Quantum Communication Scheme for Blind Signature With Two-Particle Entangled Quantum-Trits

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Abstract — Quantum communication scheme for blind signature is proposed based on two-particle entangled quantum-trits to create a novel systemmetrical quantum cryptosystem. All the messages are encrypted by the private key of the sender Alice during the communication and the authenticity verification of signatures and an arbitrator’s batch efficient proxy signature is applied. It demonstrates that a large number of blind signatures can be derived with a high efficiency.

Keywords — Quantum communication, Blind signature, Proxy signature, Quantum signature, Quantum cryptography.