Jump-Start Portable Stimulus Test Creation with SystemVerilog Reuse

Matthew Ballance
matt_ballance@mentor.com

Portable Stimulus Specification
- Scope (Integration)
  User
  - System/Concept/Scenarios
  - Use Case/Verification
  - Runtime Portable Semantics

Abstract Portable Stimulus Model
- Tools (Secret Sauce)
  - APIs

Guidelines: Structuring SystemVerilog for Reuse
1. Avoid use of inline constraints
2. Avoid procedurally enabling/disabling constraints
3. Avoid constraint references to class-external variables
4. Specify covergroups in terms of a single class

Avoid Inline Constraints
- Inline constraints procedural construct, not declarative
- Usually contain references to procedural-code variables

Avoid Procedurally Enabling/Disabling Constraints
- Use of constraint_mode() prevents independent evaluation
- Refactor as classes with additive constraints
- Refactor as classes with subtractive constraints