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[UQCC Project Use Only]

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QKD-AES Hybrid System

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This project has been carried out under NICT-commissioned research program

Orchestrating a brighter world

NEC brings together and integrates technology and expertise to create the ICT-enabled society of tomorrow.
We collaborate closely with partners and customers around the world, orchestrating each project to ensure all its parts are fine-tuned to local needs.

Every day, our innovative solutions for society contribute to greater safety, security, efficiency and equality, and enable people to live brighter lives.

Deployment in “Cyber Security Factory”

- Core facility for our counter-cyber-attack activities
  - 24/7 network monitoring
  - Cyber incident analysis
  - Gathering cyber intelligence
- Sensitive information handled
  - Operation areas protected by
    - Surveillance cameras
    - Biometric authentication

Cyber Security Factory

Challenges

- Efforts in our field test
  - Long-run tests pursuing quality
  - Security evaluation of implementation

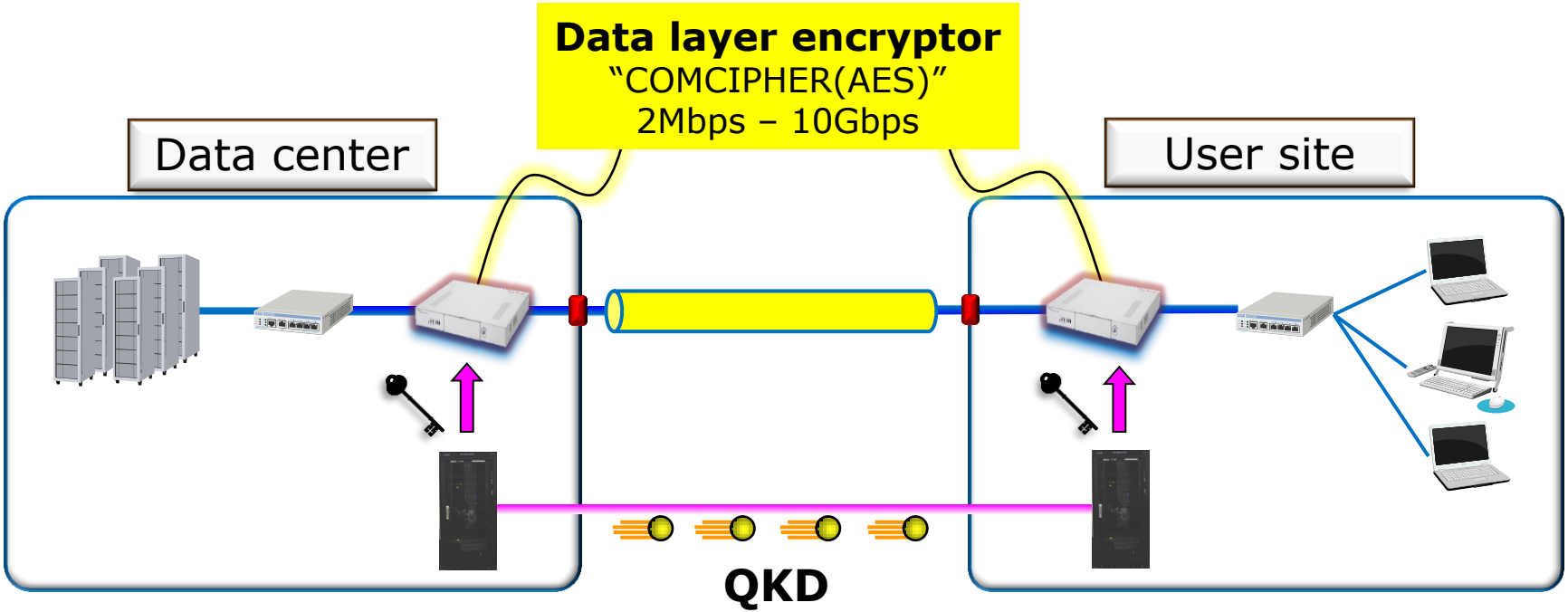
= involved task, since…

Data to the community

- Challenges of QKD implementations
  - Precision and stability requirements
    - QKD >> Conventional communication systems
  - Standard criteria for security certification
    - yet to be established

QKD-AES Hybrid System (an intended use case)

- Data over Ethernet (data layer) encrypted with AES
- AES security enhanced by key refresh from QKD

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