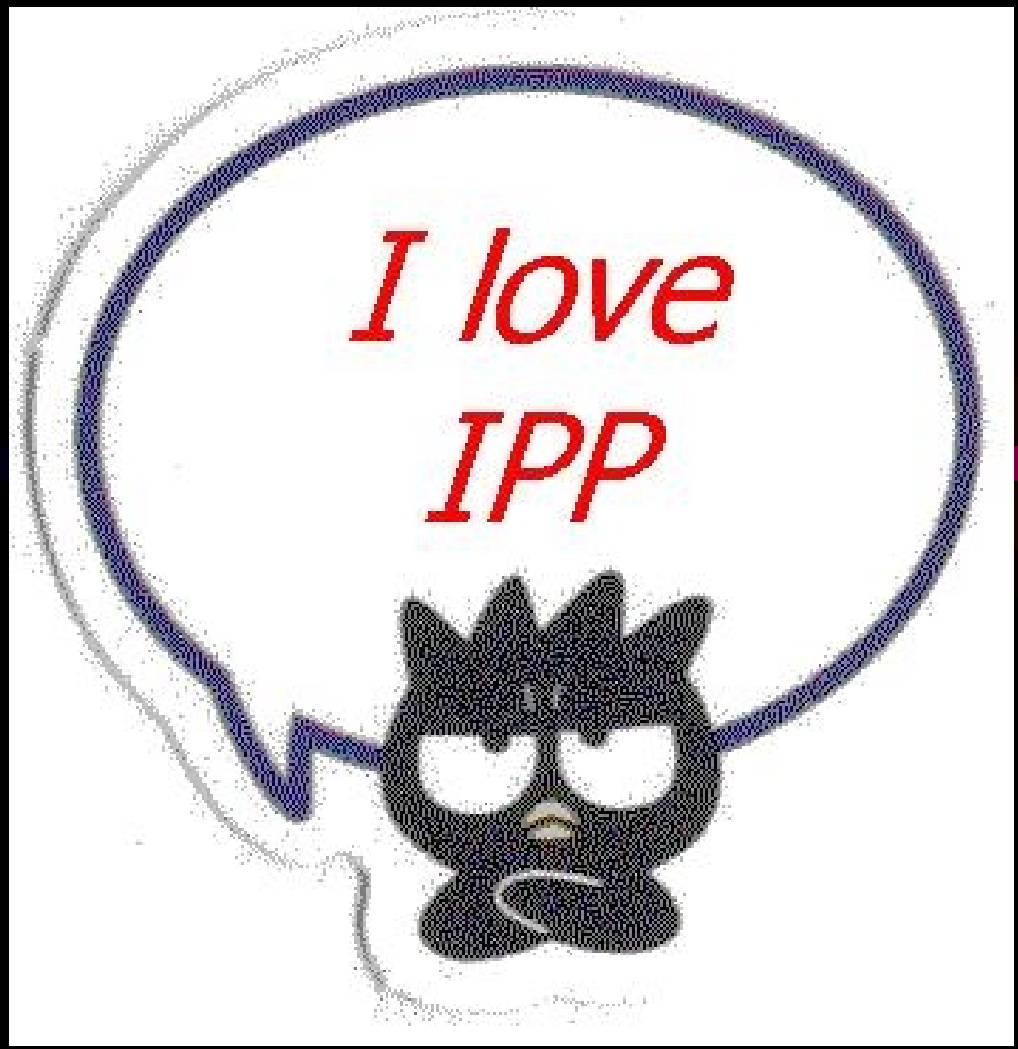

I love
IPP

Internet Printing Protocol - IPP Agenda for IETF 47

1) Which documents are still under review in the IESG?
2) IPP Notifications - new drafts and issues
3) Proposal for an LDAP printer schema
4) IPP Additional Operations and Additional Syntax - new drafts
5) Review Proposed Charter for IPPEXT

Which documents are still under review in the IESG?

- Internet Printing Protocol/1.1: Model and Semantics
  - <draft-ietf-ipp-model-v11-06.txt>
- Internet Printing Protocol/1.1: Encoding and Transport
  - <draft-ietf-ipp-protocol-v11-05.txt>
- Internet Printing Protocol/1.1: Implementer's Guide
  - <draft-ietf-ipp-implementers-guide-v11-00.txt>

IPP Notifications - new drafts

- IPP Event Notification Specification
  - <draft-ietf-ipp-not-spec-02.txt>
- IPP: The 'mailto:' Notification Delivery Method
  - <draft-ietf-ipp-notify-mailto-00.txt>
- IPP: The 'ipp' Notification Polling Method
  - <draft-ietf-ipp-notify-poll-00.txt>

IPP Notifications - new drafts

- IPP: The INDP Notification Delivery Method
  - <draft-ietf-ipp-indp-method-00.txt>
- IPP Notification Delivery Protocol (INDP)
  - <draft-ietf-ipp-indp-00.txt>
- IPP: Notifications over SNMP
  - <draft-ietf-ipp-not-over-snmp-01.txt>

Internet Printing Protocol (IPP)

HTTP Chunking and
Notification Delivery Methods

HTTP: Proxy Support of Chunking

- Do HTTP proxies support chunking
  - for POST in requests?
  - for POST in responses?

IPP Notification Quick Summary

- Subscriptions
  - are for printer events or job events
  - contain events that trigger event notification
  - contain notification recipient URL
    - scheme specifies event notification delivery method
- Event Notification
  - is delivered to specified notification recipient
  - whenever specified event occurs

Event Notification Delivery Methods

- Four delivery methods (to specified URL)
  - ippget:
    - use IPP to get (poll) accumulated event notifications
  - indp:
    - use INDP over http to send event notifications
  - mailto:
    - email an event notification
  - snmpnotify:
    - target of URL is an SNMP notification receiver

ippget: delivery method

- The Printer
  - saves each event for a fixed amount of time
  - supports the IPP Get-Notifications operation
  - requires clients to poll for event notifications with IPP Get-Notifications operation
  - responds to the client with:
    - one or more event Notifications
    - the recommended time to poll again
    - the lease time of future event notifications

ippget: delivery method, HTTP Issues

- In order for a client to receive events as they occur, should there be an operation with a single HTTP POST where the Printer returns event notifications in multiple response-parts spread out over several minutes?
- Should this operation use HTTP GET instead of HTTP POST?
- Should each response-part be a separate message body in MIME multi-part?

ippget: delivery method, Issues

- Do the lease and server recommended times make this polling mechanism a reasonable alternative to Printer initiated event delivery method (mailto, indp, snmpnotify) ?

mailto: delivery method

- The Printer
  - sends email (SMTP) to the specified notification recipient URL
    - interfaces to existing gateways for paging, voicemail and instant messaging.
  - the format may be
    - human readable and/or
    - machine readable

indp: protocol & delivery method

- INDP - new protocol for a notification service
  - leverages encoding and semantics from IPP
  - notification recipient behaves as HTTP server
  - all INDP operations use HTTP POST like IPP
  - Send-Notifications is one INDP operation
  - indp: is an IPP event notification delivery method that uses Send-Notifications operation

snmpnotify: delivery method

- The Printer sends SNMP trap or inform requests to the specified notification recipient URL
  - This delivery method is specified as an extension to the Job Monitoring MIB RFC 2707

Proposal for an LDAP printer schema

- IPP: LDAP Schema for Printer Services
  - <draft-ietf-ipp-ldap-printer-schema-00.txt>
  - aligned with SLP Printer template:
    - Definition of the Printer Abstract Service Type v2.0
    - <draft-ietf-svrloc-printer-scheme-06.txt>

IPP Additional Operations and Additional Syntax - new drafts

- IPP: Job and Printer Set Operations
  - <draft-ietf-ipp-job-printer-set-ops-01.txt>
- IPP: The 'collection' attribute syntax
  - <draft-ietf-ipp-collection-02.txt>

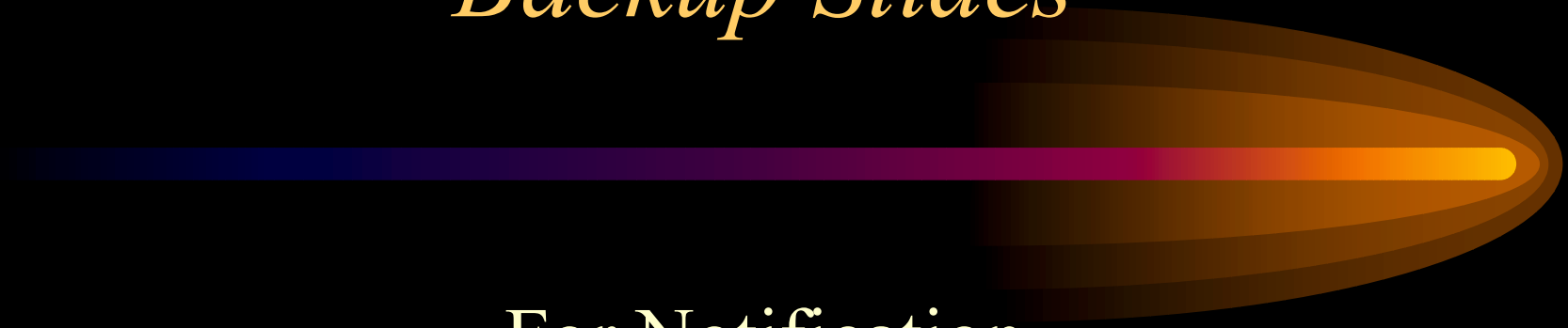
Proposed Charter for IPPEXT

- Description of Working Group:
  - The first area has to do with additional functionality mainly needed by administrators and operators of a printer, rather than end users, which was the scope for the IPP WG.
  - The second area has to do with printer initiated notifications back to end-users, operators or administrators.

Proposed Charter for IPPEXT

- Major Milestones
  - New Operations — June 2000
  - Notifications — September 2000

Backup Slides



For Notification

Subscription Request Attributes (Partial)

- notify-recipient
  - the URL of the notification recipient
  - the scheme specifies the delivery method
- notify-events
  - one or more keywords that are event names
- notify-format
  - a MIME media type -- the format of the event notification

Subscription Response Attributes (Partial)

- subscription-id
  - integer for identifying a subscription
- notify-lease-expiration-time
  - integer time at which subscription lease expires
- notify-server-up-time
  - current integer time on Printer.

Event Notification

- Event is delivered
  - when event in “notify-events” occurs
  - to “notify-recipient”
  - with contents
    - of “notify-format”
    - containing a fixed set of attributes

Event Notification Attributes Delivered (e.g.)

- printer-uri
- subscription-id
- request-id (i.e. a sequence number)
- trigger-event
- trigger-time
- printer-state (for printer events)
- job-state (for job events)

ippget: delivery method, Get-Notifications Request

- request
  - like Get-Printer-Attributes
  - specifies events by
    - notify-recipient url
      - events from all subscriptions with the specified url
    - job-id
      - events from all subscriptions associated with the job
    - subscription-id

ippget: delivery method, Get-Notifications Response

- Response
  - operation attributes contains
    - event-lease-time-interval
      - number of seconds until future events start disappearing
    - recommended-time-interval
      - number of seconds a client should wait until next Get-Notifications request
  - one notification group per event
    - each group contains the fixed attributes