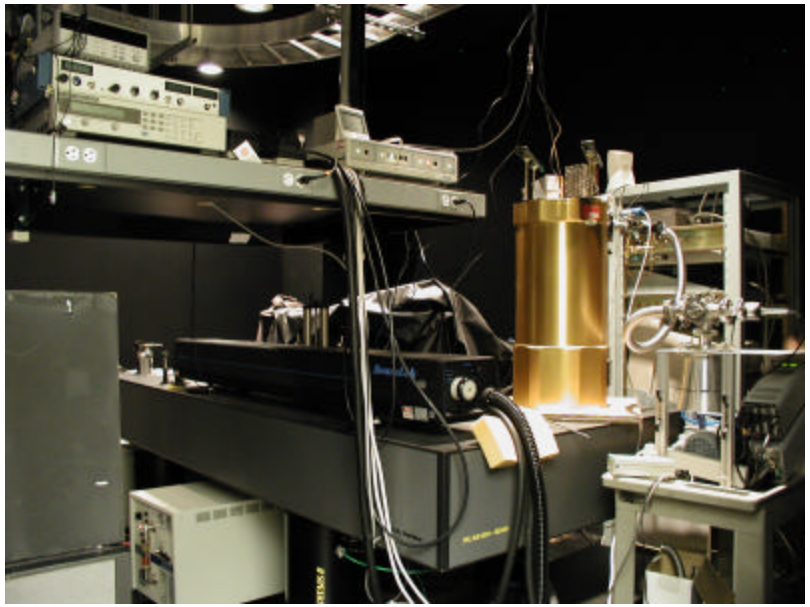
A Scalable Quantum Information Network

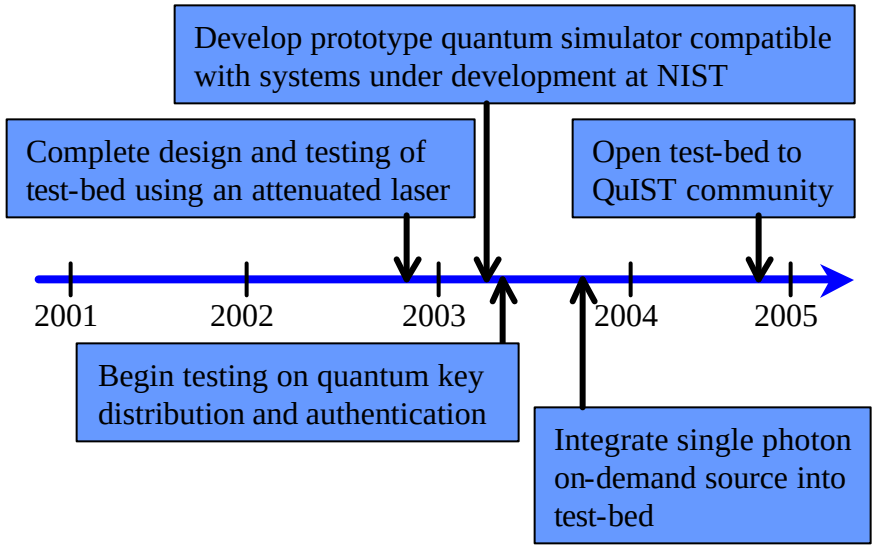


New Ideas:

- **A quantum communication test-bed**
- **Single photons and/or entangled photon pairs on demand using parametric down converters**
- **99% efficient single photon detectors based on superconducting transition edge sensors**
- **Authentication protocols, NIST validated standards, and quantum simulators for quantum information systems**

Impact:

- **Development of measurement and standards infrastructure for high speed quantum communication network**
- **Development of metrics and calibration capabilities for single photon source and detectors**
- **Development of NIST validated standards and communication protocols for quantum communication networks**



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