

Constraints, et al.

Media Capture TF telecon

27 March 2014

Recent changes

- optional constraint array element now a `ConstraintSet`, just like the mandatory value
- *state* is now *setting*
- constraints, capabilities, and settings now consistent in syntax and extracted to `Constrainable` interface

Current syntax review

- Core is a ConstraintSet (limits/values allowed)

```
{width: {min: 640},  
  height: {min: 480},  
  aspectRatio: 1.33333333333,  
  facingMode: "left"  
}
```

– Properties and allowed values/ranges defined in IANA registry

- A Constraints structure is

```
{mandatory: <ConstraintSet>,  
  optional: [ <ConstraintSet>, . . . ]  
}
```

*Array order is significant:
earlier has higher priority*

Current syntax review (2)

- Media capture
 - `getUserMedia({audio: <Constraints>, video: <Constraints>})`
 - `getUserMedia({audio: true, video: true})`
- Media configuration
 - `applyConstraints(<Constraints>)`
- For both,
 - All mandatory constraints must be satisfied
 - Each optional `ConstraintSet` satisfied if possible, with conflicts broken by priority order

Current syntax review (3)

- Capabilities (only ranges/sets)
 - `{width: {min: 640, max: 1920},
height: {min: 480, max: 1080},
...}`
 - Returned from `getCapabilities()`
- Settings (no ranges/sets)
 - `{width: 1280,
height: 1024,
...}`
 - Returned from `getSettings()`
- All supported properties included for both

Constraints example

```
{mandatory:  
  {width: {min: 640}, height: {min: 480}},  
optional: [  
  {width: 1920, height: 1280},  
  {aspectRatio: 1.333333333333}  
]  
}
```

- "I want 1080HD video, but if I can't get that, give me 4x3 video. Under no circumstances give me video with less width or height than VGA."

Questions?