

Charter Proposal for

PWG WEB-Based Monitoring and Management

Abstract

There exist several needs relative to the monitoring and maintenance of office imaging devices.

1. An extra-enterprise monitoring and management for:
 - a. Monitoring and configuration of equipment in remote offices
 - b. Service Company monitoring of leased equipment or services for charging and maintenance
 - c. Equipment Supplier access of sold or leased equipment to maintain and update equipment

2. A consistent Device and Service management mechanism for both intra and extra-enterprise interface that is:
 - a. Compatible with the new generation of Management Applications
 - b. Complementary to and supporting Web Services such as PSI
 - c. Utilizing current tools and techniques

3. A flexible Management Model that is
 - a. Applicable to services as well as devices
 - b. Extensible to imaging equipment beyond printers, including scanners and MFD's
 - c. Structured to support management information communications in the way information is consumed

These needs have been intensified by the increased complexity of equipment in scattered locations, the increased mobility and demands of print service users and administrators, and the need to reduce costs of maintenance and support.

Various mechanisms have been used to provide remote Monitoring, including

- telephone hookups, where the equipment calls out on a modem,
- built in radio paging transmitters,
- various network connections, often using a proprietary protocol

Telephone and pager solutions are costly both for the equipment and in recurring charges. Custom network approaches typically require special MIS actions to communicate through the ever-necessary firewall. There is no standardization among the various approaches, so that different implementations are not compatible.

The prevalence of the “Web” and the consistent support of Web Browsers across enterprise, soho and home environments suggest an effective and inexpensive method of addressing the extra-enterprise need.. Indeed, the second “need” is basically providing a

management support to web services such as the PSI initiative, again pointing to a Web Services approach for both extra- and intra enterprise management.

Finally, imaging management currently uses SNMP , management information embedded in printing protocols and other proprietary mechanisms. The different protocols and the extensive use of proprietary MIBs severely affects interoperability of management applications with different printers. The MIBs tend to follow a physical structuring which is not compatible with many management application requirements. Again, a web services approach using an XML coded model is consistent with addressing the three primary needs

In accord with these objectives, the working group should address:

1. A transport:
2. A protocol handling a set of operations and responses, including
 - a. Monitoring (both on an alert and a periodic basis)
 - b. Administration of Management Configuration (identifying attributes to be monitored, frequency of monitoring, conditions for reporting)
 - c. Management (configuring and/or controlling operation of the imaging device or service)
 - d. Transfer of files to or from the imaging device or service (communicating executable updates, fonts, options, address lists etc, along with the instructions of what to do with these files)
3. A Management Model

The implementation of these functions must address:

1. Costs
2. Security
3. Operability within typical enterprise network constraints
4. Compatibility with existing data base and management capabilities
5. Compatibility with existing and anticipated infrastructure, including MIBs, the Semantic Model and PSI.
6. Support of the installed equipment base as well as providing for inclusion in future equipment (extensibility path is clearly defined)

To the extent possible, the working group should utilize protocols, techniques and tools already in place, both to leverage extant technology and to avoid conflict with or infringement upon proprietary solutions. To this end, it should be aware of the work of the following organizations, as well as any publicly documented proprietary solutions. This does not imply any commitment to ensure compatibility with any of these alternate approaches.

- IETF xmlconf activity (<http://www.ietf.org/proceedings/02jul/index.html>)
- IETF webdav (<http://www.ietf.org/html.charters/webdav-charter.html>)
- IETF BEEP (The Blocks Extensible Exchange Protocol Core {RFC 3080}) (Mapping the BEEP Core onto TCP {RFC 3081})
- OASIS (<https://www.oasis-open.org/committees/mgmtprotocol/>)

- Industry plans to use WEB services in support of major management applications (Tivoli, Open View)
- CIM (including Common Information Model (CIM), Web-Based Enterprise Management (WEBM) and Alert Standard Format (ASF))
<http://www.dmtf.org/standards/>

Milestones

Because of increased activity in this area and the increasing deployment of proprietary approaches, it is important that the standardization activity proceed forthwith. Nevertheless, the various aspects must be given adequate consideration. Some aspects are relatively straightforward while others may take substantial consideration. Therefore, the plan is to pursue several aspects in parallel, perhaps getting interim partial solutions. All aspects would be co-ordinated so that the final specification is cohesive.

Charter Stage

Charter Discussion & Approval	June 2003
Initial Requirements Statement	July 2003 (Mail List)
Requirements Approval	August 2003(Mail List)

Definition Stage

Initial Solutions Proposals	
Transport & Operations	October 2003
Basic Monitoring Model	October 2003
Full Management Model	December 2003
Unified Working Draft	Q1 2004
Candidate Standard	Q2 2004

Implementation Stage

Interoperability Event	Q3 2004
Proposed Standard Last Call	Q4 2004
Published Standard	Q4 2004