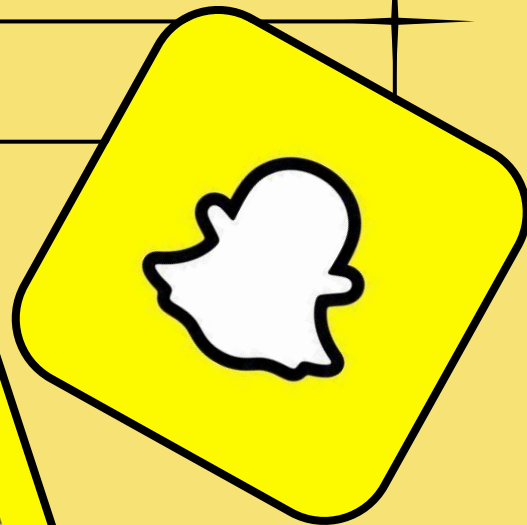# A PRIVACY ANALYSIS OF:
SNAPCHAT

COMP 555: Software Privacy

INTRODUCTION

- Snaps and Chats
    - Ephemeral, except for replays
    - Memories and My Eyes Only
- Friends
- Snap Map
- Deep user activity monitoring
    - User viewing conversation?
    - Screenshot/recording?
    - Snapscore

Snap
Share the moment

See You Soon!

Send To ▶

PRIVACY SENSITIVE PROCESSES

1. Geolocation Tracking

2. Camera Access, Filters and Facial Recognition

3. User Data Collection

4. Third-Party Data Sharing

5. Snapping & Messaging

FAIR INFORMATION PRACTICES - SUCCESS

Choice respected somewhat

- Easily accessible privacy controls
- Snap deletion
- Snap save location
- Story visibility
- Ad targeting controls
  - Independent controls for different methods
- Location tracking
  - Location may still be tracked internally while hidden from map
- No control over snapscore

Access well respected

- Download My Data portal
- Easily navigable data presentation
- Direct control over what content from conversations is/isn't saved
- Automatic deletion of unopened content
- Full account deletion is straightforward

Data Available for Download

✓ Login History and Account Information
· Basic Information
· Device Information
· Device History
· Login History
· Account Deactivated/Reactivated
✓ Snap History
· Received Snap History
· Sent Snap History
✓ Chat History
· Received Chat History
· Sent Chat History

FAIR INFORMATION PRACTICES - FAILURE

Notice only for legality

- Link to privacy policy at signup
- Notice of location visibility
  - Location hidden by default
- Notice of story visibility
- No prior notice of the effects of screenshotting or replaying
- Data logging is far deeper and longer than a user would expect
  - 2 years of location data
  - Most logs minimum 180 days

Security only for profit

- A number of breaches through third-party companies or phishing
- Find Friends flaw identified in 2014
  - 4.6 million users affected
  - Slow and dismissive response
- Internal tool abuse in 2019
  - Legal inquiry tool used by employees to view chats, snaps, memories, etc.
- End-to-end encryption added in 2019
  - Only for 1:1 snaps
  - Text and group-chats in future...

DATA TRANSFER, STORAGE, AND PROCESSING

- Transfer
  - User interactions, device phonebook, location information (+more)
  - Most of the data is recorded automatically by Snapchat and implicitly transferred
    - Causes some privacy concerns
- Storage
  - User Sphere: Saved Snaps/Chats and Memories
  - Recipient/Joint Sphere:
    - Persistent: Standard user info, Saved Snaps/Chats, Memories
    - Transient: Snaps, Chats, Stories, Location
- Processing
  - Feature Development, Personalization, Security, Advertising (+more)

ACTORS AND INTERACTIONS

Actors

- PII Principal: Users
- PII Controller: Snapchat Inc.
- PII Processor: Data analytics, management and solution providers (+more)
- Third Parties: Advertising partners, cloud storage providers, marketing partners (+more)
  - Cookies, web beacons and web storage used to collection information on user activity, browser and device
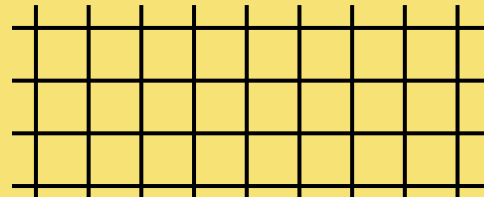
ACTORS AND INTERACTIONS

Interactions

- User (PII principal) & Snapchat (PII controller)
  - Name, phone number, email address and birthday
- User (PII principal) & User (PII principal)
  - Snaps, Chats, Stories and Location
- Snapchat (PII controller) & PII processor
- Snapchat (PII controller) & Third Parties
  - PII processors and Third Parties must work in accordance with Snapchat's protection standards
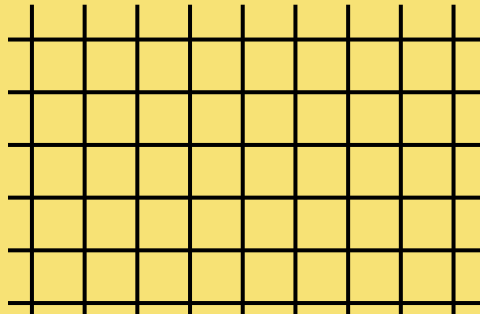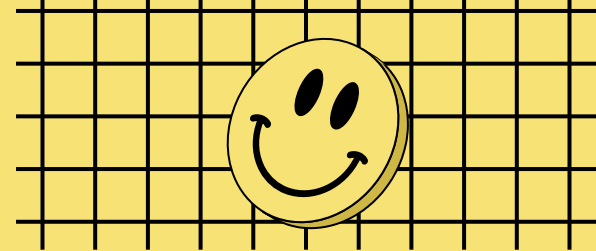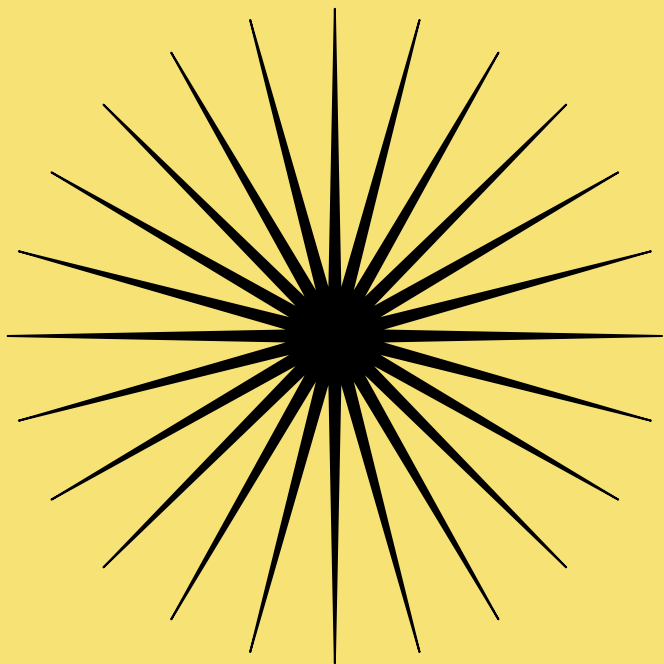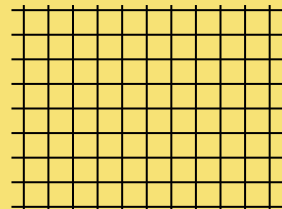
PIIS TRANSFERRED, STORED AND PROCESSED

- First and last name
- Email
- Username (changeable once a year)
- Phone number
- Birthdate
- List of friends
- Optional:
  - Profile picture
  - Mobile phone contacts
  - Location

11 PRIVACY PRINCIPLES

PRIVACY PRINCIPLES

OPENNESS, TRANSPARENCY, & NOTICE

- Easy & clear information

- Collected info into 3 categories: provided, collected, third party

INDIVIDUAL PARTICIPATION & ACCESS

- Gives users ability to access & review PIIs
- Username can be changed once a year
- Phone number & email can be edited

ACCOUNTABILITY

- Lack of responsibility for third-party info
- "We are not responsible for how those third parties collect or use your information"
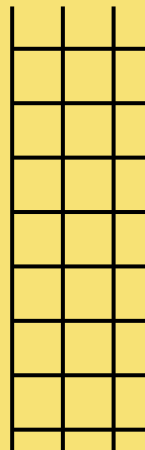
PRIVACY PRINCIPLES

INFORMATION SECURITY

- Snapchat has log-in capabilities
- 2-factor authentication
- Very vague policy on sharing information

PRIVACY COMPLIANCE

- Snap has a head of Global Platform Safety
- Applies a privacy-by-design approach
- Abides by GDPR regulations and requirements

PRIVACY PRINCIPLES

CONSENT & CHOICE

- Privacy Policy Agreement is very verbose and not clear to the average user.

- Automatically checks the "agree" button upon signing up - no guarantee that the user did read the agreement.

PURPOSE LEGITIMACY & SPECIFICATION

- Snapchat does claim to adhere to the GDPR guidelines.

- First time that a user uses the map, story, and other features on the app do warn the user about the use of their data

COLLECTION LIMITATION

- Snapchat saves users location for 180 days!

- Snapchat saves a lot of data about its users, and is not explicit about how long they keep each data point for.

PRIVACY PRINCIPLES

DATA MINIMIZATION

- Snap does not give users a list of its trusted partners who receive user's PII
- "need-to-know" principle not so much respected with retention period of location data
- Collected info into 3 categories: provided, collected, third party

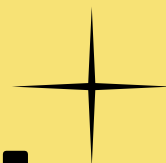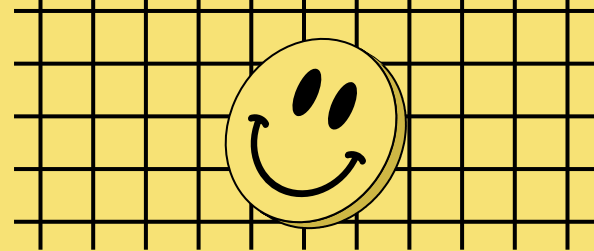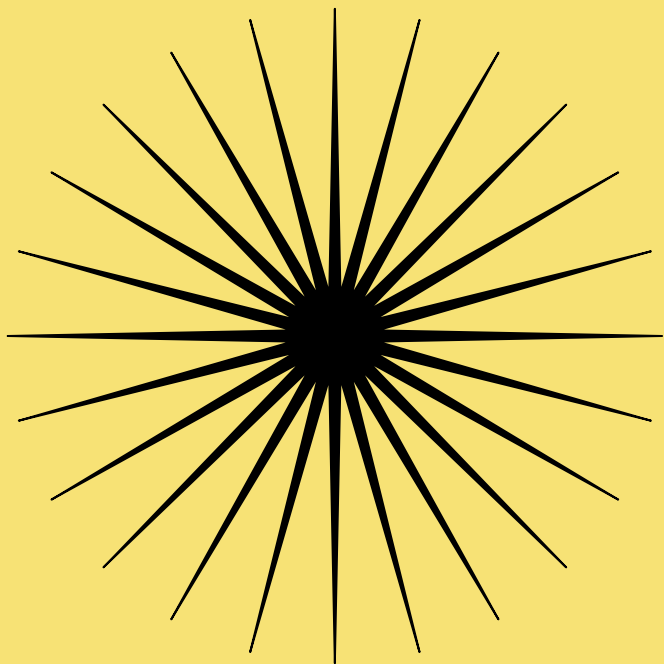## USE, RETENTION & DISCLOSURE LIMITATION

- Deletes **unopened** snaps from its servers after 31 days
- Retains **saved** snaps indefinitely
- Stores geolocation for 2+ years
- No specification on how long retains your voice call history for
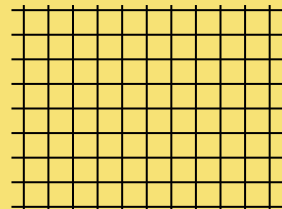
ACCURACY & QUALITY

- Text message verification
- Email verification
- No system to check with user if information is still up-to-date

THANK YOU