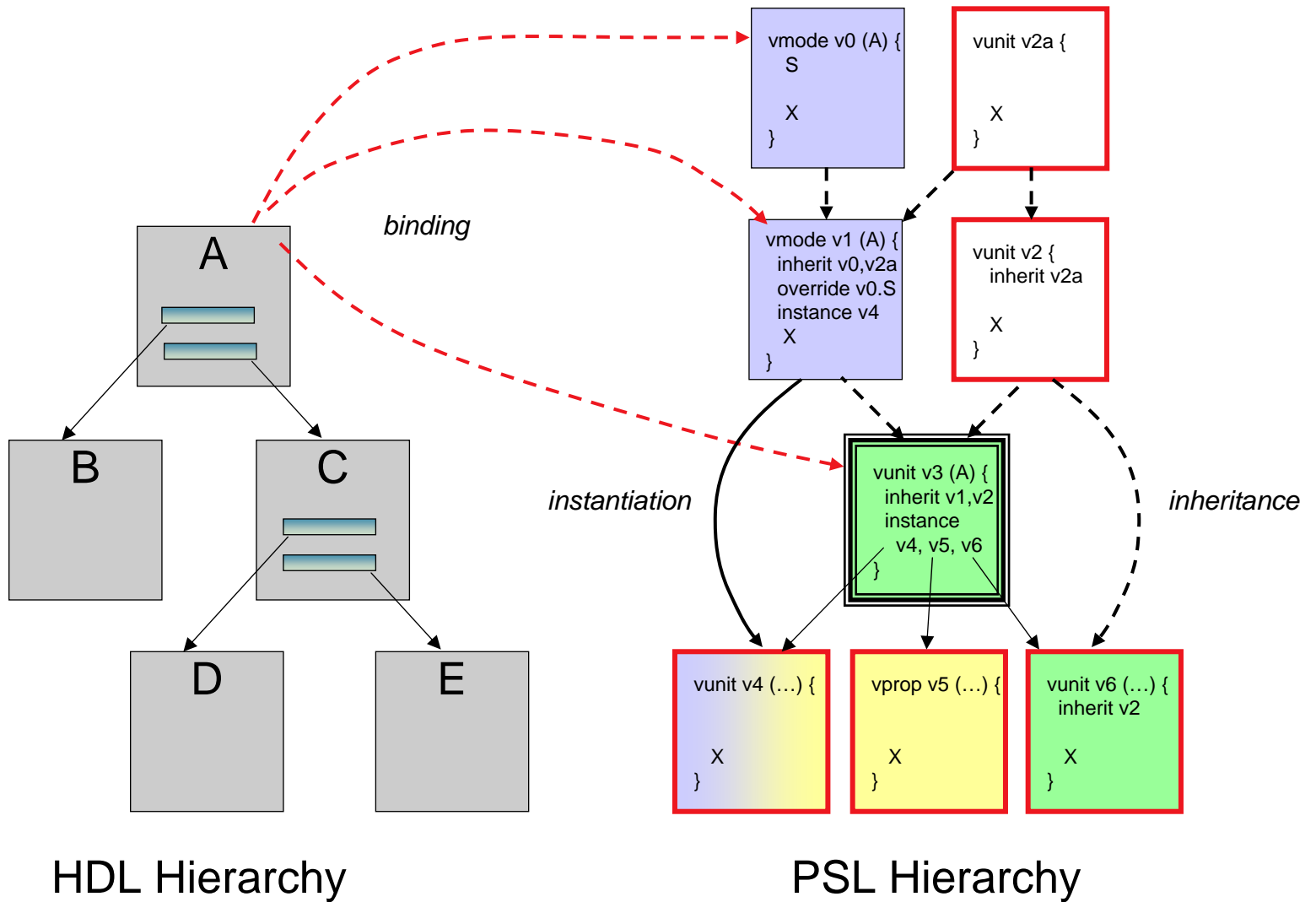


Verification Unit Use Models

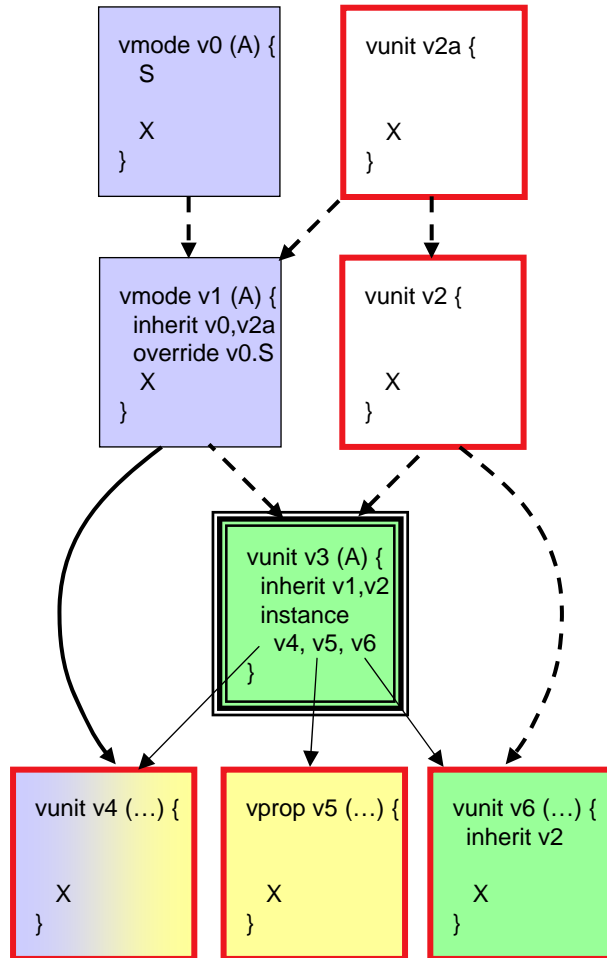
Erich Marschner

27 March 2007

Verification Unit Inheritance / Instantiation



Classes of Vunits and Their Characteristics



- **package**
 - A vunit that contains only declarations
 - Contains no non-local refs, and no modeling code
 - Is neither bound nor parameterized
 - May be inherited by any other vunits

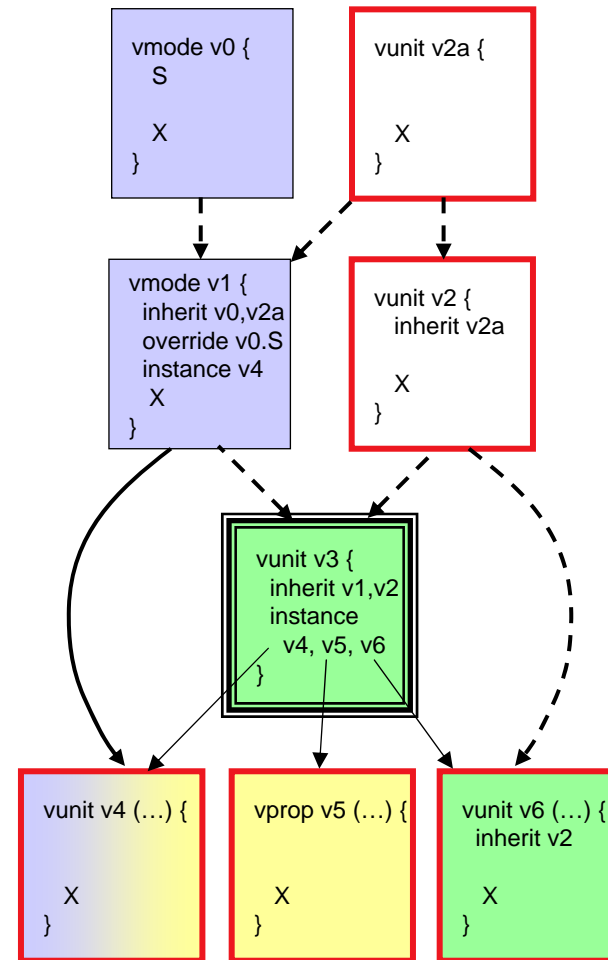
- **environment spec (aka vmode)**
 - A vunit that contains environment constraints and/or modeling code
 - May be bound, but not parameterized
 - May be inherited by any vunit other than a package
 - May inherit, and may override, other vmodes

- **requirement spec (aka vprop)**
 - A vunit that contains assertions to check
 - May be bound or parameterized
 - May be inherited by another vprop or vunit

- **general vunit**
 - Union of all other capabilities
 - If parameterized, may be bi-modal (env, reqs)
 - May be inherited by another vunit

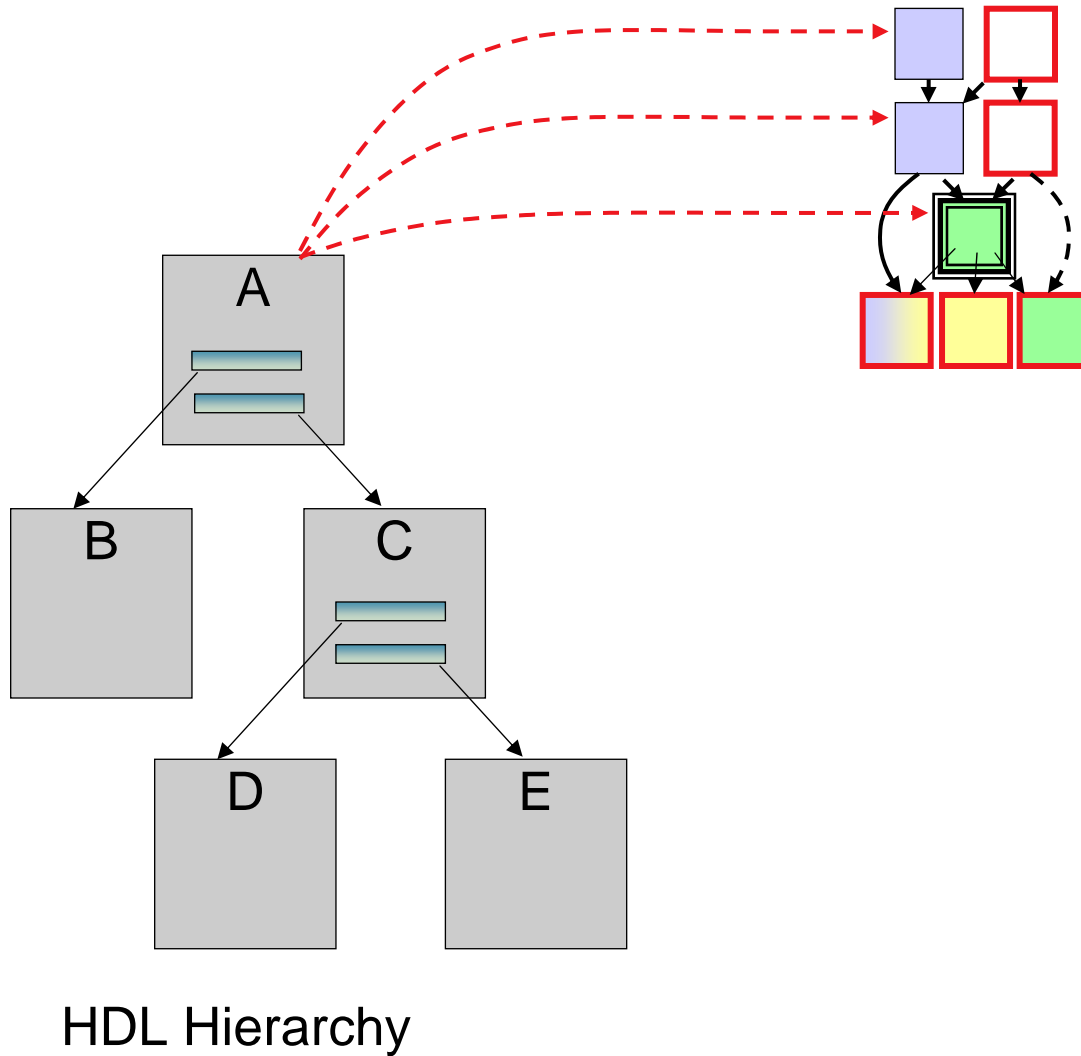
Abstract Use Model

- No HDL involved
- No binding involved
- Env specs are abstract

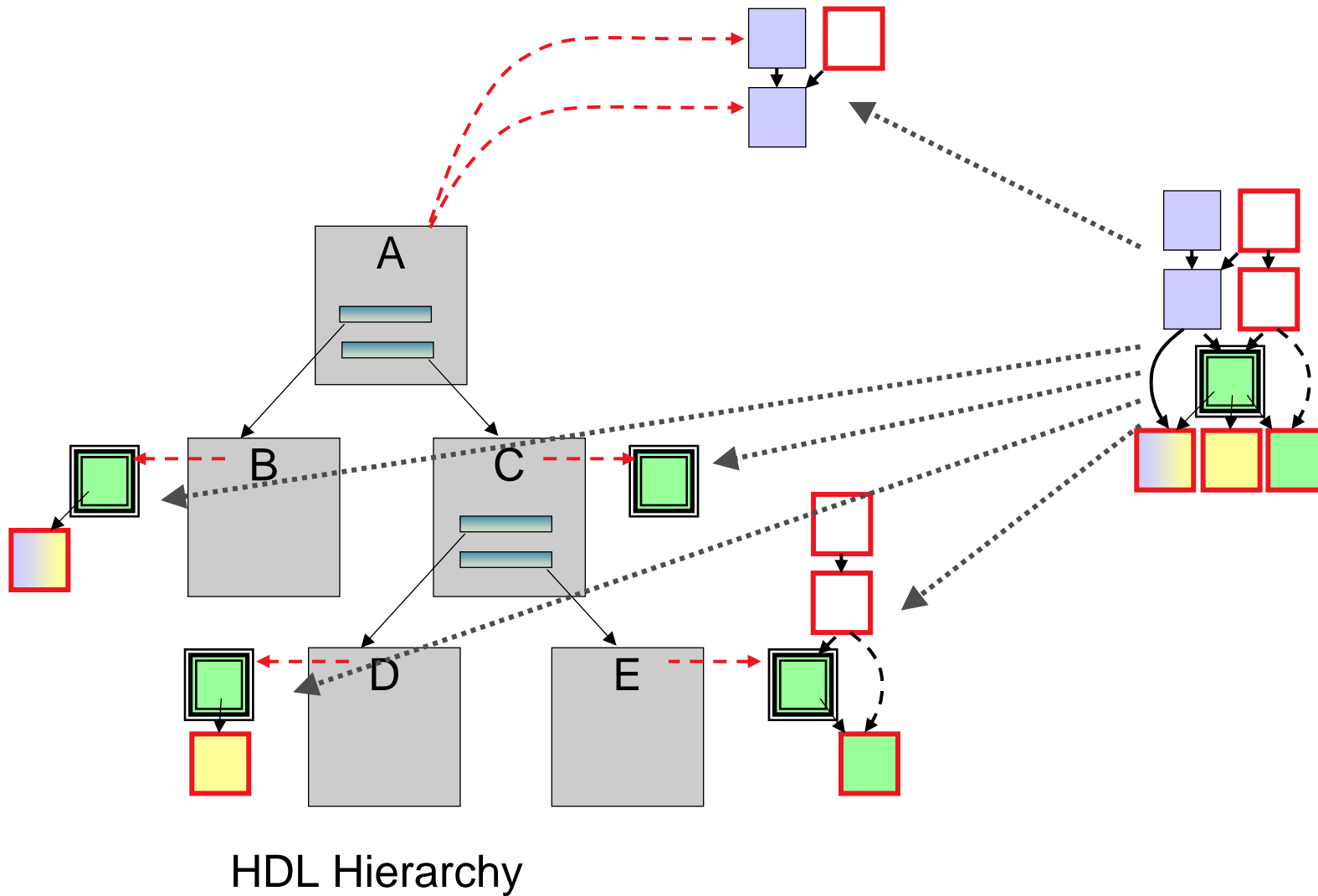


PSL Hierarchy

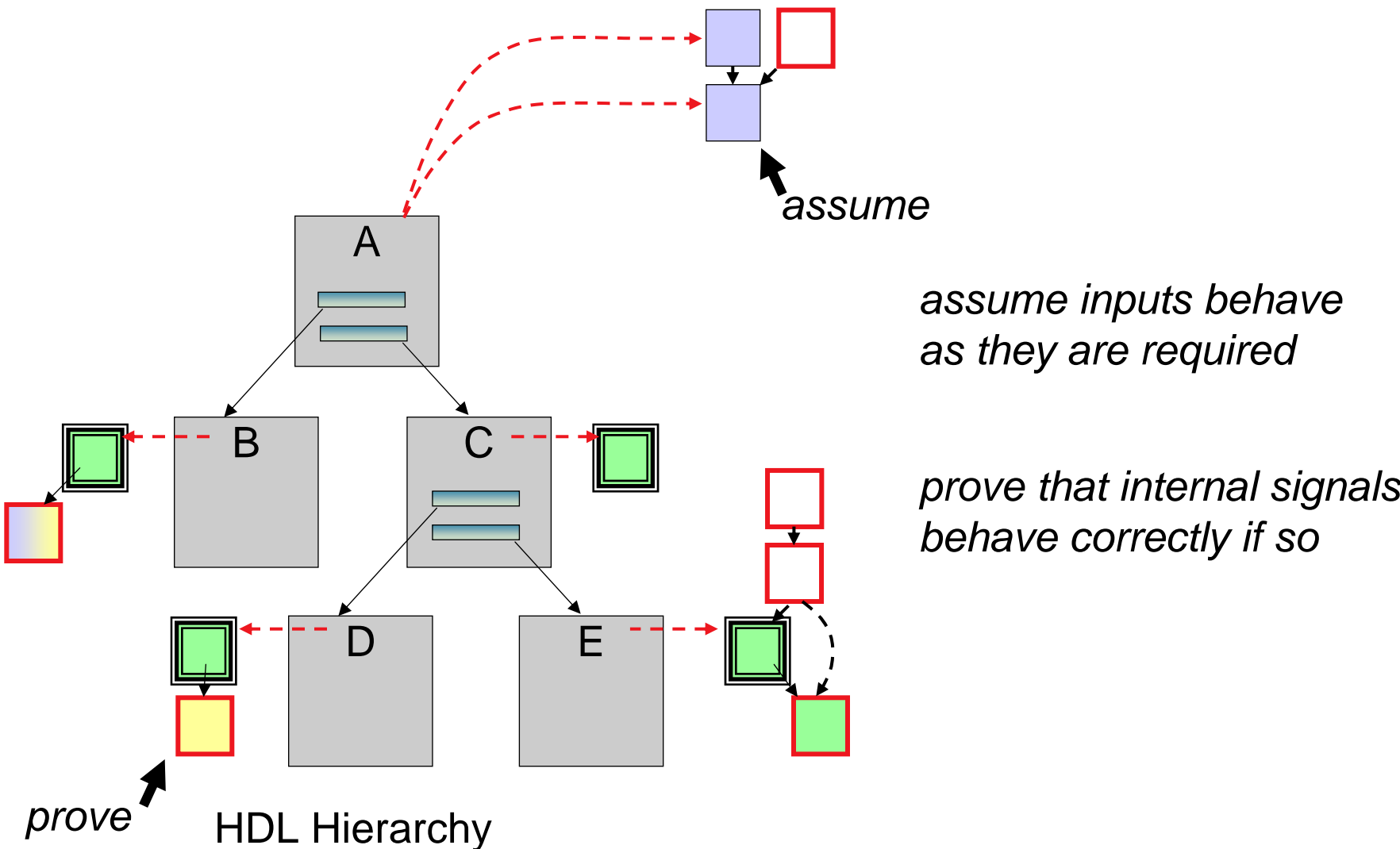
Concrete/Focused Use Model



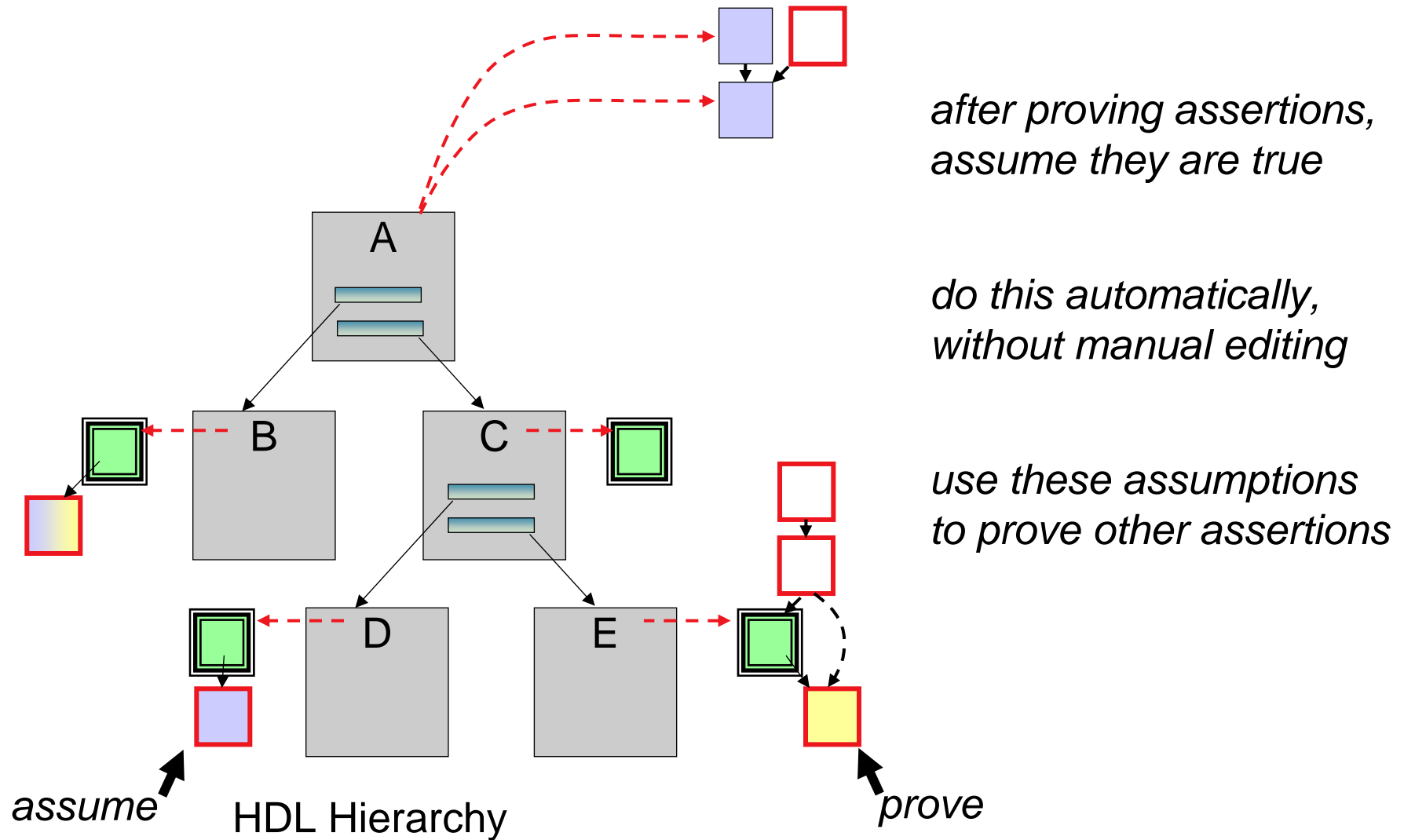
Concrete/Distributed Use Model



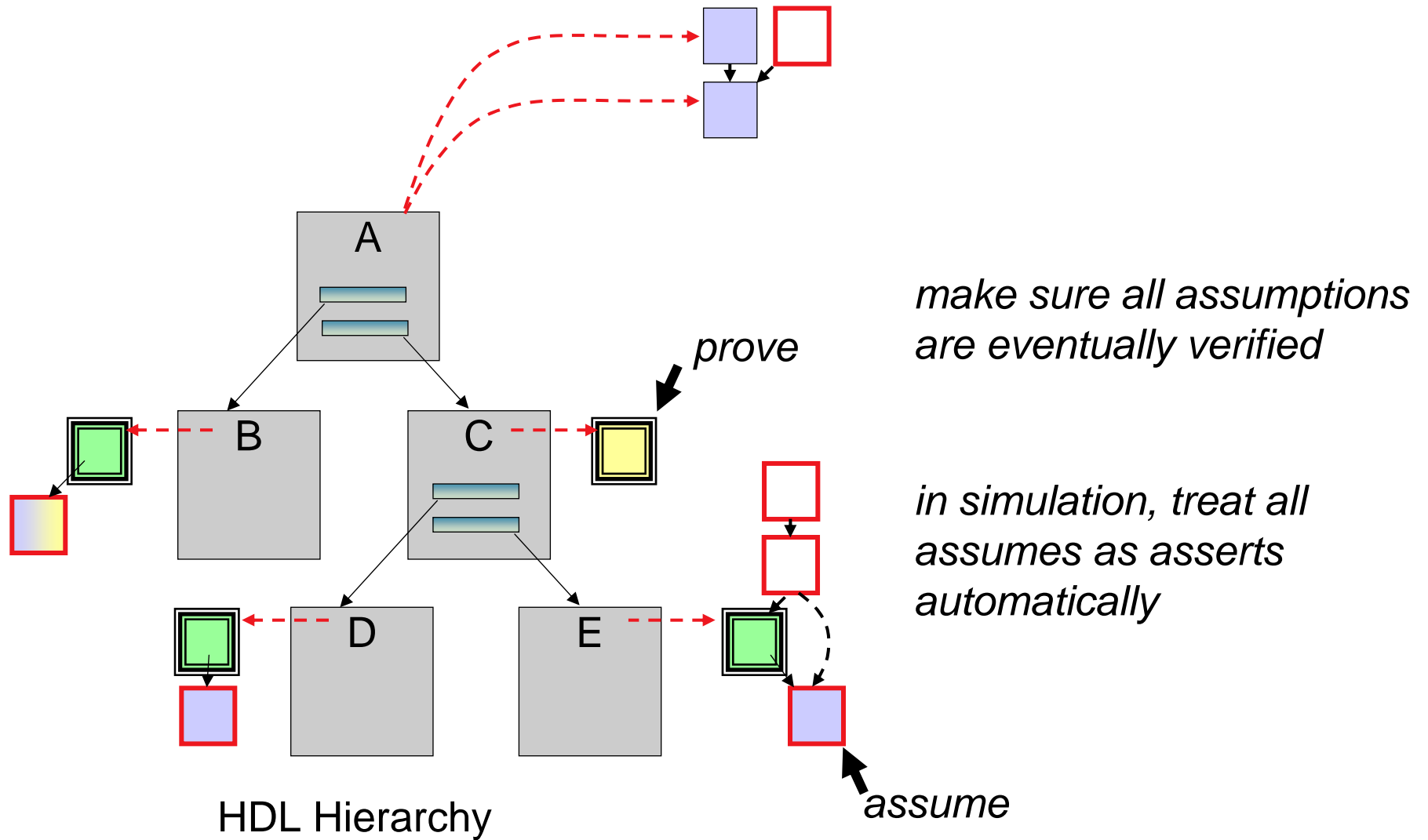
Flexible Use Model



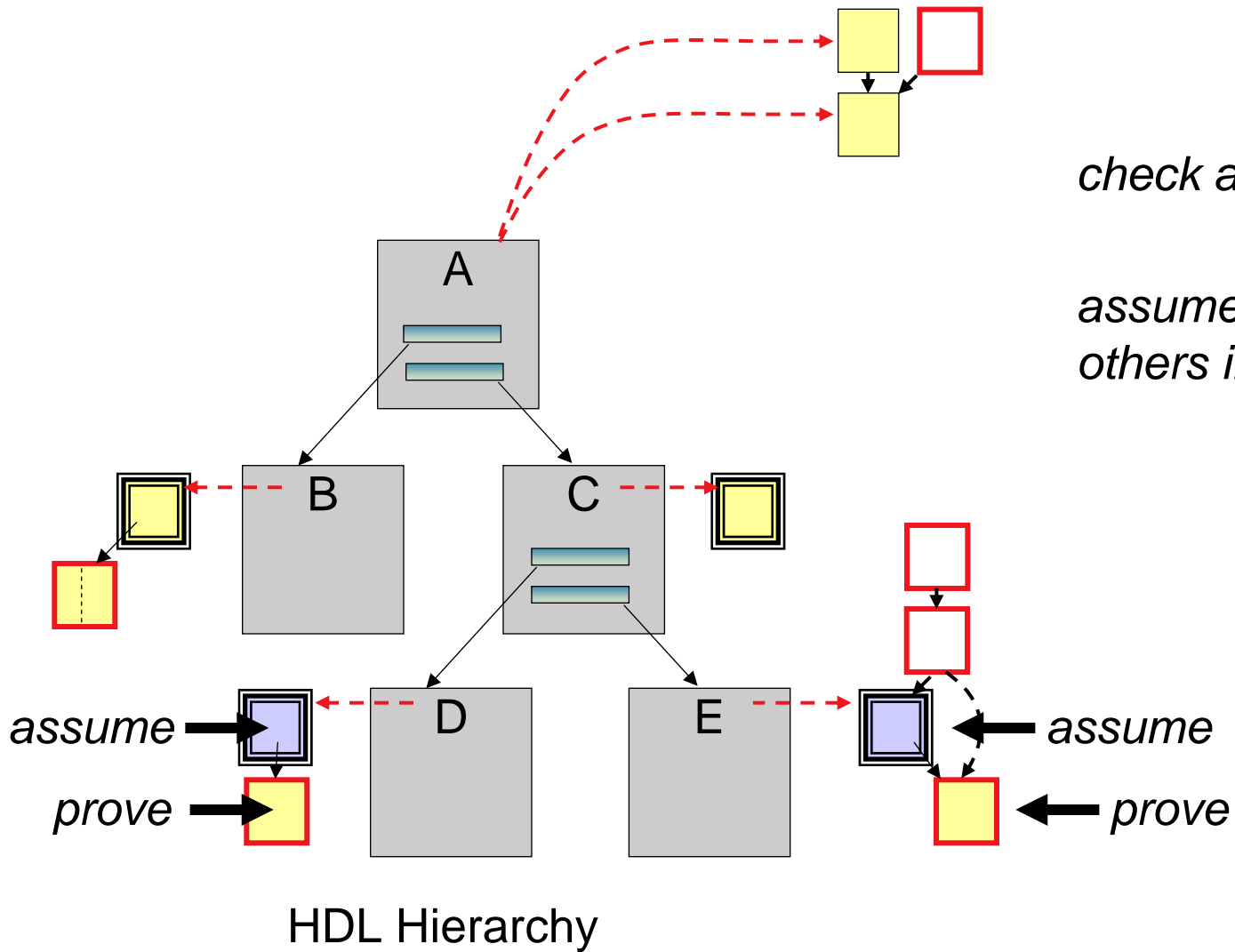
Flexible Use Model ...



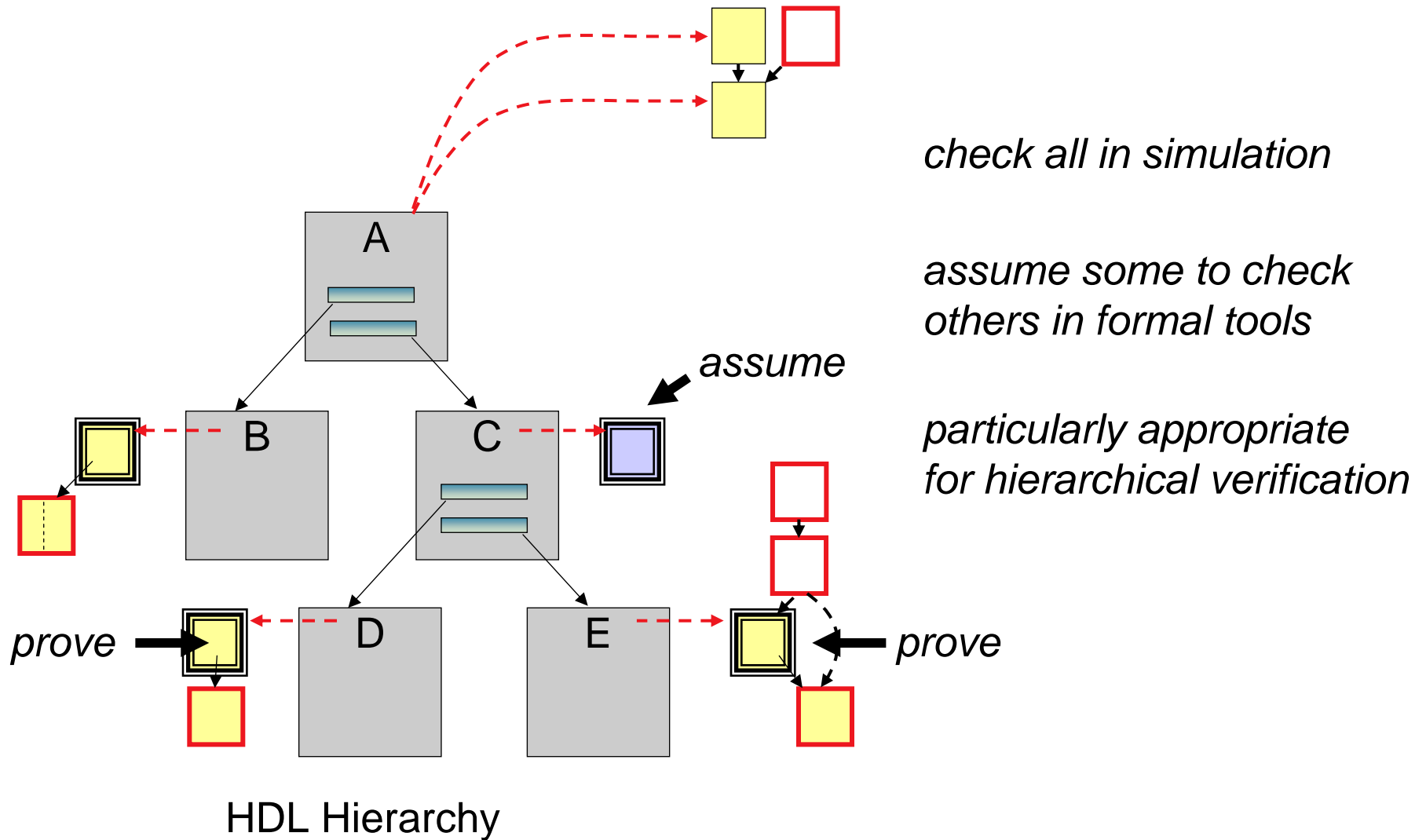
Flexible Use Model



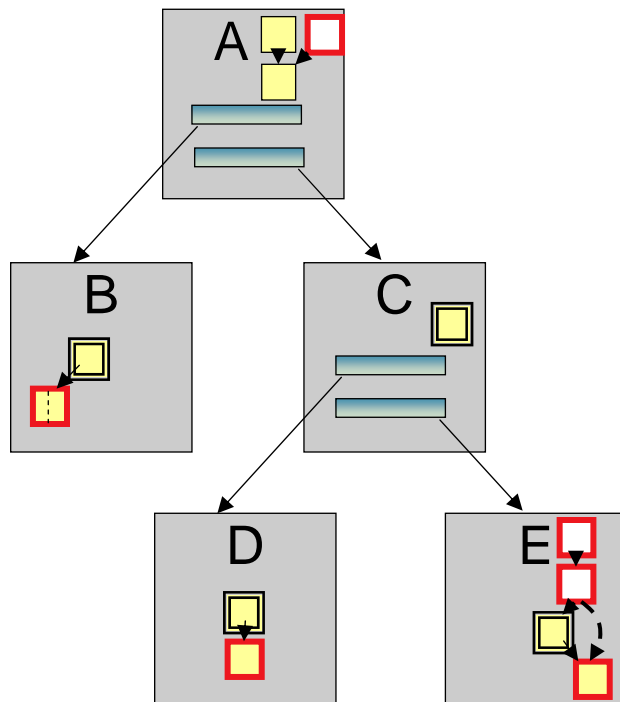
Assert-Only Use Model



Assert-Only Use Model



Embedded Use Model



HDL Hierarchy

*flexibility is required
to avoid editing code*

*typical when using
IP with assertions*