



# PWG Quarterly Feb 2007 Projector & Display Management BOF Status

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# Projector & Display Management BOF

- Call for participation at PWG quarterly meeting a year ago
- Began in earnest July 2006 with critical mass
  - Projector vendors and OEMs
  - Management software developers
- Weekly concalls
  - Tricky to schedule: Austin, Dallas, Seattle, LA, Singapore, Taiwan, Tokyo
- PWG email reflector, PWG FTP site for docs
- We want to become a real working group in PWG
  - Ballot out now, closes 5/4
  - NEC and Coretronic joining PWG imminently

# Goals

- Develop a data model for the management data of video projectors and video displays
- Management = Is it healthy? Capabilities? Is it on? Turn it off. Current settings? Adjust settings for usage model.
  - NOT deliver data
- Projectors = Installed projectors from small conference room to theater
  - NOT low-end, personal, carry-around
- Displays = Large, (semi-)permanently mounted displays, digital signage, wall, kiosk, up to jumbotron
  - NOT desktop monitors

# Gradual Approach

- Agreed on targets, requirements for management
- Develop architectural model
  - Started with Printer MIB model
- Define common use cases
  - Inventory, manage power and consumables
  - Save and restore settings for usage profiles
- Divide and conquer
  - Everyone takes some use cases, some groups, some data items

# Working Method

- Define abstract data model
  - Using abstract language template in XML
- Generate usable SNMP MIB first
- Provide consistent naming, datatypes, semantics for other access points: embedded web server, serial, CIM MOF

# Participation

- Active companies
  - Canon (& PWG): Lee Farrell
  - Coretronic (Optoma): Vincent Chen
  - Dell: Rick Landau, Nick D'Alessio, Vincent Ng
  - Delta Electronics: Jason Tsai, Josephine Lee
  - Epson: Hiroyuki Hashimoto
  - NEC: Koichi Ara
  - SpinozaTechnology: Randy Massengale, Devin Fujimoto
  - Symon Communications: Raymond Rogers
- Still recruiting
  - Others have expressed interest but have not committed a person
  - Limited participation is both a blessing and a curse

## Current State

- Agreed requirements and targets
- Set of use cases, 1-3 paragraphs each
- Rough architectural model, long slide set
  - Define subunits, groups of properties, properties within groups
- Template for defining groups, tables, properties
  - Interview sheet: choose datatype, ranges if necessary, enumerations; is it mutable, writable, have a default value, etc.
  - Has gone through many revisions
  - XML format so we can use it to generate at least part of MIB & MOF
    - XSLT translation to MIB fragments just starting, works well so far

## Current State (cont'd)

- Changed to one table per group
- Agreement on structure of resettable counters and FRUs
- Recent re-prioritization
  - Classified properties into
    - must-have
    - should-have
    - nice-to-have
    - not-in-v1
  - Reduced property count by half, eliminated some groups
  - Concentrate on power control, health and status, very basic video and audio controls, a few capabilities, alerts
- Approx twelve (12) groups defined, working on several others
- Detailed definitions of "aspect ratio" values in use in the industry



# Groups Currently in Draft

- Buttons
- Display capabilities
- Display settings
- Fans
- Filters
- Interlocks
- Lights
- Light sources
- Localization
- Optics
- Power states
- Signal source
- System controller
- Thermal sensors
- Thermal switches

# Groups Remaining to be Drafted

- Alerts
- Audio
- Interfaces
- Interpreters and codecs
- System controller
- Text display
- Transport capabilities
- Transport settings

# Documents

- FTP area on <ftp.pwg.org/pub/pwg/BOFs/pdm>
- Charter, member list, requirements, use cases
- Data model
- Priority assessments
- Group and property definitions

# Roadmap

- Milestone: Draft abstract data model Feb-March 2007
  - Expect first drafts or better of all groups by end Q2
- SNMP MIB produced mainly by translation
  - One-shot translation impractical: technically possible, but fixed cost too high
  - Translation will produce several fragments that have to be hand edited into MIB framework
    - Separate groups, TCs; edit into hand-crafted MIB container
  - Add ancillary helper properties (e.g., row update for FRU replacement)
  - Recently restructured template slightly, need to rework translation

# Let's Look at Source Documents

- Structure of FTP area
  - Subdirs: Charter, Requirements, Members, Minutes, Model, Objects
    - (Yes, mistakenly used capitals)
- Requirements, use cases, model slides
- Property definition template
- Schedule of drafts of property groups
- Examples of group properties
- Alpha attempt at translation to MIB fragments

Questions?