CSE190/291
How The Web Tracks You / Targeted Advertising

Online Advertising, Part 3

UC San Diego

Housekeeping

General course things to know

- PA1 part 4 is due **11/3… four days**
  - Pls begin
  - Everything that you have built so far will converge
  - You will be building an SSP that talks to several DSPs and makes pricing decisions, trying to make money for Boogle using advertising
    - Along the way, you'll deal with complaints, fraud, etc.…

Housekeeping

General course things to know

- Pete Snyder, Principal Privacy Researcher at *Brave*, (a privacy oriented browser company) will be visiting us on **11/3,** in the CSE190 section
- The talk will (hopefully) be in-person, which will be great!
  - Come prepared with lots of questions about how Brave works and the online tracking ecosystem!



Brave

Housekeeping

General course things to know

- The midterm is coming: in class on **11/5**
- ***Sample questions are released!***
- We will give you a cheatsheet… which we'll release on Monday **11/2**
- There will be a midterm review session, Wedneday 11/4, 6 – 8pm, room TBD!
- **You must attend the section you are enrolled in. No exceptions.**

Previously on CSE190/CSE291…

- The online advertising ecosystem, in full — with protocols!
  - We talked about OpenRTB and how it is used in practice, especially with regards to cookie syncing!

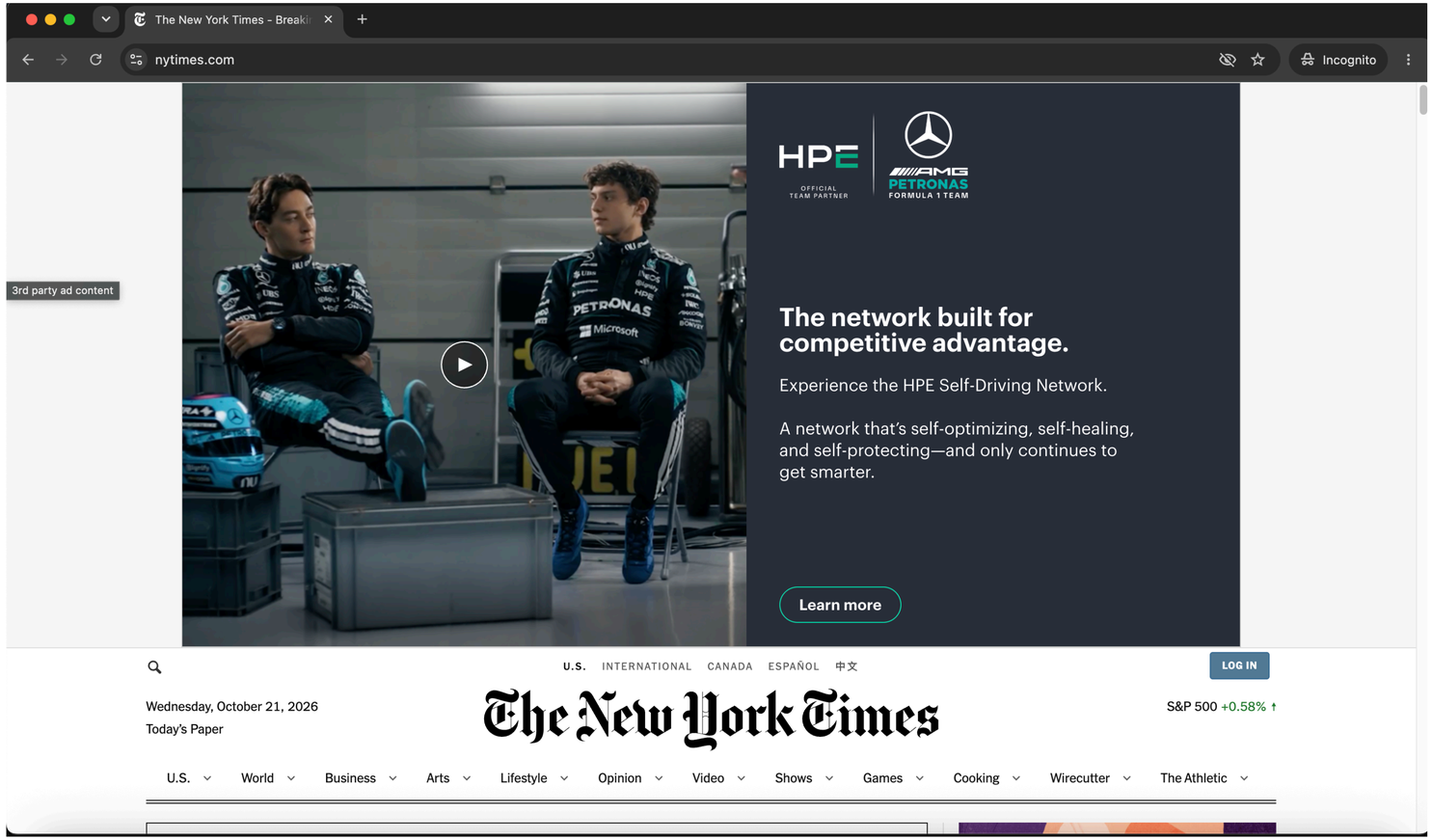
Today's lecture — Online Advertising, Part 2

Learning Objectives

- (190 only) Learn some ways that the ecosystem has had to adapt in response to fraud and abuse
- Understand the idea of an *auction*, how auctions are embedded in online advertising, and the distinction between a first-price and second-price auction
- Talk about privacy regulation that has emerged in response to the stateful tracking ecosystem and the new hell that it's spawned (cookie banners)
- Learn about influence + persuasion in design, as it relates to *dark patterns*

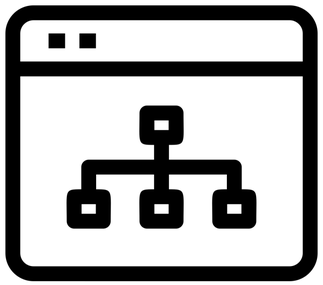
But first — a full, end to end ad

- Recall this advertisement that we talked about two lectures ago.
- Let’s go, step by step, to illuminating how **this ad** got placed on the front page of the New York Times — from the perspective of clients, servers, and protocols
  - **This will be without cookie syncing.**



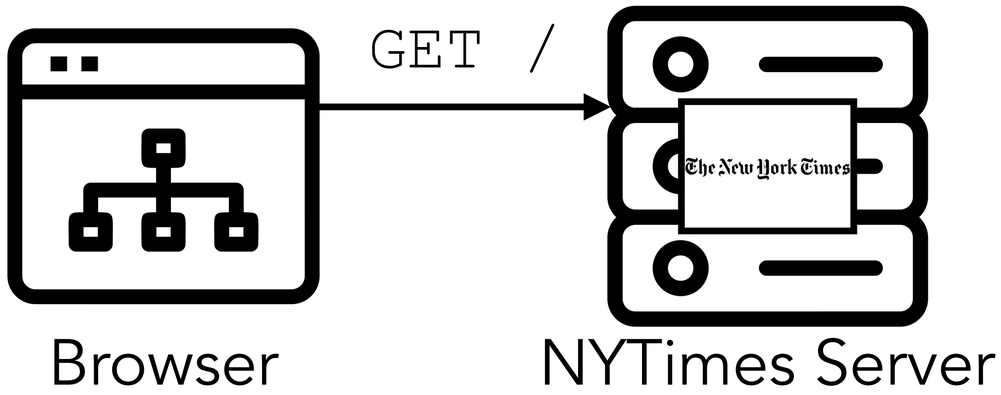
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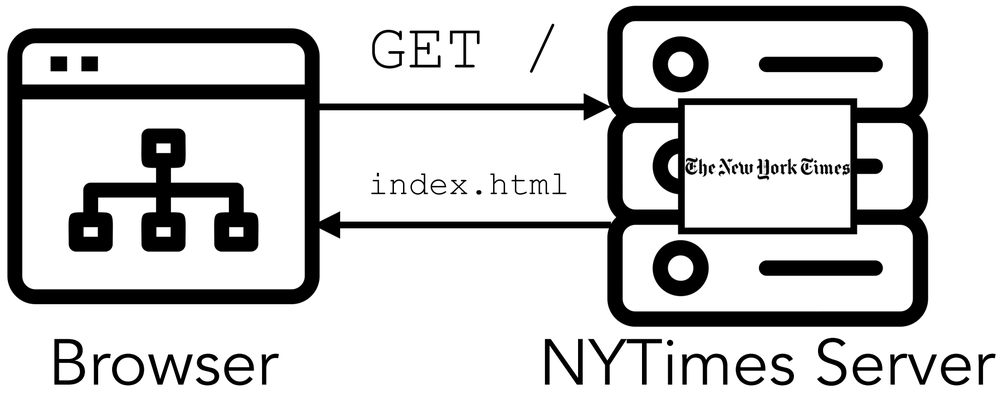


Browser

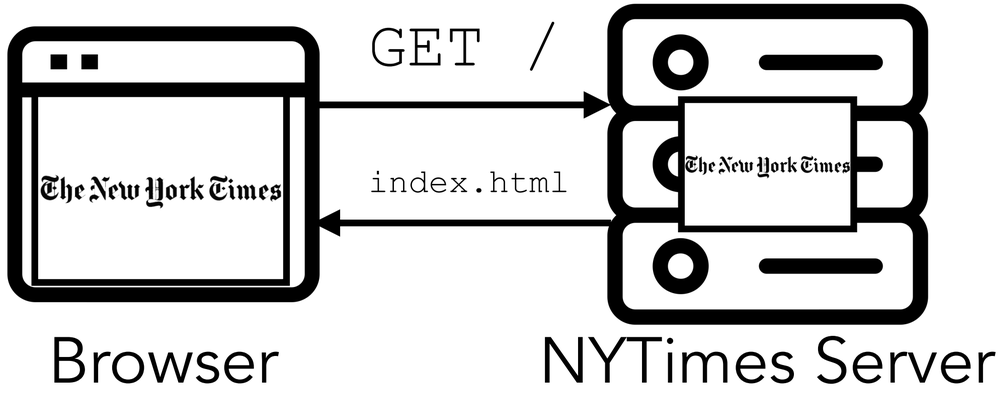
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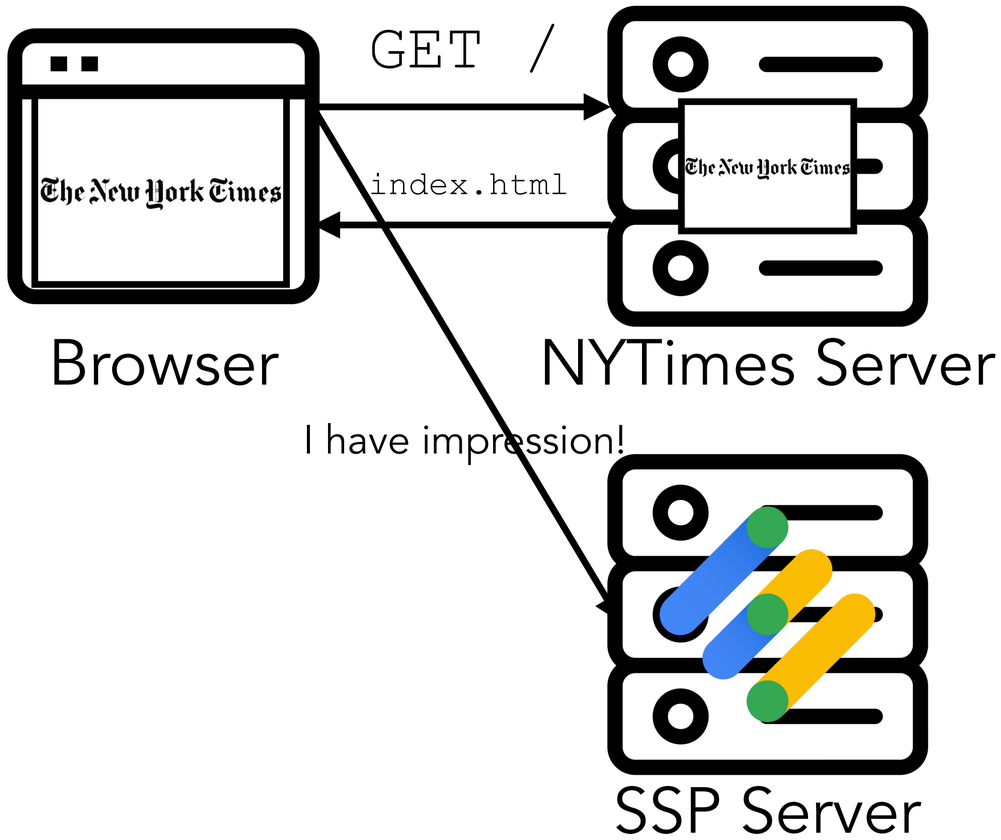
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Let’s say the next request is the ad request. Who makes it, and where does it go?

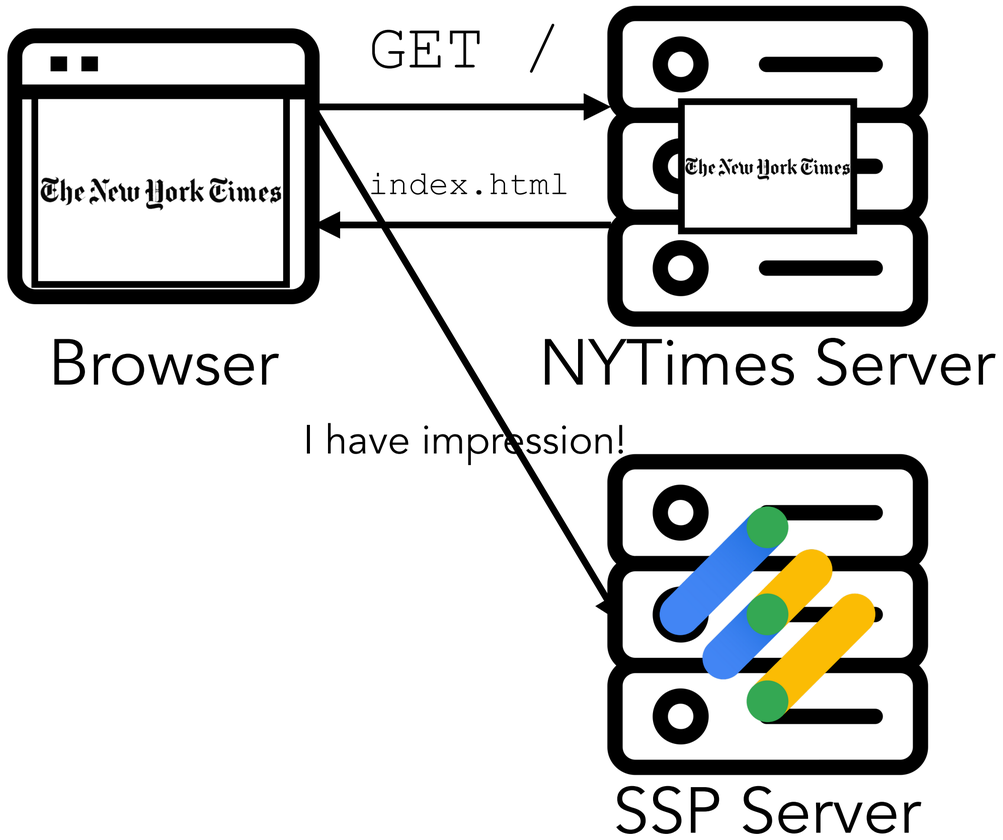


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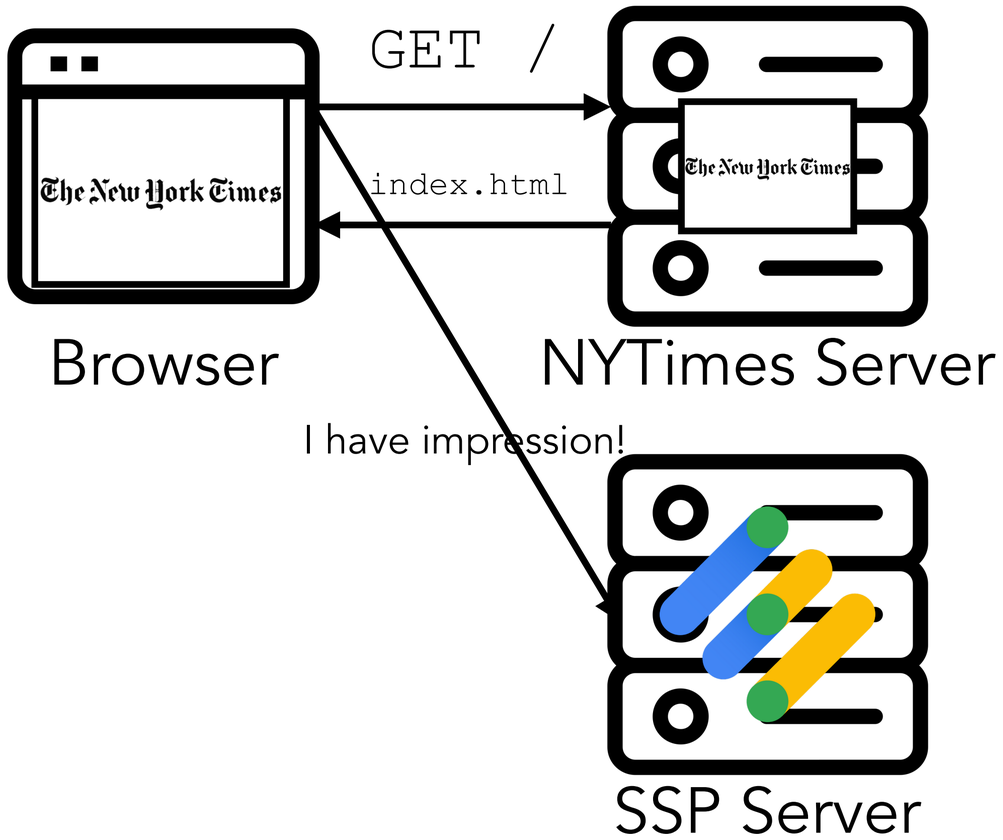
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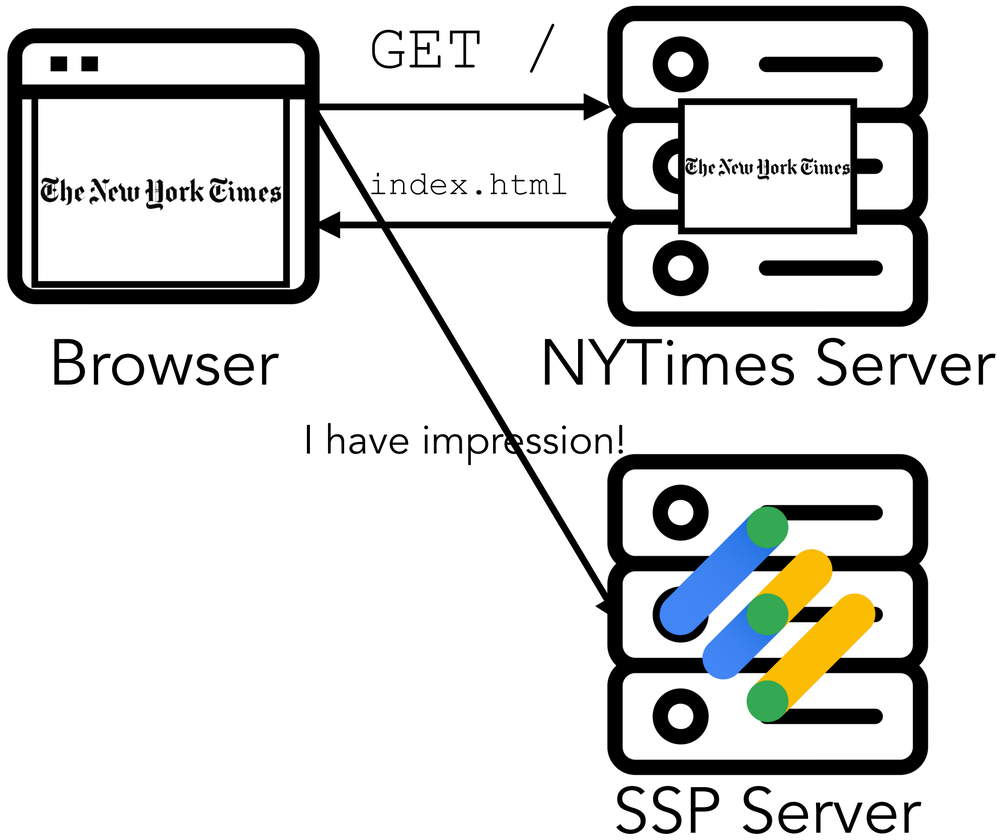
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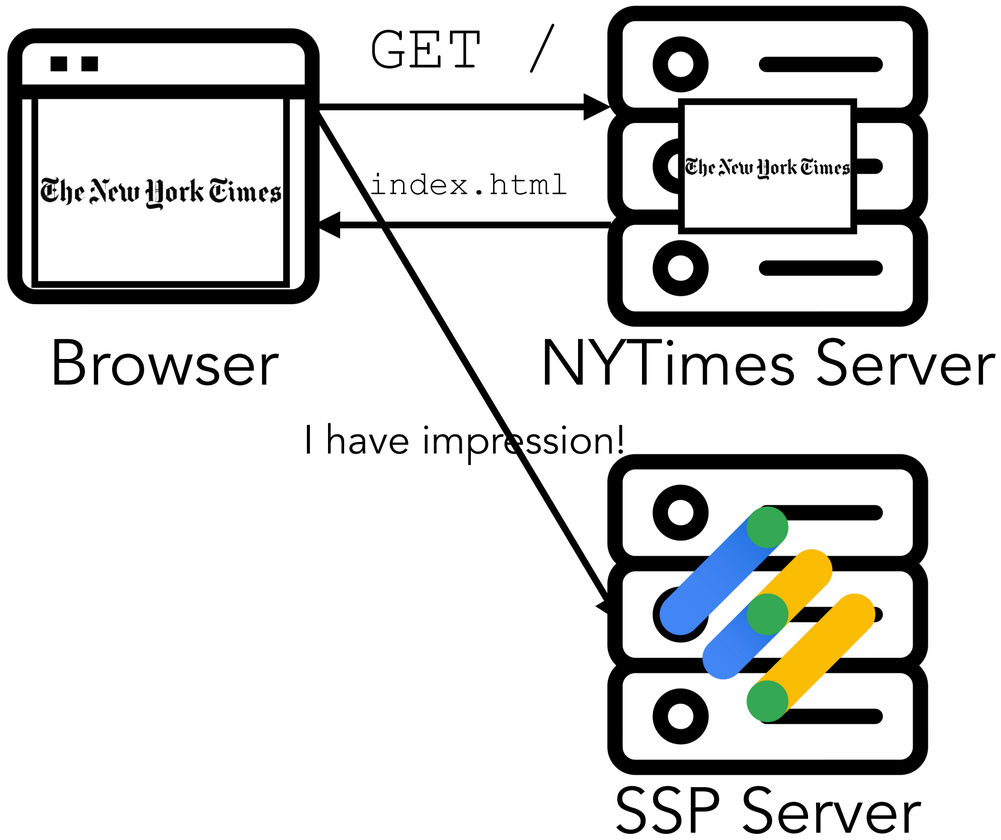
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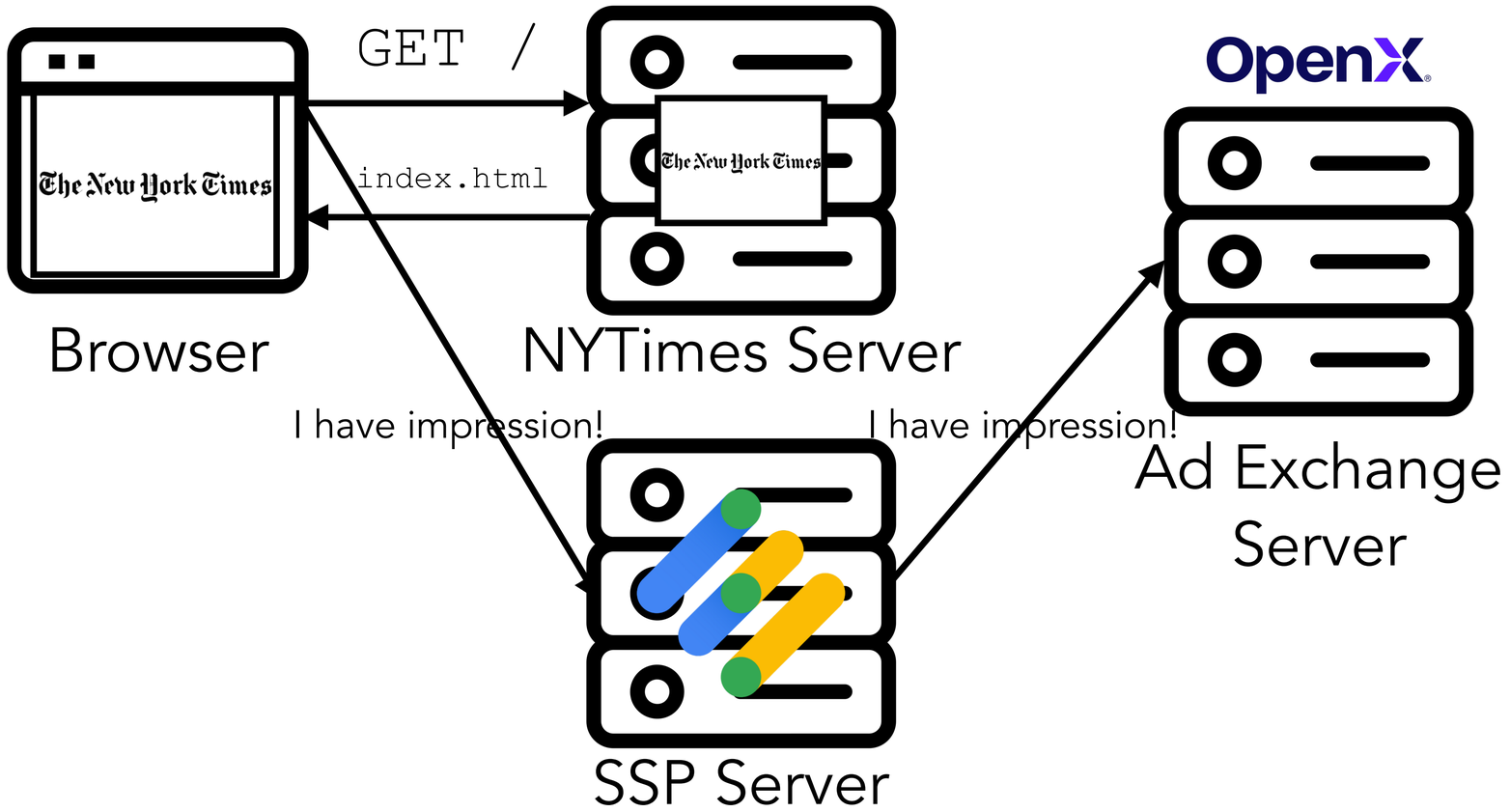
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  - Some JavaScript on the page was loaded that makes the request. Usually prebid.js. **Who put the JavaScript there?** NYTimes!
- What protocol is the browser using to talk to the SSP?
  - OpenRTB! (HTTP + JSON)

Where does the SSP go next? What does it send over?

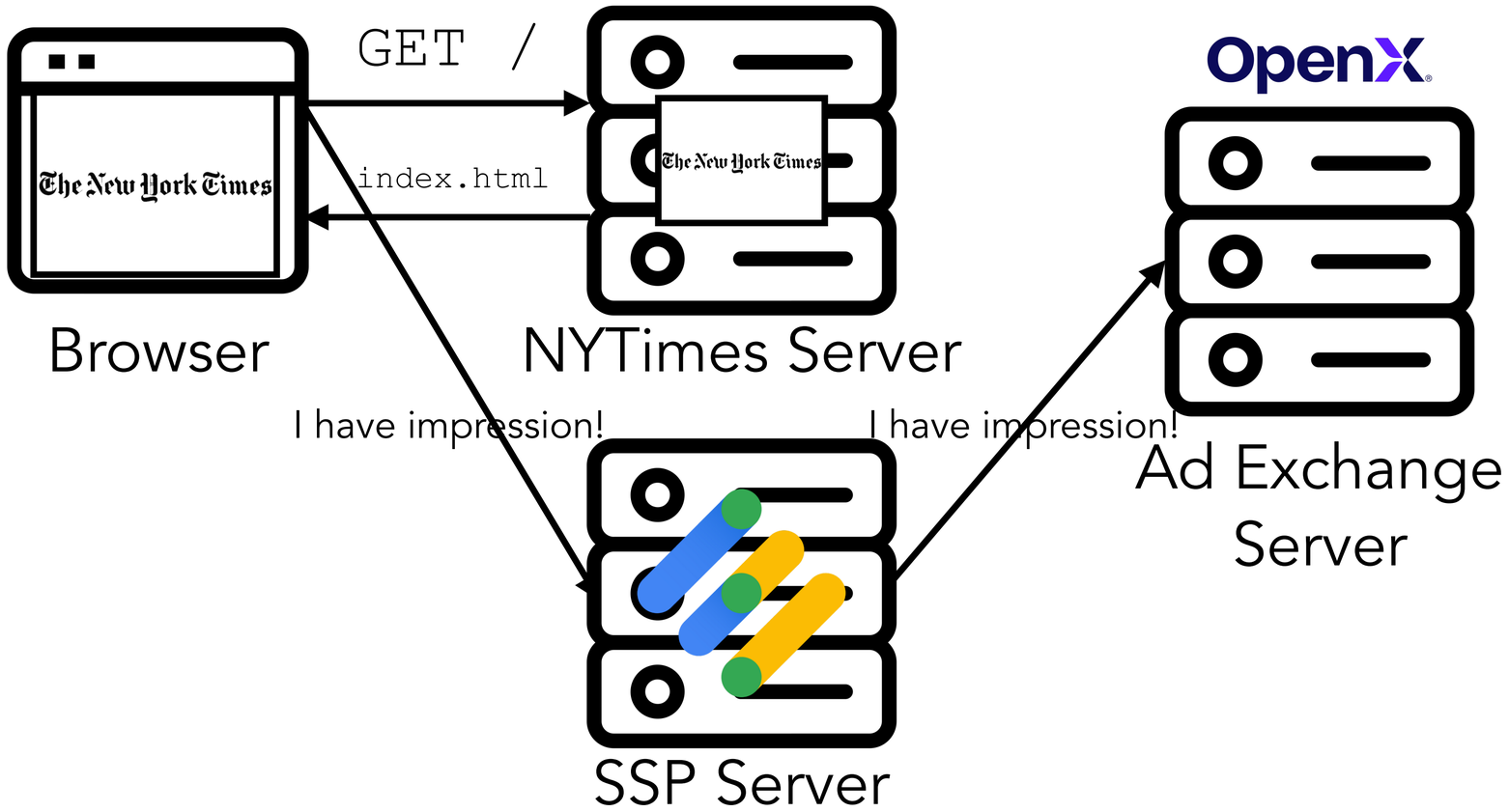


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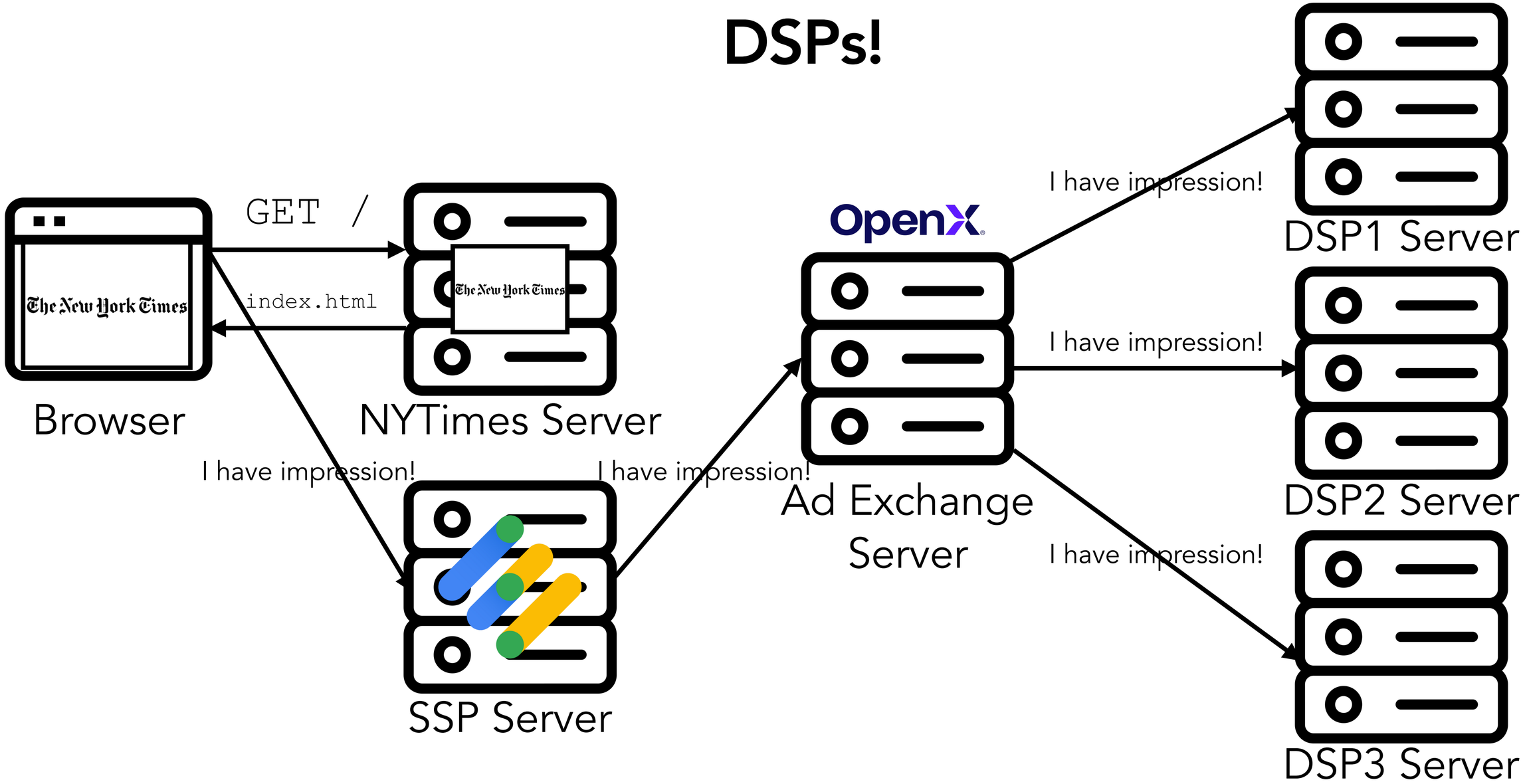
Ad exchange!



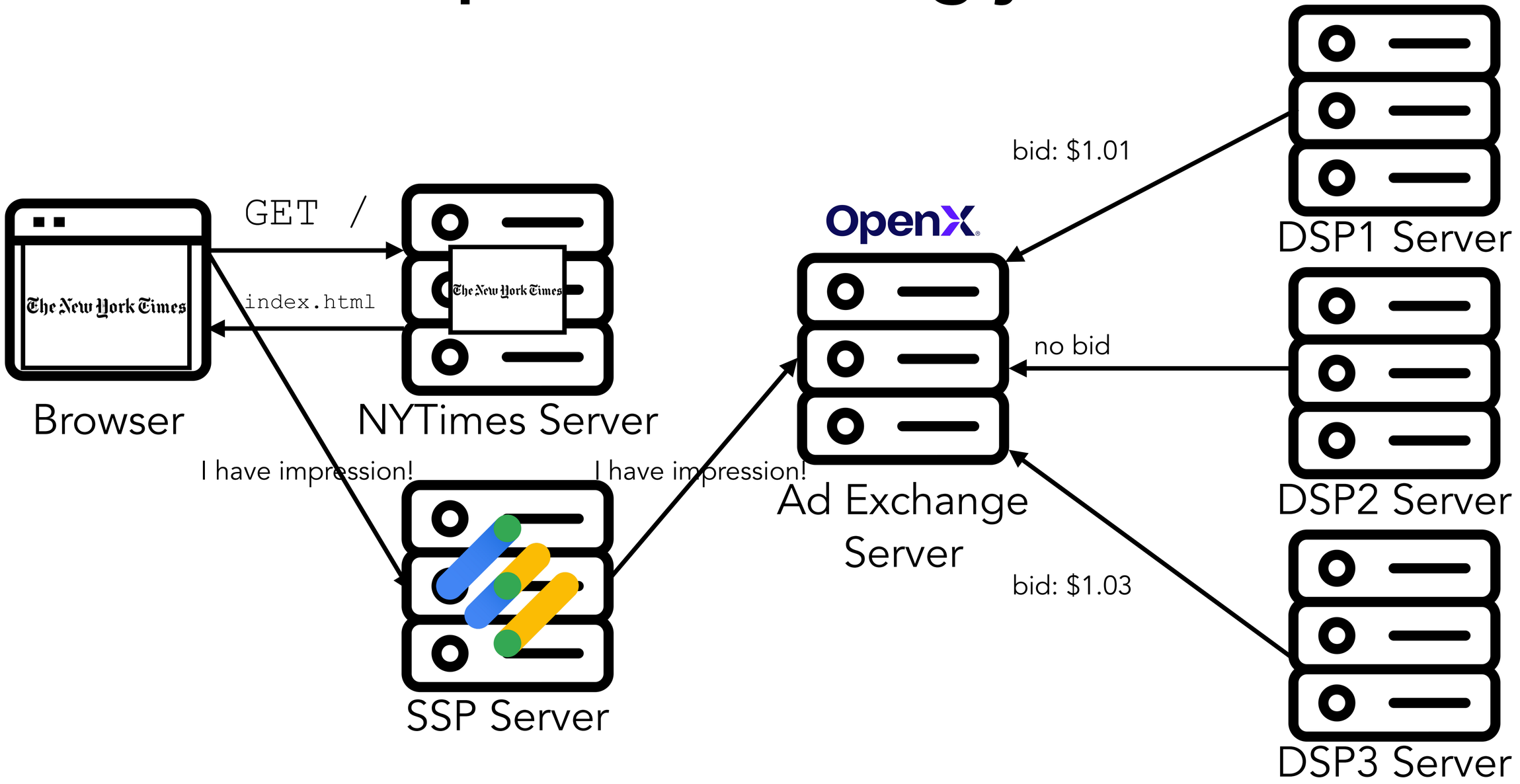
Where does the ad exchange go with the request?



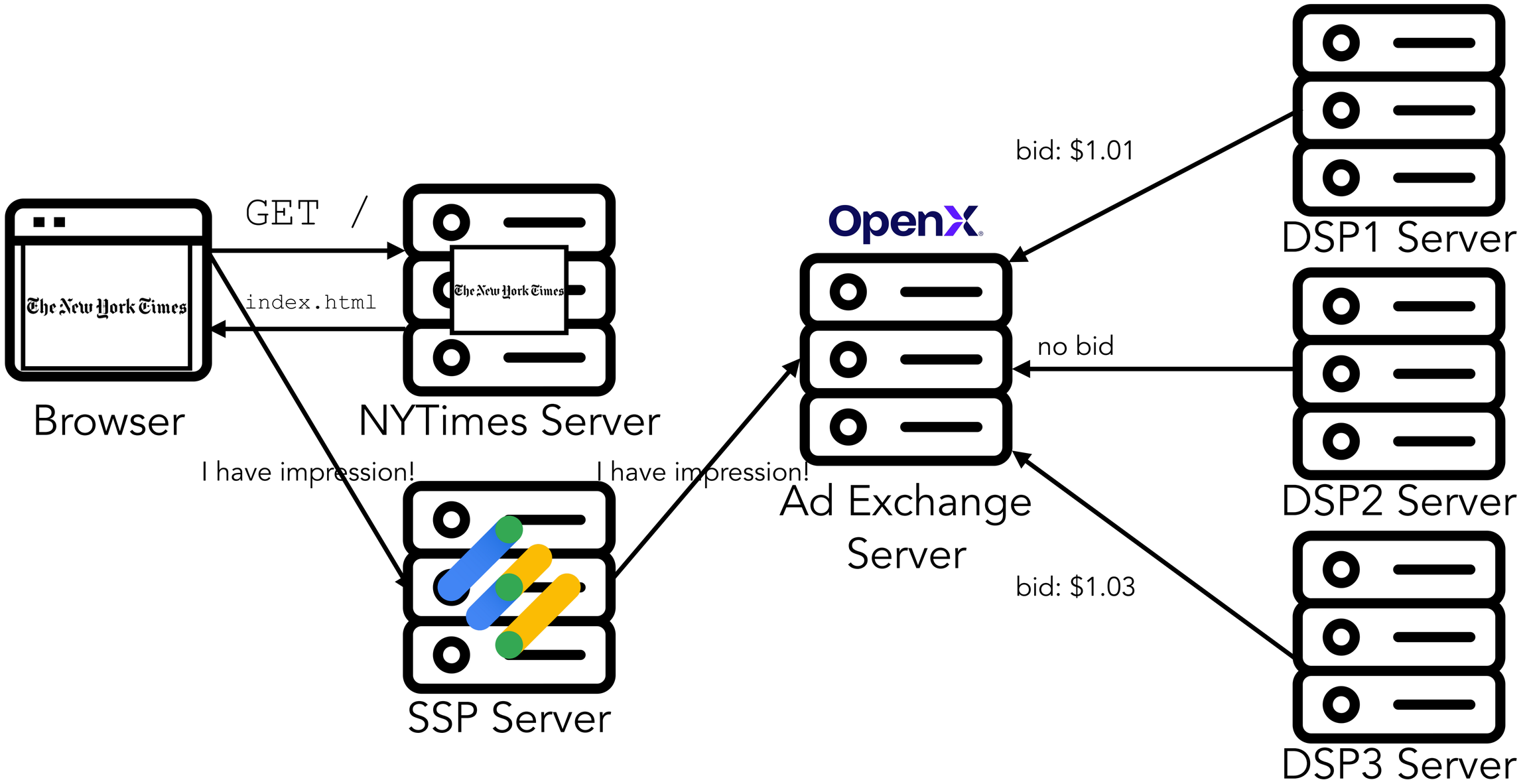
Where does the ad exchange go with the request? DSPs!



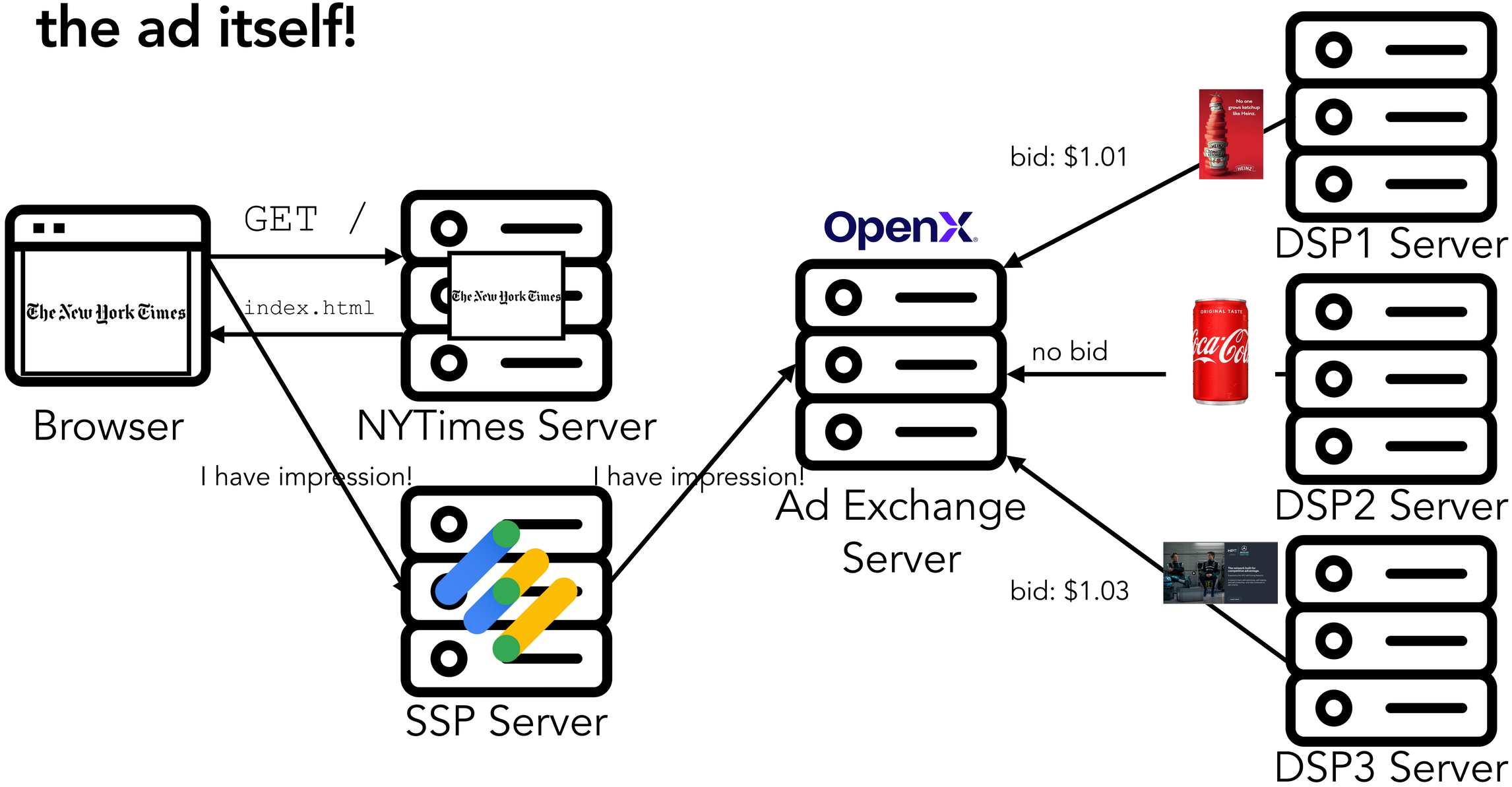
DSPs will respond accordingly…



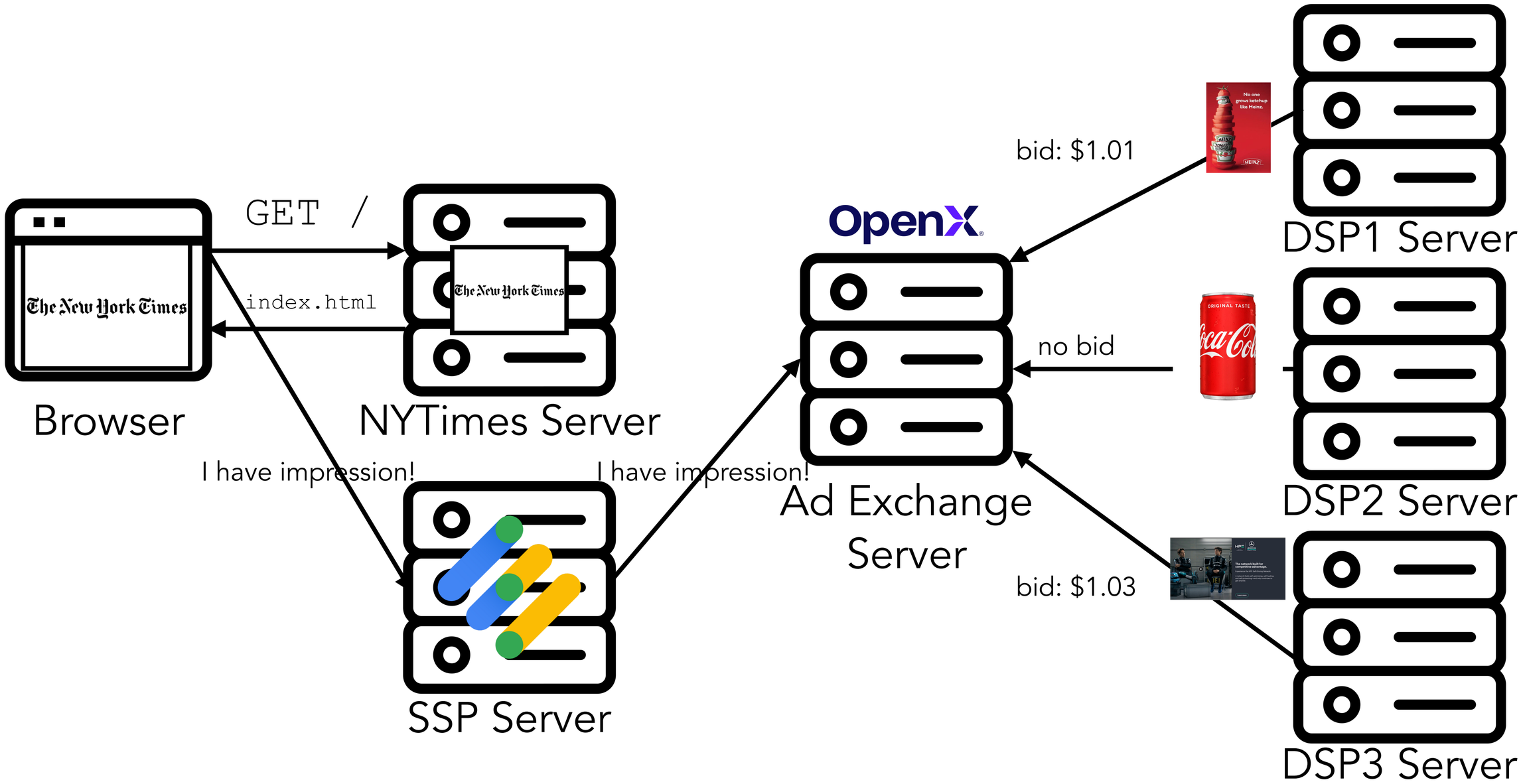
In addition to the bid, what else do DSPs send at this moment?



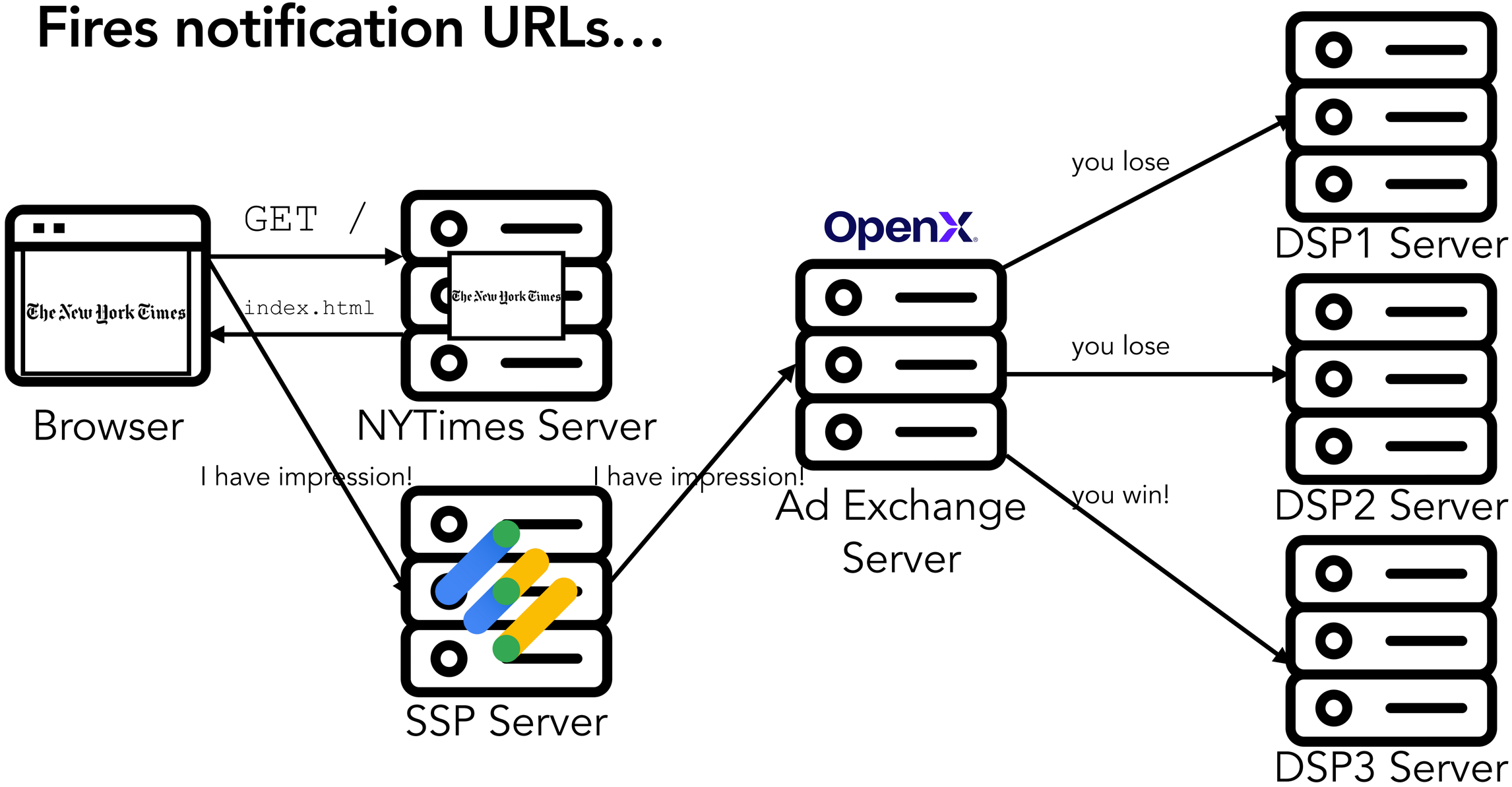
In addition to the bid, what else do DSPs send at this moment? the ad itself!



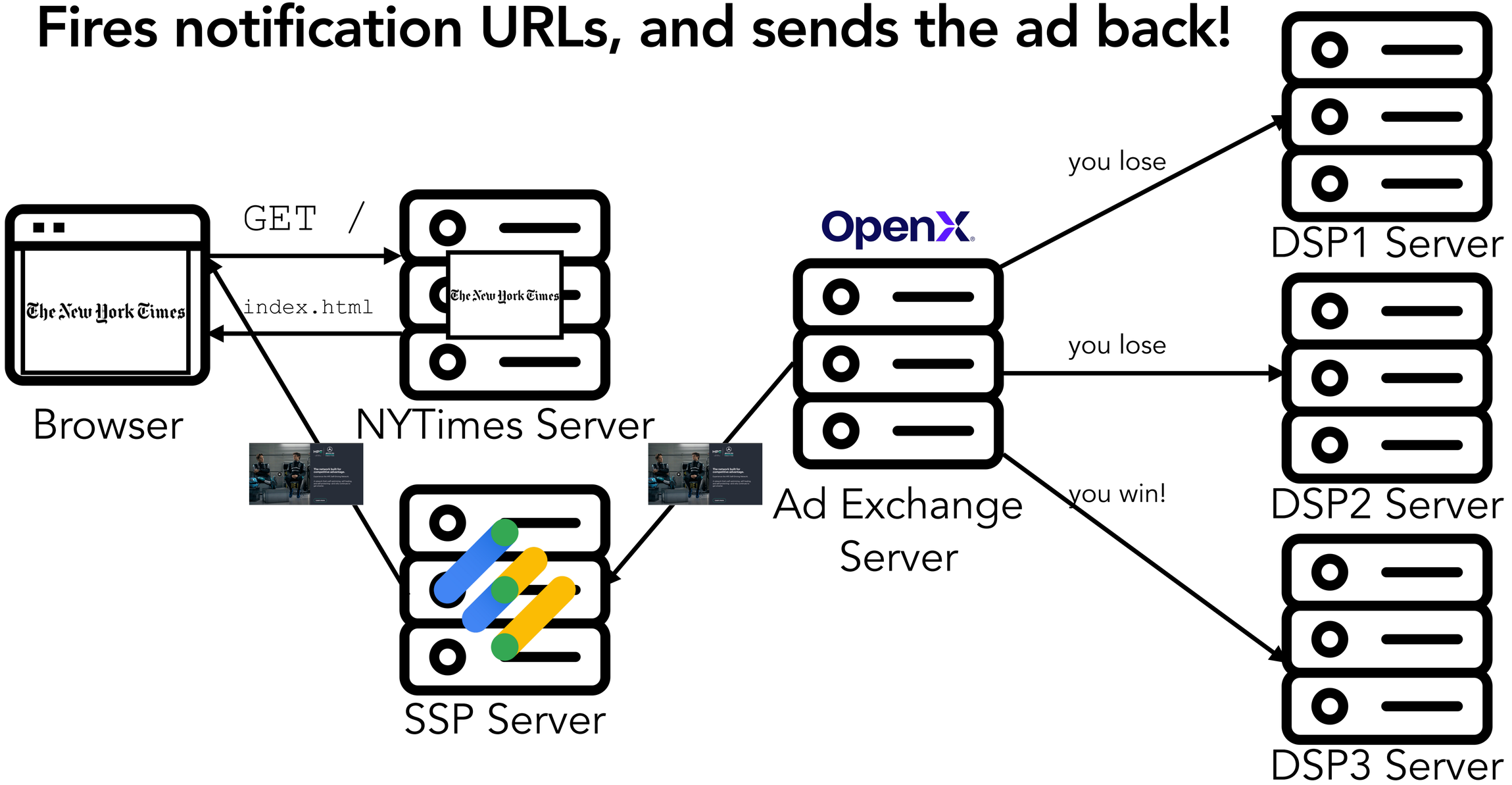
The ad exchanges chooses a winner, and then does what?



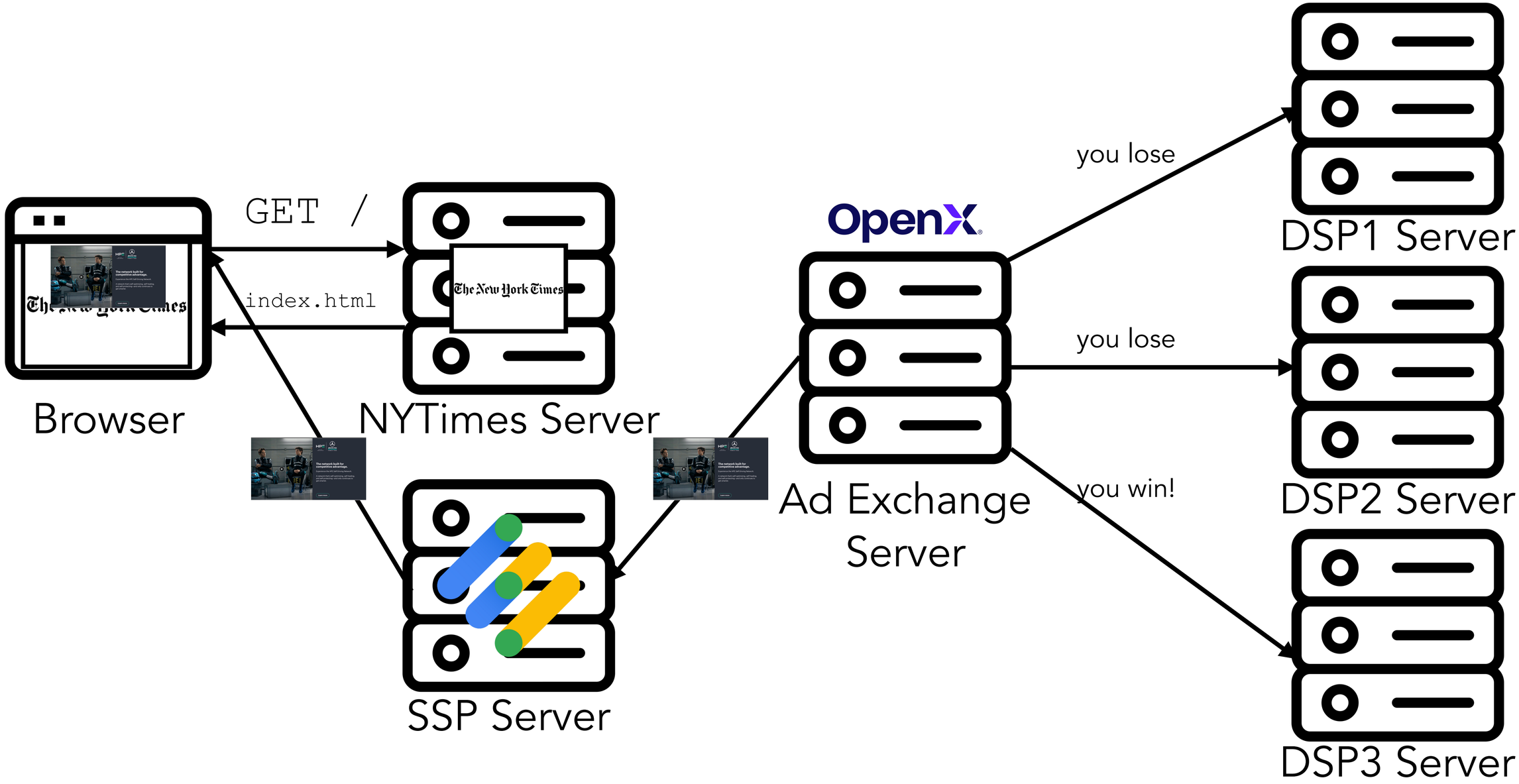
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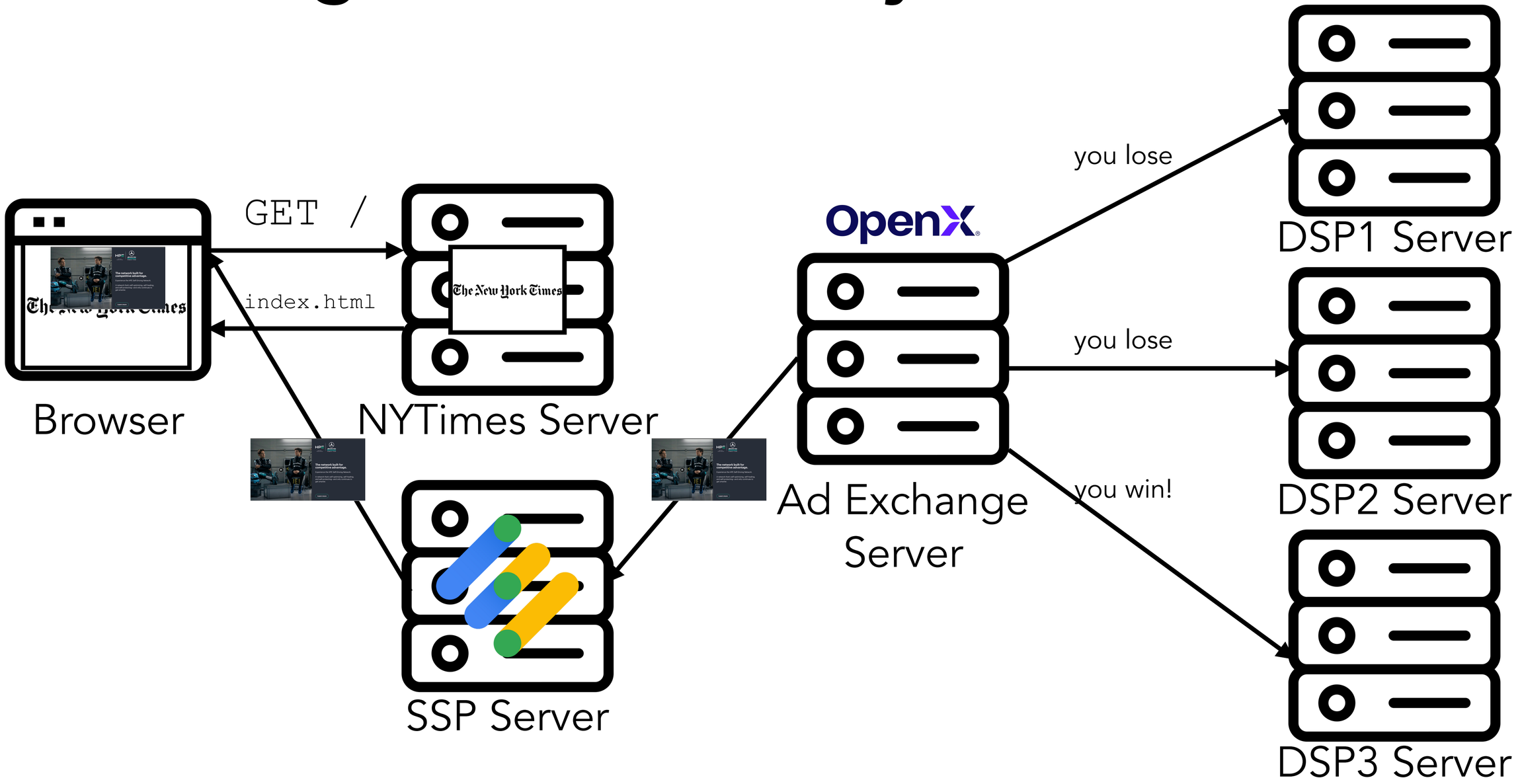
The ad exchanges chooses a winner, and then does what? Fires notification URLs, and sends the ad back!



Finally, the ad is displayed on the user's browser.

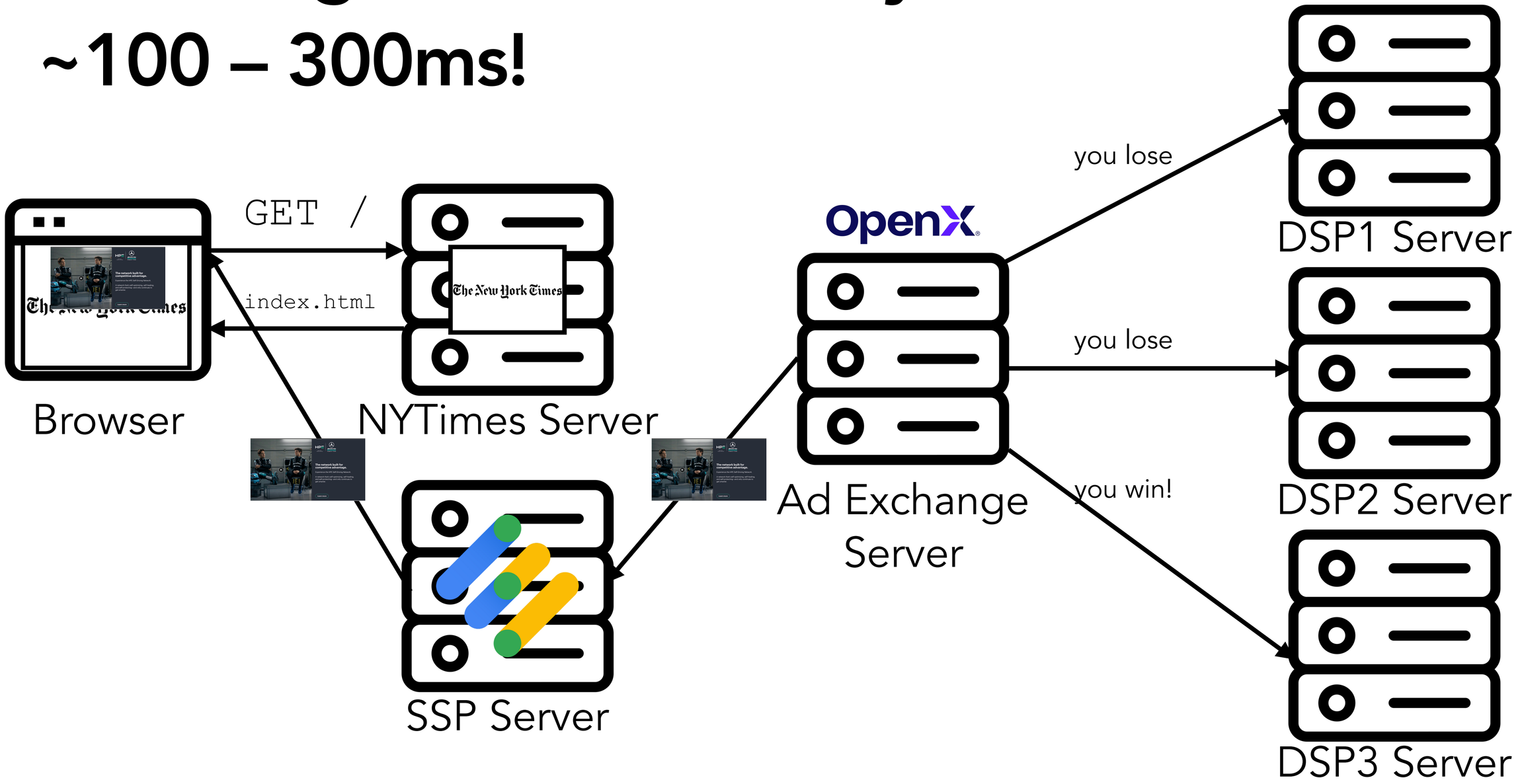


How long does this usually take?

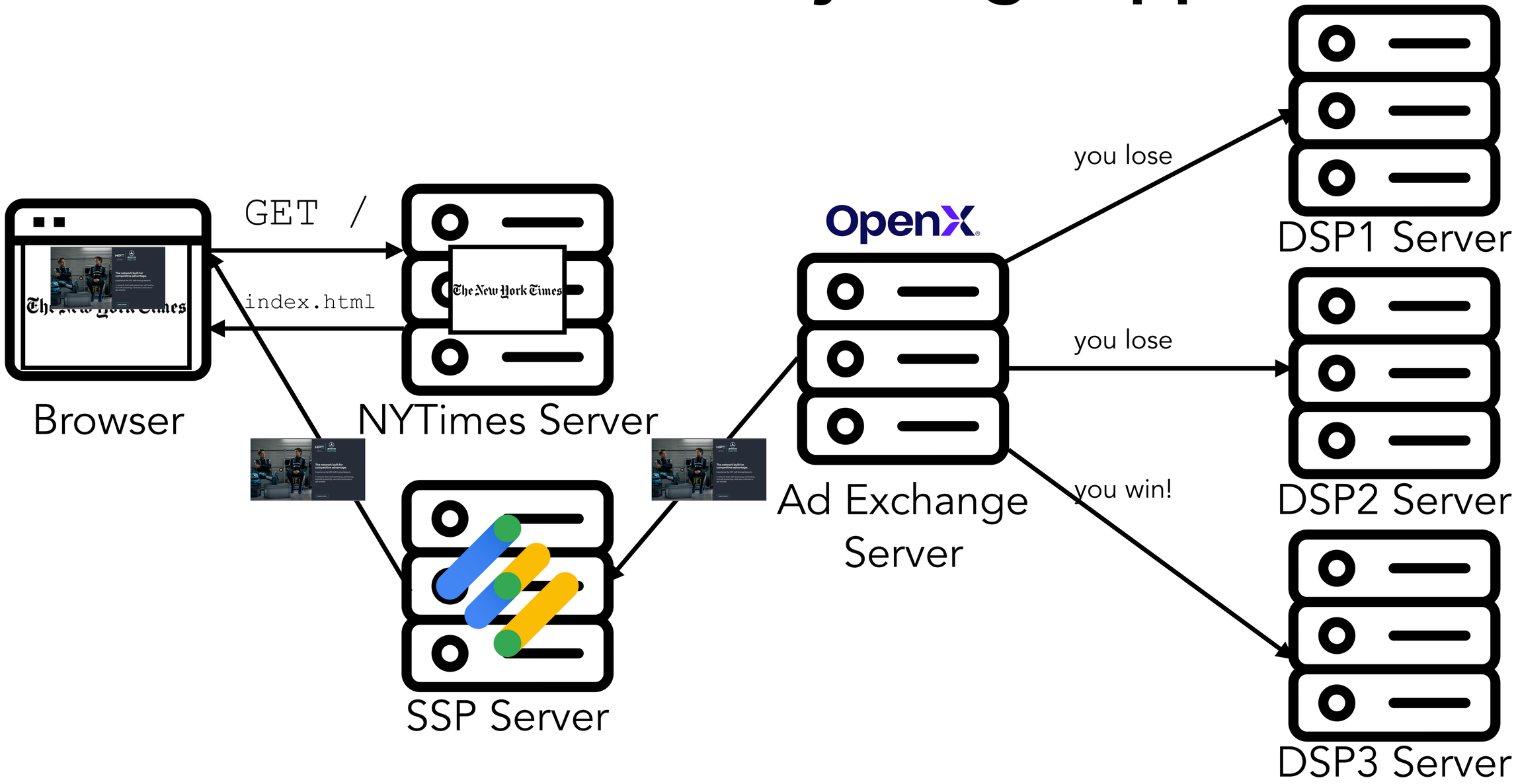


How long does this usually take?

~100 – 300ms!

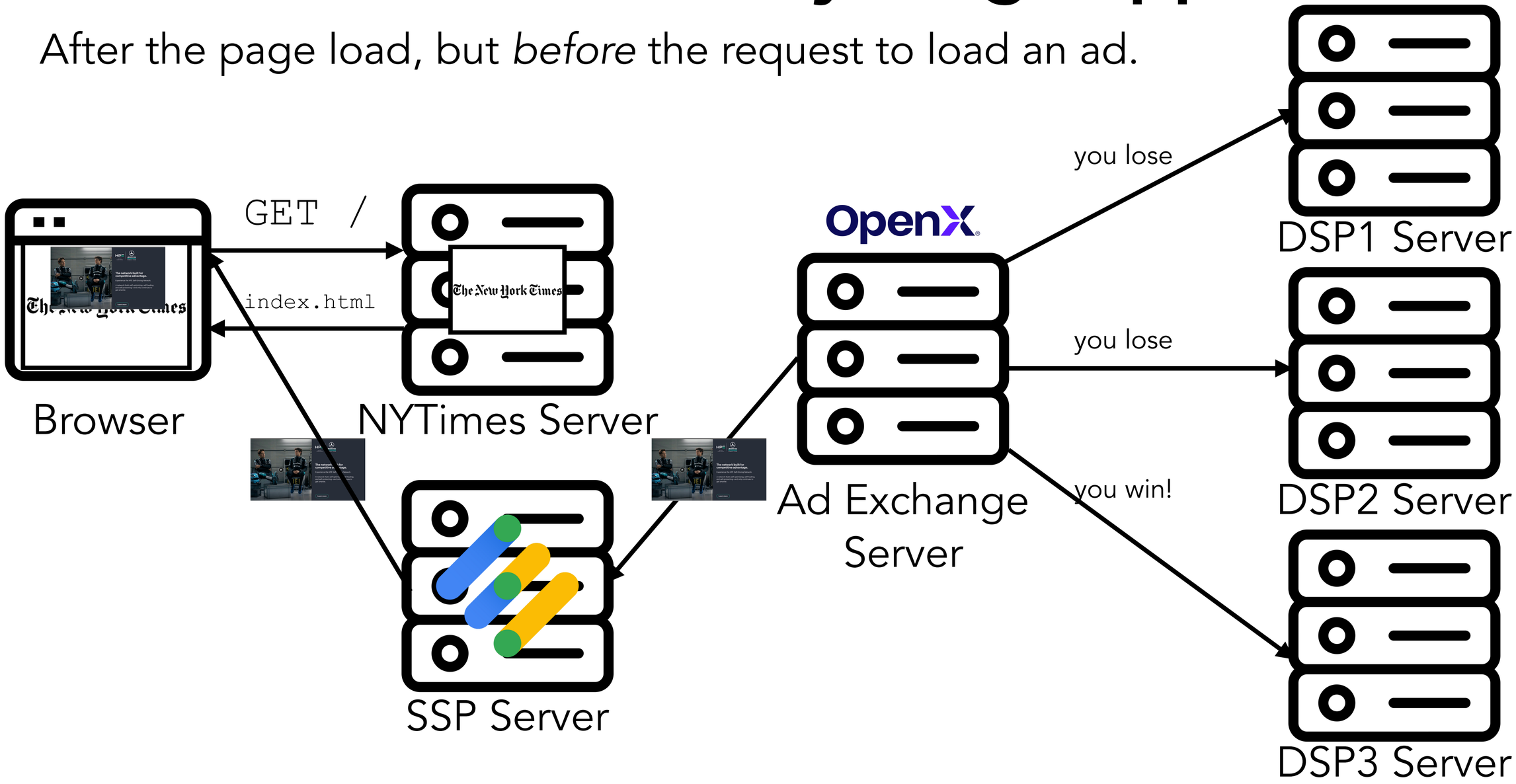


So, when does cookie syncing happen?



So, when does cookie syncing happen?

After the page load, but *before* the request to load an ad.



Re-imagining server-side bidding

- What we've been discussing so far is called *server-side bidding* — a client makes a single request, and gets back a single advertisement.

- With a group, take a few minutes and discuss: **what are some pros and cons of this approach?**

Re-imagining server-side bidding

- What we've been discussing so far is called *server-side bidding* — a client makes a single request, and gets back a single advertisement.
- With a group, take a few minutes and discuss: **what are some pros and cons of this approach? Could you do it another way?**
  - Pros
    - Client has to make just one request and get one bid back, simplifies logic
    - You can reasonably scale up to an infinite number of bidders without any additional logic
  - Cons
    - You don't see the bids (you are trusting the SSP / Exchange a lot)
    - If SSP-level cookie syncing breaks, you don't make the most money

Client-side bidding

The browser asks each exchange for a bid itself.



NYTimes Server

Browser

OpenX

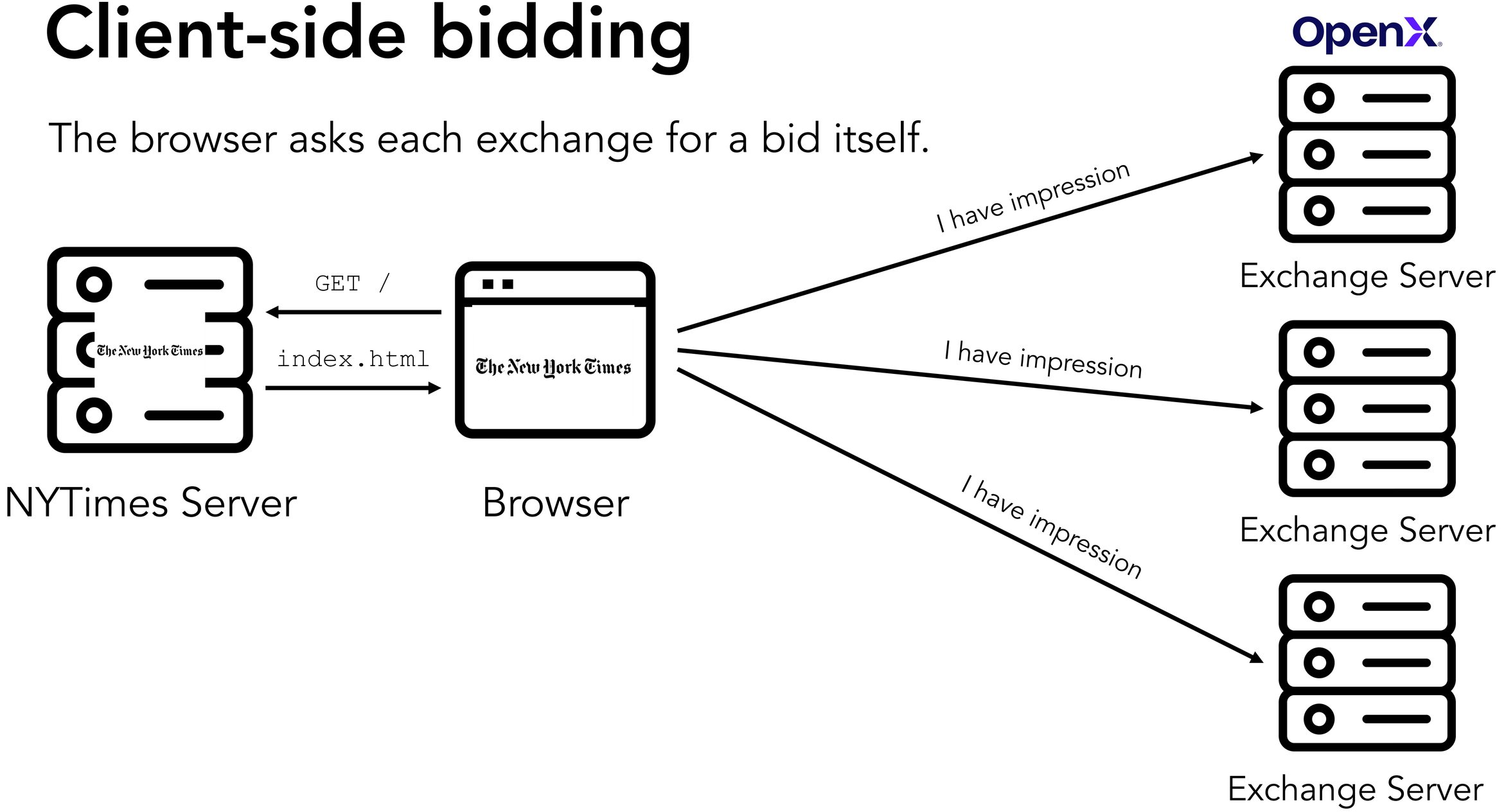
Exchange Server

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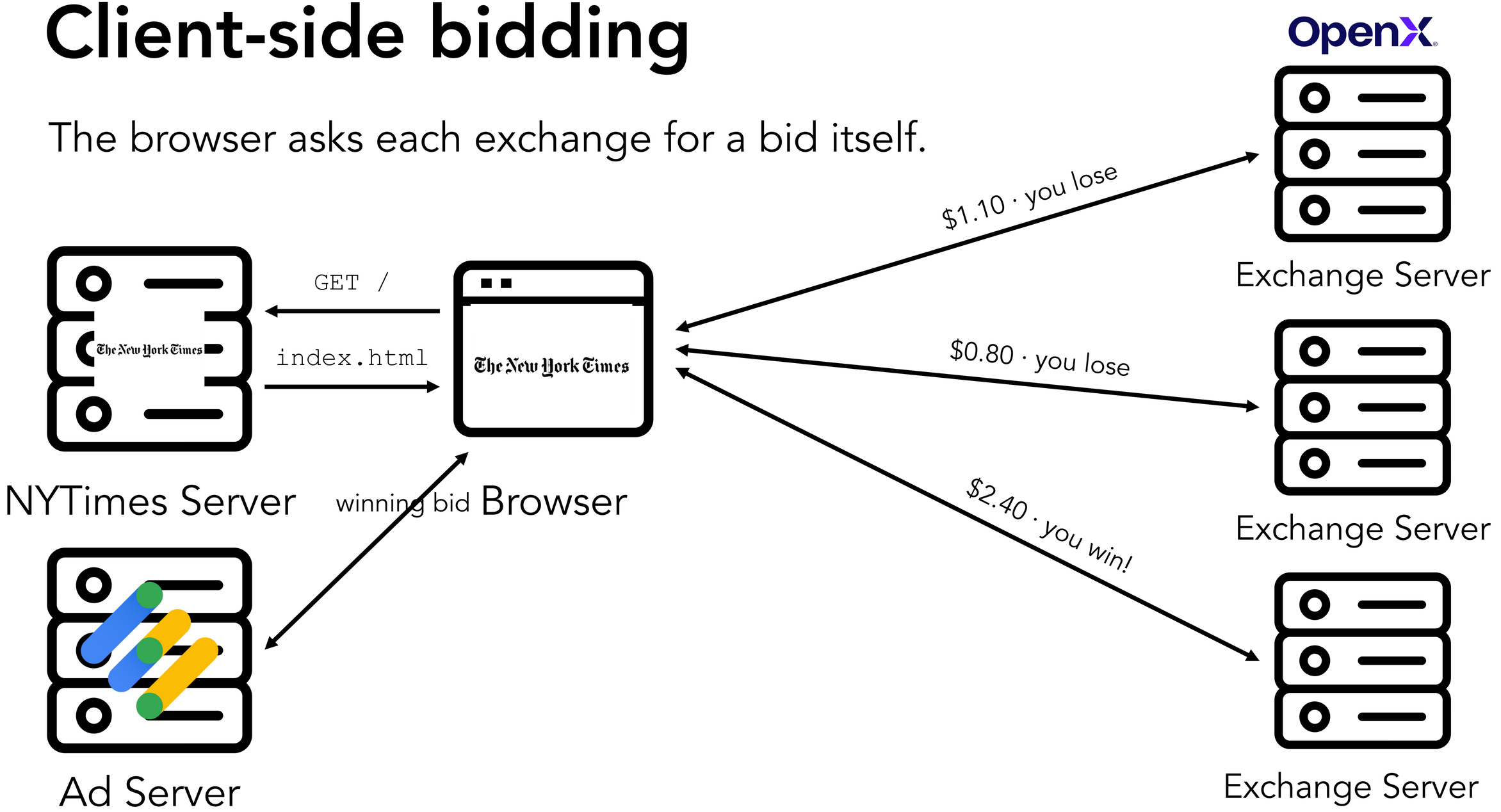
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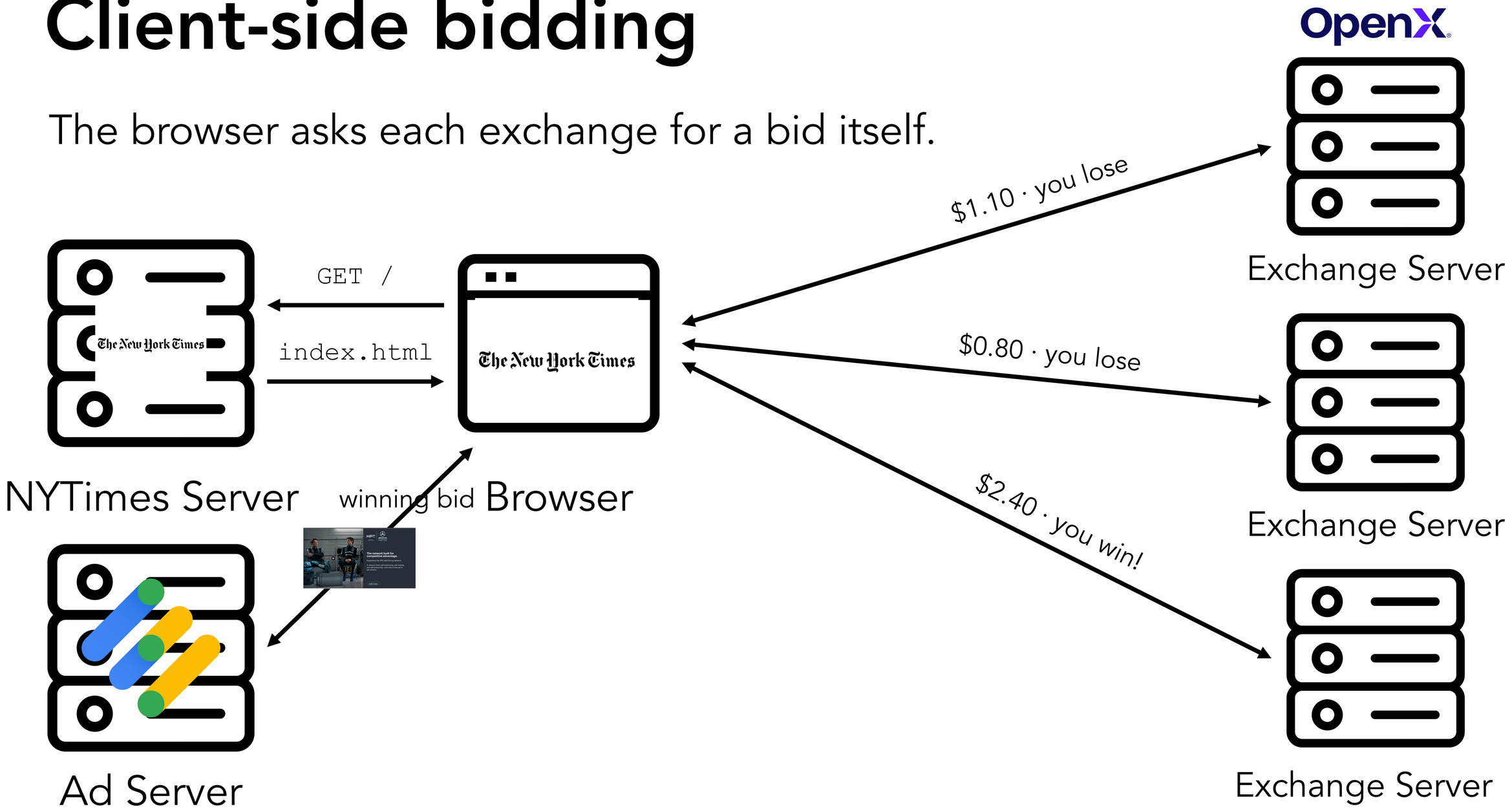
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Client-side bidding

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Pros / Cons of Client-Side Bidding

- Pros
  - Clients get transparency — they see every bid and it flows through the browser
  - Cookies flow to each exchange easily (if third-party cookies are turned on)
- Cons
  - Huge latency problems with lots of bids, which means you have to max out at ~5 – 10 bidders
  - Page might take a bit longer to load the advertisement

Fraud

Thought experiment

- Let's say a DSP receives an OpenRTB request for a spot on the Financial Times (ft.com).
    - How does the DSP know this is a *real* bid?

Thought experiment

- Let's say a DSP receives an OpenRTB request for a spot on the Financial Times (ft.com).
  - How does the DSP know this is a *real* bid? **By default, they don't!**



FT warns advertisers after identifying jaw-dropping levels of domain spoofing

Ad Fraud, Financial Times, IAB News

Thursday, September 28th, 2017 Author: **Tyrone Stewart** Share this article:

About $1.35M in fraudulent advertising billing was clocked per month.

What do we do about it? `ads.txt`

- Publishers can designate **verified sellers** by putting a TXT file up on their page called **`ads.txt`**
- Basically designates **which SSPs** (and exchanges) can offer their inventory for real
  - Example on the right is nytimes.com/ads.txt
- When does a DSP fetch `ads.txt`?

```
OWNERDOMAIN=nytimes.com
amazon-adsystem.com, 3030, DIRECT
google.com, pub-4177862836555934, DIRECT
google.com, pub-9542126426993714, DIRECT
indexexchange.com, 184733, DIRECT
liveintent.com, 130, DIRECT
openx.com, 537145107, DIRECT
openx.com, 539936340, DIRECT
openx.com, 539052954, DIRECT
openx.com, 544071378, DIRECT, 6a698e2ec38604c6
rubiconproject.com, 12330, DIRECT
rubiconproject.com, 17470, DIRECT
triplelift.com, 746, DIRECT
pubmatic.com, 158573, DIRECT, 5d62403b186f2ace
pubmatic.com, 158945, DIRECT, 5d62403b186f2ace
pubmatic.com, 163427, DIRECT, 5d62403b186f2ace
media.net, 8CU2553YN, DIRECT
media.net, 8CU83M88N, DIRECT
Media.net, 8CU4XCJ1B, DIRECT #OB
yahoo.com, 55861, DIRECT, e1a5b5b6e3255540
google.com, pub-1793726897772453, DIRECT, f08c47fec0942fa0
aps.amazon.com, 3030, DIRECT
indexexchange.com, 196165, DIRECT, 50b1c356f2c5c8fc
indexexchange.com, 205938, DIRECT, 50b1c356f2c5c8fc
adswizz.com, nytimes, DIRECT
triplelift.com, 746-EB, DIRECT, 6c33edb13117fd86
liveintent.com, 74445, DIRECT
themediagrid.com, B7HPLK, DIRECT, 9fac4a4a87c2a44f
adswizz.com, 463, DIRECT
connatix.com, 2013252542147178, DIRECT, 2af98acdee0e81ed
kargo.com, 9123, DIRECT
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  - **Not** during the bid (too slow!)

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amazon-adsystem.com, 3030, DIRECT
google.com, pub-4177862836555934, DIRECT
google.com, pub-9542126426993714, DIRECT
indexexchange.com, 184733, DIRECT
liveintent.com, 130, DIRECT
openx.com, 537145107, DIRECT
openx.com, 539936340, DIRECT
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openx.com, 544071378, DIRECT, 6a698e2ec38604c6
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media.net, 8CU2553YN, DIRECT
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indexexchange.com, 196165, DIRECT, 50b1c356f2c5c8fc
indexexchange.com, 205938, DIRECT, 50b1c356f2c5c8fc
adswizz.com, nytimes, DIRECT
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adswizz.com, 463, DIRECT
connatix.com, 2013252542147178, DIRECT, 2af98acdee0e81ed
kargo.com, 9123, DIRECT
```

It’s actually even more complicated…

- Sellers can *chain*
  - Exchanges can pass things to other exchanges which can pass to DSPs… oh my
- OpenRTB allows including this information in what’s called a `sellers.json` object — helps the DSP know if:
  - The request is valid inventory
  - What path the inventory came from
- **DSPs use all these signals, and more, to try and generate a bid response in < 50ms. Why?**


ALL I DO IS
WIN

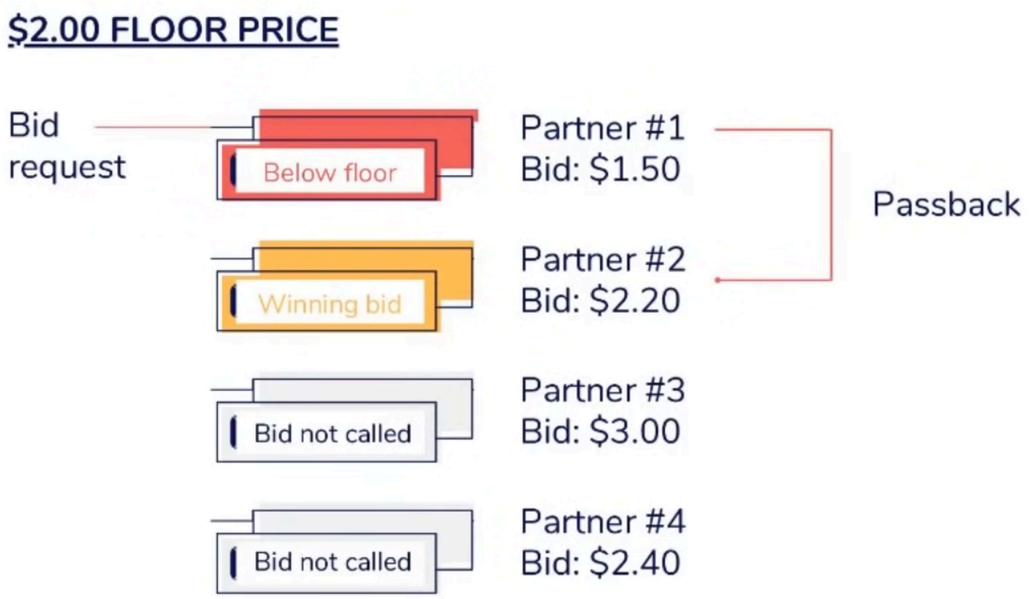
Real-time auctions

Bidding for ad spots

- **Real-time bidding** is an auction process that is kicked off when a publisher tells an advertising network that they have an open ad-spot with certain properties
- Two most widely used methods of auctioning
  - Waterfall bidding (old)
  - Header bidding (today's standard)

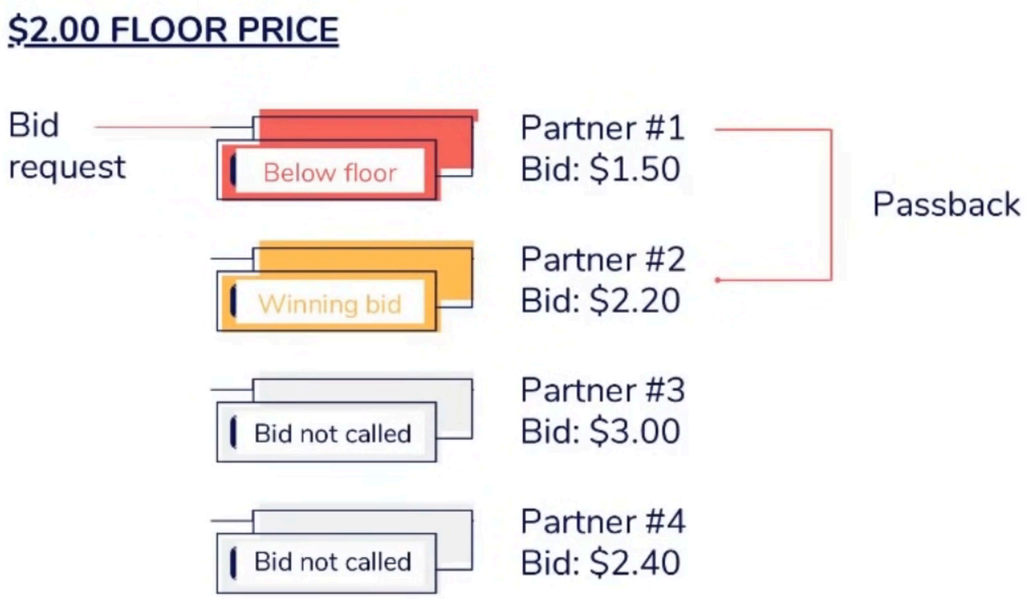
Waterfall Bidding

- Publishers pre-define a hierarchy of advertising networks (e.g., in a waterfall) for any spot
- Publishers set a floor that they need for the ad spot
  - The first network to fulfill the floor wins the spot



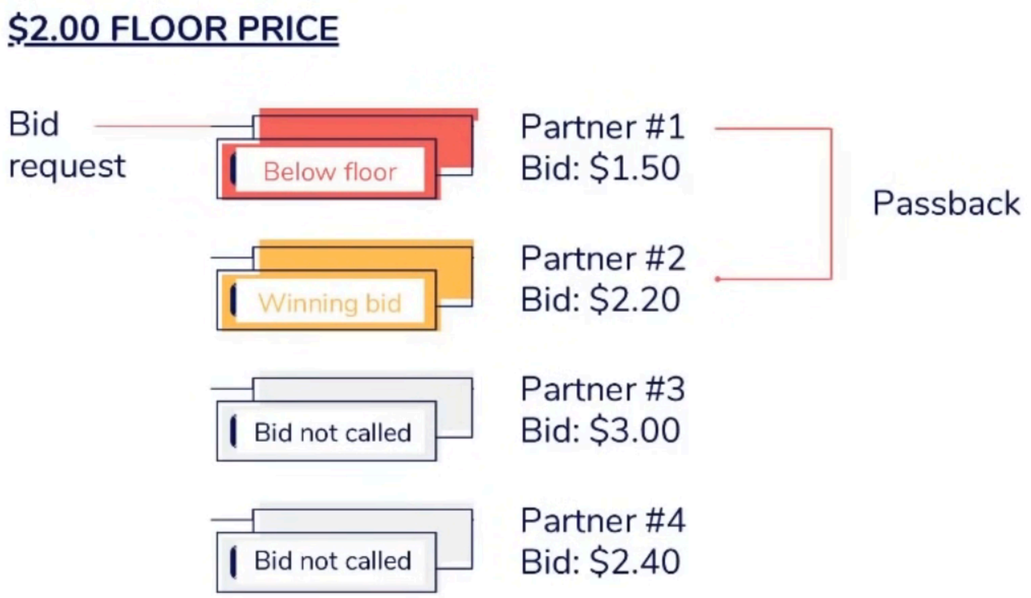
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Waterfall Bidding

- Publishers pre-define a hierarchy of advertising networks (e.g., in a waterfall) for any spot
- Publishers set a floor that they need for the ad spot
  - The first network to fulfill the floor wins the spot
- What problems might you see with waterfall bidding?
  - Slow (computation is serial)
  - Anti-competitive!
    - Google has both an SSP and a DSP, which often meant they got first pick at ad spots



Header Bidding

- Every DSP is offered an opportunity to bid at the *same time*
  - Why is this a good thing for competitiveness?

Header Bidding

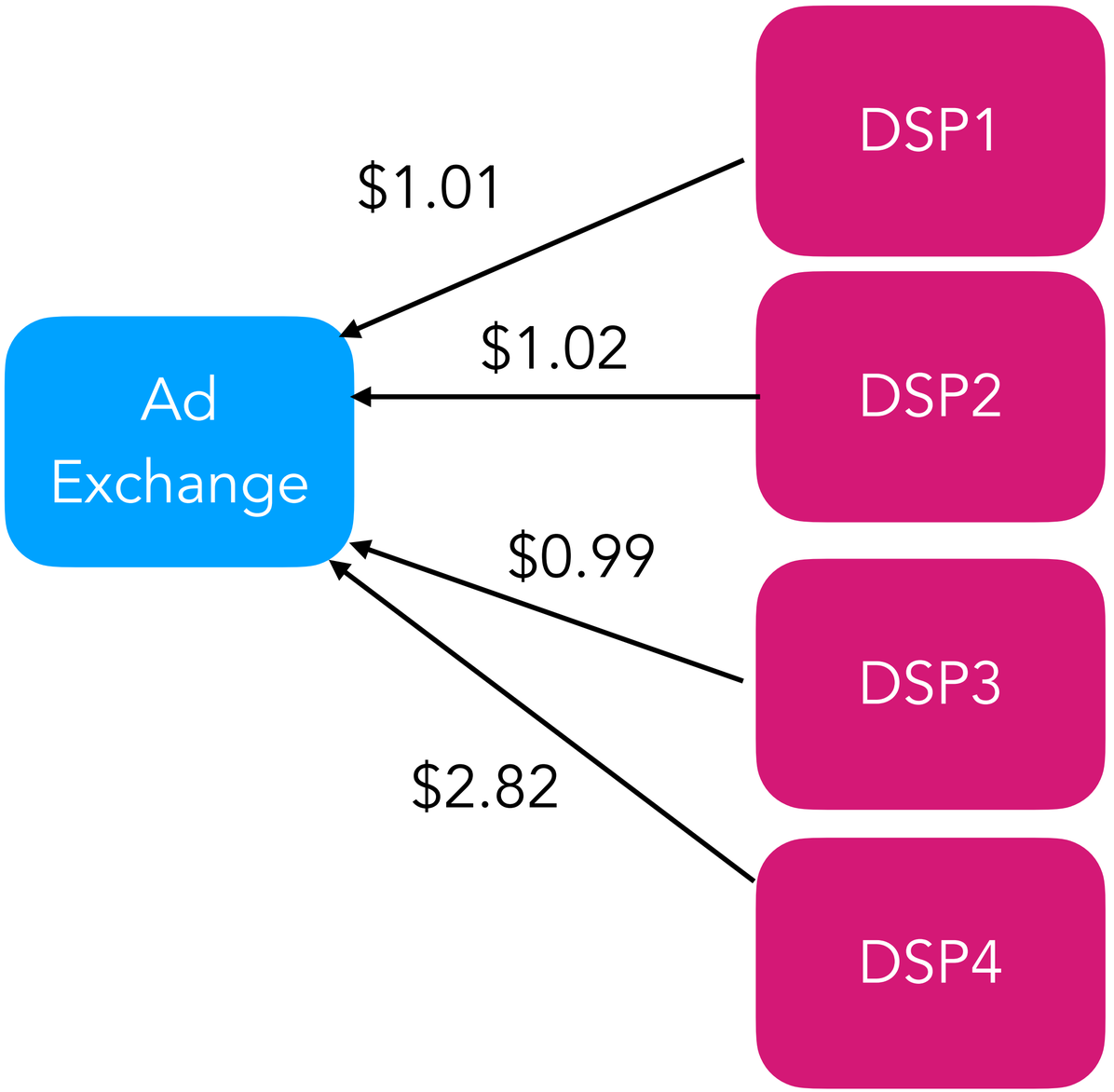
- Every DSP is offered an opportunity to bid at the *same time*
  - Why is this a good thing for competitiveness?
  - DSPs are incentivized to provide their true value for the advertising spot (theoretically)
- Two types of auctions you'll see in online advertising markets
  - Second-price auctions (Vickrey)
  - First-price auction

Second-Price Auction

- In a second-price auction, the **highest bidder** wins the auction, but only pays **the second-highest bid price** (+0.01)

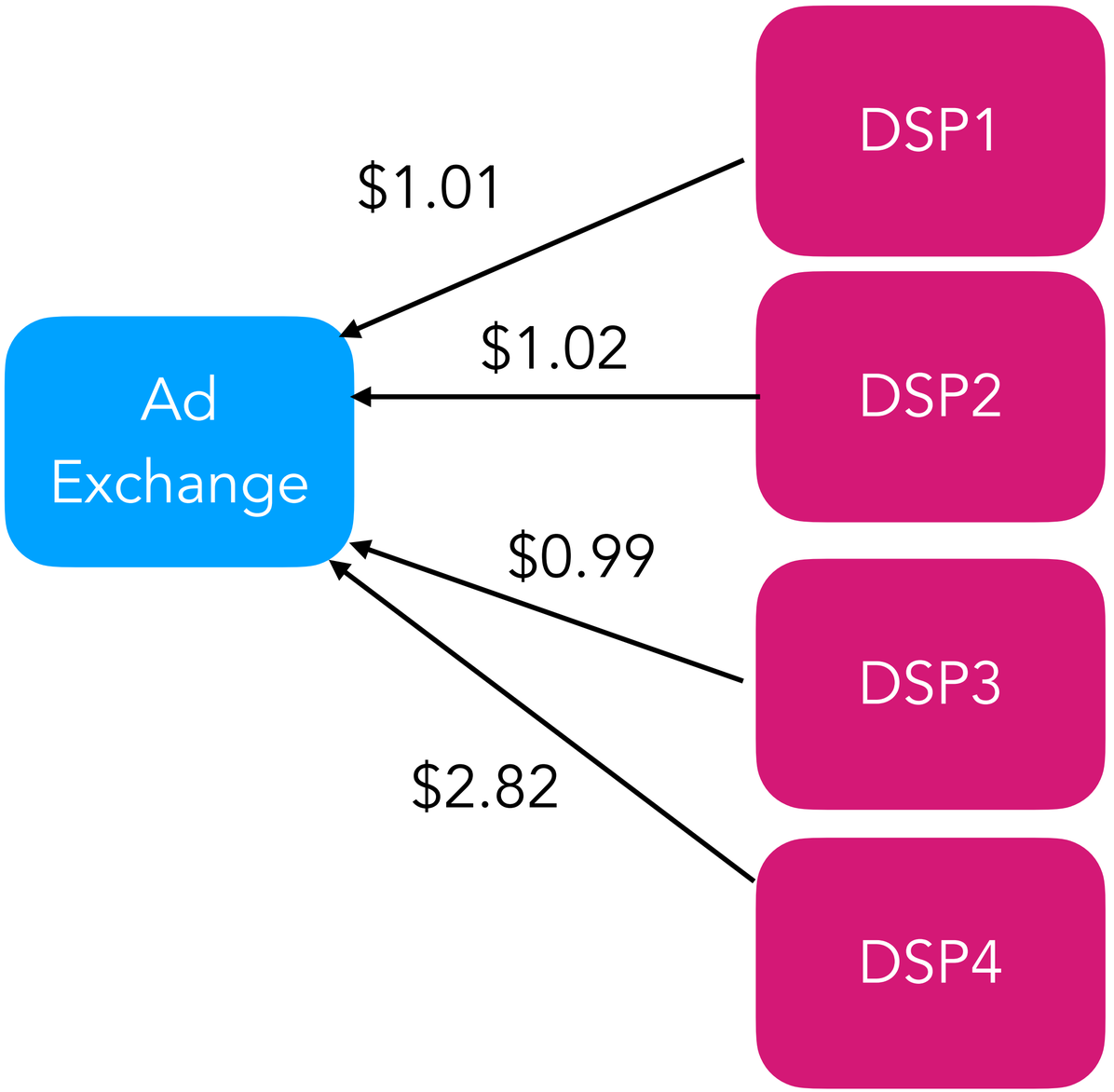
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- Which DSP should win the auction?



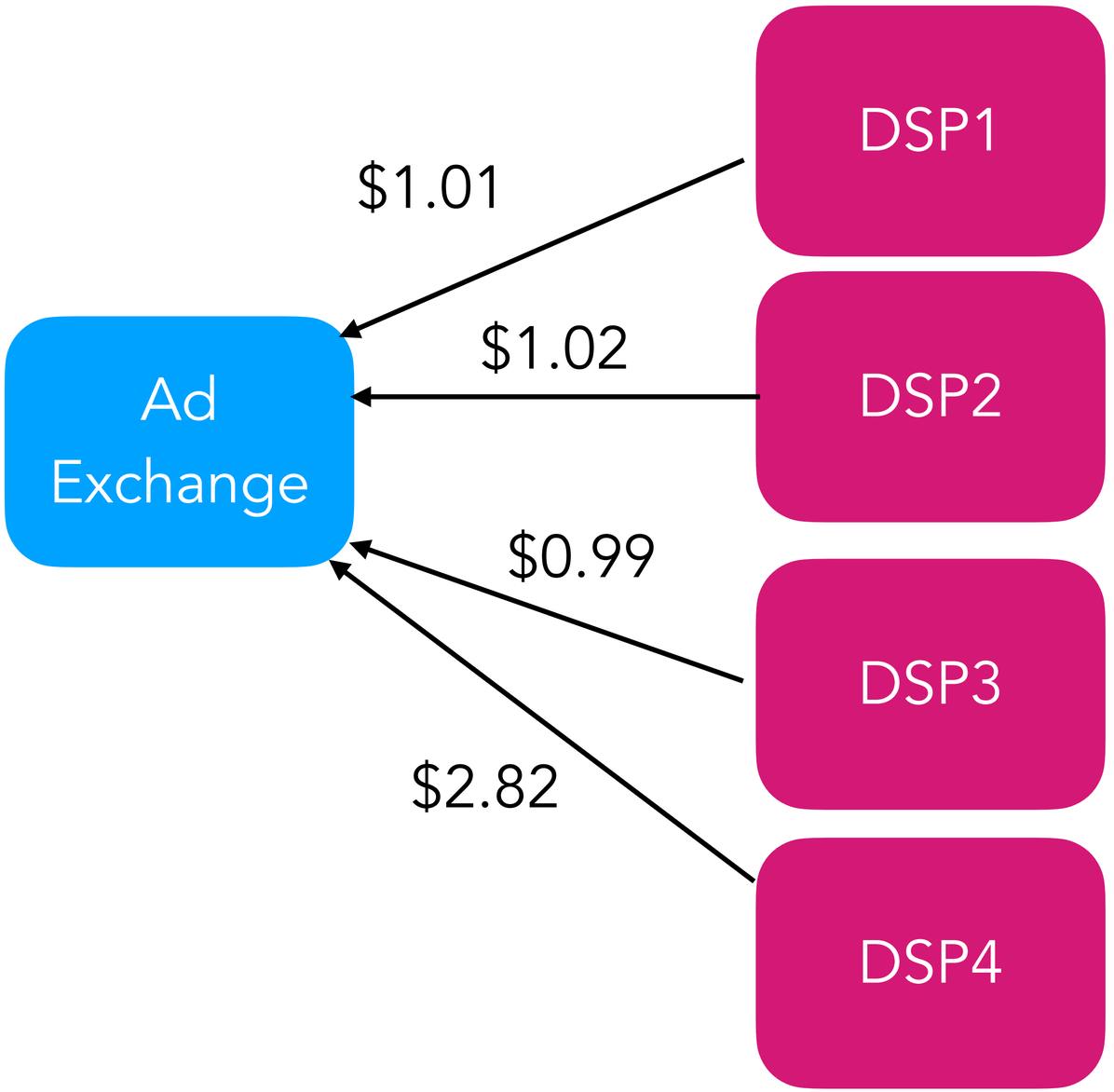
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- Which DSP should win the auction?
  - DSP4! How much should they pay?



Second-Price Auction

- In a second-price auction, the **highest bidder** wins the auction, but only pays **the second-highest bid price** (+0.01)
- Which DSP should win the auction?
  - DSP4! How much should they pay? **$1.03**



Second-Price Auction Economics

- A **dominant strategy** is one where your choice gives you the best likelihood of winning, regardless of what other entities (e.g., DSPs do)
- If you are a DSP, what is your dominant strategy?

Second-Price Auction Economics

- A **dominant strategy** is one where your choice gives you the best likelihood of winning, regardless of what other entities (e.g., DSPs do)
- If you are a DSP, what is your dominant strategy?
  - **Offer your true value!**
    - If you bid above your true value, you risk winning (and therefore paying out higher than your value)
    - If you bid below your true value, you risk losing at your profitable price

A shift in priorities

- Second-price auctions were the industry standard from 2009 — 2019ish — almost every single entity implemented them
- Nowadays, most everyone has shifted to a first-price auction.
  - What is a first-price auction?

A shift in priorities

- Second-price auctions were the industry standard from 2009 — 2019ish — almost every single entity implemented them
- Nowadays, most everyone has shifted to a first-price auction.
  - What is a first-price auction?
    - An auction where the highest bidder wins and pays they price that they bid!
- Why might the industry have moved to first-price auctions?

A humble ad exchange goes rogue

Google Misled Publishers and Advertisers, Unredacted Lawsuit Alleges

Details show Google employees fretting its ad tech auctions were 'untruthful' and based in 'insider information'

By Tripp Mickle and Keach Hagey
Updated Jan. 14, 2022 4:50 pm ET

Aa 88 Listen (2 min)

Google's Alleged Scheme to Corner the Online Ad Market

A newly unredacted legal filing sheds light on internal programs that antitrust enforcers argue advantaged Google at the expense of advertisers and publishers.

Questioning Second-Price Auctions in Ad Tech



Written by Matthew B. Wilson, December 21, 2018

Problems with first-price auctions

- What is the big problem with first-price auctions?
  - Bidders may end up overpaying when bidding their true value. Requires bidders to *guess* the right value… which means… **algorithms**

Enter: Bid shading!

- **Bid shading** is the process how advertisers *decide* how much to bid on an ad

- What's a simple bid shading algorithm?

Enter: Bid shading!

- **Bid shading** is the process how advertisers *decide* how much to bid on an ad
- What's a simple bid shading algorithm?
  - Take your true value and bid 0.9 * value
- There are **many** more complicated algorithms at play, complex ML, etc… lots of research here if you're interested!

Adaptive Bid Shading Optimization of First-Price Ad Inventory

NIKLAS KARLSSON and QIAN SANG

Bid Shading in The Brave New World of First-Price Auctions

Djordje Gligorijevic*, Tian Zhou*, Bharatbhushan Shetty, Brendan Kitts, Shengjun Pan, Junwei Pan and Aaron Flores
Yahoo Research, Verizon Media
Sunnyvale, CA, USA
{djordje.gligorijevic,tian.zhou,bharatbs,brendan.kitts,alanpan,jwpan,aaron.flores}@verizonmedia.com

An Efficient Deep Distribution Network for Bid Shading in First-Price Auctions

Tian Zhou, Hao He, Shengjun Pan, Niklas Karlsson, Bharatbhushan Shetty, Brendan Kitts, Djordje Gligorijevic, San Gultekin, Tingyu Mao, Junwei Pan, Jianlong Zhang and Aaron Flores
Yahoo Research, Verizon Media
Sunnyvale, CA, USA
{tian.zhou,hao.he,alanpan,niklas.karlsson,bharatbs,brendan.kitts,djordje,sgultekin,tingyu.mao}@verizonmedia.com,
jonaspan@tencent.com,jianlong.zhang@gmail.com,aaron.flores@verizonmedia.com

Break Time + Attendance



Codeword:
WinWinWin

https://tinyurl.com/webtracking-attendance

Regulation (and responses)

Tech > Services & Software > Online

Privacy fears raised by DoubleClick database plans

After buying a direct marketing company, DoubleClick begins signing up sites to create a network tying Web surfers' travels with their personal information and shopping habits--online and off.



CNET staff

January 26, 2000, 4:10 am ET

3 min read

The story

- Doubleclick (then an independent company) in 1999 hatched a “secret” plan to merge with Abacus Direct Co.
  - Deal was ~$1.7B USD!
- Until that point, DoubleClick has primarily been building “anonymous cookie profiles,” but wanted to merge with Abacus, who tied names + addresses of tens of millions of households
- The news was broken in 2000, and caused a *huge* public uproar
  - The Federal Trade Commission (FTC) launched a massive investigation, exploring whether this would be bad for consumers

Dear Christine:

As you know, Federal Trade Commission staff has conducted an investigation of your client, DoubleClick, Inc. ("DoubleClick"). The purpose of the investigation was to determine whether, in collecting, maintaining, using or transferring consumer information, including personal identifying information ("PII") or other sensitive information, DoubleClick engaged in unfair or deceptive acts or practices in violation of Section 5 of the Federal Trade Commission Act. The primary areas of inquiry were: 1) whether your client used or disclosed consumers' PII for purposes other than those disclosed in, or in contravention of, its privacy policy, including, in particular, whether it combined PII from Abacus Direct (an offline direct marketing company that it had acquired) with non-PII clickstream data that DoubleClick collected; and 2) whether your client used or disclosed sensitive information about consumers in contravention of its stated privacy policy.

"I made a mistake in moving ahead with these plans with no privacy standards in place." — Kevin O'Connor, CEO

E-COMMERCE REPORT

E-COMMERCE REPORT; DoubleClick's competitors breathe a sigh of relief as an uproar over privacy abates, at least for the moment.

Share full article

By Bob Tedeschi

March 6, 2000

Network Advertising Initiative — “Trust us, it’s fine”

NAI

About the NAI | Self-Reg Framework | Policy & News | How to Join



How to Opt Out

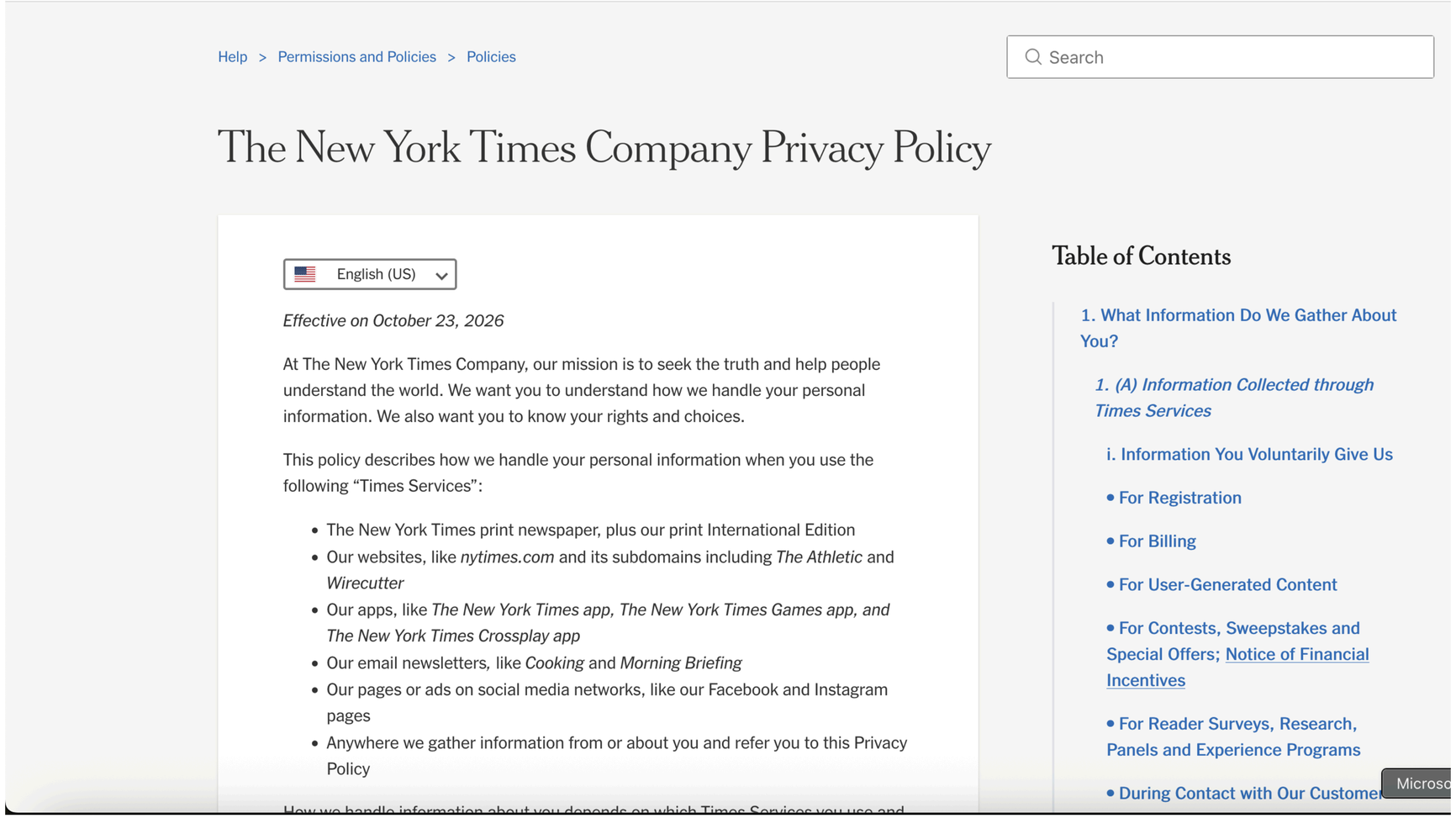
Benefits of Digital Health Advertising

Updated: NAI State Law Processing Addendum

NAI Guidance: Key Do’s & Don’ts for Using AI in Network Advertising

Benefits of NAI Membership

Since then, U.S. Privacy has been organized around “notice and choice”



Help > Permissions and Policies > Policies

Search

The New York Times Company Privacy Policy

English (US)

Effective on October 23, 2026

At The New York Times Company, our mission is to seek the truth and help people understand the world. We want you to understand how we handle your personal information. We also want you to know your rights and choices.

This policy describes how we handle your personal information when you use the following “Times Services”:

- The New York Times print newspaper, plus our print International Edition
- Our websites, like *nytimes.com* and its subdomains including *The Athletic* and *Wirecutter*
- Our apps, like *The New York Times app, The New York Times Games app, and The New York Times Crossplay app*
- Our email newsletters, like *Cooking* and *Morning Briefing*
- Our pages or ads on social media networks, like our Facebook and Instagram pages
- Anywhere we gather information from or about you and refer you to this Privacy Policy

How we handle information about you depends on which Times Services you use and

Table of Contents

1. What Information Do We Gather About You?

1. (A) Information Collected through Times Services

i. Information You Voluntarily Give Us

- For Registration
- For Billing
- For User-Generated Content
- For Contests, Sweepstakes and Special Offers; Notice of Financial Incentives
- For Reader Surveys, Research, Panels and Experience Programs
- During Contact with Our Customer

Anyone ever read one of these?

Notice and Choice

- The basics of “notice and choice”
  - *Tell* the user about your privacy practices, collection, etc. (Notice)
  - *Allow them* to opt-out (Choice)
- What are some pros and cons of this strategy?

Notice and Choice

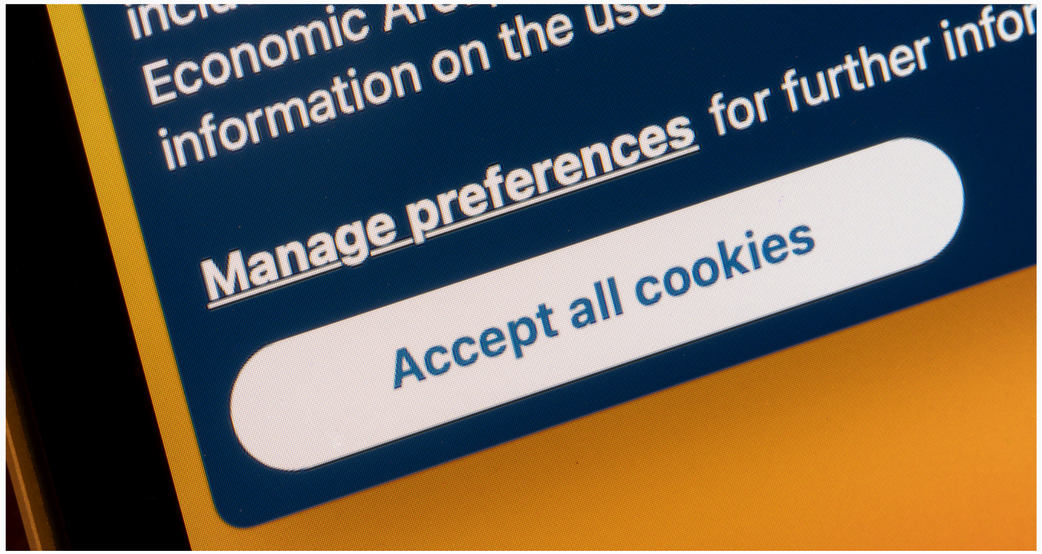
- The basics of “notice and choice”
  - *Tell* the user about your privacy practices, collection, etc. (Notice)
  - *Allow them* to opt-out (Choice)
- What are some pros and cons of this strategy?
  - Pros
    - Flexible, and allows in theory for users to be in the drivers seat on privacy
  - Cons
    - Fatigue, apathy, decision paralysis….

Notice and Choice Cannot Stand Alone

Privacy notice and choice has largely failed us so far because we are not giving it the legal and technical support it needs.

By Lorrie Faith Cranor

Posted Nov 19 2024



"However, despite the failures of notice and choice as a regime, the concept of notice and choice should not be abandoned. It remains an important component of a broader privacy arsenal that should be combined with ***strong privacy laws*** *and* ***automated tools*** *to provide* ***customized privacy protections for individuals.***"

United States Federal Legislation

- There is *very little* federal privacy legislation. Anyone know any laws?

United States Federal Legislation

- There is *very little* federal privacy legislation. Anyone know any laws?
  - Family Educational Rights and Privacy Act (FERPA)
  - Health Insurance Portability and Accountability Act (HIPAA)
  - Gramm-Leach-Billey Act (GLBA) — financial services
- All of these laws offer special protections for specific markets. **There are no individual privacy laws at the US federal level.**

Things are different in the EU

DIRECTIVE 2002/58/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 12 July 2002

concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 95 thereof,

Having regard to the proposal from the Commission ([1]),

Having regard to the opinion of the Economic and Social Committee ([2]),

Having consulted the Committee of the Regions,

Acting in accordance with the procedure laid down in Article 251 of the Treaty ([3]),

Whereas:

(1) Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data ([4]) requires Member States to ensure the rights and freedoms of natural persons with regard to the processing of personal and privacy for users of publicly available electronic communications services, regardless of the technologies used. That Directive should therefore be repealed and replaced by this Directive.

(5) New advanced digital technologies are currently being introduced in public communications networks in the Community, which give rise to specific requirements concerning the protection of personal data and privacy of the user. The development of the information society is characterised by the introduction of new electronic communications services. Access to digital mobile networks has become available and affordable for a large public. These digital networks have large capacities and possibilities for processing personal data. The successful cross-border development of these services is partly dependent on the confidence of users that their privacy will not be at risk.



ePrivacy was amended in 2009 to enforce *consent*

"Member States shall ensure that the use of electronic communications networks to store information or to gain access to information stored in the terminal equipment of a subscriber or user is only allowed ***on condition that the subscriber or user concerned is provided with clear and comprehensive information in accordance with Directive 95/46/EC."***

Article 5(3), 2002

ePrivacy was amended in 2009 to enforce *consent*

"Member States shall ensure that the use of electronic communications networks to store information or to gain access to information stored in the terminal equipment of a subscriber or user is only allowed ***on condition that the subscriber or user concerned is provided with clear and comprehensive information in accordance with Directive 95/46/EC."***

Article 5(3), 2002



"Member States shall ensure that the storing of information, or the gaining of access to information already stored, in the terminal equipment of a subscriber or user is ***only allowed on condition that the subscriber or user concerned has given his or her consent, having been provided with clear and comprehensive information, in accordance with Directive 95/46/EC, inter alia, about the purposes of the processing.***"

Article 5(3), 2009

…but, two exemptions in 2009

- “Transmission Exemption”
  - —> access needed to carry out the transmission of communication
- “Requested-service exemption”
  - —> access “strictly necessary” to provide a service the user explicitly requested (e.g., a shopping cart)
- As a result, we used to see a lot of these:

Cookies on the BBC website

The BBC has updated its cookie policy. We use cookies to ensure that we give you the best experience on our website. This includes cookies from third party social media websites if you visit a page which contains embedded content from social media. Such third party cookies may track your use of the BBC website. If you continue without changing your settings, we'll assume that you are happy to receive all cookies on the BBC website. However, you can change your cookie settings at any time.

Continue
Change settings
Find out more

ives
l farewell





Other issues…

- ePrivacy was a *directive*, not a law
  - Which means that different member states had different interpretations, and the resultant landscape was patchy and confusing
- Companies were skirting the rules and regulators didn’t have a clear way to get companies on violating laws

Enter: GDPR!

I

(Legislative acts)

REGULATIONS

REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 27 April 2016

on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 16 thereof,

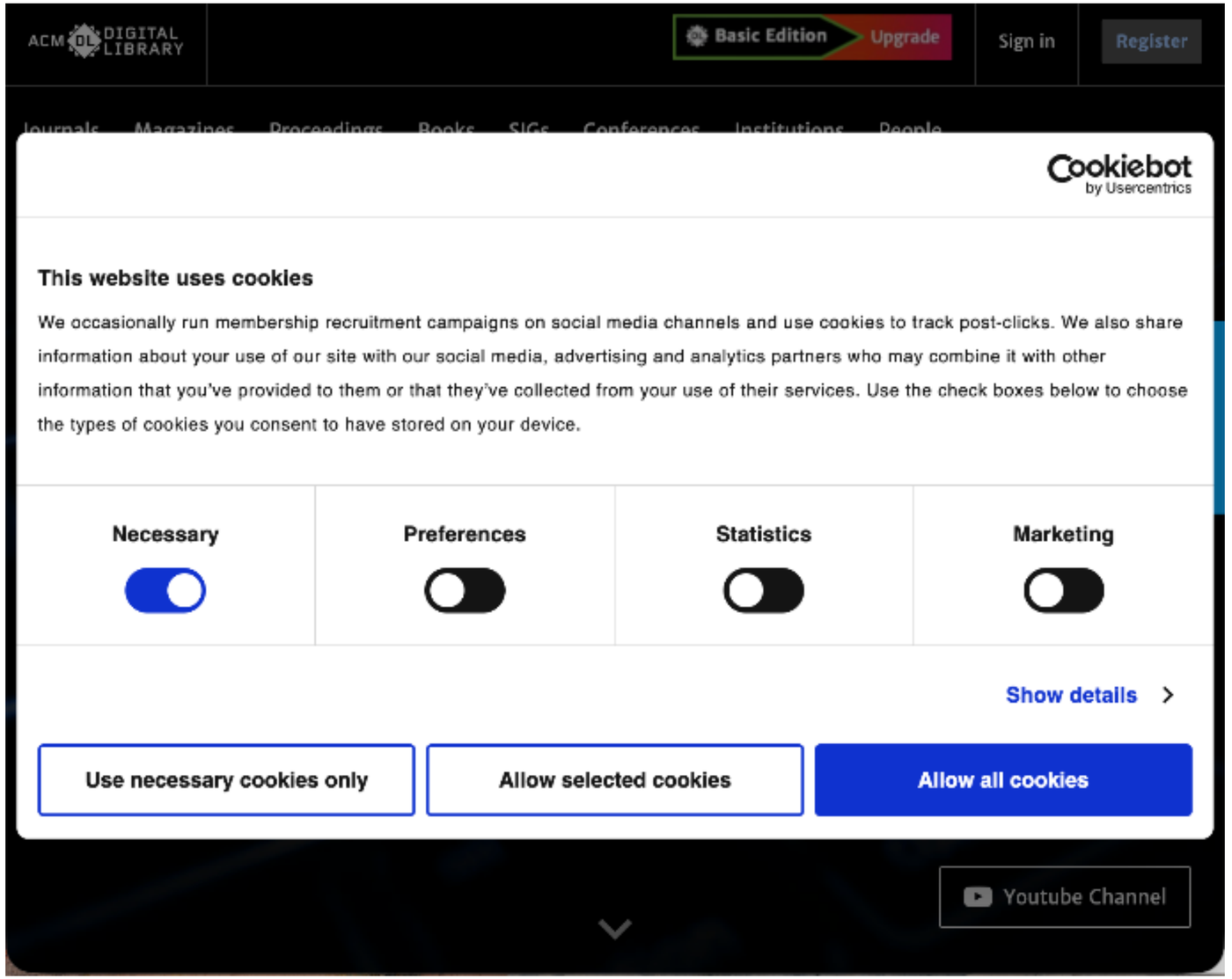
Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

GDPR hits the scene

- General Data Protection Regulation (GDPR) — a major EU law that enshrined the ideas in ePrivacy directive
- Changed “consent” from a passive opt-in to an **active opt-in**
  - In addition, forced all companies to classify their tracking behaviors as “essential vs. non-essential… ” —> **non-essential cookies could not be sent without explicit consent**

And so, here we are

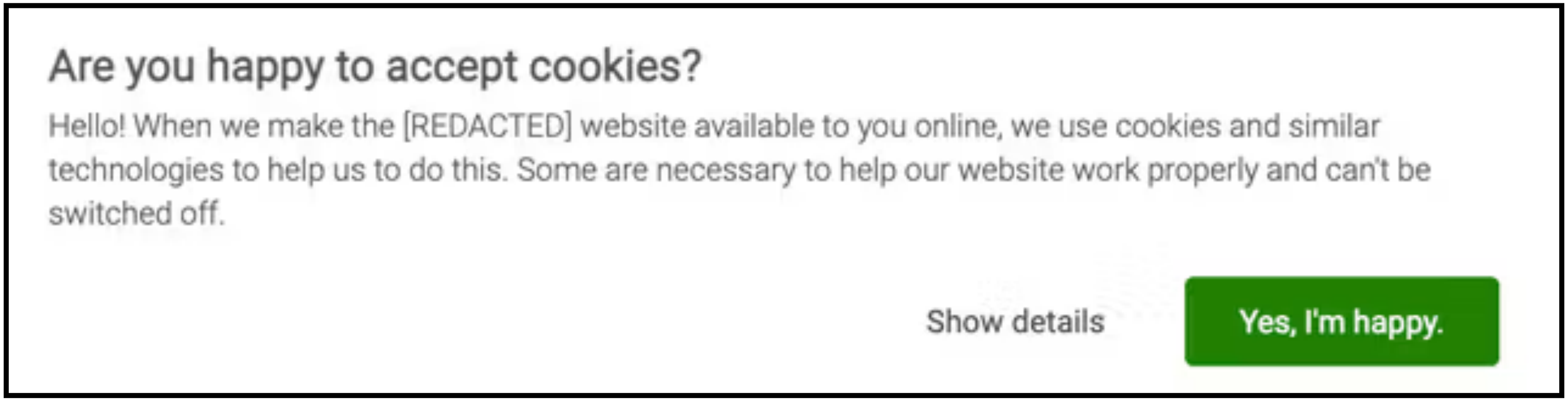


The rise of dark patterns

- What is a dark pattern?

The rise of dark patterns in cookie consent

- What is a dark pattern?
  - User interface designed to steer or trick the user towards making a choice they may not have intended



POP QUIZ! WHICH BANNER DOESN'T INCLUDE A DARK PATTERN?

CAPTAIN COMPLIANCE

A

COOKIE NOTICE

We use cookies and similar technologies to support this website's essential functions, as well as for personalization, analytics, and marketing purposes. You may disable non-essential cookies by selecting “Reject" or by customizing “Settings”. For more detail, please refer to our Privacy Notice.

Allow | Reject | Settings

B

COOKIE SETTINGS

We use cookies and similar technologies to support this website's essential functions, as well as for personalization, analytics, and marketing purposes. You may disable non-essential cookies by customizing “Settings”. For more detail, please refer to our Privacy Notice.

Allow | Settings

C

YOUR VISITOR EXPERIENCE

Cookies and similar technologies are required to unlock our site's full potential—delivering personalized content, in-depth analytics, and exclusive offers. Disabling non-essential cookies will drastically limit your access to premium features and a truly tailored experience.

Allow | Reject | Settings

D

WE USE COOKIES

We use cookies and similar technologies to support this website's essential functions, as well as for personalization, analytics, and marketing purposes. You may disable non-essential cookies by selecting “Reject" or by customizing “Settings”. For more detail, please refer to our Privacy Notice.

Allow | Reject | Settings

Dark patterns make regulators unhappy

CNIL Fines TikTok 5 Million Euros Over Cookie Infringements

2 Minute Read | January 23, 2023

Categories: European Union, International

On January 12, 2023, the French Data Protec
fine for the social network TikTok for violatic
at the end of 2022.

NEWS, PRIVACY

Google and Facebook fined $240 million for making cookies hard to refuse

by Pieter Arntz | January 7, 2022

Cookies placed without consent: SHEIN fined 150 million euros by the CNIL

03 September 2025

California is also in on the action!

California Consumer Privacy Act (CCPA)

Home / Privacy / *California Consumer Privacy Act (CCPA)*

Updated on August 28, 2026

The California Consumer Privacy Act of 2018 (CCPA) gives consumers more control over the personal information that businesses collect about them and the CCPA regulations provide guidance on how to implement the law. This landmark law secures new privacy rights for California consumers, including:

California is also in on the action!

- The right to know about the personal information a business collects about them and how it is used and shared;
- The right to delete personal information collected from them (with some exceptions);
- The right to opt-out of the sale or sharing of their personal information including via the GPC;
- The right to non-discrimination for exercising their CCPA rights.

California is also in on the action!

Youth Sports Media Company to Pay $1.10 Million Fine, Change Practices Over Privacy Violations

March 3, 2026

SACRAMENTO, CA — The California Privacy Protection Agency Board has issued a decision requiring PlayOn Sports to pay a $1.10 million fine and change its practices following a settlement reached by CalPrivacy's Enforce
students and Califor

Honda Settles With CPPA Over Privacy Violations

Automaker Will Change Business Practices and Pay $630k+ Fine

News: March 12, 2025

SACRAMENTO – The California Priva
pay a $632,500 fine to resolve claim
ongoing review of data privacy prac

CPPA Orders Clothing Retailer Todd Snyder to Pay Six–Figure Fine, Overhaul Privacy Practices

News: May 06, 2025

SACRAMENTO, CA — The California Privacy Protection Agency (CPPA) Board has issued a decision requiring national clothing retailer Todd Snyder, Inc., to change its business practices and pay a $345,178 fine to resolve allegations that it violated the California Consumer Privacy Act (CCPA).

The CPPA's Enforcement Division alleged that Todd Snyder violated Californians' privacy rights by:

- Failing to oversee and configure properly the technical infrastructure of its privacy portal, resulting in a failure to process consumer requests to opt out of the sale or sharing of personal information for 40 days;
- Requiring consumers to submit more information than necessary to process their privacy requests; and
- Requiring consumers to verify their identity before they could opt–out of the sale or sharing of their personal information.

California led the charge, but lots of states are building privacy laws!

- California: CCPA, 2020 (expanded by the CPRA in 2023) —> full agency CPPA does regulation!
- Virginia: 2023
- Colorado: 2023
- Connecticut: 2023
- Utah: 2023
- Florida: 2024 (Digital Bill of Rights; much narrower, applying only to very large companies)
- Oregon: 2024
- Texas: 2024
- Montana: 2024
- Delaware: 2025
- Iowa: 2025
- Nebraska: 2025
- New Hampshire: 2025
- New Jersey: 2025
- Tennessee: 2025
- Minnesota: 2025
- Maryland: 2026
- Indiana, Kentucky, Rhode Island: 2026

OpenRTB supports regs in requests!


```
{
  "id": "req-8f3a2c1e",
  "imp": [
    {
      "id": "1",
      "banner": { "w": 300, "h": 250 },
      "bidfloor": 0.50,
      "bidfloorcur": "USD"
    }
  ],
  "at": 1,
  "tmax": 120,
  "regs": {
    "coppa": 0,
    "gdpr": 0,
    "us_privacy": "1YNN",
    "gpp": "DBABL~BVQqAAAAAgA.QA",
    "gpp_sid": [7]
  }
}
```

Next time…

- PA1 part 4 is due! You should get started!
- GUEST LECTURE in CSE190 section!
- Midterm arriving! Get pumped!