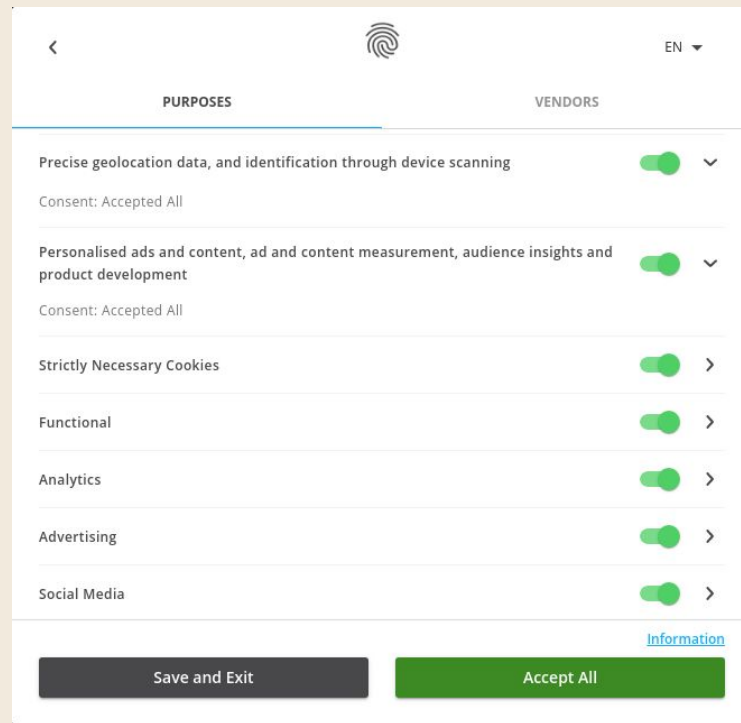
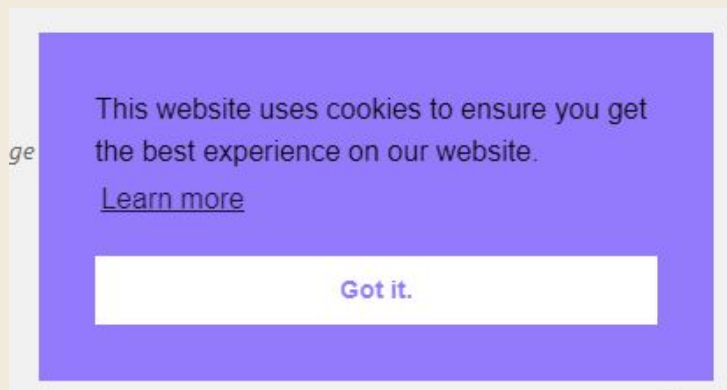


# **Privacy.txt: a self-disclosing standard for transparency on the web**

By Louise van der Peet  
Supervised by George Smaragdakis



# Cookies and Consent banners





# ePrivacy Directive and GDPR



## ePrivacy Directive consent (2002)

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- All but necessary data collection requires consent

## GDPR consent (2018)

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- Freely-given
- Unambiguous
- Specific
- Informed
- Purpose Limited

# Problems of cookies



## Trackers

90% of websites use tracking cookies [1]



## Consent

Websites often ignore users choices [2]



## Compliance

80% of websites are not compliant under the GDPR [2] [3]

[1] Sanchez-Rola, I., Dell'Amico, M., Kotzias, P., Balzarotti, D., Bilge, L., Vervier, P.-A., and Santos, I. (2019). Can i opt out yet? gdpr and the global illusion of cookie control. In Proceedings of the 2019 ACM Asia conference on computer and communications security, pages 340–351.

[2] Matte, C., Bielova, N., and Santos, C. (2020). Do cookie banners respect my choice?: Measuring legal compliance of banners from iab europe's transparency and consent framework. In 2020 IEEE Symposium on Security and Privacy (SP), pages 791–809. IEEE.

[3] Utz, C., Degeling, M., Fahl, S., Schaub, F., and Holz, T. (2019). (un)informed consent: Studying gdpr consent notices in the field. In Proceedings of the 2019 acm sigsac conference on computer and communications security, pages 973–990.

# Proposed solution: privacy.txt

```
# example.com/privacy.txt
#
# Cookies
BIDUPSID, .example.com, 365, 0, 0, 1, 0
atpsida, .example.com, 0, 0, 0, 0, 1
NID, .google.com, 200, 1, 1, 1, 1
#Banner
example.com, 1
# Privacy policy
example.com/privacypolicy
```

Cookie name

Duration

Domain name

First / third party

Optional

HTTP only

Secure

- Cookies and attributes
- Banner information
- Privacy policy location

- Server Side
- Self disclosed
- Machine readable
- Single reference point



# Advantages of `privacy.txt`



- Machine Readable
- Easy to adopt
- No change on user side
- Does not interfere with browser functionality
- Complete in most important parts of GDPR compliance
- Potential for high accountability
- Transparency as priority



# Supporting Tools



## Data collector tool **1**

- Creation of privacy.txt files
- Verification of privacy.txt files
- Auditing

## Cookie compare tool **2**

# Challenges of automatic cookie generation

**Bot Protection**

**User interaction**

**Banner detection**

**Changing cookie attributes**

Name	Value	Domain	Path	Expires / Max-Age	Size	H..	Secure	SameSite	Partitio...	Priority
session_tracker	qrnfqkolorjlmnmrmo.0.1687518631787.Z0FBQUBFQmt...	.reddit.c...	/	Session	237		✓	None		Medium
datadome	7uMRqYFYIPv8CJfnVwdWae1GiN-bfCRn-hOXuveZVmC...	.reddit.c...	/	2024-06-22T11:10:...	136		✓	Lax		Medium
session	932fe66e9dd4b190097c1b4d59f289094a0bf9e3gAWVS...	www.re...	/	Session	159	✓	✓			Medium
USER	eyJwcmVmcyl6eyJnbG9iYWxUaGVtZSI6IjFRFRJVCiSm...	.reddit.c...	/	2024-07-27T10:39:...	344					Medium
edgebucket	RSZ2yzoXNS0ihu5FVR	.reddit.c...	/	2024-07-27T10:39:...	28		✓			Medium
csv	2	.reddit.c...	/	2024-07-27T10:39:...	4		✓	None		Medium
token_v2	eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiJleU...	.reddit.c...	/	2024-07-27T10:39:...	1784	✓	✓			Medium
loid	00000000e08aqp7u.2.1687516771269.Z0FBQUBFQmt...	.reddit.c...	/	2024-07-27T10:39:...	226		✓	None		Medium
Name	Value	Domain	Path	Expires / Max-Age	Size	H..	Secure	SameSite	Partitio...	Priority
datadome	7uMRqYFYIPv8CJfnVwdWae1GiN-bfCRn-hOXuveZVmC...	.reddit.c...	/	2024-06-22T11:10:...	136		✓	Lax		Medium
session	932fe66e9dd4b190097c1b4d59f289094a0bf9e3gAWVS...	www.re...	/	Session	159	✓	✓			Medium
USER	eyJwcmVmcyl6eyJnbG9iYWxUaGVtZSI6IjFRFRJVCiSm...	.reddit.c...	/	2024-07-27T10:39:...	344					Medium
edgebucket	RSZ2yzoXNS0ihu5FVR	.reddit.c...	/	2024-07-27T10:39:...	28		✓			Medium
session_tracker	qdqknjcdpedmdpfpki.0.1687516788614.Z0FBQUBFQmt...	.reddit.c...	/	Session	237					Medium
csv	2	.reddit.c...	/	2024-07-27T10:39:...	4		✓	None		Medium
token_v2	eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiJleU...	.reddit.c...	/	2024-07-27T10:39:...	1784	✓	✓			Medium
loid	00000000e08aqp7u.2.1687516771269.Z0FBQUBFQmt...	.reddit.c...	/	2024-07-27T10:39:...	226		✓	None		Medium





# Real world impact



## 01. Empower users

- By providing privacy transparency

## 02. Help websites comply

- By ease of verification of privacy features

## 03. Facilitate auditing

- With large-scale auditing tools



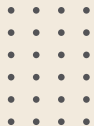
# To sum up



**01. GDPR compliance on the web is low**

**02. Privacy.txt as transparency solutions**

**03. Auditing and Generation Tools**



# References



- [1] Sanchez-Rola, I., Dell'Amico, M., Kotzias, P., Balzarotti, D., Bilge, L., Vervier, P.-A., and Santos, I. (2019). Can i opt out yet? gdpr and the global illusion of cookie control. In Proceedings of the 2019 ACM Asia conference on computer and communications security, pages 340–351.
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