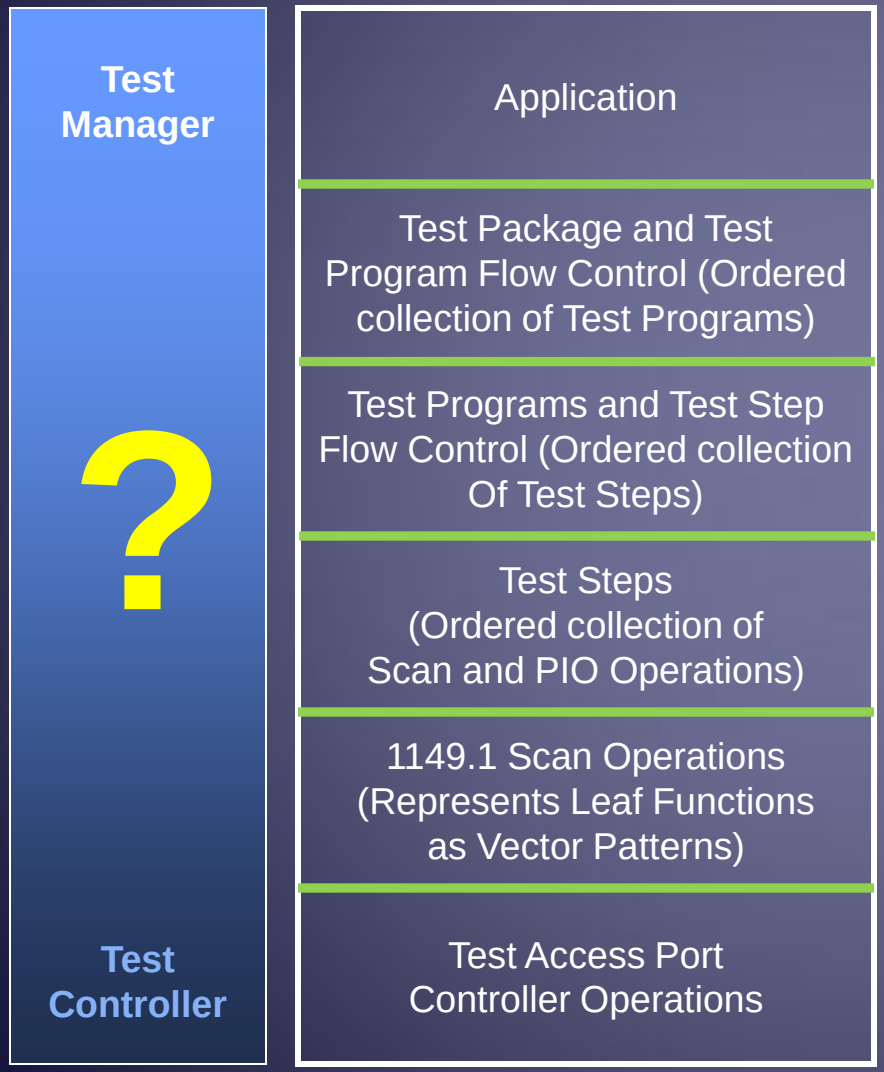
Test Managers and Controllers in the SJTAG Domain

Discussion

Insights of Modularity

- *"An implementation of an SJTAG architecture in a system allows **Test Programs**, running on **Test Controller**(s), to operate on **Bscan controlled Functions** in **Bscan enabled components**."*
  - Gunnar Carlsson, Ericsson, former SJTAG Vice-chairman

Layers of Software



- Avoid thinking in terms of "hardware":
  - Capabilities may co-reside within the same hardware or may not but will retain their own distinct "role" in either case.
- There are defined interface boundaries between each layer.
- Green lines show interface boundaries.

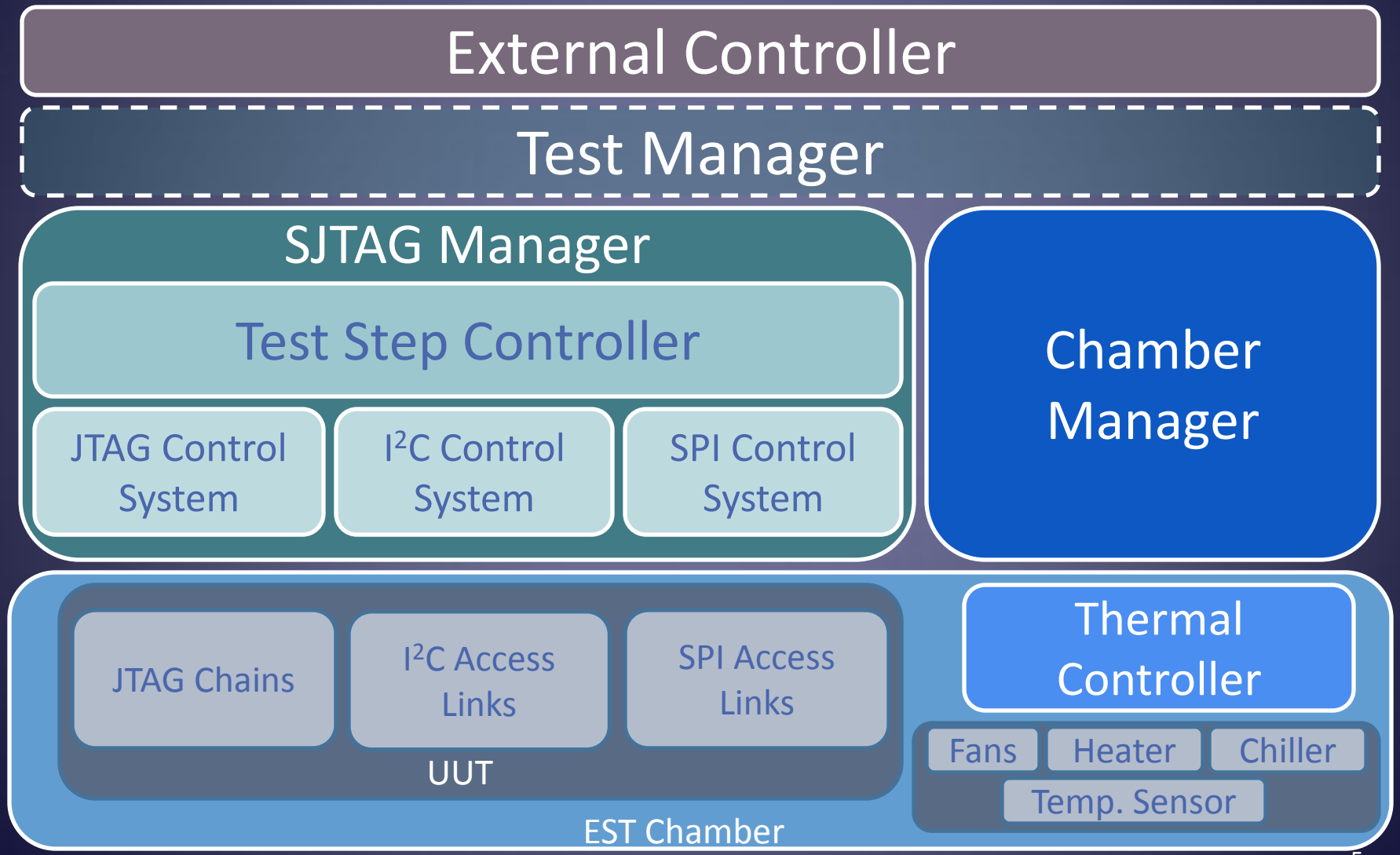
Definitions

- **SJTAG Manager:** A term used to describe any combined hardware/software SJTAG Control System that is used as a free-standing or integral on-line runtime controller providing top-level management of UUT test or configuration operations.

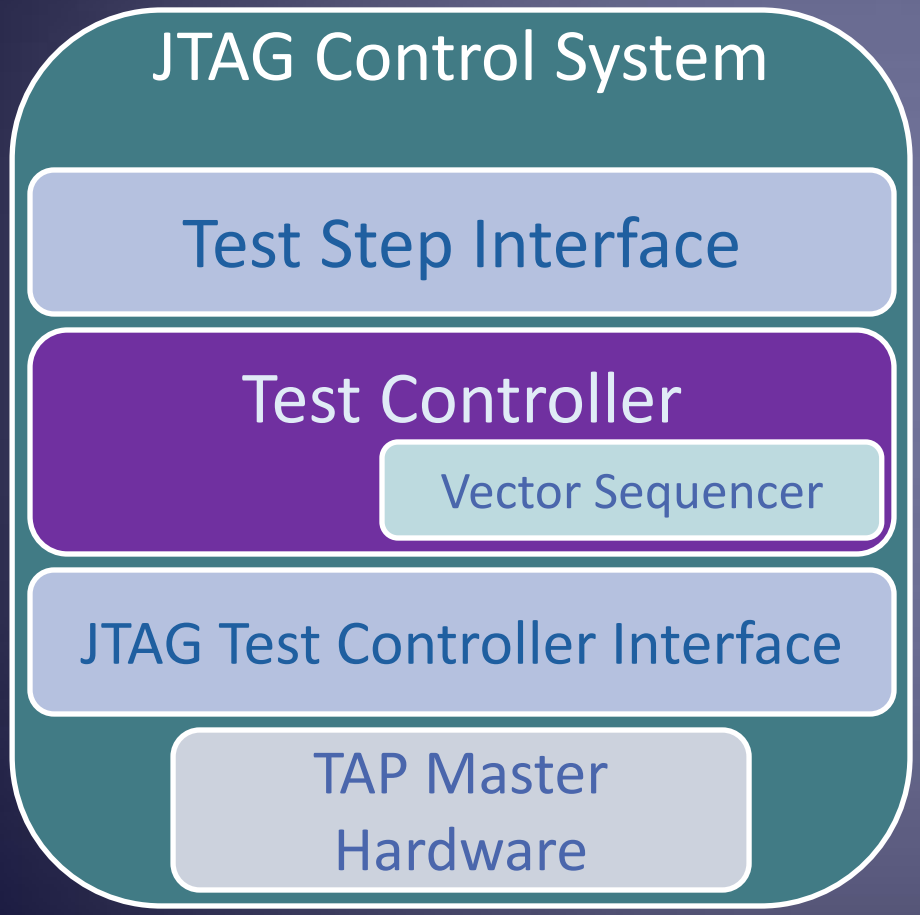
- **Control System:** A term used to describe any combined hardware/software entity that provides control of the execution of some part of the application. Multiple Control Systems may exist and responsibility may be delegated from one to another in a hierarchical manner.

- **Test Step:** A singular operation for which the next highest level in the control hierarchy is able to resolve control.

An Example – EST Case



JTAG Control System



- JTAG Control System shown as example
- Similar model applies to all other “Control Systems”

The Test Manager Problem

- Since the transition from Test Manager to Test Controller is determined by architecture, how do we know the capability of each?
  - Can we break this down into more deterministic parts?
  - Does the Test Manager subsume some of the lower level entities or interface to them?
- If we say the SJTAG Manager is responsible for all operations within the SJTAG domain, how do we interface to other domains?
  - Can, or should, the SJTAG Manager take the “overseer” role?
  - Is there always an “overseer”?