

Web-based Imaging Management System Working Group

**Printer Working Group
Face-to-Face Meeting
April 18, 2008
Mesa, AZ**

WIMS WG Agenda



- **1:00 – 1:15** **Recently Completed Projects**
- **1:15 – 2:00** **CIM-Printer & Related MOFs**
Grill the experts!
- **2:00 – 2:30** **CIM Prototyping Activity (Rick)**
- **2:30 – 3:00** **Discussion of Next CIM Activities**
- **3:00 – END** **CIM_ImagingStatisticalData (Ira)**

Recently Completed Projects



➤ **Imaging State & Counter MIB**

- **PWG Voted to advance to PWG Candidate Standard**
- **PWG Steering Committee approved process.**
- **Ira and the PWG Secretary are currently preparing the document to be published.**
- **Effort started to structure in CIM**
- **More implementations for further advancement?**

➤ **DMTF/CIM Printing MOFs**

- **Printer Device MOFs approved by CIM**
- **Currently Print Related MOFs in CIM V 217 Final and CIM V 217 Experimental**
- **Dell to Start Prototyping Activity**

Q & A on CIM w/r Printer



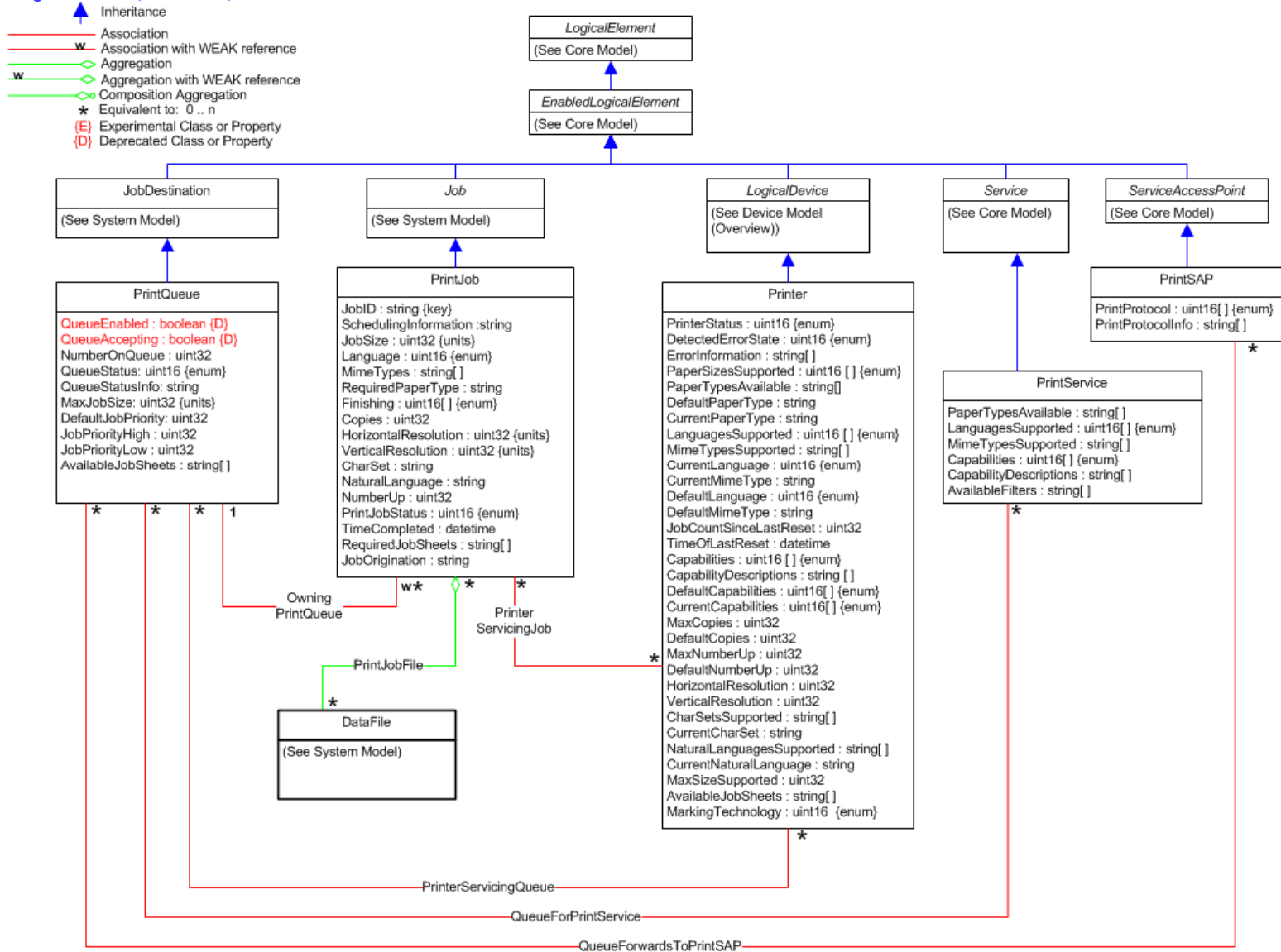
- **“Final” vs Experimental MOFs**
- **Changes vs Additions**
- **Listed Printing Models vs PWG CIM Model**
- **Associations - We decided not to use**
 - **CIM_AssociatedPrintMediaPath and**
 - **CIM_AssociatedPrintOutputTray****Why.. and should they still be on the diagram?**
- **How do the CIM WG diagrams relate to the published CIM UML diagrams?**

CIM V 217 Final - Device – Print Related MOFs



- **CIM_Printer*** PrinterDevice (Capabilities and Status)
- CIM_PrinterServicingJob Relation of Job with Printer
- CIM_PrinterServicingQueue Relation of Queue with Printer
- **CIM_PrintJob*** PrintJob (attributes)
- CIM_PrintJobFile Files in PrintJob
- **CIM_PrintQueue*** PrintQueue (Capabilities and Status)
- **CIM_PrintSAP*** Service Access Point–Channels to PrintService
- **CIM_PrintService*** Point of Entry for PrintJob
- **CIM_OwningPrintQueue*** Relates PrintJob to PrintQueue
- **CIM_QueueForPrintService*** Relates Print Service to Print Queue
- CIM_QueueForwardsToPrintSAP Relates PrintQueue to PrintSAP

Page 28- Printer, Print Jobs, & Print Services



CIM Printing Model










- **PrintJob submitted to PrintService via PrintSAP.**
- **PrintJob placed on PrintQueue (indicated by the QueueForPrintService association).**
- **Printer takes PrintJob from PrintQueue (indicated by the PrinterServicingQueue association).**

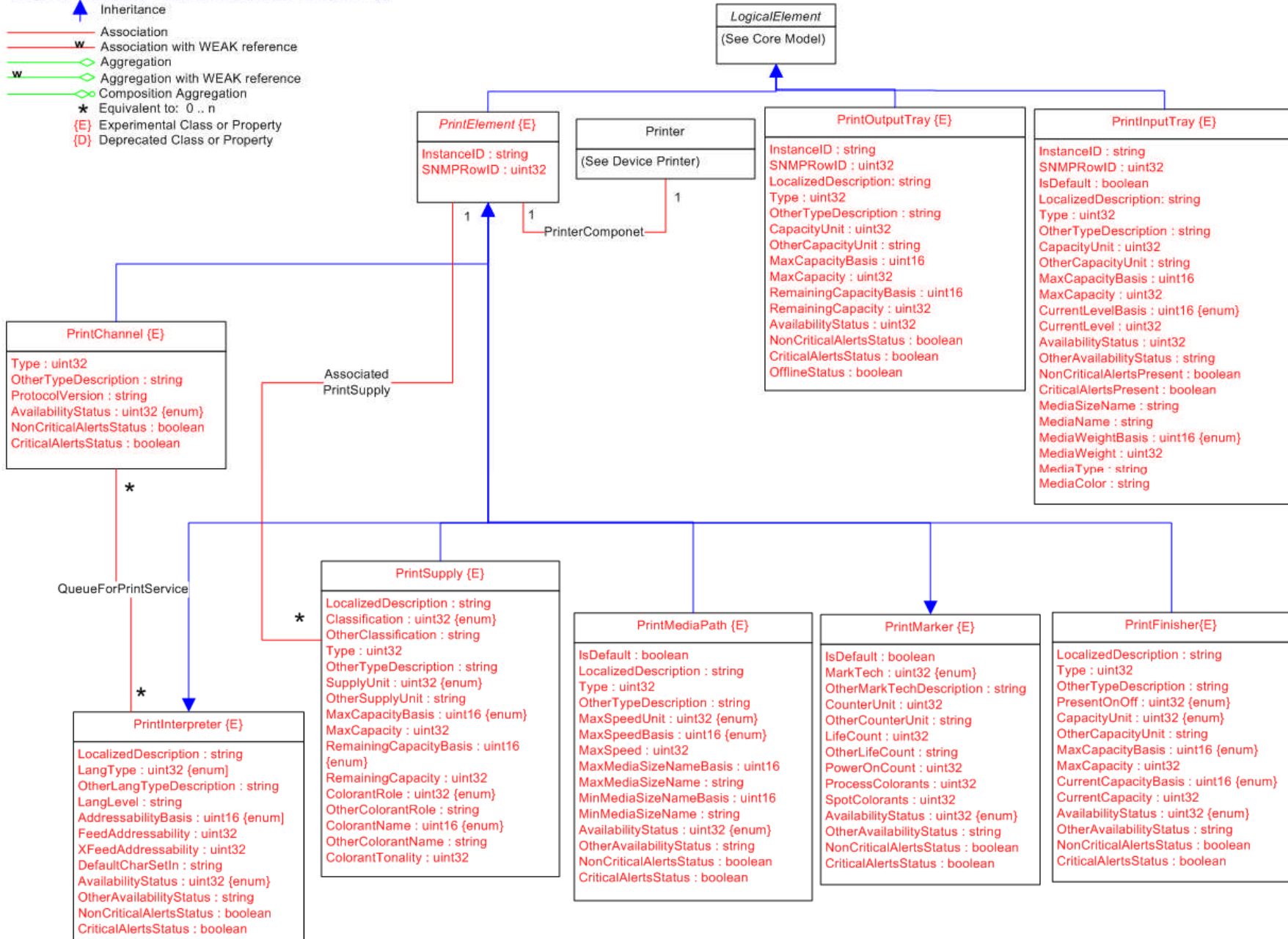
CIM V 217 Experimental Device – Print Related MOFs



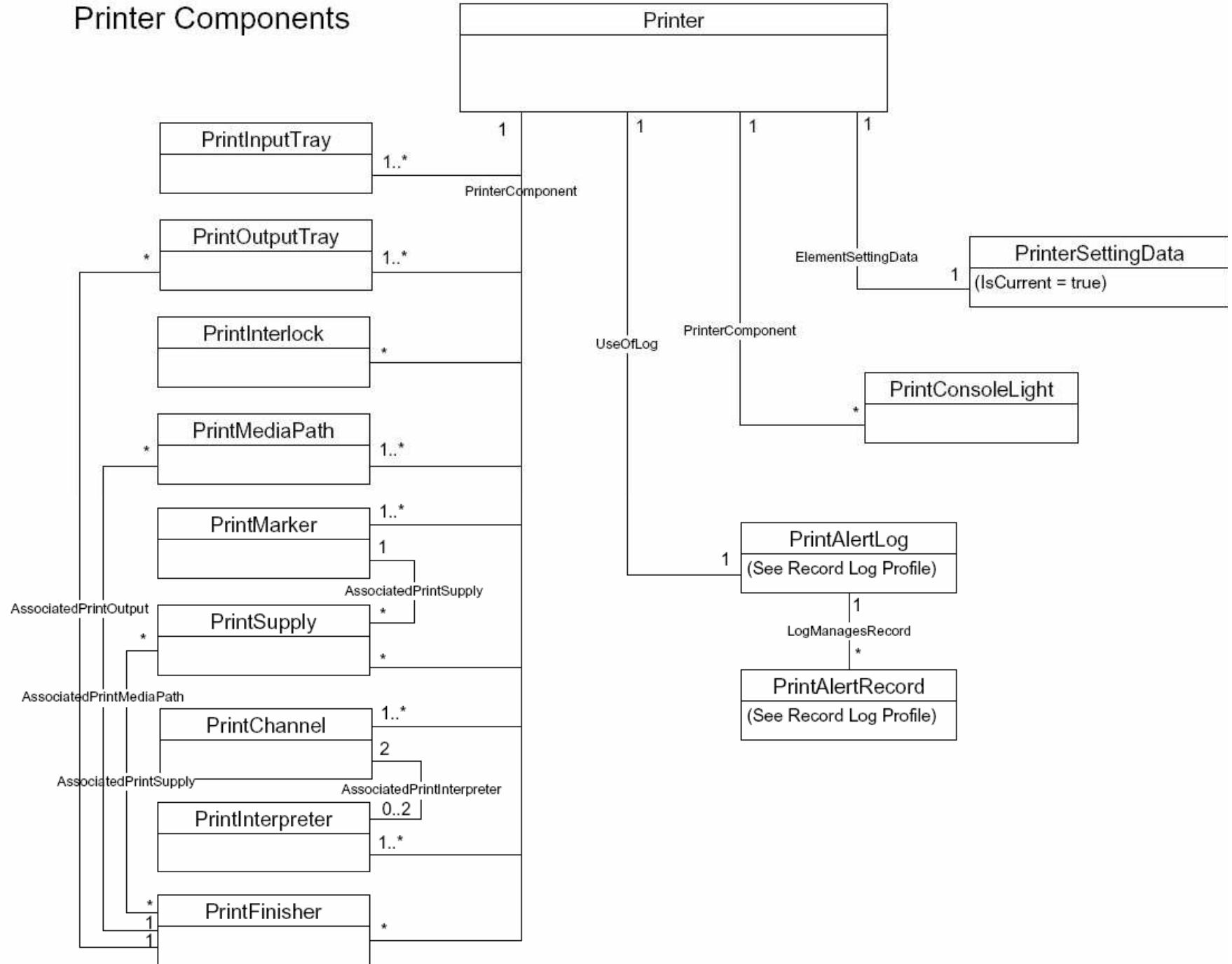
- +CIM_PrintAlertRecord
- CIM_PrintChannel
- CIM_Printer
- +CIM_PrinterComponent
- +CIM_PrinterElement
- CIM_PrinterServicingJob
- CIM_PrinterServicingQueue
- +CIM_PrintFinisher
- +CIM_PrintInputTray
- +CIM_PrintInterpreter
- *CIM_PrintJob
- CIM_PrintJobFile
- +CIM_PrintMarker
- +CIM_PrintMediaPath
- +CIM_PrintOutputTray
- CIM_PrintQueue
- CIM_PrintSAP
- CIM_PrintService
- +CIM_PrintSupply
- +CIM_AssociatedPrintInterpreter
- +CIM_AssociatedPrintSupply
- CIM_QueueForPrintService
- CIM_QueueForwardsToPrintSAP
- CIM_OwningPrintQueue
- CIM_PrintInterlock

Page 29 - Printer, Print Jobs, & Print Services (2)

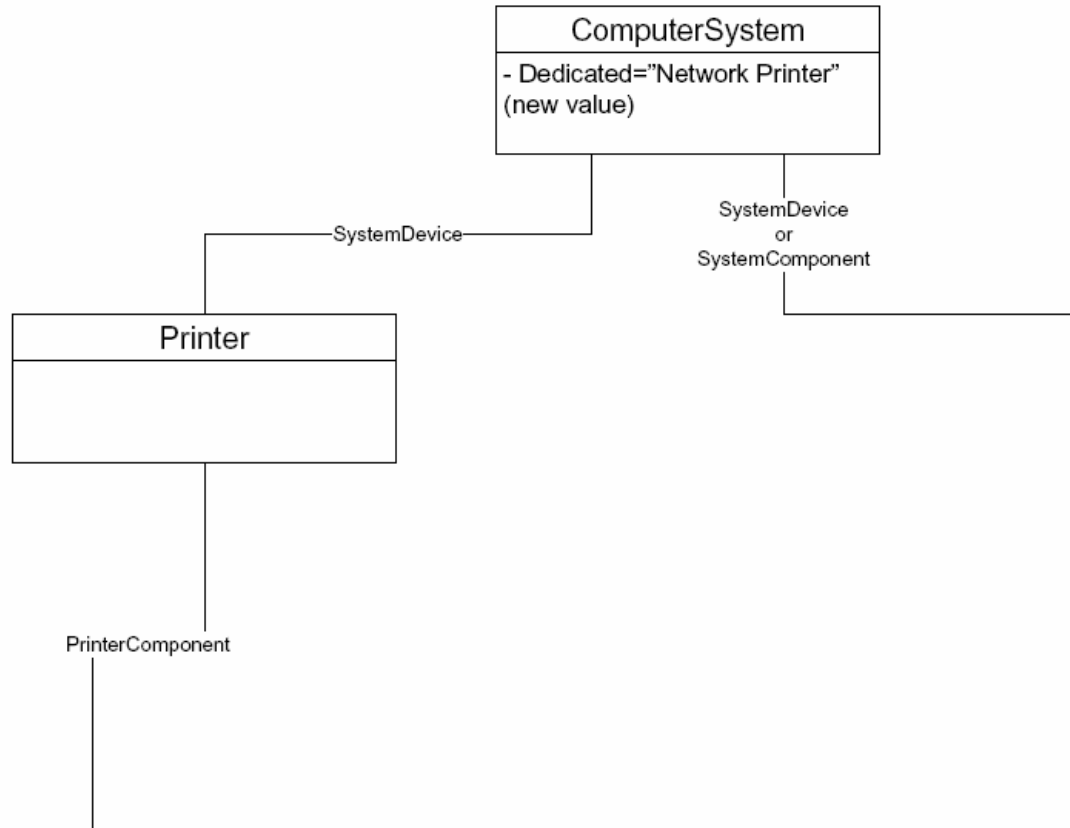
-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0..n
- {E} Experimental Class or Property
- {D} Deprecated Class or Property



Printer Components



Network Printer = Dedicated CIM_ComputerSystem with an included Printer



- Profiles that may need to be implemented
- PRP
 - Network port
 - IP endpoint
 - DHCP client
 - DNS client
 - Software identity
 - Power management
 - Printer

Connections to same classes as in simpler Printer device

CIM_Printer etc. Prototyping



- **What is involved?**
- **What MOFs need be prototyped?**
- **Will this be a MIB to MOF conversion?**
- **How will prototype be tested?**
- **Prototype of simple printer, or Network Printer**

Next Steps - Discussion



- We have heard suggestions of:
 - Print Alert Indication – but comments suggest that:
 - This would not have high use
 - Incompatibilities in vendor prtAlerts implementation would make consistent mapping difficult
 - PrintService, PrintJob, Print Queue, Print SAP
 - Desirable to Update CIM printing model
 - Would utilize elements from IPP V2 consideration
 - But some suggest that it would be unnecessary
 - Translation of Counter MIB elements
 - More discussion later
 - Generation of Printer Device Profile
 - What is this; why is it desirable?

CIM_ImagingStatisticalData



- CIM version of Counter MIB
- Where does this fit within CIM structure?
- Ira email "WIMS> Detailed Mapping of CIM Imaging Counter Classes (6 April 2008)"
- Discussion Points ?

CIM_ImagingStatisticalData MIB-MOF

MIB Group	CIM MOF Class	Comment
• General	none	locale of system, etc.
• Key	[SNMPKeyId property]	artifact of MIB structure
• Service	ImagingService	future abstract base class
• Subunit	ImagingDeviceElement	future abstract base class
• SubunitMap	AssociatedImagingDeviceElement	future association class
• Alert	ImagingAlertRecord	future log class

<Monitoring and Availability>

- Time ImagingMonitorStatisticalData system, service, etc.
- Monitor ImagingMonitorStatisticalData system, service, etc.

CIM_ImagingStatisticalData MIB-MOF



MIB Group	CIM MOF Class	Comment <MediaUsed>
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- MediaUsed ImagingMediaUsedStatisticalData system, service, etc.

<Traffic>

- Traffic ImagingTrafficStatisticalData system, service, etc.

<Work>

- Image ImagingWorkStatisticalData system, job, document, etc.
- Impression ImagingWorkStatisticalData system, job, document, etc.
- TwoSided ImagingWorkStatisticalData system, job, document, etc.
- Sheet ImagingWorkStatisticalData system, job, document, etc.

Meeting End



- Conclusions?
- Action Items?
- Next Teleconference –
 - Week of 28 April
 - Day and Time to be announced.