



PAWiS – Simulation and Models

Institut für
Computertechnik

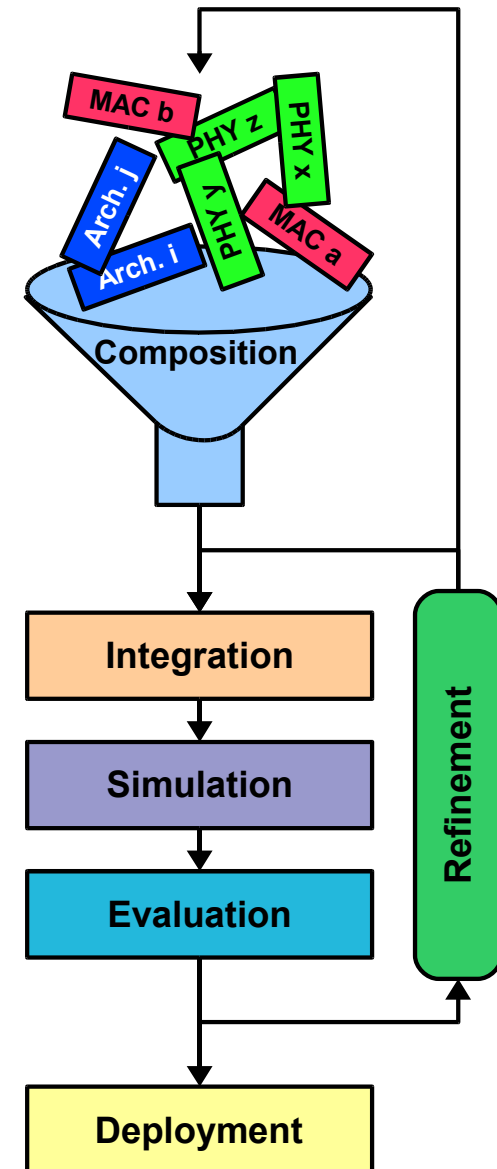
ICT

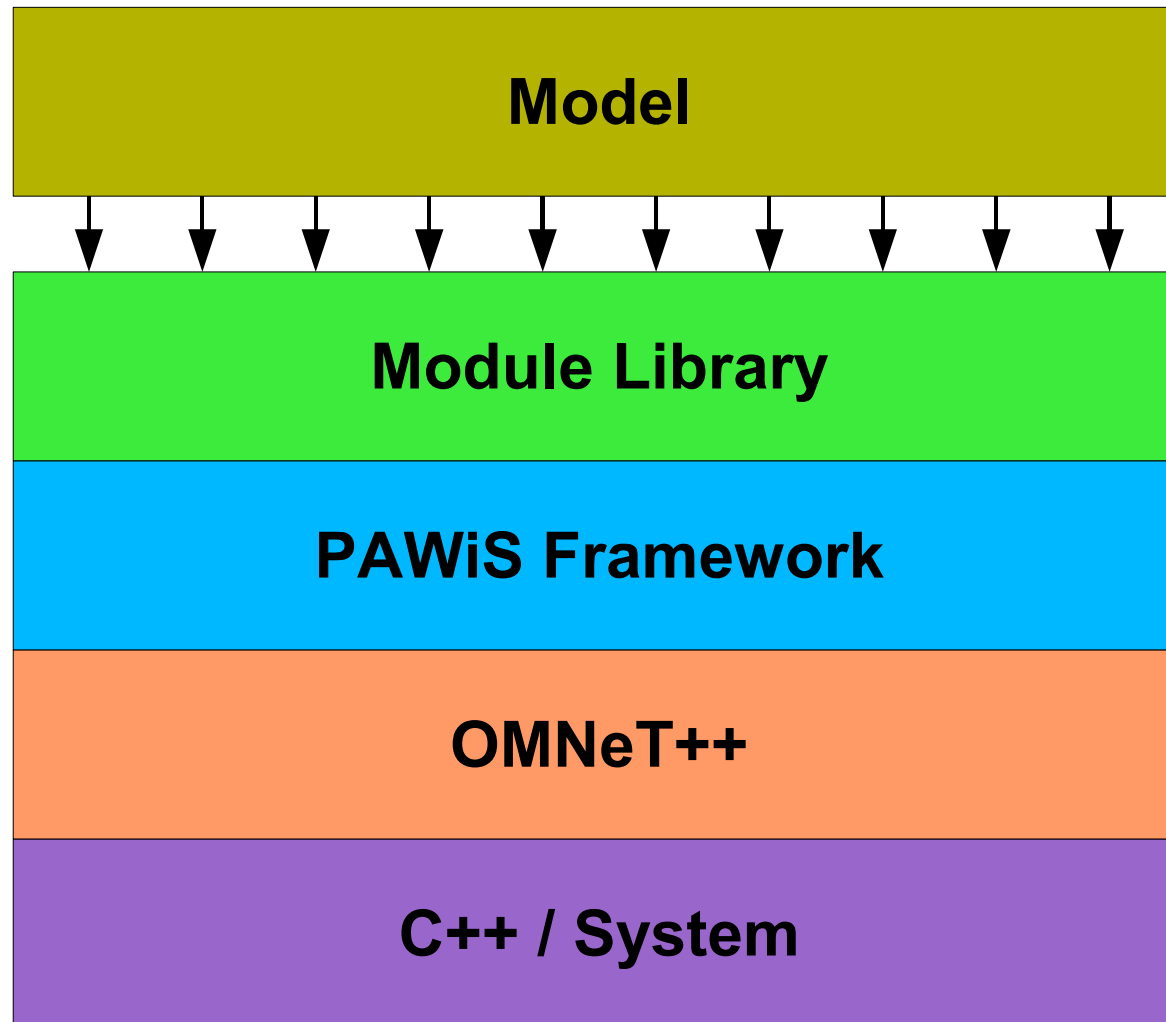
Institute of
Computer Technology

Johann Glaser

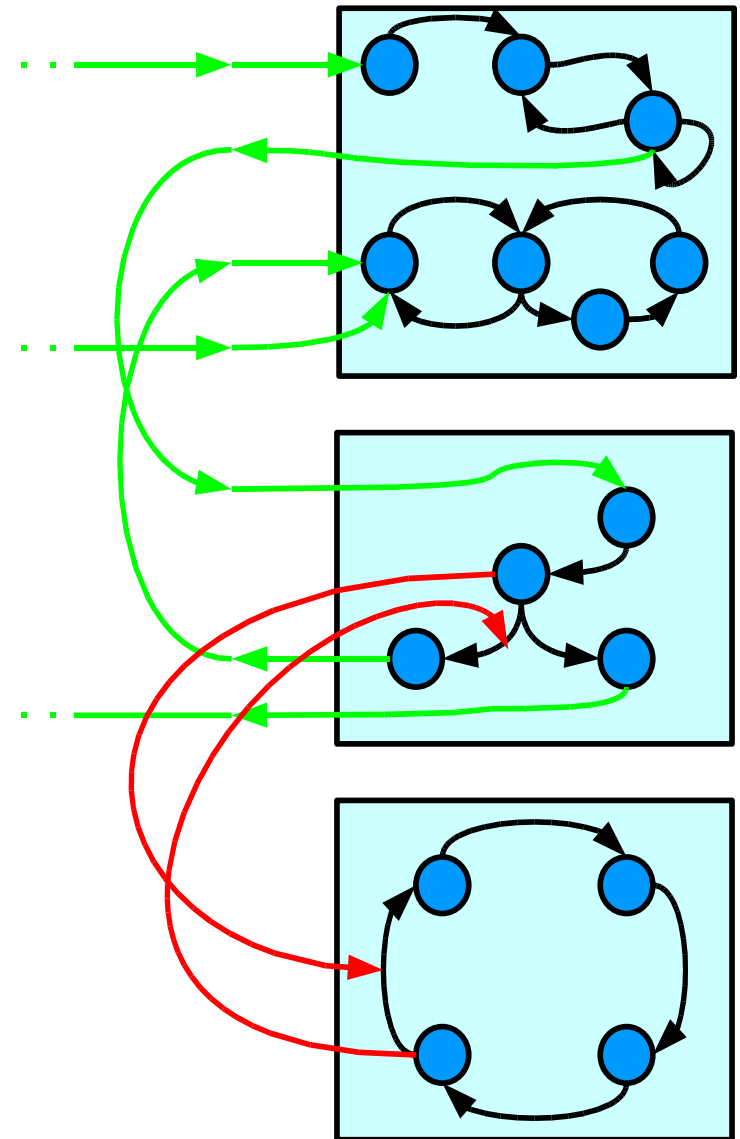
- Top Down development
- PAWiS Framework Concepts
 - Workflow – Design Refinement
 - User's View
- Intra Node
 - Modules
 - CPU
 - Power Meter
- Interface Specification, Module Library
- Extra Node
 - Environment
 - Air

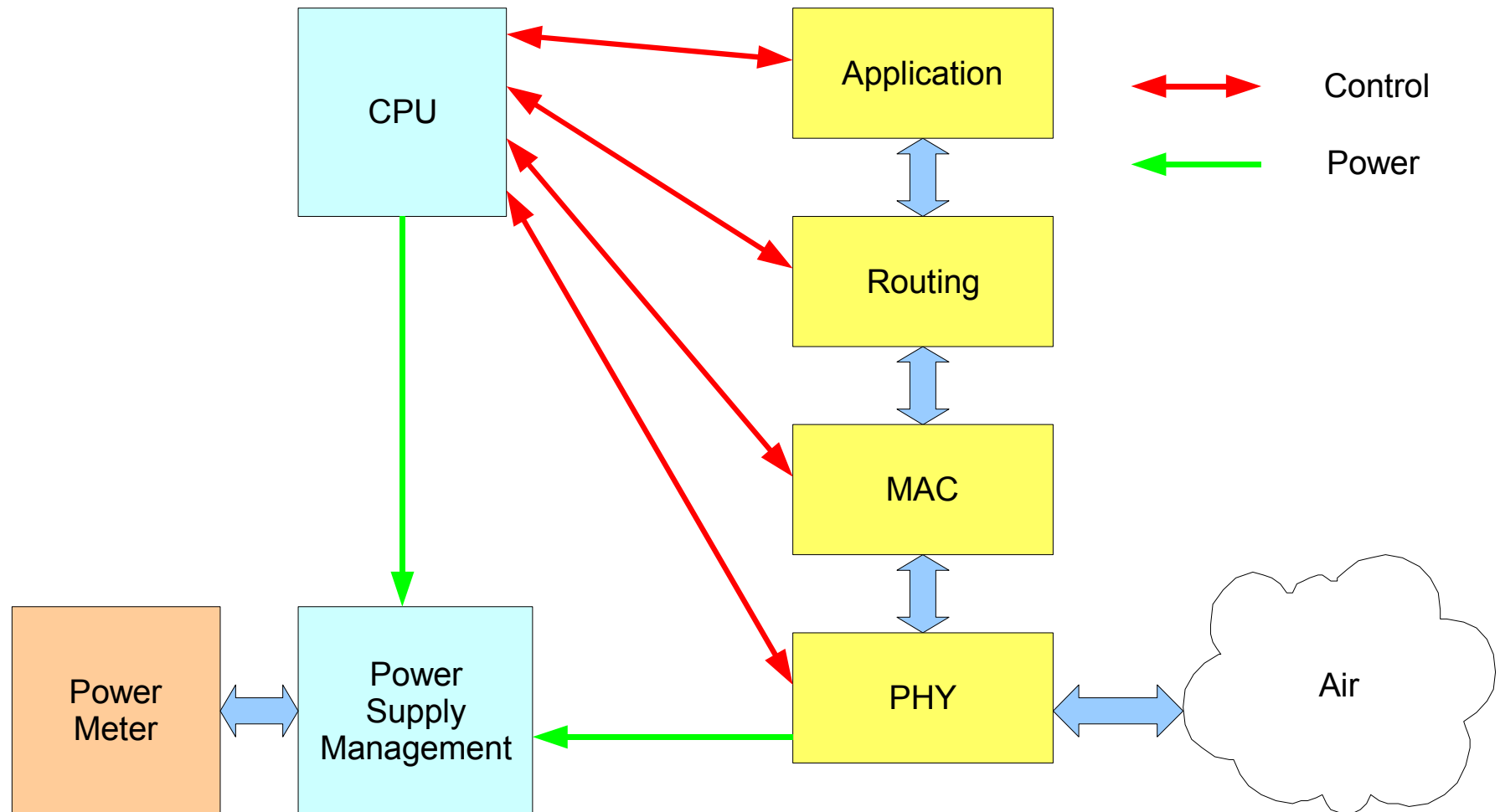
- Model
 - Network: Outside of Nodes
 - Modules: Inside of Nodes
- Virtual Prototype
 - Power Consumption
 - Timing Behavior
 - Function
 - Failures
- Module Tasks SW or HW
- Functional Interfaces
- Mediator HW ↔ Concept





- Node consists of Modules
- Modules consist of Tasks
- Functional Interfaces
- Remote Invocation
- Predicate Functions

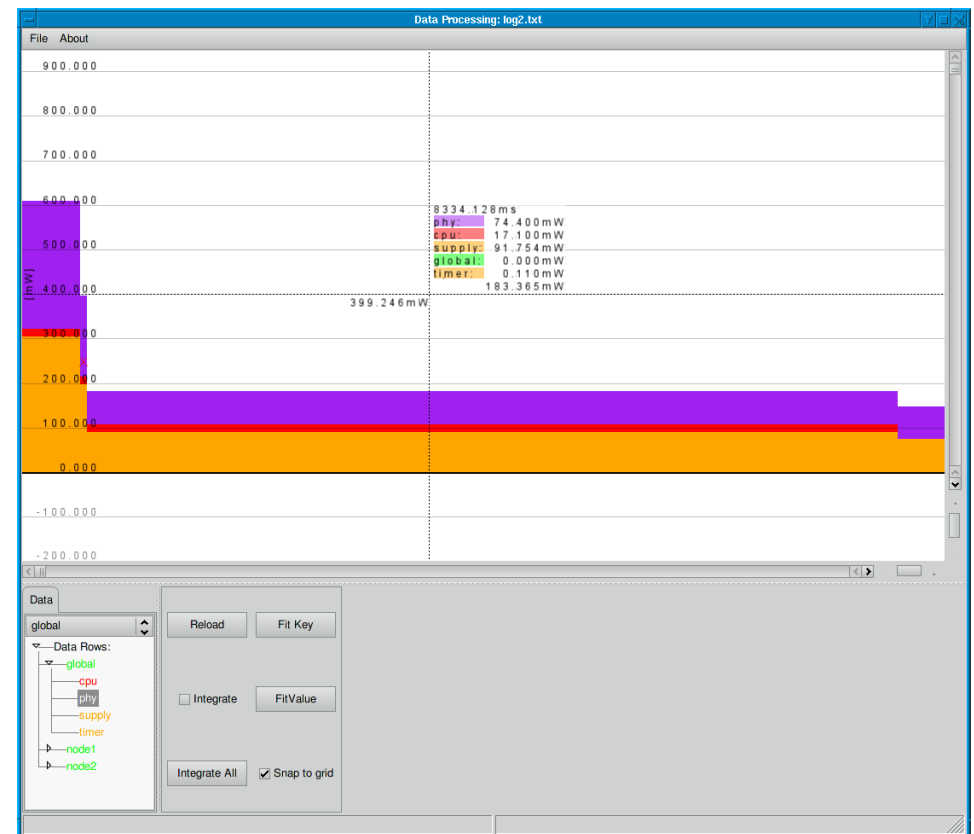




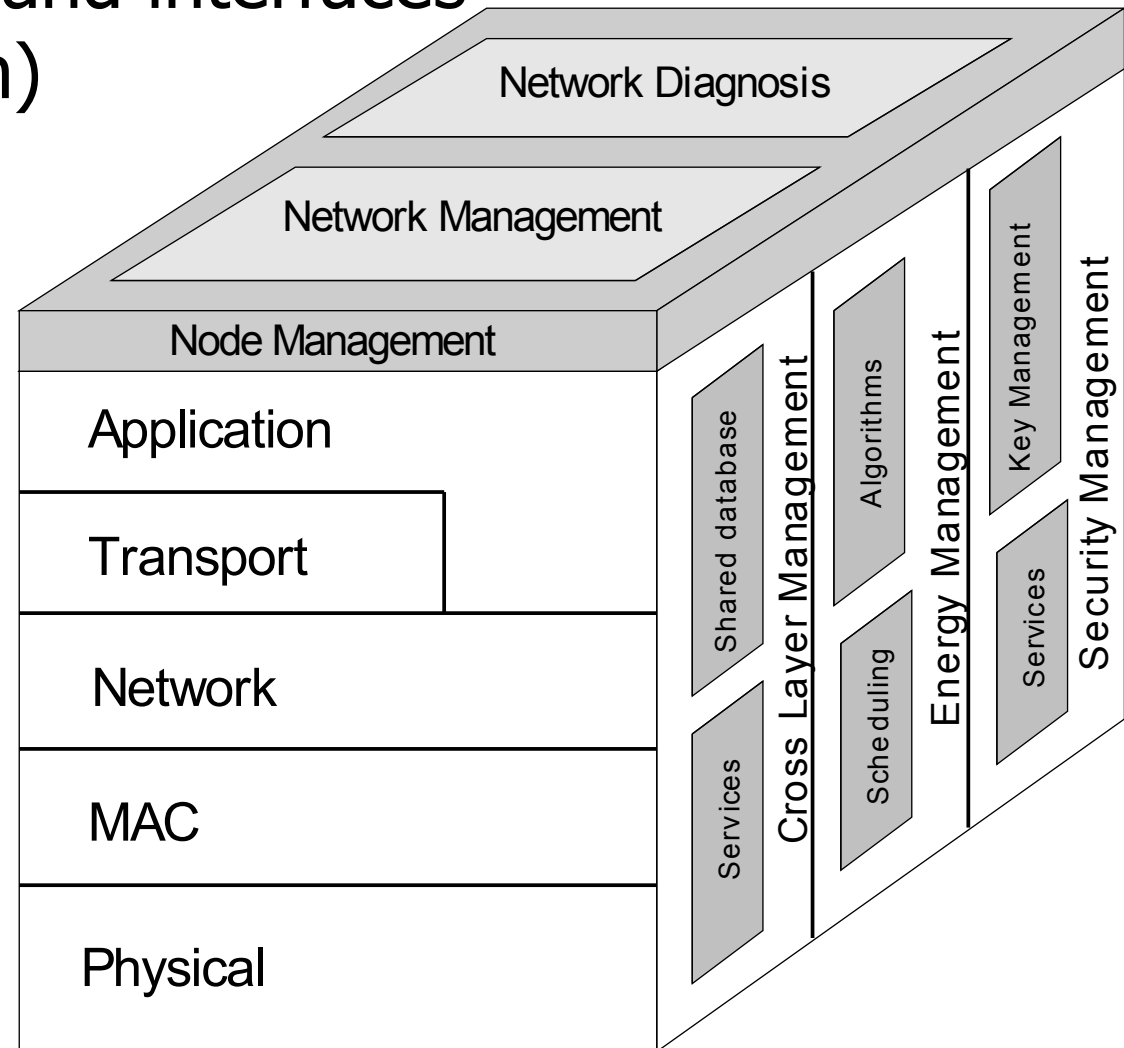
- Software tasks
- Two-way simulation
 - Functionality
 - Timing, Power Consumption
- Norm CPU
 - Replaceability
 - Scale Timing and Consumption
 - Processing Unit Proportion

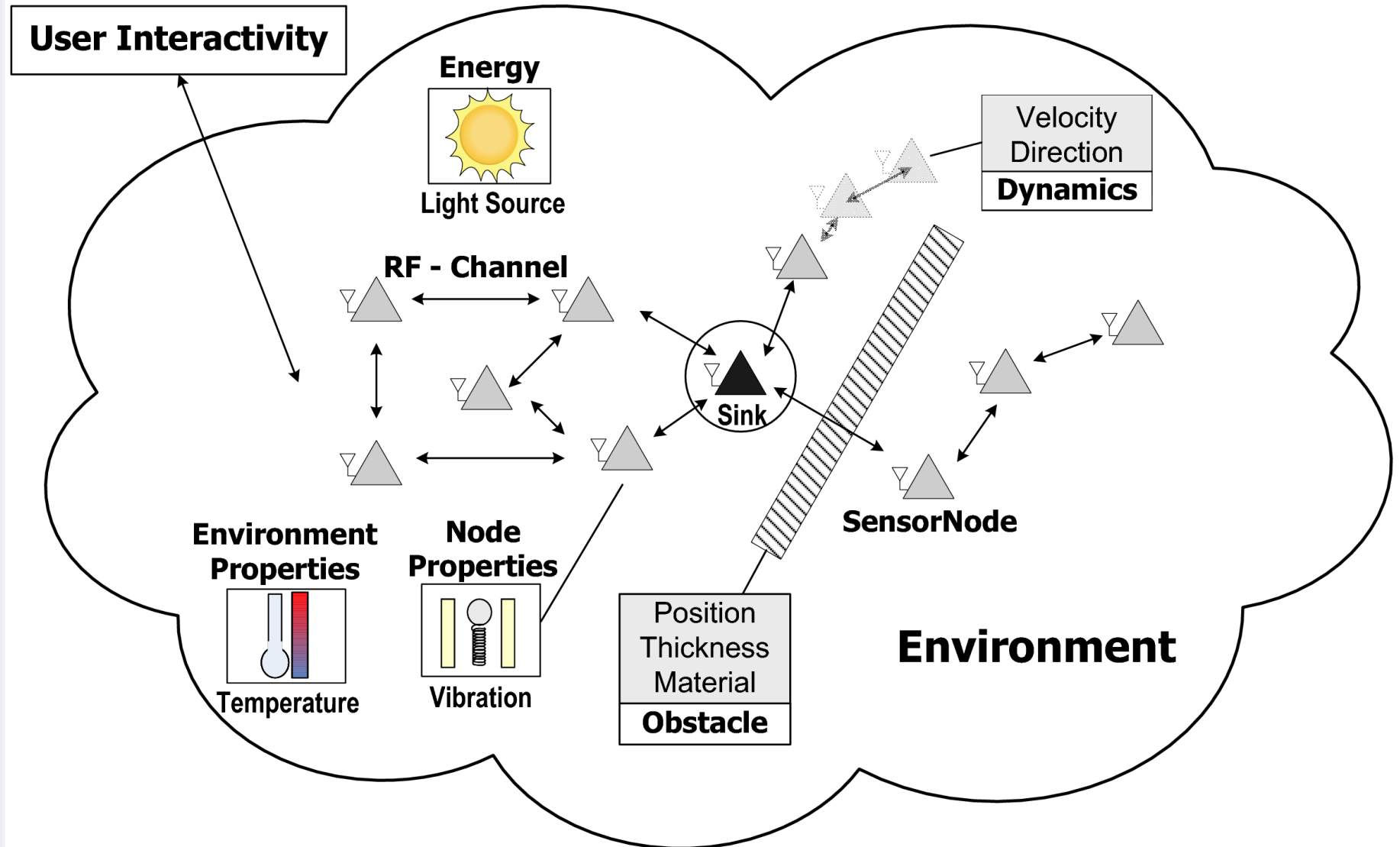
- LUA Scripts
- Setup Phase
- During Execution
- Interact with Nodes
 - Setup / Delete
 - Enable / Disable
 - Move
 - Implement Functional Interfaces

- Hierarchical power supply
- Sources
 - Efficiency
 - Output Resistance
- Consumers
 - HW Tasks
 - CPU
- Values provided by data sheets, measurement
- Values collected in log file
- Post Processing: Analysis

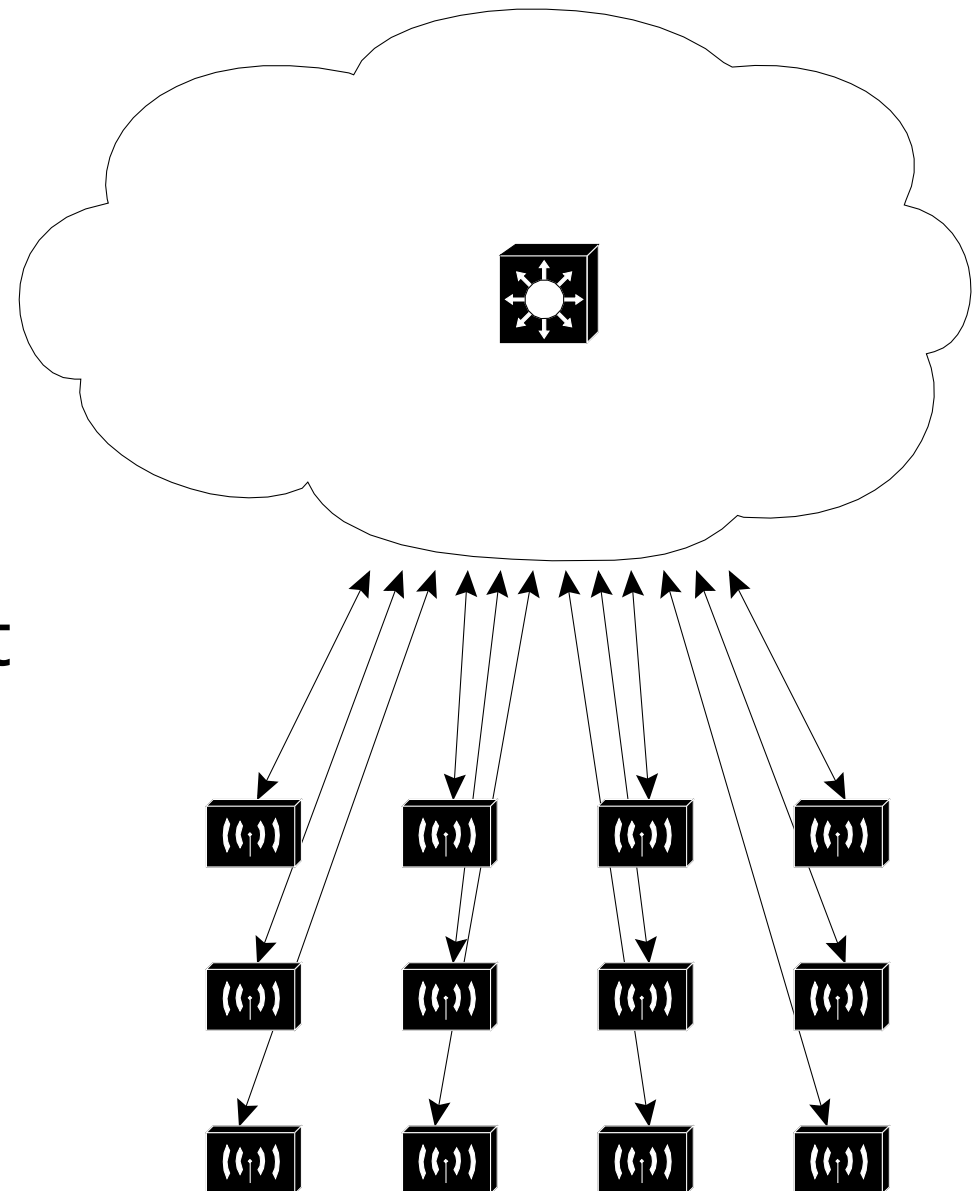


- Standardized modules and interfaces
(Interface Specification)
- Protocol stack
- Cross-Layer Planes
- Node Management
- Module Library

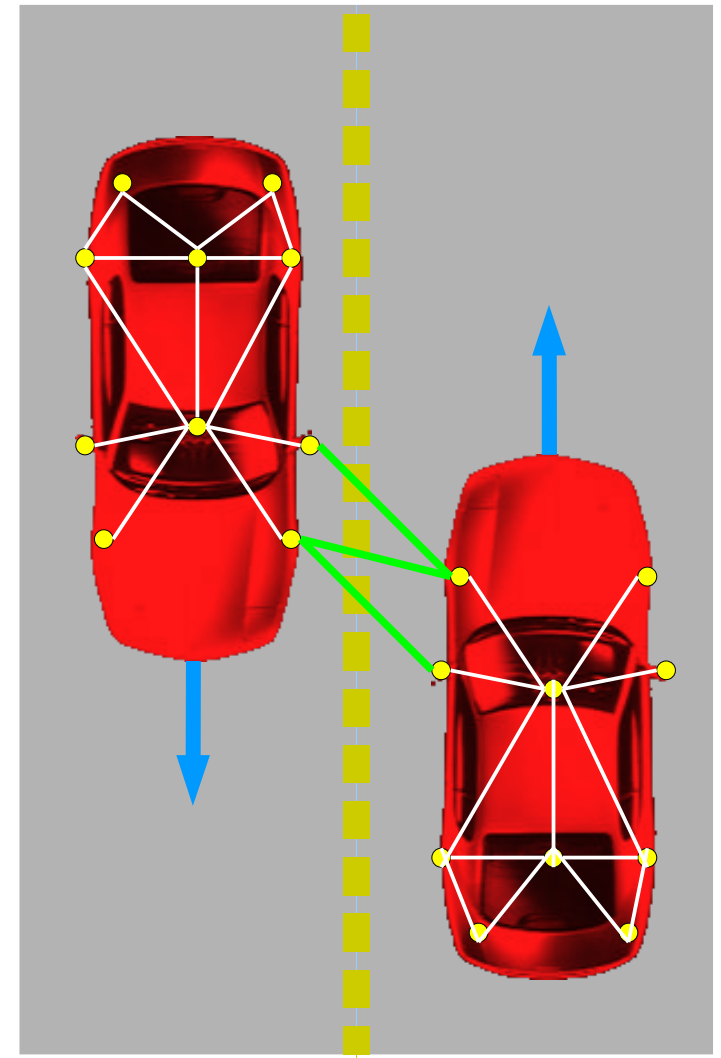




- Global "Air" object
- Acts like a Switch
- Considers 3D arrangement, Obstacles
- Calculates attenuation
- Every node connects to it
- "RF Messages" are distributed
- Use BB equivalent instead of real RF



- Air
 - Interferers
 - Obstacles
- Interactivity
 - Human Interaction
 - User Interface
- SystemC Integration



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