

MatLab/Simulink-based design flows are being used by DSP designers to improve time-to-market of FPGA implementations. 1 Commonly, digital signal processing cores are integrated in an embedded system as coprocessors. Existing CAD tools do not fully address the integration of a DSP coprocessor into an embedded system design. This integration might prove to be time consuming and error prone. It also requires that the DSP designer has an excellent knowledge of embedded systems and computer architecture details. We present a prototyping platform and design flow that allows rapid integration of embedded systems with a wavelet coprocessor. The platform comprises of software and hardware modules that allow a DSP designer a painless integration of a coprocessor with a PowerPC-based embedded system. The platform has a wide range of applications, from industrial to educational environments.

Keywords: Wavelets, coprocessor, FPGAs