Restarting P1666
The IEEE SystemC WG

August 2009

Updating the P1666 SystemC Standard

- The IEEE approved the P1666 SystemC standard in December 2005
- The approaching five year anniversary is significant
  - "Sponsors are required to undertake a maintenance action on a standard within five years of its IEEE-SA Standards Board approval date. " (from IEEE-SA Op. Manual)
  - This "maintenance" may be anything from a reaffirmation with no changes to a major overhaul
- The OSCI Board has decided that P1666-2010 should be a combination of the current P1666-2005 plus the OSCI TLM 2.0 standard
  - The TLM 2.0 LRM has already been written in "IEEE style"
    - ◆ Should ease incorporation into P1666 LRM
  - Errata to the existing P1666-2005 can be made were appropriate

SYSTEMC™

The P1666 Working Group

- WG is "entity based"
  - Entities, i.e., organizations, that are Corporate members of the IEEE SA are eligible to be voting members of the WG
    - Such entities name a DR (designated representative) to represent them in the WG
  - Membership dues for the IEEE-SA is based on an Entity's revenue or "status"
    - Less than $5 million annual revenue, academic institutions, associations, nonprofits, government agencies: dues $3,500
    - $5 million to less than 100 million annual revenue: dues $5,000
    - $100 million to less than $500 million annual revenue: dues $7,500
    - More than US $500 million annual revenue: dues $10,000
  - Anyone may participate in the WG's deliberations
    - Only restrictions will be voting rights
  - OSCI may (subject to Board approval) join the IEEE-SA as a Corporate member
- OSCI is willing to fund the Technical Writing costs, so there should be no additional fees for WG members.

SYSTEM C™

What Needs To Be Done In The Short Term

- P1666 WG needs to reconvene
  - Never was dissolved, so no need to restart with a Study Group
  - Current Project Authorization Request (PAR) is still active
- New officers should be elected
  - Victor Berman is current chair, but will be resigning
  - Chair, Vice-chair and secretary should be elected
    - The Chair and Vice-chair
      - Shall be IEEE members of any grade and must also be a Designated Representative (DR) of an entity that is a corporate IEEE-SA member
    - The Secretary
      - Must be a DR of an entity that is a corporate IEEE-SA member
    - If OSCI joins the IEEE-SA its DR can be an officer
- Revised PAR must be drafted to capture new scope (TLM)
  - Will be reviewed and approved by DASC and then sent to   IEEE NesCom and the SA-Board for final approval.
- OSCI must contribute rights to the TLM copyright to the IEEE
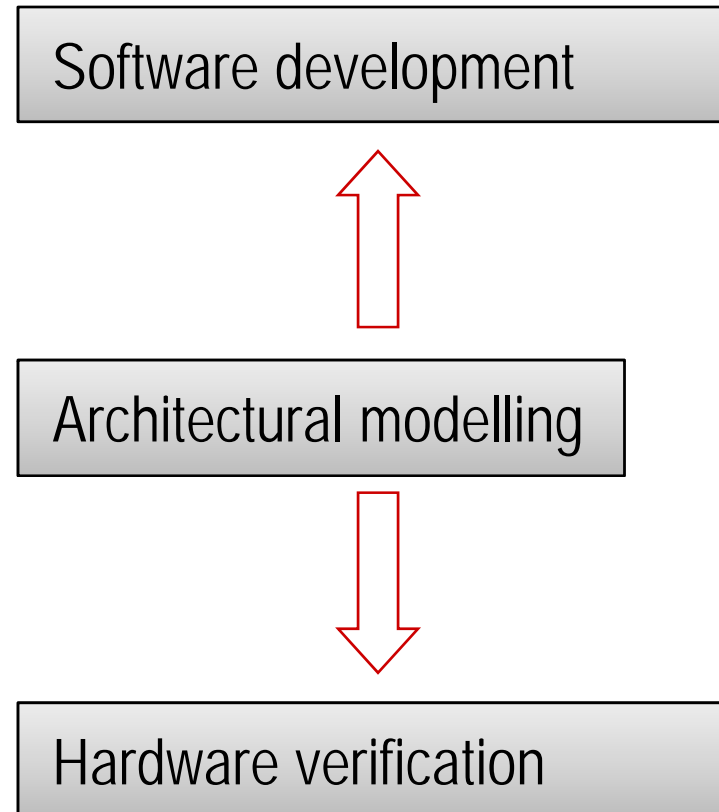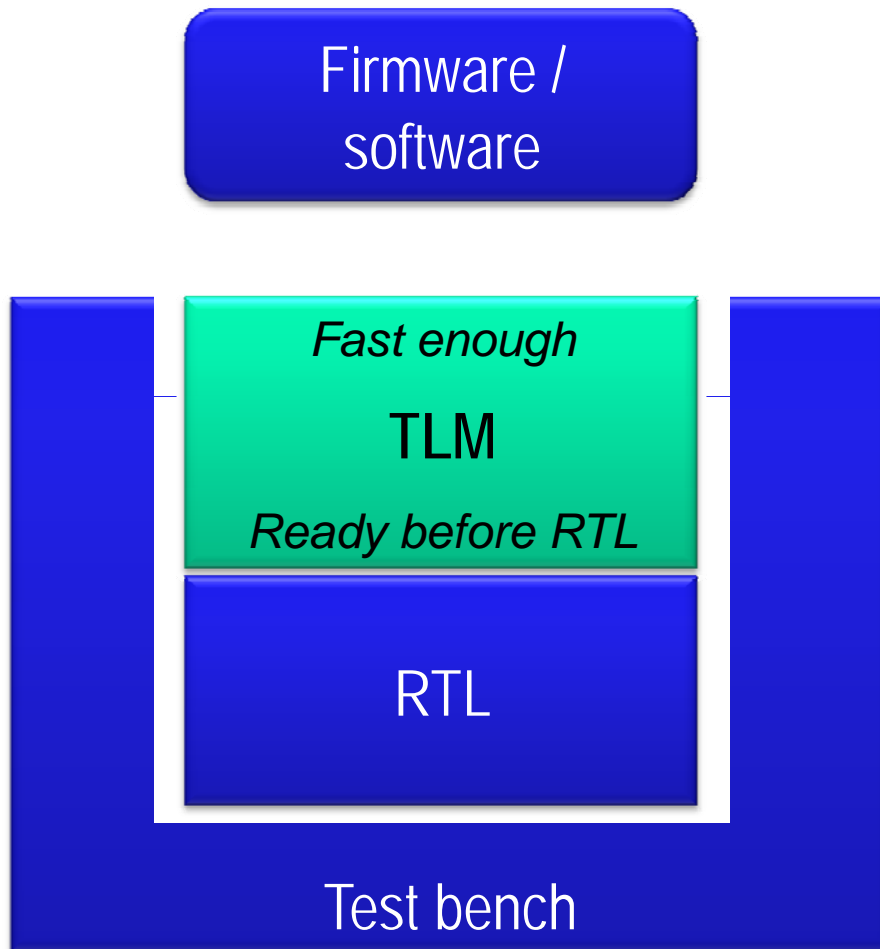
SYSTEM C™

Backup

Announcing the
New SystemC TLM-2.0 Standard!

- Essential framework for standards-based ESL design

- Incorporates feedback from SystemC users worldwide

- Official release June 9, 2008

  – Available for download at www.systemc.org

SystemC TLM-2.0!

SYSTEM C™

Reasons for Using TLM

Accelerates product release schedule

Firmware / software

Fast enough

TLM

Ready before RTL

RTL

Test bench

Software development

Architectural modelling

Hardware verification

S Y S T E M **C**™

What is SystemC TLM-2.0?

- Defines the interoperability standard that allows model reuse for
  - SW development and performance analysis
  - Architecture analysis

- Supports following features
  - Generic transaction payload for memory mapped busses with payload extension mechanism
  - Minimizes the need for bridges or adaptors to connect models together
  - Support for multiple, compatible abstraction levels
  - High simulation speed
  - Debug and analysis
  - Interoperable with TLM-1.0

- Documentation, training and examples are available

SYSTEM C™