

Quantum Multi-Signature Protocol Based on Teleportation

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In this paper, a protocol which can be used in multi-user quantum signature is proposed. The scheme of signature and verification is based on the correlation of Greenberger-Horne-Zeilinger (GHZ) states and the controlled quantum teleportation. Different from the digital signatures, which are based on computational complexity, the proposed protocol has perfect security in the noiseless quantum channels. Compared to previous quantum signature schemes, this protocol can verify the signature independent of an arbitrator as well as realize multi-user signature together. – PACS numbers: 03.67.Dd; 03.67.-a

Key words: Quantum Signature; Quantum Teleportation; Multi-User.