Collaboration is key for improving space networks

Alex Miller 3 minutes

Via Satellite Magazine webinar highlights the value of multiple technologies working together to benefit end users

Fast-moving technological developments in space communications can go even further if industry, governments and other organizations work to collaborate. That was the theme of a webinar hosted by Via Satellite that included Amy Mehlman — E-Space Vice President of Global Affairs and Stakeholder Relations.

Dubbed "A Journey in Space Convergence," the webinar also included industry representatives Nicole Robinson from Comtech, Rachel Jacobs from Amazon Web Services, Tina Ghataore from Mynaric USA and Janie Robinson of Descartes Labs Government. Panelists emphasized the advantages of multi-orbit solutions working together to benefit the end user.

Using first responders in a disaster area as an example, Mehlman referenced E-Space's coming ability to collect data from billions of sensors and said gathering big-picture data is critical.

Using this scenario, Mehlman said, "It's not just the communications networks, it's also understanding whether [a utility's] pipelines have burst or homes affected — you need a more granular view that comes from sensors on the ground along with Earth observation from the sky," she said. "It all comes together for the first responders who could also be equipped with a push-and-talk radio connected via an E-Space module."

Watch the recording of the webinar here.

Moving data quickly is something panelists said is critical, and they emphasized the advantage of having satellites in different orbits communicate with each other — such as one in low Earth orbit (LEO) being able to transmit data to another in medium Earth orbit (MEO) or geostationary orbit (GEO) rather than waiting to pass by a ground station. Also key: a wide variety of applications to address a broad array of use cases all connected to the cloud.

"We look to work with companies like AWS and Comtech to integrate all these sensors around the world and use artificial intelligence and machine learning to get actionable data to do things more efficiently," Mehlman said. "How we'll do it is by all working together."

Comtech's Nicole Robinson said harnessing that power has incredible potential to provide insight to the customer at the edge.

"Think about what's possible now when E-Space has billions of small devices connected anywhere on the Earth," she said. "It's all made possible by the convergence of multi-orbit space and terrestrial capabilities. Having that all come together in one cohesive architecture is really where we're leaning."

Jacobs said one of the great challenges is helping end users appreciate the many benefits of space-based communications.

"It's helping end users imagine that space data is relevant to them," she said. "There are just so many incredible outcomes and insights they could have if they used the technology and applied it to their advantage."

Mehlman added that sustainability and accessibility are other important considerations.

"Economically, we need to be able to provide a system that will allow users to buy [services and systems] affordably," she said. "And we need to protect the space environment to keep it clean and safe from debris, which is why E-Space is looking to build satellites with a low profile."

Ghataore said collaboration among satellite networks has the added benefit of reducing the number of satellites necessary to address the many use cases and said industry needs to continue listening to the end users.

"We obsess over the cool technology, but often it takes a segment leader to really push forward and say, 'we want this,'" she said.

Looking at the landscape holistically is the way industry can truly address all the needs, Mehlman said.

"As we move forward, the idea of having a lot more of these collaborations is fantastic, so we can understand everyone's abilities to get the end users what they need," she said. "We're going to need all of these technologies working together … it's an exciting multi-platform space we're working in and it's only going to get more efficient and cost effective going forward into this trillion-dollar industry."

Alex Miller

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