Panel on OO-VHDL

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OO-VHDL — The Question

3) Is there a crisp statement of the problem that OO VHDL is trying to solve?

• Yes, several!
• cf experience in the software engineering world
  – key problem: managing complexity
• Improved expressiveness for modeling
  – at all levels of abstraction, not just high-level
  – ADTs: data abstraction, encapsulation
• Reusability
  – of ADTs and components
  – inheritance with polymorphism, genericity
OO-VHDL and VHDL-200X

2) Is OO VHDL really separate from VHDL-200X?
   • No, must be cleanly and seamlessly integrated
     – But no penalty imposed if OO/genericity not used
   • Divergence would hurt everyone
     – confusion about what VHDL is
     – dissipation of effort

OO-VHDL Market

1) What is the market for OO VHDL, separate from that of VHDL in general?
   • not separate!
   • system-level modeling
     – behavioral modeling early in the design flow
   • behavioral synthesis
   • hardware/software codesign
SUAVE

- Adopt Ada-95 features for OO and genericity
  - see papers
- Working on system-level behavioral modeling
  - generalizing concurrency and communication