Report Thesis

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Tuesday 4th April, 2017

1 Milestones

Tuesday 25th April, 2017
Installing and setup of hardware/software
Set-up cadence with the TSMC40 nm tools. Set-up liberty, and calculate the files for a single library component. I should familiarize myself with the design tools, partially helped by Alex to kickstart me.

Tuesday 2nd May, 2017
Running liberty through a subset of desired components and settings
Depending on how automized the process is, this part should be easy but time consuming

Tuesday 9th May, 2017
Analyze the first subset for performance translation
Analyze the consistency of performance changes for different components, and try to spot trends. This can also be backed up by a literature study and some math. While doing this continue to calculate the remaining components in liberty

Tuesday 23rd May, 2017
Finish up analysis of entire set and present findings
Go through the entire set where deemed necessary and draw conclusions. Based on findings construct presentation to present observations and design recommendations to discuss with coolgroup

Tuesday 30th May, 2017
Implement feedback in analysis where required
Depending on how well the work went, this should take a smaller time

Tuesday 4th July, 2017
Design a test IC (schematic), to verify library
Design a digital IC component to test out the new library. This component could somewhere between a fucntional system or a ring oscillator farm.

Tuesday 18th July, 2017
Design a test IC (layout)
Make the layout for the test IC.

Future

Make components for the QC

Make components for the qunatum computer where required while making use of my own library and the recommendations accompanying it.