**Entanglement of mixed states in systems of n qubits**[1] RENAN
CABRERA, WILLIAM BAYLIS, Physics Dept., Univ. of Windsor — With the
help of geometric algebra, we define a sequence of unitary operators that fulfills
a controllability condition and whose operation on a reference or pass state spans
the complete Hilbert space. The unitary operators can be classified according to
their ability to induce entanglement, and the operators that can entangle a system
provide a natural parametrization of the process. The entanglement of pure states
is measured using reduced traces, and this can be extended to define a measure of
the entanglement of mixed states in a system of n qubits. Practical expressions for
average state fidelity of n-qubit systems have also been obtained.

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