# Multiple aggregated control URIs for RTSP

draft-einarsson-mmusic-rtsp-macuri-00.txt

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**ERICSSON**

**TAKING YOU FORWARD**

# IPR Statement

- Ericsson has made an IPR statement in relation to this draft:
    - https://datatracker.ietf.org/public/ipr_detail_show.cgi?ipr_id=730

# Why

- Issue is currently of great interest in 3GPP for MBMS in e.g Mobile TV use-cases using RTSP.

- Channel switch times improved.

- Codec settings are typically the same for TV like live streams
  - At least an operator can chose to use the same settings.
  - No need to (again) negotiate the transport resources and codec settings when switching channel.
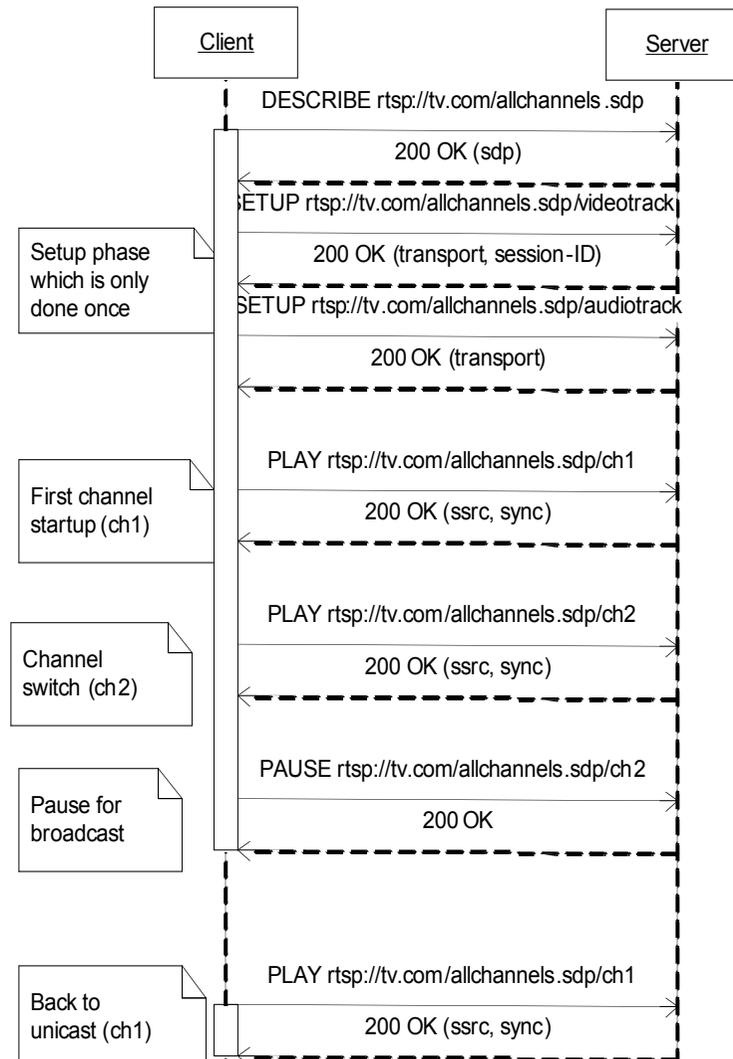
# Use case: Hybrid unicast / broadcast
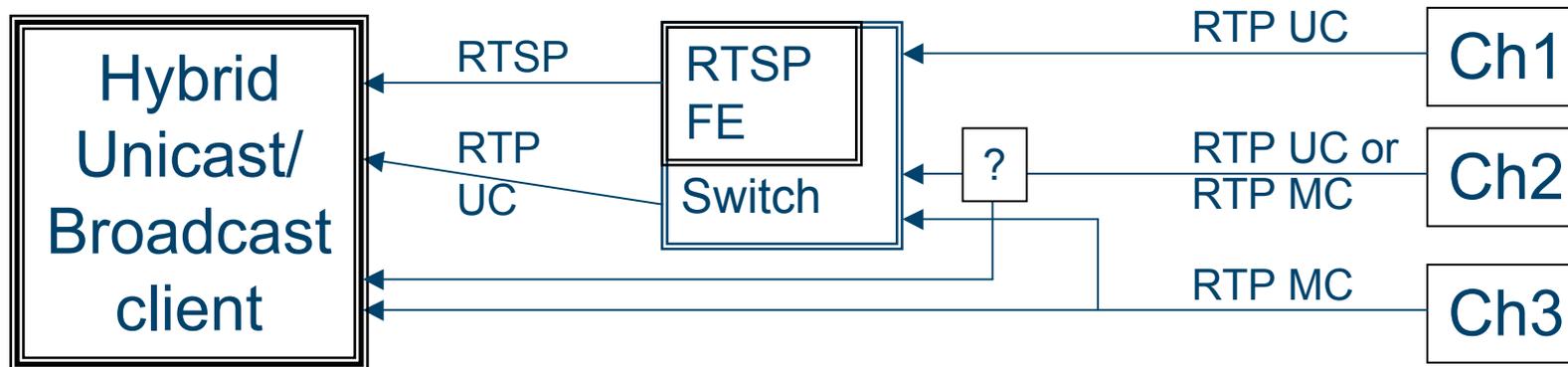


- The least popular channel (Ch1) is only available via UC, the most popular channel (Ch2) is only available via BC and the medium popular channel is sometimes available via BC a sometimes via UC.
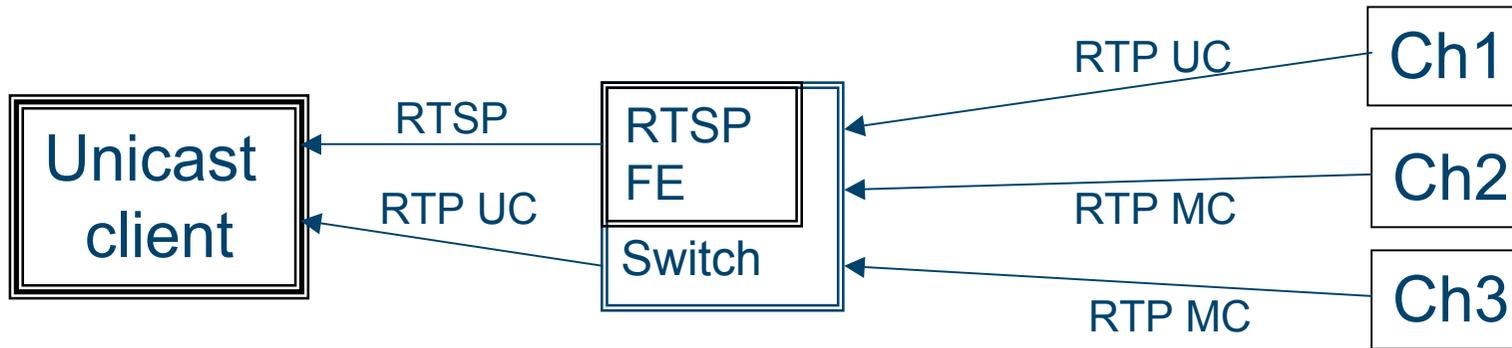
# Proposed solution

- Avoid full RTSP setup.
- Do not use packet modifying switch.

- RTSP PLAY contains synch. info.
- No TEARDOWN of old channel.
- RTSP PAUSE if switch to broadcast.
- Multiple aggregated control URIs (AC URI) proposed to achieve the above.
- Seamless transition between UC and BC can be acheived by receiving both streams during a short time.
- New feature tag "multiple-control-uris" defined and must be used. If server responds with 551 (option not supported), client must fall back to use default AC URI.

- SDP syntax : new attribute "altcontrol", which can occur multiple times, used in combination with multiple AC URIs

```
Client                                                    Server

        DESCRIBE rtsp://tv.com/allchannels .sdp
                        200 OK (sdp)
        SETUP rtsp://tv.com/allchannels.sdp/videotrack
                 200 OK (transport, session-ID)
        SETUP rtsp://tv.com/allchannels.sdp/audiotrack
                      200 OK (transport)

        PLAY rtsp://tv.com/allchannels.sdp/ch1
                     200 OK (ssrc, sync)

        PLAY rtsp://tv.com/allchannels.sdp/ch2
                     200 OK (ssrc, sync)

        PAUSE rtsp://tv.com/allchannels.sdp/ch2
                        200 OK

        PLAY rtsp://tv.com/allchannels.sdp/ch1
                     200 OK (ssrc, sync)
```

Setup phase which is only done once

First channel startup (ch1)

Channel switch (ch2)

Pause for broadcast
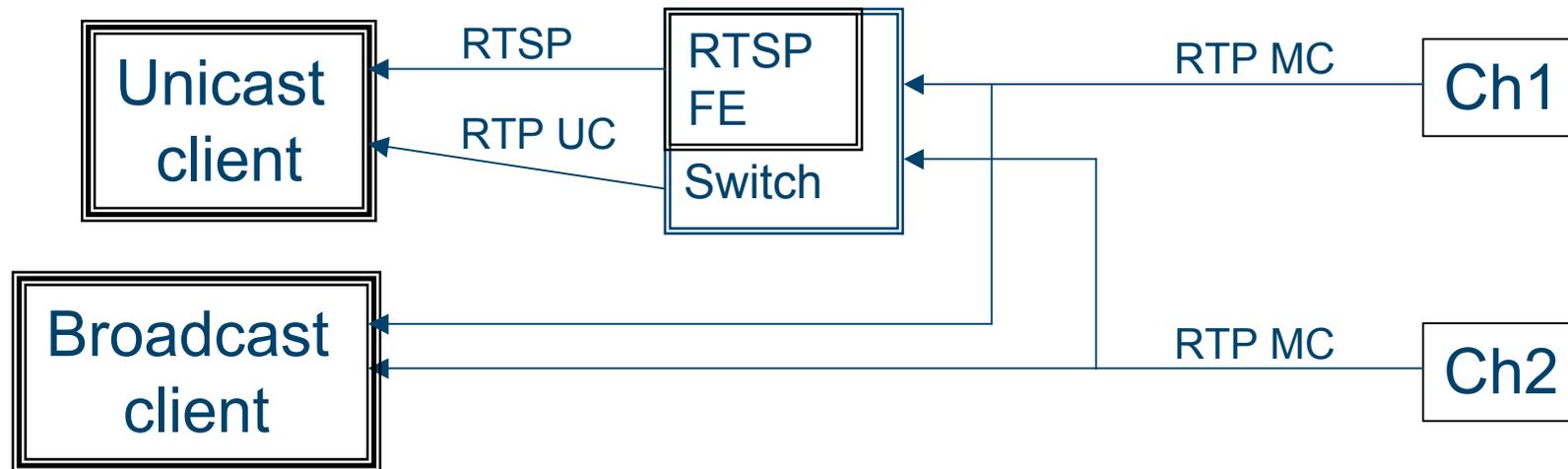
Back to unicast (ch1)

# Thanks!

- Questions?

# Use case: Unicast client



- RTSP is used to control the RTP unicast sessions between client and server (switch)

# Use case: Unicast and broadcast clients



- Both clients can view the same channels. For the unicast client RTSP is used to control the streams.