Dear Ms. Ahlers,

Enclosed is the final report entitled Power Optimization Method in Heterogeneous Multicore Processors.

This technical report focuses on the advantages of heterogeneous multicore processor architectures in four main areas of performance, efficiency, compatibility, functionality. It unites the four categories under the common purpose of reducing the overall power consumption in a multicore processor designs. Performance and efficiency sections, characterized by their experimental nature, contain simple but accurate mathematical analysis of how multicore architectures help to improve processor speed and power consumption. More theoretical discussion follows in compatibility and functionality sections that outlines additional advantages and challenges posed by multicore processors. I didn’t find it helpful to divide the report into experimental and theoretical sections because this would further separate the four main sections that are closely dependent on each other. The report concludes with a feasibility study that foreshadows the future of the technology and its impact on our lives.

Initially, I was planning to write a technical report that was targeted strictly at computer architecture engineers. However, throughout my research I have found that “the big picture” approach better illustrates the superiority of multicore processor architectures. I found that I was more interested in researching the entire field of multicore processors rather one particular example of this type of architecture. As a result, my report targets the managerial audience which has some background in electrical engineering. It provides a balance between statistical data and theory which I believe is essential for basic understanding of this topic.

I really appreciate the guidance, mentorship and assistance you provided with this difficult research project. I truly enjoyed working with you and the students of the class. If you have any questions or concerns, please do not hesitate to contact me at asv22@cornell.edu or 917-751-7377. Thank you very much.

Sincerely,

ALEXANDER VATKALOV
COLLEGE OF ELECTRICAL AND COMPUTER ENGINEERING
CORNELL UNIVERSITY

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Enclosures