Backhaul Betterment For USG To Be Advanced By EM Solutions

Employing a team of specialist engineers at their Brisbane, Australia, head office in Brisbane, Australia, EM Solutions has won an initial order from a US Government Agency to develop and supply their 10 Gbps E-band backhaul radios for evaluation for use in ship to shore communications.

Notoriously susceptible to atmospheric path loss are E-band frequencies that span the 70 to 80 GHz spectral band. This limits their effective range. One solution has been to use large antennas at both ends to increase the link gain and to achieve path lengths of up to 20 km. However, large antennas have narrow beamwidths at E-band frequencies and require active steering.

According to EM Solutions Managing Director and CEO, Dr. Rowan Gilmore, the company has been selected to showcase their radio technology and will integrate the new, 10Gbps E-band radios that were developed by the firm's subsidiary, EMClarity, into the same steerable gimbal systems used in their Communications-On-The-Move (COTM) Cobra satellite terminals. Such will enable the new radio systems to be used for high speed data backhaul, even when either end is in motion.

Dr. Gilmore added this means that even with wave or wind motion buffeting the antennas, both ends always remain pointing along boresight and are resistant to motion of the underlying ship or vehicle. Once the link is established by the pointing system, the radios can communicate at data rates up to 10 Gbps. This system, he stated, provides the longest range and highest data rate of any commercial wireless system, and that occurs even when both ends are moving.


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