frank will review our financials.

Francis B. Laurencio - *Atomera Incorporated - Chief Financial & Accounting Officer and Corporate Secretary*

Thank you, Scott. At the close of the market today, we issued a press release announcing our results for the first quarter of 2022. This slide shows our summary financials.

Our GAAP net loss for the 3 months ended March 31, 2022, was $4.1 million or $0.18 per share compared to a net loss of $3.6 million or $0.16 per share in the first quarter of 2021. In Q4 of 2021, GAAP net loss was $4.2 million or $0.18 a share.

Revenue in Q1 2022 is $375,000 compared to $400,000 in Q1 2021. We did not recognize any revenue in Q4 of last year. GAAP operating expenses in Q1 2022 were $4.3 million compared to $4 million in Q1 2021 and $4.1 million in Q4. Non-GAAP net loss for the first quarter of 2022 was $3.3 million compared to losses of $2.9 million in Q1 2021, $3.4 million in Q4 of 2021.

Non-GAAP operating expense last quarter was $3.6 million, compared to $3.4 million in Q4 and $3.3 million in Q1 of 2021.

The $400,000 of revenue that we recognized in Q1 of last year at 100% gross margin since it consisted solely of the grant of a manufacturing license to our first JDA customer. In Q1 2022, our $375,000 of revenue consisted of a JDA success fee, which involved Atomera engineering costs and the integration license revenue, which included costs of MST deposition and wafer delivery.

Cash balance at March 31, 2022, was $24.5 million compared to $28.7 million at the end of 2021, a decline of $4.2 million during the quarter. As we've discussed on previous earnings calls, cash usage is typically highest in the first quarter of each year through annual payments which are expensed throughout the year on our income statement.

As of March 31, we had 23.4 million shares outstanding.

Scott mentioned in his remarks that we've signed a new JDA, which we believe will lead to us recognizing license and engineering services revenue, and more importantly, will accelerate our path to commercialization with this foundry partner. We are not yet in a position to predict the timing of when we may reach these revenue generating milestones under the JDA. And consistent with our past practice, I'm not guiding revenue beyond the current quarter. So our guide for Q2 revenue is 0.

On our last quarterly update call in February, my guidance for non-GAAP operating expense for 2022 was a range of $15.25 million to $15.75 million. Although we are slightly behind our hiring targets, we remain focused on adding engineering head count and we are not changing our previously stated guidance.

With that, I'll turn the call back over to Scott for a few summary remarks, before we open up to questions. Scott?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Thanks, Frank. As you've heard in this call, we continued to gather steam here at Atomera and are quite excited about some of our near-term developments as well as the underlying macro environment, which is creating favorable long-term conditions for MST to be widely adopted across more and more applications.

As we work with more customers and unveil new capabilities of our technology, our TAM is constantly expanding. We believe our recent successes are only the beginning of momentum, which will continue throughout the year, and we'll establish Atomera as a technology licensing leader in the semiconductor industry.

I truly look forward to sharing those successes with you in the future. Mike, we can now take questions.

QUESTIONS AND ANSWERS

Mike Bishop

Thank you, Scott. (Operator Instructions) And right now, our first question comes from Richard Shannon of Craig-Hallum.

Richard Cutts Shannon - *Craig-Hallum Capital Group LLC, Research Division - Senior Research Analyst*

Congratulations on your JDA announcement today. I think my first couple of questions are on that topic. I guess, Scott, first question here is I would like you to describe this a little bit better. You described this a little bit different than the first JDA that's going through central engineering versus the new one that's going through a business unit. If you could help us describe how this moves faster to the first product here than in the other way? Is it just simply because it's not going through the central engineering pipeline? Or is there some other reason for that?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes. So one of the -- generally when we engage with a customer, they're engaging with one specific business unit that's thinking "they have a problem and they want to use MST to solve it." So they'll implement that and they'll take it to production. It's a fairly focused effort. That's how this current JDA customer is.

Our JDA that we announced last year, we initially started working with the customer like that. One of the business units looked at our technology and said: "Hey, this looks very interesting." So in that very large company, they have a policy that no new technology can be brought in by a business unit. It has to be vetted by the central engineering group before other people can use it. So it went to the central engineering group.

Now, the good news about that is, from that first JDA, the central engineering group did a lot of work and now they've kind of given it their seal of approval for the rest of the company. And those business units can now adopt it and move very quickly to production.

But going from the beginning of the JDA to getting into production is probably a little longer because the central engineering group had done this work. Now, the good news is they're ready to go to production or they could possibly go to production quickly with a number of different business units.

This new JDA we announced today is pretty focused around one specific business, and if all goes well, they'll be driving that specific one to get into production. And hopefully, we'll get adopted by other business units inside their company.

Richard Cutts Shannon - *Craig-Hallum Capital Group LLC, Research Division - Senior Research Analyst*

And to that last comment there, Scott, it was supposedly my follow-on question, the potential here. And do you have any engagement or potential engagement with other business units or if this company also has central engineering with them as well?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes. As a matter of fact, we've been working -- I mentioned in my remarks, we've been working with this company in Phase 3 for a while. They've tried a number of different things with our technology, and they've decided to focus on this one area first. But we do have a number of other areas that we have been talking with them about, and has the real potential to expand beyond -- into those once we've established success in this first area.

Richard Cutts Shannon - *Craig-Hallum Capital Group LLC, Research Division - Senior Research Analyst*

Okay. Is there any characterization you can give for the second JDA? You describe it as a major semiconductor foundry. Any other -- any ways you can describe them, the location, technology focus, anything? I suspect not, but I just wanted to see if there's anything else you can characterize.

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes. I can tell you that we did ask and try to say a lot more than we did and kind of negotiated for that, but ultimately, they weren't very comfortable with it and they may be more comfortable when we get to the later stages of licensing. But we'll see.

Richard Cutts Shannon - *Craig-Hallum Capital Group LLC, Research Division - Senior Research Analyst*

Okay. Well, we'll look forward to that day. Maybe jumping over to the first JDA here. Obviously, great to see the next steps down there and the money coming in the door. Just want to get some -- your best characterization and visibility into how long the next steps are going to take? I know it's not immediate. It's going to take a few quarters. I don't know, maybe you can describe what your expectations are now? And are there any limitations with this customer in terms of getting wafers runs and doing the analysis on them, obviously, with very tight capacity? Or do you think that's -- that won't be a limitation for you?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

I think -- right now, I wouldn't say that getting wafers is a limitation. What's -- where we stand right now is we've kind of -- we've had the central engineering group say, "Hey, this is good technology. It does what they say it does. So it meets the performance requirements. And we also have tested it and determined that we can take it into high-volume production." Because that's one of the things they're testing for.

But now we have to convince individual business units that they want -- that they should use it and then go through a process of integration with them. And we're just at the very beginning of those stages. Ideally, we'll be able to convince a number of different business units, but I can't give much insight into that now. It's just too early stages to know.

Now I will say one more thing, is that we installed MST in the factory of that first JDA customer. And because of that, if a new business unit wants to try our technology, they can do it really quickly. They can literally take wafers off their line and put them into this other machine that's in the same factory, get MST on there and test it in the same day as opposed to what -- normal customers, they have to take their wafers, package them up, send them over to us. We do a lot of contamination checks, a lot of setup. It takes a lot of -- it takes about a month to go through that whole processing. And then incoming inspection on their side again.

But for this first JDA customer, literally in one day they can do it and should speed up everything to be able to get towards production quicker.

Richard Cutts Shannon - *Craig-Hallum Capital Group LLC, Research Division - Senior Research Analyst*

Okay. That's helpful. Scott, you said a couple of times on this call and obviously in past calls as well it's your priority to get the first customer across the finish line, get into Phase 6 and get wafers out the door in a production sense here.

I'm not sure if this is the right way to ask the question to that end here. But the best way I thought to answer this -- please change if necessary. But do you think we're going to get a customer moving to Phase 5 this year? And is that the right way to describe the process by which the JDA -- or probably the first JDA customer announced -- is that the right way to ask that question, ultimately getting to the answer that we think is -- will obviously be great news for Atomera's wafers and production?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes. I'm not going to predict anybody will get to Phase 5 right now. Is it possible? Yes. For the JDA customer, they have to go through some integration work. So just -- at a high level, let's think about it like they're developing a product and their central engineering group has said, "Hey, this is a good ingredient for your product." But before they would start taking it production, obviously, they're going to insert the ingredient and run a bunch of tests to make sure it works well and it doesn't cause any errors and all those other things.

Once they're done with that, they'll start going towards the process of entering it into production. Phase 5 is entering into production. So there still has to be some work on that integration effort. And we can't -- I don't like to call them phase numbers in this case because it isn't really linear. But let's just say they have to do integration phase work and then they can get into the qualification Phase 5 work after that. But as I said, the integration mark can go pretty quickly if they use their internal tool.

Richard Cutts Shannon - *Craig-Hallum Capital Group LLC, Research Division - Senior Research Analyst*

Right. Okay. That's helpful. Scott, you made an interesting set of comments regarding 200-millimeter capacity out there. And I think a couple of different technology areas would -- my understanding is they are focused mostly, if not entirely, on that capacity. Once you talked about core being RFS-wide, I think a good -- a decent choke of industry capacity on 5 volt analog is also there. Is this type capacity -- is that creating any headwinds for actually adopting because it's so tight they can't even do the work to implement your technology even though there is seemingly a lot of benefit there? Or is that actually accelerating it? And -- well, let me just stop at that point first.

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes. No, I think -- I would say -- at this time last year, I would say there are quite a few headwinds. Very big trouble getting some access to fabs and everything. This year even though I don't see -- the industry is not seeing signs that the capacity crunch is behind us. It certainly still going out. I think people are saying at least the end of the year.

We are seeing more interest and willingness to run R&D wafers because it's just been some time that they've been prioritizing production, and now they've got to get back on to the R&D bandwagon to keep their innovation going. So I don't see it as a major holdup for us this time, at this time, getting into those 200-millimeter fabs.

Mike Bishop

Okay. And I'm sure I'll follow up on that topic off-line. There seems a very interesting dynamic there. One last question for me, and I'll jump out of the line. I know there's a bunch of other questions here. Just kind of big picture long term. One of the 6 product -- or technology areas you talked about on the last call and before that. One of them was talking about advanced nodes here, which is a big topic of discussion across the semi industry here. Any commentary on engagements there? And specifically, I guess my key question here is, are you -- do you expect to be intersecting only at node introductions or major variations of those introductions? Or would you possibly intersect the old nodes that are getting a refresh in some manner?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes. It's -- I don't know the exact answer to that question, Richard. But I will tell you that we've had customers that have talked to us about yield enhancements on existing notes that are in production. These are still advanced nodes. But doing work there. We also are talking to some about something that would come out in the next generation, the bleeding edge.

And I also want to say that when we talk about advanced nodes internally, we also kind of throw the memory guys into that category. Even though memory tends to be like a little bit bigger line with, they're still pushing the envelope on how they're building wafers and are looking for solutions. So yes, I think we have a number of opportunities both for new process nodes coming out and ideally to enhance some existing ones.

Mike Bishop

Our next question comes from Cody Acree of The Benchmark Company.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

I echo my congratulations on the new JDA. Can you walk us through, Scott, your expectations on how we think about license fees coming in from this JDA? Is it -- given the foundry situation and that you're not going through something like central research or central development, is there a different timing schedule that you would expect? Or is the first JDA signed a model to follow?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

I don't think the first JDA signed is a model. Let me just say, I don't think that the first JDA is a model. I actually think most of our JDAs are a little bit one-off, kind of unique each one of them. This particular JDA, as I mentioned, we don't have revenue at the signing, but later on down the line, we do have these milestones defined.

Now the first milestone requires us to get good results on some work that we're doing together right now. But the whole point of the JDA is to kind of grease the skids, that, if we get good results on that next one -- and we're very confident. Then they know what licenses have to be executed, when, how much they cost. And they also have committed to dedicate a certain amount of engineering resources and high-priority production runs and other things.

And the reason why we're doing this is because we're dedicating a lot of effort to it. And we don't want things to be slowed down by contractual negotiations or any kind of misunderstandings between the team. We want to make absolutely sure they know if we're going to make this super high priority, then this is what we expect from you. And so we've got this now signed and in place, and it's I think a really good step for us.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

Excellent. So as you look at the breadth of the engagement, what are the deliverables that you have committed to? And is it a matter of a single wafer run? So you were talking months. Or are there larger developments at hand?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes. I've got to be careful here not to give too details. But I would say, it's based on the results of one or more wafer runs that have been defined. But one thing about our technology and any new process development technology in semiconductors, it's very rare that you kind of do the first one and it's a home run. You got -- it's an iterative process. So there is contemplation of that in this agreement, and we're looking for a signal that indicates that with a little bit more tweaking we're going to get to the promised land that we're all hoping to get to.

So yes, there's a few runs and there's a number of -- I'd say a few shots on goal here before we know. And if the first run proves spectacular, then the milestones will be hit earlier. And if we have to do another one, it will take a little longer.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

And how broad is the engagement with the foundry across processes or customers or applications?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes, the first one is pretty focused on specific product area, specific process. But as I mentioned, we have spoken to a number of other organizations inside this company. And with -- if we get good results on one, I think we'll have the ability to expand into a number of other businesses.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

So you are getting access to a larger customer base? Or do you think it's just different processes within the foundry?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes, different processes within the foundry, which will be focused on different applications and so forth.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

Okay. So what is the interaction with the foundry customers?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes, so we...

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

The evaluation and the...

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

The foundry customers, yes. So far, it's been limited. We are increasing our outreach to fabless customers all the time and starting to talk to them. As a matter of fact, we have one fabless licensee. And so that's something that we're building up as a capability. And it is one exciting thing about working with foundries. When we go to a fabless customer, I would say, in most cases, they're quite interested and their next question is, "Where can I try running some wafers on this?"

And so it's important to be able to have a foundry that you're working with that you can point them towards so you can make that definitive next step.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

Okay. But your interaction with the wafer customer through your foundry you said has been limited to date.

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

So there's no -- as part of the JDA, an evaluation by the customer -- the foundry customer so that you can move to a potential license -- volume license fee. Because it's...

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes. Actually -- so although the interaction with the end customer will be very interesting and helpful for us, the foundry owns the process. They're going to define all of the performance parameters of the process. And they go out and sell that process to their end customers. So if we can meet all the requirements of the foundry process, then we'll be able to get -- rollout to customers.

Now if we were able to go out and engage with those customers directly -- obviously, you always learn a little bit more by going to the primary source. But it's not absolutely mandatory for us to be successful in this one.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

Scott, can you talk about progress with some of your early licensees?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Sure. Yes. All of our licensees, with one exception, continued to work with us, continued to move forward towards getting technology into production. We've talked a lot about one of them today, who was the existing -- I mean, our first JDA customer. We had another licensee that started in -- just started in February, and obviously, we're going very hot and heavy with them.

One of our licensees, AKM, who allowed us to use their name, we're still on quite limited work with them because their fab burnt down. They're using third-party fabs right now as they figure out how to rebuild and get started again on their R&D work. But we have been talking with them and do have an assurance that when they get their stuff back together, they'll be restarting their work on MST.

But our other licensees, we continue to have great relationships and interaction, and hopefully, we'll be moving forward to production with them.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

So you would expect that STMicro is moving forward?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

If you had to handicap one of your current engagements to volume revenue -- I know Richard asked timing of this year. But whether it's timing this year or next, which do you think gets there first?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes, it's a little bit hard to guess actually, I would say. We have more than one licensee and our JDA partner that could be first.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

Okay. What's going on in China? Are there any implications to your engagements?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

No ramifications for our engagement right now in China. We didn't have -- although we had started to do some work in China with talking to fabs over there, a couple of years ago we slowed down that effort based on some concerns about IP and other things. And so today, although the environment is very volatile over there, it's not really affecting us in any way.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

Okay. And Frank, you mentioned your OpEx that you've got [OpenRex] that you're trying to fill. What's the process there and what are your expectations of getting that OpEx spend?

Francis B. Laurencio - *Atomera Incorporated - Chief Financial & Accounting Officer and Corporate Secretary*

Yes. I mean as I've been saying for a couple of quarters, we're -- we feel like we're reaching some limits on our capacity with the number of customers that we're working with, and we could do more with more engineers. So that's where our hiring is focused, in adding more engineering head count.

It's not -- Q4 is a difficult time to hire and we've really been trying to ramp up our efforts to bring on more staff. But the reason that I haven't sort of made any change on our expense guidance, we think there's plenty of work for folks to do and we're actively hiring there. So we're -- we've not added any new head count during Q1, which we would have liked to do. But our plan all along was to see these head count more kind of loaded towards sort of second, third, fourth quarter. Just kind of easier to get people in the pipeline in that time frame. But as you know, it's a very competitive environment right now to hire. So it just takes a real concerted effort to get it done.

So yes, I -- that would probably be the single factor, I think, that could cause us to maybe under spend versus our guidance is if we're not able to hire. But we're holding the line on that.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

And I guess what is the process of hiring talent that's suited your needs?

Francis B. Laurencio - *Atomera Incorporated - Chief Financial & Accounting Officer and Corporate Secretary*

Some of our best hiring recently just came through word of mouth and network effects of the folks that are already here. There's -- we've got an EPI team in the Phoenix, Arizona area, which is kind of a center of excellence for that. That's where historically have been a lot of fabs and there also have been a lot of -- there have been some significant sites there for both ASM and applied. And so there are alumni from those OEMs as well as some of the companies that have had fabs there like Intel and onsemi and Motorola that are sort of fertile places to hire.

We've done some recruiting out of universities as well. But -- yes, I'd say the 2 places we found the most folks is some with technical recruiters and some just with kind of network effects from our own team. And I think the latter is really the most successful. But in this market, you've got to also take some rifle shot approaches. And we'll kind of pursue both ways: I mean with jobs posted on our site with recruiters and word of mouth. I think pretty typical for the way most engineering organizations would try to grow.

Cody Grant Acree - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

And lastly, Scott, would you agree with Frank's comment that you're kind of maxing out your ability to respond to customers?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes, I found out that we could use a number of additional people. I think our opportunities are bigger than our ability to service them right now, which is -- and to correct that, it's not going to be another 20 people. It's only a small group of people. But we really need to do that.

Mike Bishop

And Scott and Frank, we have a number of questions coming in from today's attendees on the Q&A window. So I will just go ahead and ask some of the relevant ones.

So the first one there that comes across is comparison from the second JDA we just announced to the first one is: Do you think the time line with the foundry JDA will follow the same time line as the first JDA or will it be faster?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes. I don't think it will follow the same time line as the first JDA. The first JDA, honestly -- let's go back and look. We announced that we were in the negotiation phase, and it ultimately took almost a full year before we could finally announce the start of the JDA. And then it took us another year to get to the point where we would -- we had done all -- met all of their technical specifications. I personally think that was pretty slow, and we should be doing better than that with other customers. So I'm hopeful that this next JDA will move faster.

Mike Bishop

All right. And then for the second JDA, there's just some clarification. The question is, could you state that the royalty rates were already negotiated if MST is successful in the next steps?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

That's a great question, and I have heard a number of kind of questions coming in from investors about that. I wanted -- so when we negotiate licenses with people, we negotiate kind of our standard upfront licenses, and we tell them about the range in which we expect to be getting royalties when they are in production. We have had that discussion with a lot of customers. The amount we're asking for with royalties is reasonable. It's lower than some other technologies that we know of that have been licensed into the semiconductor industry. And the range should work for most companies.

That being said, almost everyone doesn't want to negotiate the license rate until they can see the final benefit that they're going to get on their production. So if we can bring them a massive savings, for example, on the amount of die that they can get per wafer -- maybe they can get 30% more die per wafer -- and it increases their gross margin by 10%, obviously, they're going to be willing to give us more royalties than if we can bring them only a very modest improvement. So they all want to wait until later in the process before we finalize the royalty rates, and that's true.

So to summarize, we have not negotiated final royalty rates with anyone yet. But we have socialized them with many people. And we think the levels that we're asking for are fair and entirely justifiable.

Mike Bishop

All right. And would we expect Phase 4 integration license with the foundry that you need to have the JDA with?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

We can't answer the when question because, as we mentioned, it's hard to predict. But we can say that the JDA does include provisions for a manufacturing license, which would involve installation at some point in the future when we've met some milestones.

Mike Bishop

All right. And going back to the first JDA, can you comment on any specific business units with the first JDA and the time line of moving them into Phase 5?

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

Yes. Unfortunately, I just really can't talk about any potential BUs or what the time frames would be. The time frames I can't answer even if I knew the BUs because it's too early in the process. But I think I said in my remarks, that customer, in particular, is hypersensitive to confidentiality. They will be listening to this call and will be checking to see what I'm saying. And so I can't really reveal any details about what they'd be doing with the technology.

Mike Bishop

And maybe to Frank. We got a question about getting more color on the $75,000 integration license.

Francis B. Laurencio - *Atomera Incorporated - Chief Financial & Accounting Officer and Corporate Secretary*

Yes. No, I mean I -- we'll just say that's from the license that we announced in the first quarter, and it's in the range of license fees that we've been paid for integration licenses in the past. And so we'll look forward to continuing the successful wafer runs with that integration licensee with the hope to get that to Phase 4.

Mike Bishop

Okay. Okay, Scott, I think that concludes the questions that I've got prepared. You may go ahead with the closing comments.

Scott A. Bibaud - *Atomera Incorporated - President, CEO & Director*

All right. Well, I want to say thank you to everyone who has attended today's presentation. It was great to be able to share with you some information on our recent successes and give you a feeling of the enthusiasm we're experiencing inside Atomera. Please continue to look for our news, articles and blog posts to keep you up-to-date on our progress, which are available along with investor alerts on our website at atomera.com.

We look forward to seeing some of you during our scheduled marketing activities, including the Craig-Hallum Institutional Investor, Oppenheimer Emerging Growth and the Stifel Cross Sector Insight conferences coming up later this quarter. Should you have additional questions, please contact Mike Bishop. We'll be happy to follow up. Thanks again for your support, and we look forward to our next update call.

Mike Bishop

Thank you, everyone. And this concludes today's call.

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