

Gianluigi Fioriglio

Search Neutrality and Algorithmic Accountability between Freedom of Speech and Consumer Protection

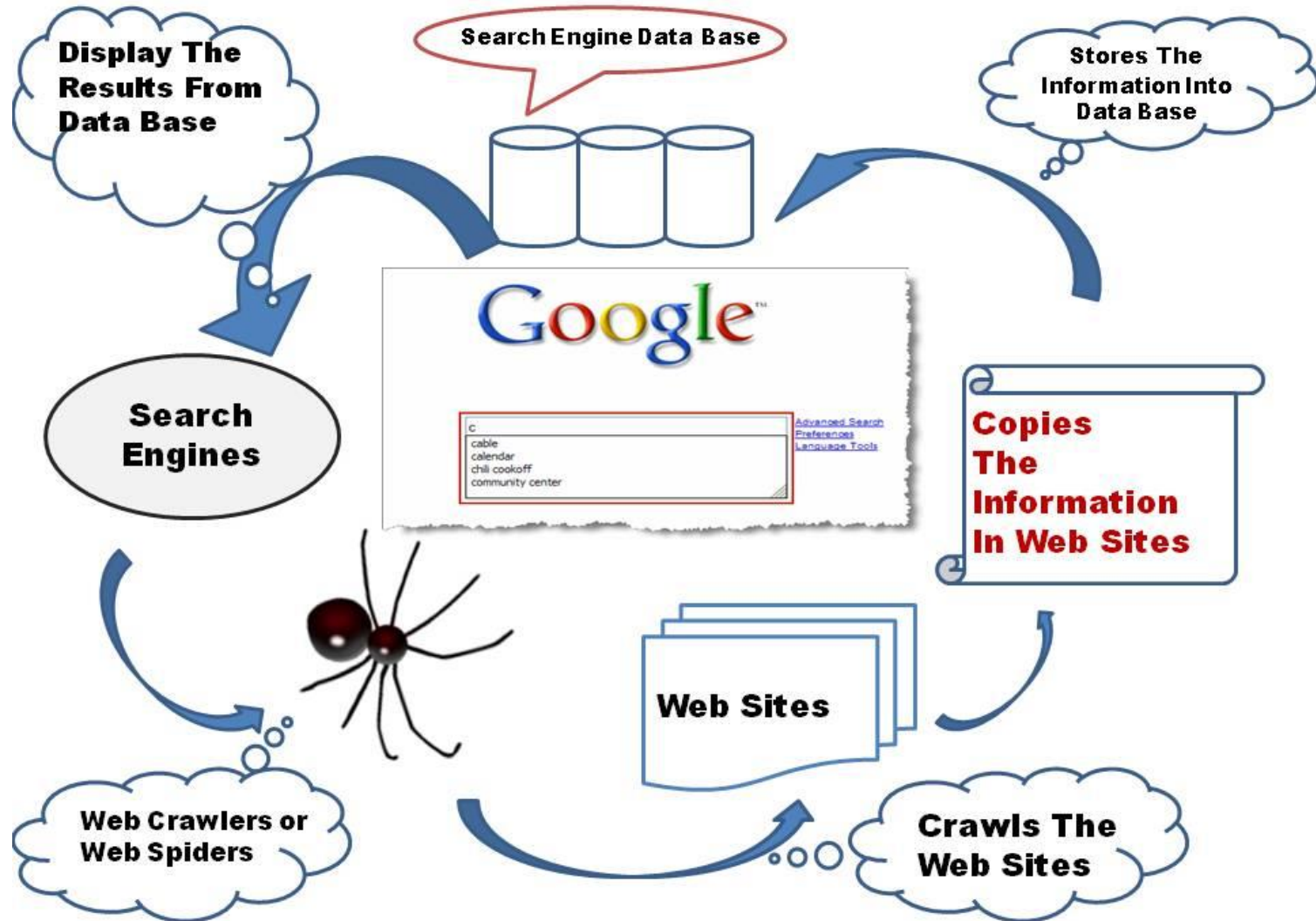


SAPIENZA
UNIVERSITÀ DI ROMA

Outline

- **Introduction: the technical and legal framework**
- **The impact of search engines**
- **The right to be listed**
 - *Neutrality and accountability*
- **Questions**

How a search engine works



SERP

The image shows a Google search results page for the query "cupcake pans". The search bar at the top contains the text "cupcake pans" and a search icon. Below the search bar, there are navigation tabs for "Web", "Shopping", "Images", "News", "Videos", "More", and "Search tools". The "Web" tab is selected. The search results are displayed below, with a message indicating "About 1,350,000 results (0.62 seconds)".

The search results are organized into two columns. The left column contains organic search results, and the right column contains paid advertisements. The organic results are highlighted with a green border, and the advertisements are highlighted with a red border.

Organic Search Results (Left Column):

- Cupcake and Muffin Pans - Macys.com**
Ad www.macys.com/Cupcake-and-Muffin-Pans ▾
Cupcake and Muffin Pans at Macy's. Spring Home Essentials Have Arrived
- Amazon.com: Muffin & Cupcake Pans: Home & Kitchen**
www.amazon.com ▾ > ... > Kitchen & Dining > Bakeware ▾ Amazon.com, Inc. ▾
Results 1 - 24 of 1714 - Online shopping for Muffin & Cupcake Pans from a great selection at Home & Kitchen Store.
- Cupcake Pans : Bakeware - Walmart.com**
www.walmart.com/c/kp/cupcake-pans ▾ Walmart ▾
Shop Cupcake Pans : Bakeware at Walmart.com - and save. Buy Baker's Secret Signature 12-Cup Muffin Pan, Steel, Range Kleen Non-Stick 6-Cup Muffin and ...
- Cupcake and muffin pans : bakeware : Target**
www.target.com/.../cupcake...muffin-pans/-/N-5xtsbZ... ▾ Target Corporation ▾
Results 1 - 36 of 36 - Shop for Cupcake and muffin pans bakeware at Target. Find a wide selection of Cupcake and muffin pans bakeware within our bakeware ...
- Buy Cupcake Pans from Bed Bath & Beyond**
www.bedbathandbeyond.com/1/3/cupcake-pans ▾ Bed Bath & Beyond ▾
Buy "Cupcake Pans" products like 6-Cup Stone Muffin Pan, USA Pan 12-Cavity Mini Fluted Cupcake Pan, USA Pan 6-Well Swirl Cupcake Pan, Wilton® Giant ...

Advertisements (Right Column):

- Cup Muffin Pans at Amazon**
www.amazon.com/Home ▾
4.5 ★★★★★ rating for amazon.com
Everyday Low Prices. Save up to 50%
Free Shipping on Qualified Orders.
- Cup Cake Pan**
www.target.com/ ▾
4.3 ★★★★★ rating for target.com
Free Shipping On All Orders \$25+.
Free Returns on Everything in Store
- Cupcake Pans at Kmart®**
www.kmart.com/Household-Goods ▾
Shop and Save at Kmart.com On
Cupcake Pans and More.
- Cupcake and Muffin Pans**
www.surlatable.com/Muffin-Pans ▾
4.5 ★★★★★ rating for surlatable.com
Shop Now at Sur La Table®.
Free Shipping On Orders Over \$59!

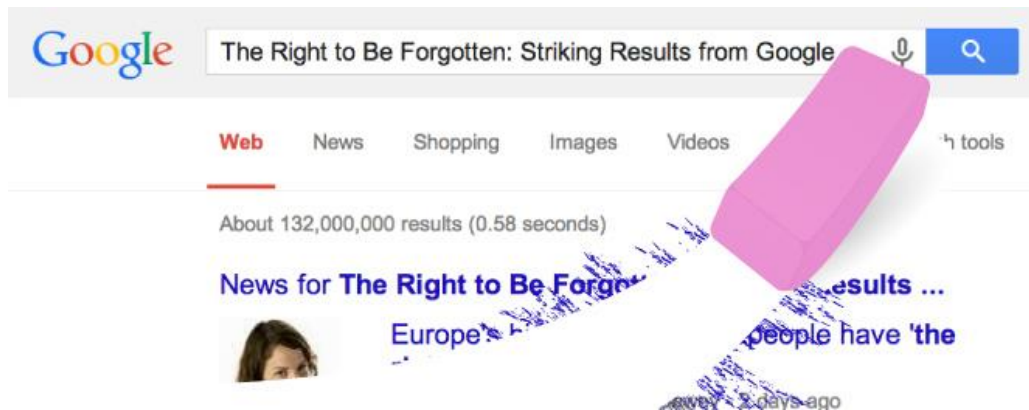
Some questions

- How does a search engine build a SERP?
- How does it decide
 - What it is shown, *and*
 - Its ranking?
- Secrecy (... *Black boxes*)



The legal framework: where do we stand?

- **The Google Spain Case** (*European Court of Justice, C131-12*)
- **The right to be (digitally) forgotten**
- **Web Publishing / finding**



Virtuous circle

1) **SE works properly.**

When does a search engine work properly?

2) **Listing** is carried out in **compliance** with

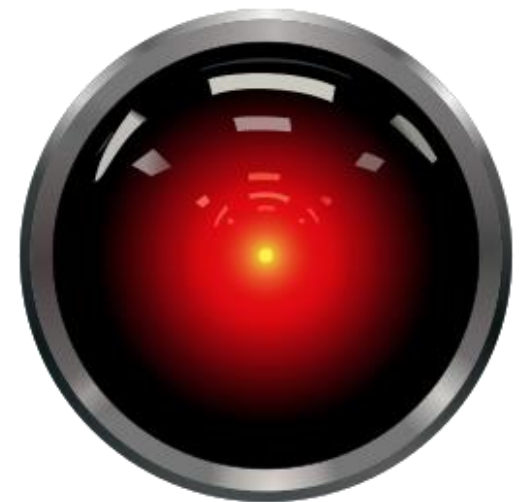
A. Neutral and

B. Embraceable Rules.

3) **Operations** are **correctly** performed.

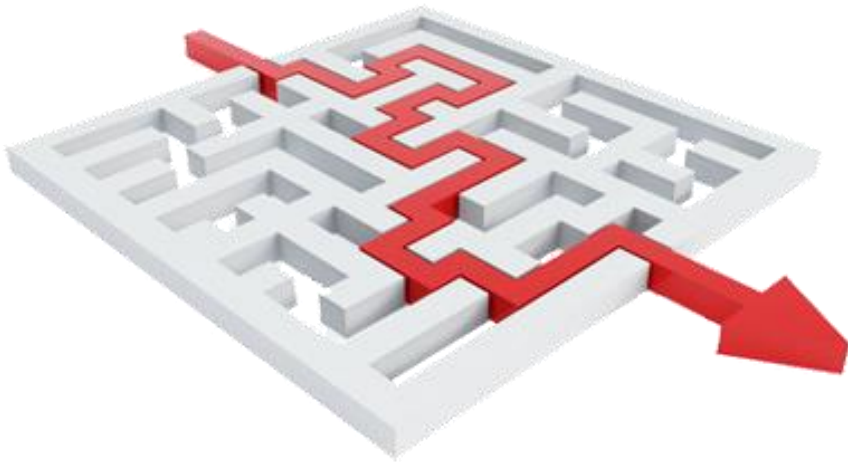
Algorithms and software agents

- **Decisions** (ranking; hide or show?)
 - *(site B was/is also omitted...)*
- **Errors** (*anomalies and bugs, etc.*)

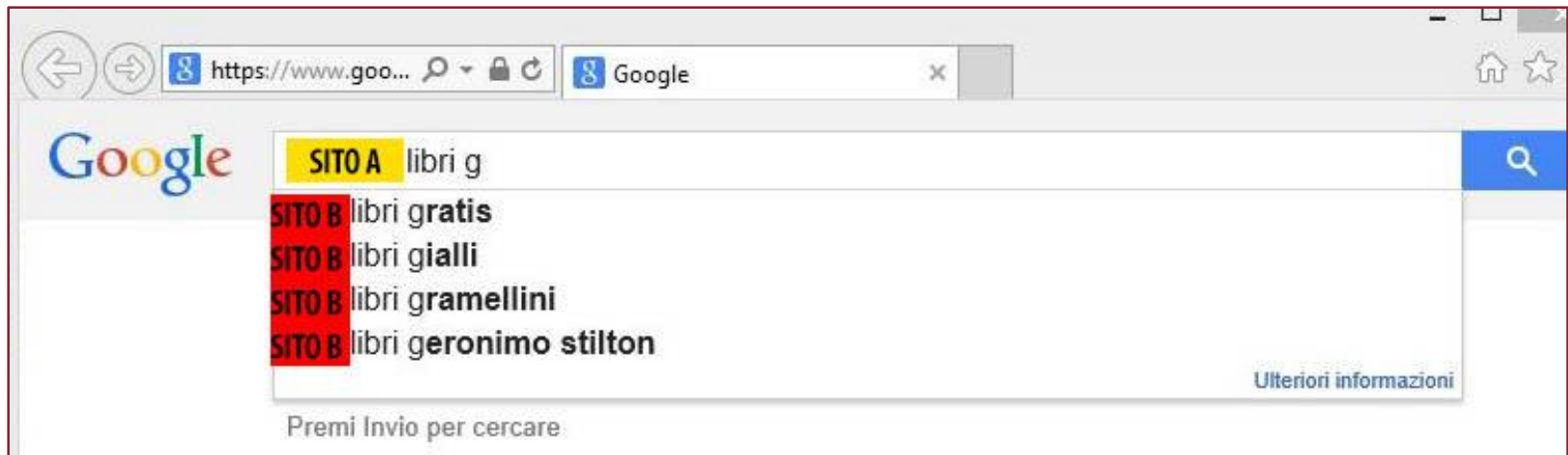


The impact of search engines

- **Freedom of speech**
- **Consumer protection**
- **Business protection**



One example (1/2)



Site A: unique word (no other meanings)

Site B: unique word (in Italy)

One example (2/2)

The screenshot shows a Google search results page for the query "john grisham il ricatto". The search bar contains the text "john grisham il ricatto" and is labeled "SITO A". The search results are displayed under the "Web" tab. The first result is "Il ricatto - Grisham John - Libro - Mondadori - Omnibus" with a URL containing "grisham-john/ricatto.html" and is labeled "SITO B". The second result is "Il ricatto - Grisham John - Libro - Mondadori - Oscar grandi ..." with a URL containing "grisham-john/ricatto.html" and is labeled "SITO B". The third result is "John Grisham - Libri di Grisham John" with a URL containing "libri/grisham+john/libri+di+john+grisham.html" and is labeled "SITO B". The fourth result is "John grisham - I libri di John grisham" with a URL containing "find_buy/findresult/.../autore-john_grisham_htm" and is labeled "SITO A".

Google john grisham il ricatto SITO A

Web Immagini Maps Shopping Altro Strumenti di ricerca

Circa 1.400 risultati (0,38 secondi)

Il ricatto - Grisham John - Libro - Mondadori - Omnibus - SITO B
SITO B code/9788804590019/grisham-john/ricatto.html
Il ricatto è un libro di Grisham John pubblicato da Mondadori nella collana Omnibus : € 17,00. Lo trovi nel reparto Narrativa straniera d SITO B

Il ricatto - Grisham John - Libro - Mondadori - Oscar grandi ... SITO B
SITO B code/9788804598282/grisham-john/ricatto.html
Il ricatto è un libro di Grisham John pubblicato da Mondadori nella collana Oscar grandi bestsellers : € 11,05. Disponibile anche in eBook a € 6,99. Lo trovi nel ...

John Grisham - Libri di Grisham John - SITO B
SITO B libri/grisham+john/libri+di+john+grisham.html
25+ elementi - John Grisham - Libri di Grisham John disponibile presso ...
L'ombra del sicomoro € 15,00 Prezzo di copertina € 20,00 Sconto 25%
Dalla parte giusta ... € 15,30 Prezzo di copertina € 18,00 Sconto 15%

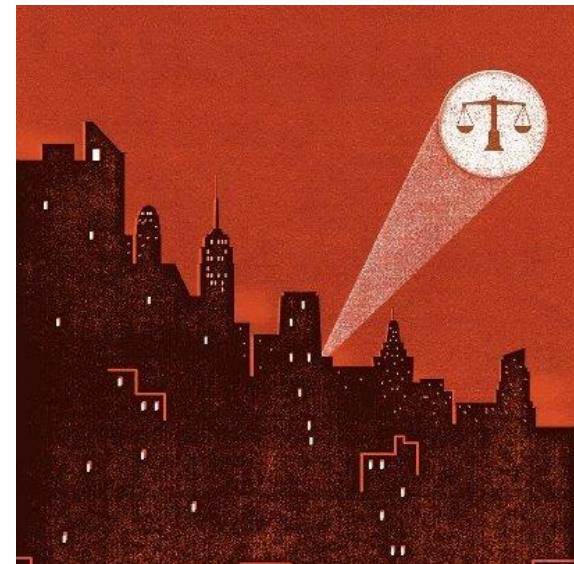
John grisham - I libri di John grisham - SITO A - La grande ...
SITO A find_buy/findresult/.../autore-john_grisham_htm
30+ elementi - John grisham libri, Libri di John Grisham , l'accusato ...
L'accusato. Theodore Boone. Genere: LETTERATURA PER RAGAZZI ...
L'ombra del sicomoro. Genere: LETTERATURE STRANIERE: TESTI ...

How can it happen?

- **Software agents -> autonomous software (algorithms are executed)**
- **The challenge of language understanding**
- **SE = expert system**
- **Software agents “thought” that Site A and Site B were synonyms...**

The right to be listed

- **Is there a right to be listed?**
- **Providers' (algorithmic) liability**
 - *Current E.U. laws*
 - *Issues of current laws (Dir. 2000/31/EC)*
- **Duty of transparency (and reasoning of the SE)**



Questions



- **E.U. vs. U.S. legal regimes**
- **Effectiveness of legal remedies, *and the issues of:***
 - **Costs**
 - **International providers**
 - **Reverence**
- **Intellectual Property Rights on algorithms / software vs. burden of proof**