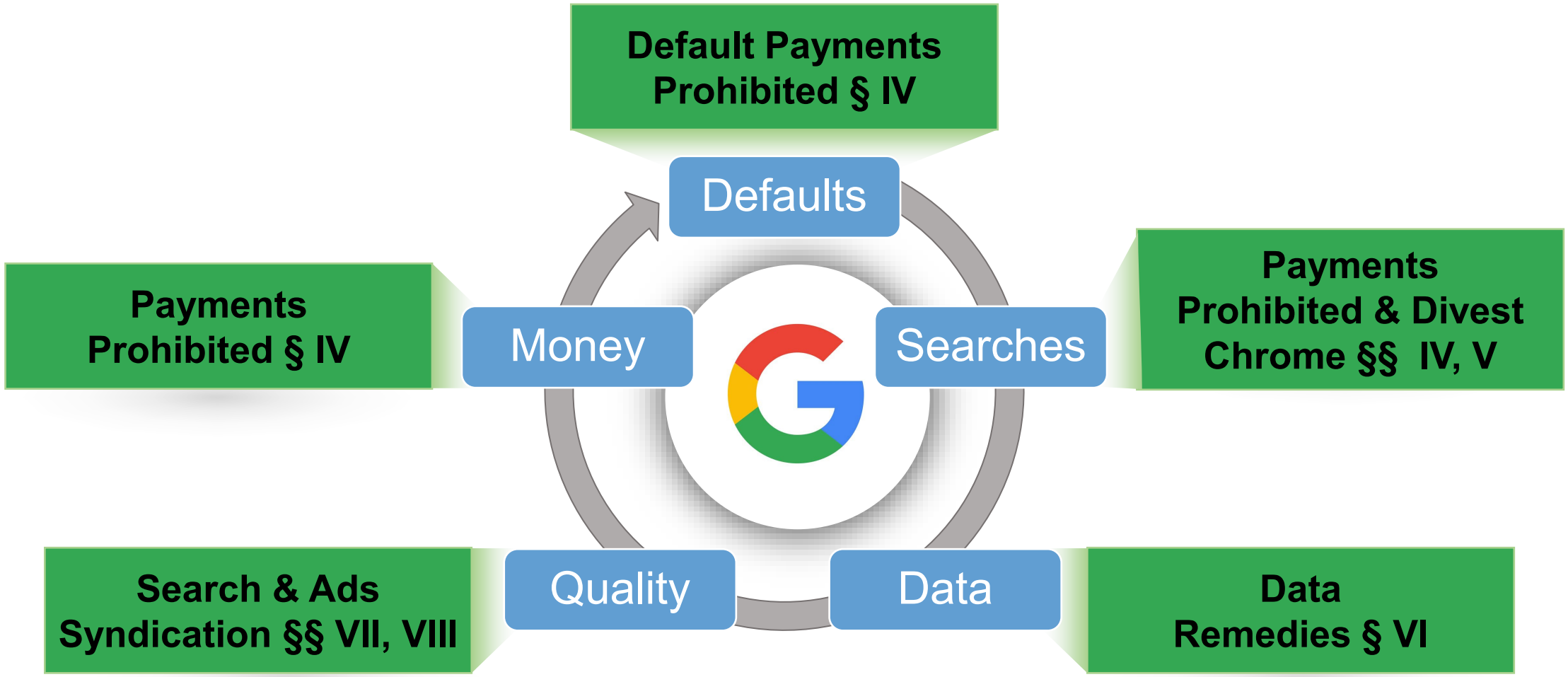
United States & Co-Plaintiff States v. Google LLC

Plaintiffs' Remedies Closing Argument

Data Sharing & Syndication Remedies

May 30, 2025

Plaintiffs' Remedies Enable Competition



Memorandum Opinion

- "Google's exclusive agreements have a second important anticompetitive effect: **They deny rivals access to user queries, or scale, needed to effectively compete**."

- "[W]ithout access to scale, other GSEs have remained at a persistent competitive disadvantage, and **new entrants [could not] hope to achieve a scale that would allow them to compete with Google**."

- "Google's distribution agreements have **constrained the query volumes of its rivals**, thereby inoculating Google against any genuine competitive threat."

Mem. Op. at 226, 234.

Data Remedies Are Important

Eddy Cue

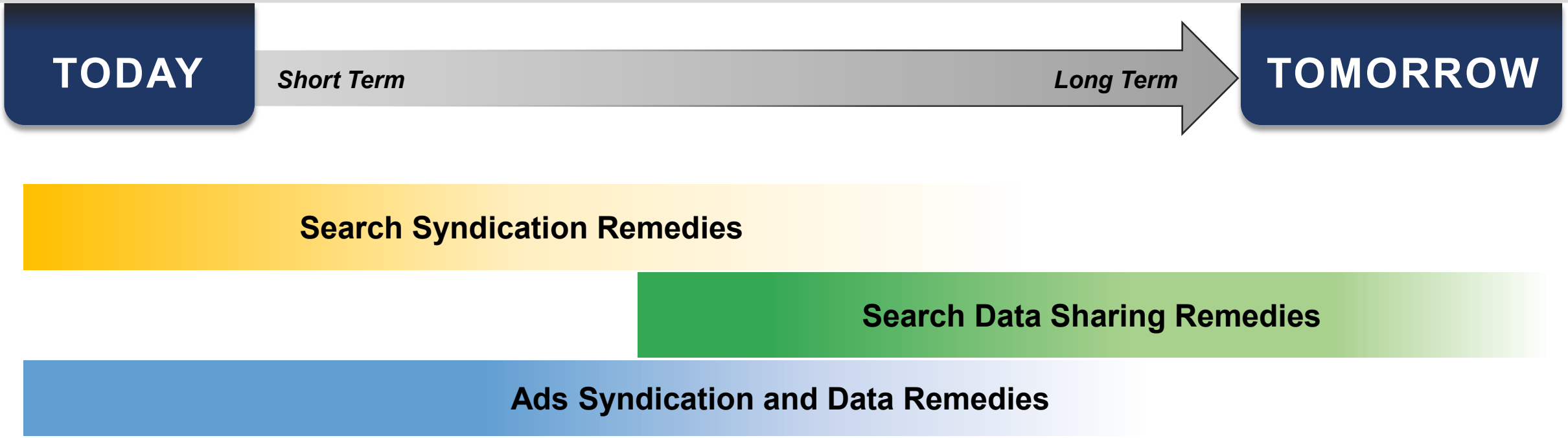
Senior Vice President of Services

Apple

"And I think the only other thing that has the potential is, is there any way that there's a way to accelerate their ability to having bigger search indexes."

Rem. Tr. 3848:5–3849:17 (Cue (Apple)).

Impact Of Data Remedies Timeline



Data Sharing And Syndication Remedies Work On Different Timelines

Nick Turley

Head of Product, ChatGPT

OpenAI

"The syndicated search results would be helpful now. . . [The data sharing remedy] aids us in the medium run, because it allows us to own our own destiny and not just partner for real-time information but build a great, high-quality index that is, you know, proprietary and that can serve our product over time."

Rem. Tr. 424:18–425:24 (Turley (OpenAI)).

Overcoming Google's Data Advantage Will Take Years

Nick Turley

Head of Product, ChatGPT

OpenAI

"But I think, you know, five years from now, we would have extreme clarity on whether or not that goal is achievable or not."

Rem. Tr. 426:1–427:19 (Turley (OpenAI)).

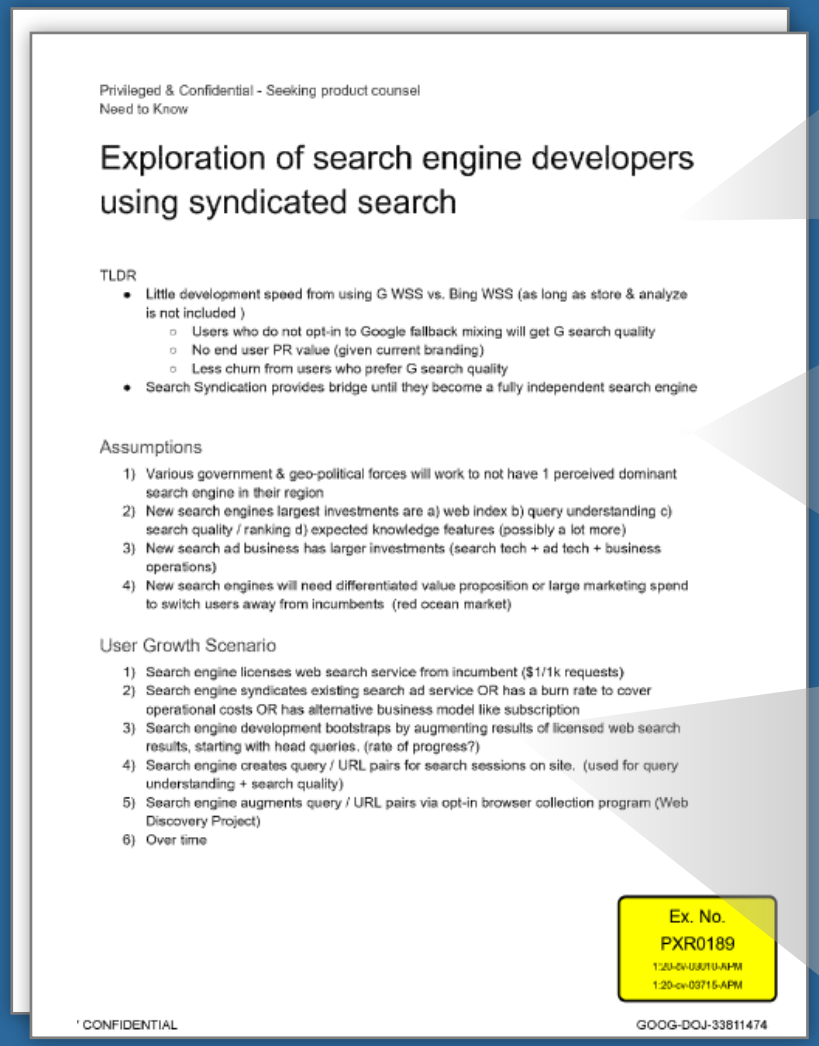
Roadmap

1. Syndication Remedies
2. Data Sharing Remedies
3. Implementation
4. Google's Purported Concerns

Roadmap

1. Syndication Remedies
2. Data Sharing Remedies
3. Implementation
4. Google's Purported Concerns

Search Syndication Serves As A Bridge



Privileged & Confidential - Seeking product counsel
Need to Know

Exploration of search engine developers using syndicated search

TLDR

- Little development speed from using G WSS vs. Bing WSS (as long as store & analyze is not included)
  - Users who do not opt-in to Google fallback mixing will get G search quality
  - No end user PR value (given current branding)
  - Less churn from users who prefer G search quality
- Search Syndication provides bridge until they become a fully independent search engine

Assumptions

1) Various government & geo-political forces will work to not have 1 perceived dominant search engine in their region
2) New search engines largest investments are a) web index b) query understanding c) search quality / ranking d) expected knowledge features (possibly a lot more)
3) New search ad business has larger investments (search tech + ad tech + business operations)
4) New search engines will need differentiated value proposition or large marketing spend to switch users away from incumbents (red ocean market)

User Growth Scenario

1) Search engine licenses web search service from incumbent ($1/1k requests)
2) Search engine syndicates existing search ad service OR has a burn rate to cover operational costs OR has alternative business model like subscription
3) Search engine development bootstraps by augmenting results of licensed web search results, starting with head queries. (rate of progress?)
4) Search engine creates query / URL pairs for search sessions on site. (used for query understanding + search quality)
5) Search engine augments query / URL pairs via opt-in browser collection program (Web Discovery Project)
6) Over time

Ex. No.
PXR0189
1:20-cv-03010-APM
1:20-cv-03715-APM

' CONFIDENTIAL GOOG-DOJ-33811474

Exploration of search engine developers using syndicated search

TLDR

* * *

- Search Syndication provides bridge until they become a fully independent search engine

User Growth Scenario

* * *

3) Search engine development bootstraps by augmenting results of licensed web search results, starting with head queries. (rate of progress?)

PXR0189 at -474.

Syndication Used To Backfill Search And Ad Results

Jesse Adkins

Director of Product Management

Google

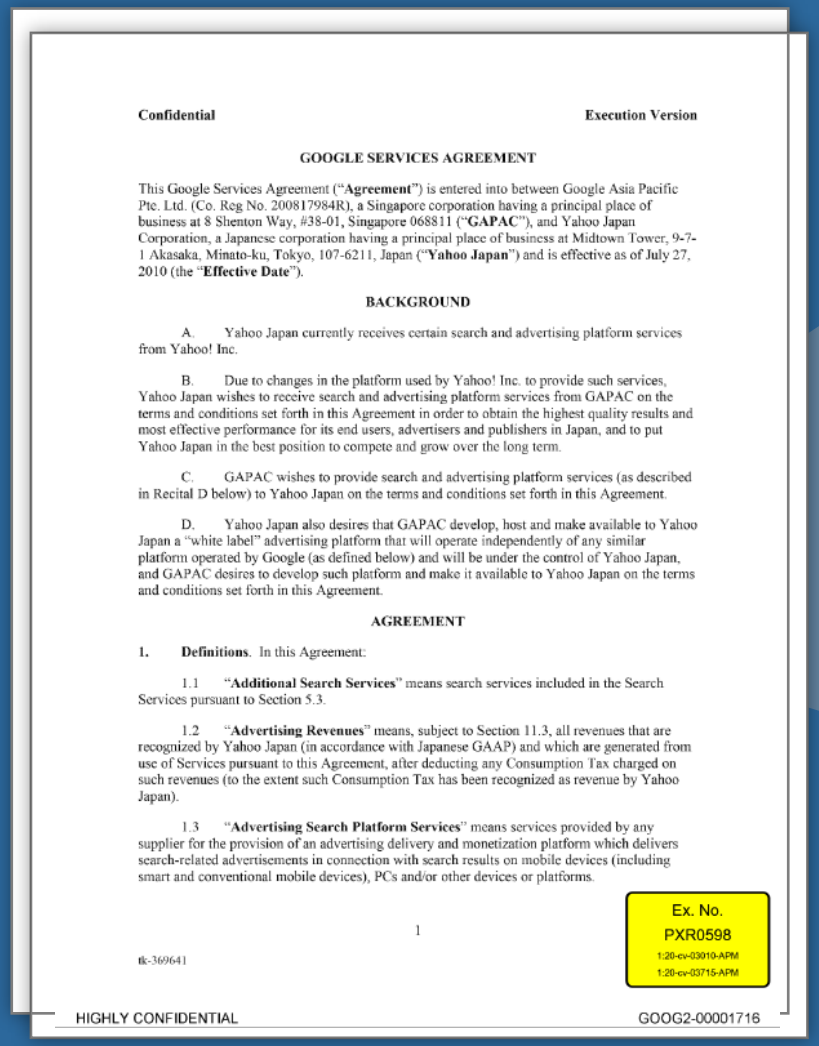
Q. And search syndication can help a new search engine backfilling results, agreed?

A. I would say that a search engine could call a different search syndication service to backfill their queries. There could be many reasons why.

Q. And you could also -- backfilling can also work for advertising as well; correct?

A. Yes, I am aware that ad networks can backfill.

Yahoo Japan Syndication Agreement



Confidential Execution Version

GOOGLE SERVICES AGREEMENT

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tk-369641

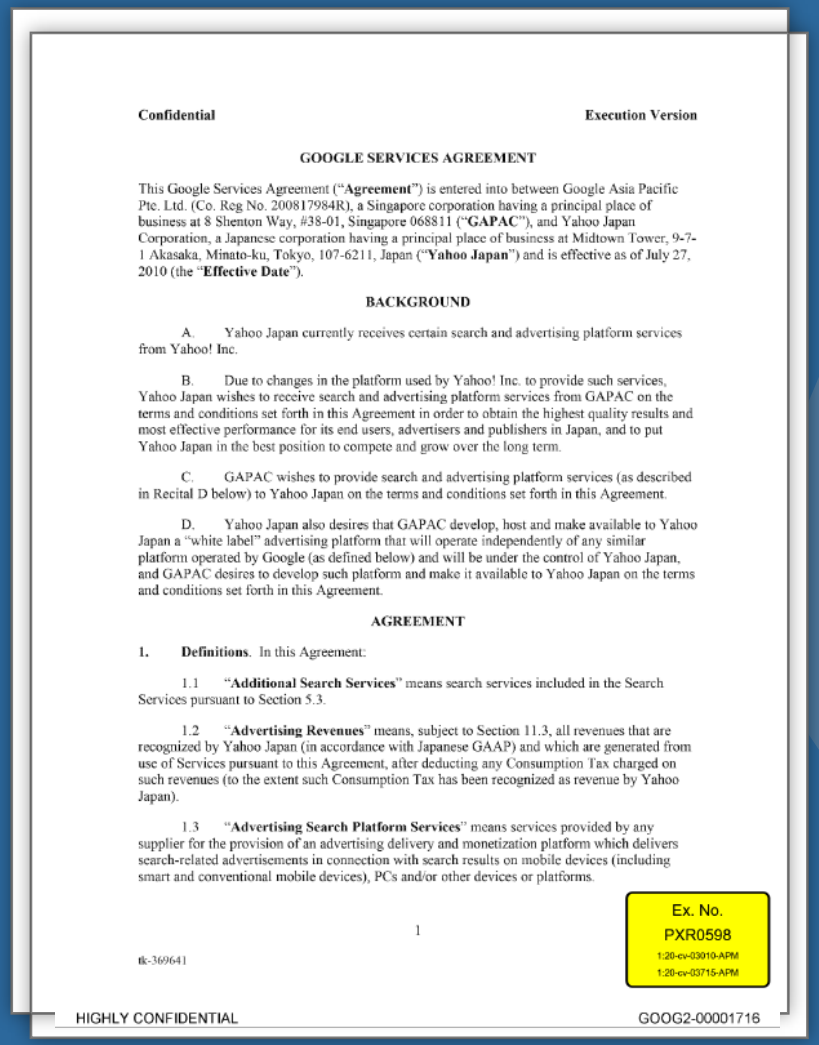
Ex. No.
PXR0598
1:20-cv-03010-APM
1:20-cv-03715-APM

HIGHLY CONFIDENTIAL GOOG2-00001716

2.1 **Launch of Search Services**. GAPAC will develop and make the Search Services available for live use by Yahoo Japan in accordance with the Development and Implementation Plan and, with respect to Video Search Services, Section 2.3. Yahoo Japan will use commercially reasonable efforts to launch the Search Services into live use in accordance with the Launch Schedule and will confirm the First Launch Date in writing to GAPAC. The parties will each use reasonable efforts to work together to facilitate the prompt development and launch of each Search Service into live use by Yahoo Japan (for Sites and Partner Sites) in accordance with the Launch Schedule and the terms of this Agreement.

PXR0598 at -722.

Yahoo Japan Syndication Agreement



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Ex. No. PXR0598 1:20-cv-03010-APM 1:20-cv-03715-APM

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APPENDIX 3
Search Features

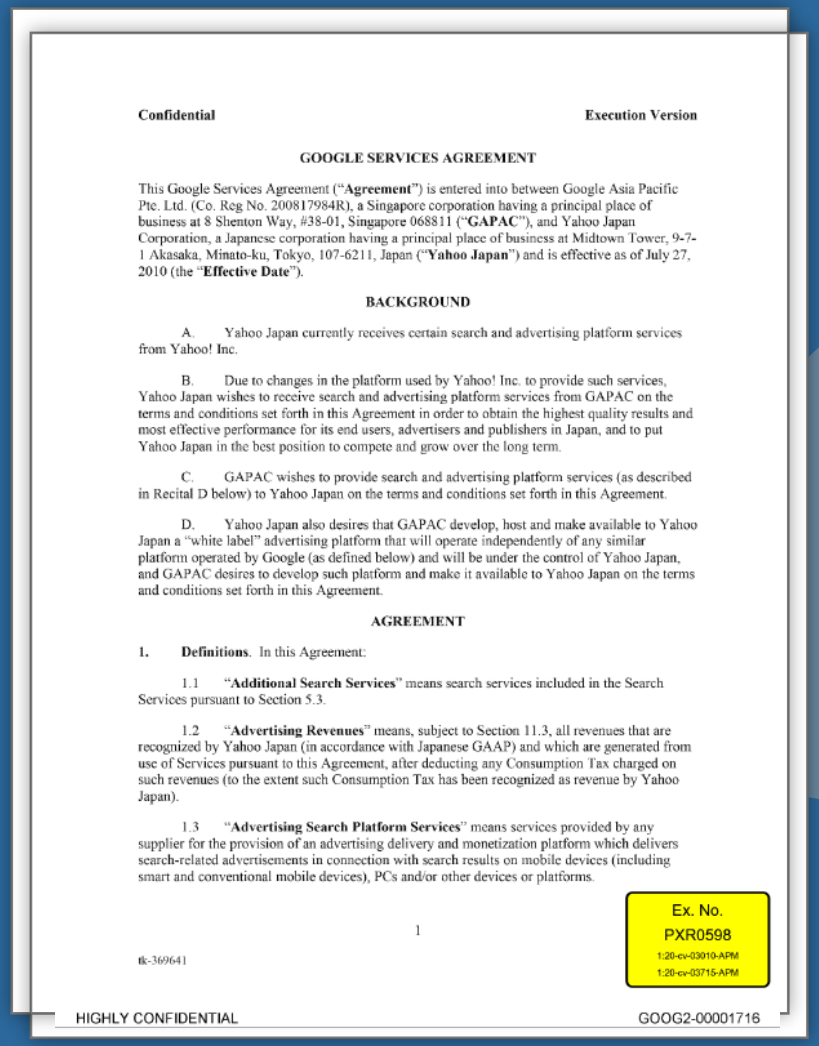
A – Search Features which are readily available on launch

B – Search Features which require engineering effort on the part of Google before they can be made available to Yahoo Japan

Available within a longer time period which requires engineering effort on behalf of Google, such timings to be agreed in the Development and Implementation schedule to be agreed between parties

PXR0598 at -752–53.

Yahoo Japan Syndication Agreement Includes Synthetic Queries



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(c) In order to assist Yahoo Japan in its own search quality initiatives, GAPAC will permit Yahoo Japan to submit machine generated queries in order to scrape the sections of Google's Japanese Sites which provide Web Search Services, Image Search Services, Video Search Services and any Additional Services. For clarity, as of the Effective Date these sections are contained under the tabs "web" ("ウェブ"), "image" ("画像"), and "video" ("動画"). The maximum number of queries per second (QPS) for such scraping will be agreed between the parties. Yahoo Japan will not permit Partners to submit queries for scraping purposes, and Yahoo Japan will not make any data obtained from its scraping hereunder available to any third parties, including its Partners. In addition, GAPAC recognizes that Yahoo Japan may store user queries and associated clicks on Search Result pages to assist in its search quality evaluations.

PXR0598 at -723.

Roadmap

1. Syndication Remedies
2. **Data Sharing Remedies**
3. Implementation
4. Google's Purported Concerns

Roadmap

2 Data Sharing Remedies

- Index
- Knowledge Graph
- User-Side Data
- GenAI Data
- Ads Data

Roadmap

2 Data Sharing Remedies

- **Index**
- Knowledge Graph
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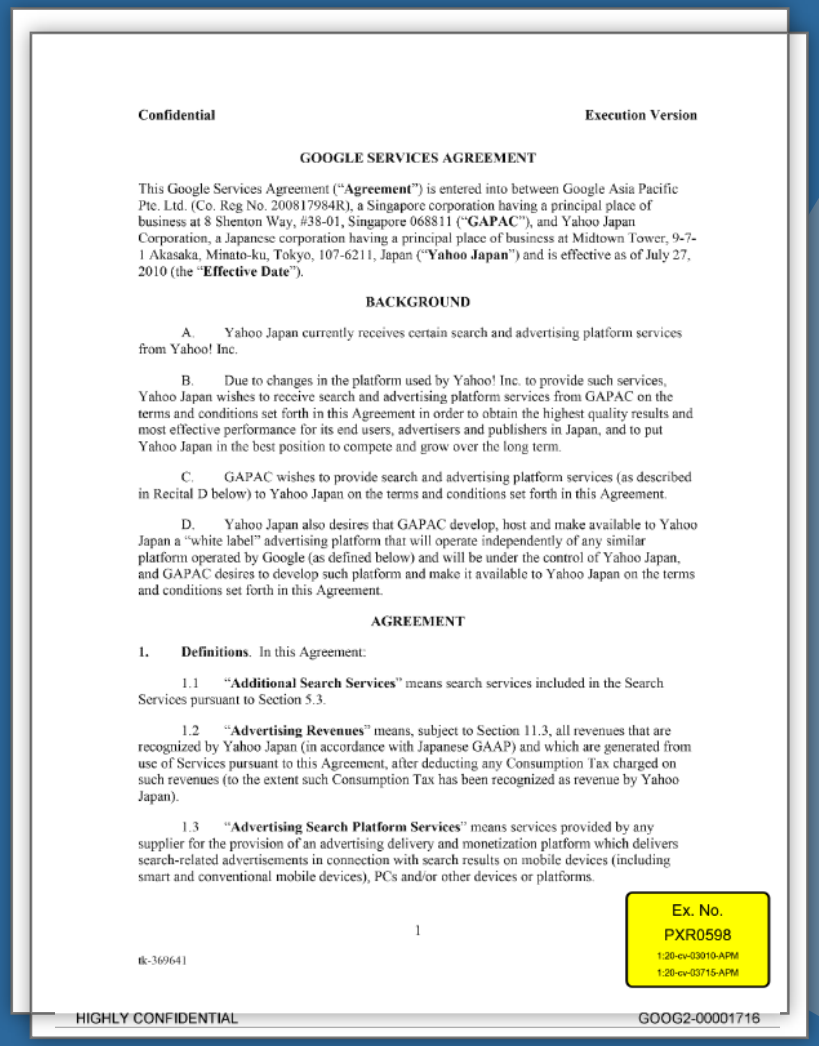
Yahoo Japan Syndication Agreement



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Ex. No. PXR0598 1:20-cv-03010-APM 1:20-cv-03715-APM

HIGHLY CONFIDENTIAL GOOG2-00001716

2.9 **Provision of Data and Information by GAPAC**. Throughout the Term, GAPAC will make available to Yahoo Japan the following data and information as reasonably requested by Yahoo Japan for purposes of implementing or improving GAPAC's provision of the Services or the operation of the Yahoo Japan Ad Business:

(a) the following data related to Search Services, in addition to the data made available by GAPAC via the APIs and Google's search protocols:

(i) a full set of DocIDs (being unique identifiers created by GAPAC in respect of documents in its search index) and Canonical Doc IDs (being single DocIDs generated by GAPAC in respect of all documents that are considering duplicates of each other), as well as a DocID to URL map; and

(ii) a database consisting of a set of Static Signals for each DocID, on a periodic basis (and in any event more frequently than once every ninety (90) days). For the purposes of this Section 2.9, a "Static Signal" is any of the following specified attributes associated with a DocID: (A) language, (B) adult content identifier, (C) host, (D) global popularity as measured by the number of inlinks, (E) time that the URL was first seen, (F) time that the URL was last crawled, (G) spam score, (H) anchor text, (I) device-type flag and (J) any other specified attributes agreed by the parties in the future. For clarity, each periodic update of the Static Signals will consist of delivery of the entire then-current database of Static Signals. Yahoo Japan will permanently destroy each Static Signal within ninety (90) days of its receipt by Yahoo Japan; and

(b) the data types listed in part 2 of Appendix 2 as data to be provided to Yahoo Japan.

PXR0598 at -726.

Index Remedy

Gabriel Weinberg

Founder & CEO

DuckDuckGo

"Over the longer term this information would be useful to build out these crawlers to know what sites to prioritize more. . . . But in general, I think it would be very useful, yes."

Rem. Tr. 840:22–842:3 (Weinberg (DuckDuckGo)).

Index Remedy

Nick Turley

Head of Product, ChatGPT

OpenAI

"Now, because we're an earlier product and we have a – magnitudes less traffic than, say, Google or other sources of traffic that these content providers get, we have the problem of incentivizing the ecosystem to work with us. . . . we always have the risk that content providers may want to opt out before we've really built the product yet, which is a worry, a significant worry I have, as we begin to crawl more sites."

Rem. Tr. 405:8–406:18 (Turley (OpenAI)).

Building An Index Is Not Easy

James Allan, Ph.D.

Google's Expert

Professor of Information
& Computer Sciences

UMass Amherst

Q. Understood. It would not be easy to download a lot of pages quickly . . . at a large scale?

A. Right. That would require appropriate hardware infrastructure and definitely some time.

Rem. Tr. 2872:16–24 (Allan (Def. Expert)).

Roadmap

2 Data Sharing Remedies

- Index
- **Knowledge Graph**
- User-Side Data
- GenAI Data
- Ads Data

User-Side Data

Elizabeth Reid

Vice President of Google Search

Google

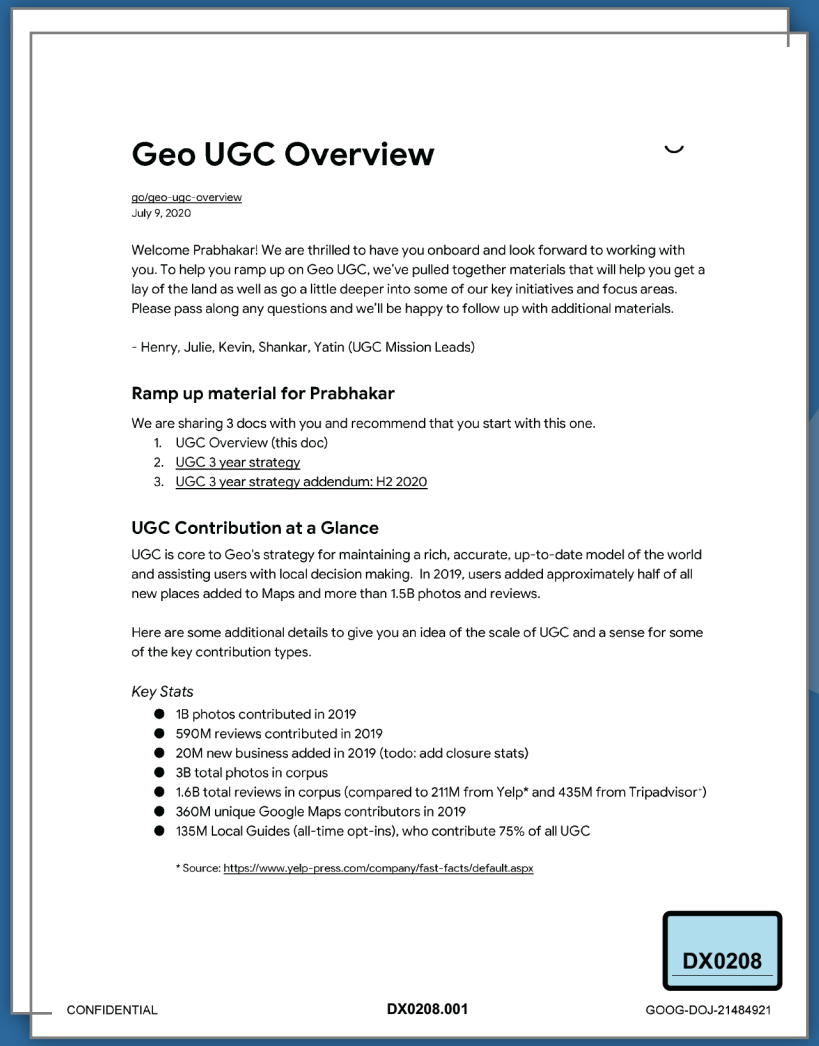
A. . . . And UGC is really fundamental to us having an accurate model of the world, and, really, the maps and local product lives or dies based on the quality of the data. And, so, this was really fundamental. . . .

* * *

A. . . . [H]alf of the new places that we figured out came from users telling us about that. . . .

Liab. Tr. 8237:9–8239:14 (Reid (Google)).

Knowledge Graph Relies Upon User Data



Geo UGC Overview

go/geo-ugc-overview
July 9, 2020

Welcome Prabhakar! We are thrilled to have you onboard and look forward to working with you. To help you ramp up on Geo UGC, we've pulled together materials that will help you get a lay of the land as well as go a little deeper into some of our key initiatives and focus areas. Please pass along any questions and we'll be happy to follow up with additional materials.

- Henry, Julie, Kevin, Shankar, Yatin (UGC Mission Leads)

Ramp up material for Prabhakar

We are sharing 3 docs with you and recommend that you start with this one.

1. UGC Overview (this doc)
2. UGC 3 year strategy
3. UGC 3 year strategy addendum: H2 2020

UGC Contribution at a Glance

UGC is core to Geo's strategy for maintaining a rich, accurate, up-to-date model of the world and assisting users with local decision making. In 2019, users added approximately half of all new places added to Maps and more than 1.5B photos and reviews.

Here are some additional details to give you an idea of the scale of UGC and a sense for some of the key contribution types.

Key Stats

- 1B photos contributed in 2019
- 590M reviews contributed in 2019
- 20M new business added in 2019 (todo: add closure stats)
- 3B total photos in corpus
- 1.6B total reviews in corpus (compared to 211M from Yelp* and 435M from Tripadvisor*)
- 360M unique Google Maps contributors in 2019
- 135M Local Guides (all-time opt-ins), who contribute 75% of all UGC

* Source: https://www.yelp-press.com/company/fast-facts/default.aspx

DX0208

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- Knowledge Engine – Much of our UGC content that represents facts about businesses (e.g. business names, location, hours, phone numbers, or even richer data such as restaurant menus) ends up in the Knowledge Engine. We build the technology for allowing UGC and Merchant data to safely flow into the Google-wide Knowledge Graph. Moreover, we are partnering with the User-Generated Knowledge (UGK) effort to provide expertise and frameworks for enabling their UGC initiatives to benefit from the infrastructure that Geo has built.

Roadmap

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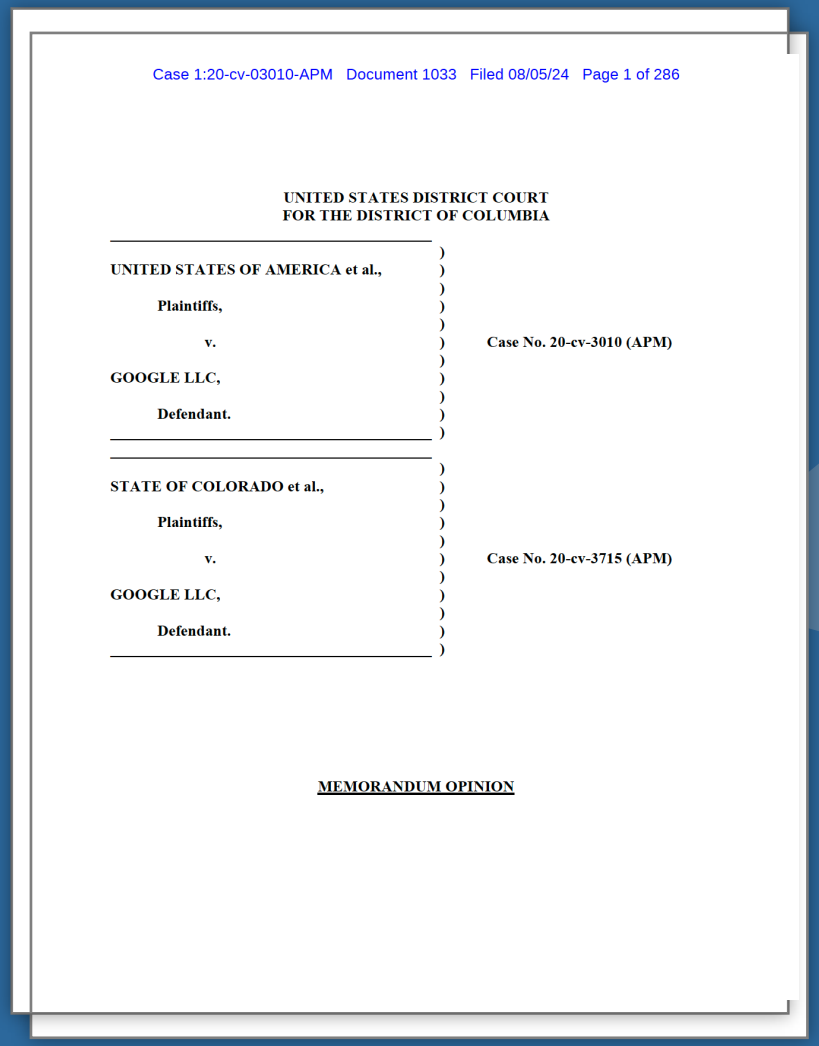
- **User-Side Data**
- GenAI Data
- Ads Data

Access To User Data Improves Quality



Case 1:20-cv-03010-APM Document 1033 Filed 08/05/24 Page 1 of 286

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA et al.,

Plaintiffs,

v. Case No. 20-cv-3010 (APM)

GOOGLE LLC,

Defendant.

STATE OF COLORADO et al.,

Plaintiffs,

v. Case No. 20-cv-3715 (APM)

GOOGLE LLC,

Defendant.

MEMORANDUM OPINION

90. Google has used its scale advantage to improve the quality of its search product. At every stage of the search process, user data is a critical input that directly improves quality.

Mem. Op. at 35 (FOF ¶ 90).

User-Side Data

Nick Turley

Head of Product, ChatGPT

OpenAI

"Put another way, the ClicData [sic] helps us build the search piece. We're already good on the [LLM] piece; that's a different piece and we need no help with that. But the search part can benefit from click-and-query data and a number of other signals."

Rem. Tr. 401:13–402:5 (Turley (OpenAI)).

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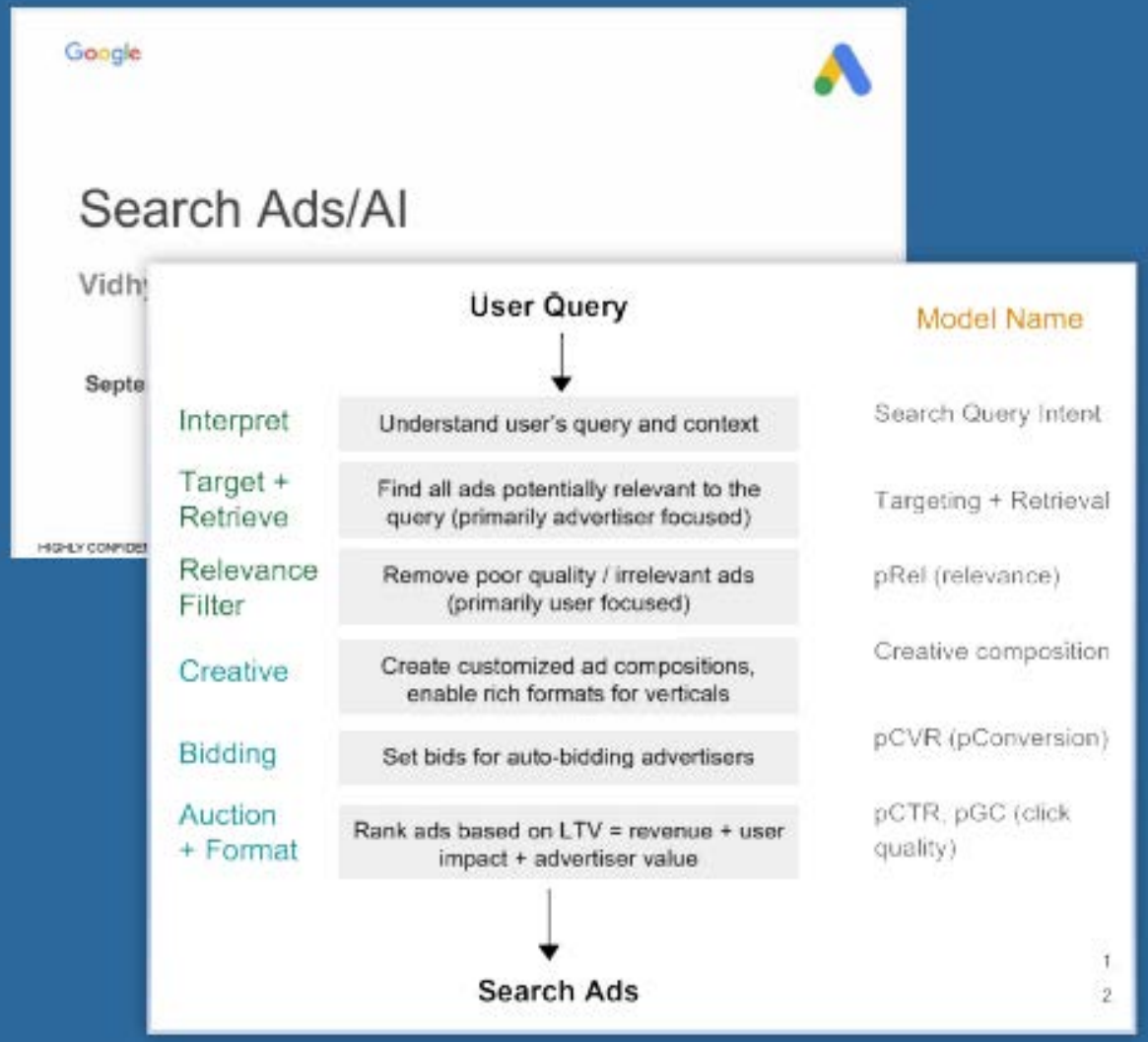
The Relevant Models Are Trained On User Data



Q. And then across from that it says, PCVR, PCTR, PGC. Do you see that?

A. Yes.

Q. And those are auction models -- those are LEM-type auction models; is that right?

A. They are models whose predictions feed into the auction, yes.

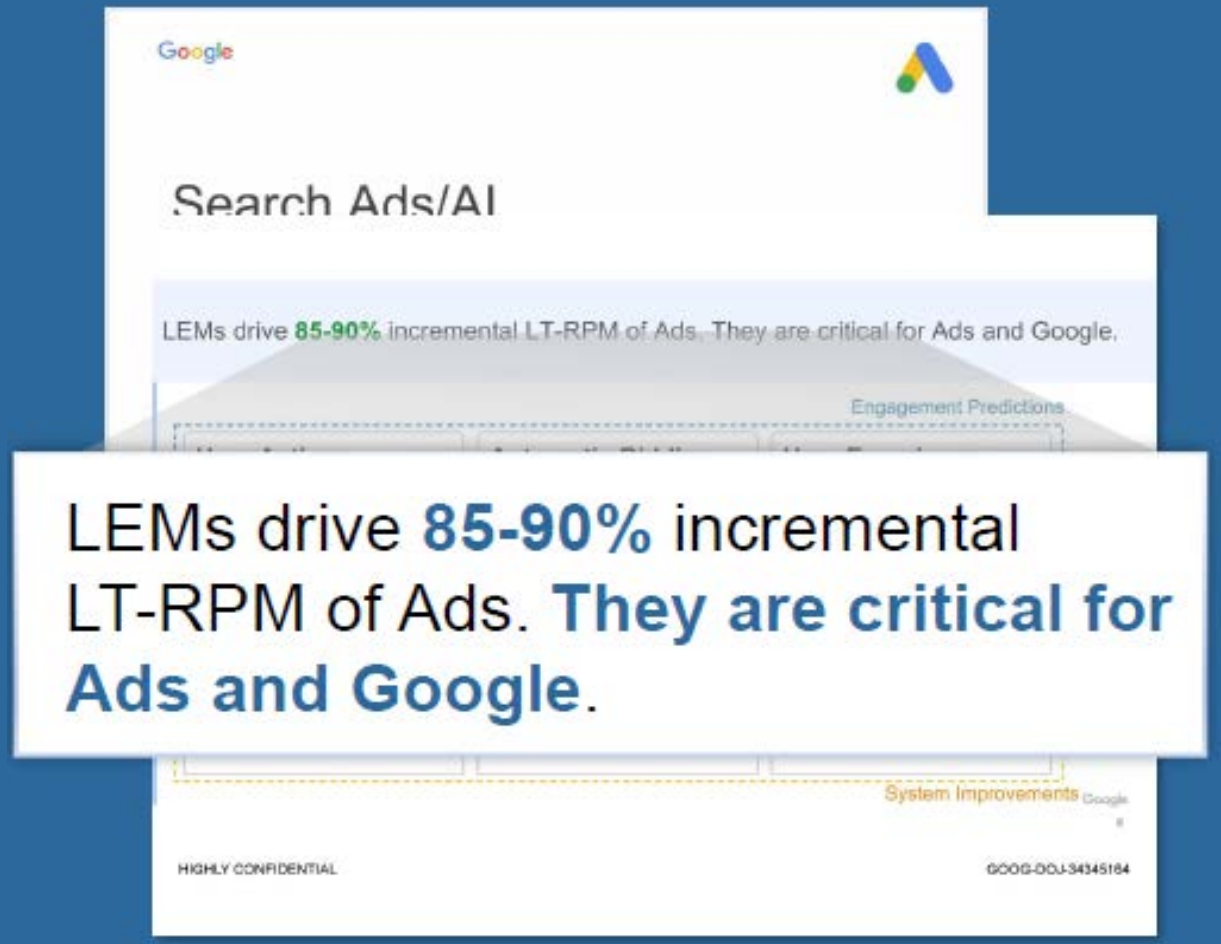
Q. And these auction models are trained on user interaction data. Correct?

A. Correct.

Testimony of Omkar Muralidharan

PXR0246 at -156; Rem. Tr. 4464:14–23 (Muralidharan (Google)).

The Relevant Models Drive Search Ads Monetization



Q. You would agree that LEMs are critical for ads in Google. Right?

A. I would agree that LEMs are critical for ads in Google. We use them extensively.

Testimony of Omkar Muralidharan

PXR0246 at -164 (emphasis added); Rem. Tr. 4466:6–9 (Muralidharan (Google)).

Scale Improves Ad Quality

Mark Israel, Ph.D.

Google's Expert

Founding Partner

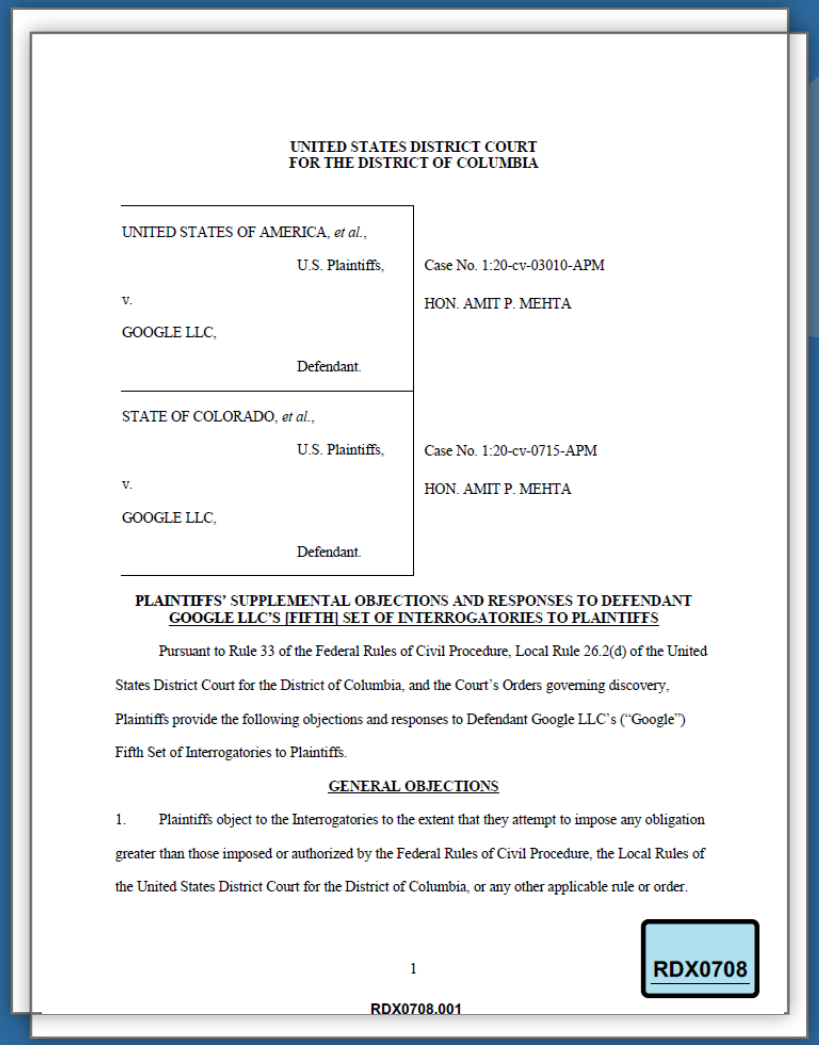
Econic Partners

Q. And generally you would agree that more scale improves ads quality?

A. Yeah. . . all else equal, I think that's true.

Rem. Tr. 3304:23–3305:4 (Israel (Def. Expert)).

Dr. Muralidharan's Testimony Misstates The Ads Data Sharing



UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA, *et al.*, U.S. Plaintiffs, v. GOOGLE LLC, Defendant.	Case No. 1:20-cv-03010-APM HON. AMIT P. MEHTA
STATE OF COLORADO, *et al.*, U.S. Plaintiffs, v. GOOGLE LLC, Defendant.	Case No. 1:20-cv-0715-APM HON. AMIT P. MEHTA

PLAINTIFFS' SUPPLEMENTAL OBJECTIONS AND RESPONSES TO DEFENDANT GOOGLE LLC'S [FIFTH] SET OF INTERROGATORIES TO PLAINTIFFS

Pursuant to Rule 33 of the Federal Rules of Civil Procedure, Local Rule 26.2(d) of the United States District Court for the District of Columbia, and the Court's Orders governing discovery, Plaintiffs provide the following objections and responses to Defendant Google LLC's ("Google") Fifth Set of Interrogatories to Plaintiffs.

GENERAL OBJECTIONS

1. Plaintiffs object to the Interrogatories to the extent that they attempt to impose any obligation greater than those imposed or authorized by the Federal Rules of Civil Procedure, the Local Rules of the United States District Court for the District of Columbia, or any other applicable rule or order.

1

RDX0708

RDX0708.001

Shared ads data "would not include the final outputs from the identified models in the Auction and Prediction stack. . . . **For interim models trained on output from other models**, the Ads Data would include the constituent raw data underpinning the processed signals but **would not include the processed signals themselves**."

Q. . . . Are some of the interim inputs into Google's ads models themself the outputs of other ads models?

A. Yes. . . .

Q. And would sharing this data expose Google's intellectual property?

A. Yes, because you would be directly sharing the model.

Testimony of Omkar Muralidharan

RDX0708 at .005–06 (emphasis added); Rem. Tr. 4424:23–4425:20 (Muralidharan (Google)).

Roadmap

1. Syndication Remedies
2. Data Sharing Remedies
3. **Implementation**
4. Google's Purported Concerns

Technical Committee Is A "Model For Monitoring"

"[T]he concept of the technical committee and its use as a vehicle for monitoring the implementation of the Final Judgment has been ingenious. . . . And I think particularly it's lended itself as being the perfect vehicle in a technical and complex subject matter. The TC, I think, **is a model for monitoring that I would heartily recommend and I would use again**."

- United States District Court Judge Kollar-Kotelly
United States v. Microsoft (April 27, 2011)

Transcript of Final Status Conference at 30, *United States v. Microsoft*, CA No. 98-1233 (D.D.C. Apr. 27, 2011) (Docket No. 930) (emphasis added).

Roadmap

1. Syndication Remedies
2. Data Sharing Remedies
3. Implementation
4. **Google's Purported Concerns**

Roadmap

4 Google's Purported Concerns

- Privacy
- "Reverse Engineering"
- Investment Incentives

Roadmap

4 Google's Purported Concerns

- **Privacy**
- "Reverse Engineering"
- Investment Incentives

Key Opinions Of Professor Evans

1. There are well-established **privacy-enhancing techniques** that can be used to protect sensitive information.

2. Many organizations, including Google, **safely release sensitive data** by using privacy-enhancing techniques.

3. Google can share the data at issue in a way that **assures privacy while providing utility**.

Technical Committee's Role Is Important

Chris Culnane, Ph.D.

Google's Expert

Principal and Consultant

Castellate Consulting Ltd.

Q. . . . And then you also recommend examination by independent experts before release, correct?

A. Yes.

Google's DMA Data Sharing Will Not Restore Competition Here

- "In the guise of privacy, [Google] **removed 99 percent of the queries** [in its DMA dataset]. So that alone made it kind of useless."

Rem. Tr. 870:4–17 (Weinberg (DuckDuckGo)) (emphasis added).

- The **data is different**: "[Y]ou would have to do a new analysis" for this case.

Rem. Tr. 3738:20–3739:3 (Culnane (Def. Expert)) (emphasis added).

- Google's DMA proposal "**falls short of providing the minimum necessary click and query information** to be useful to a search engine . . . ."

PXR0255 at -805 (emphasis added).

Roadmap

4 Google's Purported Concerns

- Privacy
- **"Reverse Engineering"**
- Investment Incentives

No Evidence Of “Reverse Engineering”

Eli Collins

Vice President of Product

Google DeepMind

Q. . . . Even an AI model trained on all of Google's search logs and ranking information would not be comparable to Google Search. Correct?

A. Yes. . . .

* * *

Q. But you believe a model trained on all of Google’s search logs and ranking information would be fundamentally different than a search engine. Correct?

A. It would not be an equivalent. It would perform a different function than a search engine, but it would be a very useful technical component to build a new search engine.

Rem. Tr. 3374:8–3375:3 (Collins (Google)).

No Evidence Of “Reverse Engineering”

James Allan, Ph.D.

Google’s Expert

Professor of Information & Computer Sciences

UMass Amherst

Q. Well, in fact, you never even attempted to figure out what it would take to match Google; correct?

A. That is correct. My goal was to look at whether they could improve their systems, not whether they could be as good as Google.

Rem. Tr. 2948:23–2949:2 (Allan (Def. Expert)).

Mimicking Not A Commercially Viable

James Allan, Ph.D.

Google's Expert

Professor of Information & Computer Sciences

UMass Amherst

Q. Professor Allan, you believe there's a difference between mimicking and matching; correct?

A. . . . I would probably define matching as being an identical output, and mimicking would be something that is similar. In the same sense that a parrot mimics a human being, you can tell it's a parrot in that particular case. . . . [T]here's a continuum, and mimicking is mirror, in my mind.

Q. In fact, you gave me a similar analogy about a mockingbird mimicking sounds and that you could tell the mimicked sound is not the original sound; correct?

A. Yes, I believe I used it that way.

Rem. Tr. 2935:9–21 (Allan (Def. Expert)).

Roadmap

4 Google's Purported Concerns

- Privacy
- "Reverse Engineering"
- **Investment Incentives**

Syndication Requires Investment

Eric Muhlheim

Chief Financial Officer

Mozilla Corporation

"[O]perating our own search engine is nothing that we've ever contemplated . . . So that would require us to divert an enormous amount of our resources to be able to build that out, to integrate the syndication."

Rem. Tr. 3154:4–25 (Muhlheim (Mozilla)).

Google Ignores The Benefits Of Competition

Tasneem Chipty, Ph.D.

Plaintiffs' Expert

Founder and Managing Principal

Chipty Economics, LLC

". . . under the distribution and the data and syndication remedies, rivals

would have an opportunity to improve their product quality . . .

[It] . . . also misses the long-term benefits to distributors and users from greater competition that would not otherwise come about."

Rem. Tr. 2168:10–17 (Chipty (Pls. Expert)).