

# Capabilities, Important Discussion Points on

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# Relevant background

- Proposals on various lists: WebRTC, RTCWeb, Media Capture
- Why? User interface reasons
- Foundational questions exist

# Overview

- Goals for today
- User interface needs
- Privacy (fingerprinting) has been brought up as an issue
- Some claim a Hints API is sufficient, some disagree
- What complexity/completeness of capability description is necessary?

# Goals for today

- Discuss key issues
- Reach consensus on at least UI and privacy/  
fingerprinting questions today
- DON'T work on syntax

# User interface needs

- Apparently two categories:
  - For app author to know what can be used
    - Examples: mic, camera, device hardware processing (face rec, avatar mode)
  - To be able to show user what's (un)available
    - Examples: mic, camera
- **Key question:** are these really needed?

# Privacy (fingerprinting)

- “Every additional bit of user distinguishing information brings us closer to personal identification by sites”
- Questions:
  - Can we make a difference?
  - What level and quantity of capability information can be shared?

# Privacy/fingerprinting [2]

- What level and quantity of capability information can be shared?
  - Does the answer depend on the state of the call?
    - e.g., before the "call" is accepted, before any media streams are requested, after specific devices/streams have already been requested previously, etc.
  - Does the answer change if we require permission first?
    - Can this be browser config or must it be explicit?
    - What granularity? Per use, per site, per time period, etc.?

# Relationship to Hints API

- Does the Capabilities API depend on the Hints API?
- Is it possible to identify the minimum information that must be in a Capabilities API without knowing how it will be used by the app to generate Hint requests?
- Based on the above, is a Hints API alone sufficient?



# If we need a Cap API ...

- Do we need a separate Capabilities registry?
- If the Capabilities API is just the Hints API in reverse, there is no need for a separate registry

# Capabilities Complexity and Completeness

- We mostly agree on axes of information: video width, video height, audio quality, etc.
- What allowed combinations of these need to be reported?
  - Video width and height?
  - Video pixel count and bandwidth?
  - Audio and video? (e.g., combo camera/mic array which can automatically turn in direction of loudest sound)