Executive Insights – Limited Series

Speaker: Jason Kim, CEO, Firefly Aerospace – 9 minutes

John Gilroy:

Welcome to Constellations Executive Insights, a limited podcast series in partnership with Nova Space. My name is John Gilroy, and I sat with five industry executives who are at the head of some of the most innovative and forward-thinking companies. If you're like me and want to know what gets them excited, what challenges they're currently focusing on and what their predictions are for the future, stay tuned.

In this episode, I'm sitting with Jason Kim, CEO of Firefly Aerospace. Jason, thank you for joining our Executive Insights Limited series.

Jason Kim:

Hey, thanks, John, for having me on.

John Gilroy:

It's an exciting time for the space industry. Can you share one recent development you are most proud of for your company?

Jason Kim:

I'm most proud of Firefly's historic Blue Ghost mission that we absolutely nailed on our first attempt, and it was just a few months ago. On March 2nd, 2025, Firefly Aerospace became the first commercial company to successfully land on the moon, and our Blue Ghost lunar lander then operated 10 NASA instruments for more than 14 days on the lunar surface, marking the longest commercial operations on the moon to date. And it's an annual lunar mission, so following this historic achievement, Firefly is gearing up for annual missions to the moon. Our next few missions will utilize a dual spacecraft configuration with Firefly's Blue Ghost lunar lander stacked on top of our Elytra Dark orbital vehicle or satellite to enable operations in both lunar orbit and on the lunar surface.

For instance, Blue Ghost Mission 2, it's set to launch next year in 2026, and we'll deliver a European Space Agency satellite to lunar orbit before delivering several payloads to the far side of the moon, including a NASA radio telescope, a UAE rover, and an instrument from Australia's fleet space. And then Blue Ghost Mission 3 will then launch in 2028 and deliver another rover and several NASA instruments to the Gruithuisen domes on the moon's near side, and these payloads will map these unexplored domes in search for potential water and hydrogen molecules. So we're really excited about all those missions and really proud of the team.

John Gilroy:

That's amazing. Downstream solutions, in other words, services and applications that leverage space-based infrastructure and technology. Downstream solutions, they account for more than half of today's $596 billion global space economy according to Nova Space. What downstream solutions are you most focused on providing or are you most excited about?

Jason Kim:

Well, I mentioned Blue Ghost 2. It's going to have a dual configuration of our Blue Ghost Mission 2 lander and our Elytra orbiting spacecraft. I'm happy to announce that we will be unveiling our Ocula Lunar Imaging Service on that Elytra spacecraft. It's a capability that's going to unlock the cislunar orbit and make the moon something that is easier to get to by others. It's part of that Blue Ghost 2 mission that I mentioned. It'll be operating on the Elytra spacecraft, and then subsequent Blue Ghost missions will also have this Ocula service on our Elytra vehicles in the future. But this constellation, it's not only to support long-haul communications relays from the moon's surface through this lunar orbit back to Earth, but it's going to fly our Ocula Lunar Imaging Service.

What Ocula will do is it's going to ride as a payload on our Elytra spacecraft, and it's going to basically image the moon's surface with high fidelity resolution, and when we are as low as 50 kilometers altitude in low lunar orbit, we'll be able to get 20 centimeter resolution, and that exceeds the capability of current systems that are imaging the moon. It's also got a ultraviolet spectrum in addition to its visible spectrum, so it'll be able to not only map the lunar surface and the geographic futures of the moon, that's so important to NASA and the commercial companies and also other lunar lander companies, but it'll also be able to detect rare minerals and things like Helium-3, which I know that there's many companies looking at mining helium-3 on the moon's surface. So it's going to be able to collect all that data and we're going to be able to sell the license to that data to multiple customers, and it's a commercial service.

It's going to be a capability that we will be able to start supporting after we launch the 2026, and then every time we launch our Blue Ghost missions, the Elytra spacecraft will have this capability. So we'll be able to even improve our revisit times when we have multiple Ocula cameras around the moon's orbit and continue to collect that high fidelity data. And then longer term, the Ocula service, the mapping and imaging service can be extended to other interplanetary objects like Mars and such. And then not to mention, the Moon is the ultimate high ground, and so there's a lot of people that want to know what's on the Moon's surface, what kind of activities are on the Moon's surface, but also just as important, what's going on around the cislunar regime? And so Ocula and this service will be able to go after that information as well.

John Gilroy:

Sometimes, leadership means changing your mind and evolving with new information or new realities. Where would you say your thinking has changed the most during your career in the space industry?

Jason Kim:

Yeah. I've got over 25 years of space and defense and technology experience, and the biggest change in my thinking has been around satellites versus rocket companies. I used to think you could be highly successful and there was no limit if you were one or the other, whether you were a satellite company or a rocket company only. But what I've learned is that there's incredible benefits to offering both rockets and satellites, and I think you really need both rockets and satellite services to be at the forefront of the space industry, and it's been an advantage for Firefly.

We're a one-stop shop to have the total ecosystem to launch, land and operate our systems across LEO, MEO, GEO, Cislunar and beyond, and we've also seen the technologies from the rocket side reduce risk and increased performance on the satellite side. Our rocket engine technology is exceptional and is quite proven on the rocket side, but we used a scaled-down version for our lunar lander and that's what helped us successfully get to the moon orbit as well as successfully softly land on the moon's surface. So that's just one example, but this approach of being a rocket and satellite company in one is allowing us to lead the way in end-end space services for the rapidly expanding defense, space exploration and commercial space markets.

John Gilroy:

Thank you, Jason, for this insightful conversation, and thank you, our listeners, for tuning in.

This limited series is brought to you by Constellations and Novaspace as we're gearing up for two of our favorite industry events: World Space Business Week and Space Defense and Security Summit. You can secure your registration to the event by visiting wsbw.com. Finally, if you're new to Constellations, please sign up to receive our newsletter at constellationsmag.com. Our community of writers, podcasters and other contributors brings you original stories on space technology, business issues and market trends.