A straw-man proposal for a media-based traceroute function for SIP

draft-kaplan-straw-sip-traceroute-00

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The Problem(s)

- Troubleshooting failed or poor media calls is difficult
  - If you call a 911/112 test number and media is bad, what do you do next?
- In IP, people start running traceroute
- It would be nice to have the same for SIP media sessions
Proposed Solution #1

- A new header (surprise!)
  - ‘B2bua-hops: 70’
- Like Max-Forwards, this header gets decremented by middleboxes
  - but only media-plane B2BUAs
- When it reaches 0, the B2BUA answers it
  - Or responds with 483 if it can’t answer it, with Contact-URI
Proposed Solution #2

- Use Max-Forwards, answer when it’s 0 and SDP says ‘loopback’
  - Plus a bunch of other policy authorization rules of course
- Other middleboxes will also decrement it, and reject
  - Too bad... If at first you don’t succeed: try, try again
- What’s the downside?
  - Some middleboxes randomly change Max-Forwards
  - Indistinguishable from detected loops
Max-Forwards

Pros

• No new header
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• Works the same as traceroute for other SIP messages
• Follows KISS principle

Cons

• Some middleboxes randomly change Max-Forwards
• Indistinguishable from loops
• Can’t do offer-less/delayed-offer INVITE mode
• No reason to go to IETF 91 in Hawaii
Wait a minute, didn’t the loop-detect draft require us to reject it?

• Sure, it has a MUST reject when Max-Forwards equals 0

• If this is an IETF doc, this traceroute draft would update the loop-detect one with a “…unless…” clause

• If it’s not an IETF doc, then a vendor can still do it
  – There is no protocol police, and IETF specs are not laws
  – A B2BUA simply wouldn’t be following the loop-detect draft for a specific condition
  – And if the B2BUA gets it wrong and creates a loop due to it, that’s its fault, not the IETF’s
Open Issues

• Repeat from IETF 84: is anyone interested in this type of thing?
• Should we use Max-Forwards, a new header, or something in SDP?