
Status of the Proxy Printer Provider Prototype

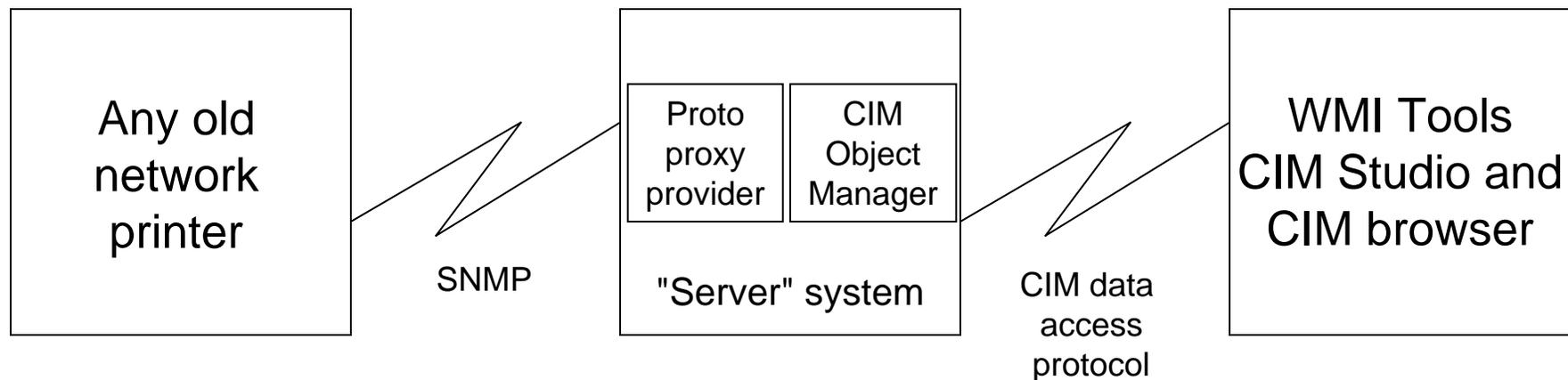
PWG WIMS-CIM Working Group

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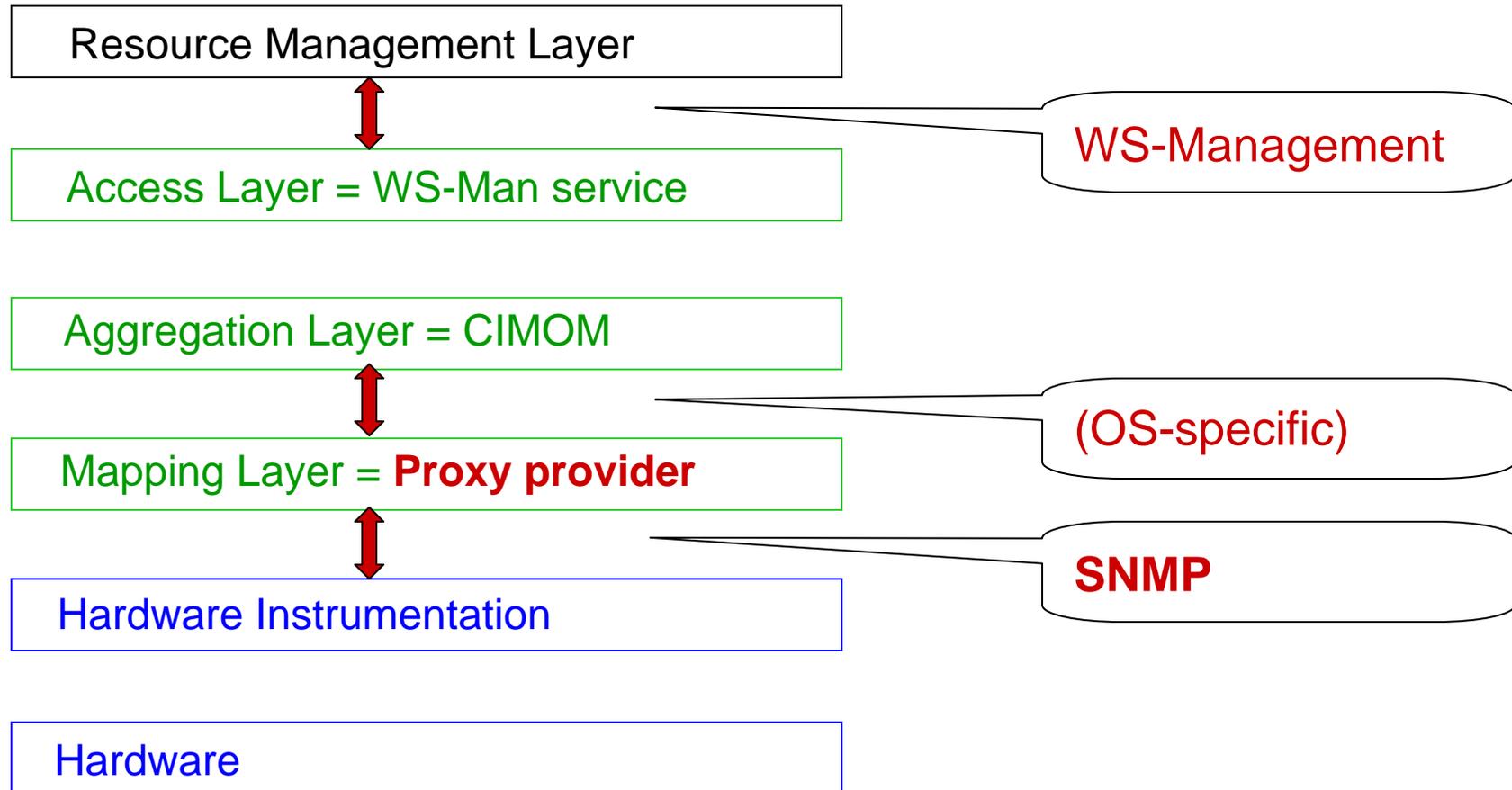
Prototype Being Constructed



- Network printer: whatever is at the end of the aisle
- "Server" system: Windows box of some sort
- Management client: el cheapo CIM data browser application, not printer-specific, not suitable for actual management
 - Probably local on server system
- **Actually being built: the guts of a proxy provider, data mappings only**



Management Stack - Protocols Between Layers



Classes Recently Implemented



- Association classes
 - CIM_PrinterComponent for mandatory subsystems of printer: input tray output tray, marker, etc.
 - CIM_ConcreteComponent for optional subsystems: supply, interlock, etc.
- Association class contains "references" to other classes
 - Reference = list of key properties of the class that uniquely identify an instance
 - For CIM_Printer, the key is the concatenation of four properties
 - For most other classes, the only key is InstanceID
 - Concatenation of manufacturer name, device type, device description, device name, instance number, etc.
 - All these properties must be retrieved from live instances of other classes
 - But instances don't exist until they are asked for

Associations are Different?



- Substantive classes are derived from SNMP tables: one instance of class per row of table
- Associations have one instance per combination of instances of two other classes
- Most associations relate all instances of one class to all of another
 - AssociatedPrintSupply and AssociatedPrintInterpreter limit instances to specific relationships
 - Need to select only the proper instances

To Do



- Finish association classes
 - UseOfLog and LogManagesRecord
 - AssociatedPrintSupply and AssociatedPrintInterpreter
- CIM_Printer properties
 - Including many inherited from parents
 - Particularly locale and array properties

Minor Shortcomings



- One printer
 - Handles only a single printer
 - Affects few places, isolated
- Fixed geometry of tables
 - Okay for all classes but PrintAlertRecords, which come and go
 - Easy to fix
- No caching of SNMP data
 - Practical implementation needs to optimize network access: discover read-only data once only
 - Network access is well-centralized, easy to slide in a caching mechanism

Look at Some Files



- Captured output files
 - Subsystem classes
 - Association classes

Questions?

