

Digital Markets and Competition Policy

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Digital giants: EC cases

- Apple tax
- Google Shopping
- Google Android
- Google AdSense
- Amazon Marketplace
- ...

2019 [\[edit \]](#)

This list is up to date as of September 30, 2019. Indicated changes in market value are relative to the previous quarter.

Rank		First quarter		Second quarter		Third quarter		Fourth quarter
1		Microsoft ▲904,860 ^[4]		Microsoft ▲1,028,000 ^[4]		Microsoft ▲1,062,000 ^[4]		
2		Apple Inc. ▲895,670 ^[11]		Amazon.com ▲928,540 ^[12]		Apple Inc. ▲1,012,000 ^[11]		
3		Amazon.com ▲874,710 ^[12]		Apple Inc. ▲911,240 ^[11]		Amazon.com ▼858,680 ^[12]		
4		Alphabet Inc. ▲818,160 ^[13]		Alphabet Inc. ▼751,170 ^[13]		Alphabet Inc. ▲838,020 ^[13]		
5		Berkshire Hathaway ▼493,750 ^[14]		Facebook ▲551,490 ^[15]		Berkshire Hathaway ▼508,530 ^[14]		
6		Facebook ▲475,730 ^[15]		Berkshire Hathaway ▲521,100 ^[14]		Facebook ▼508,050 ^[15]		
7		Alibaba Group ▲472,940 ^[16]		Alibaba Group ▼439,150 ^[16]		Alibaba Group ▼435,400 ^[16]		
8		Tencent ▲440,980 ^[17]		Tencent ▼432,080 ^[17]		Tencent ▼398,840 ^[17]		
9		Johnson & Johnson ▲372,230 ^[18]		Visa ▲379,270 ^[19]		Visa ▲385,370 ^[19]		
10		Visa ▲353,710 ^[19]		Johnson & Johnson ▼370,300 ^[18]		JPMorgan Chase ▲376,310 ^[20]		

Different **business models**

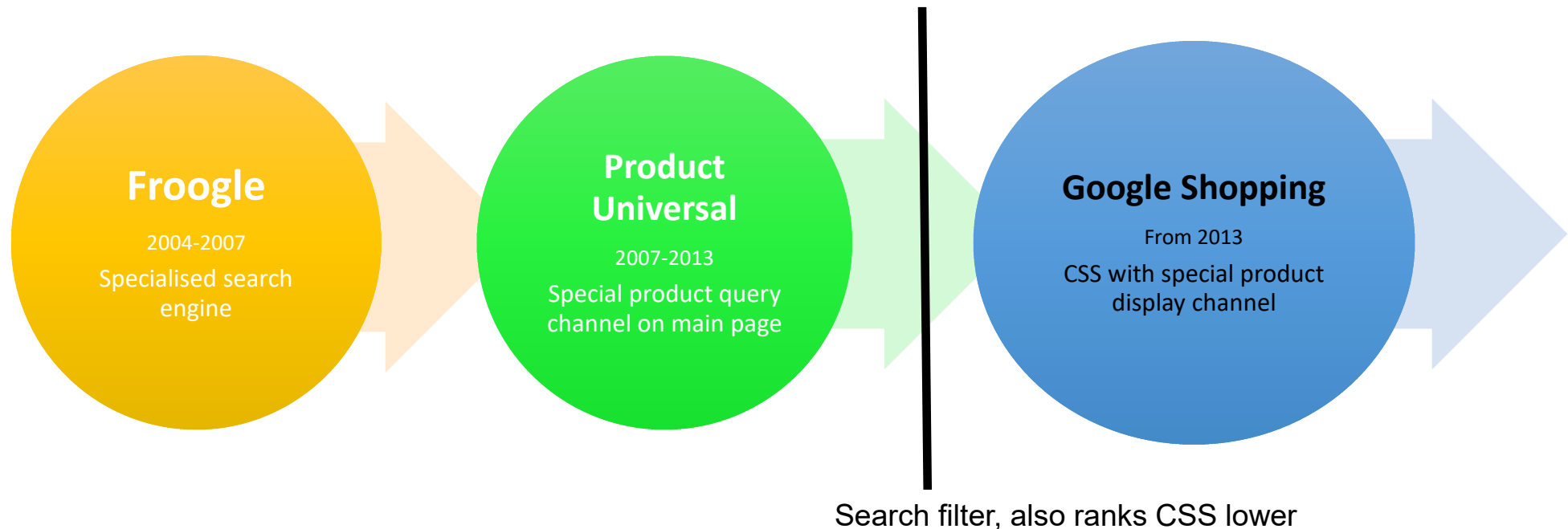
- Paid ads: Google/Facebook
- Digital marketplace: Amazon
- Selling stuff: Apple, Microsoft
- Microsoft? Last “big” antitrust case **in US** almost 20 years ago...

What happened?

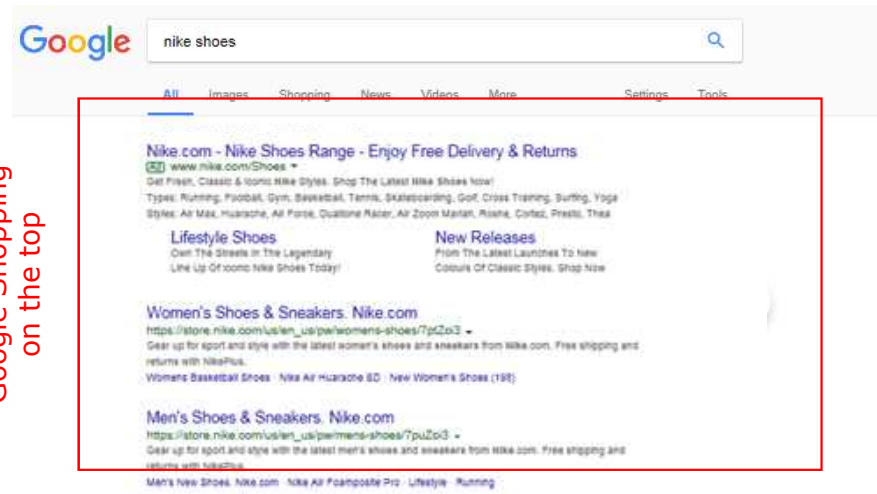
- “Move fast and break things”
- Breaking rules

Google's specialised product search

On top of organic search product results and paid product ads



Demotion



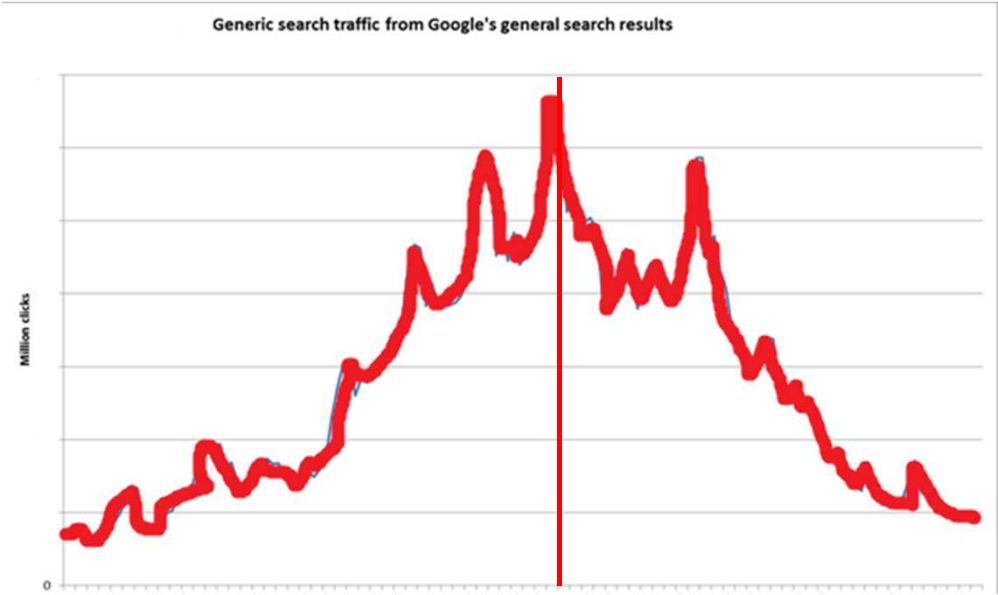
Google Shopping
on the top



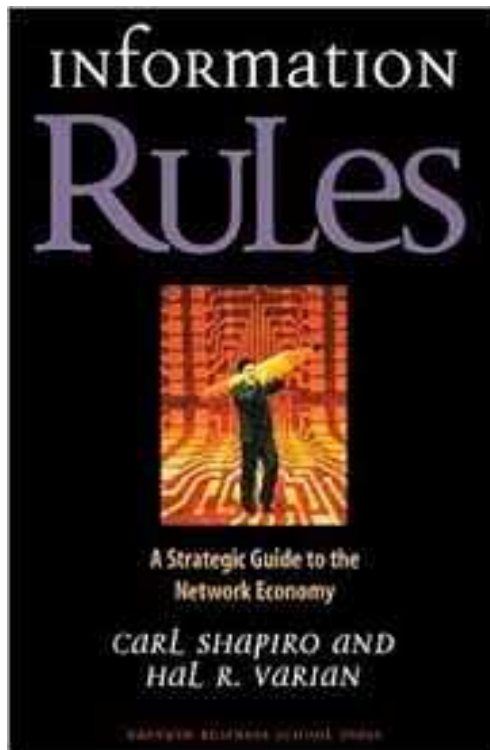
Competitors not visible

Traffic data

Generic search traffic from Google to CSSs



Economics: in theory and in practice



- In theory:
 - - *Multi-homing*
 - - *Rational search*
 - - *Low transaction costs*
 - - *Information*
 - - *Dynamism*
 - - *Democracy!*
- In practice:
 - - *Single-homing*
 - - *Zero clicks on page 2*
 - - *“Bundling”/Cannot port any data*
 - - *?*
 - - *?*
 - - *??*

What did we do wrong and what can we improve?

- Mergers
- Privacy
- Lobby

Mergers

August 6, 2014	Director	Mobile video	USA	—	YouTube, Android	1190
August 17, 2014	Jetpac	Artificial intelligence, image recognition	USA	—	Picasa	1193
August 23, 2014	Gecko Design	Mechanical design	USA	—	X	1194
August 26, 2014	Zync Render	Cloud-based visual effects software	USA	—	Google Cloud Platform	1195
September 10, 2014	LitLabs	Litware	USA	—	Verily	1196
September 11, 2014	Polar	Social polling	USA	—	Google+	1197
October 21, 2014	Firebase	Application development platform	USA	—	Google Cloud Platform	1198
October 23, 2014	Dark Blue Labs & Vision Factory	Artificial intelligence	UK	—	Google Desktop	1199
October 24, 2014	Revolv	Home automation	USA	—	Nest Labs	1200
November 19, 2014	Relativelive	Mobile software prototyping	USA	—	Android	1201
December 17, 2014	Vidmeaker	Video editing	USA	—	YouTube	1202
February 4, 2015	Launchpad Toys	Child-friendly apps	USA	—	YouTube for Kids	1203(2014)
February 8, 2015	CoJuke	Multimedia sharing and storage	USA	—	Google+	1204
February 23, 2015	Softcard	Mobile payments	USA	—	Android Pay	1205(2015)
February 24, 2015	Red Hq Labs	App advertising and discovery	USA	—	Google Play	1206
April 16, 2015	Thinie Audio	Buried sound technology	IRL	—	Google Cardboard	1207
April 16, 2015	Bellman & Howett	Virtual reality software	USA	—	Tilt Brush	1208
May 4, 2015	Timetof	Mobile software	USA	—	Google Inbox, Google Calendar	1209
May 28, 2015	Pulse.io	Mobile app optimizer	USA	—	Android	1210
July 21, 2015	Flaxite	Mobile software prototyping	USA	—	Android	1211
September 21, 2015	Cypher	Ebook subscriptions	USA	—	Google Play Books	1212
September 30, 2015	Joe Mobile	Rich Communication Services	USA	—	Android	1213
June 18, 2016	Agave	Mobile application streaming	USA	—	Android, Google Play	1214
October 17, 2015	DigitalEE	360-degree photography	FOR	—	Street View	1215
November 11, 2015	Fly Labs	Video editing	USA	—	Google Photos	1216
November 11, 2015	8080	Cloud software	USA	—	\$350,000,000 Google Cloud Platform	1217
February 12, 2016	BandPage	Platform for musicians	USA	—	YouTube	1218
February 18, 2016	Pie	Enterprise communications	SGP	—	Spaces (app)	1219
May 2, 2016	Bynaryuse	Interactive tutorials	CAN	—	Google Docs	1220
June 22, 2016	Webpass	Internet service provider	USA	—	Google Fiber	1221
July 6, 2016	Moodstocks	Image recognition	FRA	—	Google Photos	1222
July 8, 2016	Xivato	Cloud-based video services	USA	—	Google Cloud Platform	1223
July 12, 2016	K9	Link management	USA	—	Spaces (app)	1224
July 27, 2016	LaunchKit	Mobile tool maker	USA	—	Firebase	1225
August 8, 2016	Orchestra	Cloud software	USA	—	\$100,000,000 Google Cloud Platform	1226
September 8, 2016	Adqee	API management and predictive analytics	USA	—	\$625,000,000 Google Cloud Platform	1227
September 16, 2016	Union Engines	Location-based analytics	USA	—	Google Maps	1228(2016)
September 19, 2016	API.AI	Natural language processing	USA	—	Google Assistant	1229(2016)
October 11, 2016	FameBit	Branched content	—	—	YouTube	1230
October 24, 2016	EyeFuelTech	Eye tracking, virtual reality	—	—	Google VR	1231(2016)
November 9, 2016	LeanCloud	Android emulator	USA	—	Android	1232
November 21, 2016	Quikraps	Cloud based hands-on training platform	—	—	Google Cloud Platform	1233
December 13, 2016	Cronopics	Smartwatches	USA	—	Android Wear	1234
January 8, 2017	Limes Audio	Voice communication	BVB	—	Google Duo, Google Hangouts	1235
January 19, 2017	Fabric	Mobile app platform	USA	—	Firebase	1236
March 6, 2017	Kippie	Data science	USA	—	Google Cloud Platform	1237
March 9, 2017	AppBridge	Productivity suite	USA	—	Google Docs	1238
May 10, 2017	Outonomy Labs	Virtual reality studio	USA	—	Google VR	1239
July 12, 2017	HealthPass	Artificial intelligence	IND	—	—	1240
August 15, 2017	Artimate	Computer vision	BLR	—	YouTube	1241(2017)
September 21, 2017	HTC (company)	Talent and intellectual property licenses	TWN	—	\$1,100,000,000 Google Pixel	1242(2017)
September 26, 2017	Bitium	Single sign-on and identity management	USA	—	Google Cloud Platform	1243
October 9, 2017	Relay Media	AVR converter	USA	—	Accelerated Mobile Pages	1244
October 11, 2017	8080	Podcasts	USA	—	Google Play Music, Google Podcasts	1245
March 27, 2018	Tensor	GPU image search	USA	—	Google Images	1246
May 9, 2018	Velocstra	Cloud Migration, Google Cloud Platform	USA	—	Google Cloud Platform	1247
May 14, 2018	Cask	Big Data, Hadoop	USA	—	Google Cloud Platform	1248

- https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Alphabet

Data and privacy

- Search activity



- Browsing activity



- Responses to targeted ads



- Location



- Electronic communications



- Activity in social networks



- Past purchases



Some platforms
can combine
different sources

The algorithm (aka the business model)

THE INTERPRETER

*On YouTube's Digital Playground,
an Open Gate for Pedophiles*

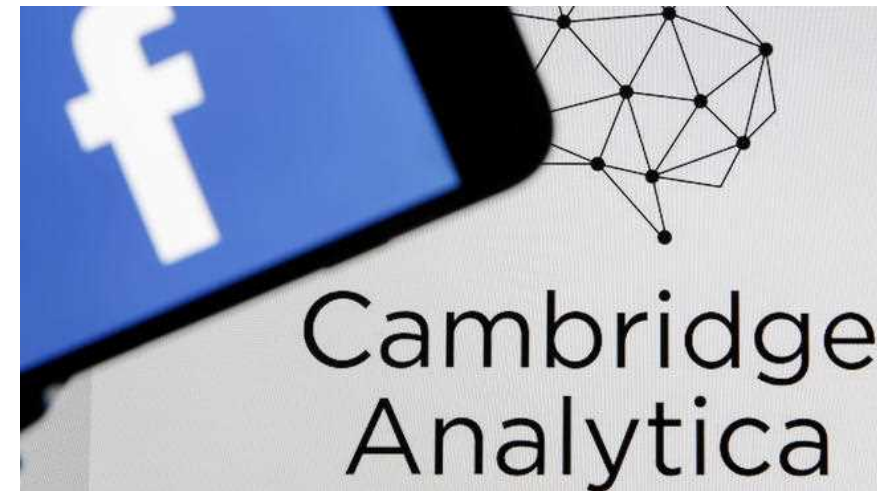
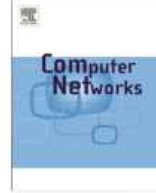


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Contents lists available at SciVerse ScienceDirect

Computer Networks

journal homepage: www.elsevier.com/locate/comnet



Reprint of: The anatomy of a large-scale hypertextual web search engine

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Thank you!

ありがとうございます

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