



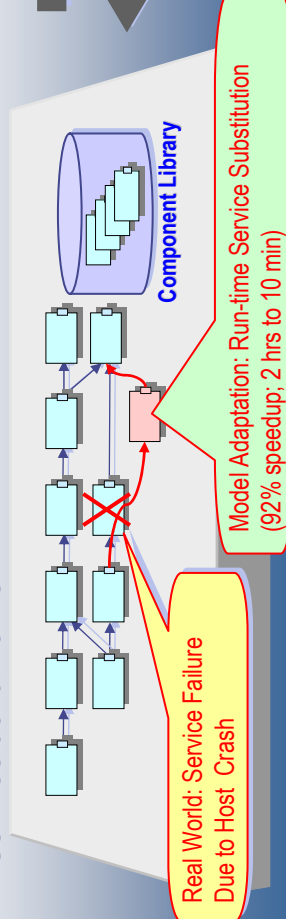
SIM-TBASSCO – Semantic Interoperability Measures:

Using multi-level architecture views to overcome faults/bottlenecks

- ◆ Software architecture views enable dynamic, rapid response to faults by
 - providing visibility into software systems
 - identifying control points to adjust their behavior
- ◆ Multi-level views offer a greater range of adjustments than any single level
 - A system architecture view enables dynamic adjustment of servers:
 - ◆ create additional server to accommodate increased demand
 - ◆ migrate server from overloaded host to new host
 - A dataflow architecture view enables reformulation of an application:
 - ◆ substitute alternative type of service for non-functioning or unavailable service
- ◆ GeoWorlds applications provide testbed for monitoring/repairing faults
 - GeoTopics “Hot News” Portal application executes as 120 individual components
 - Multiple DASADA contractors using GeoWorlds-based testbed

Dataflow Architecture View

- Load dataflow architecture; extend it at run-time
- Update dataflow architecture to replace malfunctioning service at run-time



System Architectural View

- Detect overloaded server; re-host the server
- Update system architecture automatically to reflect re-hosted server

