

Gamepad Light Indicator Extension

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Overview

Modern gamepads support the concept of a light indicator. Light indicators have been used to indicate the player index or extend the user's gaming experience. The Standard Gamepad specification should be updated to include light indicator functionality, and the Gamepad API should be extended to allow developers to set the color of light indicator in their apps.

Standard Gamepad

The [Standard Gamepad specification](#) describes the positions of up to 17 buttons and 4 axes that are found on a typical gamepad. To support setting the light indicator, the standard gamepad will be extended to specify many light indicators, which are found on modern gamepads.

The light indicator, if present, will be assumed to be capable of turning on and off, or specifying an RGB value. This configuration is found on many popular gamepads including the Xbox 360, Xbox One, DualShock®3, and DualShock®4. When this configuration is present, it should be exposed as the light indicator on the corresponding gamepad.

IDL

The Gamepad interface is extended with an optional attribute representing a light indicator. The light indicator is assumed to be turned on and off, or changed to the color. Multiple light indicators are supported.

```
partial interface Gamepad {  
    readonly attribute FrozenArray<GamepadLightIndicator?> lightIndicators;  
};
```

Two types of light indicators are defined. A "on-off" light indicator is a light indicator that can only be turned on and off. One or more non zero values denotes the light indicator is ON, whereas a zero value for all components indicates the light indicator is OFF. A "rgb" light indicator represents an RGB light indicator on a modern gamepad. One or more non zero values specify the color of the light indicator, whereas all zero values indicate the light indicator is OFF.

```
enum GamepadLightIndicatorType {  
    "on-off",  
    "rgb"  
};
```

Set color effects are described by `GamepadLightIndicatorParameters`. Red/blue/green represents red/blue/green component of the RGB light color, or non-zero value for an on-off light indicator that indicates ON. The value of red/blue/green is in range [0, 255].

```
dictionary GamepadLightIndicatorParameters {  
    octet red = 0;  
    octet blue = 0;  
    octet green = 0;  
};
```

A `GamepadLightIndicator` represents a light indicator device. `setColor()` returns a promise that resolves to completed when setting the color has succeeded and resolves to error on failure.

```
interface GamepadLightIndicator {  
    readonly attribute GamepadLightIndicatorType type;  
    Promise setColor(GamepadLightIndicatorParameters params);  
};
```

Examples

Below is an example of how this API could be used to set color (1 second, full intensity) on the indicator at index 0 of the gamepad at index 0.

```
var gamepads = navigator.getGamepads();  
if (gamepads.length > 0) {  
    var gamepad = gamepads[0];  
    if (gamepad.lightIndicators[0]) {  
        gamepad.lightIndicators[0].setColor({red:250, green:0, blue:255});  
    }  
}
```

Document History

Date	Author	Description	Reviewed by
2019-04-05		Initial draft	