The User Agreement Dilemma -**Team Crystal**

10/27/2021 CS 410 Fall 2021



Team Bio



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Terms of Service



Terms of Services are too long (on average 7700+ words for the 10 most popular applications and services[4]) and are written in legal jargon that is difficult to understand.

Problem Characteristics

- Length of documents and the time it takes to read them
 - Hypothesized that 25 days would be needed to read every user agreement of every website a consumer has
 visited in their lifetime[2]
- Lack of consumers reading before agreeing
 - According to Business Insider, 97% of younger consumers between the ages of 18-34 will accept conditions
 without reading them [1]

Problem Characteristics Cont.

- Legal language obfuscates what the TOS really are
 - "Choice of Law and Jurisdiction" section
 - Grown more complex to reflect case-law of courts and to cover grounds that lawyers find necessary
- Broad statements leave interpretation up to users
 - Terms such as: "partners" and "usage"
 - One-sided examples to sway consumer
- Difficult to make an informed decision even after reading
 - Requires reading all ToS of multiple services and comprehending their differences

Example TOS - Netflix Arbitration Clause

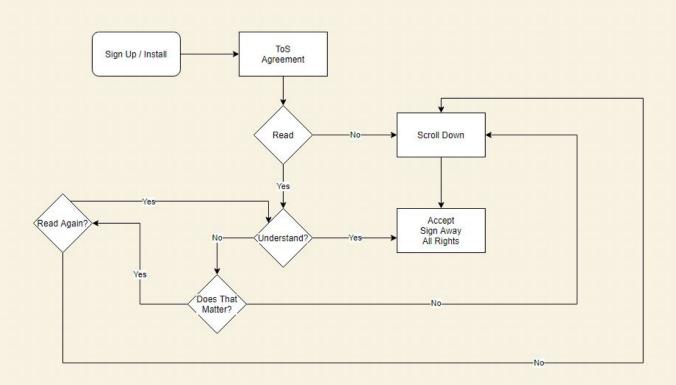
7. Arbitration Agreement

- 7.1. You and Netflix agree that any dispute, claim or controversy arising out of or relating in any way to the Netflix service, these Terms of Use and this Arbitration Agreement, shall be determined by binding arbitration or in small claims court. Arbitration is more informal than a lawsuit in court. Arbitration uses a neutral arbitrator instead of a judge or jury, allows for more limited discovery than in court, and is subject to very limited review by courts. Arbitrators can award the same damages and relief that a court can award and nothing in this Arbitration Agreement shall be interpreted as limiting any non-waivable statutory rights. You agree that, by agreeing to these Terms of Use, the U.S. Federal Arbitration Act governs the interpretation and enforcement of this provision, and that you and Netflix are each waiving the right to a trial by jury or to participate in a class action. This arbitration provision shall survive termination of this Agreement and the termination of your Netflix membership.
- 7.2. If you elect to seek arbitration or file a small claim court action, you must first send to Netflix, by certified mail, a written Notice of your claim ("Notice"). The Notice to Netflix must be addressed to: General Counsel, Netflix, Inc., 100 Winchester Circle, Los Gatos, CA 95032-1815 ("Notice Address"). If Netflix initiates arbitration, it will send a written Notice to the email address used for your membership account. A Notice, whether sent by you or by Netflix, must (a) describe the nature and basis of the claim or dispute; and (b) set forth the specific relief sought ("Demand"). If Netflix and you do not reach an agreement to resolve the claim within 30 days after the Notice is received, you or Netflix may commence an arbitration proceeding or file a claim in small claims court.
- 7.3. You may download or copy a form Notice and a form to initiate arbitration at www.adr.org. If you are required to pay a filing fee, after Netflix receives notice at the Notice Address that you have commenced arbitration, Netflix will reimburse you for your payment of the filing fee, unless your claim is for greater than US\$10,000, in which event you will be responsible for filing fees.

Customers and End Users

- Any person / entity interested in making an informed decision with regards to the ToS
- Anyone who may be interested in informing others about information in the ToS
- Users who desire a larger degree of control with regards to their personal data
- Users who want to compare the user agreements and privacy policies of similar services to better discern which service fits their needs

Current Process Flow



Solution What It Will Do

Use a single user email to help keep track of all ToS/ToC contracts connected to the account.

List each application/website's ToS/ToC sections in plain English.

Allow the community to upload their own findings in the ToS/ToC contracts.

Rank each service ToS based on several factors and allow for community rankings

Compare the information in ToS of competitors of similar services

Actively translate contracts from lawyer jargon to plain english directly from the website/application in question.

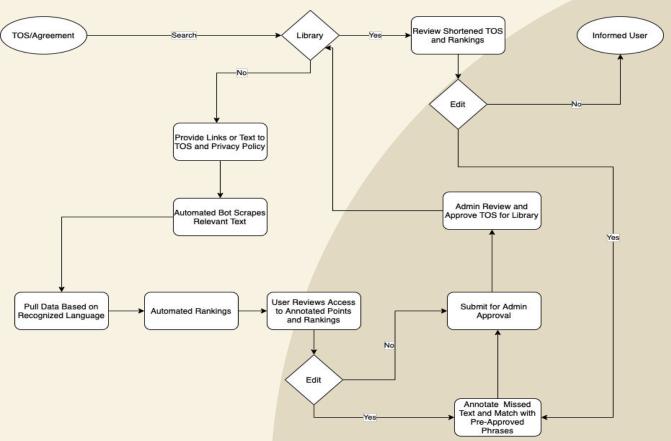
What it Will Not Do

Automatically accept ToC/ToS contracts

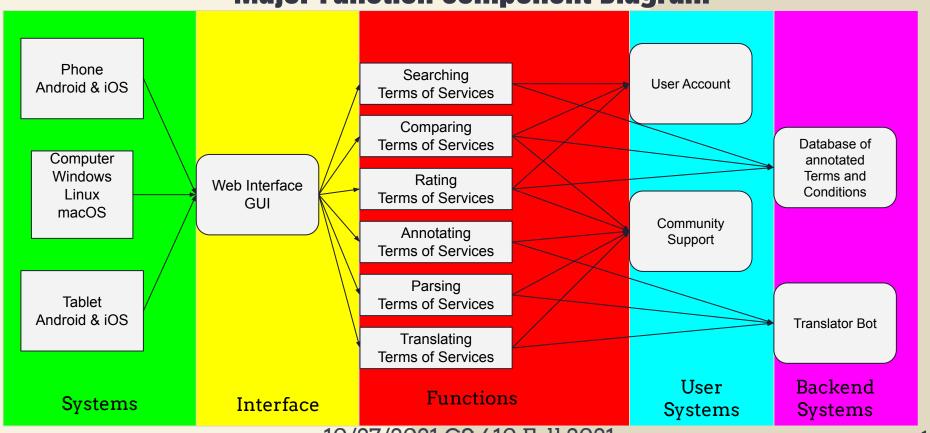
Alter the contents of any website/application's ToC/ToS

Replace a lawyer

Solution Process Flow

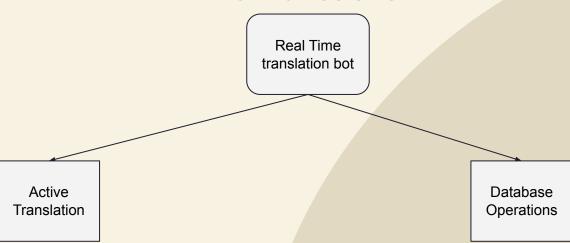


Major Function Component Diagram



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BOT Functions



- Provide text to be translated into plain English
- Using NLP Library (SpaCy), detect common phrases and legal terms
- Provide preset dictionary definitions of pulled phrases

- Adds basic translations to database
- Uses database to make comparisons

Competition

ClickWrapped

Scoring System of Top 15 Webpages

TLDRLegal

Side by Side Explanations of Content in TOS



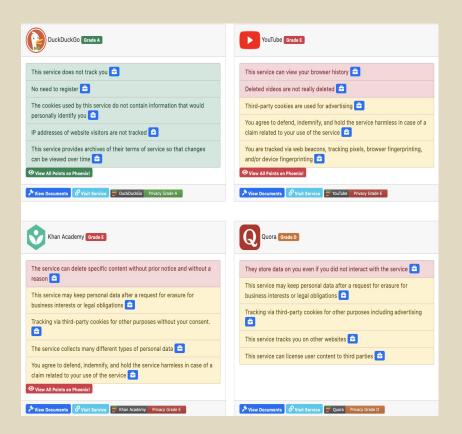
Community Driven TOS Simplifier and Privacy Ranking System

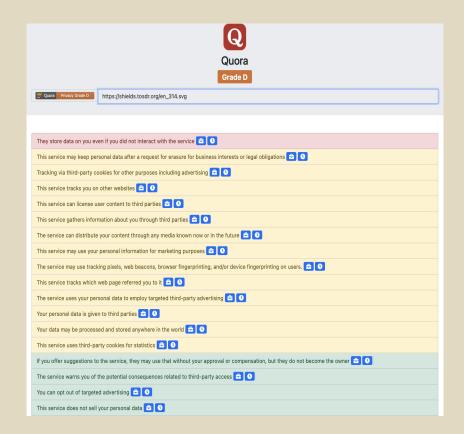
Competition Matrix

| Features | Us | TOS;DR | TLDRLegal | ClickWrapped |
|--|----|--------|-----------|--------------|
| Simplified Version of Content | x | х | Х | Х |
| User Account | × | x | x | |
| Community Involvement | х | х | X | |
| Rankings | × | x | | x |
| Privacy Visualizations | Х | | | |
| Automatic Scraping | x | | | |
| Instant Access to Simplified Versions | х | | | |
| TOS Comparisons | Х | | | |
| User Activity Status | × | | | |

Our Plan To Beat The Competition

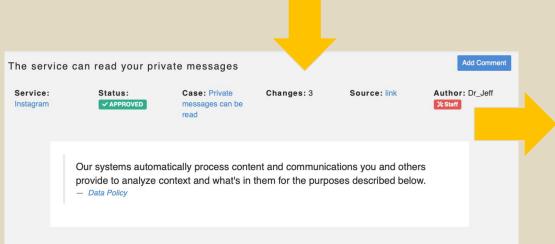
- Ability to compare TOS and Privacy Content of multiple webpages at the same time
- Notifications on changes/disparities and status of annotations
- Visual diagrams of privacy information
- Automatic Scraping of TOS's that provide an instant simplified version for the user
- User Interface Improvements





Our systems automatically process content and communications you and others provide to analyze context and what's in them for the purposes described below.

Learn more about how you can control who can see the things you share. Data with special protections: You can choose to provide information in your Facebook profile fields or Life Events about your religious views, political views, who you are "interested in," or your health. This and other information (such as racial or ethnic origin, philosophical beliefs or trade union membership) could be subject to special protections under the laws of your country. Networks and connections. We collect information about the people, Pages, accounts,



Private messages can be read

The Service is able to access, scan, review or read all user communications, including private messages, which may contain personal or sensitive data.

Customer Risks

Risks:

C1: User needs to view the most up to date user agreements

C2: Making decisions based off of inaccurate translation of user agreement

Mitigations:

C1: User can visit the company's website to view the most recent TOS

C2: Users can decide to get professional legal help

| | | Impact | | | | |
|-------------------------|-----------------------|-----------------|------------|---------------|------------------|-------------|
| | | 1 Negligible | 2 Minor | 3 Moderate | 4 Significant | 5 Severe |
| P o s s s i b i l i t y | 1 Very Unlikely | | | | | |
| | 2 Unlikely | | | | C2 | |
| | 3 Possible | | | C1 | | |
| | 4 Likely | | | | | |
| | 5 Very Likely | | | | | |

Technical Risks

Risks:

T1: Storing other companies' user agreement may not be allowed

T2: An update to a user agreement would require immediate update to annotations

T3: Each annotation of a user agreement would need to be accurate

Mitigations:

T1: State where the TOS can be found and which section each annotation refers to

T2: Update annotations and update the user that changes have been made

T3: We can get help from a professional to create annotations

| | 1 | | | | | | |
|-----------------------|-----------------------|-----------------|------------|---------------|------------------|-------------|--|
| | | Impact | | | | | |
| | | 1 Negligible | 2 Minor | 3 Moderate | 4 Significant | 5 Severe | |
| P o s s i b i l i t y | 1 Very Unlikely | | | | | | |
| | 2 Unlikely | | | | | | |
| | 3 Possible | | | | Т1 | | |
| | 4 Likely | | | T2, T3 | | | |
| | 5 Very Likely | | | | | | |

Security Risks

Risks:

S1: Our database containing our annotations, companies' TOS, and other sensitive data may be breached (SQL injection)

S2: An adversary may gain unauthorized access to our users' accounts

Mitigations:

S1: Implement techniques such as parameterized statements

S2: Use encryption techniques that are inline with the industry's best practices

| | | | | Impact | | |
|-----------------------|-----------------------|-----------------|------------|---------------|------------------|-------------|
| | | 1 Negligible | 2 Minor | 3 Moderate | 4 Significant | 5 Severe |
| P o s s i b i l i t y | 1 Very Unlikely | | | | | |
| | 2 Unlikely | | | | | S1, S2 |
| | 3 Possible | | | | | |
| | 4 Likely | | | | | |
| | 5 Very Likely | | | | | |

Legal Risks

Risks:

L1: Customer may use our translation of TOS to make a decision and try to hold us accountable if anything goes wrong

L2: Companies may sue because we are taking their TOS and storing it in our database

Mitigations:

L1: Clearly state that our translation of TOS is not to serve as legal advice

L2: Reference the TOS and state where the user can find the TOS and the section the annotations refer to

| | | Impact | | | | |
|-------------------------|-----------------------|-----------------|------------|---------------|------------------|-------------|
| | | 1 Negligible | 2 Minor | 3 Moderate | 4 Significant | 5 Severe |
| P o s s s i b i l i t y | 1 Very Unlikely | | | | | |
| | 2 Unlikely | | L2 | | | |
| | 3 Possible | L1 | | | | |
| | 4 Likely | | | | | |
| | 5 Very Likely | | | | | |

Conclusion

There is a sizeable lack of transparency of what the true relationship is between companies and their customers. Currently, it just isn't feasible for the average consumer to make a legally binding decision without spending a large amount of time and energy to do so.

A solution is necessary to present these confusing documents in a clear and concise manner:

- Privacy rankings and visualizations
- Comparisons between similar services
- Database of shortened ToS and ability for quick audit of unknown services

A solution containing these features will make for an informed customer and give the power back to the users.

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Glossary

ToS - Terms of Service

T&C - Terms and Conditions

ToC - Terms and Conditions

NLP - Natural Language Processing

Glossary Cont'd

Annotation - Simplified, plain English summary of a portion of the original TOS.

Parsing - Analyzing a piece of the TOS into parts, and describing their syntactic roles.

Translation - Parsing an original, unmodified TOS into plain English Annotations.

Appendices

Statistics that highlight issues with User Agreements:

- Overall, 91% willingly accepts legal terms and conditions without reading
- More than 80% of consumers believe that companies use their personal data
- 78% believe that their personal data is shared with third parties
- 98% of participants in a mock study agreed to terms that highlighted that any data would be shared with NSA

Lengths of Popular Applications/Websites TOS

• Instagram: 2451 words

• Netflix: 2628 words

• YouTube: 3308 words

• Twitter: 5633 words

• TikTok: 7459 words

Microsoft: 15260 words









Do you have any questions?

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