Leveraging Hardware Capabilities for Building Dependable Many-Core Operating Systems (WIP)

Poster Companion Video

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End of Moore's Law [3, 4]

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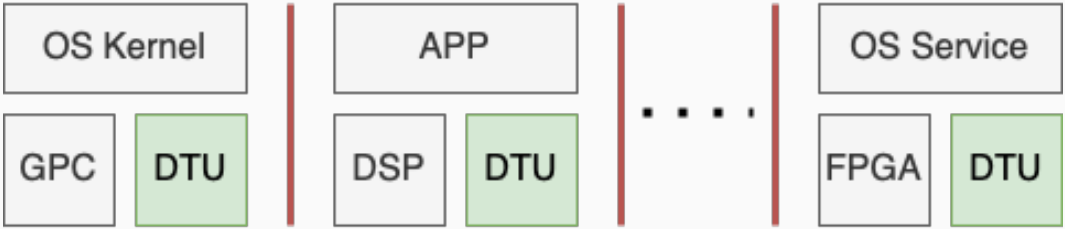
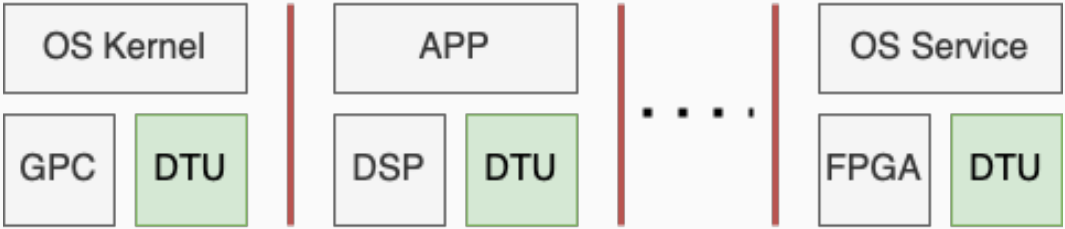
- Operating System design that supports heterogeneity

M^3 [1, 2]



Many-core Architectures

M^3 [1, 2]



Many-core Architectures

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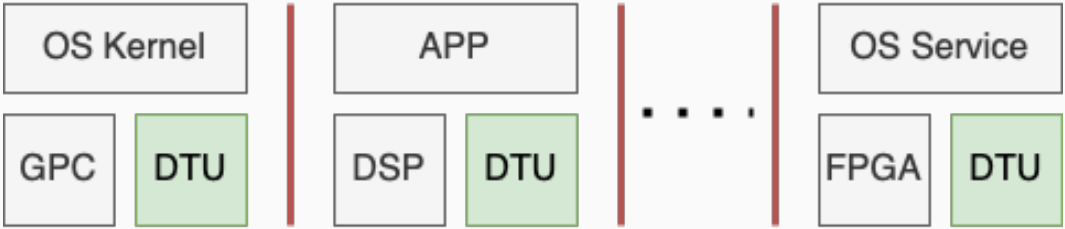
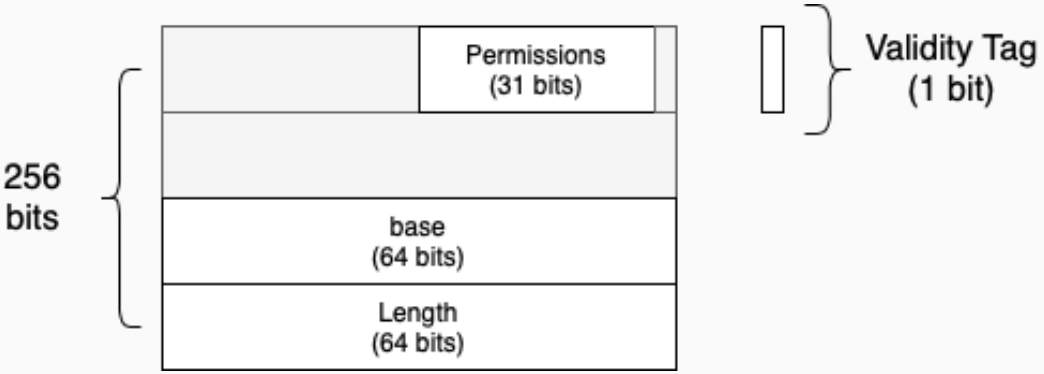


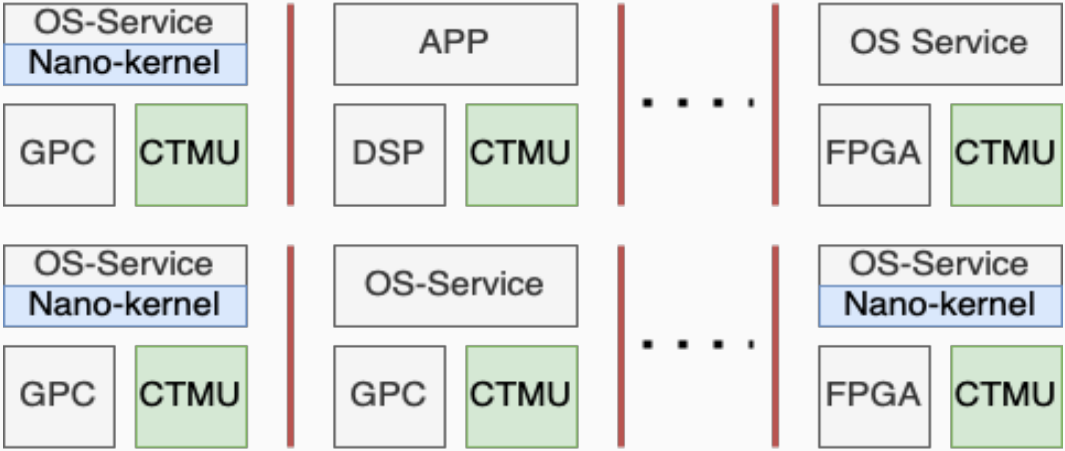
Many-core Architectures

- Support for heterogeneity
- Little attention to dependability

Background: CHERI [5]

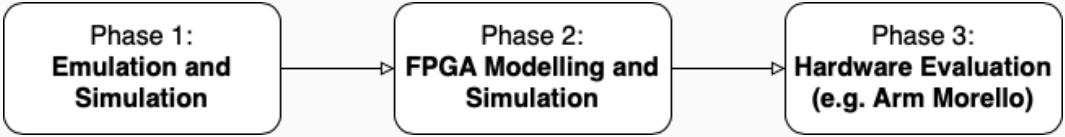


Kernsensus Overview



GPC = **G**eneral **P**rocessor **C**ore, FPGA = **F**ield **P**rogrammable **G**ate **A**rray,
DSP = **D**igital **S**ignal **P**rocessor

Evaluation Plan



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Kernsensus: A consensus driven kernel design for Many-core OSs

References i

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