

Multi-party real-time text

status update for IETF AVTCORE 109 Nov. 19, 2020

RTP-mixer formatting of multi-party Real-time text
draft-ietf-avtccore-multi-party-rtt-mix-09

Real-time text solutions for multi-party sessions
draft-hellstrom-avtccore-multi-party-rtt-solutions-04

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Presentation view should be a receiver choice. Mixer should insert source and interleave text within the degree of freedom of ITU-T T.140

Principles: Readable phrases, source indicated, multiple insertion points, approximate timing visible.

| Bob | Eve | Alice |
|----------------------|---------------------|------------------------|
| | | I will arrive by TGV. |
| My flight is to Orly | | Convenient to the main |
| | Hi all, can we plan | station. |
| | for the seminar? | |
| Eve, will you do | | |
| your presentation on | | |
| Friday? | Yes, Friday at 10. | |
| Fine, wo | | We need to meet befo |

Example of possible multiple panel view with multiple insertion points.
Other views are possible.

Example of chat-style view with multiple real-time insertion points

```
|-----| |
|[Alice] Can we meet on Thursday evening? | |
| | | |
|[Eve] Yes, definitely. How about 7pm. | |
|   at the entrance of the restaurant | |
|   Le Lion Blanc? | |
|[Eve] we can have dinner and then take a walk |-|
| | | | |v|
| <Eve-typing> But I need to be back to |^|
|   the hotel by 11 because I need | -|
| | | | |
| <Bob-typing> I wou | -|
| | | | |v|
|-----| |
| of course, I underst |
|-----| |
```

draft-hellstrom-avtcore-multi-party-rtt-solutions-04

- Informational, used as background for specification of the standards track draft
- Requirements.
- Transport and negotiation solutions with pros and cons
- Can be used by developers and in future work
- Latest changes to align with version -09 of main avtcore draft
- No clear ambition to continue to approval

RTP-mixer formatting of multi-party Real-time text draft-ietf-avtcore-multi-party-rtt-mix-09

- Standards track
- Main focus on RTP-based solutions for centrally controlled SIP conferences
- Brief info on WebRTC (rfc-to-be 8865), gateways, security....
- Good text presentation requires multi-party aware actions by the receiver so that text from multiple simultaneously sending sources can be presented in a readable way.
- Contains two RTP mixing solutions.
- #1. Mixing for multi-party aware endpoints of RFC 4103 text/red format with one source per packet in CSRC.
- #2. Mixing for multi-party unaware endpoints. Low functionality fallback.

Text interleaving method change planned for next version

- Mixer method about to change in next version
- Enables different source for each packet instead of change of source at every 4-th packet in earlier versions.
- Major switching performance increase.

New packet interleaving approach for mixer

- Briefly:
- When text from more than one source is available for transmission (new or redundant), send next packet with all available text from source with oldest remaining unsent text 100 ms after latest packet.
- When text from only one source is available for transmission (new or redundant), send next packet 330 ms after latest packet.

New recovery and loss detection in receiver

(Brief example procedure for transmission with two redundant generations)

- Note timestamp of latest received text from each source..
- At each reception, evaluate original timestamps of redundant text.
(=timestamp minus timestamp offset).
- Check if text was received from that source with these timestamps.
- Recover the text if not received before.
- Mark with a possible text loss mark if a sequence number gap is wider than three.

Status of draft-ietf-avtcore-multi-party-mix

New version planned with modified interleaving of packets and recovery of loss.

Other parts not changed

WG last call proposed

Thanks

Comments are welcome

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