

Sample Uses of SIP INFO with Varying Reliability Needs

draft-kuthan-sip-infopayload-00

Jiri Kuthan

jiri.kuthan@wcom.com

November 10, 1999

IETF #46

Objectives

- Establish a “catalog” of uses of the SIP INFO mechanism. Currently included is transportation of:
 - text
 - mid-session GSTN signaling
 - DTMF
- Stimulate discussion on reliable in-order delivery

Use #1: Text

- Motivation: communicating session-related, human-readable information, e.g. charging information (“last minute” warning, “available minutes”, advice of charge), user short messages, etc.
- Encoding: Text/* (Text/HTML, Text/Plain, etc.)

Use #2: Transported GSTN Signaling

- Motivation: transport of native GSTN mid-session signaling messages which do not affect the SIP state, e.g. ISDN Info packet carrying 'Advice of Charge'
- Encoding: e.g. application/ISUP for transported ISUP messages, see I-D draft-zimmerer-mmusic-sip-isup-mime

Use #3: DTMF Transport ...

- DTMF - another case from the category of GSTN signaling transport.
- Motivation: accessing existing IVR applications until they are replaced by WWW.
- Benefits of the SIP INFO approach:
 - in-order, loss and jitter resistive delivery
 - may reuse SIP/HTTP security
 - easy to integrate with SIP services

... Use #3: DTMF Transport

■ An Example: phone-banking

- high reliability needed (no digit may get lost)
- security needed (credit card numbers communicated)

■ Possible data formats: MGCP/Megaco

- text format of DTMF signaling fits SIP's text format and existing text-oriented operating systems
- easy passing through a gateway controller
- defined event sets can be reused

Reliability Mechanisms

- Motivation: if a single DTMF digit is lost or delivered out-of-order during a phone-banking session, a financial transaction may result in unexpected results.
- Solutions: application-specific
 - Trivial: no handling for applications with no need
 - Buffering: delay out-of-order packets
 - Re-sending Transmission Window: like buffering, but all unacknowledged segments are retransmitted to minimize the retransmission delay (makes sense for applications generating a continuous stream of small size packets)