



Diversifying for growth

Q&A with Spaceflight Industries CEO Jason Andrews

Spaceflight Industries is best known for pioneering the rideshare launch model for smallsats, with the US-based group recently brokering a landmark deal that saw it book an entire Falcon 9 rocket.

Last year the venture unveiled a separate business to expand into the imagery market with its own satellite constellation. SatelliteFinance editor Jason Rainbow speaks with CEO Jason Andrews to find out more.

Jason Rainbow: There are multiple parts to your business – could you provide a rough overview?

Jason Andrews: Spaceflight Industries is the parent company of two groups: Spaceflight and BlackSky.

Spaceflight is revolutionising the business of accessing space. It's a full service launch provider that offers a suite of products and services including state-of-the-art satellite infrastructure, rideshare capabilities, and global communications networks that enable commercial and government entities to achieve their mission goals.

On the BlackSky side, we're providing an easy, affordable way to order and access high-quality satellite imaging to look at the planet in real time, leveraging the

capabilities of Spaceflight. BlackSky is really a software company. It's all about big data.

In our view there are multiple revolutions taking place right now. There's a geo-spatial revolution, a LEO communications revolution, and a third one, which is really a long-term market opportunity: human space transportation.

We're focused on the small satellite piece of all this. It's the key technology to enable looking at the planet in real time, and in some cases we're involved in these big LEO constellations too. Think of Spaceflight as the basic infrastructure – the shovels to the miners that are going out and prospecting. BlackSky's constellation can also be used by anybody. We don't think we have competitors, we just have customers. We see people like Planet Labs, DigitalGlobe and Skybox Imaging as customers.

Ultimately, it doesn't matter who uses our spacecrafts. We believe that, if you fundamentally transform the price point and latency of the revisit rate, then there will be more demand than there is supply for Earth imaging capability.

JR: For the launch part of your business, how are you positioning yourself to deal with the increasing competition from new vehicles and service providers coming to market?

JA: We're very different than everybody else. Whereas others are very vertically



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integrated – meaning they only launch services on the vehicles they own or operate – we're horizontal. We're rocket agnostic. We don't build the rockets.

Traditionally, if people wanted to launch a satellite they bought a rocket and it was a one-to-one relationship, and we've broken that relationship. Now you don't need to buy a rocket, you just need to buy a ride and you pay specifically for what you want.

We think we're the first commercial spaceline. Airlines don't build airplanes; cruise lines don't build cruise ships – why should a spaceline build spaceships or rockets?

We have a SpaceX Falcon 9 mission scheduled for this summer that will carry 87 payloads. The companies onboard pay a couple hundred thousand dollars for a cubesat instead of \$65m for a Falcon 9 rocket.

We've brought down the barriers for access to space from a cost standpoint, with routine schedule services and regular pricing based on the class of service.

JR: How much space has been booked on this flight?

JA: This mission is nearly full. We've identified all the customers and are working on getting the last payloads onboard now. It's just about contracting them.

JR: How do the numbers add up to reach the cost of a Falcon 9?

JA: I don't want to get too deep into the economics of that, but in order to see a profit we do need to fill the rocket entirely, which we are very close to finalising. While I can't go into the specifics of each customer payload, I can tell you that the Falcon 9 can carry about 14 tons, including the hardware that will carry the satellites.

JR: How did the SpaceX deal come about? Was it demand-led or it something you felt like trying?

JA: Mostly demand led. Historically Russia has been a good source of rideshares, and the invasion of Crimea in 2014 cut off that supply and made scheduling missions very difficult. Secondly, there are a lot of US small satellite customers who need to launch on a US launch vehicle. That has created a lot of demand as well.

Thirdly, there's been a broader acceptance of rideshares as a viable means to get to orbit. Whereas we started by launching cubesats, it's rapidly turned into launching 100-300kg spacecrafts and these payloads justify a larger vehicle.

JR: Prices will likely come down as more launch players enter the market - do you see this model remaining viable in the years ahead?

JA: I think the spaceline model is going to be the one that prevails. It prevails in the aviation and shipping industries. There are operators of infrastructure and there are service providers, and those groups are very different from the hardware manufacturers. I think you're just starting to see that shift today.

JR: So you wouldn't consider developing your own launch vehicle at some point?

JA: When we started Spaceflight five years ago we believed we'd see the market through rideshare and then it would justify a small

dedicated launch vehicle. I think we're finally at that tipping point. If someone is not successful, then yes, we might develop our own launch vehicle. But as of now, I'd rather let other companies direct their capital to building the launch vehicles and we'll leverage the vehicles for our services.

JR: You partnered with Spire last year to use its ground stations for your new smallsat-focused communications network. Could you tell me a little more about this deal?

JA: We have three ground stations operational right now – one in New Zealand, one in Alaska and one in Seattle – but we're really focused on growing the broader market and we're all about collaboration. You always hear people talking about pitting their imaging satellites against each other and I think that's the wrong attitude. Right now it's a US\$3bn market and there's no reason it shouldn't be US\$30bn.

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We have a sales arm within Spaceflight to focus on this effort. Spire has ground stations with excess capacity, so we decided to integrate that into our network. We're in the process of doing this now.

We're committed to executing on our vision to build a cellphone network for space. Our whole model for the communication networks aspect of Spaceflight is to build a common set of space radios and ground radios that are matched so when a company launches a satellite, it turns on and just works - similar to how your cellphone just works immediately after you buy it because it's standardised to work with all of the telecom towers.

JR: What's the latest with BlackSky's plans to operate a constellation of 60 satellites by 2019?

JA: We have two that will be launched in the June/July timeframe this year. Those are demonstration satellites called Pathfinders, and then we have four operational satellites going up in 2017. We expect more but we have to get those Pathfinders on orbit first.

JR: Are you looking to raise capital in the near future?

JA: Yes, but what we are focused on right now is reaching our goal of getting our satellites in orbit. Once this has been accomplished, we will begin redirecting some of our focus to raising some capital.

JR: How much would you be looking to raise?

JA: I can't reveal that number, but one of the benefits for us is that we've been around for a while. We started as a company 17 years ago this summer and it has been generating good revenues and is a very viable business.

BlackSky is really one of our growth areas. Again, for BlackSky we don't believe we have competitors but instead customers and partners that we can reach out to if we can't meet the need for pixels with our own spacecraft.

JR: What else differentiates BlackSky in what is becoming an increasingly crowded market?

JA: I don't think it's that crowded. There's a lot of noise about who is funded and building satellites but, as far as who is actually launching satellites, it's proving to be a hard gig to do. Look at Google – they came out in 2011 and it's now 2016 and they might have two satellites on orbit. It's hard to build an imaging constellation.

As we look around the planet, the desire is to look at it in real time and there still aren't enough satellites out there to do that. We're really focused on price point, revisit rate and user experience. We believe that if we can fundamentally revolutionise that then there'll be more demand than we could ever fulfil.

JR: Spaceflight Industries is already very diversified for a company of its size, but are there plans to move into other adjacent markets?

JA: Not at this time. While we're doing a lot already, I believe the reason we will succeed is because we started off as different companies with very clear focus, vision and management teams, and we're still that way today.

JR: Which part generates the most revenue at the moment and how do you see that split changing?

JA: Today Spaceflight is generating the bulk of the revenue as a US\$30m-US\$50m company. It's going to change every year as we continue to grow the constellation, so it's hard to say what the split will be.

JR: Could an IPO be on the cards any time soon?

JA: We're really focused on execution at this point. We're not thinking of an exit or monetisation at all. It's too early.