

# **W3C WebRTC WG Meeting**

October 28, 2021

8:00 - 9:00 AM Pacific Time

Chairs: Bernard Aboba

Harald Alvestrand

Jan-Ivar Bruaroey

# W3C WG IPR Policy

- This group abides by the W3C Patent Policy <https://www.w3.org/Consortium/Patent-Policy/>
- Only people and companies listed at <https://www.w3.org/2004/01/pp-impl/47318/status> are allowed to make substantive contributions to the WebRTC specs

# Welcome!

- Welcome to the TPAC 2021 meeting of the W3C WebRTC WG, at which we will cover:
  - State of the WG
  - mediacapture-transform

# About this Meeting

- Meeting info:
  - [https://www.w3.org/2011/04/webrtc/wiki/TPAC\\_2021#WebRTC\\_WG\\_Meeting](https://www.w3.org/2011/04/webrtc/wiki/TPAC_2021#WebRTC_WG_Meeting)
- Link to latest drafts:
  - <https://w3c.github.io/mediacapture-main/>
  - <https://w3c.github.io/mediacapture-extensions/>
  - <https://w3c.github.io/mediacapture-image/>
  - <https://w3c.github.io/mediacapture-output/>
  - <https://w3c.github.io/mediacapture-screen-share/>
  - <https://w3c.github.io/mediacapture-record/>
  - <https://w3c.github.io/webrtc-pc/>
  - <https://w3c.github.io/webrtc-extensions/>
  - <https://w3c.github.io/webrtc-stats/>
  - <https://w3c.github.io/mst-content-hint/>
  - <https://w3c.github.io/webrtc-priority/>
  - <https://w3c.github.io/webrtc-nv-use-cases/>
  - <https://github.com/w3c/webrtc-encoded-transform>
  - <https://github.com/w3c/webrtc-svc>
  - <https://github.com/w3c/webrtc-ice>
- Link to Slides has been published on [WG wiki](#)
- Scribe? IRC <http://irc.w3.org/> Channel: [#webrtc](#)
- The meeting is being recorded. The recording will be public.
- Volunteers for note taking?

# W3C Code of Conduct

- This meeting operates under [W3C Code of Ethics and Professional Conduct](#)
- We're all passionate about improving WebRTC and the Web, but let's all keep the conversations cordial and professional

# Virtual Interim Meeting Tips

**This session is being recorded**

- **Type +q and -q in the Google Meet chat to get into and out of the speaker queue.**
- **Please use headphones when speaking to avoid echo.**
- **Please wait for microphone access to be granted before speaking.**
- **Please state your full name before speaking.**
- **Poll mechanism may be used to gauge the “sense of the room”.**

# Understanding Document Status

- Hosting within the W3C repo does ***not*** imply adoption by the WG.
  - WG adoption requires a Call for Adoption (CfA) on the mailing list.
- Editor's drafts do ***not*** represent WG consensus.
  - WG drafts ***do*** imply consensus, once they're confirmed by a Call for Consensus (CfC) on the mailing list.
  - Possible to merge PRs that may lack consensus, if a note is attached indicating controversy.

# Issues for Discussion Today

- 08:10 - 08:30 AM State of the WG (Harald)
- 08:30 - 08:50 AM mediacapture-transform (Chairs)
- 08:50 - 09:00 AM Wrap-up and Next Steps

Time control:

- A warning will be given 2 minutes before time is up.
- Once time has elapsed we will move on to the next item.



# **State of the WEBRTC WG (Harald)**

**End Time: 8:30 AM**



# State of the WEBRTC WG (Harald)

- What we are chartered to do
- What we have been doing
- What we need to do going forward

# What we are chartered to do

- Charter from [October 2020](#)
- Focus on media and peer-to-peer comms
- Delivery and maintenance of existing specs (15 documents listed in charter)
- Future extensions work
  - Use case document
  - Direct control semantics (ORTC inspired)

# What we have done (chartered)

- WEBRTC-PC 1.0 is now a REC!  
- Still working on mediacapture-main to REC
- The 13 other docs are more or less dormant
- WEBRTC-NV use cases document seems stalled
- Lots of maintenance work on webrtc-pc++ (experience finds bugs)

# What we have done (unchartered)

- Numerous extensions proposed
  - Tab capture manipulation
  - Raw frame access
  - Encoded frame access
  - New device picker model
  - Lots of smaller things
- A number of these have provoked controversy - some have not

# Issues in Participation

A lot of debates recently have been totally dominated by browser vendors. This is not healthy; we're making APIs for the developers, not for the browser vendors.

The mailing list is basically announcement-only; real debate happens (if it happens) in github.  
Hard to follow?

# How to Get Change - Imagined

- Detect need for functionality
- Distil need into a scenario (for WEBRTC-NV)
- Propose an extension that makes sense
- Get consensus on extension
- Win

# How we try to change - current

- Detect need for functionality (inhouse)
- Develop a solution (inhouse)
- Propose solution to WG
- Discuss
- ..... Maybe .... Get to agreement?



# Call for editing resources!

Goal of W3C process is REC

- Consensus on specification
- Test suite available
- Implementations done

Many documents are languishing

- Who needs them? Can they do the work?
- If nobody needs them - can we abandon?
- If we need them, but nobody can edit .... ?

**mediacapture-transform (Chairs)**

**End Time: 8:50 AM**

# A Recap of September/October

- A (successful) “Call for Consensus” (CfC) was concluded for transferable MediaStreamTracks. Summary:

<https://lists.w3.org/Archives/Public/public-webrtc/2021Sep/0047.html>

- At the October 14 Virtual Interim...
  - Youenn Fablet presented:
    - The state of WHATWG Streams Issues impacting media pipelines.
      - Github Issue discussions showing progress, but no running code yet.
      - Potential future meeting with WHATWG Streams Editors.
    - A comparison of transferable MediaStreamTracks and transferable WHATWG streams.
      - With transferable MSTs, streams can be created in a worker thread, rather than being created on main thread and transferred to a worker. This *may* yield more predictable performance (no data yet).
      - `track.clone()` offers more flexibility (e.g. ability to apply different constraints to the clone) as well as avoiding potential issues with `stream.tee()`.
  - Jan-Ivar and Harald presented proposals for `mediacapture-transform`

# API proposal comparison

	Mediacapture-transform proposal	Alternate proposal
<b>Frame delivery</b>	Streams	Streams
<b>Exposure</b>	Worker and Main	Worker only
<b>Stream generator</b>	Separate class	MediaStreamTrack+
<b>Stream consumer</b>	MediaStreamTrack+	Separate class
<b>Media types</b>	Audio and Video	Video only

The differences seem to be fairly isolated from each other, so can be discussed one by one.

# “Sense of the WEBRTC WG” Poll

- Answers: Yes/No/Undecided
- Question 1: Should mediacapture-transform be based on streams?
- Question 2: Should mediacapture-transform support audio?
- Question 3: Should mediacapture-transform be exposed on main thread?

# Results of the Poll

- 8 Responses
- Question 1: Should mediacapture-transform be based on streams?
  - Yes: 6, No: 2
- Question 2: Should mediacapture-transform support audio?
  - Yes: 4, No: 3, Undecided: 1
- Question 3: Should mediacapture-transform be exposed on main thread?
  - Yes: 3, No: 5

# Discussion

# Thank you

Special thanks to:

WG Participants, Editors & Chairs