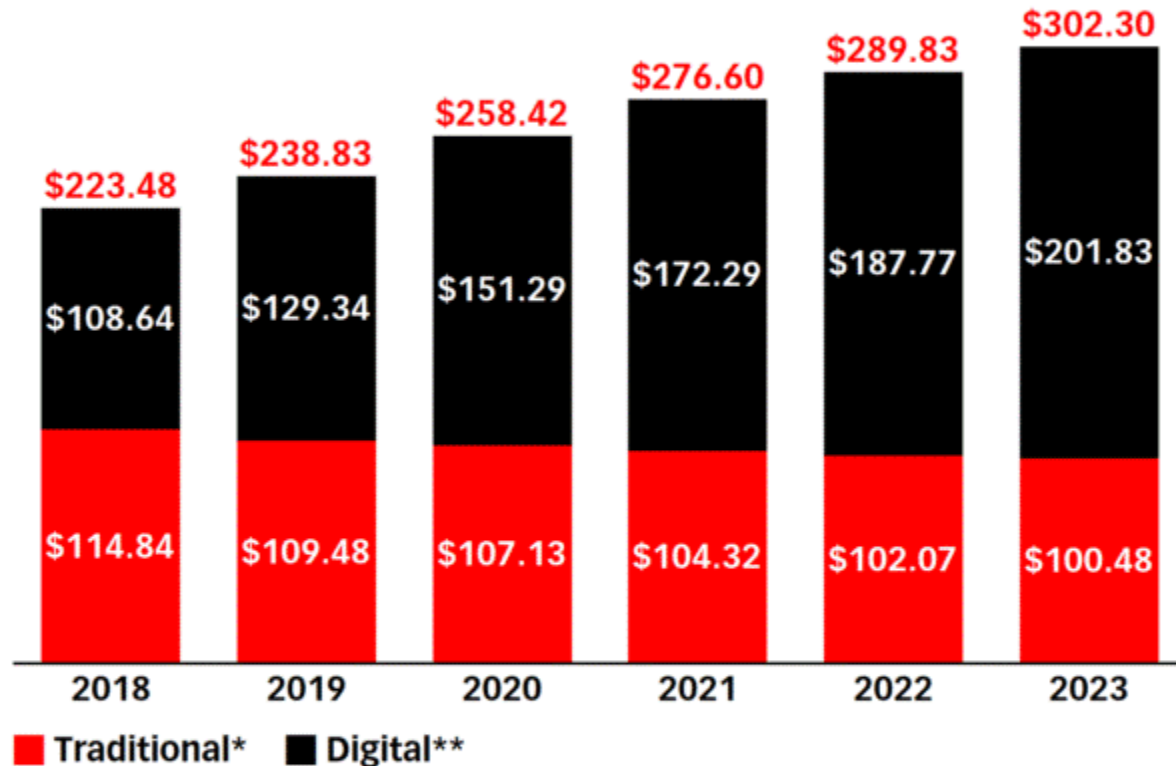


Digital Ads

Total Media Ad Spending in the US, Traditional vs. Digital, 2018-2023

billions



Note: *includes directories, magazines, newspapers, out-of-home, radio and TV; **includes advertising that appears on desktop and laptop computers as well as mobile phones, tablets and other internet-connected devices, and includes all the various formats of advertising on those platforms; includes SMS, MMS and P2P messaging-based advertising

Source: eMarketer, February 2019

What are the major types of digital ads?

Digital Ad Spending in the US, by Format, 2019-2023

billions

	2019	2020	2021	2022	2023
Display	\$70.06	\$81.38	\$92.53	\$100.71	\$107.91
—Video	\$36.01	\$42.58	\$49.02	\$53.99	\$58.39
—Banners and other*	\$25.94	\$30.20	\$34.23	\$37.12	\$39.70
—Rich media	\$5.28	\$5.44	\$5.85	\$6.00	\$6.10
—Sponsorships	\$2.84	\$3.16	\$3.44	\$3.60	\$3.72
Search	\$53.73	\$63.90	\$73.31	\$80.43	\$87.15
Lead generation	\$2.59	\$2.84	\$3.05	\$3.15	\$3.24
Classifieds and directories	\$2.19	\$2.34	\$2.49	\$2.53	\$2.56
Email	\$0.49	\$0.55	\$0.61	\$0.65	\$0.68
Mobile messaging	\$0.28	\$0.28	\$0.29	\$0.29	\$0.29
Total	\$129.34	\$151.29	\$172.29	\$187.77	\$201.83

*Note: includes advertising that appears on desktop and laptop computers as well as mobile phones, tablets and other internet-connected devices on all formats mentioned; *includes ads such as Facebook's News Feed Ads and Twitter's Promoted Tweets*

Source: eMarketer, February 2019

T10056

www.eMarketer.com

Display Ads and
Paid Search!

Paid Search

Google

mba in hk

All Images News Maps Videos More Settings Tools

About 12,400,000 results (0.68 seconds)

Ad · mba.fbe.hku.hk/ ▾
HKU MBA - Asia's No.1 for 9 Years
 Extensive elite alumni network providing leadership across industry sectors. Relatively small class size. Diversity of profiles among class members.

Part Time MBA Both weekday and weekend modes Complete between two to four years	Contact Us Online contact form, email address Dedicated phone numbers
--	--

Ad · fb.polyu.edu.hk/ ▾
HK PolyU MBA - Developing leaders since 1990
 PolyU **MBA** helps professionals develop into innovative and forward-thinking leaders. Offering three optional specialisms in Aviation, Fashion, and Innovation and Design.
 Admissions · Contact Us · Awards & Duration

Ad · cb.cityu.edu.hk/雙碩士學位/emba_&_mpa ▾
由清華大學與城市大學攜手策劃 - 亞洲首個EMBA及MPA
 2021年度秋季班課程招生計劃現已接受報名

Ad · www.hkma.org.hk/master ▾
Choose your MBA - 7 MBAs
 Prestigious **MBA** by UK & Australia Universities. Attainable in 1.5 years in **Hong Kong**

mba.fbe.hku.hk ▾
HKU MBA-MBA Programmes | Full-time MBA | Part-time MBA ...
 HKU's international MBA programme is carefully designed to give you a first-class education, real-world experience, deep understanding of international ...

Paid Search

Organic Search

Example Advertiser

The image shows the homepage of David's Cookies. At the top is a dark red navigation bar with the David's Cookies logo on the left, followed by menu items: SHOP PRODUCTS, GIFT OCCASIONS, and CORPORATE GIFTS. A search bar on the right contains the text "SEARCH THE GOOD STUFF" and a magnifying glass icon.

The main banner features a large image of two chocolate chip cookies on a wooden surface. On the left side of the banner, white text reads "SAVE UP TO 40% ON SELECT ITEMS." In the center, large white text says "END OF SEASON SALE" with a decorative wavy line underneath, and "SHOP NOW" in a larger font below it.

Below the banner is a grid of eight product category tiles, each with a small image and text:

- Holiday Gifts**: A sure delight for anyone. Image shows a basket of cookies and a teddy bear.
- Items on Sale!**: Shop our holiday sale items. Image shows a red container of cookies and candles.
- Fresh Baked Cookies**: Baked the Day Your Order Ships. Image shows a red container of cookies.
- Brownies & Crumbcakes**: Delicious & Fresh. Image shows brownies and crumbcakes.
- Cookie Dough**: Image shows a tray of cookie dough balls.
- Cookie Bars**: Image shows a tray of chocolate chip cookie bars.
- Cookie Mix**: Image shows a bowl of cookie mix.
- Cheesecake**: Image shows a slice of cheesecake.



office gift baskets



All Shopping Images News Maps More Settings Tools

About 284,000,000 results (0.93 seconds)

Corporate Gifting Made Easy | Crowd-Pleasing Desserts

Ad www.davidscookies.com/ (800) 500-2800

Custom Logo Stickers & Cards. Choose A Gift & Customization Options. We'll Do the Rest. In a Rush? Provide A Recipient List & We'll Handle Shipping. Arrives in 2 Days or Less.

Cookie of the Month Club

Large Variety of Fresh, Homemade Cookies Delivered to You Monthly.

Cookie Gift Baskets

Unique Collection of Our Delicious Cookies Starting at Only \$39.35!

Olive & Cocoa | Office Gift Baskets | Custom Logo Branding

Ad www.oliveandcocoa.com/ (800) 538-5404

Our Gifts Are Gracefully Packaged Inside Handcrafted Wood Boxes.

Godiva® Corporate Gift Baskets | Chocolates For Self Or Gift

Ad www.godiva.com/Chocolate_Gifts (800) 946-3482

Godiva Corporate Gift Baskets Are The Best Gift Option For Any Office. Order Today! Godiva...

Williams Sonoma® Gift Baskets | Free Shipping On Orders \$49+

Ad www.williams-sonoma.com/Gift-Baskets

Shop Premium Gift Baskets For All Occasions. Exclusively at Williams Sonoma®.

How did we end up in position #1?

How much did we pay for this?

Are we paying more than the ad in slot #2?

Paid search ads are sold by auctions

There are two types of auctions: first-price and second-price auctions. Both are used in digital advertising. Google used to adopt second-price auction but switched to first-price auction in 2023.

First-Price Auction

In a first price auction, the winner pays how much he / she bids.
CPC = cost per click

Advertiser	Bid	Position	CPC
D	\$1.00	1	\$1.00
B	\$0.75	2	\$0.75
A	\$0.50	3	\$0.50
C	\$0.40	4	\$0.40

Second-Price Auction

In a second price auction, the winner pays how much the next bidder bids. $CPC = \text{cost per click}$

Advertiser	Bid	Position	CPC
D	\$1.00	1	\$0.75
B	\$0.75	2	\$0.50
A	\$0.50	3	\$0.40
C	\$0.40	4	\$0

Second-Price Auction

Why do some search engines use the second-price auction instead of the first-price auction?

First-Price Auction

In a first-price auction, players game the system by bidding less.
Will D have incentives to decrease bid? How about bidding \$0.76?

Advertiser	Bid	Position	CPC
D	\$1.00	1	\$1.00
B	\$0.75	2	\$0.75
A	\$0.50	3	\$0.50
C	\$0.40	4	\$0.40

Second-Price Auction

In this example, D pays \$0.75, and she has no incentive to decrease her bid. If she decreases the bid to any number greater than \$0.75, she still pays \$0.75. If she bids <0.75 , she loses the auction.

Advertiser	Bid	Position	CPC
D	\$1.00	1	\$0.75
B	\$0.75	2	\$0.50
A	\$0.50	3	\$0.40
C	\$0.40	4	\$0

Second-Price Auction



The designer of second-price auction, William Vickrey, won the Nobel Prize in Economics in 1996.

Auctions

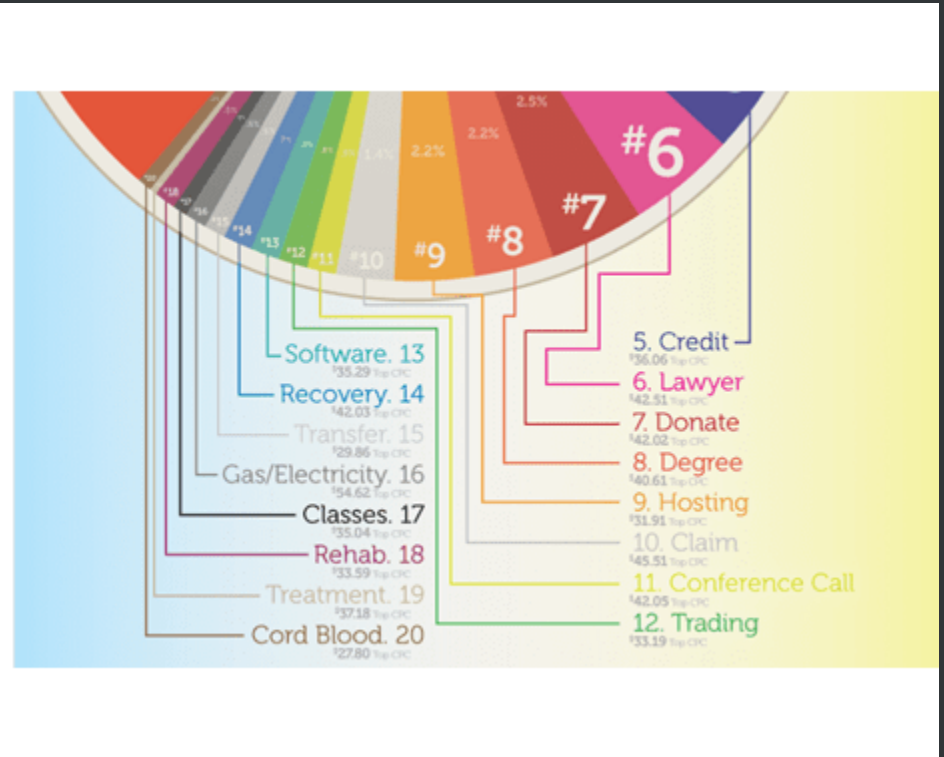
Nonetheless, Google switched back to first-price auction in 2023 because of its simplicity and transparency.

Guess

What is the most expensive keyword in Google's search advertising?

Insurance.

How much do you need to pay Google to get a click on
“insurance”?



Measuring the effectiveness of online ads

How do we measure ads?

- **Impressions**
 - Frequency & Reach
- **Clicks**
 - Click-through rate
- **Ad Engagement**
 - Mouse-over, Interaction
 - FB: Like, Share
 - Twitter: RT, Favorite
- **Conversions**
 - Sign-ups, Downloads, Place in cart, Purchase

Impressions

Impression: A user loads 1 ad on a website

Impression = Frequency \times Reach

Frequency: Number of ads per person

Reach: Number of people who see at least one ad

Clicks

- Instantaneous feedback on individual ads – revolutionary!
 - Clicks can be used as a measure of intent to buy.
 - Click-Through Rate (CTR) = the number of times a link was clicked divided by the number of times it was seen. $CTR = \frac{Clicks}{Impressions}$
- Correlation between CTR & ad effectiveness (AdFX) is debatable
 - E.g. Does a higher CTR on mobile mean higher mobile AdFX?
 - Ads are smaller, but fill more of the screen
 - Up to 50% of clicks on mobile banner ads are accidental (GoldSpot Media)

Sometimes clicks are unreliable...

<https://www.youtube.com/embed/N1ltwg2nTK4?enablejsapi=1>

Engagement

- Engagement: A catch-all for user interactions with the ad beyond clicking including mouse-over, interacting with interactive ads, rollover, start or skip video
- Social engagement / conversion include
 - FB: Like, Share
 - X (Twitter): RT, Favorite
- Intentional measure showing whether consumer likes ad more than just clicks

Conversions

- Conversions: A catch-all for user interactions with advertiser including sign-ups (newsletter, membership, etc.), downloads, shopping on-site, placing items in cart, purchasing.
- Conversion Rate (CR) = the number of conversions divided by the number of times the ad was clicked. $CR = \text{Conversions} / \text{Clicks}$
- Probability of Purchase = $CTR \times CR$, here purchase is broadly defined.

Conversions: Pros and Cons

(+) Some direct response advertisers only need conversion info (like app makers & downloads)

(+) For brand advertisers (like Coca-Cola), conversions (& engagement) are often all they can measure!

(-) Conversion rates are typically very low
Decisions require much more impression data

Some Metrics

Impression = number of instances ad is seen by user

Cost-per-Click (CPC) = cost paid to search engines

Click-Through Rate (CTR) = efficiency of generating clicks from delivered impression

Conversion Rate (CR) = efficiency of generating sales from click

Probability of Purchase = $CTR \times CR$

Display Advertising

Historical Note: Banners

Banners seem to be the oldest standard format in use.

The first “banner ad” was launched by AT&T on Oct 27, 1994 on Hotwired, the web version of Wired.



Part of the AT&T “you will” ad campaign.

The AT&T You Will Campaign

Each ad presented a futuristic scenario beginning with “Have you ever...” and ending with “...you will. And the company that will bring it to you: AT&T.”

At that time, there were about 30 million people on the Internet.

The ad predicted a number of innovations including GPS navigation, Wi-Fi, tablet computing, smartwatches, distance learning etc.

Display Advertising

Struggling Rural Colleges, Towns Find Fates Intertwined
As America's rural colleges struggle with falling enrollments and local flight, they are realizing how their own futures are intertwined with the broader community.

- **There's an Antidote to America's Long Economic Malaise: College Towns** (Dec. 12)

Bring Back Jobs From China? In Shenzhen, They Aren't That Worried
Donald Trump's threat to compel Apple and others to manufacture more at home should strike fear into Shenzhen, where the world's tech gadgets are made. Yet executives here aren't worried by Mr. Trump.

Stock Futures Edge Up as Dow Nears 20000
Futures pointed to a small opening gain for the Dow

Myanmar's Right-Hand Cars Feel Wronged by State Ban

Trump's Israel Envoy Pick Helped Fund Settlers

Dec 20 '16, 4:39 PM EST MARKETS →

Opinion →

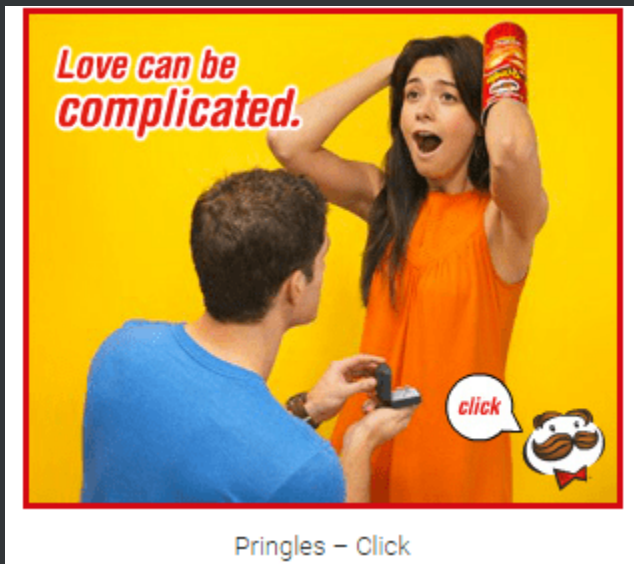
Coal in Trump's Stocking
Review & Outlook

Why Liberals Oppose Ben Carson
By Jason L. Riley | Upward Mobility

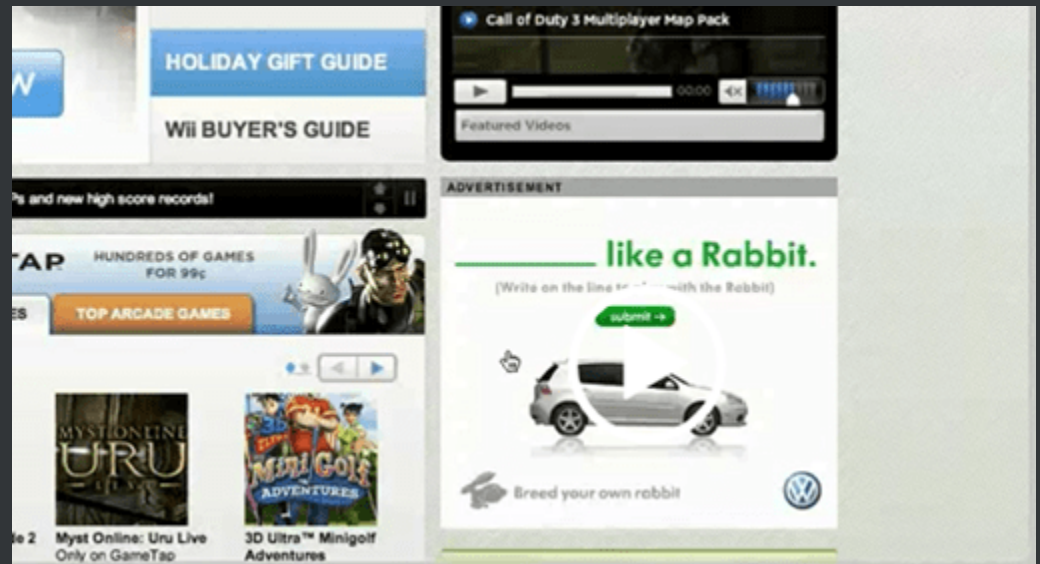
The Case for a Rules-Based Fed
By John B. Taylor | Commentary

Canada: Land of quattro...
The weather will report to you.
Audi

Examples of Interactive Ads



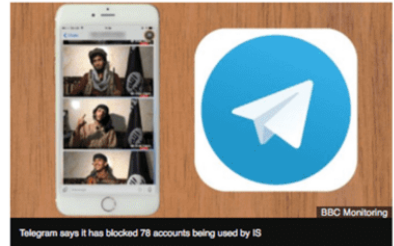
link



link



Technology
Telegram app cracks down on IS propaganda channels
By BBC Monitoring Analysis
2 hours ago | Technology



The secure mobile messaging app Telegram has started cracking down on propaganda from so-called Islamic State group (IS), nearly eight weeks after the terror group set up its own public broadcast channels there.
IS and other jihadist groups have been exploiting new functionality introduced by the app in late September, which allows users to broadcast their messages to an unlimited number of members via their own Telegram "channel".

Paris attacks
The action followed claims by IS for the 13 November Paris attacks and the downing of a Russian passenger jet over Egypt's Sinai Peninsula on 31 October.
Shortly before the key IS propaganda channel on Telegram was shut down on 18 November, it had been used to publish IS's English-language magazine Dabiq which hailed the Paris attacks and featured an image of the bomb IS claims to have used to bring down the plane.
IS had shifted its propaganda distribution to Telegram from Twitter on 26 September, just four days after Telegram trumpeted the launch of its new "Channels" tool.
An official IS channel dubbed Nashir, which translates as "Distributor" in English, quickly became the platform where IS propaganda started appearing first, often several minutes before being posted to Twitter - IS's other favoured outlet.



The channel had amassed over 16,000 subscribers before it was shut down along with a raft of other IS channels used to distribute the group's propaganda in a wide range of languages, including English, French, Russian, Turkish and Urdu.
But many other jihadist Telegram channels continue to be active, including official Hijab patriot

Top Stories
Paris 'ringleader' killed in raid
The man believed to have planned the attacks in Paris, Abdelhamid Abaaoud, was among those killed in a French police raid, prosecutors confirm.
48 minutes ago
US House votes to restrict refugees
37 minutes ago
World on cusp of 'post-antibiotic era'
5 hours ago

Advertisement for SAS: Is your data ready for analytics? 5 best practices. Includes image of a man pointing at a screen with charts.

More like this
IS shifts propaganda to Telegram app
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Hijab patriot

by hackers, government agencies.
Telegram is so confident of its security that it twice offered a reward of hundreds of thousands of dollars to the first person who could crack its encryption.
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18 November 2015

US attorney calls for access to Google and Apple phones
18 November 2015

Paris attacks: 'Ringleader' Abdelhamid Abaaoud killed in raid
48 minutes ago

Technology section with three articles: University says FBI payment reports 'inaccurate', Tablets 'eroding' digital skills internet, Bangladesh 'mistake' cuts internet. Includes small images for each.

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Grid of news snippets: BBC News Blind pupil asked to stop using white cane in school, BBC Culture Roland Barthes at 100: The six quotes you need to know, BREAKING NEWS 'Unruly' passenger tries to open exit door on BA flight, BBC Travel The ancient protectors of England's forests.

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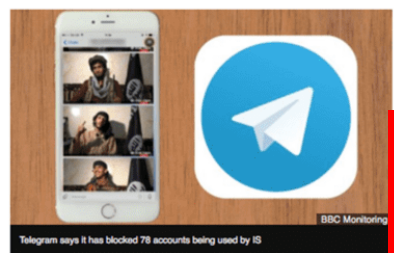
Advertisement for University of Rochester, Simon Business School: Webinar Topics Current Student Insights Admissions Tips. View Schedule.

From Around the Web Promoted content by Outbrain. Grid of news snippets: Trump on the Islamic State: 'I would just bomb those suckers', U.S.S. Harry S. Truman deploys from Norfolk, U.S. Presidents Ranked from First to Worst InsideGov, Islam: What's the Difference Between Sunni and Shia? Pathos, 12 Animals You Should Be Glad Are Extinct Answers.com, Hillary Clinton Presents Her Plan to Battle ISIS The New York Times.

This is an example of the BBC website. How many ads do you find on this webpage?



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2 hours ago | Technology



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In an announcement on Wednesday evening, the Berlin-based Telegram said it had shut down 78 IS channels and promised to make it easier for users to flag "objectionable public content" shared via the app.
"We were disturbed to learn that Telegram's public channels were being used by ISIS [alternative name for IS] to spread their propaganda," said a statement from Telegram, which was set up in 2013 by two Russian brothers, Pavel and Nikolai Durov.

Paris attacks
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Hijab patriot

Both ads from SAS. This is a behavioral targeting ad. It is becoming popular to have two ads on the same page.


by hackers or government agencies.
Telegram is so confident of its security that it twice offered a reward of hundreds of thousands of dollars to the first person who could crack its encryption.
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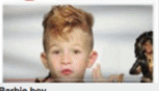


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12 Animals You Should Be Glad Are Extinct
Answers.com



Hillary Clinton Presents Her Plan to Battle ISIS
The New York Times

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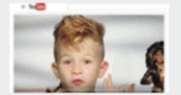


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InsideGov



Islam: What's the Difference Between Sunni and Shia?
Patheos

12 Animals You Should Be Glad Are Extinct
Answers.com

Hillary Clinton Presents Her Plan to Battle ISIS
The New York Times

They are also ads, even though they look like real content. This is called native ad.

Native advertising is a type of advertising that matches the form and function of the platform upon which it appears.

It is hard for consumers to distinguish between content and native ads.

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How Arabs make each other laugh in six seconds



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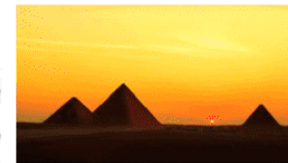
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Advertisers face a trade-off between ad clicks and brand recognition. Publishers need to strike a balance between ad clicks and the platform's trustworthiness. For policy makers, concerns that native advertising confuses customers prompted the U.S. Federal Trade Commission to issue guidelines for disclosing native ads.

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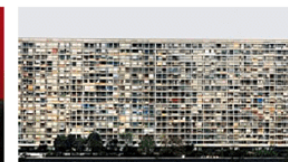
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The first native ad

What Will Become of China?

None can foresee the outcome of the quarrel between foreign powers over the division of China. It is interesting to watch the going to pieces of this ancient but unprogressive race. Many people in America are also going to pieces because of dyspepsia, constipation, blood, liver and stomach diseases. We are living too fast, but strength, vigor and good health can be retained if we keep off and cure the above diseases with Hostetter's Stomach Bitters.

Targeting based on simple rules

- Geo-targeting
 - Target by country, state, city, IP address
- OS / Browser / Devices
 - Segment based on technology
- Day and time
 - Specify display times to the minute

In addition to these simple targeting rules (geo-targeting, OS / browser / devices, day and time), which other targeting rules can you think of?

Targeting via sophisticated matching

Contextual targeting

Ads displayed based on content of web site

Over 250 sick after eating at Indiana Olive Garden

REUTERS



58 minutes ago

LOS ANGELES (Reuters) - More than 250 people have reported becoming sick after eating at an Olive Garden restaurant in Indianapolis, Indiana, a county health official said on Friday, a day after an outbreak of E. coli at Taco Bell restaurants was declared over.

The news makes Olive Garden at least the third U.S. restaurant chain this month to be linked to widespread customer illnesses.

Reuters Photo: A plate of pasta from the Olive Garden is seen in an unfolded file photo....

Some customers who ate at the Olive Garden restaurant in northeast Indianapolis between December 9 and December 13 have reported nausea, vomiting, diarrhea, and in some cases fever, said John Althardt, a spokesman for the Marion County Health Department.

Three of those people have been hospitalized.

Tests of the sick peoples' stool and leftovers they took home from the restaurant will be conducted later today or Monday, Althardt said. He added that the tests would take about 48

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FREE
Dinner for Two
at Olive Garden®

[Click Here!](#)

*Just complete 1 offer © 2006 Olive Garden®

ELSEWHERE ON THE WEB
CNN.COM

11-year-old charged with driving drunk

REUTERS

NEWS ALERTS

Get an alert when there are new stories about:

- Orange Beach, Alabama
- Perdido Key, Florida
- Chevrolet Monte Carlo

[Add Selected Alerts](#)

More Alerts

ELSEWHERE ON THE WEB

CNN.COM

Explosion rocks besieged mosque in Pakistani capital

ABC NEWS

'Out of the Blue': Do Aliens Exist?

THE CHRISTIAN SCIENCE MONITOR

William Bratton: 'Lauded chief of troubled LAPD'

Fri Jul 6, 3:23 PM ET

MIAMI (Reuters) - An 11-year-old girl was charged with drunken driving after leading police on a chase at speeds of up to 100 mph that ended when she flipped the car in an Alabama beach town.

A video camera in the police car captured the look of surprise on the officer's face when he approached the wrecked car and got a look at the motorist.

The Mobile Press-Register newspaper said the patrolman saw the Chevrolet Monte Carlo speeding and flashed his lights to signal the driver to stop. Instead, the car sped faster, traveling at up to 100 mph (160 kph) before sideswiping another vehicle and flipping over in the Gulf Coast town of Orange Beach, Alabama, on Tuesday night.

The young driver, who lived nearby in Perdido Key, Florida, was treated at a hospital for scrapes and bruises and released to relatives. Police also charged her with speeding, leaving the scene of an accident and reckless endangerment.

The car belonged to a relative and police were still trying to find out where she got the alcohol. There was none in the vehicle but her blood alcohol level was over the limit for adult motorists, police told the newspaper.

[Email Story](#) [IM Story](#) [Printable View](#)



ADVERTISEMENT

Hooray Beer!

Click here for more 800

Please and not drive. Hooray Beer is brewed with 100% natural ingredients. Hooray Beer is brewed with 100% natural ingredients. Hooray Beer is brewed with 100% natural ingredients. Hooray Beer is brewed with 100% natural ingredients.

Targeting via sophisticated matching

Google display network offer two options for contextual targeting

- **Keyword targeting:** Choose words or phrases related to your product or service so Google can automatically target your ads to relevant websites on the Google Display Network that your customers visit.
- **Topic targeting:** Target your ad to multiple pages about specific topics at once. Topic targeting lets you reach a broad range of pages on the Display Network.

Targeting via sophisticated matching

Contextual targeting

Ads displayed based on content of web site

Behavioral targeting

Delivering relevant messages to audiences based on interests defined by recency and frequency of site navigation behaviors (web sites visited, search queries made, etc).

Targeting via sophisticated matching

Contextual targeting

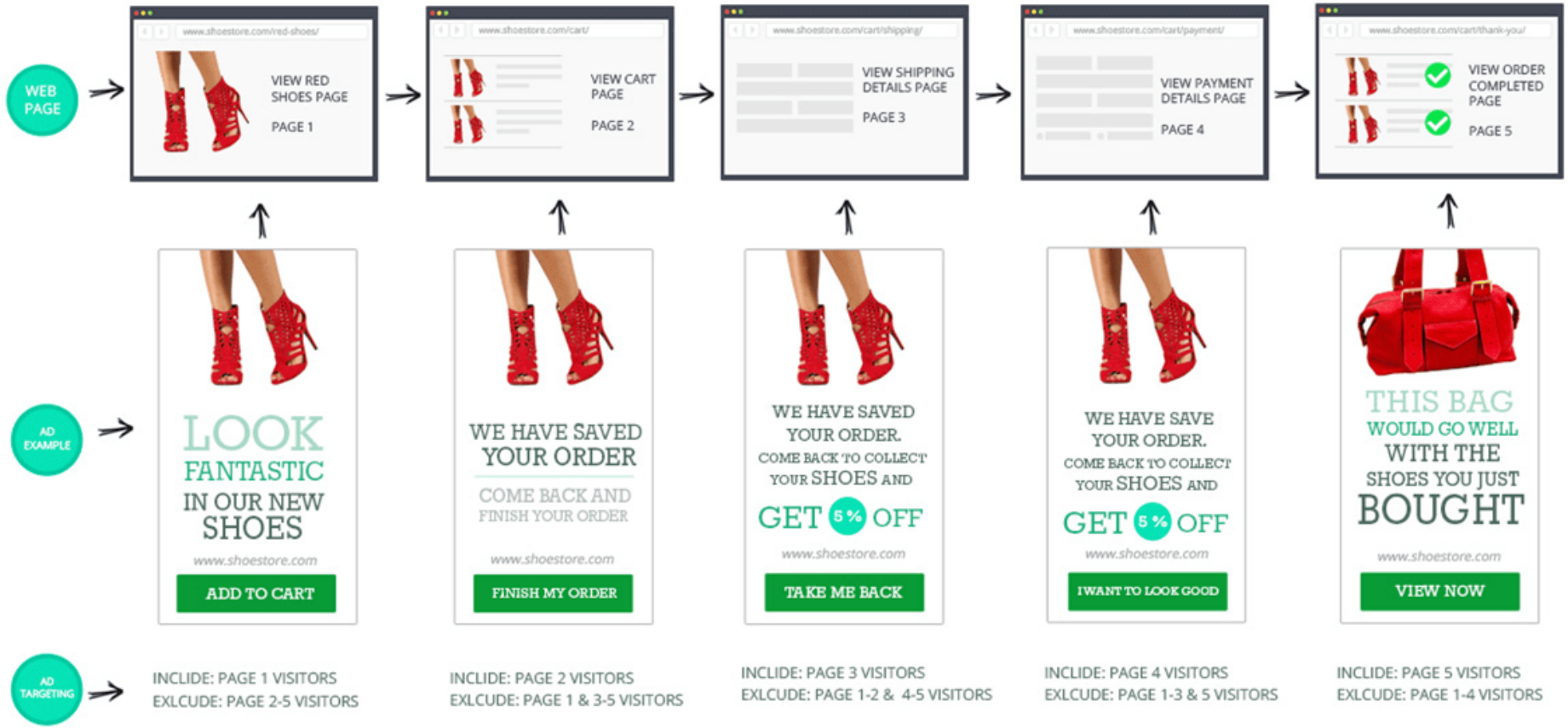
Ads displayed based on content of web site

Behavioral targeting

Delivering relevant messages to audiences based on interests defined by recency and frequency of site navigation behaviors (web sites visited, search queries made, etc).

Retargeting / Remarketing

Online ad is shown to a user who searched for (or saw) a particular kind of content. Based on past sites a user has visited.



Price can also be targeted

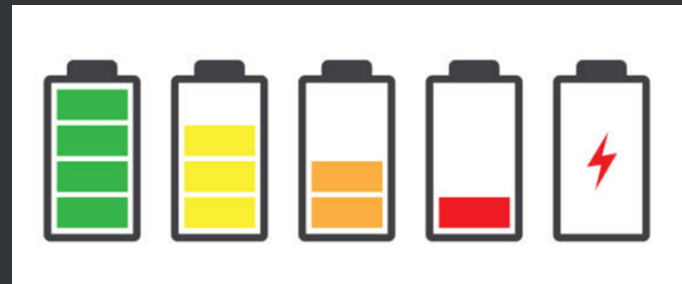
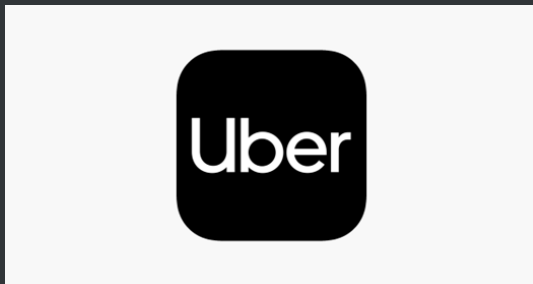
Firms offer different consumers different prices based on their personal situations (e.g., geolocation, search history, purchase history).

Do you use a MacBook or a PC?

Mac vs. PC

The Wall Street Journal investigated claims that Orbitz, a popular online travel agency, was showing higher prices for hotel rooms to Mac users compared to those who used a Windows PC.

Uber charges you higher prices when your battery is low, because it knows you cannot afford to wait!



How are Display Ads Bought & Sold?

Display ads are mainly sold in one of two ways

1. Direct buying from publishers
2. Real-time bidding (RTB) through Ad Exchange

Direct Buying from Publishers

“200,000 impressions to US users on the New York Time’s finance related pages in July”

“All impressions on the EPSN homepage on Sept 21”

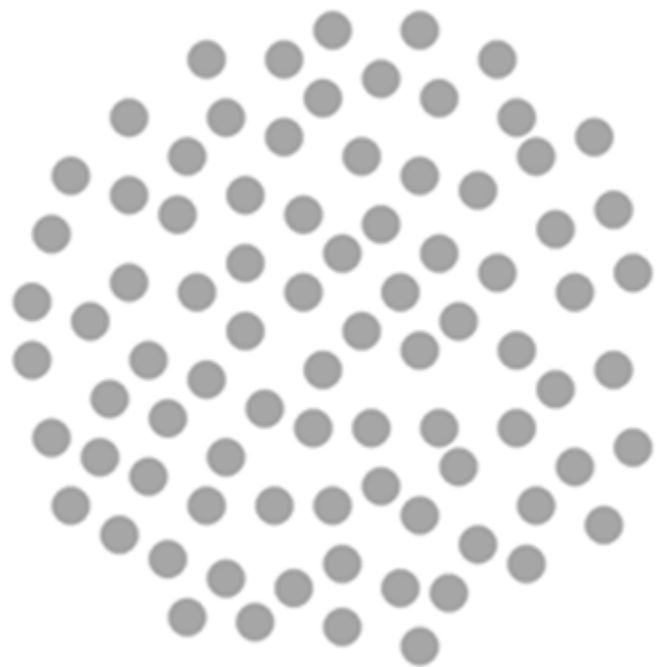
“300,000 impressions on Yahoo! to a retailer’s existing customers in April”

Ad Networks and Ad Exchange

Ad networks / ad exchanges purchase remnant inventory across many publishers and resell to advertisers at a premium.

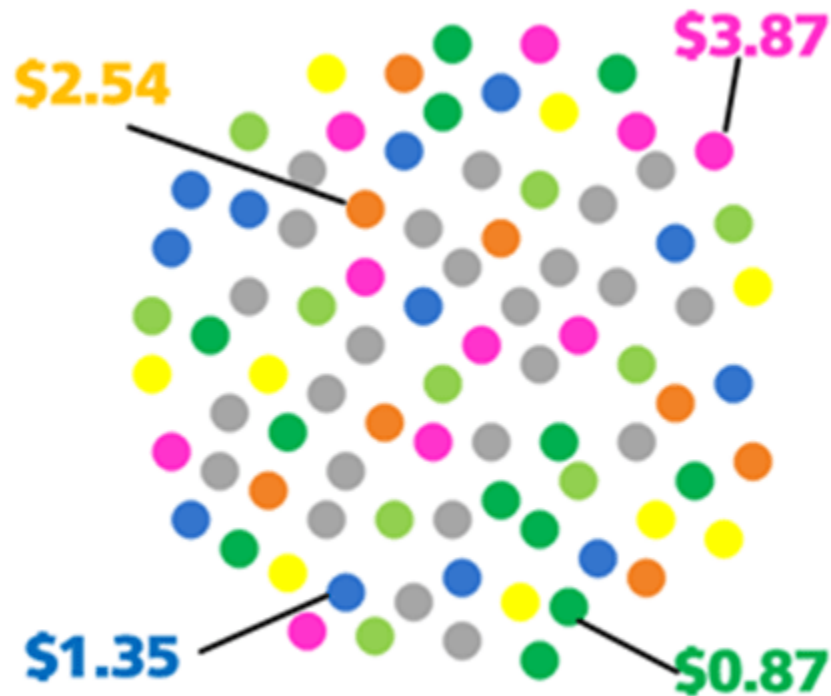
An essential vehicle for monetizing the Long Tail of the Internet. Provide small and mid-sized online publishers with more advertising revenues.

Direct Buy

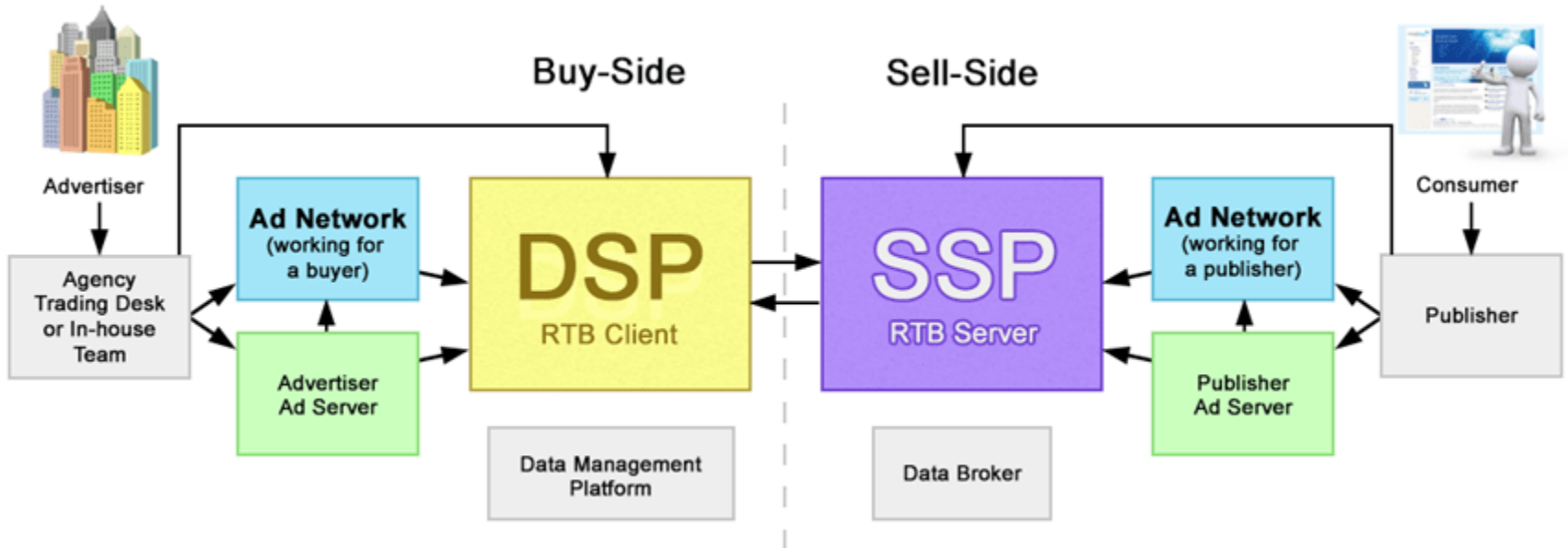


1 price for all impressions
\$10 CPM

Real-time Bidding



Each ad priced individually
\$3 eCPM



<https://www.youtube.com/embed/Cd8DYHx2E9E?enablejsapi=1>

Click and Like Fraud

 **250**


\$27.00 - Delivery in 10 days

[View Package](#)

 **500**

\$42.00 - Delivery in 10 days

[View Package](#)

 **1000**


\$70.00 - Delivery in 15 days

[View Package](#)

 **2000**


\$120.00 - Delivery in 20 days

[View Package](#)

 **5000**

\$260.00 - Delivery in 30 days

[View Package](#)

 **10k**


\$480.00 - Delivery in 45 days

[View Package](#)

 **25k**

\$820.00 - Delivery in 60 days

[View Package](#)

 **50k**

\$1200.00 - Delivery in 90 days

[View Package](#)

Why do people buy fake clicks / likes?

Click and Like Fraud

Publishers profit from clicks and likes, and they have incentive to engage in click and like fraud.

Your competitor may create fake clicks and likes on your ad to waste your advertising budget.

The competitor of your publisher may create fake clicks and likes so that you may terminate the relationship with your publisher.

Click and Like Fraud

Like farmers pay people in developing world

Remember: Fraud is everywhere (click, view, etc.)

But, Like fraud creates a lasting distortion (until the offending user is caught)

- Worse, to avoid detection, like farm users will 'like' pages that are not buying fake likes
- Like farm users hard to detect & removing real users destroys their user experience

Course Project

Course Project

Choose a company and analyze its digital marketing strategy, including:

- Its website
- Online sentiment (How users talk about the brand online? E.g., user reviews on platforms such as TripAdvisor / Amazon; online discussions on platforms such as Twitter / FB)
- Is the company's official social media accounts (e.g., Twitter / IG / FB / YouTube) well managed?
- Competitor Analysis and Consumer Analysis

Course Project

More details can be found [here](#).

You are going to present in the last lecture (Nov 25 for Class A and Nov 29 for Class B); order of presentation will be drawn randomly.

The report is due one week later (Dec 2 for Class A and Dec 6 for Class B).

Companies Chosen by Students in the Past:

Daniel Wellington

Steelseries

Shein

Foodpanda

Nintendo

KKDay

Ocean Park

...

Data Project

The next class will be the lecture for data project.

You will start working on the project in the next class and submit the findings one week later (i.e., each group has one week to complete the data project).