

Developing a Common Vision in Microelectronics Design - Design Reliability

Dr Peter R Wilson (Southampton)
Mr Peter Lee (Kent)

Outline

- Who is involved
- What is the scope
- What has happened so far
- What happens next

Who is involved

- Academia
 - Dr Peter Wilson (Electronics, Southampton)
 - Mr Peter Lee (Electronics, Kent)
 - Others.....?
- Industry
- EDA

Scope

- Problems, Failures: Causes and Compensations
 - Device, Circuit and System Level Issues
- Robust Design
- Reconfigurable Design
- Evolvable Design
- Self Repair, Replicating, Self-Replicating and Self-Healing Systems

Design and Failure

- Power Management
- Thermal Issues
- Mechanical issues

- Process variations
- Predictability
- Yield Management

Reliable Systems

- (Self) Checking and Monitoring
- Self Repair
 - Redundancy, Reconfiguration, Replication??
- Verification/Testability/Observability
 - Extending test to AMS and Systems

Progress so Far

- Initial meeting Held (March 06)
- Academic and Industrial contacts made
- Initial Scope Identified....
- Links to other networks

The Plan...

- Identify Clear Research goals
- Identify partners and common interests
- Arrange first full network meeting
 - Mid 2006

Questions?

