MediaStream Deprecations

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If you work with `getUserMedia()` or WebRTC, you may need to adjust your code for Chrome 45 and later.

The MediaStream API represents synchronized streams of media. For example, a stream taken from camera and microphone input has synchronized video and audio tracks. Each track is represented by a MediaStreamTrack. (Not to be confused with the <track> element !)

There are three `MediaStream` deprecations in Chrome 45:

- `MediaStream.ended`
- `MediaStream.label`
- `MediaStream.stop()`

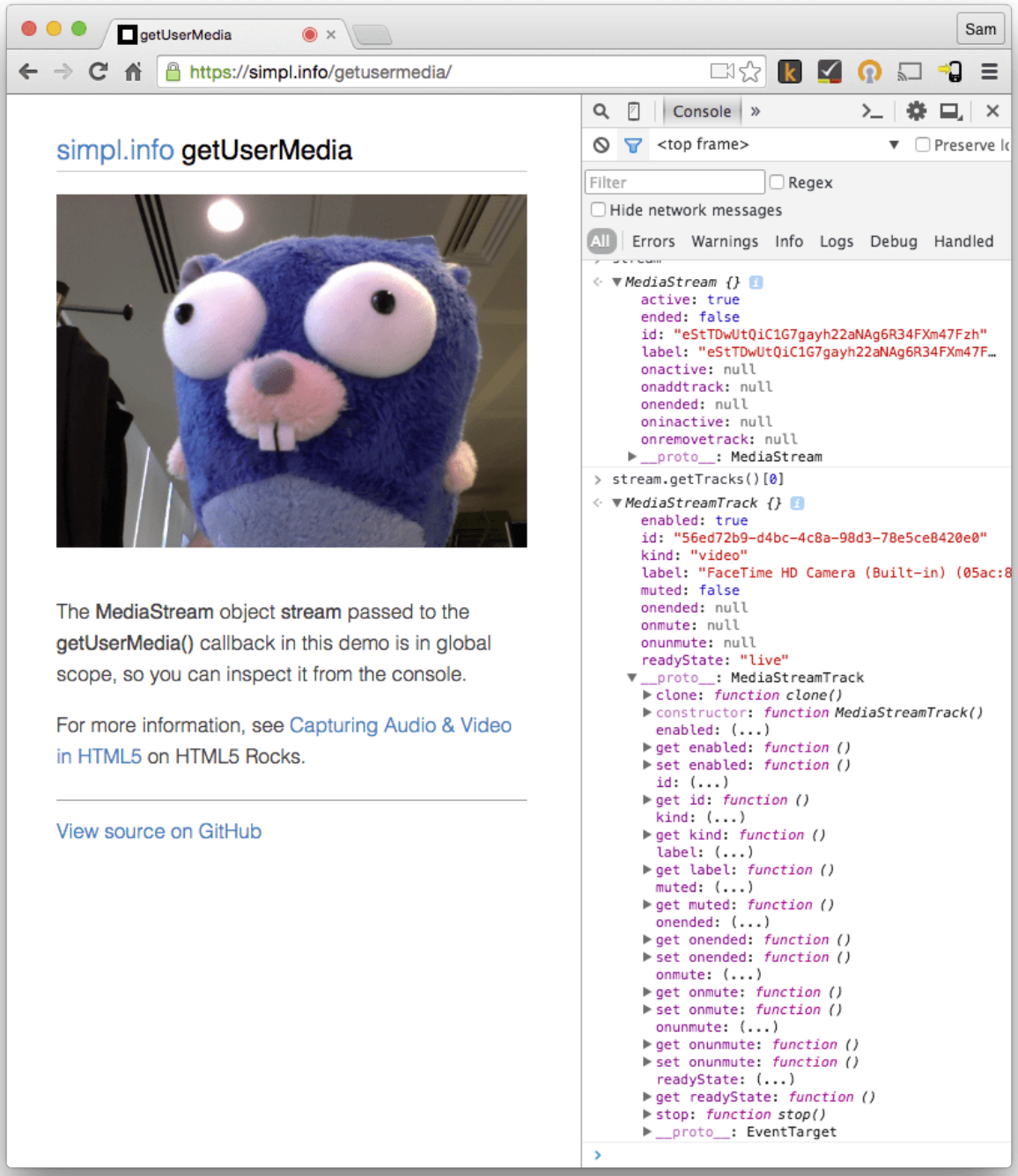
In parallel are two additions:

- `MediaStream.active`
- `MediaStreamTrack.stop()`

These require the following changes:

- Use `MediaStream.active` to check if a `MediaStream` is streaming, not `MediaStream.ended`.
- Use `MediaStreamTrack.stop()` to stop streaming, not `MediaStream.stop()`.
- If you need a unique identifier for a `MediaStream` use `MediaStream.id` instead of `MediaStream.label`. `MediaStreamTrack.label` provides a human-readable name for the source device for a stream, e.g. *FaceTime HD Camera (Built-in) (05ac:8510)*.

You can see these in action: open simpl.info/gum in Chrome (on a device with a camera) and view the Chrome DevTools console. The MediaStream object `stream` passed to the `getUserMedia()` callback in this demo is in global scope, so you can inspect it from the console. Call `stream.getTracks()[0]` to view the `MediaStreamTrack` for this stream.



Stop(), ended and active

When the Media Capture and Streams W3C Working Group looked at the problem of what happens when you add new tracks to a **`MediaStream`**, and whether an empty **`MediaStream`** is ended, they realized that there was no sensible way to implement **`ended`** on a **`MediaStream`** (as in 'will never start again'). In other parts of HTML5 'ended' means 'this has ended and will never resume'. 'Active' carries no such implication: an inactive stream can become active

again, for instance if a new track is added to it. Rather than maintain a confusing attribute and function, the Working Group decided to remove it.

Here's an example of how to use 'MediaStream.active' to check the status of a stream:

```
var gumStream;

navigator.getUserMedia({audio: false, video: true},
    function(stream) {
         gumStream = stream;
        // ...
    },
    function(error) {
        console.log('getUserMedia() error', error);
    });

// …

if (gumStream.active) {
    // do something with the stream
}
```

Removing **`stop()`** from **`MediaStream`** did not remove any real functionality: processes for detaching source devices and so on have to be done on **`MediaStreamTrack`** anyway. Use **`stop()`** on **`MediaStreamTrack`** instead:

```
navigator.getUserMedia({audio: false, video: true},
    function(stream) {
         // can also use getAudioTracks() or getVideoTracks()
        var track = stream.getTracks()[0];  // if only one media track
        // ...
        track.stop();
    },
    function(error){
        console.log('getUserMedia() error', error);
    });
```

label

It turns out that nobody could quite figure out a use for this property!

`MediaStream.label` had been added to the first version of the spec, but nobody really knew what **`label`** was for. It was also unclear what happened to **`label`** when a stream was sent via **`RTCPeerConnection`**.

The W3C Working Group asked around, and nobody wanted it, so they removed it.

To reiterate: `MediaStream.id` provides a unique identifier for a `MediaStream` and `MediaStreamTrack.label` provides the name of the source of a stream, such as the type of camera or microphone.

More information about `MediaStream` and `MediaStreamTrack` is available from Mozilla Developer Network, and HTML5 Rocks provides an excellent introduction to `getUserMedia()` in Capturing Audio & Video.

As ever, we appreciate your feedback on changes to Chrome. You can follow the bugs for these deprecations (here and here) and find more discussion and detail in the Intent to Implement.

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