RETRACTION: Efficient Quantum Transmission in Multiple-Source Networks

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The authors wish to retract this Article because the main improvements reported are invalid.

(1) The paper has not considered how to route quantum information. This is an essential problem in classical network communication such as TCP/IP.

(2) In the presented quantum network, the quantum address or quantum IP address representation for each quantum node has not been designed. In this point of view, different quantum signals going into one common quantum channel cannot be distinguished for their different goal addresses.

(3) The synchronizations of the oscillators are only useful when different quantum signals may be distinguished. From (3), they cannot be completed for quantum network. For an example, see the following figure, there are three incoming edges and three outcoming edges. The synchronizations of the oscillators may be false if the nodes C and D do not know the outcoming paths of three incoming quantum signals. For an example, our synchronizations are shown in Figure 1a while the real paths may be those shown in Figure 1b. Even if one can synchronize them before the transmission, the transmission goals may be different in each time.
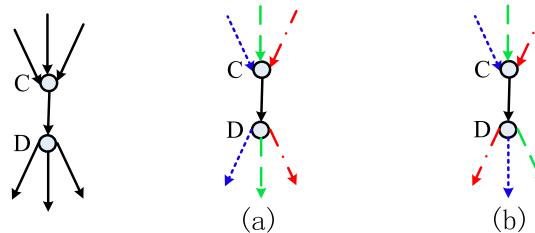

Figure 1 |

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The original version of this Article contained a typographical error in the volume number '5' was incorrectly given as '4'. This error has now been corrected in the PDF and HTML versions of the Article.