



MQP-CS-DXF-NV22

NVIDIA Regression Testing Utilities

A **Major Qualifying Project** Report

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Abstract

Upgrades to the Android system on a Tegra chip may cause unintended hardware issues, including complications with clock generator and multiplexer components. Regression testing is required to ensure these impediments do not occur. Currently, manual testing of such components is time consuming and complex. We were tasked with developing utilities to automate this process. At the conclusion of our project, we were able to develop two tools that significantly reduced time spent on regression testing. The clock tree parser tool can efficiently compare clock trees and return issues with clock components. Similarly, the pin multiplexer tool can read, write, and debug register values with great ease of use.