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Power and Thermal Modeling

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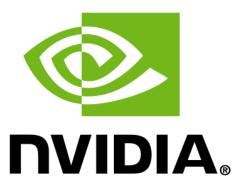
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Power and Thermal Modeling

A Major Qualifying Project submitted to the faculty of WORCESTER POLYTECHNIC INSTITUTE in partial fulfillment of the requirements for the Degree of Bachelor of Science
On 06 March 2015
By
Ali Akhtar
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Kwan Yeong Kim

Submitted to:

WPI Advisor: John Orr Sponsor: NVIDIA Liaison: Brian Smith

This report represents the work of three WPI undergraduate students submitted to the faculty as evidence of completion of a degree requirement.

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Abstract

The Tegra is a processor made by Nvidia which is used in many mobile applications. In designing advanced digital systems like the Tegra processor, it is essential to perform detailed simulations to understand and optimize the behaviors of many aspects of the chip. Specifically, power and thermal considerations are two co-dependent parameters that must be understood during the design phase. This project developed a flow to import existing power and thermal models of the Tegra processor into a new software package from Docea Power that integrated the power and thermal domains for simulations and architectural analysis.

The full report will be posted under the authorship of Kwan Yeong Kim