

Lightbeam Plugin and Third-Party Trackers

Lightbeam is a Firefox plugin that helps us track third-party trackers and understand how they collect and share data while browsing the web.

-How Third-Party Trackers Operate:

I understood that Third-party trackers are often advertising networks or data brokers, that place tracking code or cookies on websites. These are generated when we browse a website and these third-party trackers gather data about your online behavior, including browsing habits, interests, and demographics. They use this data to build user profiles and serve personalized ads and content. Trackers may share collected data with other companies or advertisers to enhance personalization and they might even build our complete information by collecting data from several websites.

-Understanding Lightbeam:

- Lightbeam visualizes the connections between websites I visited, and the third-party trackers associated with them.
- It presents this information as a graph, making it easier to see how data is collected and shared as you browse the web. You can see the graph in the figure 1 below.

Observation

From the figure (1) of Lightbeam tracker graph, I observed several unexpected connections between websites:

1. nytimes.com and weather.com:
 - These websites shared a significant number of connections, indicating potential data sharing between them.
2. doordash.com, walmart.com, and amazon.com:
 - These e-commerce websites had connections with various other websites, suggesting that they might be involved in widespread data tracking and advertising.

Organizations Responsible for These Edges and Their Activities

- **nytimes.com and weather.com:** Advertising networks, data brokers, or analytics services collect user data to create targeted ads based on user interests and demographics.

- **doordash.com, walmart.com, and amazon.com:** E-commerce giants use tracking to optimize ads and offer personalized product recommendations based on user behavior.

Revenue Sources:

- **Advertising Networks and Data Brokers (nytimes.com and weather.com):** Profit by selling website data to advertisers for more effective ad campaigns.

- **E-commerce Companies (doordash.com, walmart.com, and amazon.com):** Generate revenue from online sales, subscriptions, and advertising, using data to enhance marketing strategies.

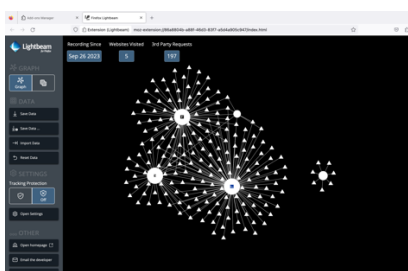


Fig (1)

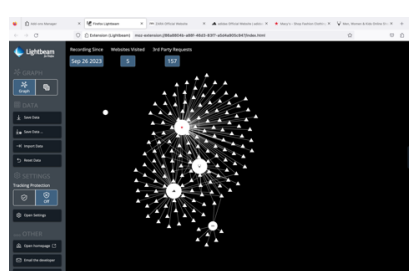


Fig (2)

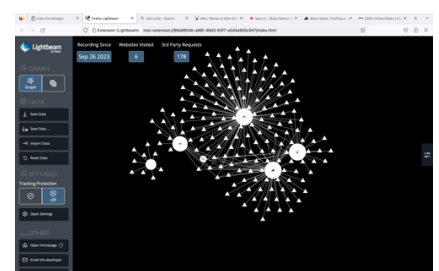


Fig (3)

Observation after clear data(cookies) and visiting sites through search engines like Google,bing

In the above figures 2 and 3.

In Fig (2): I have visited zara, macys, adidas, allensolly clothing web sites directly by typing URLs without search engines.

In Fig (3): I have visited above websites through search engines like Google and Bing.

Observation:

I have noticed that these websites share several connections but when we use search engines like google, we can see that these websites have a common point as google and it shares several connections to all these websites.

I think that using search engine like google may provide websites about the user information like their email address and details and even ip address, whereas directly visiting the websites would at least restrict sharing these details as there would be no sharing point.

