



PWG Quarterly Oct 2006 WIMS CIM Update Project Status

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EARLY-BIRD SPECIAL

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Free!
Coffee Mai-Tais!

Everybody awake now?

WIMS CIM Update Project

- Alliance partnership between PWG and DMTF (Distributed Management Task Force), dmtf.org
- DMTF is a large industry consortium
 - Home of CIM: Common Information Model (for management)
 - Many CIM and CIM-related standards
 - Also recently SMASH, WS-Management
 - Numerous working groups with specific areas of concentration
 - Server, Desktop & Mobile, Core Schema, Architecture, WBEM Interoperability & Protocols, etc.
 - Mainly conference calls, regular face-to-face meetings
 - Very sophisticated web sites

Goals

- Bring the CIM model of printing up to date with PWG models
 - CIM schema includes classes for Printer, PrintService, PrintJob, PrintQueue
 - Current classes missing many interesting attributes
 - CIM_Printer class has approx 30 properties; by comparison PrinterMIB has approx 140 properties
 - Current classes not clearly defined
 - CIM_Printer contains some aspects of PrintService
- Ensure that every property in CIM printing-related classes is implementable interoperably

Participants

- Active participants
 - Dell: Rick Landau
 - High North: Ira McDonald
 - IBM: Harry Lewis
 - Sharp: Craig Whittle
 - Bill Wagner (WIMS Chair)
 - Xerox: Peter Zehler

What's Missing

- Current CIM_Printer (and other) classes are pretty basic
- Some categories of management information entirely absent
 - Console displays and lights
 - Input trays, output trays, input media
 - Media paths
 - Toners, colorants, and other supplies
 - Communications channels and language interpreters
 - Counters

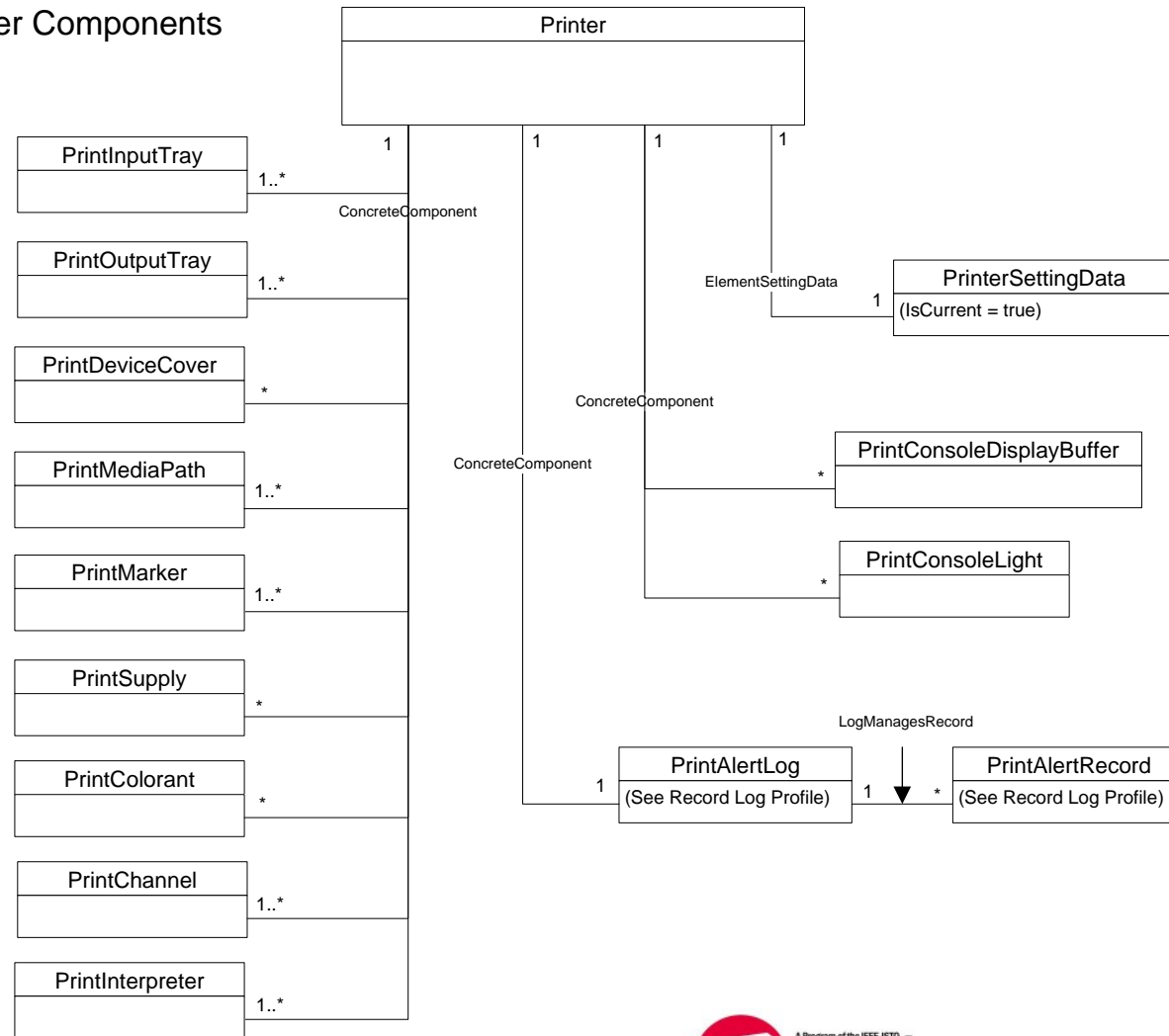
Process to Change the Model

- In DMTF, submit Change Requests (CRs) to change CIM classes or define new classes
 - Concentrate on printer as device first, then service, job, queue
 - Change in phases: cosmetic changes, corrections, major restructuring
- Decide on changes, draft CRs, submit CRs to appropriate CIM Working Group
 - Usually the CIM Core Schema Working Group
- In PWG,
 - Selected range of printers and use cases
 - Selected properties to move forward from Printer MIB
 - Developed model of class inheritance and relationships

- Doing major surgery on CIM_Printer (the print device)
 - Will add 11 classes analogous to prtXxx tables
 - InputTray, OutputTray, DeviceCover, MediaPath, Marker, Supply, Colorant, Channel, Interpreter, ConsoleLight, ConsoleDisplayBuffer
 - Actual class names have "CIM_Print" prefix
 - Plus three special classes: AlertLog, AlertRecord, PrinterSettingData
 - Also add properties to the CIM_Printer base class
 - Total approx 120 new properties from PrinterMIB and Semantic Model
- Many CRs to write
 - Custom machine translation from MIB to MOF format, does 90% of the work (thanks, Ira)
 - Add Status and Key properties by hand editing
 - Run through MOF lint and pretty printer
 - Create a DMTF CR to add the class

Class Hierarchy of New Classes

Printer Components



Current State

- All Phase 1 (editorial, cosmetic) CRs approved, are included in CIM Schema 2.14, published 2006/12/04
- Submitted the first of approx fifteen CRs: add new class CIM_PrintOutputTray
- Working on machine translations and CRs for the next several

Future

- Update the PrintService and PrintJob classes
 - Based on IPP and Semantic Model

Prototype Implementation

- Build a prototype implementation of a CIM Provider that embodies the new Printer device classes (Rick, Dell)
 - Proxy to SNMP printers
 - Proof point for implementability of new classes and properties
 - Possible testbed for interoperability
- Two instances of "implementation experience" required for DMTF to promote classes from experimental status to final status

Documents

- FTP area in <ftp://ftp.pwg.org/pub/pwg/wims/wd> and .../wims/cim
 - Previous CRs
 - Current property lists, proposed class structure
- URLs to key docs
 - ftp://ftp.pwg.org/pub/pwg/wims/wd/CIMCoreCR_PrintOutputTray_04.htm
 - ftp://ftp.pwg.org/pub/pwg/wims/cim/PrinterMibObjectsToAdd_conclusions_20060921_F.xls
 - ftp://ftp.pwg.org/pub/pwg/wims/cim/PrinterMibObjectsToAdd_conclusions_20060921_F_Rationale.pdf
 - ftp://ftp.pwg.org/pub/pwg/wims/cim/td_PrintClassGroupings_v09_20070208.xls
 - ftp://ftp.pwg.org/pub/pwg/wims/cim/Visio-Printer_05.pdf

Look at Documents

- What would people like to see?
 - New CR (not the ultra-long one)
 - Printer MIB and CIM_Printer MOF, with color syntax highlighting
 - CIM "Flat classes" tool for browsing CIM schema
 - Spreadsheet of Printer MIB properties to be added to CIM
 - Current proposed class structure (pictures)
 - Spreadsheet of proposed class grouping of properties

Questions?