#17
Interleaved Randomized Benchmarking of gates with delay

Mentee : Jeongwon Kim

Sungkyunkwan University, Masters in Nanoscience & Technology

Mentor : Toshinari Itoko

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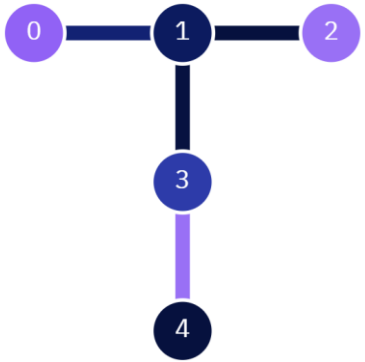
What is IRB? (Interleaved Randomized Benchmarking)



Qubit	T1 (us)	T2 (us)	Frequency (GHz)	Single-qubit Pauli-X error	CNOT error
Q0	110.84	142.61	5.301	3.093e-4	0_1: 1.089e-2
Q1	102.43	86.56	5.081	6.154e-4	1_3: 9.034e-3 1_2: 8.858e-3 1_0: 1.089e-2
Q2	108.84	169.83	5.322	2.517e-4	2_1: 8.858e-3
Q3	115.04	23.93	5.164	2.847e-4	3_4: 2.135e-2 3_1: 9.034e-3
Q4	119.2	146.01	5.052	4.357e-4	4_3: 2.135e-2

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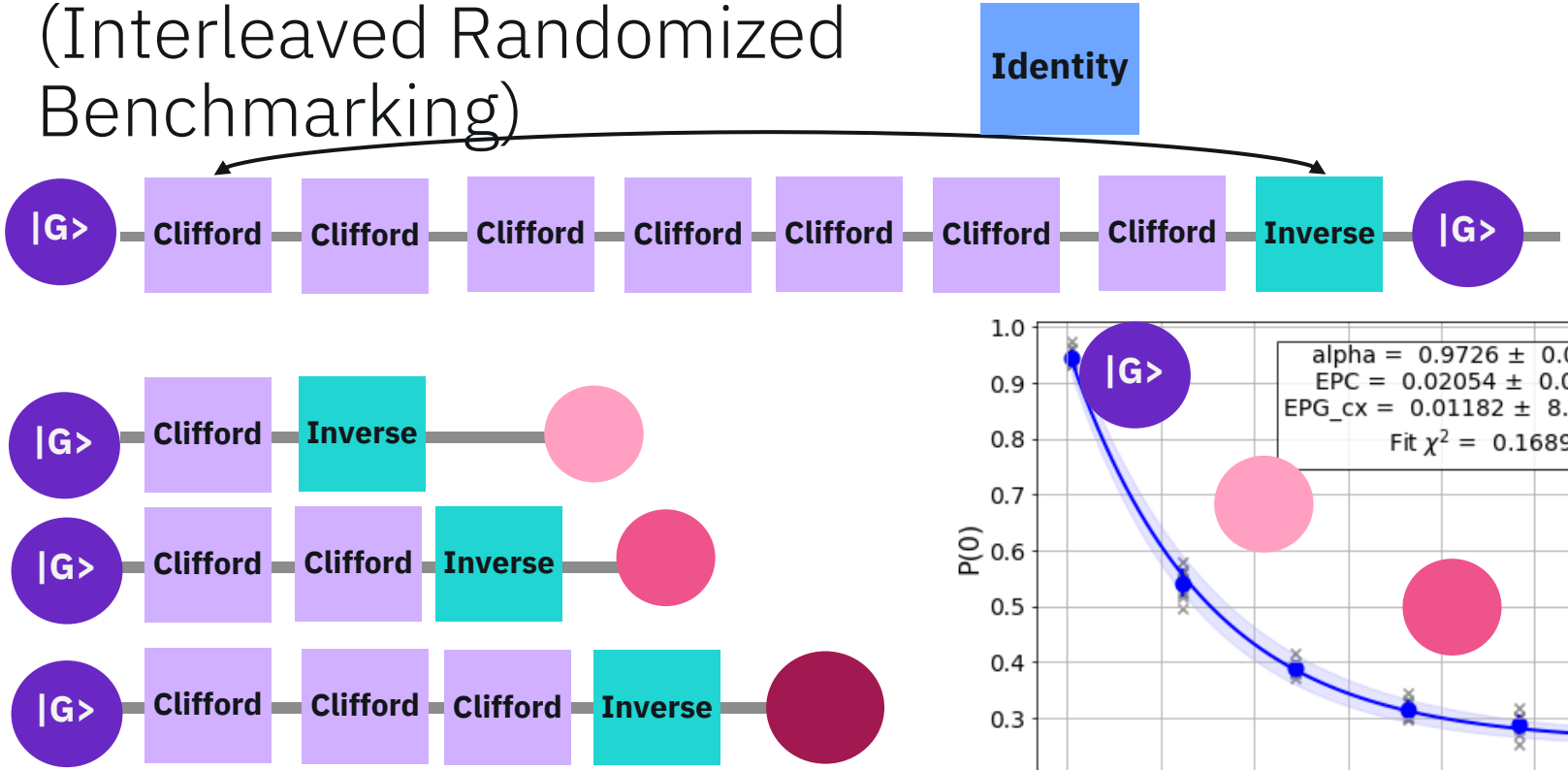

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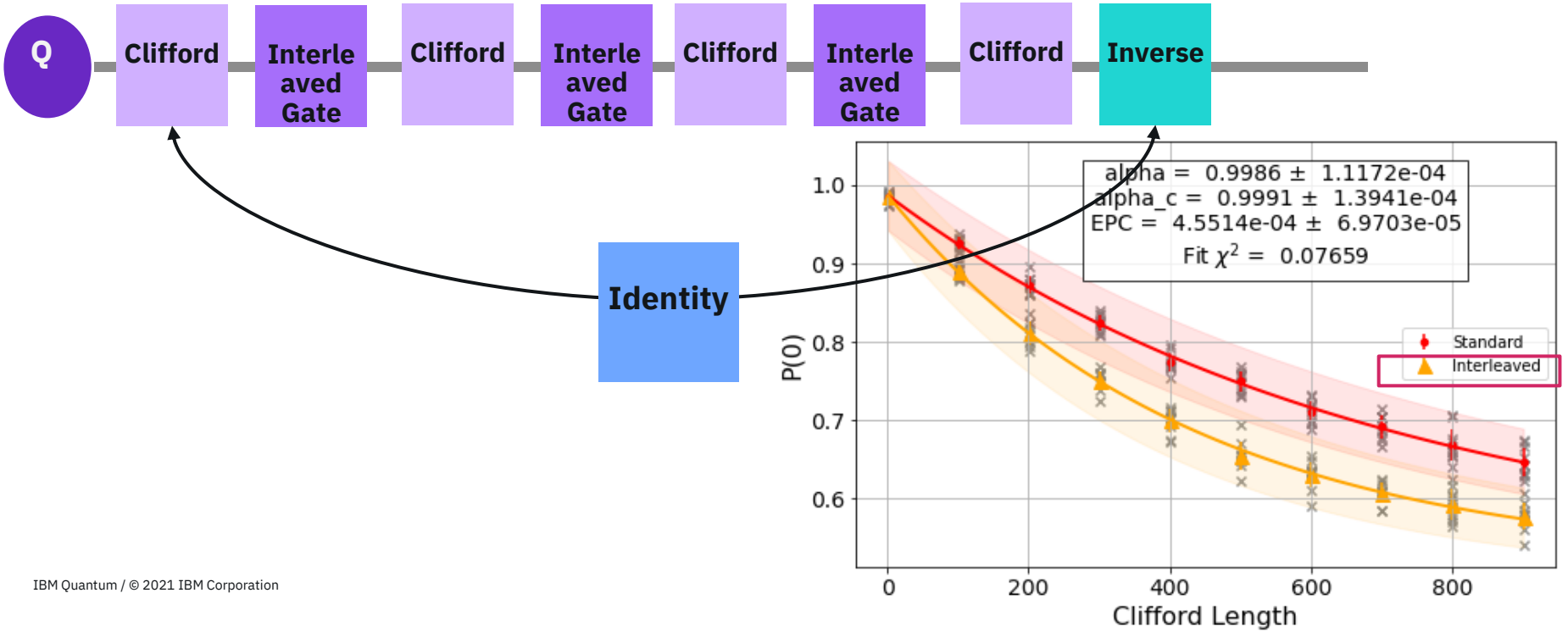
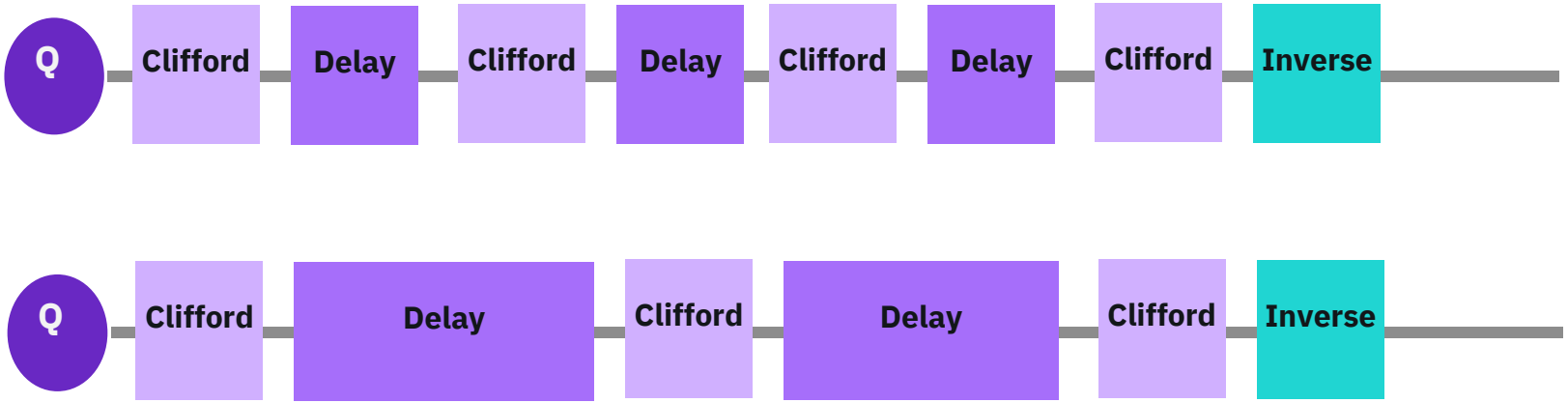
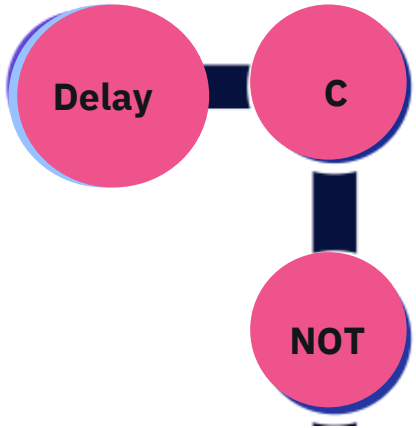
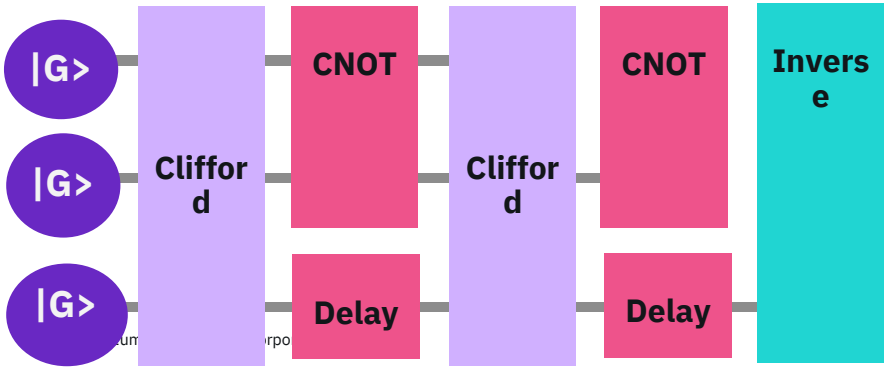


Project Goal :
Interleave ‘Delay’ Instruction



Why ‘Delay’ ?





- T1, T2 ➔ Theoretical Coherence Error
- IRB with ‘delay’ ➔ Real value

➔ Theory explains the real world Well !!!

Progress

Qiskit

Set up the Virtual Development Environment

```
conda create -y -n QiskitDevenv python=3
conda activate QiskitDevenv
```

Installing Terra from Source

Installing from source requires that you have a C++ compiler on your system that supports C++11.

Compiler for Linux | Compiler for macOS | **Compiler for Windows**

On Windows, it is easiest to install the Visual C++ compiler from the Build Tools for Visual Studio 2019. You can instead install Visual Studio version 2015 or 2017, making sure to select the options for installing the C++ compiler.

Randomized Benchmarking tutorial fails with the latest release #756

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bicycle315 commented 6 days ago • edited

Informations

- **Qiskit Experiments version**: 0.2.0
- **Python version**: 3.9.7
- **Operating system**: Window

Assignees

No one assigned

Labels

bug