Contribution ID: **30**   Type: **not specified**

LoCod: an open-source hardware/software co-design tool for SoC/FPGA

Wednesday, 12 June 2024 17:55 (20 minutes)

LoCod (French acronym for "codesign software") is an open-source hardware/software codesign tool, targeting Zynq UltraScale+ and NanoXplore NG-Ultra systems-on-chip and could be extended to any heterogenous target including FPGA and processor.

From a C language source code, developers can choose, with basic code decoration, which functions of the algorithms should be implemented on the FPGA and which are to run on the CPU. LoCod then automatically performs the code conversion and hardware implementation, as well as the interfaces to transmit data between CPU functions and FPGA functions. It is easy to explore different implementation architectures by moving a function from the CPU to the FPGA (or FPGA to CPU). The presentation will provide technical insights about these steps.

LoCod has been developed by CNES and Viveris Technologies with a mix of in-house developments and existing open-source tools like PandA/Bambu HLS framework.

Talk's Q&A

During the talk

Talk duration

15'+7'

Will you be able to present in person?

Yes

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Session Classification: HDL development, verification, and simulation tools

Track Classification: HDL development tools