Boeing is Building Wideband Global SATCOM (WGS)-11+ Satellite Using Advanced Techniques to Deliver Unrivaled Capability at "Record-Breaking Speed"

- 3D printing, rapid prototyping, agile development enabling high-paced production while enhancing system performance

- With more than double the capability of its predecessors, increased flexibility and resilience, as well as improved anti-jamming, WGS-11+'s mission utility is unrivaled

EL SEGUNDO, Calif., March 1, 2022 /PRNewswire/ -- Boeing has begun building the latest version of the Wideband Global SATCOM satellite system, WGS-11+, using advanced techniques to effectively integrate the latest commercial technology while enabling a high-paced five-year schedule that will deliver years faster than similar clean-sheet designs.

"We're moving at record-breaking speed to deliver the unmatched resilience, efficiency, and throughput WGS-11+ offers our warfighters," said Col. Matt Spencer, Space Systems Command Geosynchronous Earth Orbit and Polar Division Senior Materiel Leader. "Boeing's ability to rapidly integrate the latest commercial technology into our infrastructure gives us a competitive edge on the battlefield."

Boeing and the U.S. Space Force completed the system's critical design review in late 2021, officially launching the program's production phase. Leveraging additive manufacturing, rapid prototyping, agile development and other advanced techniques, Boeing has created cost and schedule benefits, while boosting system performance.

"We're printing more than a thousand parts for WGS-11+, giving us the capability to introduce customization in a way that improves system performance, without requiring extensive integration times or customized tooling," said Troy Dawson, Boeing Government Satellite Systems vice president. "We understand how important speed is to the mission. That production speed translates to effectiveness against threats. As we continue to invest our technology and processes, we know that a similarly capable satellite could be delivered even faster."

WGS-11+ showcases an evolution in phased array technology. Based on Boeing's advances on its commercial 702X software-defined satellite payload, it is capable of generating hundreds of electronically-steered beams simultaneously, providing users with more than twice the mission capability compared to satellites within the existing WGS fleet.

Like 702X, each individual beam is shapeable and can be uniquely tailored to any operation, enabling increased mission flexibility and responsiveness. Narrower beam widths with dual polarization unique to WGS-11+ help protect against jamming and interference while allowing greater frequency reuse.

When it joins the constellation of ten WGS satellites, WGS-11+ will substantially increase throughput capacity of essential communication services for the U.S. government and its allies. It is scheduled for delivery in 2024.

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Contact

Zeyad Maasarani
Boeing Space & Launch Communications
+1-562-400-5533
zeyad.maasarani@boeing.com

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