

Automatic Assembler Generator for NoGap

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Abstract

Flexible Application Specific Instruction set Processors (ASIP) are starting to replace monolithic ASICs in a wide variety of fields. However the construction of an ASIP is today associated with a substantial design effort. NoGAP (Novel Generator of Micro Architecture and Processor) is a tool for ASIP designs utilizing hardware multiplexed data paths. One of the main advantages of NoGAP compared to other EDA tools for processor design, is that NoGAP impose few limits on the architecture and thus design freedom.

This paper describes the automatic assembler generation process for processors generated by NoGAP. The automatic assembler generation is carried out by our assembler generator tool. This paper describes the principle behind- and implementation of AsmGen.