

MMUSIC WG

53rd IETF – Minneapolis

20 March 2002

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**Please send us a copy of your slides
(if you have not done so already)**

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All Presenters:

**You MUST notify the group of any
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MMUSIC Agenda (1)

- 0900 Agenda Bashing & update** (chairs)
- 0910 Revised RTSP spec** (Lanphier)
`draft-ietf-mmusic-rfc2326bis-00.txt`
- 0930 RTSP Extensions** (Lanphier/Narasinham)
`draft-sergent-rtsp-mute-00.txt`
`draft-lanphier-radplay-00.txt`
- 0950 Revised SDP spec** (Perkins)
`draft-ietf-mmusic-sdp-new-06.txt`
- 0950 Key Management Support in SDP** (Lindholm)
`draft-ietf-mmusic-kmgmt-03.txt`
- 1005 Connection-oriented Media in SDP** (Yon, chairs)
`draft-ietf-mmusic-sdp-comedia-01.txt`

MMUSIC Agenda (2)

- 1020 SDP for voice-band data** (Kumar)
draft-foster-mmusic-vbdfORMAT-01.txt
- 1030 SDPng Transition** (chairs)
draft-ietf-mmusic-sdpng-trans-00.txt
- 1040 SDPng Update** (Kutscher)
draft-ietf-mmusic-sdpng-04.txt
- 1055 SDPng and QoS** (chairs)
draft-bos-mmusic-sdpng-qos-00.txt
- 1110 MMUSIC and EPGs** (Schulzrinne, chairs)
draft-ietf-mmusic-sdp-comedia-01.txt
- 1130 Wrap-up** (chairs)

WG Status

- **Work items finished**
 - `draf-ietf-mmusic-fid-06.txt`
 - `draft-andreasen-mmusic-simcap-05.txt`
 - `draft-ietf-mmusic-sdp-ipv6-03.txt`
 - `draft-ietf-mmusic-offer-answer-02.txt`
 - `draft-ietf-mmusic-sdp4nat-02.txt`
- **Charter got approved and published**
 - **Milestones until July**
 - **Review status this summer**

WG Milestones

DONE	SDP simcap for PS
DONE	SDP FID for PS
DONE	IPv6 Extensions to SDP for PS
Feb 02	Revised SDP spec for PS (or Draft)
DONE	SIP's offer/answer use for Proposed
DONE	SDP4NAT for PS
Feb 02	SDPng motivations
Mar 02	SDP key management for Proposed
Apr 02	SDPng base spec for PS
Apr 02	SDPng audio profile for PS
May 02	Revised RTSP spec for PS or Draft
Jun 02	SDPng video profile spec for PS
Jul 02	RTSP MIB for PS

Issues with comedia (currently in dormant mode?)

Comedia Issues

- **Model for connection-oriented media inconsistent with SDP use for RTP streams**
 - Discussion of the “reuse” attribute
- **Several Differences:**
 - **TCP requires explicit setup/teardown**
 - But state is created for RTP/UDP as well
 - **TCP connections are bi-directional**
 - Transport capability vs. Transport use
- **Basic SDP handling not to be changed**
 - **Session descriptions must be self-contained**
 - **Resending same SDP should cause no change**

Requirements

1. Convey transport address to enable media exchange
2. Put media stream on-hold
3. Take media stream off-hold
4. Redirect media stream to different address
5. Change media stream attributes / caps
6. Terminate media stream
7. **Allow for multiple TCP connections as part of a single media stream?**

SDP “Primitives”

- a) Create a new connection to some destination**
 - b) Close an existing connection**
 - c) Pause media stream for a connection**
 - d) Re-instantiate media stream
(Associate media stream with attributes)**
- To be folded into a few SDP attributes that allow to meet the requirements.**
 - “reuse” is only part of the solution**
 - Strawman proposal from December needs further work**

SDPng Transition

SDPng Transition

- **Enable smooth migration from purely SDP-based applications to SDPng**
- **Accommodate long period of co-existence**
- **Backward compatibility is key**
- **SDPng design considers translation**

Protocol-specific considerations

- **Describe session in both SDP & SDPng**
 - **At the same time (different address, msg body)**
 - **Try one after the other**

Protocol Specifics

- **SAPv0**
 - **No Content-Type: available**
- **SAPv1**
 - **Use specific MIME type**
 - **Same or different announcement address?**
- **RTSP**
 - **Content-Type: available**
 - **multipart/alternative**
 - Does anybody implement this?
 - **Accept: header**

Protocol Specifics

- **SIP**
 - **Accept: header, OPTIONS**
 - **multipart/alternative**
 - Does anybody implement this?
 - **155 + UPDATE**
- **MEGACO**
 - **Uses different ports for text vs. Binary**
 - **No Content-Type:-style field available**
 - Check the first line?
 - Special v= line?
 - Yet another port number?
 - **What to do about binary encoding**

SDP(ng) & QoS

Current QoS activities

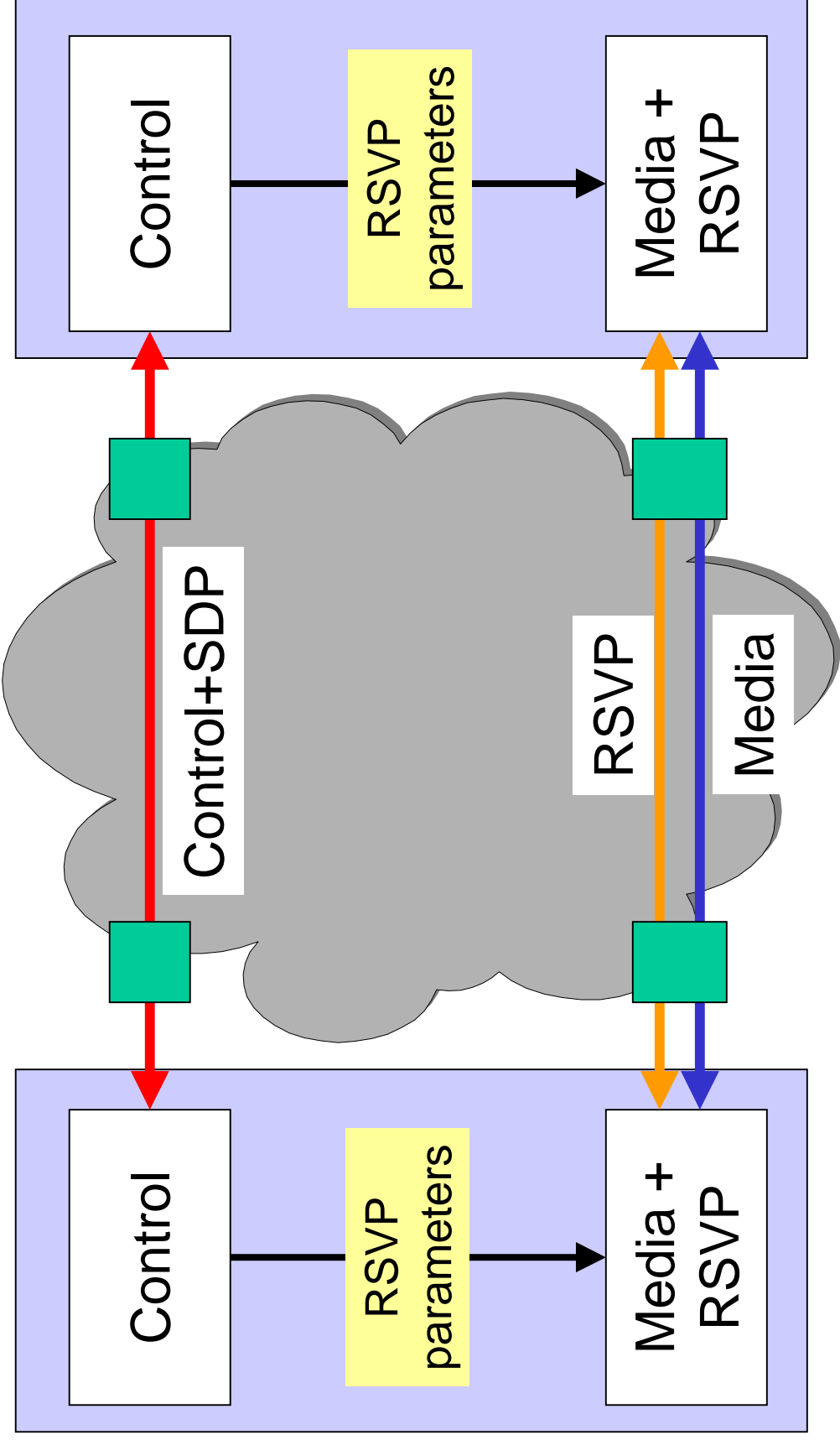
- **Manyfolks**
 - Synchronize SIP signaling with resource reserv.
 - Just signal need for and success of reservation
 - Do not convey reservation parameters
 - Implied from media descriptions
- **Media auth**
 - Authorize lower layer reservations
- **Reservation parameters derived from codec**
 - Possibly using other parameters as well (b=)
- **Dynamic Mapping to RSVP**
- **(Static?) diffserv classes**

draft-bos-mmusic-sdpng-qos-00.txt

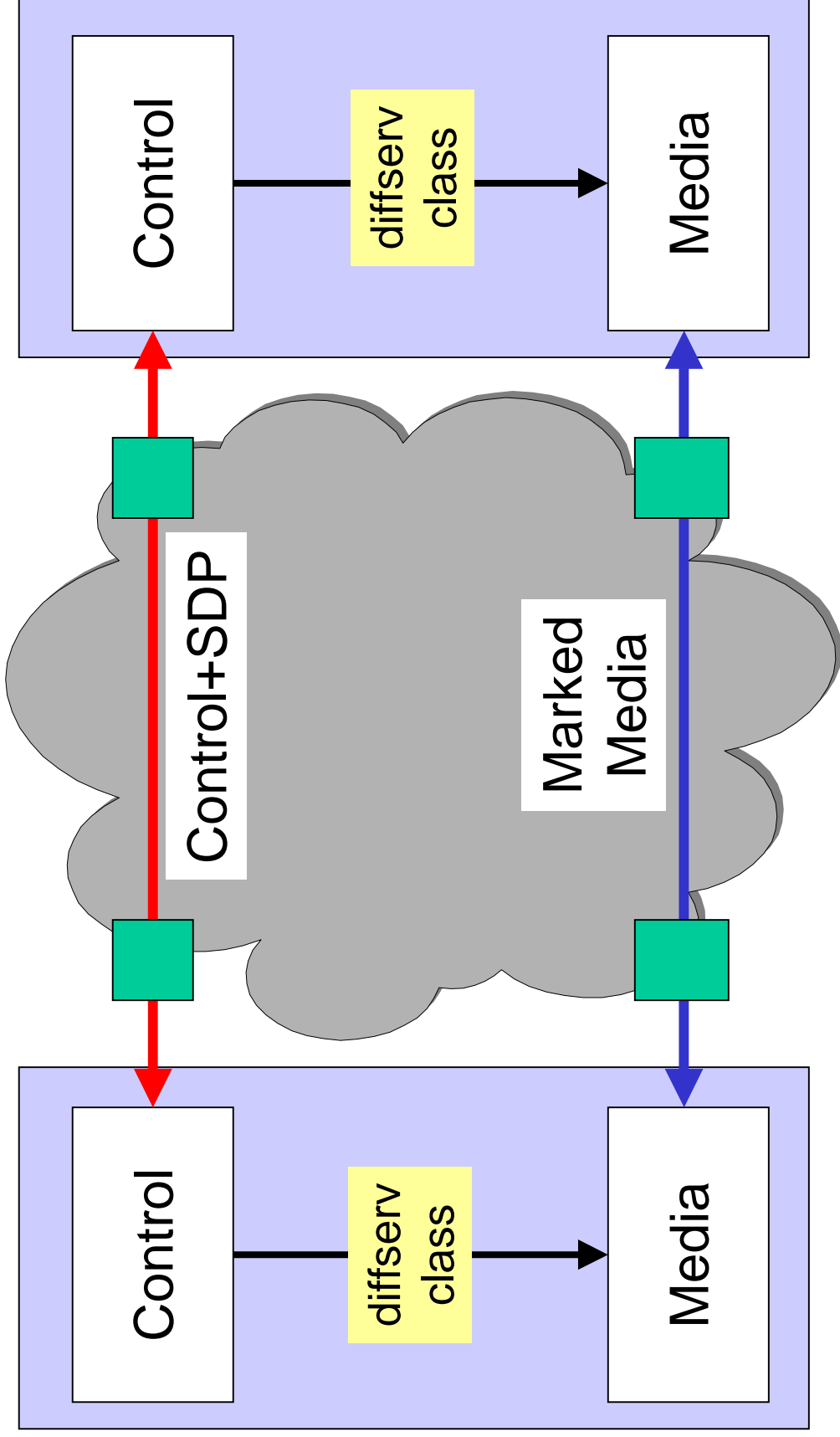
Two types of end-to-end QoS information

- **TI: Traffic Information**
 - Traffic type (peak bandwidth, packet size, ...) associated with the media component
- **SI: Sensitivity Information**
 - Specifies the QoS level for a certain media/(TI)
 - Possibility to provide an ordered list of SIs per media component
 - Three representation forms
 - Parameter format (delay, jitter, packet loss ratio)
 - Standardised QoS class
 - QoS flavour (e.g. gold, silver, brons, ...)

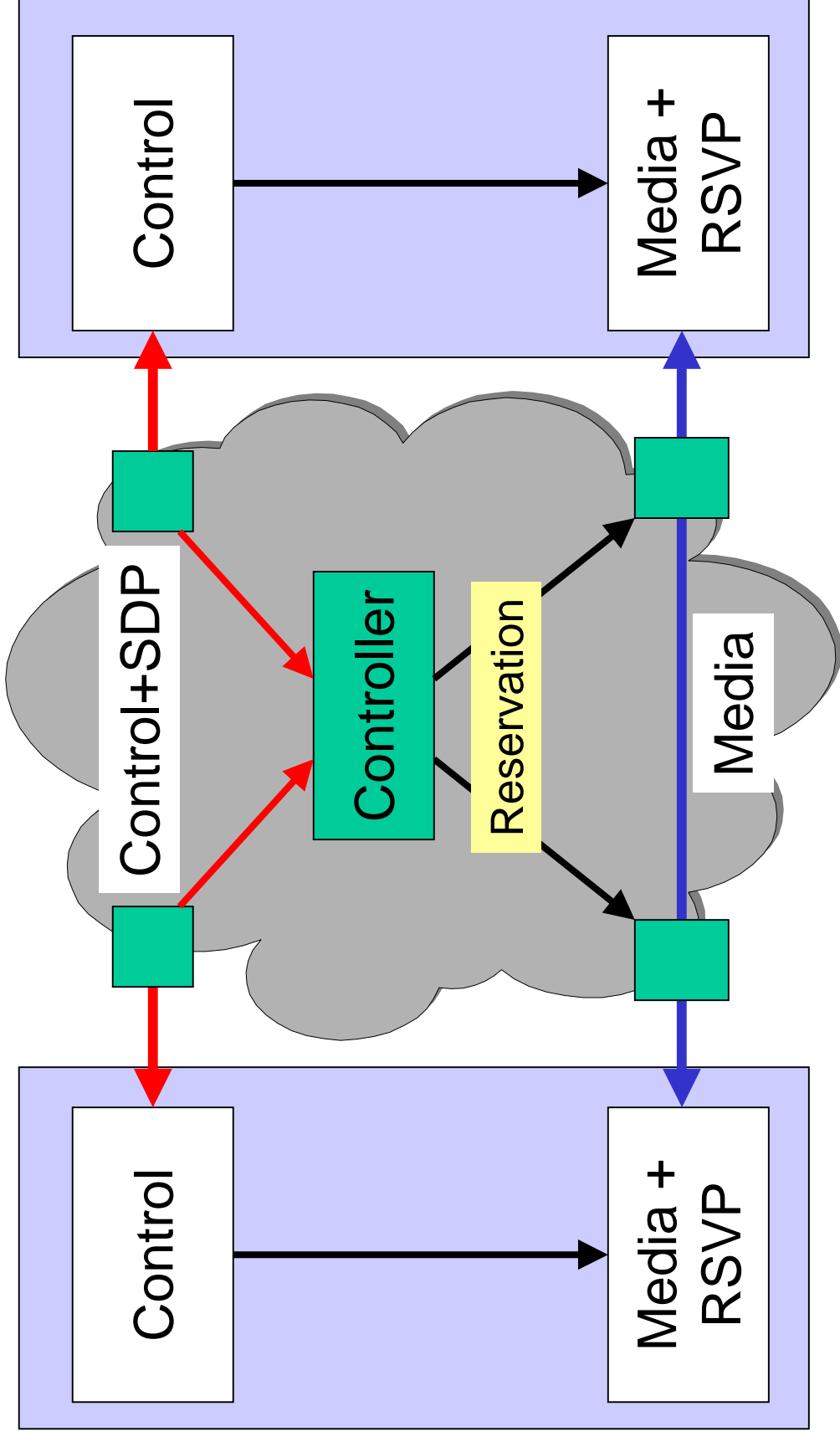
What is the problem – RSVP?



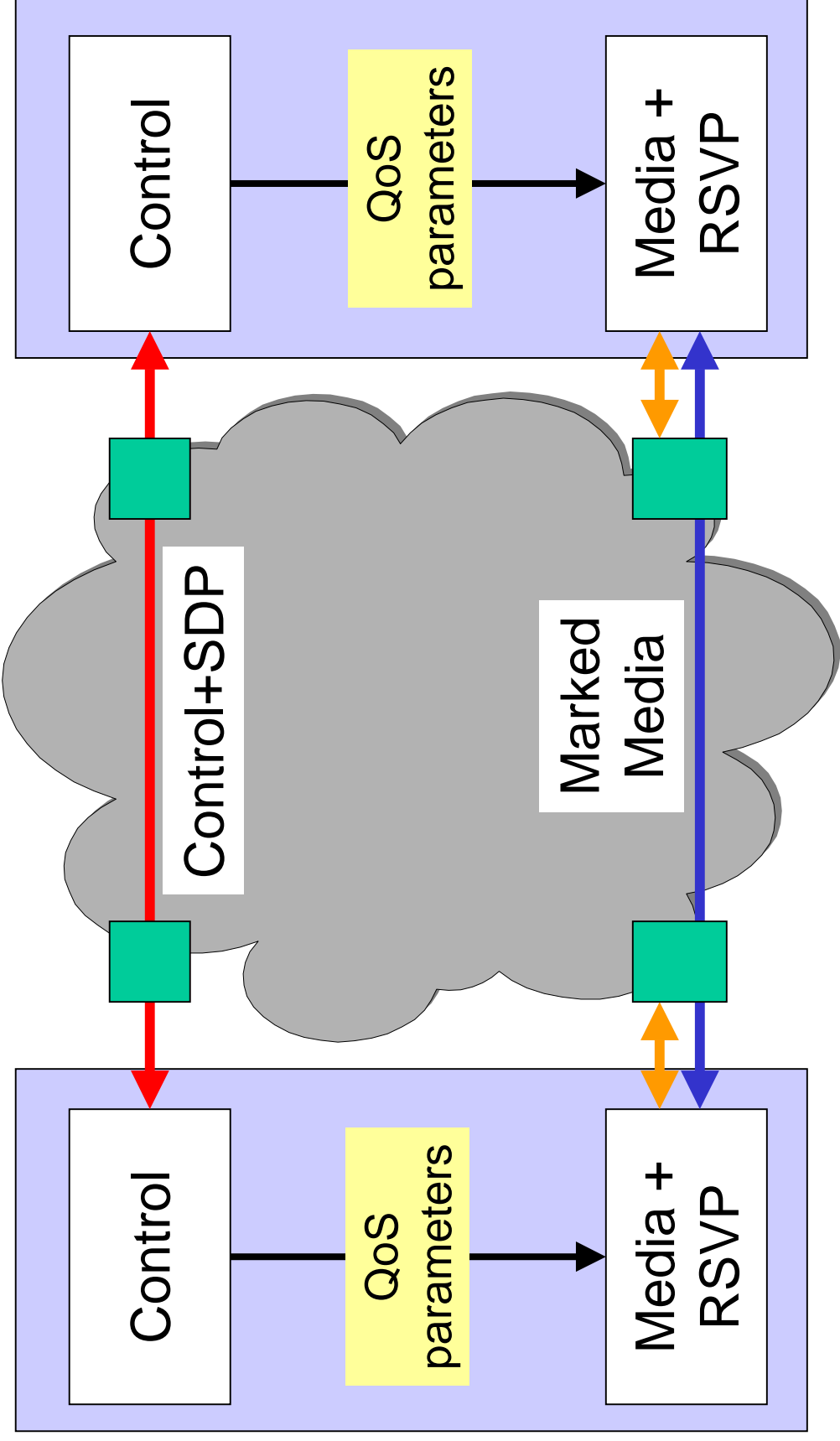
What is the problem – diffserv?



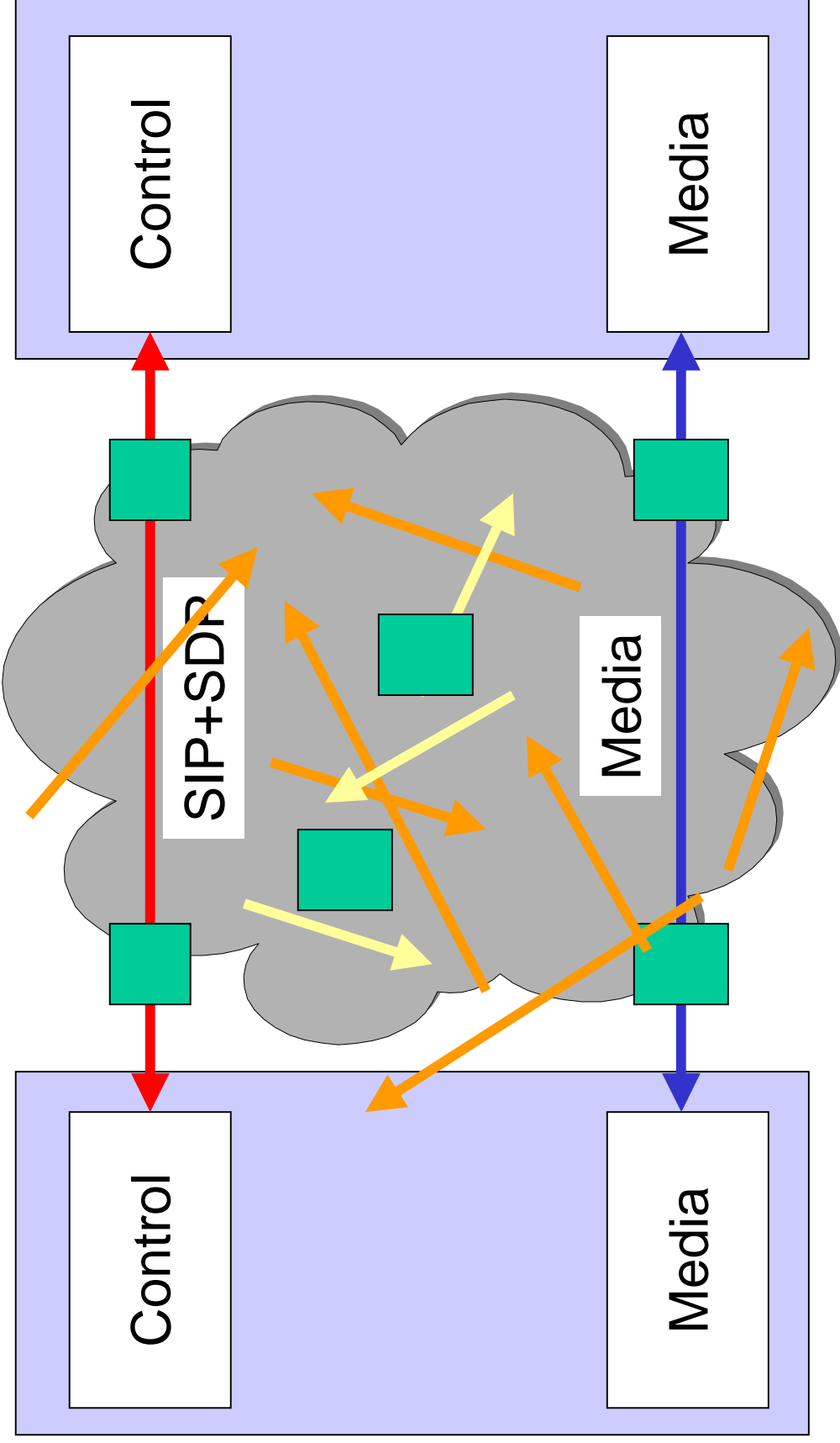
What is the problem - centralized?



What is the problem – local RSVP?



What is the problem - others?



Some Questions to Ask?

Given what we have available now...

- What have we missed so far?
- Do we need QoS information beyond what can be derived from the current SDP?
- Where would this information come from?
- Is there a need to signal this inband?
- Session vs. Application layer?
- Do we need to synchronize endpoints on (changes in) QoS (profiles)?
- How much complexity is acceptable?

Beyond just QoS...

- **QoS yet another dimension of a potential / actual configuration**
- **“A tag” attached to a media stream description**
 - **a=qos: ...**
- **Similar approaches for other dimensions**
 - **Security**
 - **...**
- **Generalize to framework in SDPng**
 - **solution for QoS just as a specific instantiation**

MMUSIC and EPGs

Background

- **IP-based broadcasting**
 - **DVB-IP (Internet Protocol Infrastructure)**
 - **Set-Top-Boxes using IP communications**
- **Interest in**
 - **SDPng for EPGs**
 - **SAP and other mechanisms for distributing EPGs**
 - Describing sessions and meta-data
 - **Minimal RTSP for retrieval**