

# Temporal Interleaving Attribute in SDP

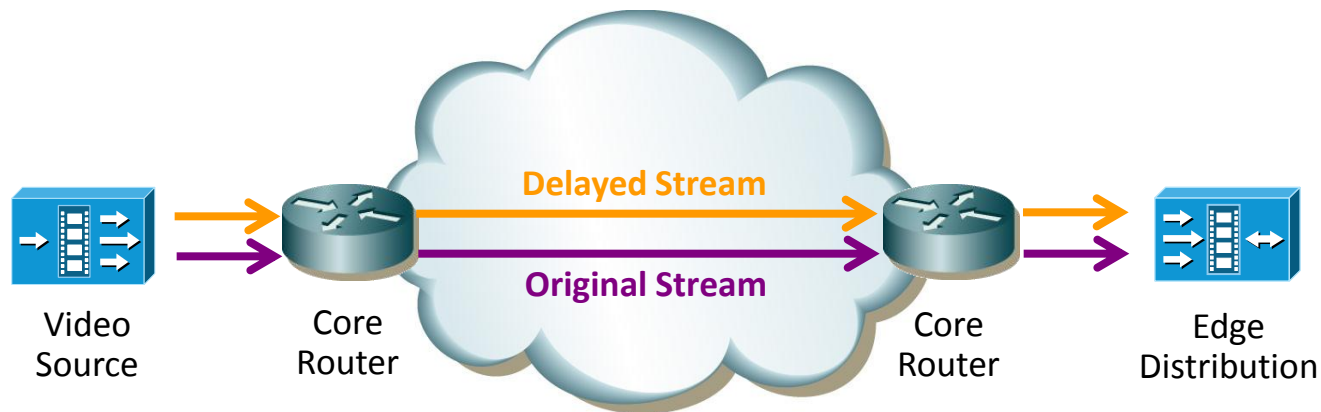
draft-begen-mmusic-temporal-interleaving-01

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# Temporal Interleaving (or Redundancy)



- Let  $Q$  denote the max outage duration that is intended to be repaired
- Packets are transmitted twice, each separated by  $Q$  time units
- Temporal diversity is hitless if loss/outage can be constrained to  $Q$  time units
- This introduces 100% overhead and a delay of  $Q$  time units

# The 'interleaving-period' Attribute

- It is defined as both a media-level and session-level attribute and specifies the interleaving duration in milliseconds (ms)

interleaving-attribute = "a=interleaving-period:" periods CRLF  
periods = period \*( ":" period)  
period = 1\*DIGIT ; in milliseconds

# Example 1

- The multicast stream is duplicated with an interleaving period of 100 ms

```
v=0
o=ali 1122334455 1122334466 IN IP4 red.example.com
s=Temporal Interleaving
t=0 0
m=video 30000 RTP/AVP 100
c=IN IP4 233.252.0.1/127
a=source-filter:incl IN IP4 233.252.0.1 198.51.100.1
a=rtpmap:100 MP2T/90000
a=interleaving-period:100
a=mid:S1
```

## Example 2

- The multicast stream is duplicated twice:
  - 50 ms after the original transmission, the first duplicate is transmitted
  - 100 ms after that, the second duplicate is transmitted

```
v=0
o=ali 1122334455 1122334466 IN IP4 red.example.com
s=Temporal Interleaving
t=0 0
m=video 30000 RTP/AVP 100
c=IN IP4 233.252.0.1/127
a=source-filter:incl IN IP4 233.252.0.1 198.51.100.1
a=rtpmap:100 MP2T/90000
a=interleaving-period:50:100
a=mid:S2
```

# Next Steps

- Opinions, comments, questions?