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Exploring the Challenges of Long-distance Entanglement Distribution MATTHEW LAWYER, BENJAMIN SZAMOSFALVI, JEAN-FRANCOIS VAN HUELE, Brigham Young University — Quantum networks promise totally secure communications, but are limited to distances of ~100km. Proposed solutions include a space-based satellite distribution system and a network of quantum repeaters based on entanglement swapping. We review the current status of quantum communication as well as explore the restrictions and challenges that impede the implementation of quantum information tools.

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