Chapter 56: Performance

Section 56.1: Use transform and opacity to avoid trigger layout
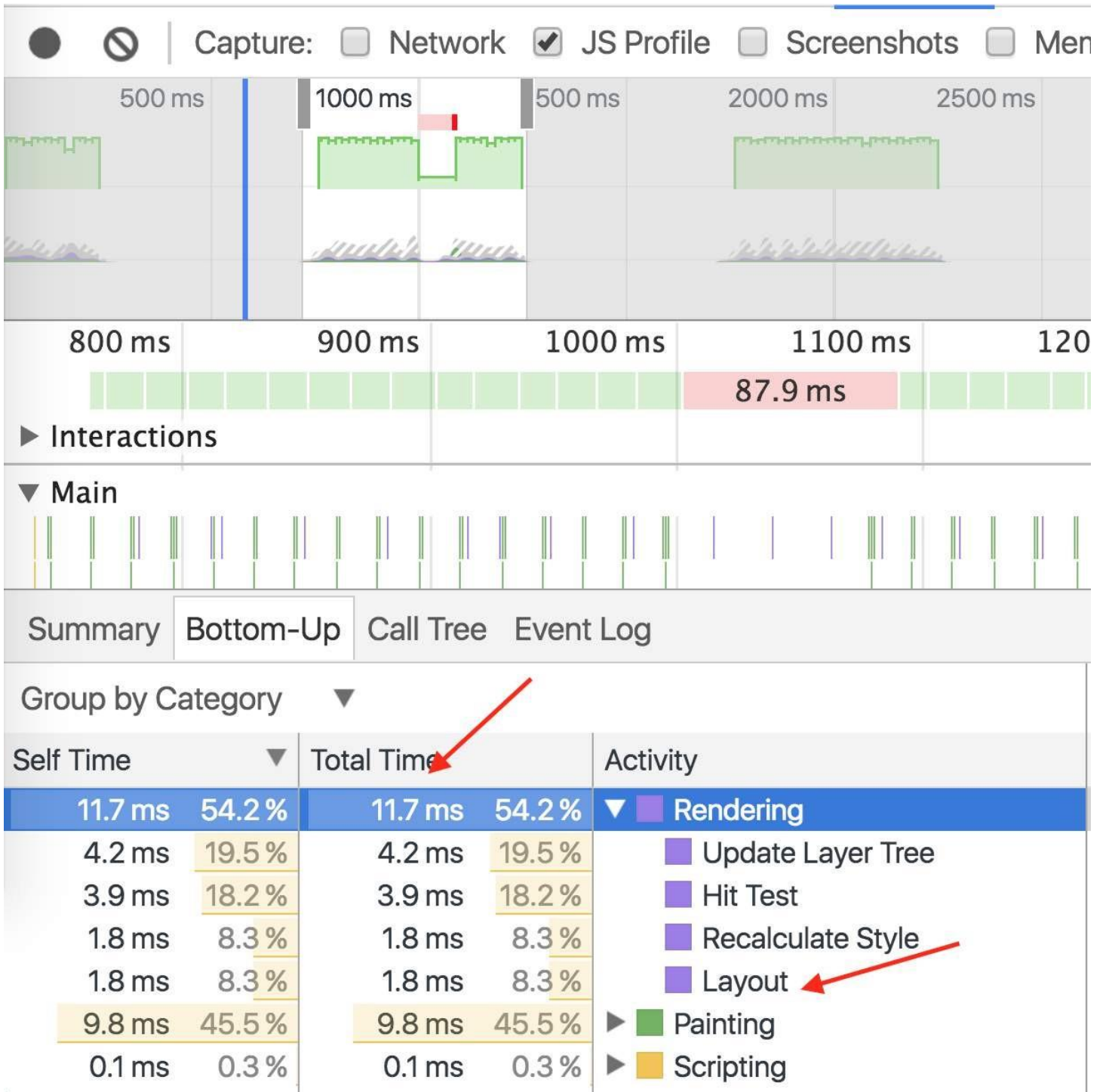
Changing some CSS attribute will trigger the browser to synchronously calculate the style and layout, which is a bad thing when you need to animate at 60fps.

DON'T

Animate with left and top trigger layout.

```css
#box {
  left: 0;
  top: 0;
  transition: left 0.5s, top 0.5s;
  position: absolute;
  width: 50px;
  height: 50px;
  background-color: gray;
}

#box.active {
  left: 100px;
  top: 100px;
}
```

Demo took **11.7ms** for rendering, **9.8ms** for painting

DO

Animate with `transform` with the same animation.

```
#box {
    left: 0;
    top: 0;
    position: absolute;
    width: 50px;
    height: 50px;
    background-color: gray;

    transition: transform 0.5s;
    transform: translate3d(0, 0, 0);
}

#box.active {
```

```
    transform: translate3d(100px, 100px, 0);
}
```

Demo same animation, took **1.3ms** for rendering, **2.0ms** for painting.