Applying Open Standards to FPGA IP Interfaces

Shepard Siegel

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Why FPGA IP Interfaces are Vital Concern

• **Components must Travel**
  - Component-based design
  - Interface before Implementation
  - Nearly continuous evolution

• **Separation of Concerns**
  - Computation ↔ Communication
  - Specifier ↔ Implementer
  - Application ↔ Architecture ↔ Implementation

• **“The von Neumann Syndrome”** [Reiner Hartenstein 2007]
  - Changing algorithms
  - Changing resources
How Interface Standards Help

• Well-Defined Interoperability

• Bias Toward the Application

• Clearly Defined Choices

• Composition
  ▪ Completeness
  ▪ Composition
  ▪ Linear-Effort
Thank you!

Shepard Siegel
Consulting Engineer, Technology Office
Mercury Computer Systems, Inc.
ssiegel@mc.com