



● ● Tom McCarthy, VP of Business Development, Motiv Space Systems

Satellite Evolution Global

Q&A

Bringing better automation to Space ● ●

Motiv Space Systems is a robotic systems developer and integrator seeking to bring better automation to space to support pioneering exploration efforts alongside ambitious commercial industries in the stars. Tom McCarthy, VP of Business Development, explains how the company serves the emerging space economy, and what demands he anticipates from it in the near future.

Laurence Russell, Assistant Editor, Satellite Evolution Global

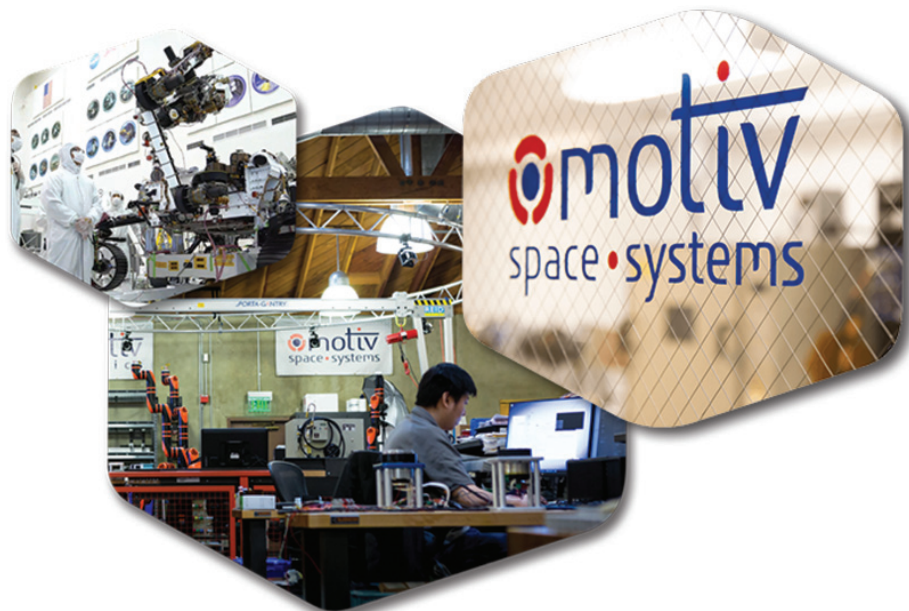
Question: How does Motiv Space Systems view the emerging space economy?

Tom McCarthy: There's an interesting convergence happening right now worldwide, with a robust interest in the space economy from venture capitalists (VCs) and capital investment groups in addition to significant government involvement.

Some of that boom is being driven by competition, or endeavours to get onto the ground floor of new technologies, but it's coming from both governments and commercial interests, which is something of a revolution in our history.

Question: How does Motiv Space Systems compliment that industry in the interest of progressing science and stability?

Tom McCarthy: There's a lot of different applications being developed, some of them in the name of science in terms of space exploration. For us, we just want to be part of an enabling member of that community, driving progress. The technologies that we develop and integrate are best suited to pushing scientific and industrial advancement forward.





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Question: There are a few startups, teams and corporate branches working on robotics for automated servicing in orbit. What will it take for one to start leading the pack?

Tom McCarthy: That's an interesting question. Robotics is this fascinatingly growing field, with the potential to resemble an incredibly diverse application base. A lot of the robotics we're working on concerns manipulation via robotics arms and mobilities for the sake of rovers and other vehicles.

I think we're going to see several companies develop niche capability. What's going to drive the leader of the pack among those is going to be customer experience. How quickly can the technology get to market? How reliably can it perform? How does the application enable efficiencies or deliverables that drive profit?

The big race is in the development of space construction, services, inspection, and planetary observation to name a few. That's an awful lot of ground to cover, and the solutions that make those theoretical markets work well are extensive. It's going to be a long game.

Question: What does Motiv Space Systems see as the biggest and most stable business cases in orbital and lunar environments?

Tom McCarthy: The services model that NASA has been developing over the last couple of years is excellent. The ability to develop an expedient technology development cycle through the CLPS missions, the lunar payload services missions, what that will yield is the ability to test and build upon many of the technologies that have been gathering dust in labs waiting to be proven in the field.

We need those kinds of programmes to accelerate development, and we're passionate about assisting their orchestration.

With different government agencies talking about building a greater presence for science and exploration in space and working together to practice what they preach; we're finding the intersection of needs between public and private expertise. That'll go a long way to bring sustainability to business cases and the market they rely on.

Question: What technologies stand out to Motiv Space Systems as important for commercial activities in space?

Tom McCarthy: We're very interested in upgrading the capability of our systems. On the Moon, for example, we have a unique environmental schedule to work around. It experiences extremes in temperature that by Earth standards resemble incredible degrees of heat and cold.

Those circumstances mean some systems can only operate during lunar day times, so we're working to develop systems that can run day and night up there with full operational efficiency. That means working out how to run our machines without the ever-present benefit of solar power.

Question: With the major space powers investing in ever more elaborate moon missions in the interest of establishing permanent facilities, does Motiv Space



xLink Space-rated modular robotic arm system. Photo courtesy Motiv Space Systems ●●●

Systems recognize a timeline for lunar colonization over the following decades, and if so, how does that influence your plans?

Tom McCarthy: Lunar colonization appears to be a very tiered system. It's difficult to imagine certain measures occurring before a necessary prior step has been successfully rolled out. To get those first few boots on the ground safely will require an awful lot of infrastructure. Then we're going to need to be there in force in order to go about creating sustainable footholds on the surface to make for sustainable periods of occupation.

It's exciting to see some of the recent awards with the Artemis missions and how this timeline is going to start shaping up. Eventually, we will be looking at landing pads, habitats, power generation systems, and mobility platforms, ultimately positioning humanity for effective exploration even further afield.

The scope of these ideas is incredibly ambitious. As the demand grows with the momentum that's being pushed today, the demand for robotic technology will multiply too. A human operator's time and safety are so crucial that it's highly necessary to make the maximum use out of automated technologies.

Question: What are Motiv Space Systems' long-term goals? What technologies, services and discoveries do you wish to contribute to?

Tom McCarthy: Our long-time goal is to be an enabler for the space development ecosystem that's coming together ever more successfully. We're looking to evolve some paradigms of the past, specifically the kinds of robotics that have been fielded. We believe there are technologies that can be exploited to enable mission architects more flexibility and capability.

We want to see costs and development times reduced for robotic systems, and we want to see those systems get connected to new ventures and startups that wouldn't have usually had access to such technologies, to make their product or service that much better. We don't want them spending time agonizing over whether they can afford that capability, or if they have time for it. We want to make robotic integration as effortless as we can.

Motiv Space Systems wants to balance our competitive nature with our capacity to collaborate with the partners and customers who stand to benefit from our hard work. ●

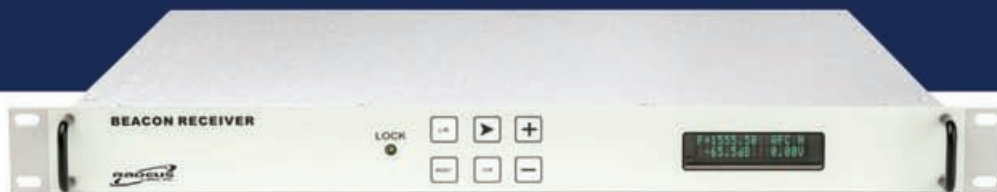


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