# Clock Reference Stream Improvements Proposal Version 2

Frank Bähren, Intel June 30<sup>th</sup>, 2020

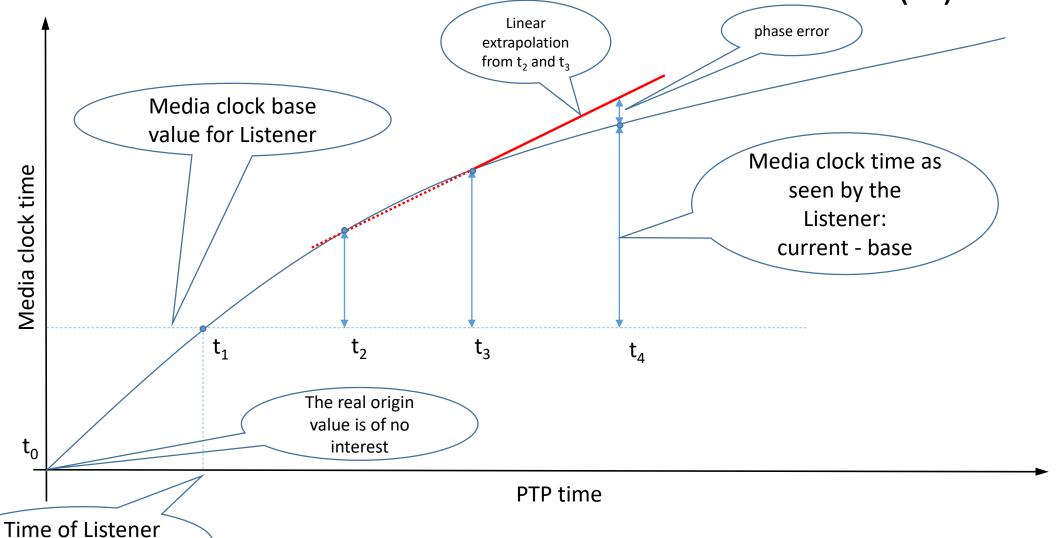
## Feedback on Previous Proposal (1)

- Most people on the call did not see an advantage in expressing "Media Time" (the representation of the clock that drives content feeding at the content source in the talker) in nanoseconds
- Would rather prefer to stick with the current, content-specific representation:
  - Samples for audio streams
  - Video lines or pixels for video streams
  - Etc.
- Hence, a new CRF type is not needed for that

# Feedback on Previous Proposal (2)

- The idea of representing the "Media Time" as absolute value is still interesting
- Use cases include sources that come with an absolute time code that could be of interest at the Listeners, e.g. SMPTE Frames
- No need to recreate/estimate number of missed events from "snapping" to the closest event boundary (and/or guessing from sequence\_num) when intermediate PDUs were lost

### Introduction to Absolute Media Time (2)



initialization

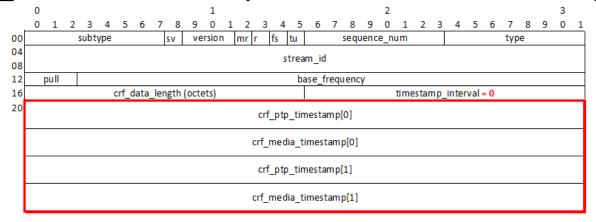
#### CRF Extension Proposal #2

 No new CRF type – improvement can be applied to any existing CRF type

• If timestamp\_interval is >0, CRF works as defined in 1722-2016

If timestamp interval is 0, crf\_data contains \*pairs\* of PTP timestamps

and media timestamps



 The original meaning of timestamp\_interval is meaningless for this kind of CRF, as there doesn't even have to be a fixed interval between timestamps