AVR8 virtual processor on FPGA

[Jack] wrote in to let us know about a project that creates a virtual microprocessor core based on the ATmega103 by using a Field-Programmable Gate Array. Great, we thought. Here's another rather esoteric project like the NES on a FPGA, but what's the motivation behind it? We asked [Jack] and he provided several scenarios where this is quite useful.

Implementing the AVR core allows code already written for the chips to be easily ported to an FPGA without a code rewrite. This way, if your needs outpaced the capabilities of the microcontroller long after the project has started, you can keep the code and move forward from that point with the added capabilities of the gate array. Having the core already implemented, you then only need to work with HDL for the ....

SRC: http://hackaday.com/2009/11/19/avr8-virtual-processor-on-fpga/