Educational Activities for the FPGA Mission Assurance Center

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Abstract

Field Programmable Gate Arrays (FPGAs) provide an excellent mechanism for schools from the high school level through graduate level to teach concepts of digital logic in a hands-on environment. FPGAs are "chameleon chips" that are also critical components in state-of-the-art systems from spacecraft to handheld devices to network routers. To master them, students must understand the design of memory registers, interfaces, and even whole processors into the FPGA "fabric". All of these must be practiced in under challenges of timing, area, fanout and other key constraints. Talented FPGA designers are rare and extremely valuable. The FMAC consortium brings together New Mexico R&D facilities, both public and private, including University of New Mexico, Air Force Research Lab, Xilinx Inc., Los Alamos National Lab and Sandia National Lab. This consortium conducts research, education, and direct project assistance to ensure success of FPGA developments. The FMAC is at your service to assist schools at any level in this rapidly growing field. Visit our website (www.fpgamac.com) for more information.