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Title:	Measurement-based local quantum filters and their ability to transform quantum entanglement
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Abstract:	We introduce local filters as a means to detect the entanglement of bound entangled states which do not yield to detection by witnesses based on positive maps which are not completely positive. We demonstrate how such non-detectable bound entangled states can be locally filtered into detectable bound entangled states. Specifically, we show that a bound entangled state in the orthogonal complement of the unextendible product bases (UPB), can be locally filtered into another bound entangled state that is detectable by the Choi map. We reinterpret these filters as local measurements on locally extended Hilbert spaces. We give explicit constructions of a measurement-based implementation of these filters for $2 \otimes 2$ and $3 \otimes 3$ systems. This provides us with a physical mechanism to implement such local filters.
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