Mediactrl Framework

draft-melanchuk-mediactrl-framework-00

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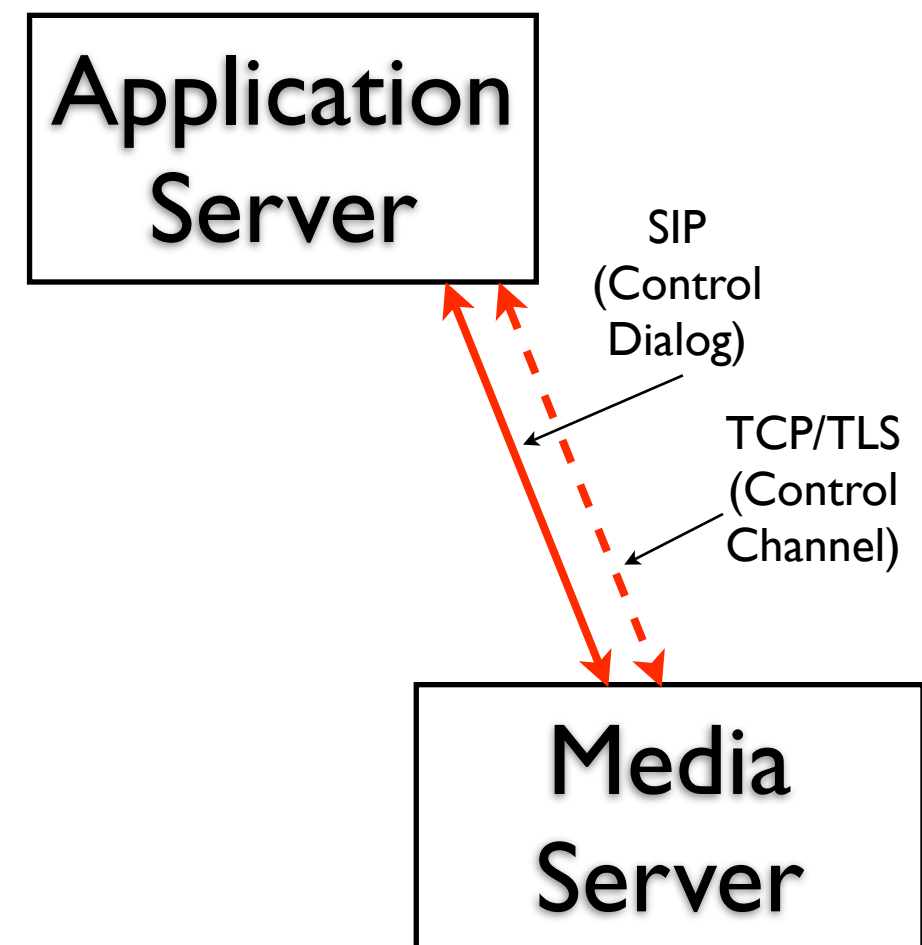
Framework Goals

- define the logical entities for the protocol:

  ▶ Application Server (AS)

  ▶ Media Server (MS)

  ▶ Media Resource Broker (MRB)

- define a model for core interactions

- define entity roles for several key use case scenarios

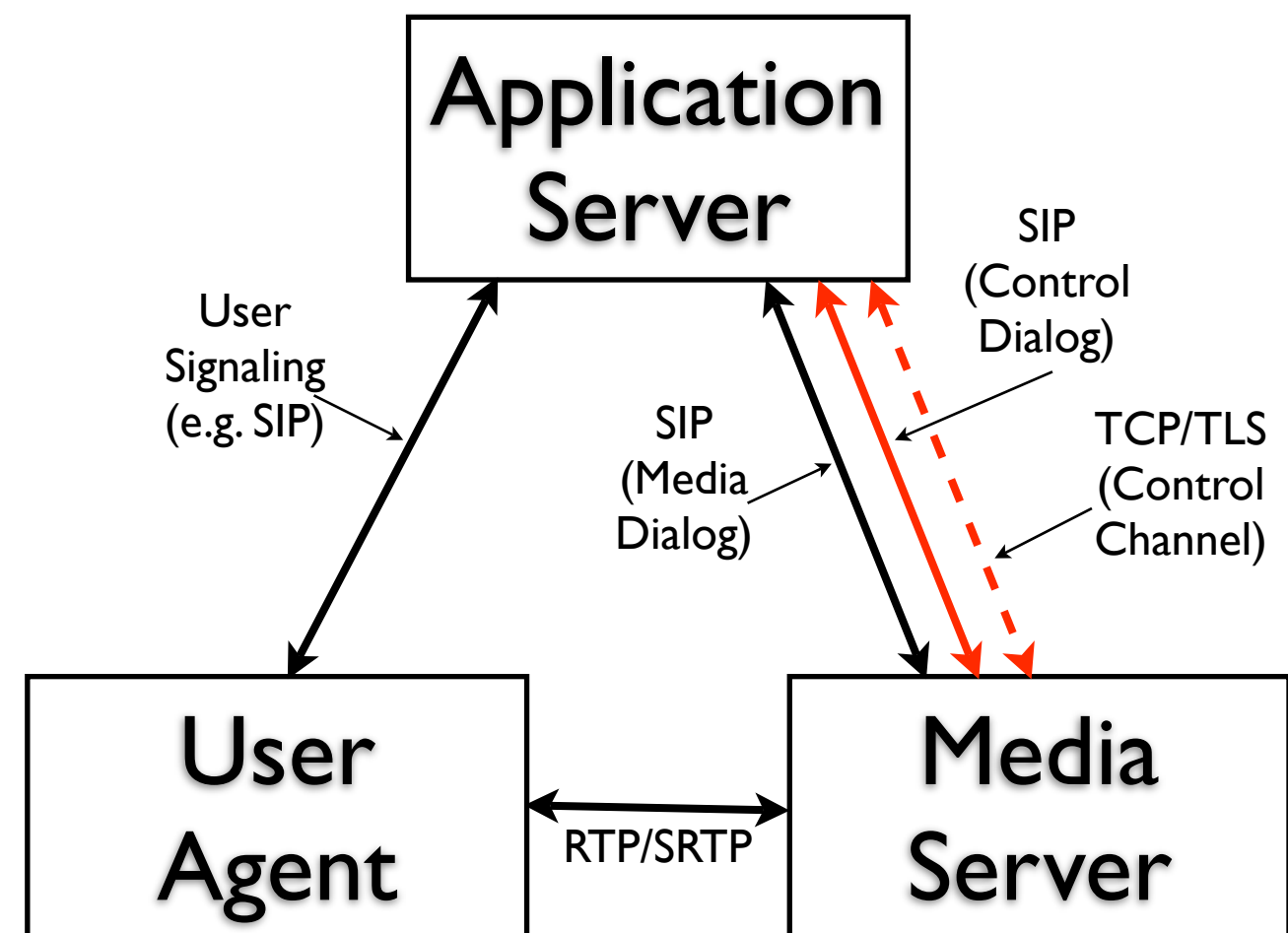Non goal: define specific protocol functions

Model - Control Channel

- AS uses SIP to establish TCP/TLS connection to MS
    - ▸ SIP dialog called "Control Dialog
    - ▸ TCP/TLS connection called "Control Channel"
- SIP/SDP signaling based on COMEDIA
    - ▸ draft-boulton-sip-control-framework-05
- may be m:n control channels between AS(s) & MS(s)
- control channels used as transport for MediaCtrl Protocol

Application Server

SIP (Control Dialog)

TCP/TLS (Control Channel)

Media Server

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Model - Media Sessions

- Signaling for media sessions between UA & AS may be SIP or other protocol

- AS signals to MS using SIP

  ‣ SIP dialog called "Media Dialog

- Standard 3PCC model if UA & AS use SIP

- no relation between media sessions and control channels

  ‣ media sessions identified within the MediaCtrl Protocol

Application Server

User Signaling (e.g. SIP)

SIP (Control Dialog)

SIP (Media Dialog)

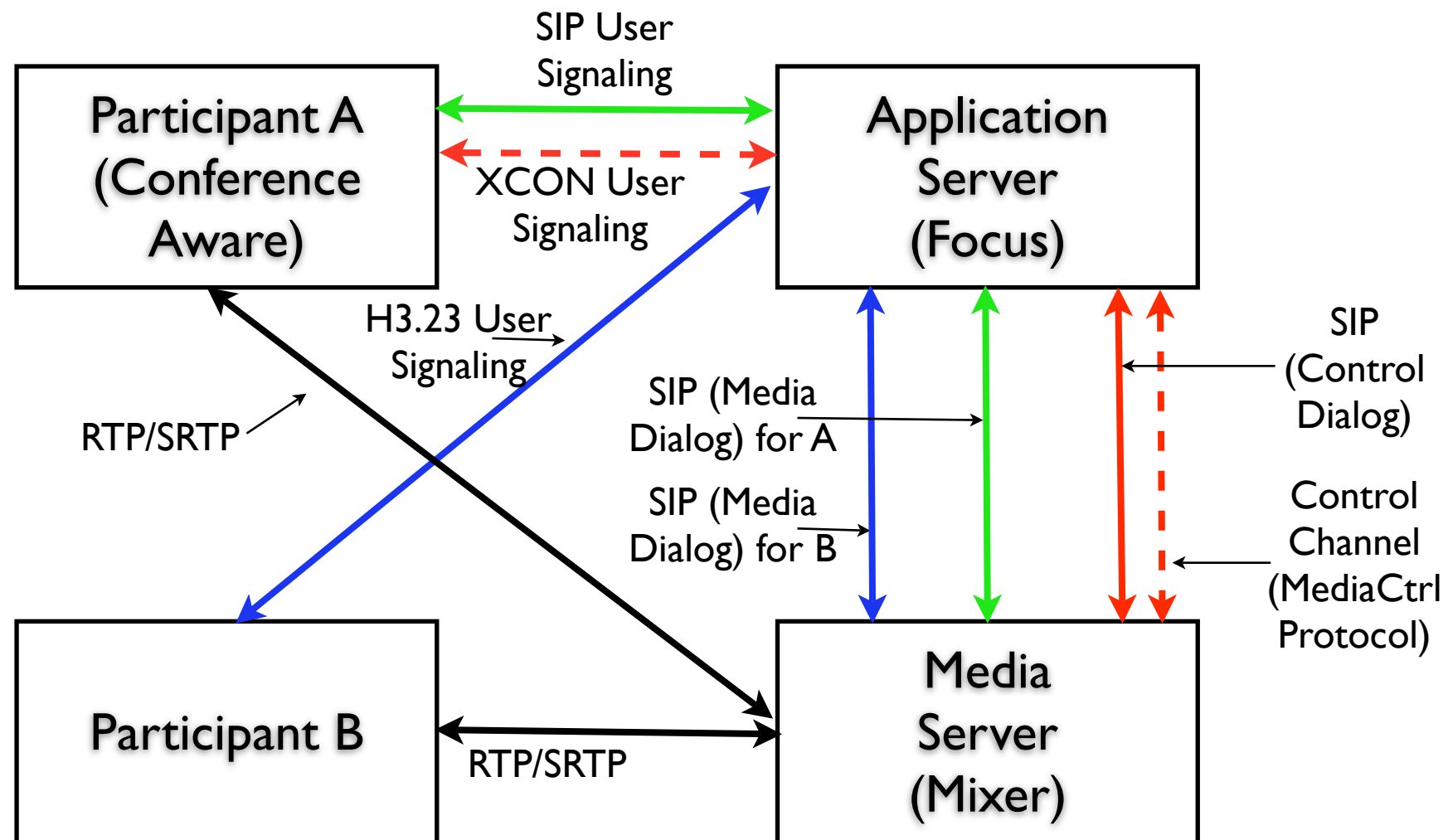TCP/TLS (Control Channel)

User Agent

RTP/SRTP

Media Server

Model Benefits

- Using SIP to establish both Control Channels and media sessions provides a common framework and allows leveraging SIP for:

  ▶ location and rendezvous capabilities

  ▶ security and identity properties

  ▶ session negotiation (RTP for media, TCP for control)

  ▶ selection of MS based on capability sets (RFC 3840)

- TCP/TLS Control Channel(s) allows for reliable transmission of arbitrary sized PDUs

IVR Services

- For simple announcement services, an AS may use the R-URI mechanism from RFC 4240 instead of Control Channels

- For interactive services, AS uses MediaCtrl Protocol in the Control Channel to request MS IVR functions

- VoiceXML services may be requested by an AS using either MediaCtrl Protocol in the Control Channel or the RFC 4240 R-URI mechanism

XCON Mapping

- AS has the role of the conference focus

- MS acts as the media mixer

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Conference Services

- AS uses MediaCtrl Protocol in the Control Channel to request functions such as:

  ▶ allocate, manage, and remove media mixers

  ▶ IVR functions for participants or the mix (e.g. announcements or recording)

  ▶ media related controls, such as requested by conference aware participants through an XCON protocol (e.g. "unmute me")

- Participants are added/removed via either SIP (conference URI of the SIP Media Dialog) or using the MediaCtrl Protocol

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Floor Control & BFCP

- BFCP defines Floor Control Server (FCS) & Floor Chair

  ▶ Floor Chair is part of application logic and if automated, should be part of the AS

  ▶ FCS could be co-located with either the AS or MS but both need to interact with the FCS (e.g. via the Control Channel)

    - Scenario of the FCS co-located with MS is described in the draft

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Discussion

- Is this the right model?

- What else is needed?

  ▶ MRB discussion?

  ▶ Control Channel usage (e.g. which entity initiates)?

  ▶ more/less scenario discussion?

  ▶ other?

- Adopt as WG item?

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