

Setting the DSCP

(and similar markings)

in WebRTC

draft-dhesikan-tsvwg-rtcweb-qos

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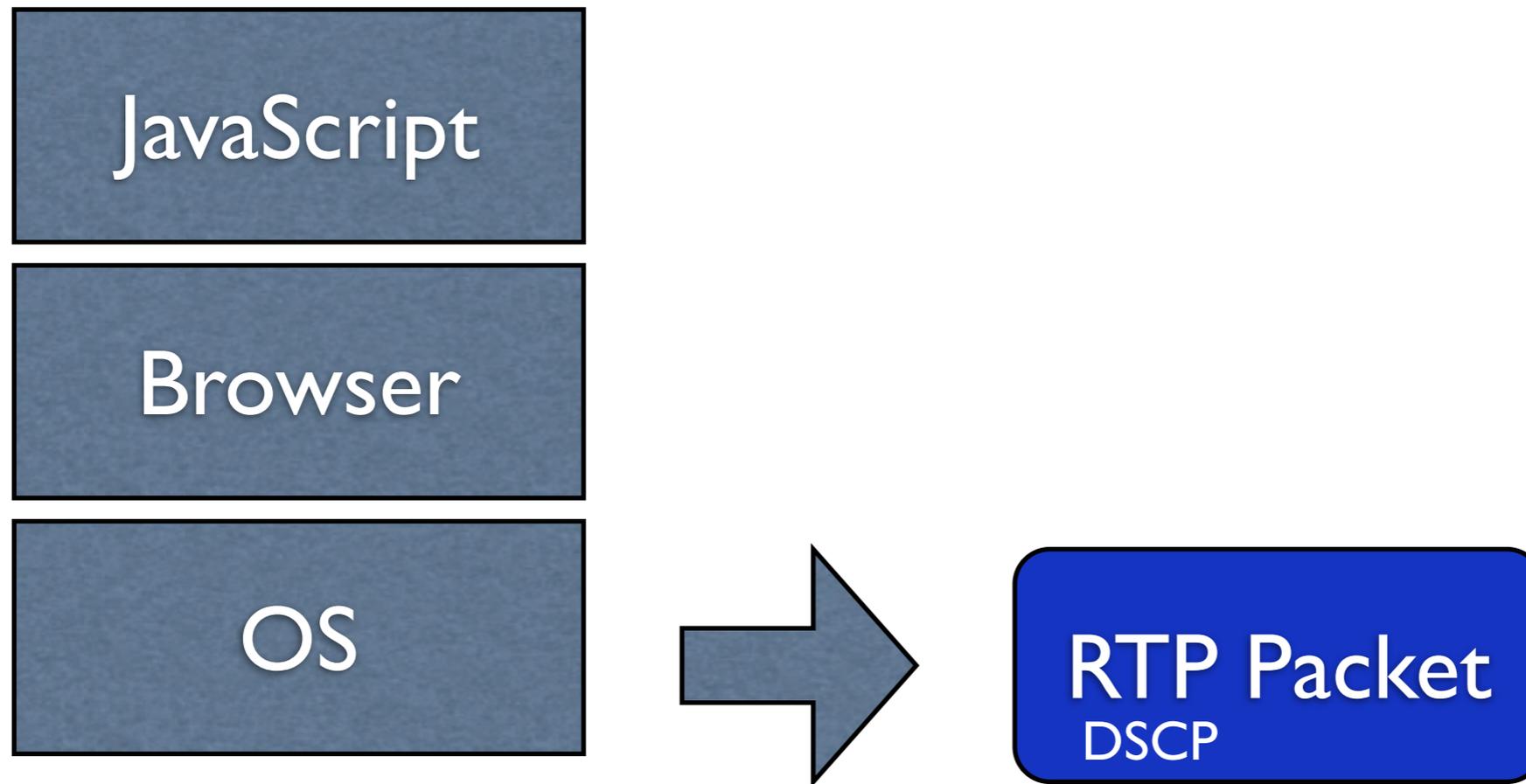
Open Issues

I have slides coming up on following issues

- API Split
- Different DSCP on same UDP 5 Tuple flow
- Relation to RMCAT work
- Use of RFC 4594 on Linux based NATs
- Shared Congestion Control State
- DSCP black hole

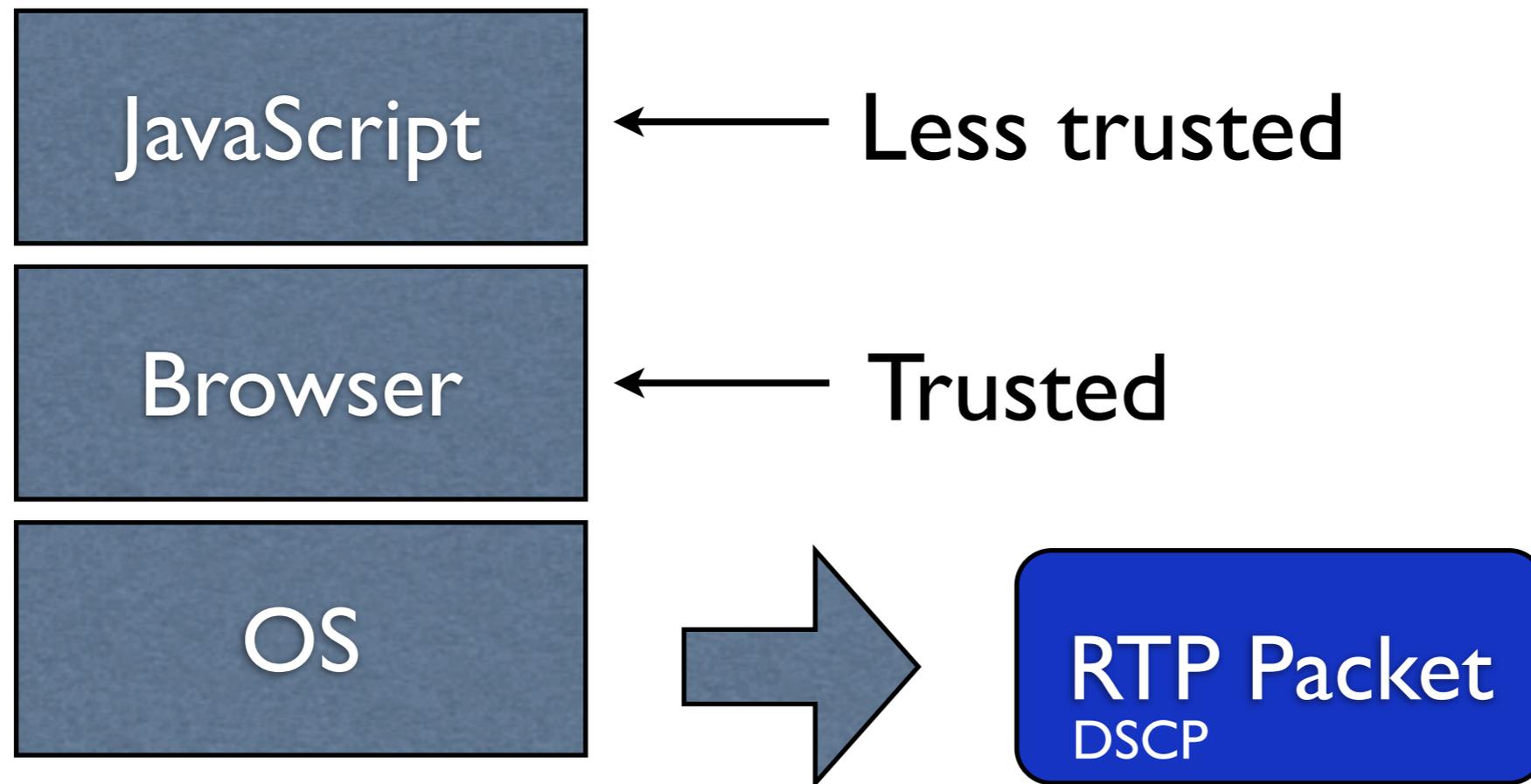
- Other Changes: Fixed IPv6 example then removed all code

WebRTC



This draft is about how the JavaScript and Browser work together to set the DSCP. (More later on setting QCI & WiFi priority)

Division of input on setting DSCP



- DSCP will be set as specified by current RFCs
- JavaScript application knows how important a given video stream is relative to other video streams in this application
- Browser knows if a given RTP packet is video or not

1. Draft defines what information the JavaScript passes to the browser

- It passes in a enum with three values (low, medium, high)

2. Draft defines how browser implementations combine that information with what they know about the media to set the DSCP

- It uses if the media type (voice, video, or data) to lookup the DSCP in this table

* (later slide on if these values are wrong for linux NATs)

Media Type	Low	Medium	High
Audio	46 (EF)	46 (EF)	46 (EF)
Interactive Video	38 (AF43)	36 (AF42)	34 (AF41)
Non-Interactive Video	26 (AF33)	28 (AF32)	30 (AF31)
Data	8 (CS1)	0 (BE)	10 (AF11)

3. Draft defines API for JavaScript to find the IP address/port for source/destination and markings in use for a given flow

Different DSCP on same UDP 5 tuple

- RAI is doing some work (called Bundle) to allow multiple type of RTP media to be sent on the same UDP 5-tuple flow
- Open Issue: If the DSCP for audio and video were set to different values, the open issue is if they can they be bundled on same UDP flow?
- There are many conditions where you can not use Bundle
 - draft-ietf-avtcore-multi-media-rtp-session addresses this issues and constraints when and when not it can be used with QoS (Magnus, Perkins, &Lennox)
 - draft-nandakumar-mmusic-sdp-mux-attributes defines when things can be bundled and when can not if they have properties that prevent them from being bundled
- This issue is not an issue for this draft but I would like to discuss it now so we can get the input into the bundle work

Different DSCP on same UDP flow

- Clear that some equipment supports this
- 3GPP includes this in filter spec thought not clear if vendors support that or not
- Are there any RFC that suggest one should no do this?
- Proposal: Say this is allowed as long as congestion control context is seperated

The RMCAT Issue

- The RMCAT work may end up using DSCP as part of it's mechanism to do congestion control
- Proposal:
 - Proceed with this roughly as is with existing congestion control systems
 - Include text that points out RMCAT will develop a new congestion control systems browsers may want to use and this may or may not use the existing DSCP / PHBs
- This draft just uses the existing RFCs in the same way any other existing voice or video endpoint do

RFC 4594

- Andrew pointed out some Linux based NATs may not implement 4594 and instead do the wrong thing
- Some minor testing shows there are lots of NATs that do the right thing. Unclear to me how prevalent this problem is
- I agree with Andrew, lets be pragmatic about reality of deployments. Seems TSVWG can either:
 - Encourage NATs to not break 4594
 - Deprecate 4594 (If WG plans to deprecate 4594, this is not the draft to do that)
- Lots of existing phones use these DSCP.
- What should this draft do ?

The Congestion Control Issue

- If two groups of packets have different markings, the congestion control for the two groups needs to be handled independently
- This is the same as handling groups of packets with different destinations or sources
- This is well understood in WebRTC and will be covered in the media specifications.
- ALSO... Looking for the right reference and text to add to this draft to remind implementors of this requirement

Some DSCP Black Hole

- Gorry mentioned issue of some DSCP black hole so you can't use them
- Can someone help me with this one?

Other Issue

- Did I miss something on list ???
- What can we do to progress this document or give a clear message there is no intention to progress it