



Inria



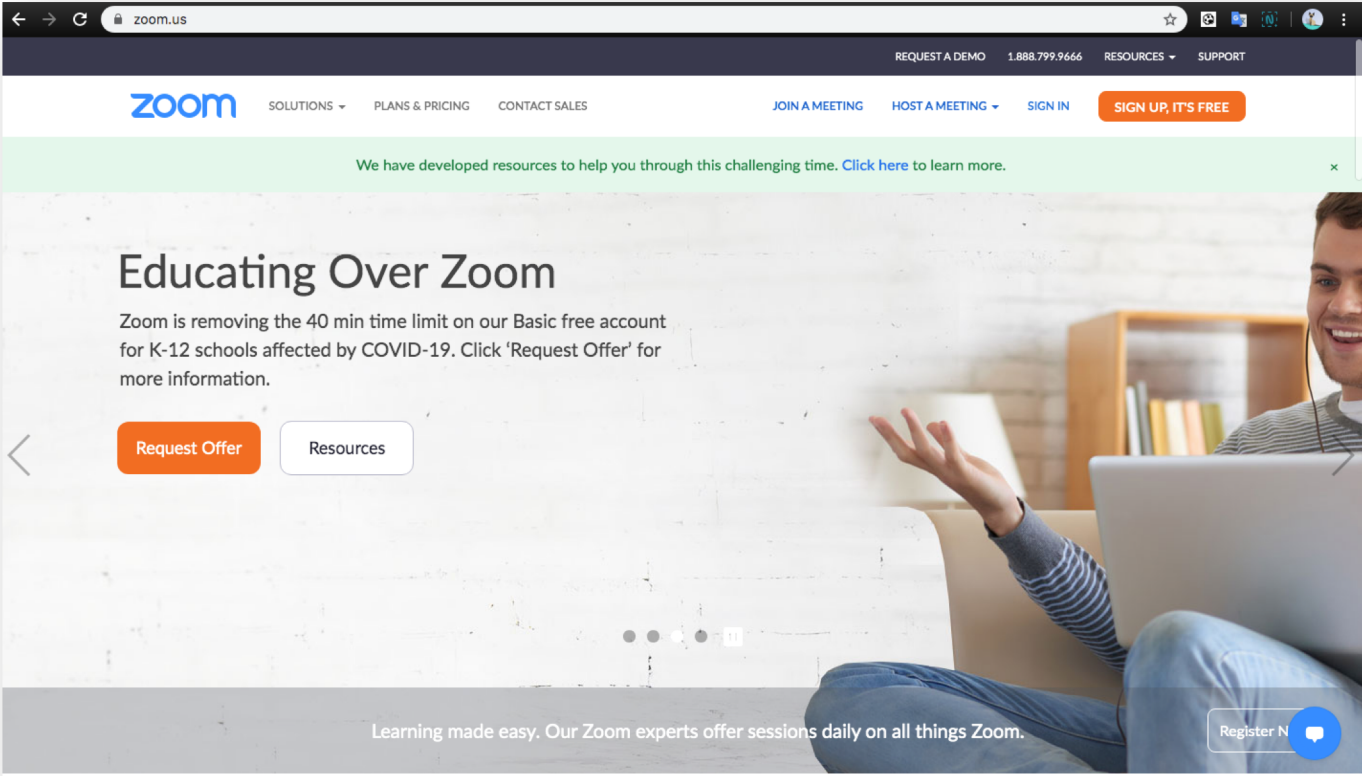
I see a cookie banner... Is it even legal?



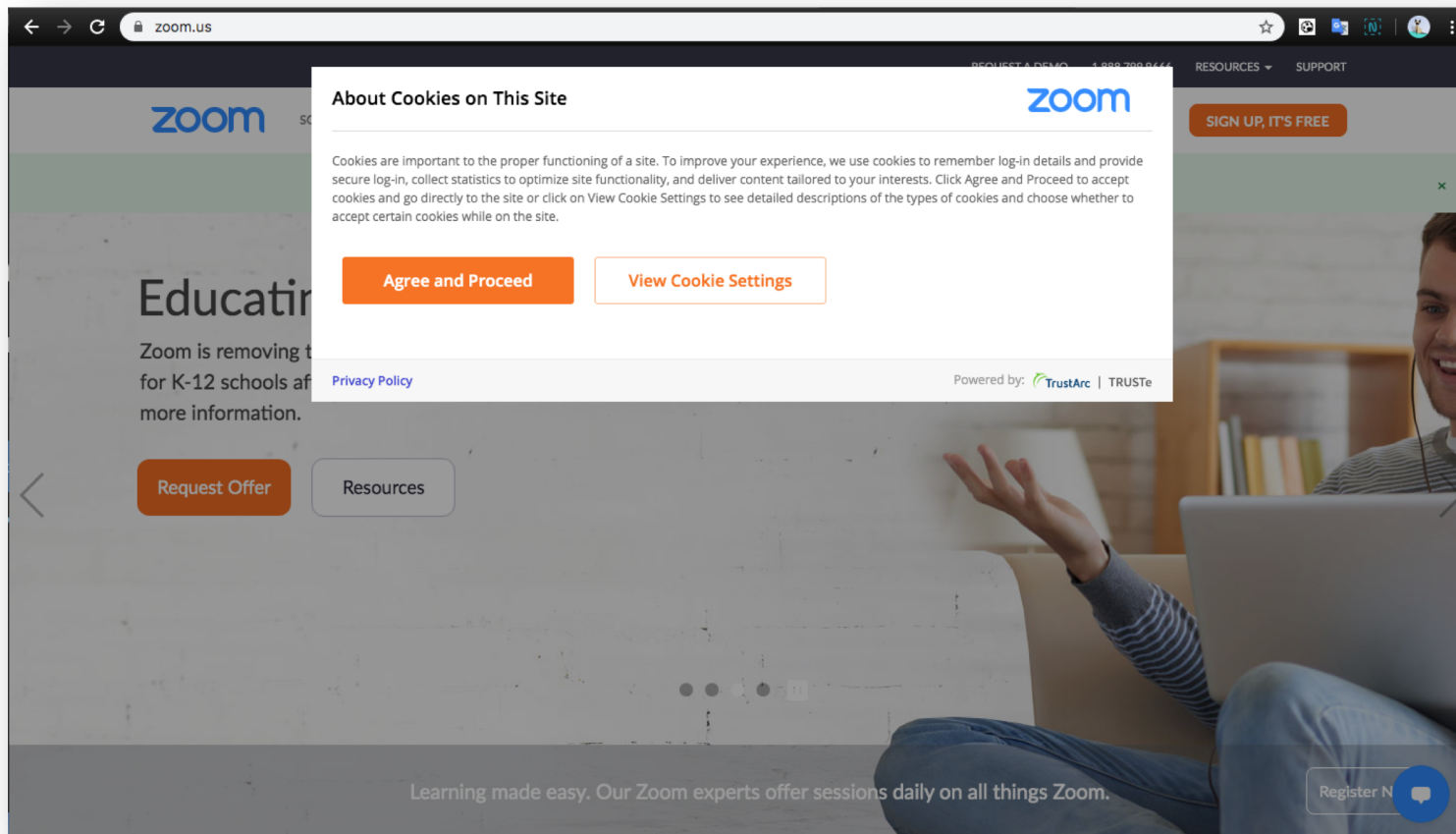
Nataliia Bielova and Cristiana Santos
joint work with Celestin Matte
Inria, France



Who has not yet visited this website?



When I visit it from the EU...



The screenshot shows the Zoom website with a cookie consent pop-up. The pop-up is titled "About Cookies on This Site" and contains the following text: "Cookies are important to the proper functioning of a site. To improve your experience, we use cookies to remember log-in details and provide secure log-in, collect statistics to optimize site functionality, and deliver content tailored to your interests. Click Agree and Proceed to accept cookies and go directly to the site or click on View Cookie Settings to see detailed descriptions of the types of cookies and choose whether to accept certain cookies while on the site." Below the text are two buttons: "Agree and Proceed" and "View Cookie Settings". At the bottom of the pop-up, it says "Powered by: TrustArc | TRUSTe" and "Privacy Policy". The background of the website shows the Zoom logo, navigation links for "REQUEST A DEMO", "RESOURCES", and "SUPPORT", and a "SIGN UP, IT'S FREE" button. The main content area features the word "Education" and a paragraph about Zoom removing barriers for K-12 schools. There are also buttons for "Request Offer" and "Resources". At the bottom of the page, it says "Learning made easy. Our Zoom experts offer sessions daily on all things Zoom." and a "Register Now" button.



Why do we see cookie banners at all ?!
Let's ask the lawyer

GDPR and ePrivacy Directive (ePD)

■ GDPR

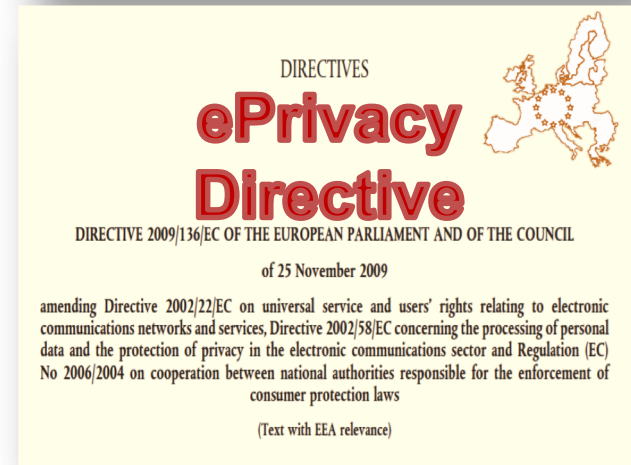
applies to processing of **personal data** of EU users, by a controller:

- established inside/outside the EU; and
- offering goods or services; monitors users behavior

■ ePrivacy Directive (ePD)

- protects privacy in online communications (websites)
- requires **consent** for processing data via cookies

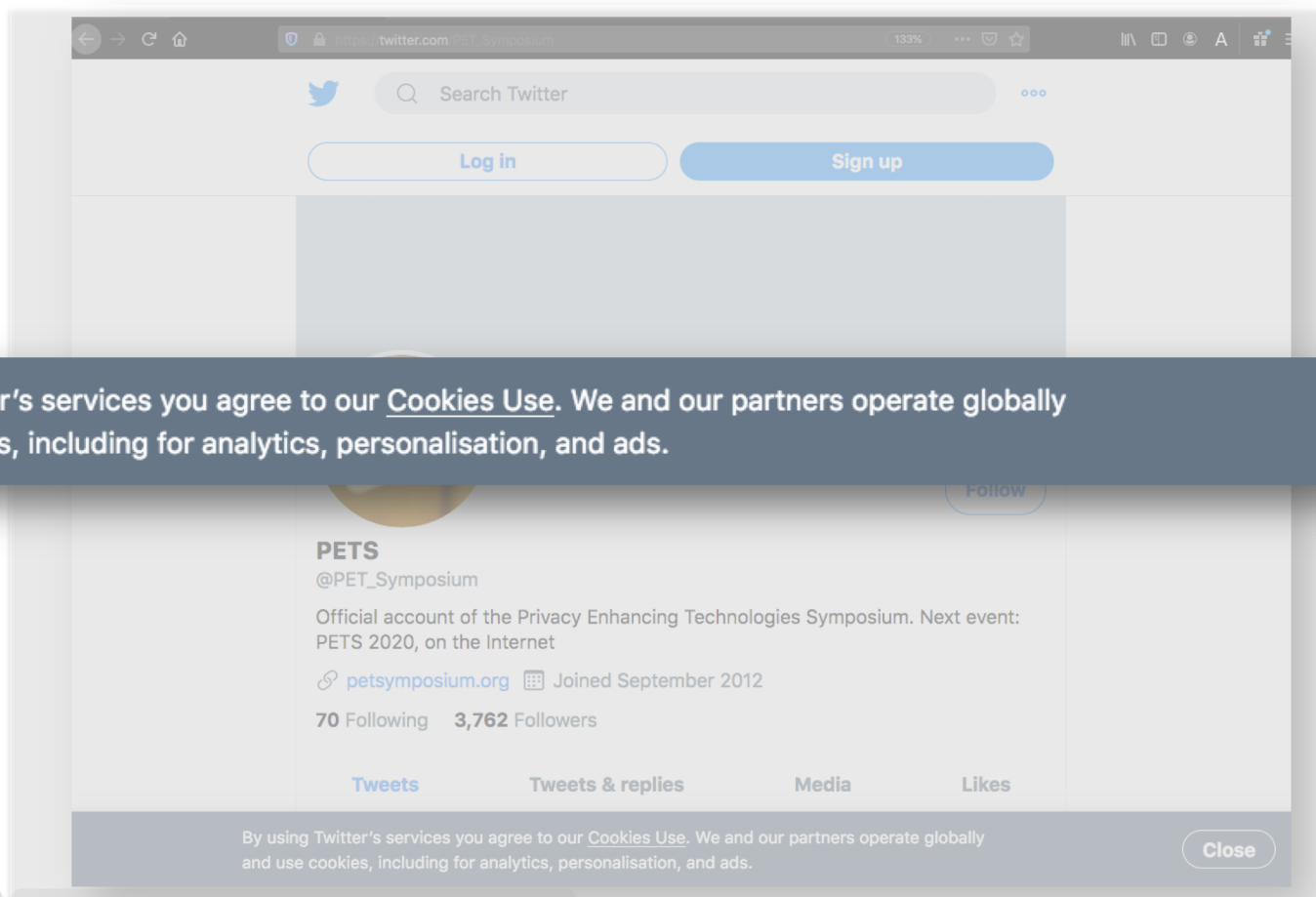
■ Websites ask consent via **cookie banners**



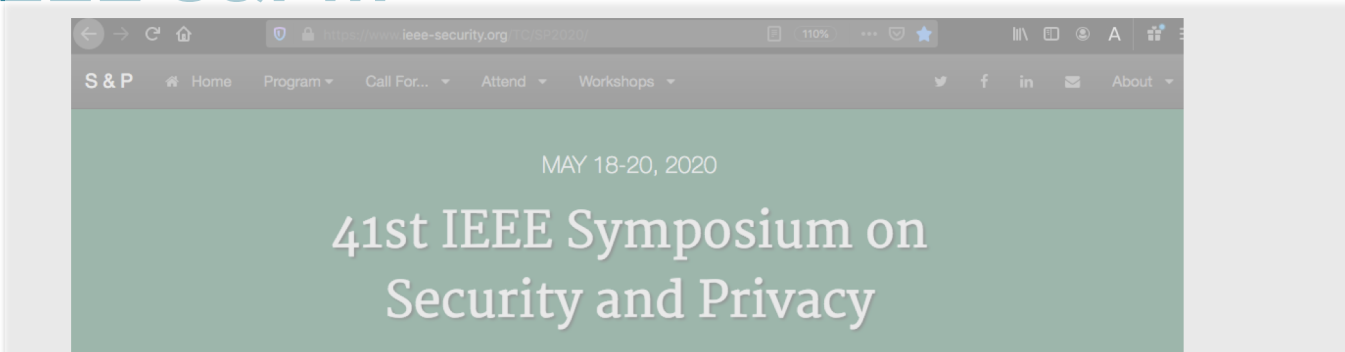
Now you'll see some cookie banners...
Do you think they are compliant with the law?



Look at this Twitter banner...



Or the IEEE S&P...



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Accept & Close

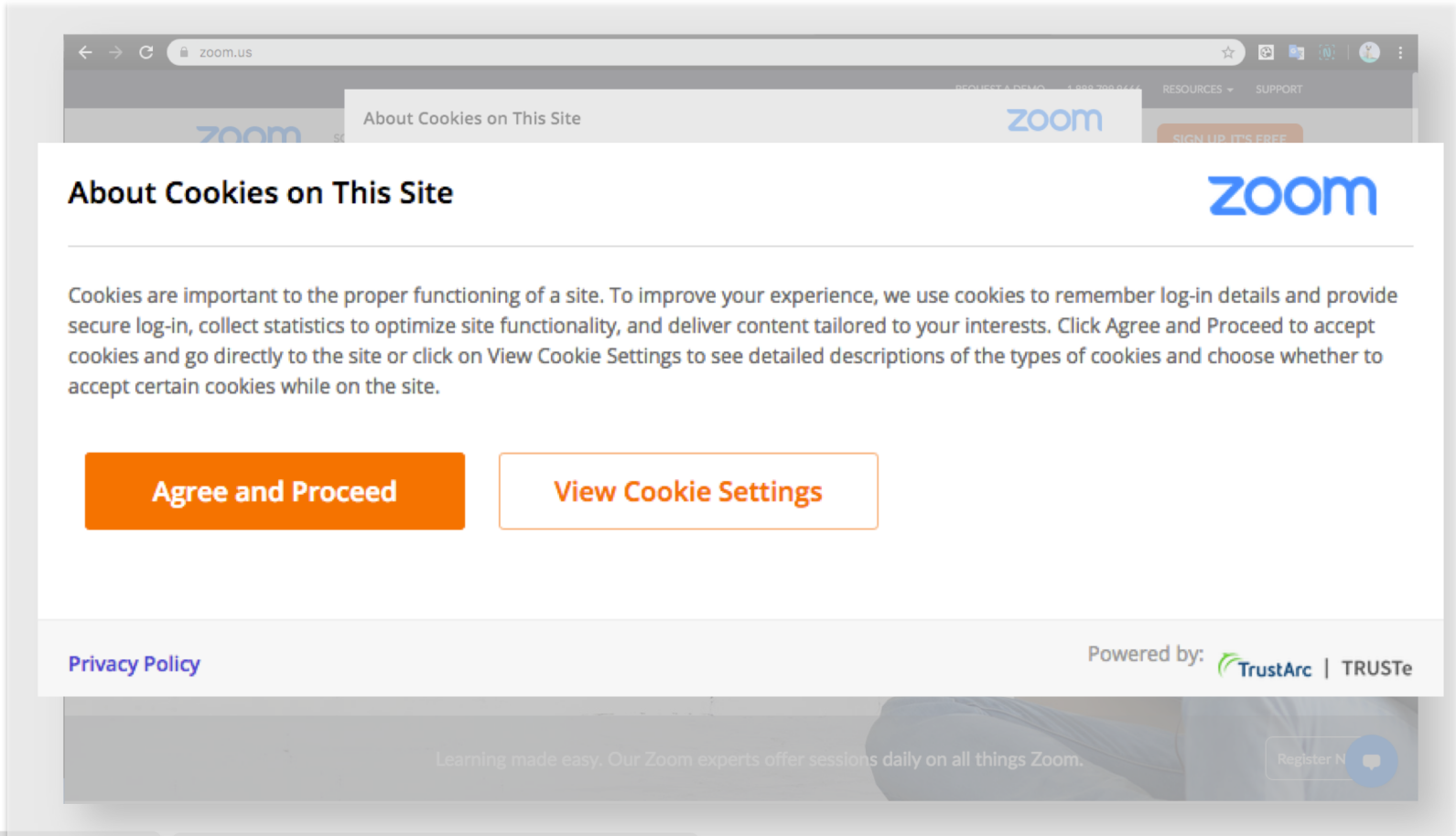
Since 1980, the IEEE Symposium on Security and Privacy has been the premier forum for presenting developments in computer security and electronic privacy, and for bringing together researchers and practitioners in the field. The 2020 Symposium will mark the 41st annual meeting of this flagship conference.

The Symposium will be held on May 18-20, 2020, and the Security and Privacy Workshops will be held on May 21, 2020.

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Accept & Close

back to Zoom...



The image shows a screenshot of the Zoom website's cookie consent banner. The banner is white with a thin border and is overlaid on a blurred background of the Zoom website. At the top left of the banner is the title "About Cookies on This Site" in bold black text. At the top right is the Zoom logo in blue. Below the title is a paragraph of text explaining the use of cookies. At the bottom of the banner are two buttons: "Agree and Proceed" in white text on an orange background, and "View Cookie Settings" in orange text on a white background with an orange border. In the bottom left corner of the banner is a link for "Privacy Policy" in blue text. In the bottom right corner is the text "Powered by: TrustArc | TRUSTe" with the TrustArc logo. The background website shows the Zoom logo, navigation links like "REQUEST A DEMO", "RESOURCES", and "SUPPORT", and a "SIGN UP, IT'S FREE" button.

zoom.us

REQUEST A DEMO | 1.888.398.6444 | RESOURCES | SUPPORT

About Cookies on This Site

zoom

SIGN UP, IT'S FREE


About Cookies on This Site

zoom

Cookies are important to the proper functioning of a site. To improve your experience, we use cookies to remember log-in details and provide secure log-in, collect statistics to optimize site functionality, and deliver content tailored to your interests. Click Agree and Proceed to accept cookies and go directly to the site or click on View Cookie Settings to see detailed descriptions of the types of cookies and choose whether to accept certain cookies while on the site.

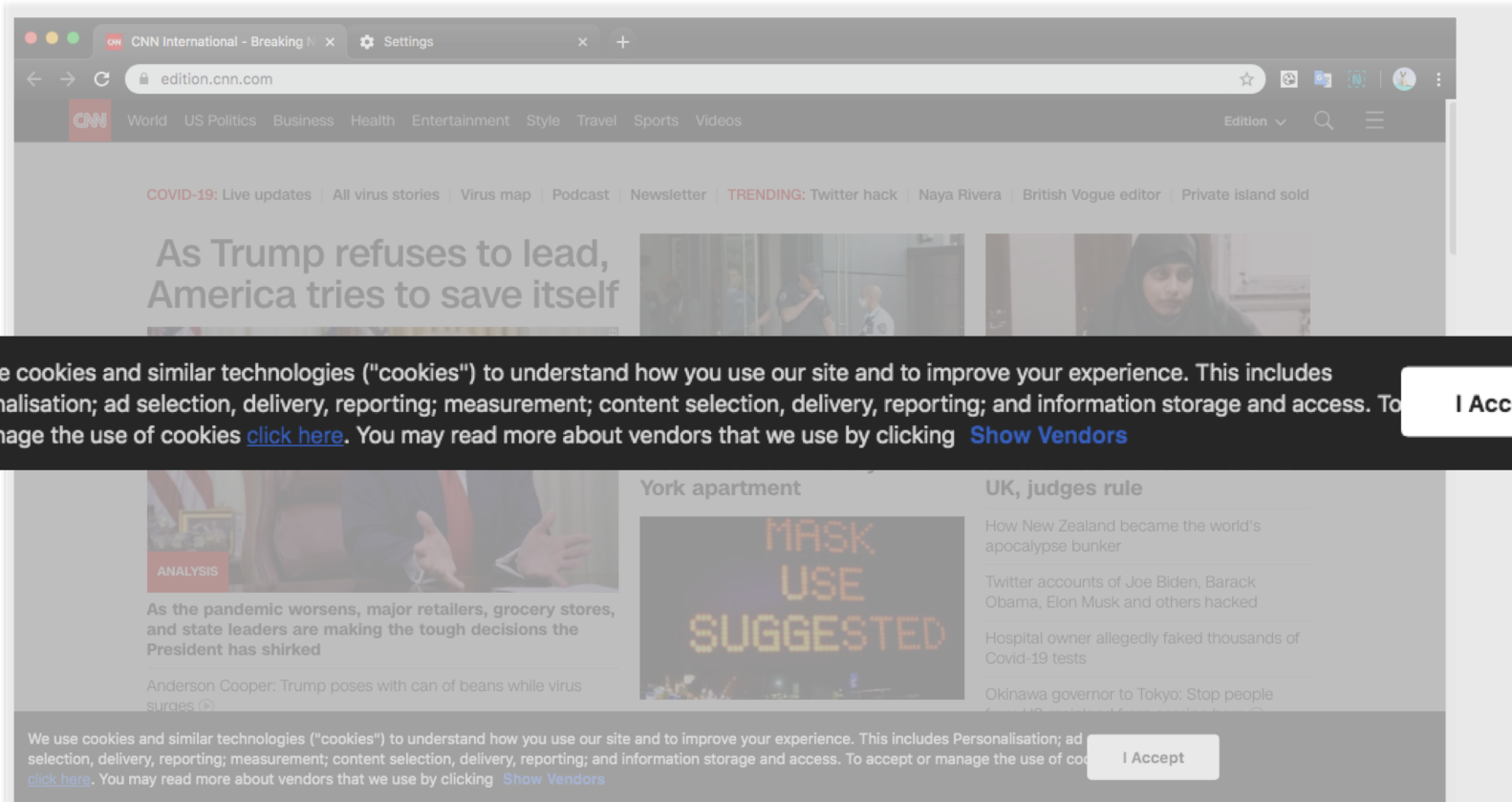
[Agree and Proceed](#) [View Cookie Settings](#)

[Privacy Policy](#)

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Learning made easy. Our Zoom experts offer sessions daily on all things Zoom. [Register Now](#)

and finally CNN ...



**How can we understand when a banner is compliant with the law?
It is easy, read the GDPR!**



You need to be an expert!

- Consent request must be:
 1. Freely given
 2. Specific
 3. Informed
 4. Unambiguous
 5. Revocable
 6. Prior to any data collection
 7. Readable and accessible

- Check our **75** page draft paper:
<https://hal.inria.fr/hal-02875447>

Are cookie banners indeed compliant with the law?

Deciphering EU legal requirements on consent and technical means to verify compliance of cookie banners

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celestin.matte@ploudseeker.com

Abstract

In this work, we analyze the legal requirements on cookie banners as a consent mechanism in Web applications. We describe how banners are supposed to be implemented to be fully compliant with the ePrivacy Directive and the GDPR. Our contribution resides in the definition of 22 operational and fine-grained requirements on cookie banner design that are legally compliant, and moreover, we define whether and when the verification of compliance of each requirement is feasible.

The definition of requirements emerges from a joint interdisciplinary analysis composed of lawyers and computer scientists in the domain of web tracking technologies. As such, while some requirements are provided by explicitly codified legal sources, others result from the domain-expertise of computer scientists. In our work, we match each requirement against existing cookie banners designs of websites. We exemplify each requirement with compliant and non-compliant cookie banners.

For each requirement, we perform a technical assessment to decide if technical (with computer science tools), manual (with any human operator) or user studies (with a significant number of users) verification is needed to assess compliance of consent. We show that it's not possible to fully assess compliance with the law for the majority of requirements because of the current architecture of the Web.

With this approach, we aim to support practically-minded parties (compliance officers, regulators, privacy NGOs, researchers, social and computer scientists) to assess compliance and detect violations in cookie banners' design and implementation, specially under the current revision of the EU ePrivacy framework.

Keywords: legal compliance, consent, cookie banners, General Data Protection Regulation, ePrivacy Directive, web tracking technologies, legal requirements, technical verification, ePrivacy Regulation, detection of violations

1 Introduction

The ePrivacy Directive¹ 2002/58/EC, as amended by Directive 2009/136/EC, stipulates the need for consent for the storage of or access to cookies (and any tracking technology, e.g. device fingerprinting) on the user's terminal equipment, as the lawfulness ground, pursuant to Article 5(3) thereof. The rationale behind this obligation aims to give users control of their data. Hence, website publishers processing personal data are duty-bound to collect consent. Consequently, an increasing number of websites now display (cookie) consent banners.²

However, there is no established canonical form for the consent request. It is clear from Recital 17 of the ePrivacy Directive (hereinafter named ePD) that a user's consent may be given by any appropriate method. Website operators are free to use or develop consent flows that suit their organization, as long as this consent

¹ In this paper we will only regard to the recent amended version of the ePrivacy Directive, the Directive 2009/136/EC of the European Parliament and of the Council of 25 November 2009 amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws (Text with EEA relevance) OJ L 337, 11-36 (hereinafter named 'ePD').

² Jannick Sørensen, Sokol Kosta, 'Before and After GDPR: The Changes in Third Party Presence at Public and Private European Websites' (Proceedings of the World Wide Web Conference, ACM, NY, USA, 2019)1590-1600.

Or install “Cookie Glasses” to look inside banners!

<https://chrome.google.com/webstore/detail/cookie-glasses/gncnjghkclhpkfghgcbobednpchjifk>

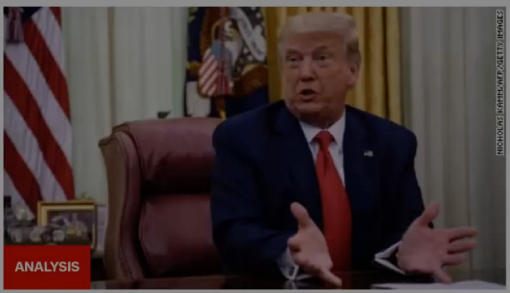
<https://addons.mozilla.org/en-US/firefox/addon/cookie-glasses/>

The screenshot shows the Chrome Web Store page for the 'Cookie Glasses' extension. The page header includes the Chrome Web Store logo and a 'Sign in' button. The breadcrumb trail is 'Home > Extensions > Cookie Glasses'. The extension is offered by 'celestin.matte' and has a 'Developer Tools' badge and '212 users'. The 'Overview' tab is selected. Below the extension name, there is a preview of the extension's functionality: a browser window showing a consent string registered by the CMP on a page. The consent string information includes: 'CMP: Faktor BV (ID: 3)', 'Number of vendors of data processing you consented to: 547', and 'Number of purposes of data processing you consented to: 5'. The purposes listed are: 'Information storage and access', 'Personalisation', 'Ad selection, delivery, reporting', 'Content selection, delivery, reporting', and 'Measurement'. The consent string stored by the CMP is also displayed as a long alphanumeric string.

The screenshot shows the Mozilla Add-ons page for the 'Cookie Glasses' extension. The page header includes the Firefox Browser logo, the 'ADD-ONS' title, and navigation links for 'Explore', 'Extensions', 'Themes', and 'More...'. A search bar is present with the text 'Find add-ons'. The extension is listed with a rating of 5 stars and 8 users. The extension is by 'Célestin Matte'. The description states: 'Show consent registered by cookie banners of IAB Europe's Transparency & Consent Framework'. There is a 'Remove' button and a warning message: 'This is not monitored for security through Mozilla's Recommended Extensions program. Make sure you trust it before installing.' There is also a 'Learn more' button. The page also features a 'Rate your experience' section and a 'Screenshots' section.

COVID-19: Live updates | All virus stories | Virus map | Podcast | Newsletter | TRENDING: Twitter hack | Naya Rivera | British Vogue editor | Private island sold

As Trump refuses to lead, America tries to save itself



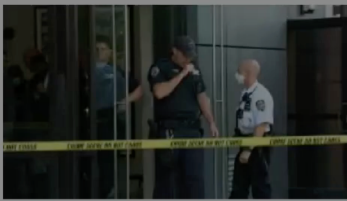
ANALYSIS
As the pandemic worsens, major retailers, grocery stores, and state leaders are making the tough decisions the President has shirked

- Anderson Cooper: Trump poses with can of beans while virus surges ▶
- Trump demotes campaign chief amid poor opinion poll numbers
- Why the Trump administration's win over Huawei could be bad news for TikTok
- Jake Tapper calls out White House: Let me not be diplomatic ▶
- POLL** Most Americans don't trust the President, but they do trust Dr. Fauci



How the world got Covid-19 messaging so wrong

- **LIVE UPDATES:** Australian state registers its worst day since the pandemic began
- Atlanta mayor says Trump broke law by not wearing mask
- These states have tamed coronavirus, even after reopening
- **NEWSLETTER:** What you need to know about coronavirus today



Tech CEO, 33, found dismembered in luxury New York apartment

How New Zealand became the world's apocalypse bunker

Twitter accounts of Joe Biden, Barack Obama, Elon Musk and others hacked

Hospital owner allegedly faked thousands of Covid-19 tests



Schoolgirl who joined ISIS should be allowed to return to UK, judges rule

Okinawa governor to Tokyo: Stop people from US mainland from coming here ▶

Vogue boss 'racially profiled' while trying to enter his own office

Siberian heatwave 'made 600 times more likely by climate change'

Teen dies from bubonic plague after eating marmot

Before her suicide, triathlete asked mother to 'lay bare the sins' of her alleged abusers

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The US is defying Trump's reopening demands



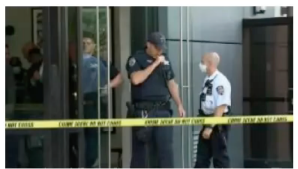
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- Teen dies from bubonic plague after eating parrot



Schoolgirl who joined ISIS



Violations found on websites with TCF banners

- Pretend that you accepted even before you clicked!
- Register your acceptance even if you rejected!



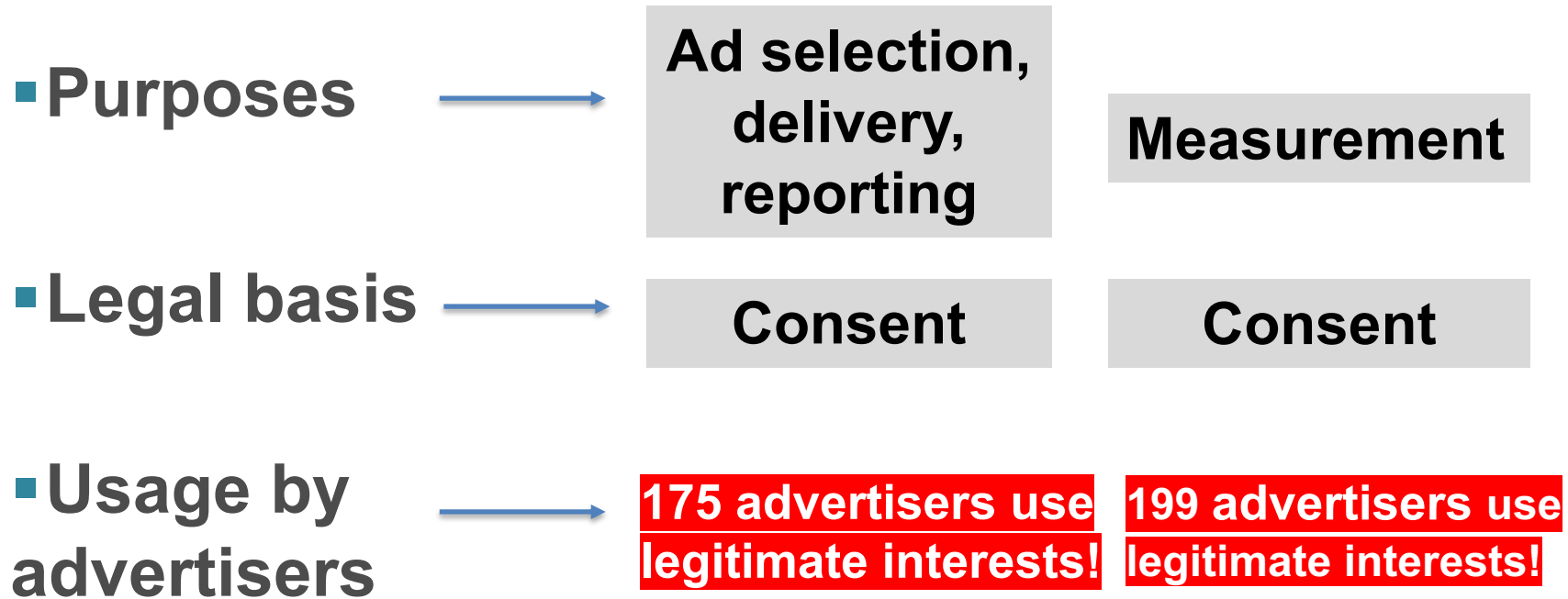
We have an impact!

- Most popular websites have fixed their practices
- See historical videos here: <https://www-sop.inria.fr/members/Nataliia.Bielova/cookiebanners/>

**Nice but still... that's a lot of purposes,
and a lot of advertisers that will track me!
Is this legal?**



Not always!



Purposes in IAB Europe's TCF: which legal basis and how are they used by advertisers?

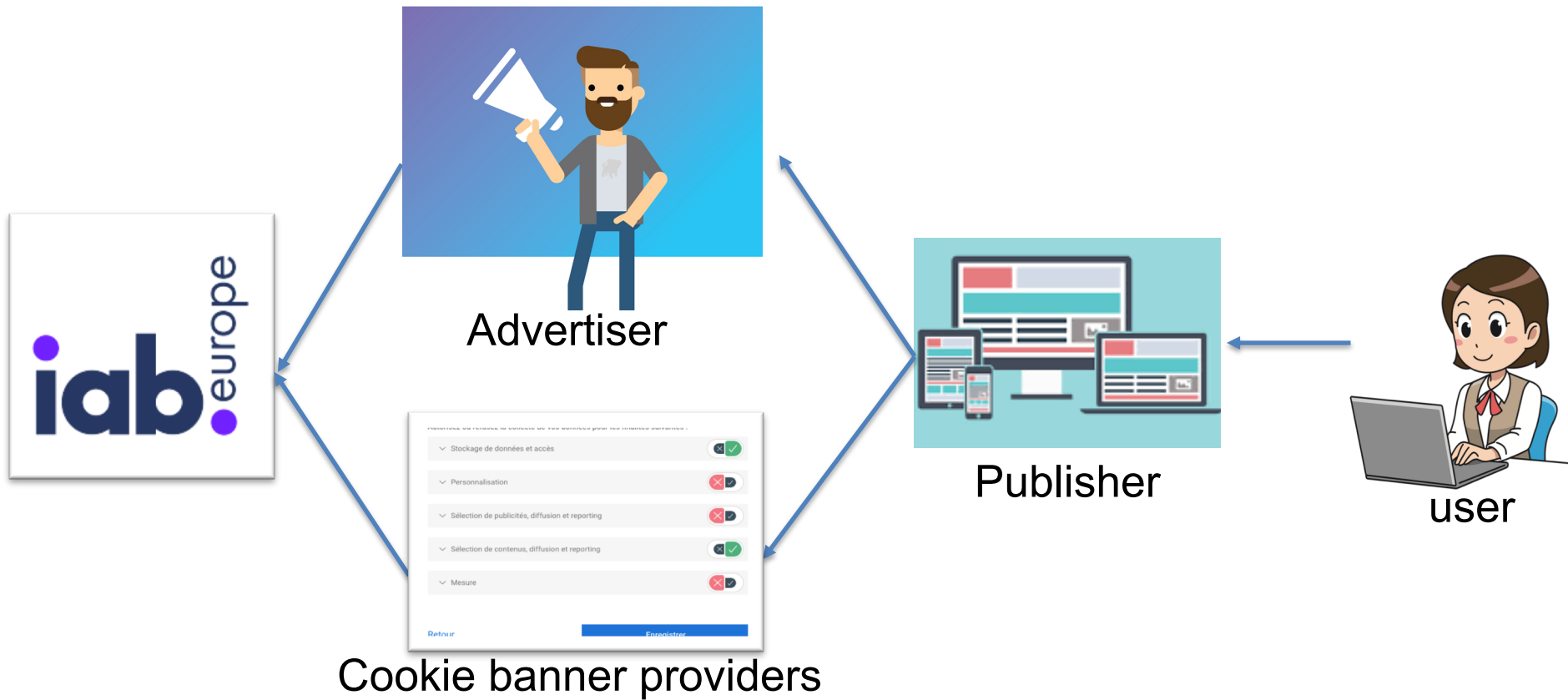
Célestin Matte, Cristiana Santos, Nataliia Bielova. *Annual Privacy Forum (APF 2020)*. <https://hal.inria.fr/hal-02566891>

So who's responsible?

IAB Europe? Advertisers? Cookie banner providers? Website publishers? Users?



Let's see..



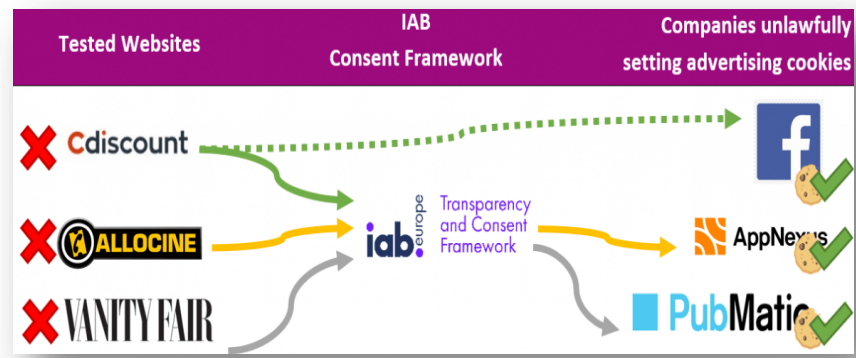
What's next?

How to annoy DPAs or become their best friends?



noyb filed a complaint to the CNIL using our tool. Do like NOYB!

- We are writing an open letter to the **European Data Protection Board (EDPB)**
- Use **“Cookie Glasses”** to uncover what’s happening behind the interface of cookie banners <https://github.com/Perdu/Cookie-Glasses>



Lawfulness of consent in the cookie banners of the IAB Europe TCF
Why it matters to data subjects

Nataliia Bielova and Cristiana Santos
 Inria, France
 July 2, 2020

To the European Data Protection Authorities,
 the European Data Protection Board

This Letter provides Inria researcher's views on consent collection practices of the

Share ideas & contacts: help us change the cookie banner practices in the EU and the world*!