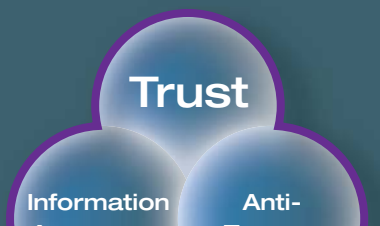
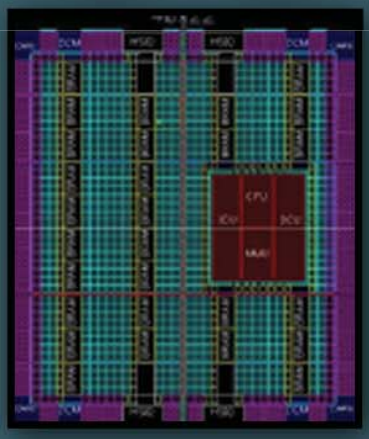
MacB Integrated Laboratories

Secure Computing and Communications Lab

Roanoke, Virginia

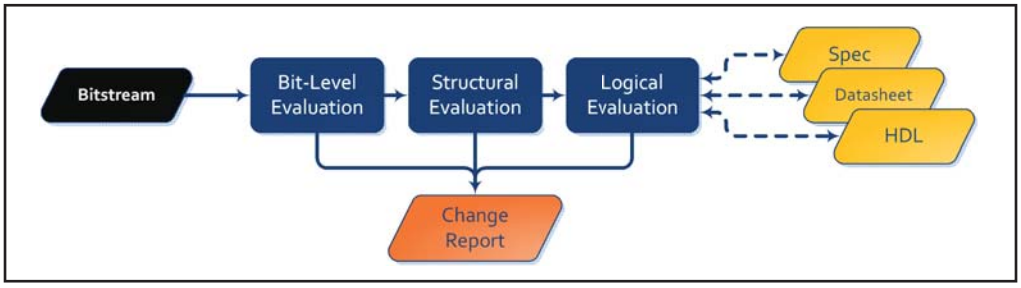




Overview

MacB's Secure Computing and Communications (SCC) Division is fully accredited as a Trusted Integrated Circuit Supplier to Trusted Category 1A, accredited by the Defense MicroElectronics Activity (DMEA), to keep defense microelectronic systems trusted, safe and mission ready. Our 12K square-foot facility is focused on state-of-the-art microelectronics, reverse engineering, anti-obsolescence and software development. We rapidly prototype hardware and software for quick proof-of-concepts as well as create, integrate and test production quality products for maximum traceability, accountability and stability.

Hardware prototyping is supported with two mainframe logic analyzers, each with 134 channels and available slots; numerous high-end Field Programmable Gate Arrays (FPGA) development boards; several development servers with FPGA development tools, virtual machine software and other development and reverse engineering tools; as well as peripheral instruments like Fluke multimeters, soldering stations and a ball grid array (BGA) rework station.



We maintain in-house expertise for developing Electronic Design Automation (EDA) tools, GUIs for data visualization and process management, embedded code, device drivers for Linux and Windows, Linux kernel modifications, high speed data acquisition, web-enabled collaborative tools and clustered computing. Our in-house EDA libraries provide a solid base for rapid development of circuit analysis tools that have a proven track record in deployment. Our processes provide maximum traceability and stability from design documents to end product, including source code control that is efficiently managed and backed up by automated tools, bug tracking, scheduling and quality assurance testing.

In addition to custom developed tools, MacB engineers leverage industry leading third-party EDA and reverse engineering tools for simulation (e.g. Mentor Questa), formal verification (e.g. OneSpin 360), synthesis (e.g. Synopsys® Synplify®), debugging tools (e.g., Synopsys® Verdi), and software reverse engineering tools (e.g., IDA Pro). We maintain expertise in C/C++, C#, VB.NET, Java, Python, PHP and ASP.NET.

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