Antitrust and AI: Competition Issues from AI Use and in AI Markets

June 27, 2024

The views expressed do not necessarily reflect those of the United States Department of Justice or Federal Trade Commission

The Sedona Conference®

❖ Nonprofit 501(c)(3) research and educational institute dedicated to the advanced study of law and policy in the areas of antitrust, intellectual property, and complex litigation

❖ Transcending traditional continuing legal education to combine experience with dialogue, outside of the adversarial system, to contribute to the reasoned and just development of law and policy

❖ Supporting Working Groups to develop principles, guidelines, and best practices in targeted areas "ripe" for development

The Sedona Conference dialogue model

Debate: Assuming that there is a right answer and that you have it

Dialogue: Assuming that many people have pieces of the answer and that together they can craft a solution

Debate: Listening to find faults and make counter arguments

Dialogue: Listening to understand, find meaning, and agreement

Debate: Defend one's own views against those of others

Dialogue: Admitting that others' thinking can improve on your own

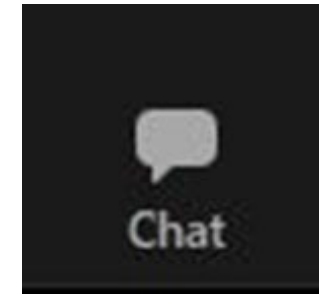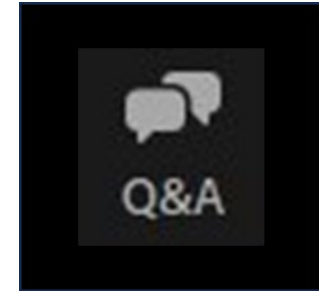*Debate: Seeking a conclusion or vote that ratifies your position*

Dialogue: Discovering new options, not seeking closure

Adapted from Daniel Yankelovich, *The Magic of Dialogue* (2001)

"Virtual" dialogue

❖ This webinar is being recorded

❖ Text questions for the panel using the "Q&A" function

❖ Keep the "Chat" window open and join the dialog by text

Continuing Legal Education (CLE) credit

❖ This webinar has not been pre-accredited, but most states will provide at least 1 hour of self-reported CLE credit

❖ We record your attendance by presenting online polls occasionally during the webinar

❖ You MUST answer the polling question so we can record your "active engagement" (but we're not grading your answers)

❖ Attendees will get a link to an evaluation form by email, which serves as your request for a CLE certificate

Disclaimer

- ❖ The information in these slides and in this presentation is not legal advice and should not be considered legal advice

- ❖ This presentation represents the personal views of the presenters and does not necessarily reflect the views of any court, firm, or client

- ❖ This presentation is offered for informational and educational uses only

Today's moderator

Tara S. Emory
Redgrave Data

Today's panelists

Diana Aguilar
US Department of Justice

Deborah Garza
Rule Garza Howley LLP

Owen Masters
Federal Trade Commission

Patrick McGahan
Scott & Scott

Today's topics

❖ Terminology

❖ Algorithmic Pricing

    ❖ Pricing Models and AI

    ❖ Theories of Harm, Standards and Agency

    ❖ Evaluating AI Tools

❖ Theories of Monopolization in AI Ecosystems

❖ Evidence and Discovery

❖ Looking into the Future

❖ Q&A

Terminology

What is Artificial Intelligence?

❖ Machine learning

    ❖ Generative AI

        • Large Language Models

❖ Pricing Algorithms

Poll: AI Pricing Experience

1. Do you have experience with AI pricing tools?

a) I have advised on related legal risks and compliance

b) I have been involved in litigation or investigations involving AI pricing

c) Both (a) and (b) above

d) I do not have experience in this area

e) Other (type your experience in Chat if you wish)

f) No answer, just mark me "present"

Algorithmic Pricing

Algorithmic Pricing

An algorithm is an:

"unambiguous, precise, list of simple operations applied mechanically and systematically to a set of tokens or objects (e.g. configurations of chess pieces, numbers or cake ingredients). The initial state of the tokens is the input; the final state is the output."

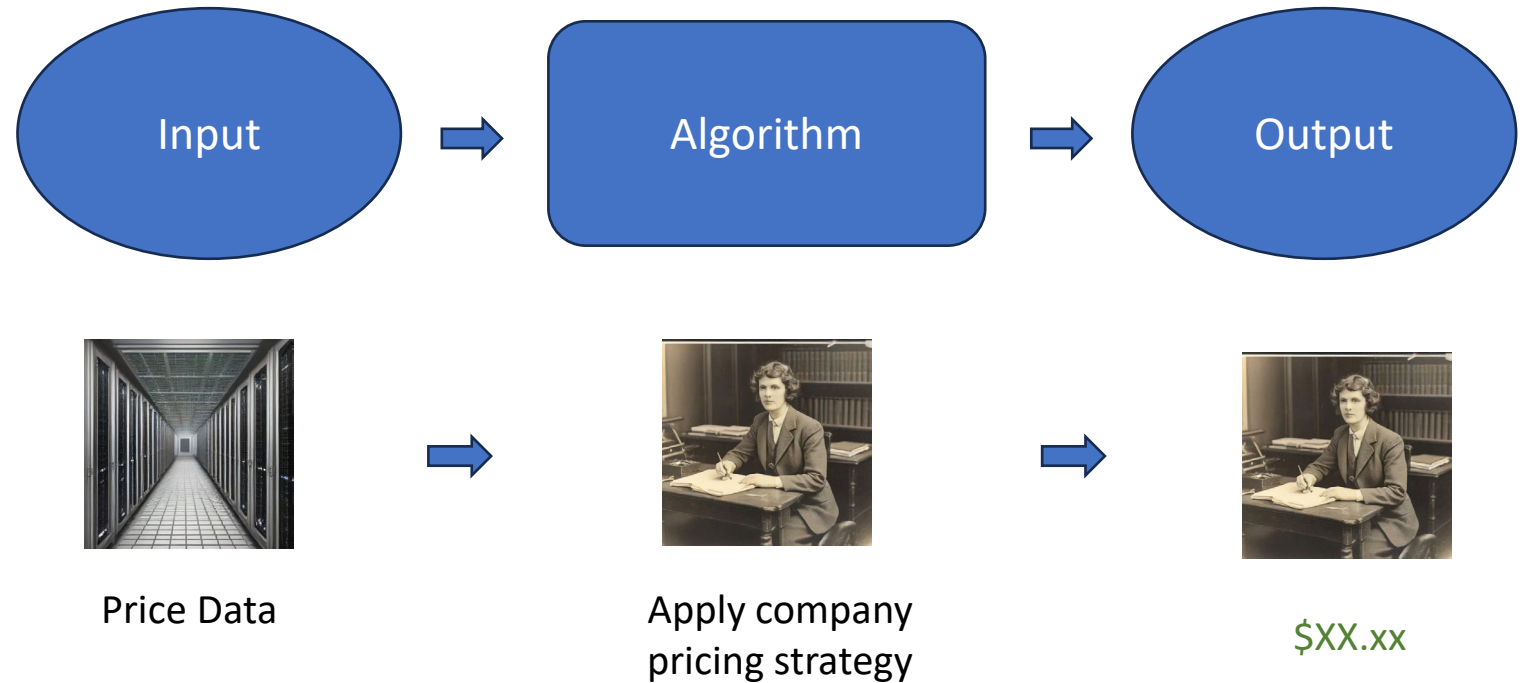Wilson, R. A. and F. C. Keil (1999), The MIT Encyclopedia of the Cognitive Sciences, MIT Press.

Input → Algorithm → Output

Evolution of pricing models

Pricing with Input from a Computer

Price information database or information exchange allows humans to price with up-to-date information

Ex.
- ATP Co.

Input → Algorithm → Output

Price Data → Apply company pricing strategy → $XX.xx

US v. Airline Tariff Publishing Co.

26. The airline defendants, either directly or through an ATP subscriber, employ sophisticated computer programs that sort the fare information received from ATP and produce detailed reports. These reports allow the airline defendants to monitor and analyze immediately each other's fare changes, including ticketing dates and the ties or links among fare changes in various markets.

Using the ATP fare dissemination system, the airline defendants participated in a complex, iterative, and essentially private exchange of future fare information with the purpose and effect of reaching agreements on price. Using, among other things, first and last ticket dates and footnote designators, they exchanged clear and concise messages setting forth the fare changes that each preferred, and they engaged in an electronic dialogue to work out their differences.

Complaint, United States v. Airline Tariff Publishing Co., Civ. Action No. 92-2854 (D.D.C. Dec. 12, 1992) https://www.justice.gov/d9/atr/case-documents/attachments/1992/12/21/4796.pdf.

Competitive Impact Statement, United States v. ATP Co. (D.D.C. Dec. 12, 1992), https://www.justice.gov/atr/case-document/file/627946/dl.
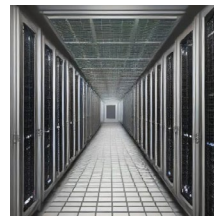
Evolution of pricing models

Simple Dynamic Pricing Algorithm

Computers collect and organize pricing data, then apply an algorithm to produce the price.

Computer updates prices dynamically.

Ex.
- *The Making of a Fly*
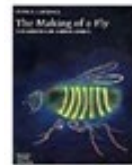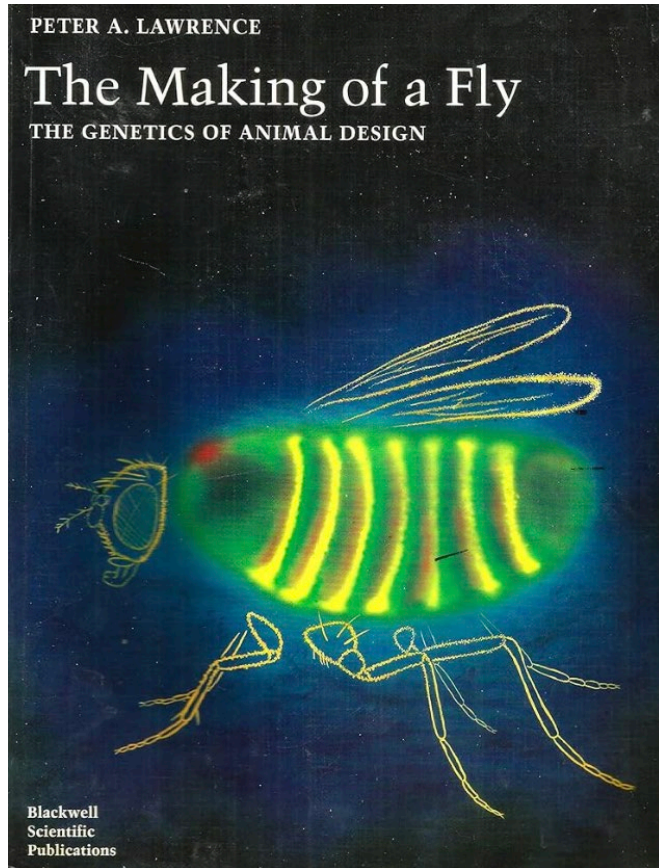

Input

Algorithm

Output

Price or
Sales Data

Apply pricing
algorithm

$XX.xx

The Making of a Fly

The Making of a Fly: The Genetics of Animal Design (Paperback)
by Peter A. Lawrence

< Return to product information

Always pay through Amazon.com's Shopping Cart or 1-Click.
Learn more about Safe Online Shopping and our safe buying guarantee.

Price at a Glance

List Price:	$70.00
Used:	from $35.54
New:	from $1,730,045.91

Have one to sell? [Sell yours here]

| All | New (2 from $1,730,045.91) | Used (15 from $35.54) |

Show ⊙ New ○ ✓Prime offers only (0)   Sorted by [Price + Shipping ⇕]

New 1-2 of 2 offers

Price + Shipping	Condition	Seller Information	Buying Options
$1,730,045.91 + $3.99 shipping	New	Seller: **profnath** Seller Rating: ★★★★☆ **93% positive** over the past 12 months. (8,193 total ratings) In Stock. Ships from NJ, United States. Domestic shipping rates and return policy. Brand new, Perfect condition, Satisfaction Guaranteed.	[Add to Cart] or Sign in to turn on 1-Click ordering.
$2,198,177.95 + $3.99 shipping	New	Seller: **bordeebook** Seller Rating: ★★★★☆ **93% positive** over the past 12 months. (125,891 total ratings) In Stock. Ships from United States. Domestic shipping rates and return policy. New item in excellent condition. Not used. May be a publisher overstock or have slight shelf wear. Satisfaction guaranteed!	[Add to Cart] or Sign in to turn on 1-Click ordering.

M. Eisen, it is NOT junk, https://www.michaeleisen.org/blog/?attachment_id=368 (April 21,2011)

Evolution of pricing models

Complex Pricing Algorithms

Voluminous Data → Multiple Algorithms → Output Price

"AI"

Machine Learning Algorithm

Voluminous Data → Feature Extractor → Features → Machine Learning Algorithm → Output Price

Deep Learning Algorithm

Voluminous Data → Deep Learning Algorithm → Output Price
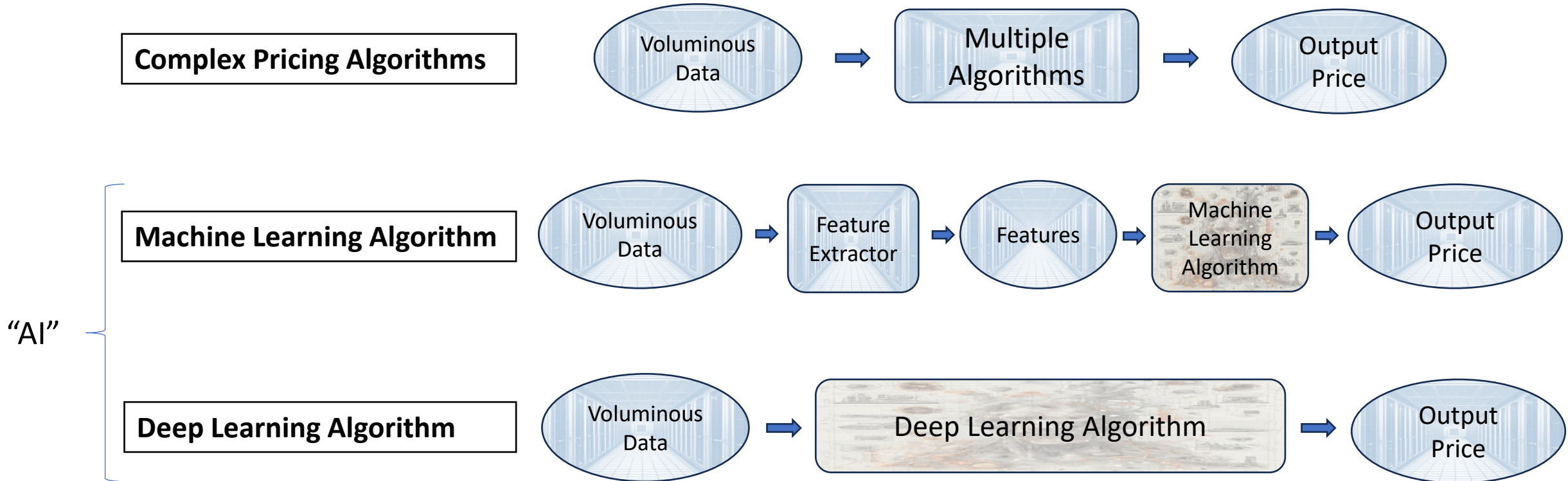
Theories of Harm and Standards

Theories of Harm and Standards

- ❖ Section 1 anticompetitive agreement between competitors
  - ❖ *Bell Atlantic v. Twombly*, 550 U.S. 544 (2007)
  - ❖ Direct vs circumstantial evidence
- ❖ Hub and spoke/ Rule of Reason claims
  - ❖ *Toys "R" Us, Inc. v. FTC*, 221 F.3d 928 (2000)
  - ❖ Role in the distribution chain
  - ❖ Effects of aggregated agreements
  - ❖ Information exchange claims
- ❖ Application of per se standard/criminal liability?
- ❖ FTC Section 5 claims

"Concerted action can take many different forms, including competitors' jointly delegating key aspects of decisionmaking to a common entity, such as an algorithm provider."

DOJ Statement of Interest in Cornish-Adebiyi v. Caesars Entertainment, Inc., No. 1:23-cv-02536 (D.N.J.)

Liability and Agency

Who may be involved?

- ❖ Actors
  - ❖ Designers
  - ❖ Data sharers
  - ❖ Model sellers
  - ❖ Deployers
- ❖ Same or different:
  - ❖ Model?
  - ❖ Information?
- ❖ Multi-layers of ownership and management
- ❖ Role of the human element

> "[Coordinated activity] deprives the marketplace of the independent centers of decisionmaking... two or more entities that previously pursued their own interests separately are combining to act as one for their common benefit. This not only reduces the diverse directions in which economic power is aimed, but suddenly increases the economic power moving in one particular direction.
>
> *Copperweld v. Independence Tube, 467 U.S. 752 (1984)*

Poll: Algorithmic Pricing

2. Are you concerned that algorithmic pricing leads to price fixing?

   a) Yes

   b) No

   c) Not sure, or Other (type ideas into Chat if you wish)

   d) No answer, just mark me "present"

Algorithmic Pricing Cases

❖ Rent

  ❖ *RealPage* cases

  ❖ *Duffy v. Yardi Systems, Inc*., No. 2:23-cv-01391 (W.D.Wash.)

❖ Hotels

  ❖ *Cornish-Adebiyi v. Caesars Entertainment, Inc.,* No. 1:23-cv-02536 (D.N.J.)

  ❖ *Gibson v. Cendyn Group LLC*, No. 2:23-CV-00140-MMD-DJA (D. Nev. May 8, 2024)

  ❖ *Portillo v. Costar*, No. 24-cv-0029 (W.D. Wash., Feb. 20, 2024)

  ❖ *Dai v. SAS Institute*, No. 24-cv-02537 (N.D. Cal., Apr. 26, 2024)

❖ Health insurance reimbursements: *MultiPlan* cases

  ❖ *Adventist Health System v. Multiplan, Inc.,* No. 23-cv-07031 (SDNY)

❖ FTC v. Amazon, No. 2:23-cv-01495-JHC (W.D.Wash. 2023)

❖ Posters plea agreement: *United States v David Tompkins*, N.D.Cal. No. CR 15–00201 (2015)

Evaluating AI Tools

What steps can companies take to reduce risk when evaluating and adopting AI pricing tools?

- ❖ Used by competitors?
- ❖ Limit shared data to anonymized, aged data
- ❖ Use pricing tools to inform pricing decisions, not makes them
- ❖ Tool providers should not advertise products as increasing industry prices

Poll: Effect on Litigation

3. What effect do you think AI pricing tools will have on competition litigation?

    a) Less: Automation presents less opportunity for humans to act illegally

    b) More: Increased AI pricing tool use will increase claims of misconduct

    c) Other (type your thoughts into Chat if you wish)

    d) No answer, just mark me "present"

Theories of Monopolization in AI Ecosystems

Analyzing AI Ecosystems

❖ Multiple layers of markets, each with own competitive dynamics

❖ AI Infrastructure

  ❖ Hardware: AI Chips

  ❖ Cloud Computing

  ❖ Training Data

  ❖ Expertise: Engineers, Scientists

❖ Foundational Models

❖ User-Facing Applications

Analyzing AI Ecosystems

❖ **Key Inputs**

  ❖ Data, Talent, Computational Resources

❖ **Possible Unfair Competition Methods**

  ❖ Tying

  ❖ Bundling

  ❖ Self-preferencing

  ❖ Monopsony

  ❖ *US v. Bertelsmann SE & Co. KGaA, Penguin Random House, LLC, ViacomCBS, Inc., and Simon & Schuster, Inc.,* No. 21-cv-02886 (D.D.C.)

Evidence and
Discovery

Evidence and Discovery

- ❖ Potentially decreased role of smoke-filled rooms and smoking guns
- ❖ Potentially many defendants
- ❖ Nature of data
  - ❖ Software: Discovery of algorithms and effects
  - ❖ What data went where?
  - ❖ Production vs. inspection
  - ❖ Volumes

Poll: Acceptance of AI Pricing Tools

4. Given the risks, would you be willing to use/recommend AI pricing tools?

   a) Yes, the risks can be managed, and the benefits are high

   b) No, the risks cannot be sufficiently managed to avoid legal issues

   c) Other (type your thoughts into Chat if you wish)

   d) No answer, just mark me "present"

Looking into the Future

Technology is changing quickly

- ❖ Agency issues
- ❖ Extent of human involvement
- ❖ APIs
- ❖ Agency deployment of AI tools

Additional Resources

❖ John A. Fortin, [Algorithms and Conscious Parallelism: Why Current Antitrust Doctrine is Prepared for the Twenty-First Century Challenges Posed by Dynamic Pricing](#), 23 Tul. J. Tech. & Intell. Prop. 1 (2021)

❖ Jay L. Himes, [If It's Too Good To Be True, It Probably Isn't — Particularly When "Them That's Got" Promise To Help: Artificial Intelligence Challenges To Antitrust](#), 2023 Competition Policy International, Vol. 2

❖ Maurice E. Stucke, [Examining Competition and Consumer Rights in Housing Markets](#) (Testimony before Senate Judiciary Committee, Subcommittee on Competition Policy, Antitrust, and Consumer Rights, Oct. 24, 2023)

❖ Jung Kim and Arianna Chen, [FTC's Amazon Antitrust Lawsuit from A to Z](#) (Dec. 2023) (ABA member access required)

Additional Resources

❖ Federal Trade Commission, Generative AI Raises Competition Concerns (June 2023)

❖ Jai Vipra and Anton Korinek, Market Concentration Implications of Foundation Models: The Invisible Hand Of ChatGPT, Brookings Center on Regulation and Markets Working Paper #9 (Sept. 2023)

❖ Krysten Crawford, FTC's Lina Khan warns Big Tech over AI, Stanford Institute for Economic Policy Research (Nov. 2023)

❖ Federal Trade Commission, FTC Launches Inquiry into Generative AI Investments and Partnerships (January 2024)

❖ Alden Abbott, Why Antitrust Regulators Are Focused On Problematic AI Algorithms, Forbes (March 2024)

Upcoming events

The Sedona Conference Webinar on AI and Healthcare Law

❖ July 2, 2024, 1:00 p.m. EDT

The Sedona Conference Webinar on Global Regulation of AI

❖ July 10, 2024, 11:00 a.m. EDT

Sedona Working Group 1 Virtual Town Hall on Rule 26(f)

❖ July 11, 2024, 1:00 p.m. EDT

Go to thesedonaconference.org for more information and to register

Questions?
Comments?

Thanks to today's panelists

Diana Aguilar
US Department of Justice

Deborah Garza
Rule Garza Howley LLP

Owen Masters
Federal Trade Commission

Patrick McGahan
Scott & Scott

Special thanks to today's moderator

Tara S. Emory
Redgrave Data

Thank you for attending!

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