



Mixed-Signal SoC Emulation Technology

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Designs Thrust Posh Open Source Hardware (POSH)

Need

- Emulation technology enables Early Software (SW) Bring-up & System Validation for digital portion of SoC
- System verification gap: SoC designs and especially DoD designs, have a mixture of digital and analog content
- No technology in industry to emulate AMS part of an SoC design

Novel Mixed-Signal Emulation Solution

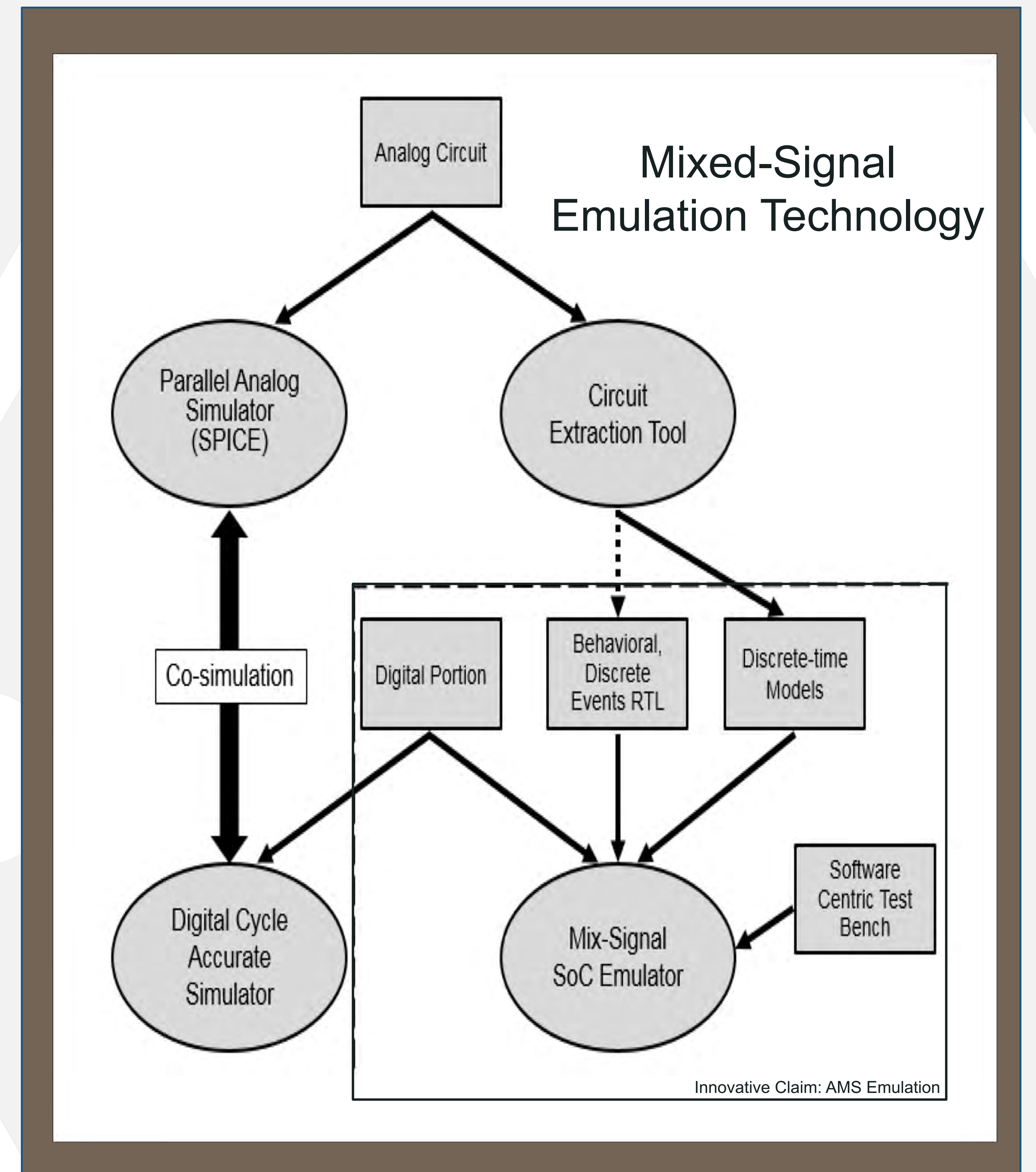
- New AMS Methodology & Set of Emulation SW Technologies
- Achieve MHz+ speeds when run on existing Hardware (HW) Emulation Platforms

Innovative Claim

- Converging Digital & Analog IP/SoC designs into a FPGA-based Emulation System to Achieve up to 100x Performance Gain vs. Simulation
 - High-level synthesis
 - Analog circuit conversion to discrete-time approximate
 - Distributed time scheduler infrastructure
 - Automatic design partitioning

Impact

- Increased Engineering Efficiency for IP/SoCs designs with analog mixed-signal content
- Improved digital, analog, and mixed-signal verification flow
- Faster Time-to-Market
- Improved Quality of Mixed-Signal SoC Designs



Prime Contractor: Synopsys, Inc.

Sub-Contractors: Lockheed Martin, Analog Devices, and Analog Circuit Works