Quantum Data Hiding: Quantum Correlations

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Resumo: The protection of a secret by sharing it, is an important capability in modern information processing. In this work is showed a method of using particular quantum states to share a secret between two parties (Alice and Bob), in which the data is hidden in a fundamentally stronger way than is possible in any classical scheme.

The quantum data hiding effect [1], [2] is part of a larger exploration of the information-theoretic capabilities of quantum mechanics. This protocol can be viewed as a strongest possible separation between the power of LOCC versus global operations for the task of distinguishing quantum states.
In this protocol, a piece of classical data is hiding from two parties, who each share a part of the data and are allowed to communicated classically.

In this work we show the mains results of the relationship between the protocol of quantum data hiding and the quantum correlations.