



**Practical applications of
quantum secure
communication
technology for CMBC
(China Minsheng Banking
Corp.Ltd.)**

May 2019

Introduction of CMBC—From the People, for the People

- **China Minsheng Banking Corp., Ltd. was formally established on 12 January 1996. It is China's first national joint-stock commercial bank initiated and founded mainly by non-state-owned enterprises (NSOEs).**

Scale of Institution

Total Assets: RMB 5.99 trillion

Net Assets: RMB 430 billion

Business Units: 2800

Employees: 58,000

Fintech-based Bank

Scientific achievements & Internet Finance: 30+ national ministries and industry association awards

Patents and Copyrights obtained : 95

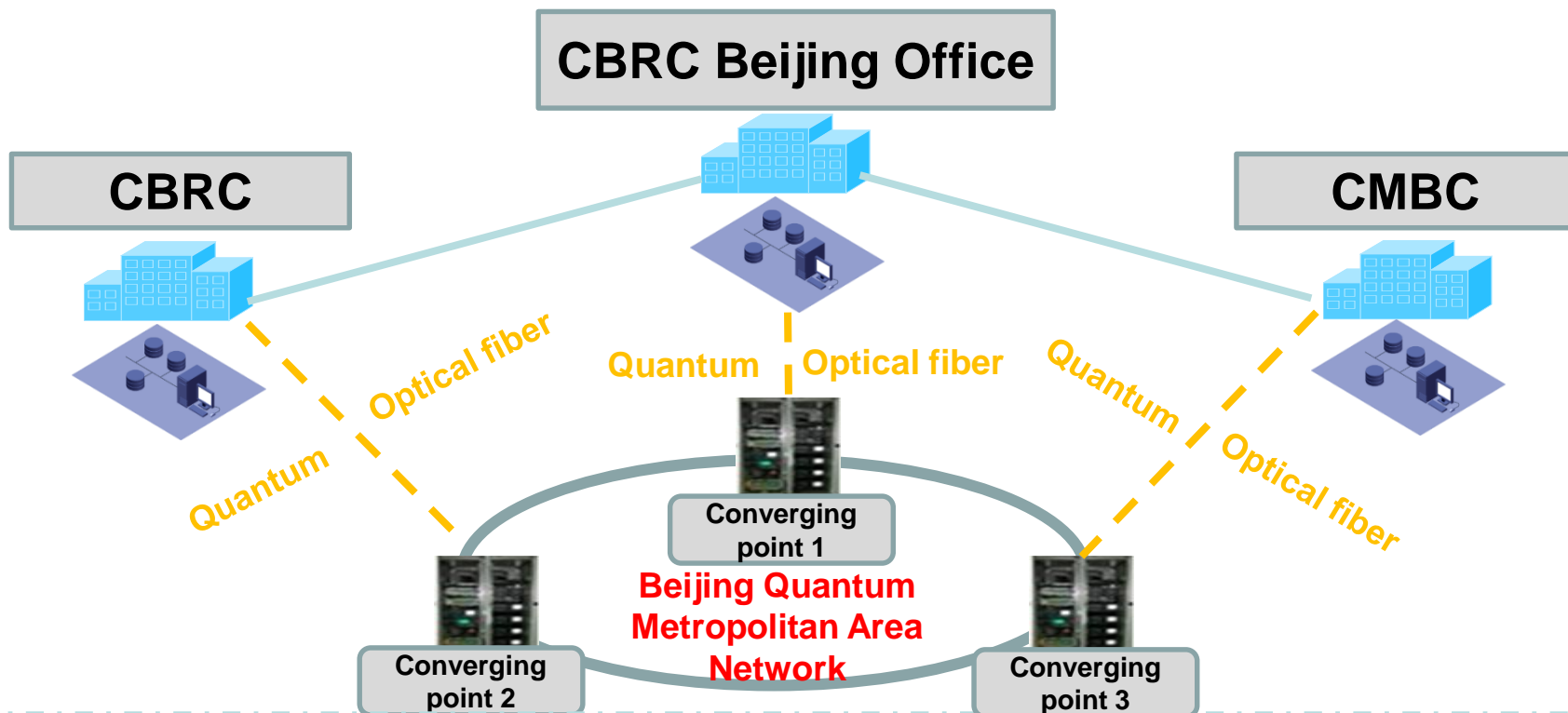
Three Major Strategic Positioning

A bank for the NSOEs

A fintech-based bank

A bank of integrated services

Quantum application scenario 1: Quantum application of banking regulatory information acquisition system



- Construction since 2013
- Completed & in operation



- Submit data once a day
- 500MB-1GB of data per transfer



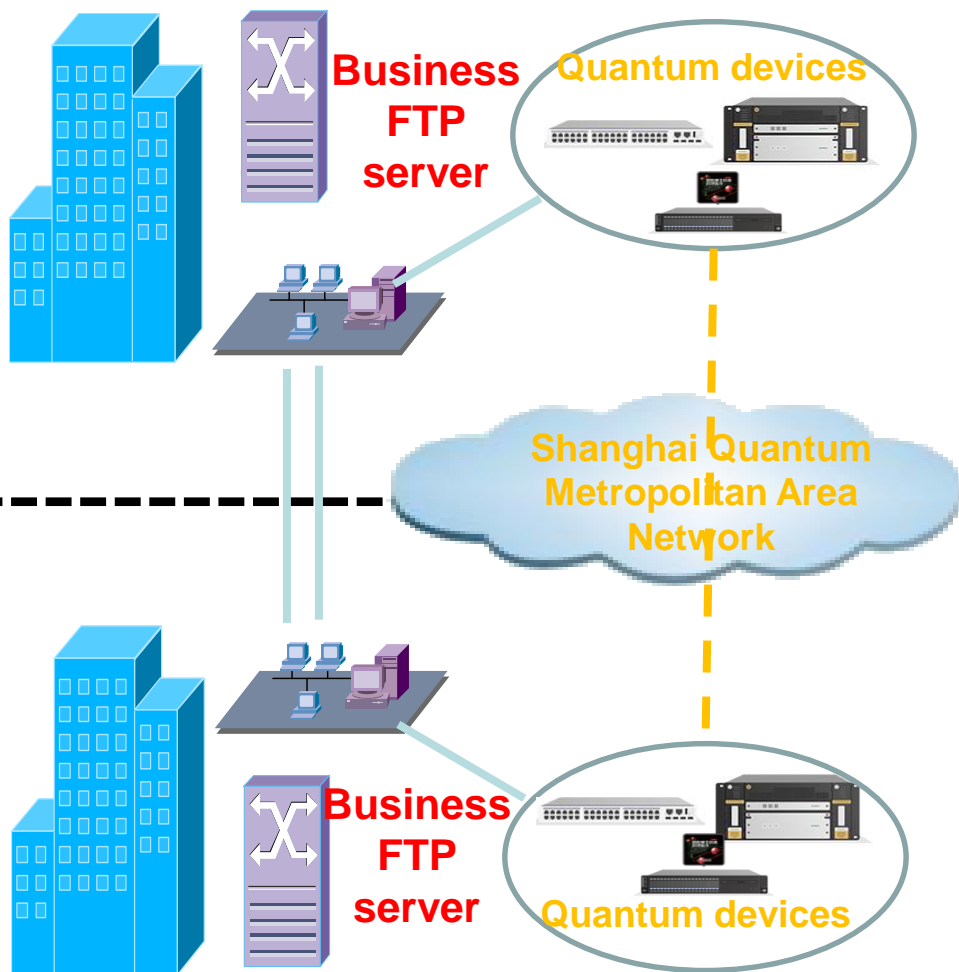
- CMBC and CBRC jointly built a financial information data acquisition system based on quantum encryption data transmission



- Information acquisition, information encryption transmission
- Information analysis

Quantum application scenario 2: Quantum application of CMBC Shanghai branch's main and backup data center

The main data center room of CMBC Shanghai branch



The main data center room of CMBC Shanghai branch

Meet the "controllable" goals
Fit the national strategy and industry requirements

Meet the "technology innovation" goals
Lead technology commanding heights

Meet the "model innovation" goals
Create characteristic application mode

Technology combined with industry demands, to meet its own security needs with wide applications, to serve the industry and social objectives

Quantum application scenario 3: A new generation of secure cryptographic applications



Status

- Construction began in Jan 2019
- In operation daily

Access Point

- 2 access points to Beijing metropolitan area network

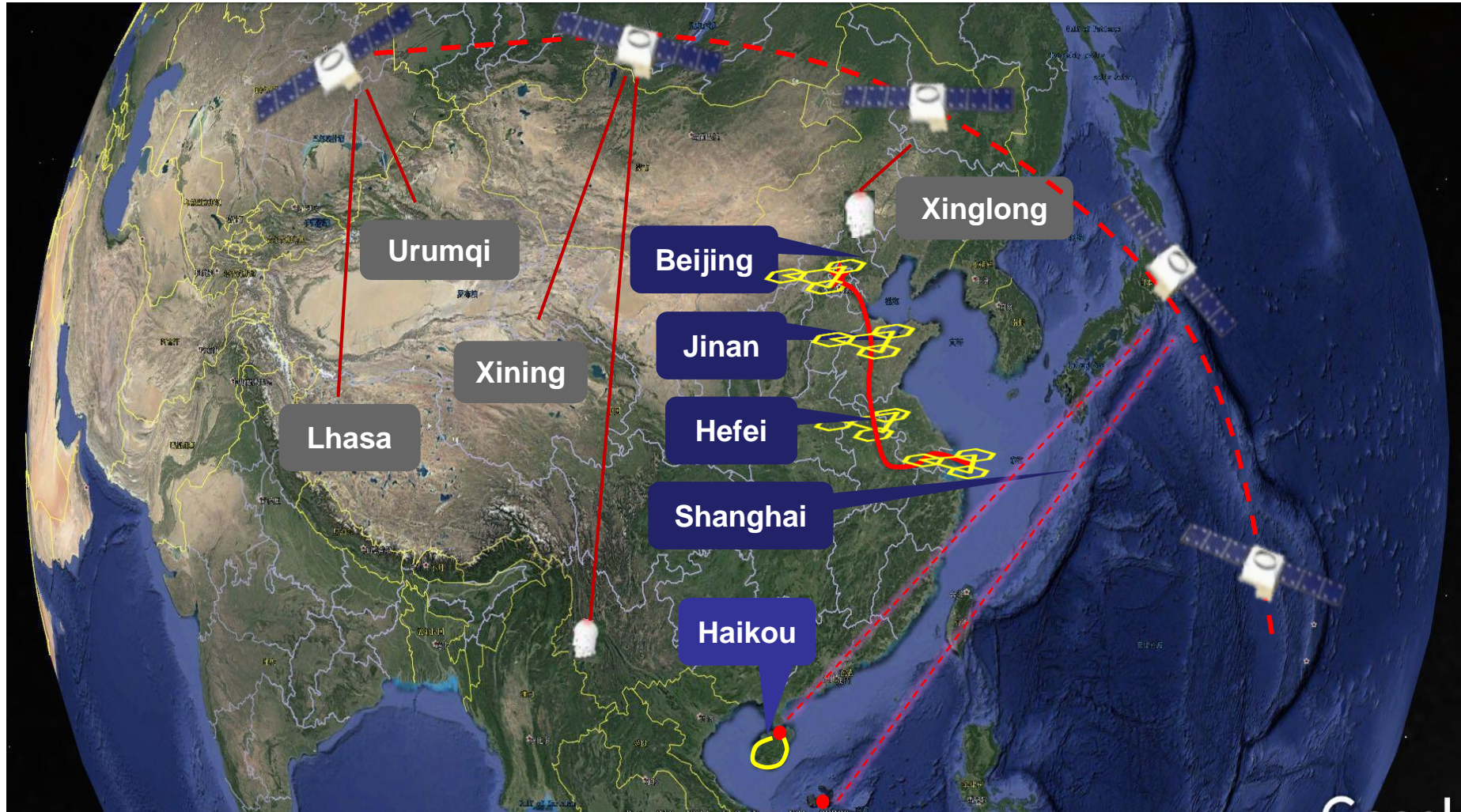
Indicators

- At 24dB attenuation, secret key rate is no less than 1kbps
- Quantum encryption throughput is not less than 1Gbps

Application

- Provide cryptography services based on quantum key distribution
- Distributed core system, business system

Extend application range: Connect overseas and remote areas via quantum satellite



Thank you!