

# RTP Clock Source Signalling

draft-williams-avtcore-clksrc-00

Aidan Williams

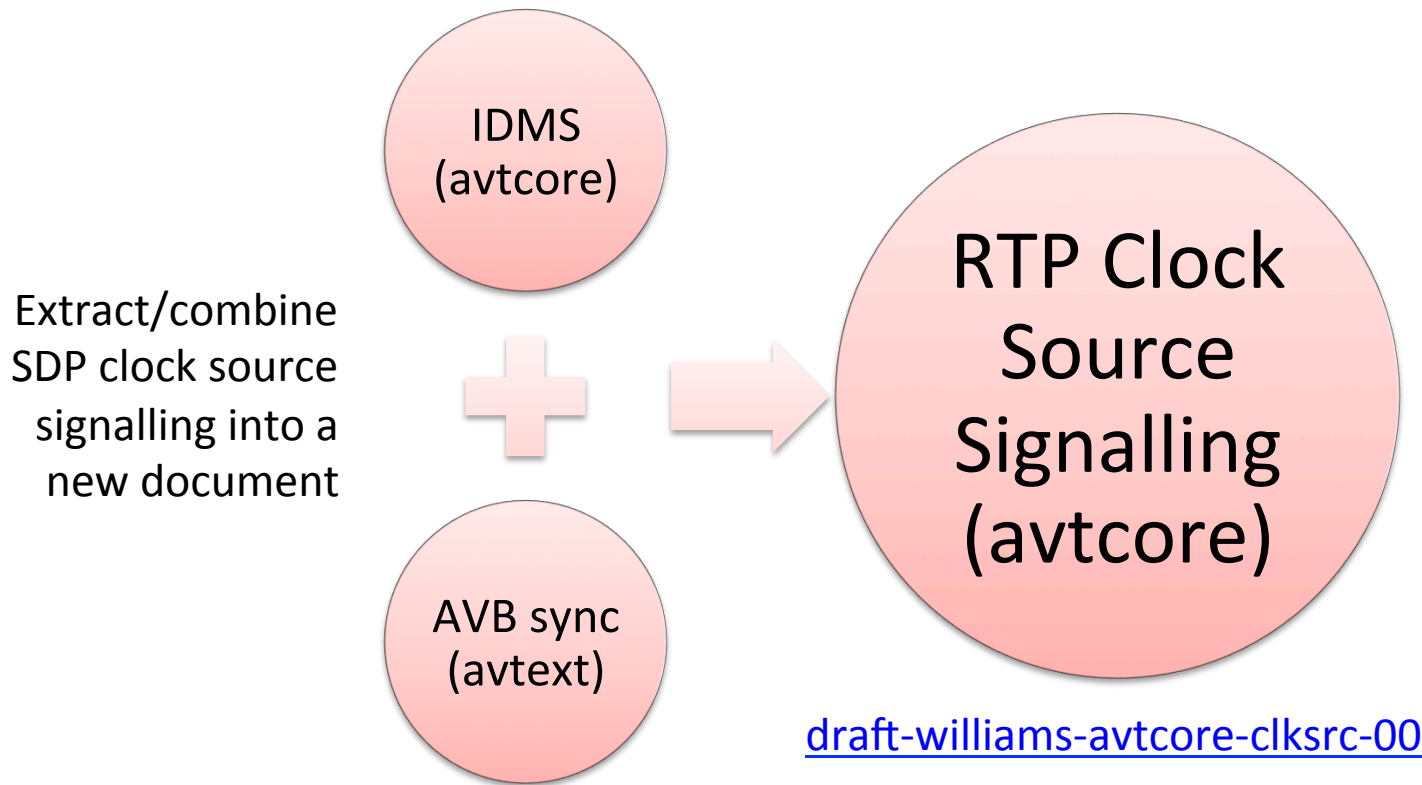
aidan.williams@audinate.com

# Background

- This draft came out of discussion in avtext and other WGs at IETF-82
  - Several people thinking along the same lines
- Presentation Outline
  - Ancestry, preceding drafts
  - Motivation
  - Brief description
  - Example
  - Next steps

# Ancestry, preceding drafts

[draft-ietf-avtcore-idms-02](#)



[draft-williams-avtext-avbsync-02](#)

# Motivation

- RTP uses NTP timestamps
  - For synchronisation, RTT estimates, etc
- Synchronised clocks can increase performance
  - E.g. Playout/capture time alignment *between* devices
  - E.g. Minimisation of buffering
- However, no standard mechanism exists to indicate that clocks *are* synchronised
  - And often they are not..
- *Therefore: provide explicit SDP signalling of NTP timestamp clock source*

# Example Applications

- Social TV
  - IDMS use case
- Video Walls
  - synchronised playout
- Networked Audio
  - synchronised capture/playout, minimise buffering
- Sensor Arrays
  - Synchronised capture

# Very Brief Description

- SDP describes timestamp *clock sources*
  - Clocks identified by: type, IP address, EUI-64, ...
  - Synchronised clocks can be considered *equivalent*
- Various clock types
  - NTP, 1588 family, GPS, local, ...
- Session, media and source level signalling
  - Default can be provided at the session level
- Traceable clocks are considered equivalent

# Example

```
v=0
o=jdoe 2890844526 2890842807 IN IP4 10.47.16.5
s=SDP Seminar
i=A Seminar on the session description protocol
u=http://www.example.com/seminars/sdp.pdf
e=j.doe@example.com (Jane Doe)
c=IN IP4 224.2.17.12/127
t=2873397496 2873404696
a=recvonly
a=ts-refclk:local
m=audio 49170 RTP/AVP 0
a=ts-refclk:ntp=203.0.113.10 2011-02-19 21:03:20.345+01:00
a=ts-refclk:ntp=198.51.100.22
m=video 51372 RTP/AVP 99
a=rtpmap:99 h263-1998/90000
a=ts-refclk:ptp=IEEE802.1AS-2011:39-A7-94-FF-FE-07-CB-D0
```

# Next Steps

- Request to become a WG document
- Complete document section on media reference clock signalling