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An Interactive Quantum Key Distribution Demonstration

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Quantum encryption enables unconditionally secure communication, provably safe against any eavesdropper attack, including from a quantum computer. We prepare a demonstration of quantum key distribution following the original proposal developed by Charles Bennett and Gilles Brassard in 1984, where quantum information is encoded on faint pulses of light as different states of polarization. Audience members will observe the quantum communication protocol in action, while sensitive single photon detectors are protected through careful filtering. This activity brings quantum key distribution out of the lab into an interactive display where photon states are encoded, transmitted, and detected as a live implementation of quantum communication.

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