Simulation Tool for QKD Applications

VPItransmissionMaker Optical Systems   together with   **VPItoolkit QKD**

classical system simulation environment   for system-level CV/DV-QKD simulations
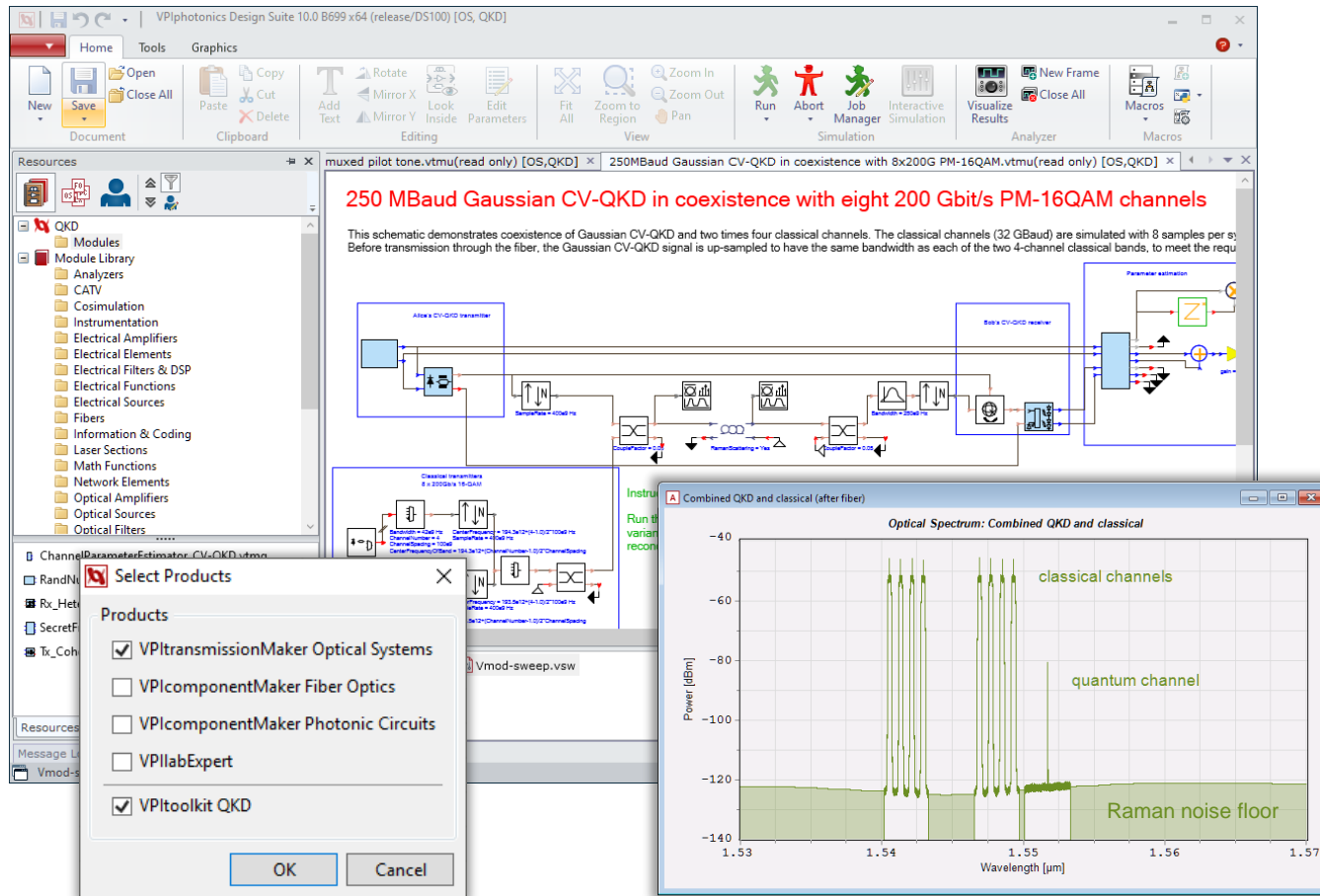
provides models for QKD transmitter/receiver, parameter and secret key rate estimation, and application examples.

- ✓ System design:
  various implementation options for QKD systems and sub-systems

- ✓ Study of co-existence scenarios:
  Raman scattering, cross-talk from classical channels, etc.

- ✓ Account for component imperfections:
  thermal and quantization noise, RIN, phase noise, biased beam splitting ratios, dark count rates, after pulsing, etc.

- ✓ Optimization of system parameters:
  modulation amplitude, photons per pulse, filter bandwidth, BB84 basis probability, symbol rate, etc.

- ✓ Estimation of performance criteria:
  max possible secret key rate, transmission distance, etc.