

SIP-over-QUIC

IETF 115 HotRFC talk

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BBC
**RESEARCH &
DEVELOPMENT**

SIP-over-QUIC

Context

- A mapping of **Session Initiation Protocol (SIP)** semantics over **QUIC Transport**
- Design inspired by **HTTP/3**
- Original idea was born from work on my QUIC RTP Tunnelling draft
 - [draft-hurst-quick-rtp-tunnelling](#)
- Sending live media over QUIC is an active topic, including the new Media-over-QUIC (**MoQ**) WG.
- Possibility of reusing SIP semantics to convey **control metadata** about media sessions using SIP offer/answer

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System design

- Design **inspired by HTTP/3** allows potential reuse of lots of existing HTTP/3 stack development
- Intention to allow for media sessions to reuse the QUIC transport connection initiated by a SIP-over-QUIC session to send media in the same encrypted tunnel
 - Deliberately doesn't choose a media transport type to allow for flexibility
- **DATA** frames are compatible with H3
- **HEADERS** frames feature QPACK compression
- Use of both client- and server-initiated bidirectional streams for sending SIP request messages
 - Decouples the UAC and UAS from the QUIC client and server model
- Unidirectional stream types reserved for **media transport**
 - **Datagrams** also available

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What next?

- Internet-Draft is ready and will be posted as soon as the datatracker is accepting new submissions again
 - Editor's draft available at <https://bbc.github.io/draft-hurst-sip-quic/draft-hurst-sip-quic.html>
- Happy to accept any and all feedback
- Which working group is the best avenue to continue this work?
 - SIPcore?
 - AVTcore?
 - MoQ?

Thank you for listening

For more information:

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