Instant Message Delivery Notification (IMDN) for Common Presence and Instant Messaging (CPIM) Messages

draft-burger-sipping-imdn-02

Open Issues

- Issue 1: Requiring IMDN's to be end-to-end encrypted.

- Issue 2: Sender keeping state

- Issue 3: No disposition time in IMDN

- Issue 4: Recipient of IMDN can appear to be different than sender

- Issue 5: Deleted state (automatic versus manual)

- Issue 6: Report Consolidation

Issue 1: IMDN Security

- Always Encrypt Body (because of B2BUA's)
- Never Encrypt Body
- Encrypt Body if UAC Requires it
  - Reject message if UAS cannot comply
  - Following privacy rules
- Encrypt Body if Message Was Encrypted
  - Requires examining message

Issue 2: Sender Keeping State

- Draft assumes UAC will keep state of messages IMDN's requested for
  - Little as Message-ID, as much as Sent Message folder
  - Drawback is memory / storage limitations of mobile devices
- Keep in mind human factors: a long time between sent message and IMDN usually results in alternate communication path choice
- "Good" or "Big" UAC's can keep persistent state
- "Small" UAC's don't really need state; they get minimum info from IMDN itself
- Timeout is a local matter

Issue 3:
No Disposition Time in IMDN

- Pro
  - Data Element Exists in CPIM and Transport Protocol
  - Trivially Easy to Spoof
  - Saves Bytes

- Con
  - UAC Has to Read CPIM Wrapper
  - We're Only Talking 42 Bytes

Issue 4: Recipient Of IMDN Can Appear To Be Different Than Sender

- Pro
  - Enables Stateless B2BUA's
  - Enables "role" addresses (e.g., "sip:info@help.example.com"
- Con
  - Imposes Authenticated Transport for IM Transport (TLS)
    - Close well-known MDN SPAM attack

Issue 5: Deleted State

- Discussion started as automatic versus manual delete

- Came from e-mail world where you could delete a message without reading it (from headers only) or having a sieve filter delete messages for you
  - Probably not applicable for IM

- Propose to drop deleted state altogether

Issue 6: Report Consolidation

- B2BUA's *could* consolidate IMDNs
  - B2BUA's can always do whatever they want to do
    - How they populate Disposition-Notification-To
    - How they process IMDN's
    - How they generate IMDN's

- UAC directs B2BUA if IMDN request is for B2BUA or Final Destination (OK?)

- Is consolidation subject of standardization, now?

- Propose to say, "no"; protocol machinery is in place to enable it in future extension

Does Anyone Care?

- Gotten repeated feedback informally that 3GPP really needs this

- Three people came up to me after presentation in Paris this was critically important to their business model (financial and medical verticals)

- Absolutely no feedback on the SIMPLE list

Next Steps

- If people care, make work group item
  - Flesh out examples
  - Work out consensus on 6 open items (my way is easiest ☺)
- If people don't care, we are finished