

# **CRISP: A scalable VLIW processor for low power multimedia systems**

PhD title: "CRISP: A scalable VLIW processor for low power multimedia systems"

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In order to cope with the dynamism of current and future multimedia applications, an ideal multimedia device will be based on one or more programmable processors specially designed for the application domain. Realizing this device requires an amazing increase in processor's computing power while keeping the energy consumption growth at a minimum. The purpose of this dissertation is to prove that widening a very long instruction word (VLIW) processor can be an effective way to improve the energy efficiency of multimedia applications if the adequate architectural and compilation techniques are used to overcome the scaling limitations of VLIW processors.

As a proof, the dissertation presents and evaluates the coarse-grained reconfigurable instruction set processor (CRISP) architecture and its compiler.