Panel on OO-VHDL

Peter Ashenden The University of Adelaide

currently Visiting Scholar at
The University of Cincinnati

partially supported by Wright Laboratory under USAF contract F33615-95-C-1638

OO-VHDL — The Question

- 3) Is there a crisp statement of the problem that OOVHDL 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

VIUF Fall 1997

Ashenden — Panel on OO-VHDL

2

OO-VHDL and VHDL-200X

2) Is OOVHDL 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

VIUF Fall 1997

Ashenden — Panel on OO-VHDL

2

OO-VHDL Market

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

VIUF Fall 1997

Ashenden — Panel on OO-VHDL

4

SUAVE

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

VIUF Fall 1997

Ashenden — Panel on OO-VHDL

5