Quantum State Tomography and Post Measurement Analysis in Qiskit

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Abstract

The IBM Quantum Experience is a public platform for executing quantum circuits on superconducting back-ends. We execute the Teleportation protocol, Grover's search algorithm, Entanglement Swapping and Entanglement Purification on three superconducting devices available from IBMQ. We analyze the results from post measurement circuits and reconstruct the final quantum state using state tomography.

I. Introduction

Quantum computers are defined by their use of quantum mechanical phenomena in order to manipulate data. Modeling the functionality of these computers is done with quantum circuit which are based on quantum bits.

The purpose of this report is

II. Conclusion

To conclude,

References

[1] Michael Nielsen and Isaac Chuang. *Quantum computation and quantum information*. Cambridge New York: Cambridge University Press, 2010. ISBN: 9781107002173.