Abstract

An Application Specific Instruction set Processors (ASIP) or alternatively known as customized processor is a processor designed for a particular application or for a set of applications. Earlier surveys show that though a significant research has been done for this most promising processor design technology, still approaches used in them are lacking in methodologies to define processor configuration based on the requirements of the applications. There are number of approaches claiming to design and synthesize ASIPs but they are facing many challenges. This paper is an attempt to find major challenges faced by them as well as the current state of these promising techniques adopted by the industry. This paper also analyzed their effort to know really what they could have achieved so far and identified what should be done to make these techniques successful. If some limitations can be removed soon, these techniques are going to expand in an explosive manner.
- Tensilica Inc. homepage, Available: http://www.tensilica.com

Index Terms

Computer Science
Security
Instruction Customization: A Challenge in ASIP Realization

**Keywords**

- Application Specific Instruction set Processor (ASIP)
- Custom Processor
- Embedded System
- Micro-architecture
- Simulation
- and Synthesis.