20 March 2025

IETF 122

draft-ietf-mlcodec-opus-extension

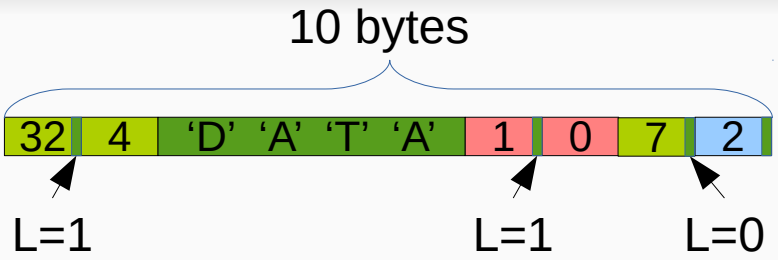
Draft Status

- -03 published with Repeat These Extensions

RTE Update

- Randomized testing found one case we had not considered
- What happens for a frame separator with an explicit increment of 0?
  - Existing text: “...all of the non-padding extensions seen so far in the current frame” get repeated
  - Initial implementation: updated the pointer to the first extension to repeat after a frame separator *even if the increment was zero*

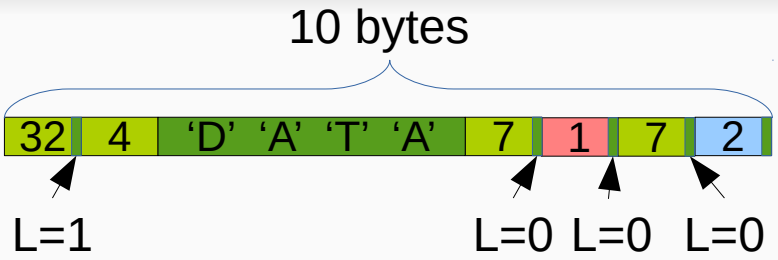
Example:
60ms packet with 3×20 ms frames



Decodes to:

ID	Frame	Length	Payload
32	0	4	“DATA”
7	0	0	
7	1	0	
7	2	0	

Example:
60ms packet with 3×20 ms frames



Decodes to:

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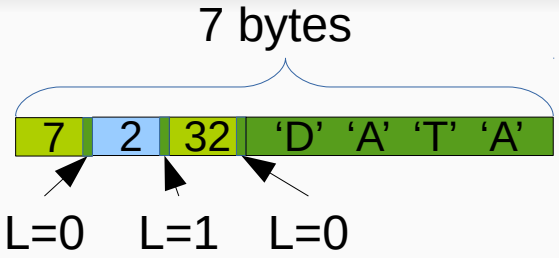
Example:
60ms packet with 3×20 ms frames



Decodes to:

ID	Frame	Length	Payload
7	0	0	
32	0	4	“DATA”
7	1	0	
7	2	0	

Proposal

- Frame separator with an explicit increment of 0 treated just like another form of padding
  - Do not update the pointer to the first extension to repeat
  - Do not repeat the separator extension!
- Follows spirit of existing text
- Add clarifying text to make this explicit:
  - “Padding extensions (ID=0) are not repeated, nor is any frame separator (ID=1) with an increment of 0 (which simply acts as another form of padding).”
- Implementation already updated to follow this proposal (was a 1-line change)

Questions?

Opus Extension Format