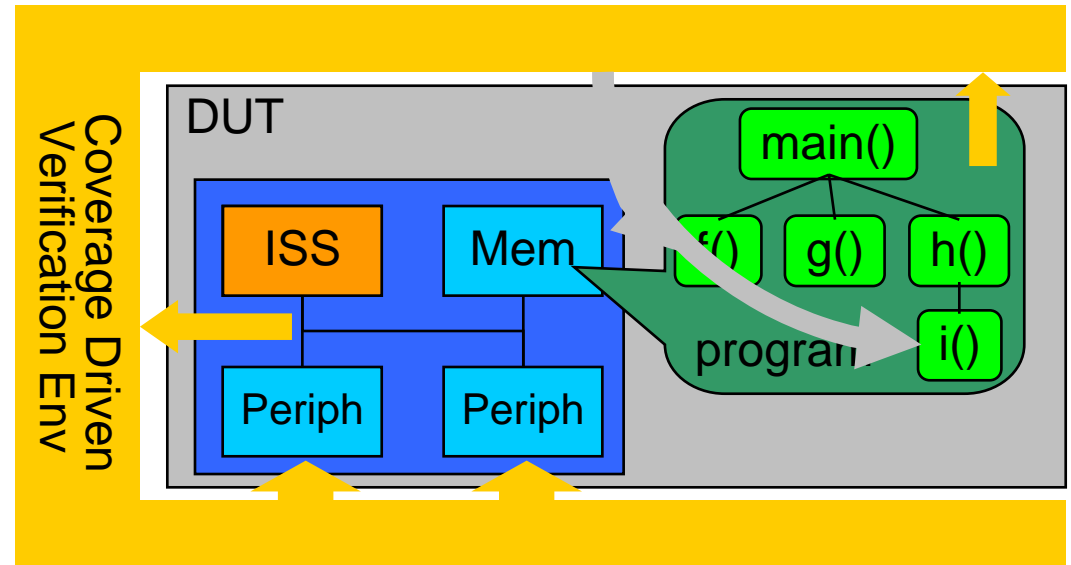


Systems-on-Chip (SoC) for HW/SW State-Space Co-verification and Architectural Exploration

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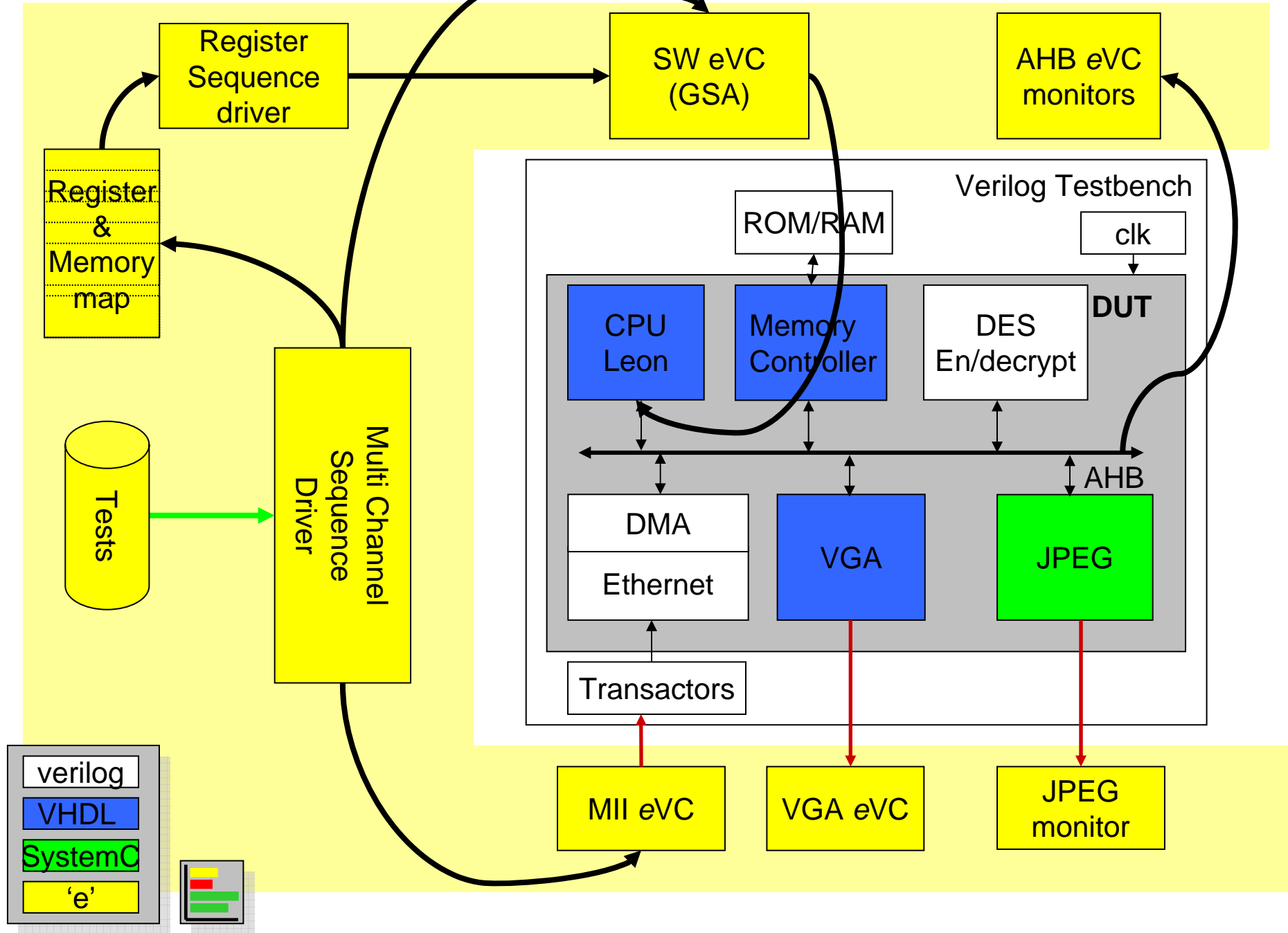
What is the Generic Software Adapter?

- Adapter's are mechanisms of Connecting the Verification environment to a simulation engine:
 - HDL Simulators (Incisive Unified Simulator (IUS), MTI, VCS, etc..)
 - SystemC Simulators (IUS/NC-SystemC, OSCI)
 - SystemVerilog Simulators (IUS, MTI, VCS, etc..)
- Verification environment is constant
 - DUT implementation may change
- Generic Software Adapter (GSA)
 - Provides a connection between CDV IDE & SW running on an embedded CPU

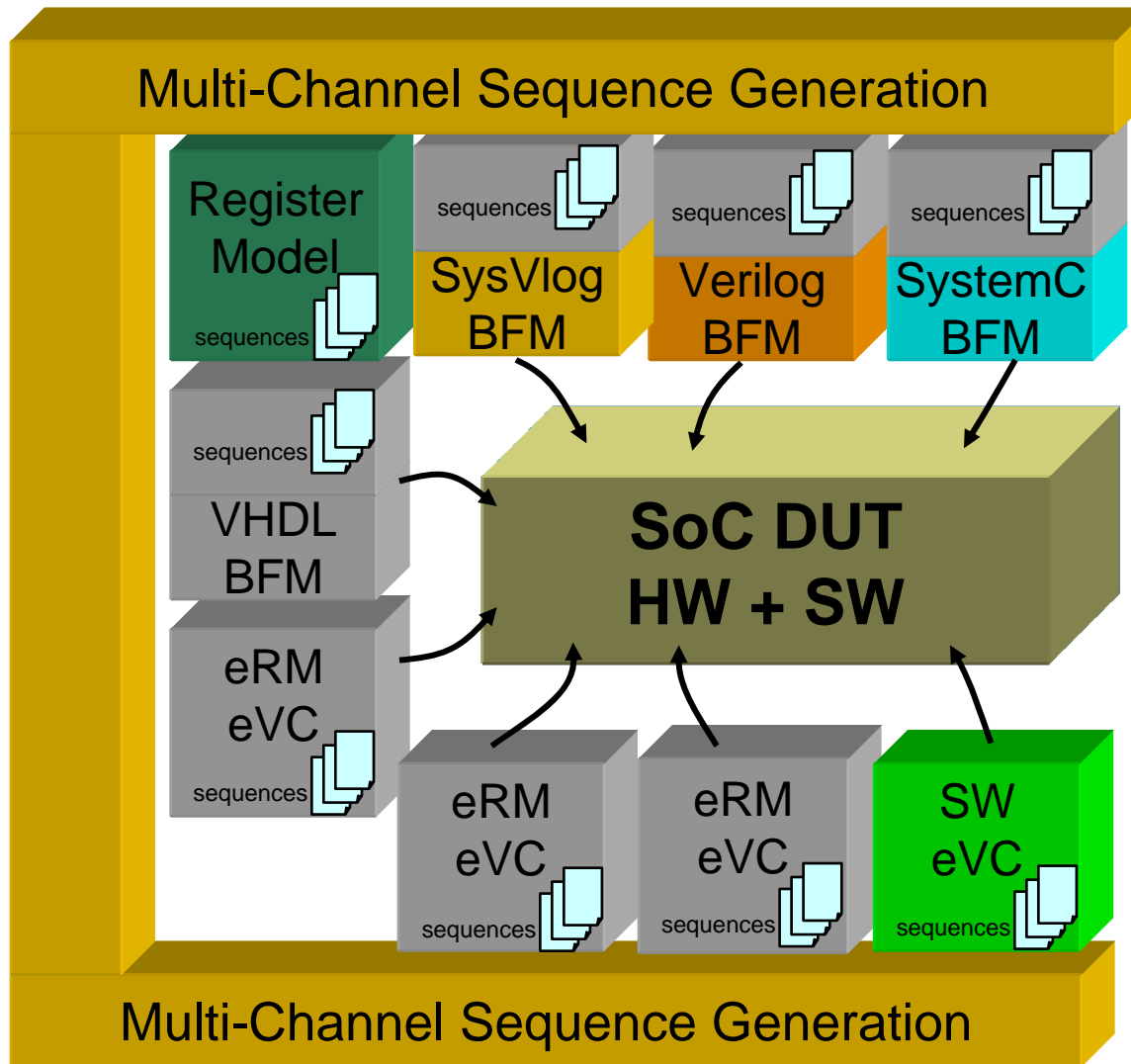


- GSA provides a direct interface between the software eVC and the software running on the Processor
 - Make calls to software routines
 - Monitor software state (global variables)
 - For checking and coverage purposes
 - Implement software routines in the verification environment
- GSA automatically sets up and manages a mailbox in System Memory to communicate with the Software
 - User must define how to communicate with the system memory
- Allows us to use all of the capabilities of a CDV verification tool on HW and SW simultaneously
 - Constrained Randomized stimulus, combined functional coverage, protocol and data checkers

GSA hooks into Embedded Software



Heterogeneous Verification Environments



SCDV

SCDV
Tools:
vManager

