DataChannels, take 2

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Changes since Atlanta/Interim

- Declarative open, no handshake (0 RTT)

  - No rejection – if you don't want a channel, ignore it or call channel.close() (not a change)

- In-band Open packet to define a bidirectional channel

  - Avoid glare by using an even/odd split

  - Sent reliably, though unreliable data can jump ahead

    – Buffer data that arrives on unused stream

    – Deliver buffered data when Open arrives

- Channels now use streams symmetrically

- Note: no list of DataChannels appears in SDP

External negotiation of channels

- Can specify "I've agreed/expect this channel (stream) to be used for a channel with these properties". Allows for external negotiation, or pre-defined channels within an app.

  - Delivers any queued data already received

- If an Open arrives, notify an error occurred to higher levels

  - Let higher level deal with it.

- Marks channel as used

- Returns error if the channel is already in use

  - May mean we want to expose the stream values (see open issues)

Open issues

- Decider for even/odd – based on DTLS roles?

- Does stream value need to be exposed?

  - External negotiation implies Yes so it can query the current set of streams in use, if a mix of in-band and external is used. Otherwise not required

  - Also may imply ability to know if you're even or odd

- Details around handling of very large messages blocking other streams

  - Draft in tsv WG in progress, expect initial implementation andWG document by Berlin

- Should there be limits to how long/much we buffer waiting for an Open?

Questions/Discussion