

# CLUE DATA CHANNEL

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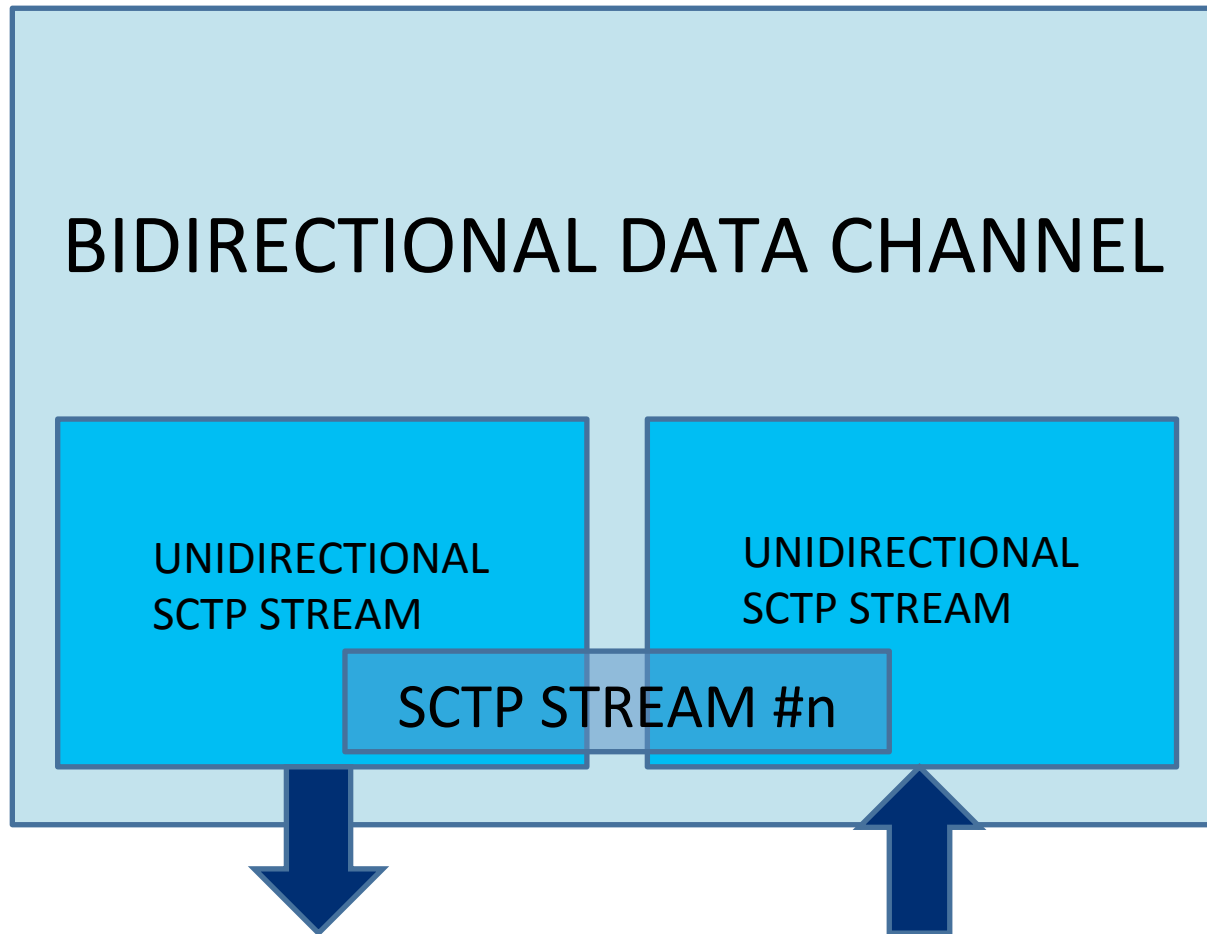
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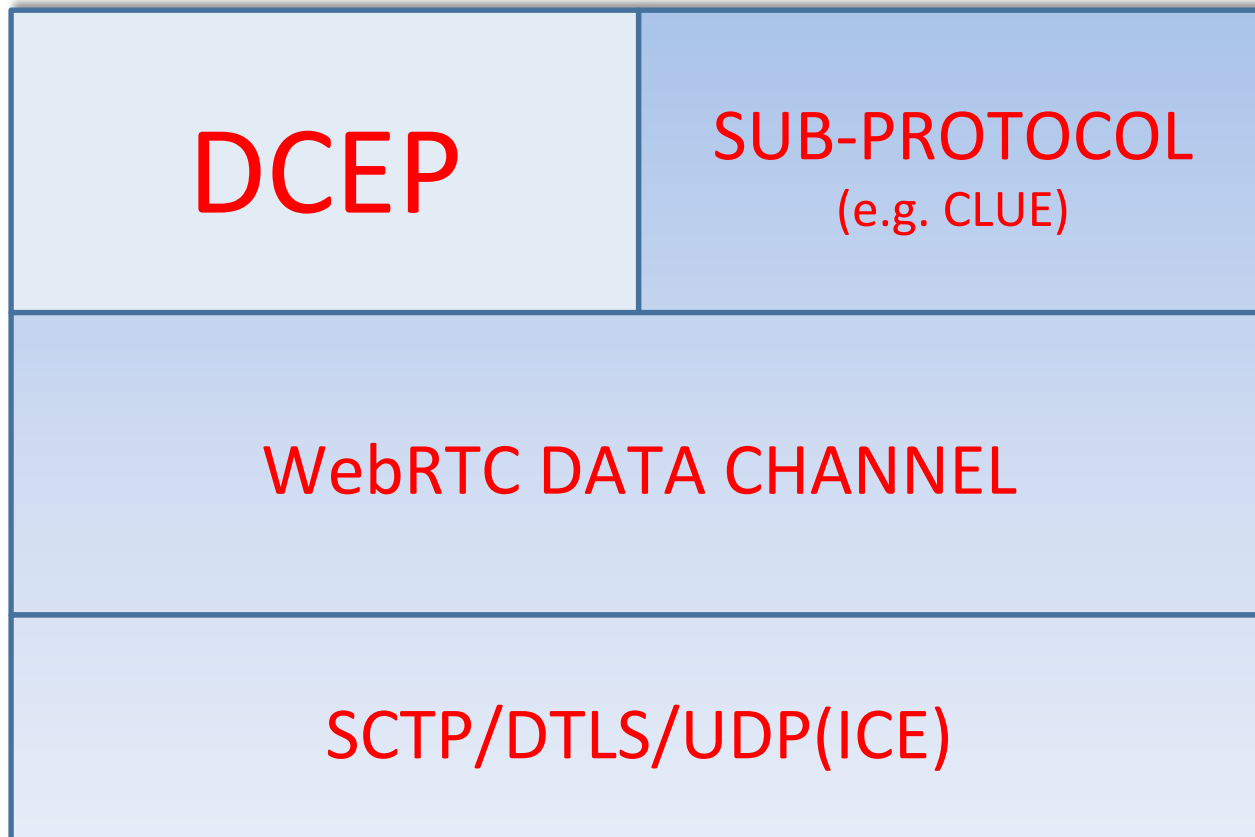
# (2) REFERENCES

- SCTP
  - RFC 4960
- DTLS (v.1.2)
  - RFC 6347
- SCTP Stream Reconfiguration
  - RFC 6525
- DTLS Encapsulation of SCTP Packets
  - draft-ietf-tsvwg-sctp-dtls-encaps
- WebRTC DATA CHANNEL
  - draft-ietf-rtcweb-data-channel
- WebRTC Data Channel Establishment Protocol
  - draft-ietf-rtcweb-data-protocol
- SCTP-Based Media Transport in SDP
  - draft-ietf-mmusic-sctp-sdp
- SDP-based "SCTP over DTLS" data channel negotiation
  - draft-ejzak-mmusic-data-channel-sdpneg

# (3) WebRTC DATA CHANNEL OVERVIEW



# (4) PROTOCOL STACK



## (5) DATA CHANNEL ESTABLISHMENT PROTOCOL (DCEP)

- Used to open a data channel on the SCTP association
  - SCTP stream selection
  - Sub-protocol
  - Additional parameters
- Uses the data channel (SCTP stream) that it controls

# (6) SDP O/A EXAMPLE (SCTP Association)

SDP OFFER:

```
m=application 54111 DTLS/SCTP 1000  
c=IN IP4 192.0.2.2  
a=sctpmap:1000 webrtc-datachannel streams=64000  
a=setup:actpass  
a=connection:new
```

SDP ANSWER:

```
m=application 64222 DTLS/SCTP 1000  
c=IN IP4 192.0.8.8  
a=sctpmap:1000 webrtc-datachannel streams=64000  
a=setup:passive  
a=connection:new
```

# (7) SDP O/A EXAMPLE

## (SCTP Association + Data Channel)

SDP OFFER:

```
m=application 54111 DTLS/SCTP 1000  
c=IN IP4 192.0.2.2  
a=sctpmap:1000 webrtc-datachannel streams=64000  
a=dcmap:1000 stream=1; subprotocol="CLUE"  
a=setup:actpass  
a=connection:new
```

SDP ANSWER:

```
m=application 64222 DTLS/SCTP 1000  
c=IN IP4 192.0.8.8  
a=sctpmap:1000 webrtc-datachannel streams=64000  
a=dcmap:1000 stream=1; subprotocol="CLUE"  
a=setup:passive  
a=connection:new
```

# PROPOSAL

- Adopt DCEP for CLUE as a way to create the CLUE data channel
  - draft-ejsak may be adopted later, if the draft progresses in MMUSIC
    - Backward compatible: fallback to DCEP always possible
  - Define generic CLUE identifier(e.g. media feature tag), used in initial INVITE to indicate that the caller supports CLUE
    - CLUE identifier definition specifies that entity must support using a data channel for CLUE



# (10) RELATED WORK

- **CLUE Data Channel impact on CLUE session**
  - How does a loss of the CLUE data channel, or the SCTP association, affect the CLUE session?
- **If DCEP is used, who is responsible for opening the channel?**
  - To avoid two CLUE data channels from being established

THE END

THANK YOU FOR  
LISTENING!