

# LogCA: A High-Level Performance Model for Hardware Accelerators

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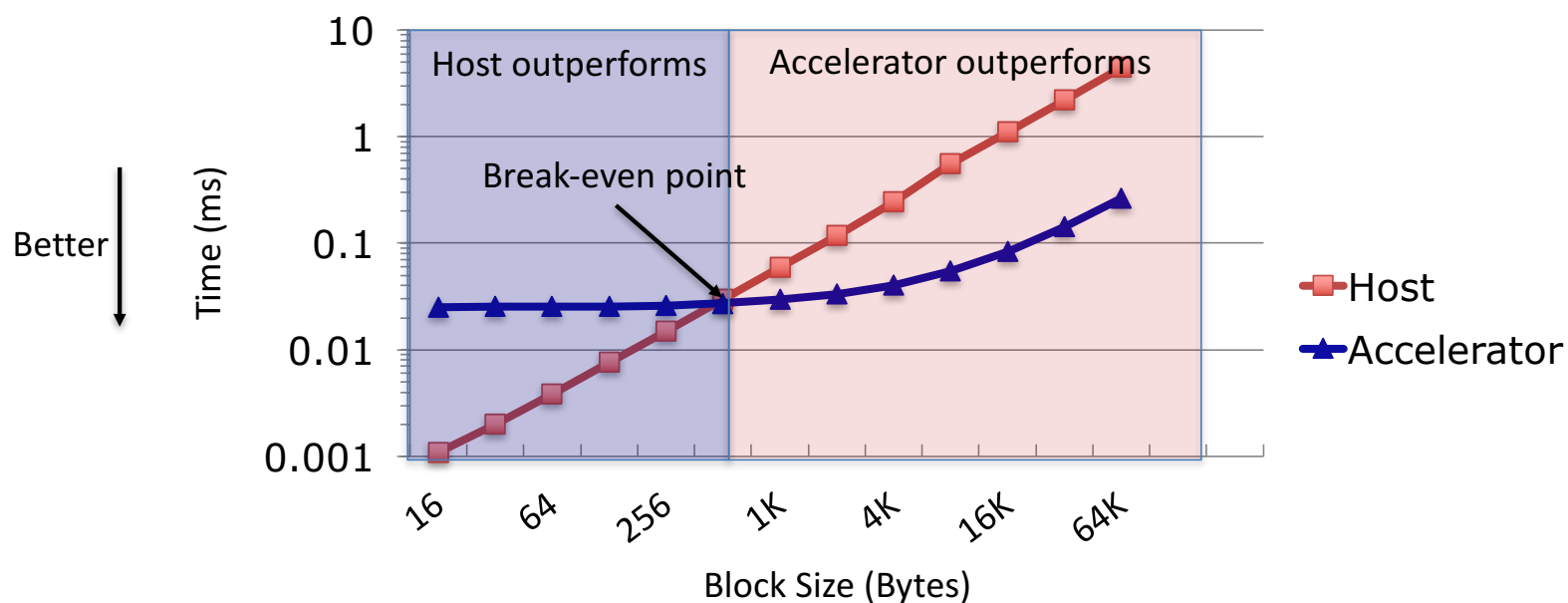
University of Wisconsin-Madison

- Accelerators do not always perform as expected
- Crucial for programmers and architects to understand the factors which affect performance
- Simple analytic models are beneficial early in the design stage

\*Now at AMD Research, Austin TX

# Why a Model?

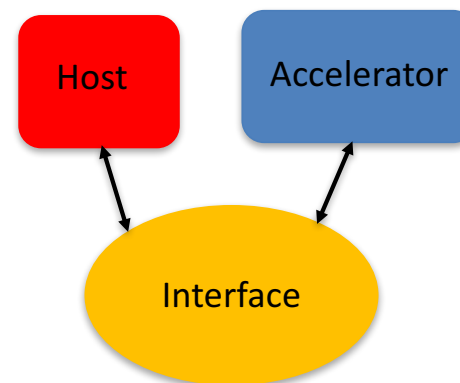
Encryption algorithm on UltraSPARC T2



**Amdahl's Law for Accelerators**

# The LogCA Model

- Five simple parameters
  - **L** Latency
  - **o** Overhead
  - **g** Granularity
  - **C** Computational index
  - **A** Acceleration



Tuesday, 2:00pm-3:20pm, Session 6A: Accelerator Design