High Performance Discrete Event Simulation

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**Abstract**—Supercomputing paradigms and high performance computers have continued to play an intricate role in bridging the gap between application demands and what technology can provide. The emergence of the CDC600 supercomputer marks the first major gain towared narrowing the computation gap. This paper explores the performance features of the CDC6600 as well as the enhancements provided by its successor, the CDC7600. A discrete event simulator written in SystemC will be used the vehicle of exploration.

**Index Terms**—High Performance Computer, Performance measures, simulation

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# 1 Introduction

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# 2 Cray SuperComputers

## 2.1 CDC6600

## 2.2 CDC7600

# 3 The SystemC Library

# 4 RESULTS

# 5 CONCLUSION AND FUTURE WORK

# Appendix

Appendices, if present, will appear online as supplemental material. In the event multiple appendices are required, they will be labeled “Appendix A,” “Appendix B, “ etc.