

# TRACKING

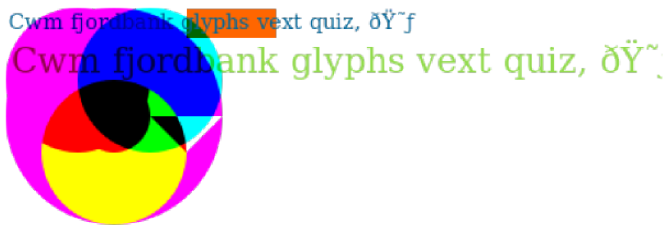
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# Mètodes de tracking

- Session only
- Storage based
- Cache based
- Fingerprinting
- Other tracking mechanisms

# Canvas Fingerprinting



**Figure:** Exemple de canvas fingerprint

# Idea del projecte

- Servei web
- Recollir dades obtingudes
- Exposició de les dades

# Canvas Fingerprinting

```
16     </head>
17     <body>
18         <canvas id="canvas" width="1" height="1"></canvas>
19         <script>
20             function f() {
21                 console.log("call 1");
22                 var canvas = document.getElementById("canvas");
23                 console.log(
24                     canvas.toDataURL("png"));
25
26                 console.log("call 2");
27                 var obfs = ["\x74\x6f\x44\x61\x74\x61\x55\x52\x4c"];
28                 console.log(
29                     canvas[obfs[0]]("png"));
30
31                 console.log("call 1");
32                 var canvas = document.getElementById("canvas");
33                 console.log(canvas.toDataURL("png"));
34
35                 console.log("call 2");
36                 var obfs = ["\x74\x6f\x44\x61\x74\x61\x55\x52\x4c"];
37                 console.log((function () {return canvas[obfs[0]]("png")}));
38             }
39             setTimeout(f, 50);
40         </script>
41     </body>
42 </html>
```

Figure: Exemple de canvas

# Canvas detection

## Es basa a la crida de toDataURL

```
function instrument() {  
  var old = HTMLCanvasElement.prototype.toDataURL;  
  HTMLCanvasElement.prototype.toDataURL = function(c) {  
    var trace = (new Error).stack;  
    var xhr = new XMLHttpRequest();  
    xhr.open("POST", "http://localhost:9000/", true);  
    xhr.withCredentials = true;  
    xhr.setRequestHeader("Content-Type", "application/json");  
    var params = {  
      w: this.scrollWidth,  
      h: this.scrollHeight,  
      referrer: document.referrer,  
      src: window.location.href,  
      stack: trace,  
      doc: new XMLSerializer().serializeToString(document),  
    }  
    xhr.send(JSON.stringify(params));  
    return old.apply(this, arguments);  
  }  
  var self = document.currentScript;  
  self.parentNode.removeChild(self);  
}
```

Figure: Exemple de canvas

# Conclusió

- **Massa varietat i complexitat de mètodes de tracking**
- **Constant desenvolupament**
- **Desconeixement de la població**

# Bibliografia

## Fonts d'informació:

- <https://arxiv.org/pdf/1507.07872v1.pdf>
- <https://webtransparency.cs.princeton.edu/webcensus/>
- <https://browserleaks.com/canvas>

## Repositori:

- <https://bitbucket.org/goordi/tracking/src>