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Capabilities

Built a commercialized entangled-photon source:

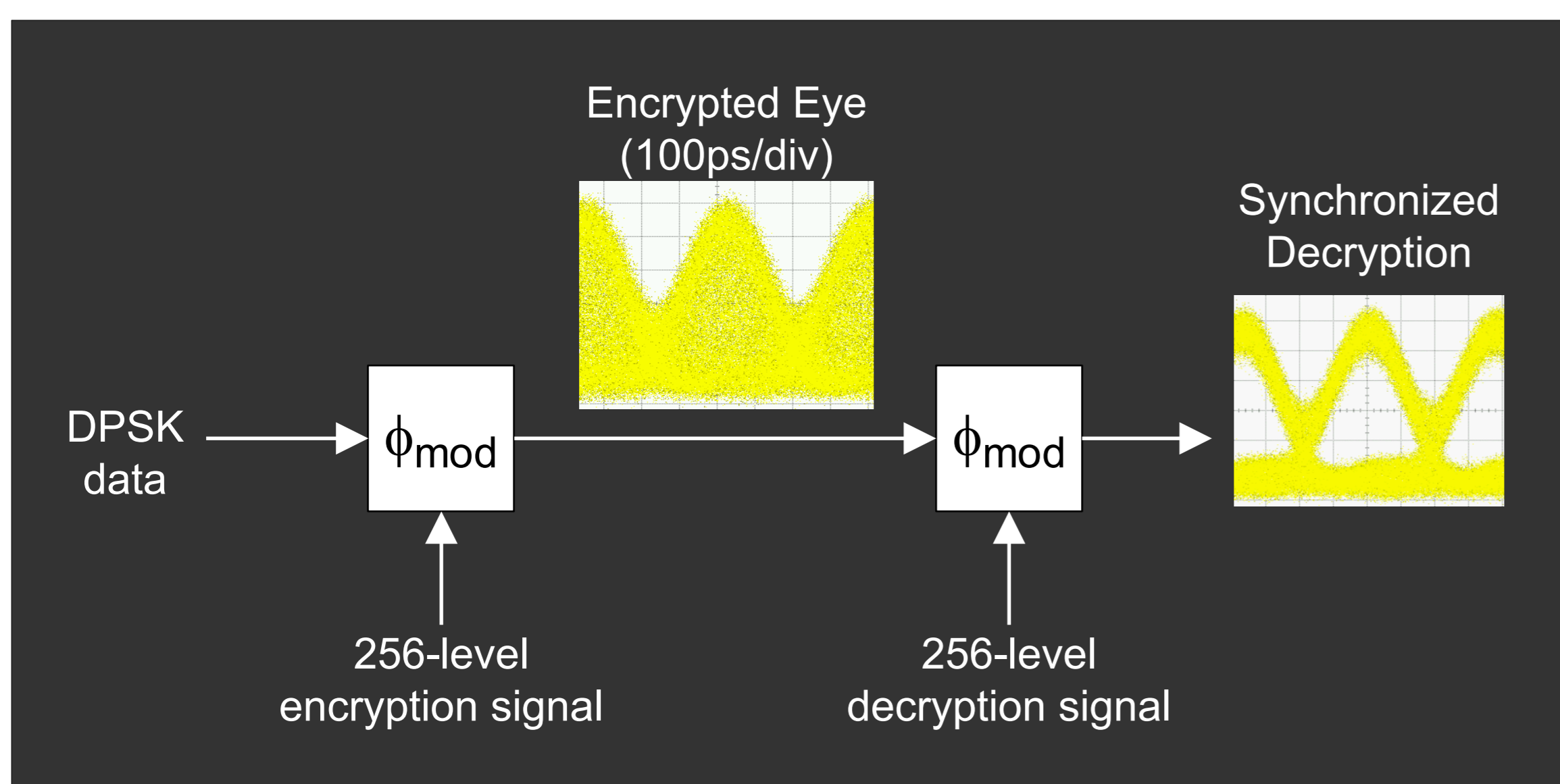


Built a telecom-band correlated photon detection system with integrated synchronization capability.

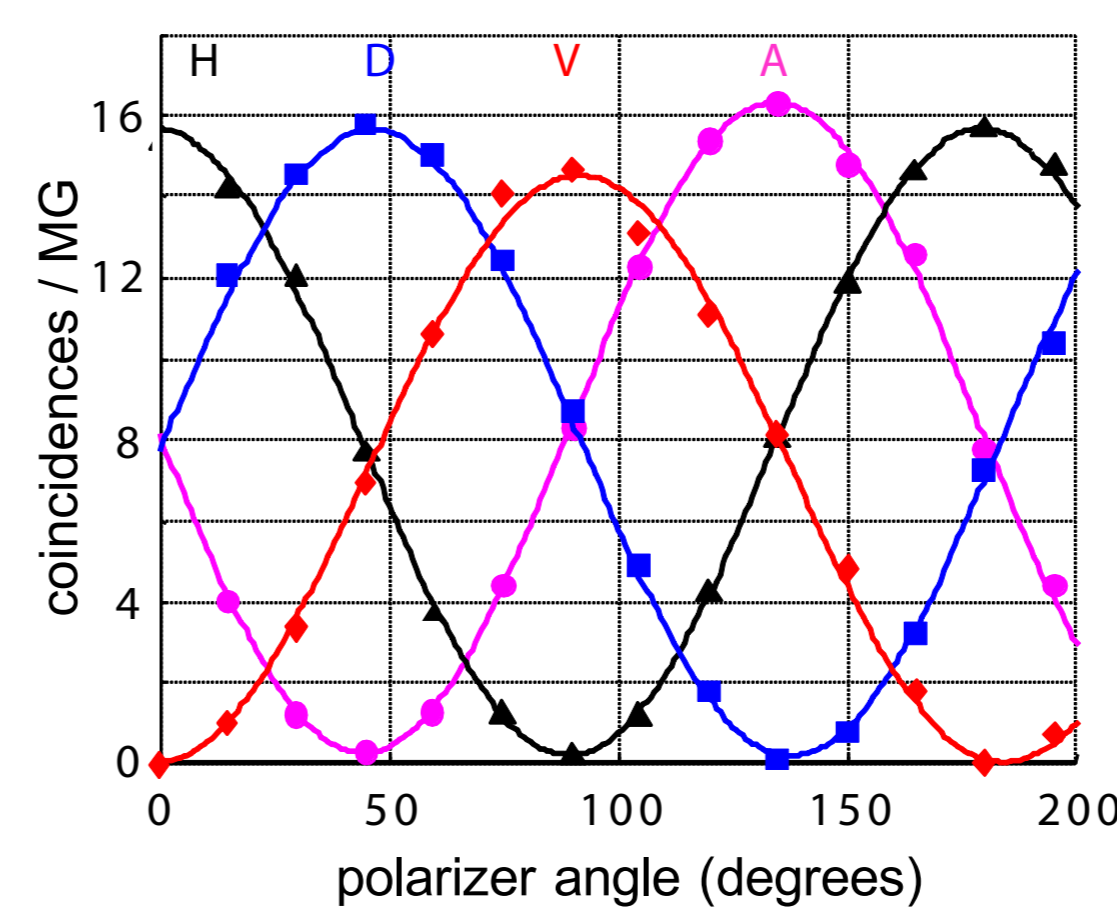
Broad expertise in photonic system synchronization and control:

- FPGA programming
- High-speed electronics
- DSP
- Polarization control
- Single-photon detection systems
- Ethernet system control
- Nonlinear fiber optics

Built 2.5 Gb/s pseudo-random basis fluctuation quantum-noise-based encryption system (AlphaEta™):



Two-Photon Interference (TPI) in 4 different bases



- built-in alignment signal for easy basis alignment
- computer controlled two-photon generation rate
- 98% (91%) TPI at 77K (295K)
- stable operation

Interests

- Automated calibration and timing alignment of quantum-optical measurements
- Robust generation of entangled light
- Measurement of entangled light
- High-speed single-photon detection
- Integration of quantum and classical communications

Seeking groups working on quantum optical systems