

1.600.000.000

With 1.6 billion active users in 2015 Facebook is heading towards their mission to connect every person on this planet through their social network.

Facebook
1201 California
Street, Menlo Park, CA 94025-5000
United States of America

1 billion log likes Facebook per day	300 petabytes per day	1.1 trillion likes
4.5 billion users	3.1 million likes	17 billion likes per post
350 million retargeted photos	4.7 billion hours spent watching	10 billion pageviews per day

Facebook revenue in 2015

17.930.000.000

This black box defines new forms of labour, exploitation and generation of enormous amount of wealth and power (17.93 billion dollars in 2015) for the owners of this invisible immaterial factory creating deep economic gap between the ones who owns and control the means of production and their users who really often live below the poverty line.

3.528.305
working hours per day

Every of over 1 billion Facebook users / digital workers, work averagely 20+ minutes per day on liking, commenting and scrolling through status updates. That is more than 300.000.000 working hours of free digital labour per day.

300.000.000

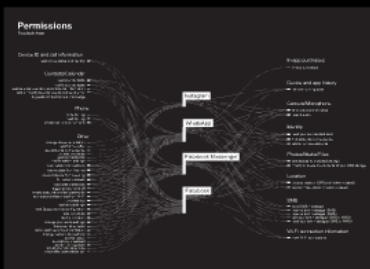
working hours per day

Investigation Tools

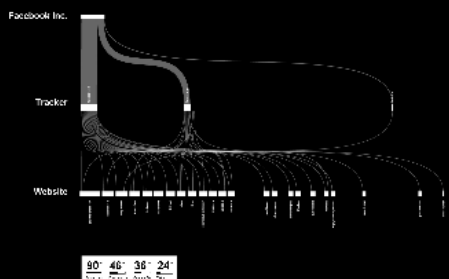
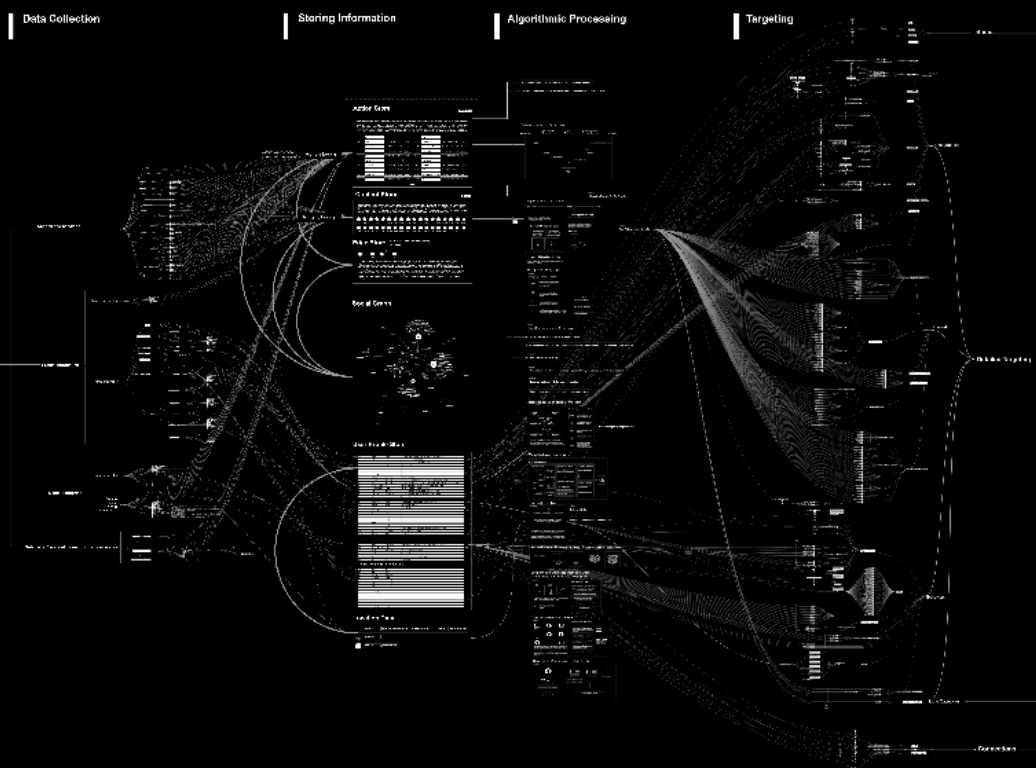
- Facebook
- Twitter
- LinkedIn
- Instagram
- YouTube
- Google
- Apple
- Microsoft
- Amazon
- Netflix
- Spotify
- Netflix
- Spotify
- Netflix
- Spotify

3 segments of our investigation:

- Immaterial Factory: Transforming user labour into profit
- Algorithmic filtering and moderation: Newsfeed algorithm
- Policing and oppression in the State of Facebook: Cybernetic censorship



Inside Facebook Algorithmic Factory



Active users
1.600.000.000

With 1.6 billion active users in 2015 Facebook is heading towards their mission to connect every person on this planet through their social network.

Registered:
Days: 139,300,000
Users: 1,600,000,000
Active users: 1,600,000,000
Members: 1,600,000,000



Facebook revenue in 2015
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Free labour:
3.528.305

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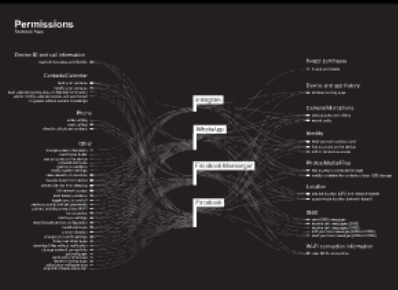
300.000.000

working hours per day

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Immaterial Factory - Transforming user labour into profit
Algorithmic filtering and moderation - Newsfeed algorithm
Policing and oppression in the State of Facebook - Cybernetic censorship

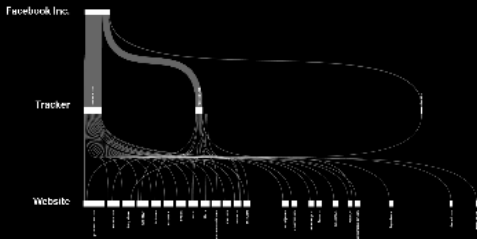
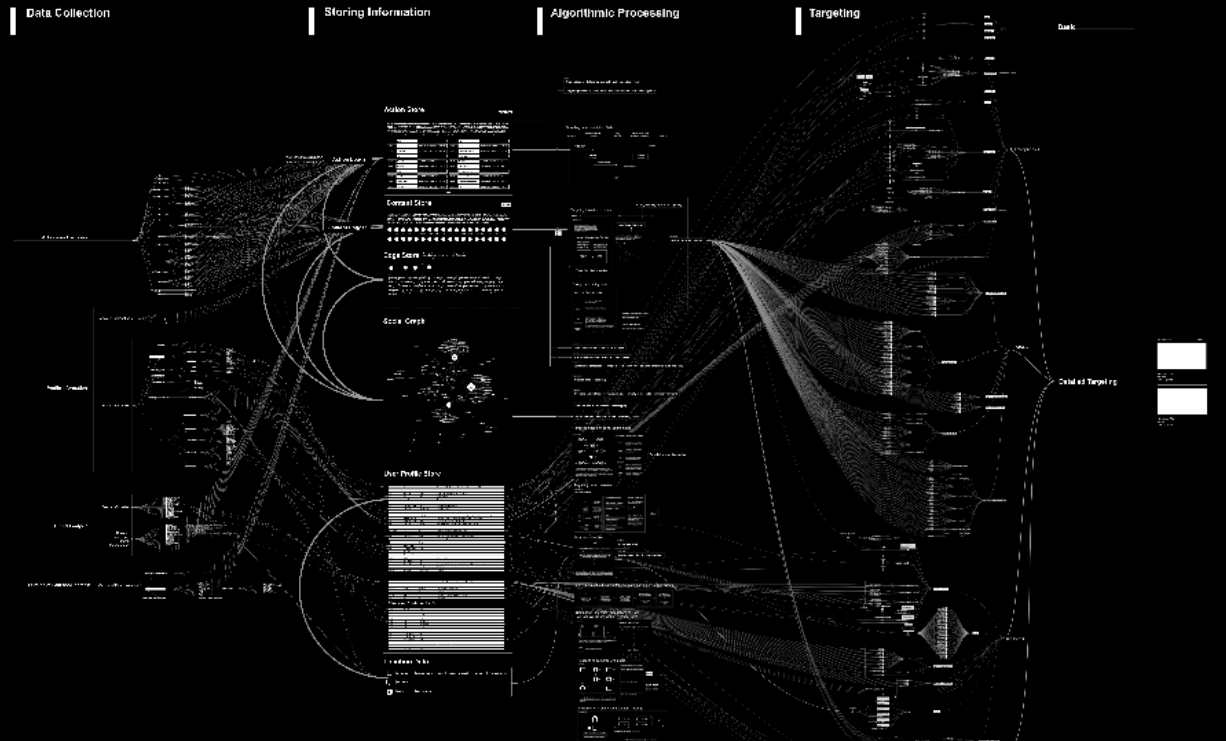
Investigation Tools

- Facebook**
- Twitter**
- Instagram**
- YouTube**
- LinkedIn**
- Google**
- Apple**
- Microsoft**



Inside Facebook Algorithmic Factory

The factory works and lives on its own and is involved in the state



90° 46' 36" 24"

Active users

1.600.000.000

With 1.6 billion active users in 2015 Facebook is heading towards their mission to connect every person on this planet through their social network.

Population :

China - 1,376,560,000

India - 1,288,970,000

United States - 323,473,000 (x5)

Serbia - 7.164.000 (x223)

1

billion
log into Facebook
every day

30

peta
USE

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cebook
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petabytes
of
user data

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trillion

Likes

since 2004

every day

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4.5

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every day

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user data

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3.1

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million

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Likes

Location-

per minute

ev

lata

LIKES

since 2004

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17

on

billion

es

Location-tagged posts

ute

every day

Likes

every day

L

per

350

million

uploaded photos

every day

4

bil

items

ea

Likes

per minute

Location-tagged

every day

0

4.7

10

billion

items shared

each day

billic

messag

send each

s

Location-tagged posts

every day

7

10

billion

messages

send each day

ed

Facebook revenue in 2015

17.930.000.000

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$423.48 \$ \times 12 = 5081.76\$$
 $17.930.000.000 / 5081.76 =$

3.528.305

x Annual wages in Serbia

$$423.48 \$ \times 12 = 5081.76\$$$
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x Annual wages in Serbia

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300.000.000

working hours per day

3 segments of our investigation :

Immaterial Factory : Transforming user labour into profit

Algorithmic filtering and moderation : Newsfeed algorithm

Policing and oppression in the State of Facebook : Cybernetic censorship

Investigation Tools

1. Data Collection

- Facebook Data policy analysis
- Mapping all the input fields on the Facebook platform
- Cookies and pixel technology analysis at the 3rd party websites
- Policy analysis of Facebook owned companies
- Research on Facebook Vendors, service providers and other partners.
- Facebook Ireland Ltd Report of Audit (2011)

2. Storage and data analysis

- Facebook Patent database research
- Facebook API

3. Targeting

- Facebook Ad creation process

The Facebook Algorithmic Factory

is tracked, stored, analysed and transformed into the product

Data Collection

Storing Information

Algorithmic Processing

Targeting

Actions and behavior

Social Graph

Profile Information

Device Fingerprint

Databases of Facebook Data

Action Logger

Content Logger

Action Store

Content Store

Edge Store

Social Graph

User Profile Store

Location Data

Facebook mobile app, web browser, plugins

Facebook mobile app, web browser, plugins

Facebook mobile app, web browser, plugins

Facebook mobile app, web browser, plugins

Facebook mobile app, web browser, plugins

Facebook mobile app, web browser, plugins

Facebook mobile app, web browser, plugins

Facebook mobile app, web browser, plugins

Facebook mobile app, web browser, plugins

Facebook mobile app, web browser, plugins

Basic

Demographics

Behavior

Interests

Connections

Device

Location

Activity

Connections

Activity

Activity

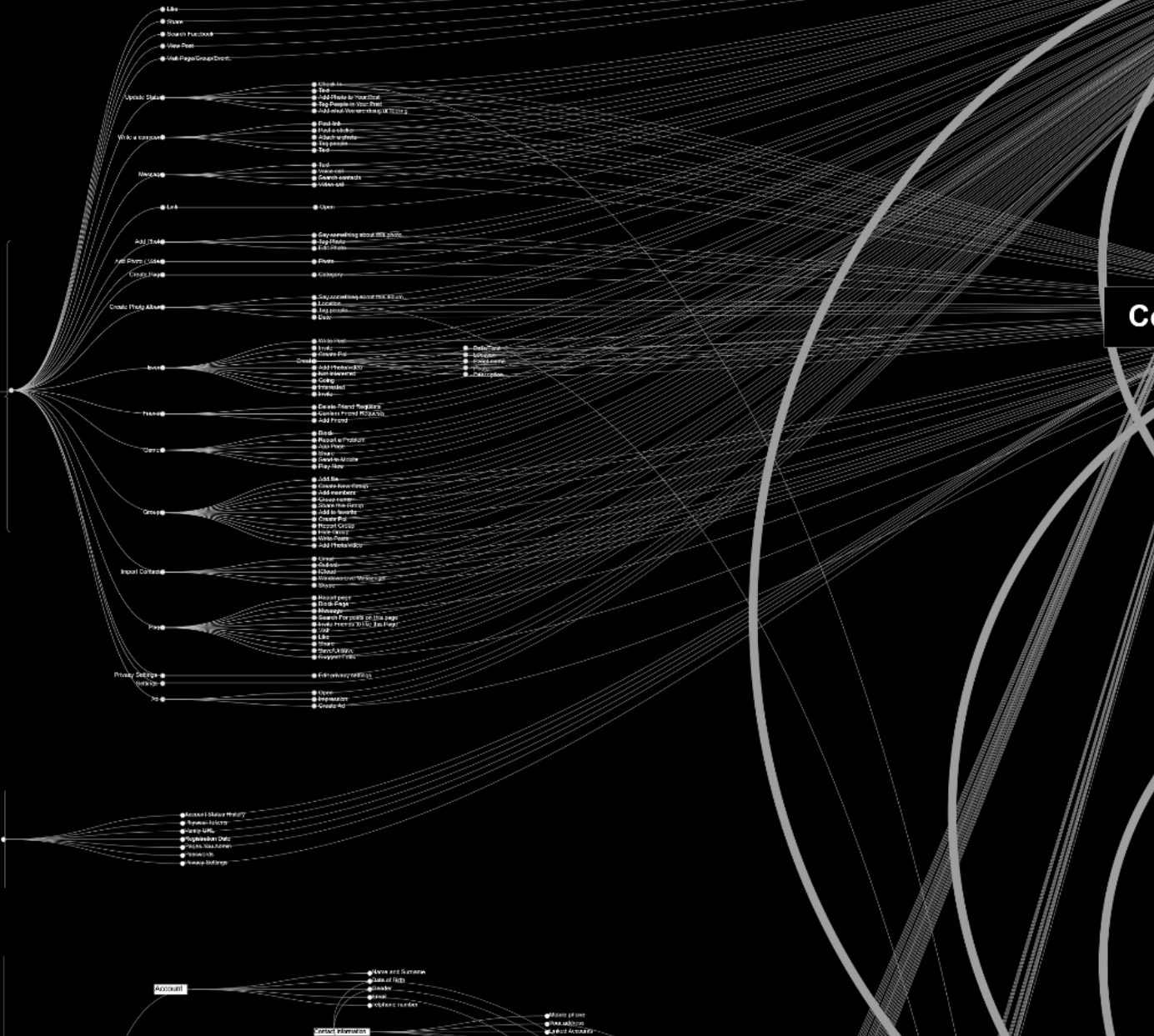
Detailed Targeting

Connections

The action logger receives communications about user actions on and/or off the social networking system. The action logger populates the action log with information about the user actions, allowing the actions to be tracked.

Actions and behavior

Account Information



- Like
- Share
- Search Facebook
- View Post
- Visit Page/Group/Event..

Update Status

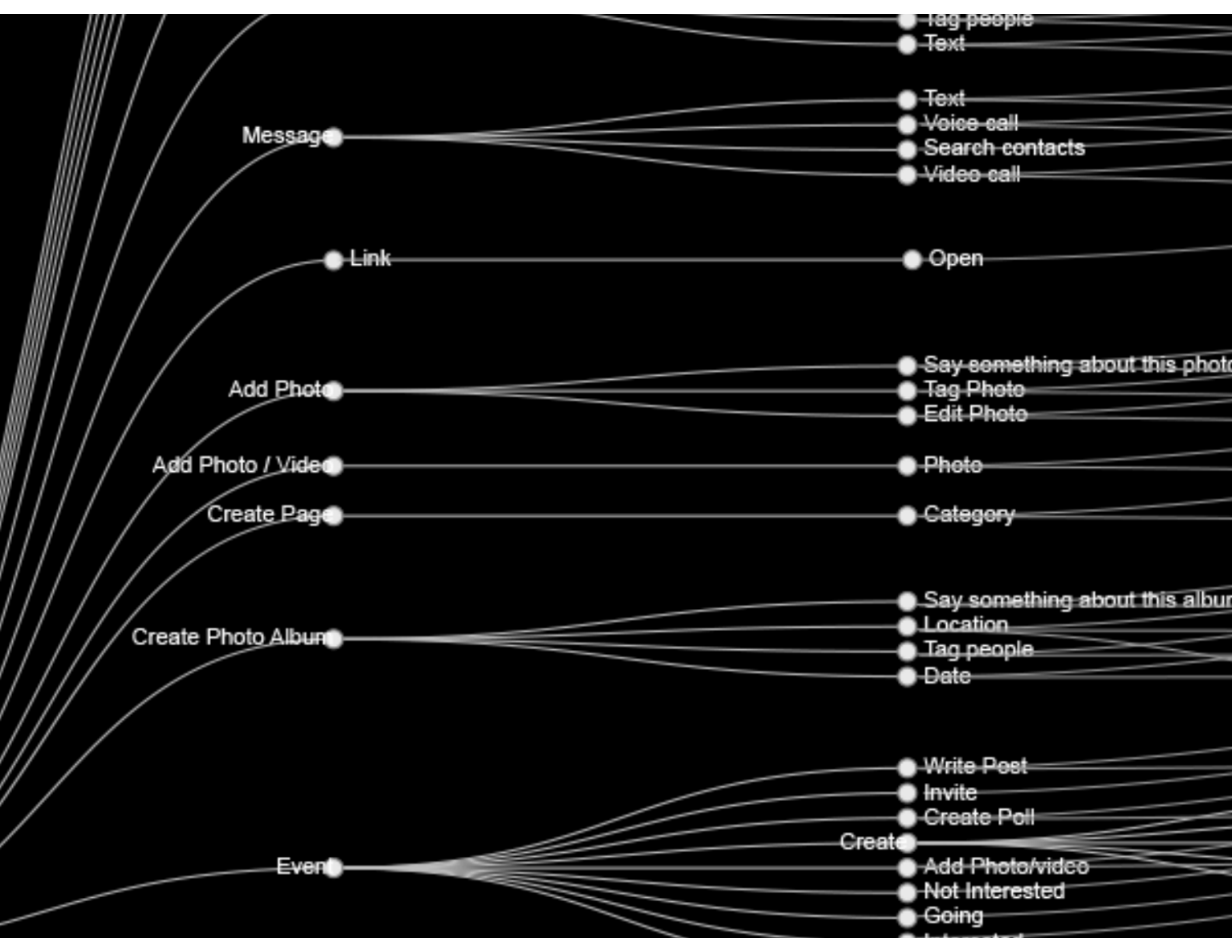
- Check In
- Text
- Add Photo to Your Post
- Tag People in Your Post
- Add what You are doing or feel

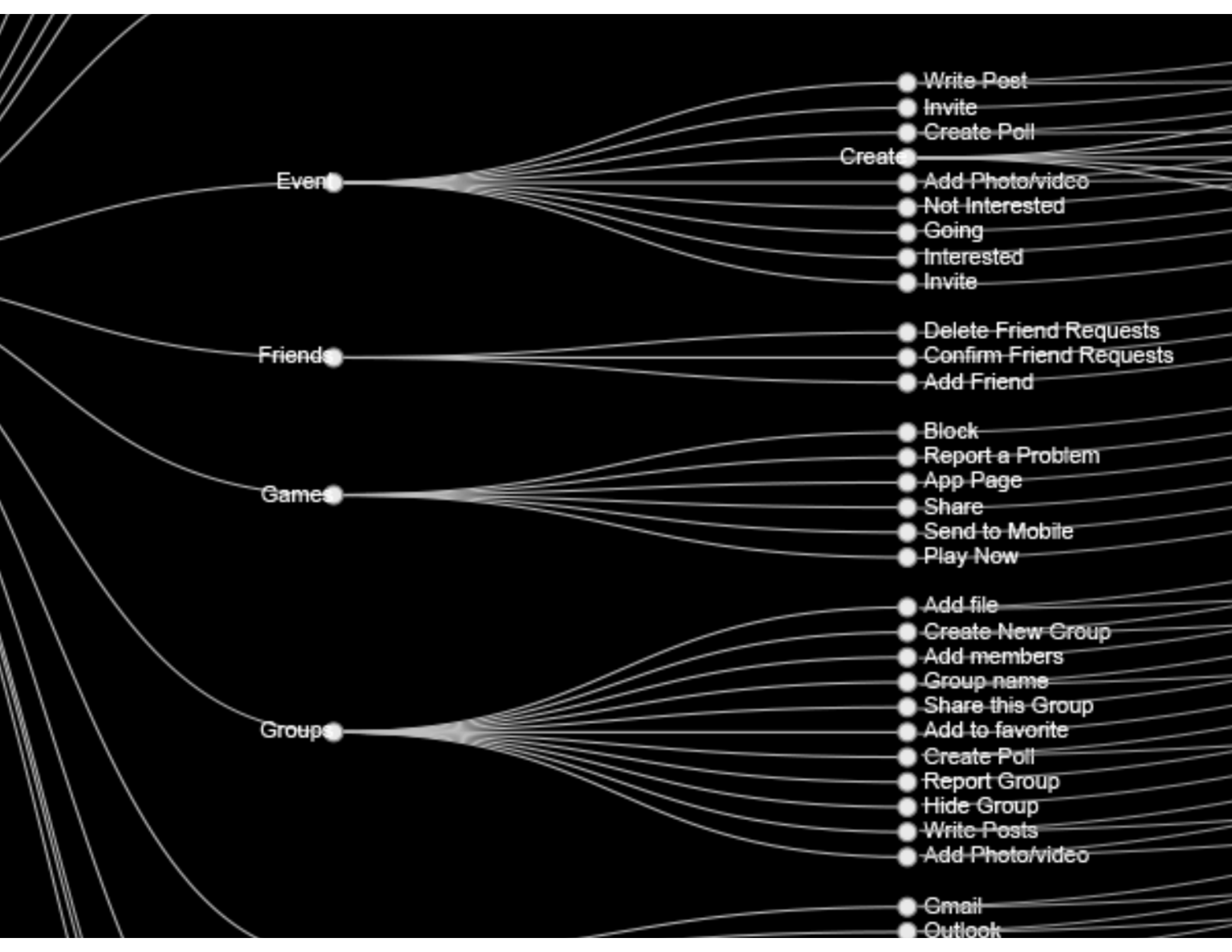
Write a comment

- Post link
- Post a sticker
- Attach a photo
- Tag people
- Text

Message

- Text
- Voice call
- Search contacts
- Video call





Event

Friends

Game

Group

Create

Write Post

Invite

Create Poll

Add Photo/video

Not Interested

Going

Interested

Invite

Delete Friend Requests

Confirm Friend Requests

Add Friend

Block

Report a Problem

App Page

Share

Send to Mobile

Play Now

Add file

Create New Group

Add members

Group name

Share this Group

Add to favorite

Create Poll

Report Group

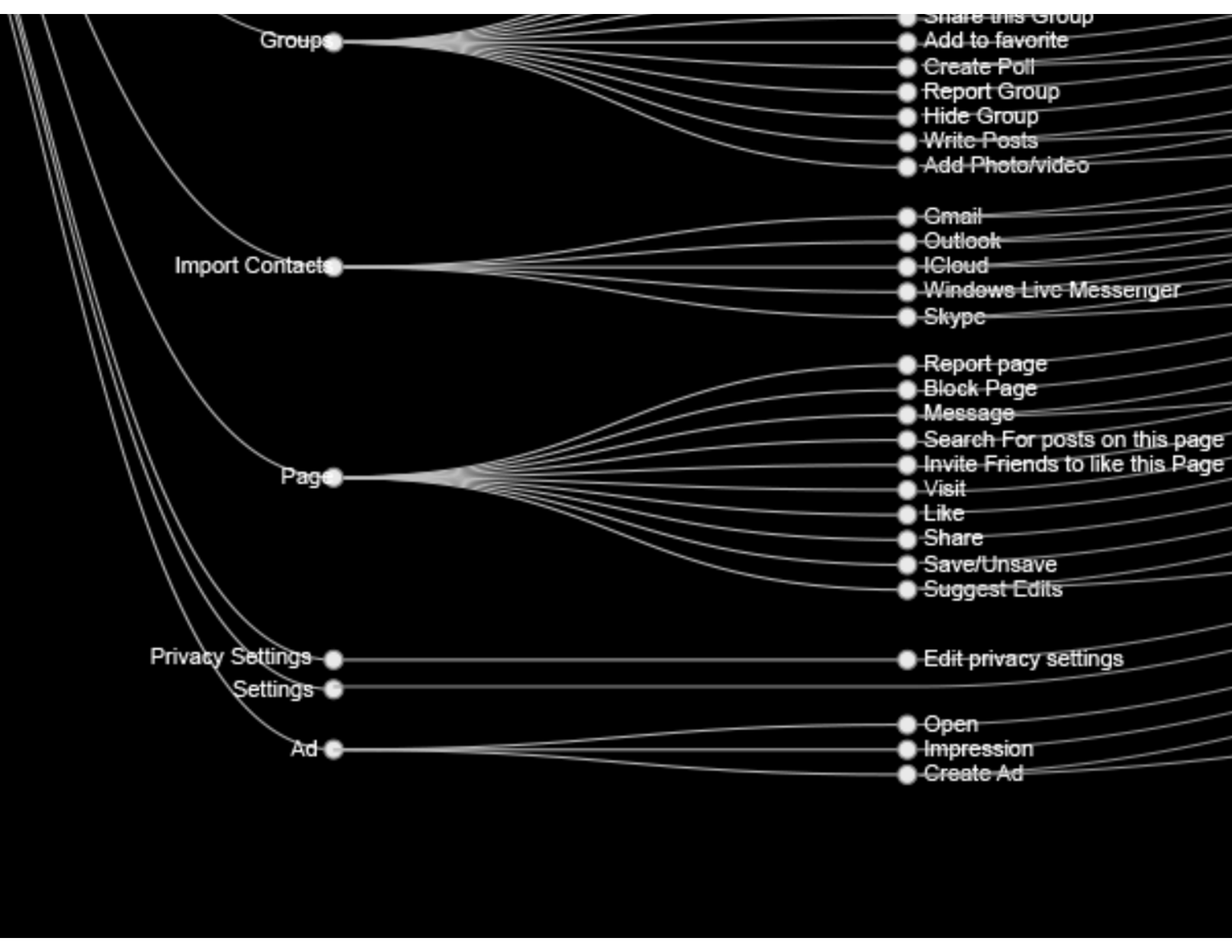
Hide Group

Write Posts

Add Photo/video

Gmail

Outlook



Group

Import Contact

Page

Privacy Settings

Settings

Ad

Share this Group
Add to favorite
Create Poll
Report Group
Hide Group
Write Posts
Add Photo/video

Gmail
Outlook
iCloud
Windows Live Messenger
Skype

Report page
Block Page
Message
Search For posts on this page
Invite Friends to like this Page
Visit
Like
Share
Save/Unsave
Suggest Edits

Edit privacy settings

Open
Impression
Create Ad

Account Information

- Account Status History
- Physical Address
- Primary URL
- Registration Date
- Profile View Admin
- Privacy Settings
- Privacy Settings

Profile Information

- Account
- Contact and Basic Info
- Work and Education
- Places You've Lived
- Details About You

Family and Relationships

Life Events

- Name and Surname
- Date of Birth
- Gender
- EMAIL
- Phone Number

Contact Information

- Mobile phone
- Your address
- Linked Accounts
- Website
- Photo link

Basic Information

- Birth Date
- Gender
- Interests in
- Messages
- Your network view
- Your profile view

Work

- Workplaces
- Professional skills

Education

- Courses
- High School

Places You've Lived

- Current City
- Locations
- Time Period Lived

Details About You

- About You
- Other names
- Work goals

Family members

- Spouse
- Partner
- In a relationship
- Married
- Domestic Partnership
- Separated
- Single
- Divorced
- Widowed

Relationship

- Grandchild
- Child
- Parent
- Adopted
- Spouse
- Partner
- In a relationship
- Married
- Domestic Partnership
- Separated
- Single
- Divorced
- Widowed

Travel and Experiences

- Grand Award, Race, Other
- Achieved Goals
- Achievement or Award
- Trips
- Travel
- Tattoo or Piercing
- New Language
- New Instrument
- New Hobby
- Create Your Own
- New Sport

Health and Wellness

- Create Your Own
- Removed Places
- Broken Bones
- Cuts, Scuffs, Other
- Weight Loss
- New Eating Habit
- Quit a Habit
- Overcame an Illness

Home and Living

- Create Your Own
- New Vehicle
- New Home
- Home Improvement
- Home Improvement
- Decorate a Home

Family and Relationships

- Create Your Own
- Loss of a Loved One
- New Relationship
- Engagement
- Marriage
- Anniversary
- Expecting a Baby
- New Child
- New Family Member
- New Pet
- End of Relationship

Work and Education

- Returned from or leave
- Retirement
- New School
- College Degree
- Volunteer Work
- Military Service
- Create Your Own

Profile Information

- Name of your mobile operator or ISP
- Mobile phone number
- Physical location (GPS)
- IP address
- Device location API status

Account

- Name and Surname
- Date of Birth
- Gender
- Email
- Telephone number

Contact and Basic Info

Contact Information

- Mobile phone
- Your address
- Linked Accounts
- Website
- Public key

Basic Information

- Birth Date
- Gender
- Interested in
- Language
- Your religious views
- Your political views

Work and Education

Work

- Workplace
- Professional skills

Education

- College
- High School

Places You've Lived

- Current city
- Hometown
- Other Places Lived

Details About You

- About You
- Other names
- Favorite quote

Family members

- Civil Union
- Complicated
- Divorced
- Domestic Partnership
- Engaged
- In a relationship

Digital Footprint

Device Information

- Name of your mobile operator or ISP
- Mobile phone number
- Device location GPS
- IP address
- Device location WiFi signals
- Device location Bluetooth
- Browser type
- Device identifiers
- Signal strength
- Battery strength
- File and software names and types
- Device settings
- Hardware version
- Operating system
- Language and time zone
- Connection type

Cookies Pixels and Similar Technologies

- Web browser
- First Facebook page
- External referrer URL
- Browser window dimensions
- User ID
- 'keep me logged in' status
- Consecutive log in's
- Time at which the user logged in
- Session number
- Session secret
- Secure browsing
- Full referrer URL
- User's chat state
- User's channel partition
- Locale
- Responsiveness of the site
- Action performed by the user on the site
- Encrypted user id
- Browser ID
- Connections to the Facebook chat server

Web browser being used to connect to
 First Facebook page that the web brow
 External referrer URL form when the br
 If the window is maximised, this reveals
 User ID of the currently logged in user
 If the 'keep me logged in' checkbox is t
 Number of times in a row that the same
 Unix timestamp value representing the
 Up-to-two digit number representing the
 ?
 If the user has enabled the secure brow
 The referrer is the URL of the web pag
 Which chat tabs are open
 User's channel partition is required by
 Display locale of the last logged in use
 Performance related information
 When the user clicked on a link
 Encrypted version of the logged in user
 Used to identify the web browser
 To communicate across tabs to coordin

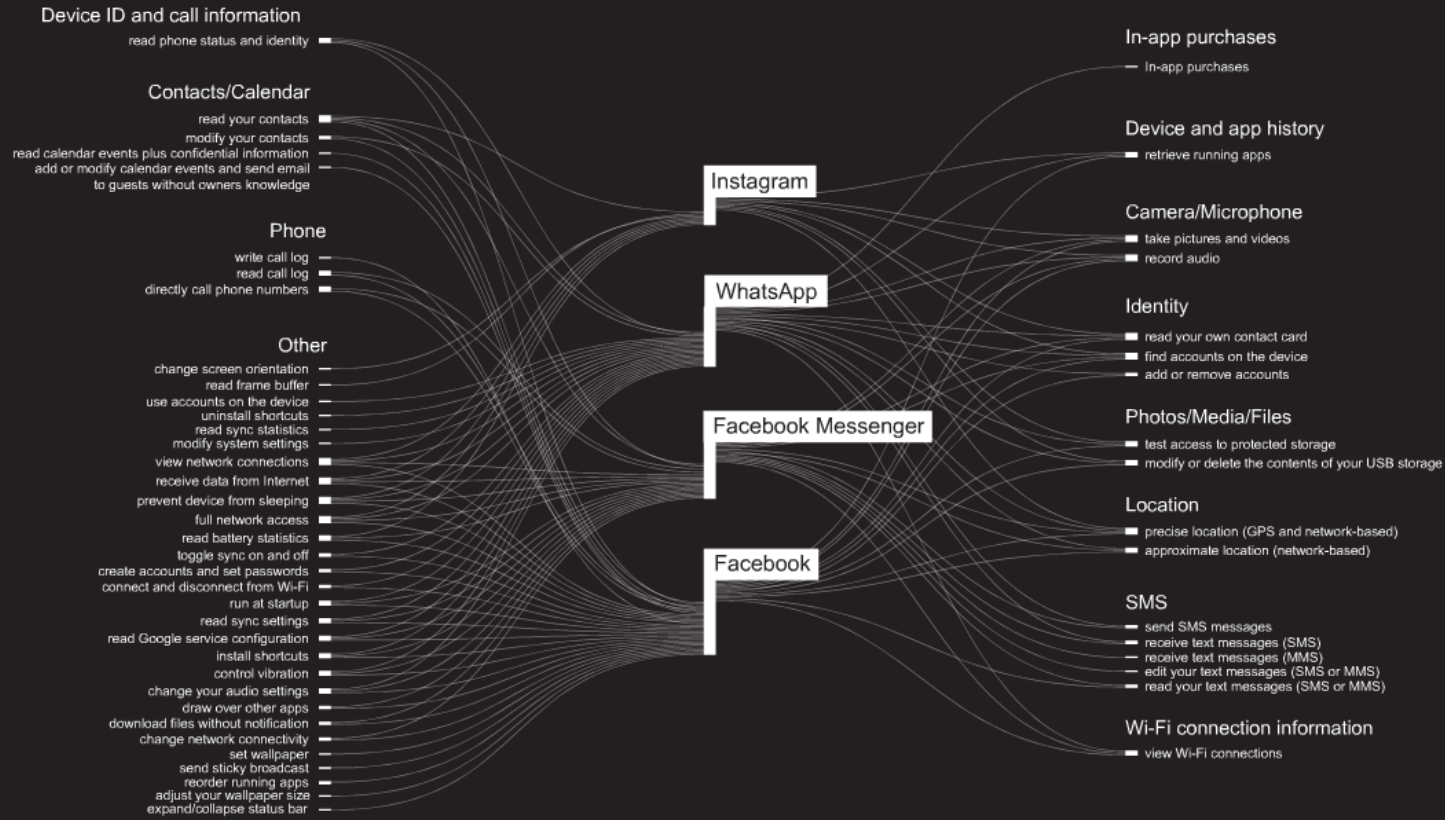
Facebook Services on Other Sites

- Comments on
- Likes on Other
- Visit to Other
- Logins on Ot

- Onavo
- Mobile Techn

Permissions

Facebook Apps



DEVICE ID and call information

read phone status and identity

Contacts/Calendar

read your contacts

modify your contacts

read calendar events plus confidential information

add or modify calendar events and send email
to guests without owners knowledge

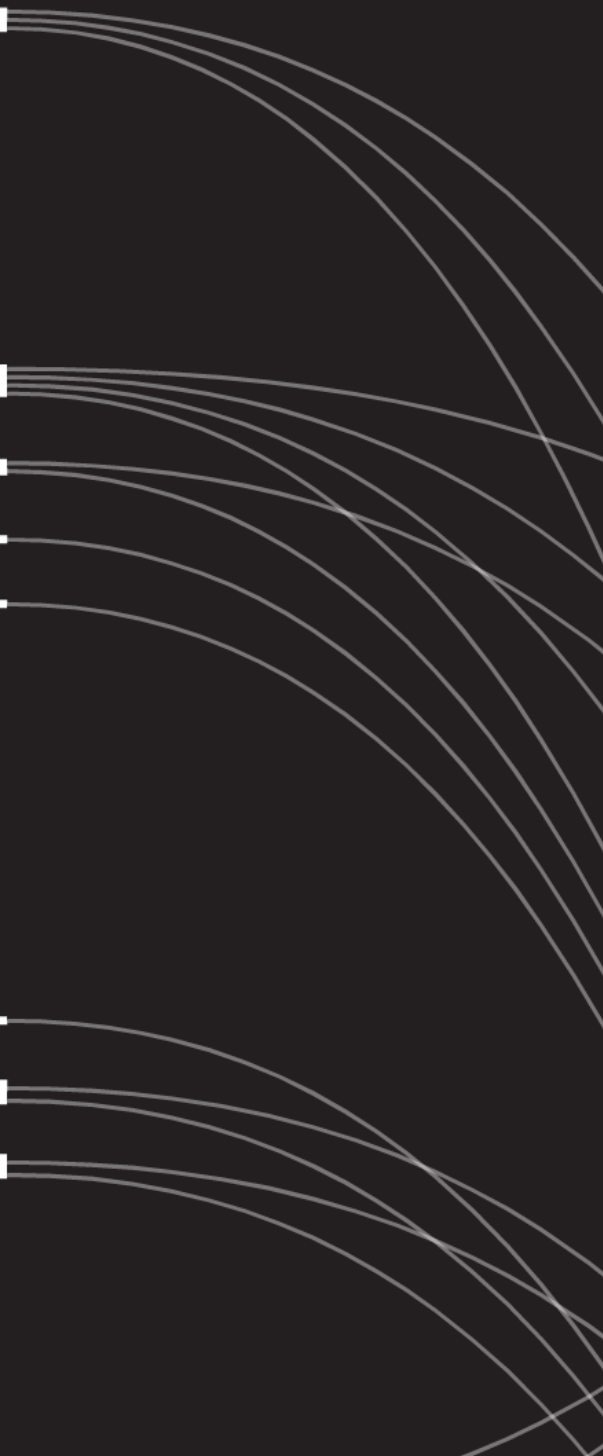
Phone

write call log

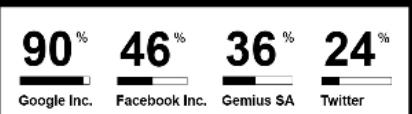
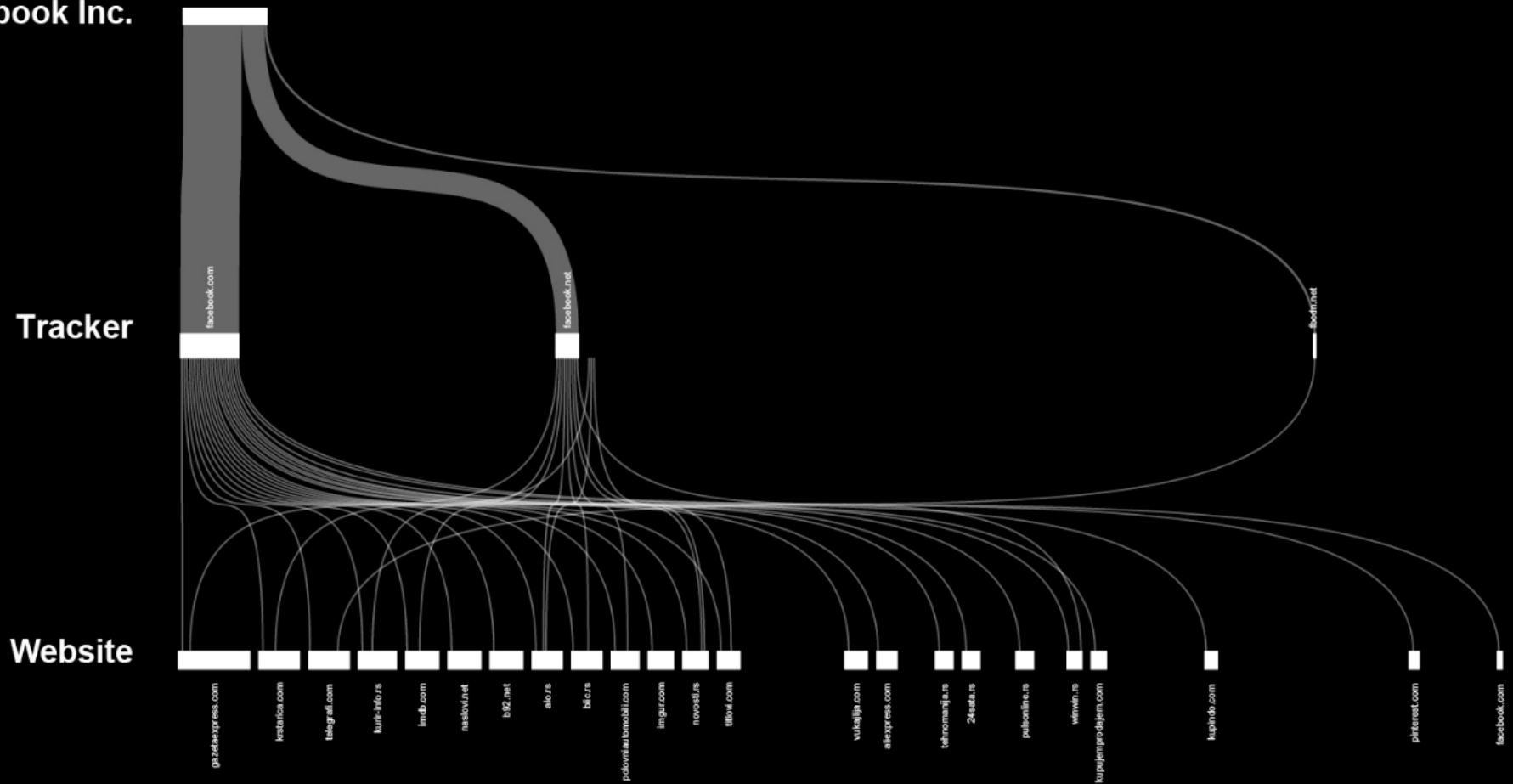
read call log

directly call phone numbers

Other



Facebook Inc.



90%



Google Inc.

46%



Facebook Inc.

36%



Gemius SA

24%



Twitter

gazetaexpress.com

krstarica.com

telegraf.hr

kurir-info.rs

imdb.com

naslovi.net

b92.net

alors

blic.rs

polovniautomobili.com

imgur.com

Cookies Pixels and Similar Technologies

- User ID
- 'keep me logged in' status
- Consecutive log in-s
- Time at which the user logged in
- Session number
- Session secret
- Secure browsing
- Full-referrer URL
- User's chat state
- User's channel partition
- Locale
- Responsiveness of the site
- Action performed by the user on the site
- Encrypted user id
- Browser ID
- Connections to the Facebook chat server

User ID of the currently logged in user

If the 'keep me logged in' checkbox is ticked

Number of times in a row that the same user has logged in from this browser and has not explicitly logged out

Unix timestamp value representing the time at which the user logged in

Up-to-two digit number representing the session number

?

If the user has enabled the secure browsing feature

The referrer is the URL of the web page on which the link that the user clicked resided

Which chat tabs are open

User's channel partition is required by many features on the Facebook site, including chat and client-side notifications

Display locale of the last logged in user on this browser

Performance related information

When the user clicked on a link

Encrypted version of the logged in user's Facebook ID. The user's ID is re-encrypted every hour to a different value

Used to identify the web browser

To communicate across tabs to coordinate connections to the Facebook chat server

main

Outside of Facebook

Facebook Services on Other Sites

- Comments on Other Sites
- Likes on Other Sites
- Visit to Other Sites
- Logins on Other Sites

From other Facebook companies

- Onavo
- Mobile Technologies Inc
- Instagram LLC
- Atlas
- Facebook Payments Inc
- WhatsApp Inc
- LiveRamp
- Oculus
- Moves
- Parsec

Information from third-party partners

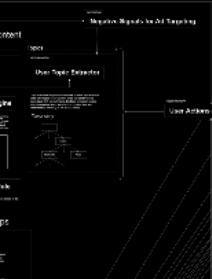
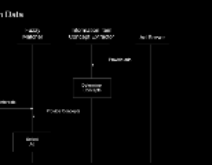
● Advertising, Measurement and Analytics Services

Payment Information

ic Processing

Targeting

of results in an online system
set to search results in an online system



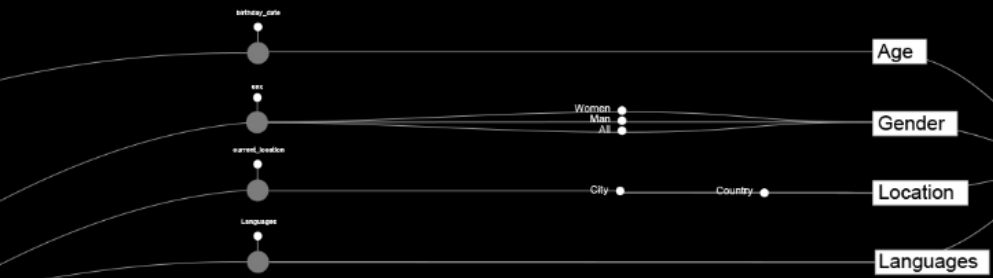
Basic

Demographics

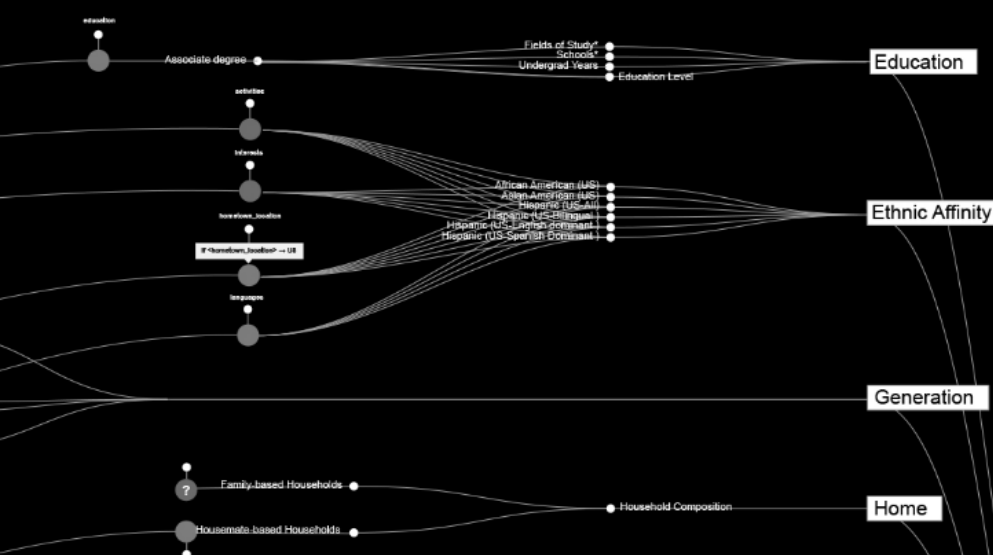
Interests

Detailed Targeting

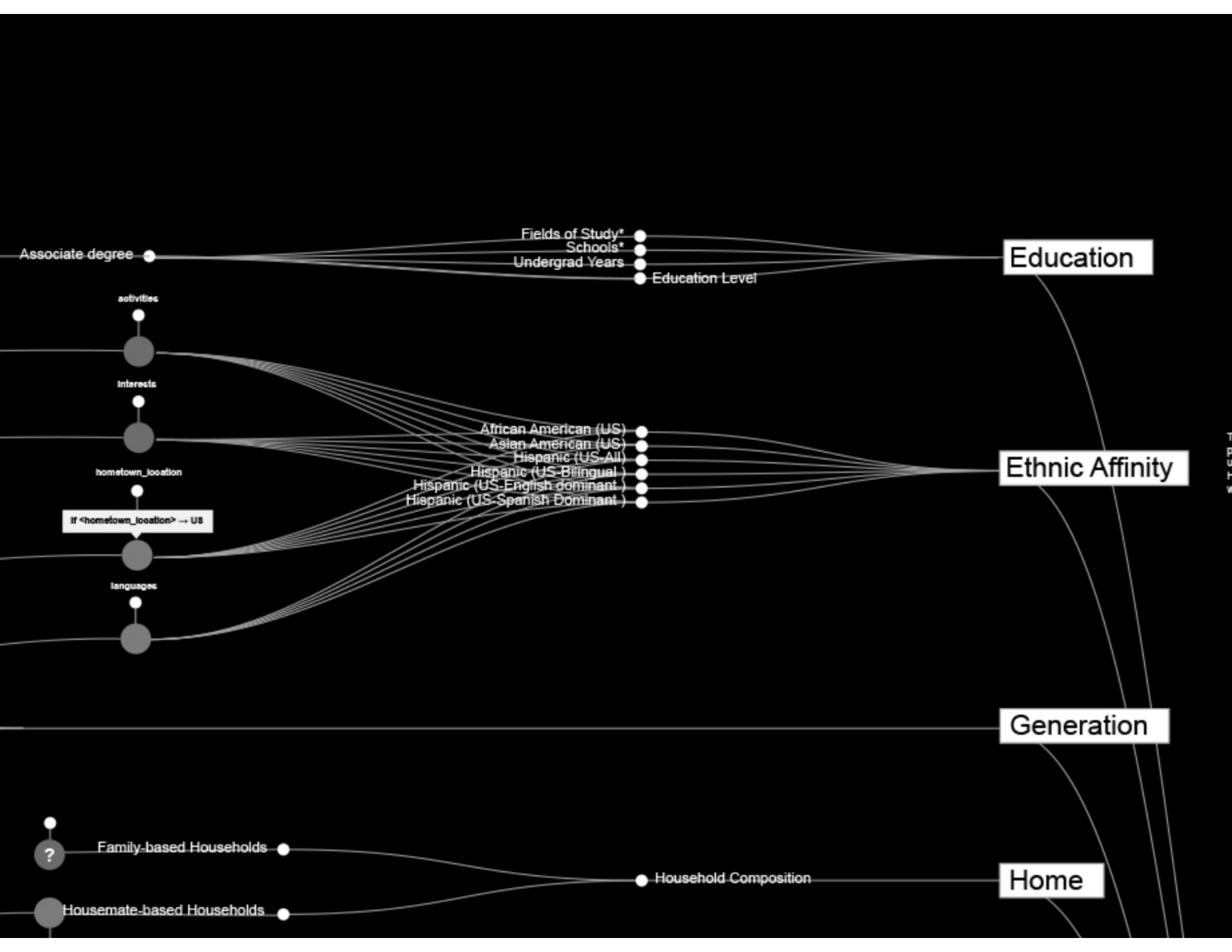


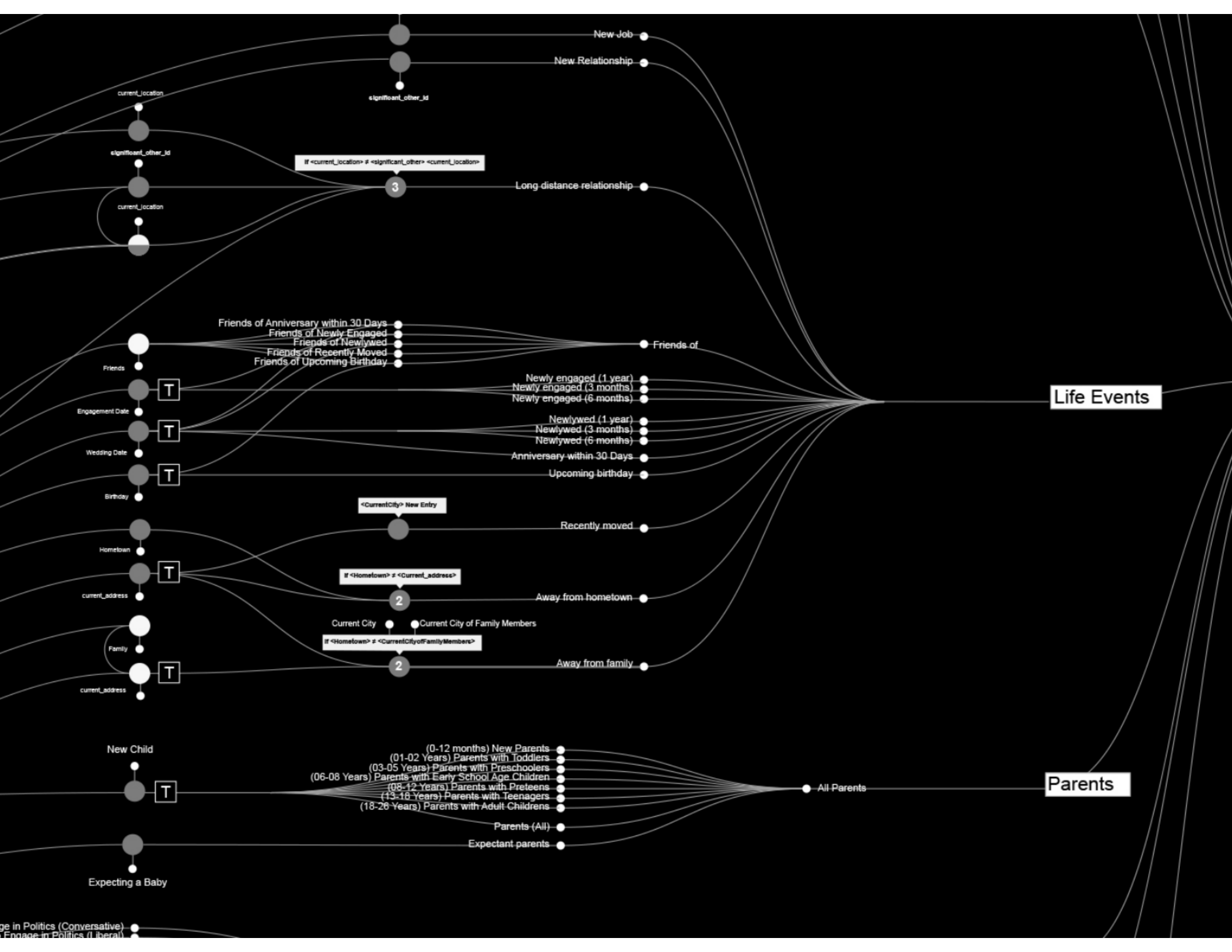


Basic



The US Hispanic cluster is not designed to identify people who are ethnically Hispanic. It is based on actual users who are interested in or will respond well to Hispanic content based on how they use Facebook and what they share on Facebook.



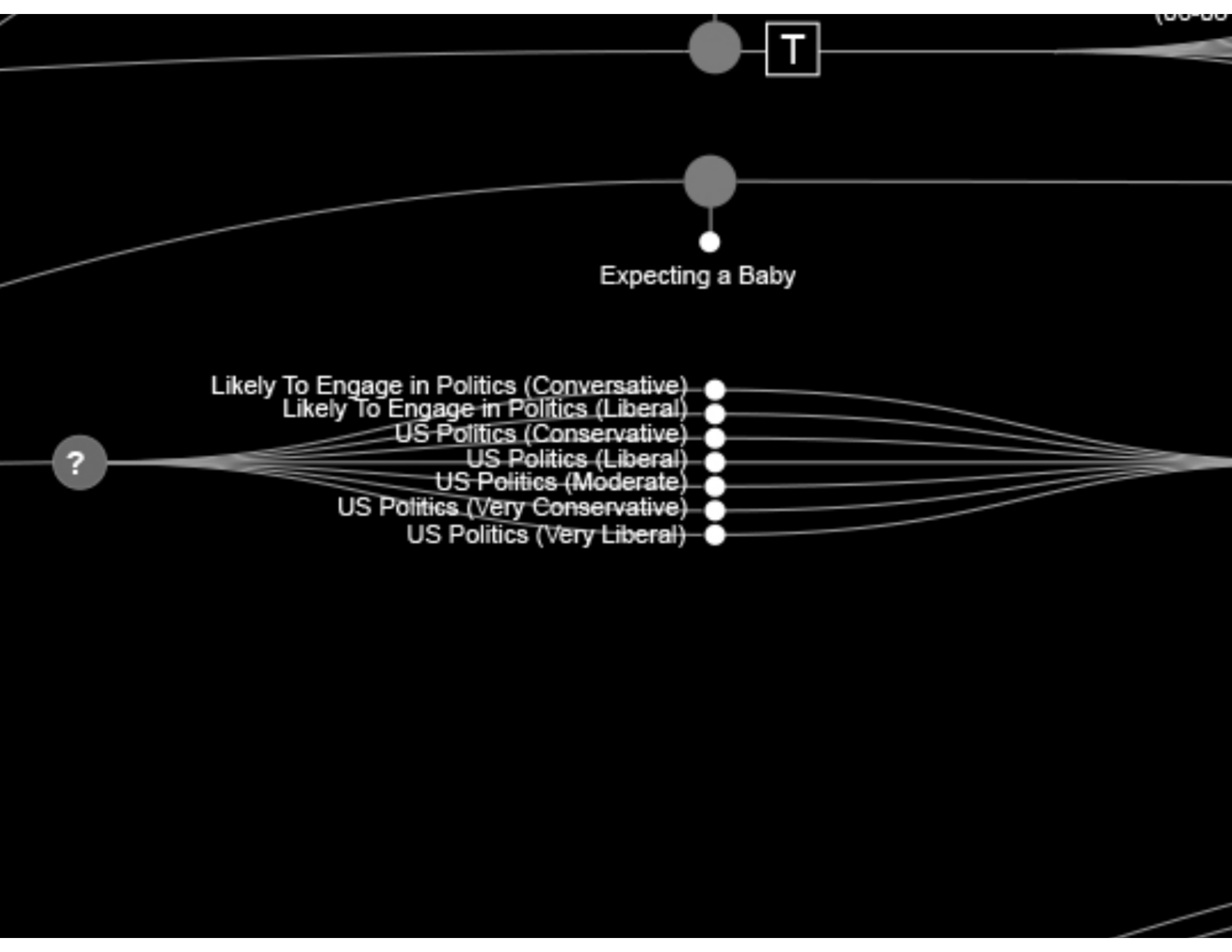


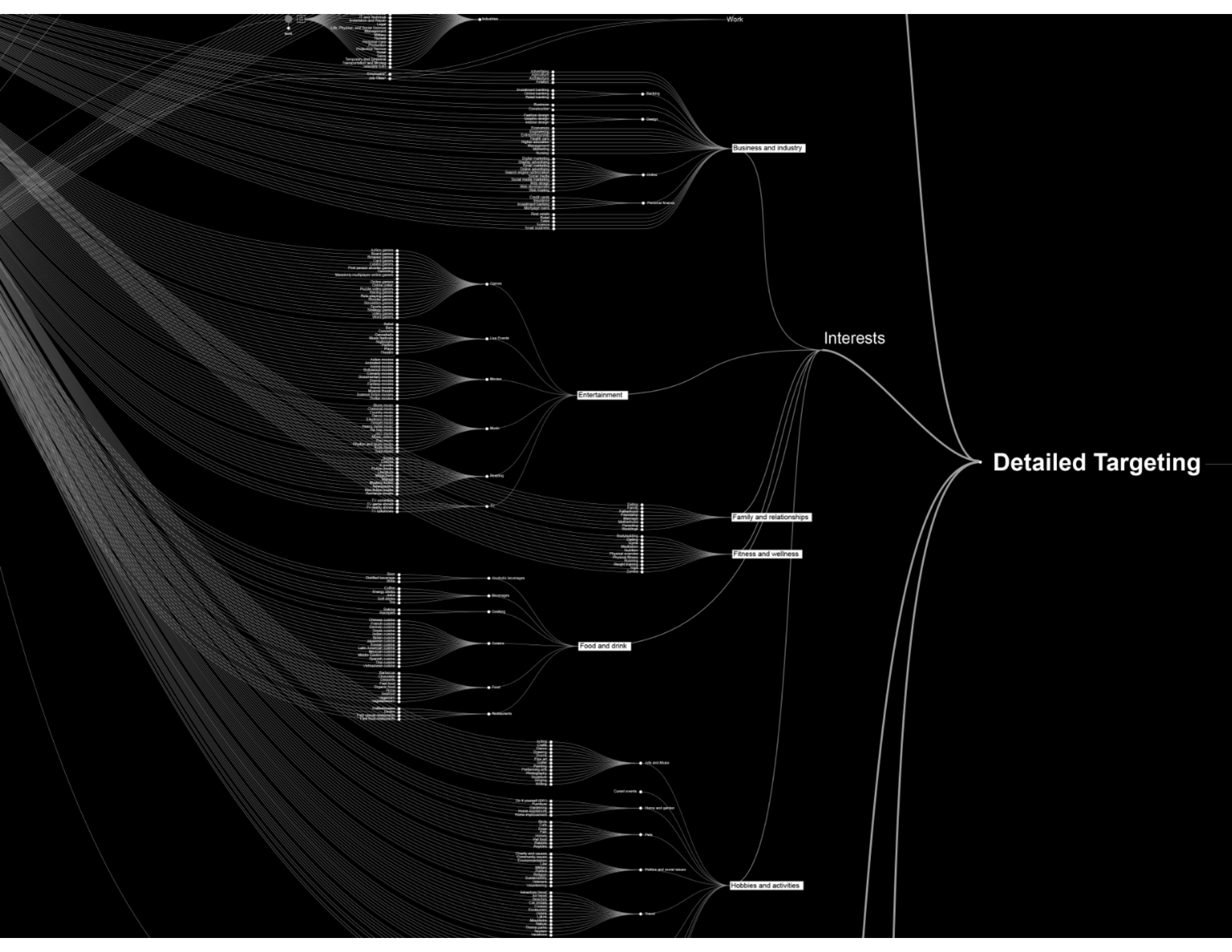
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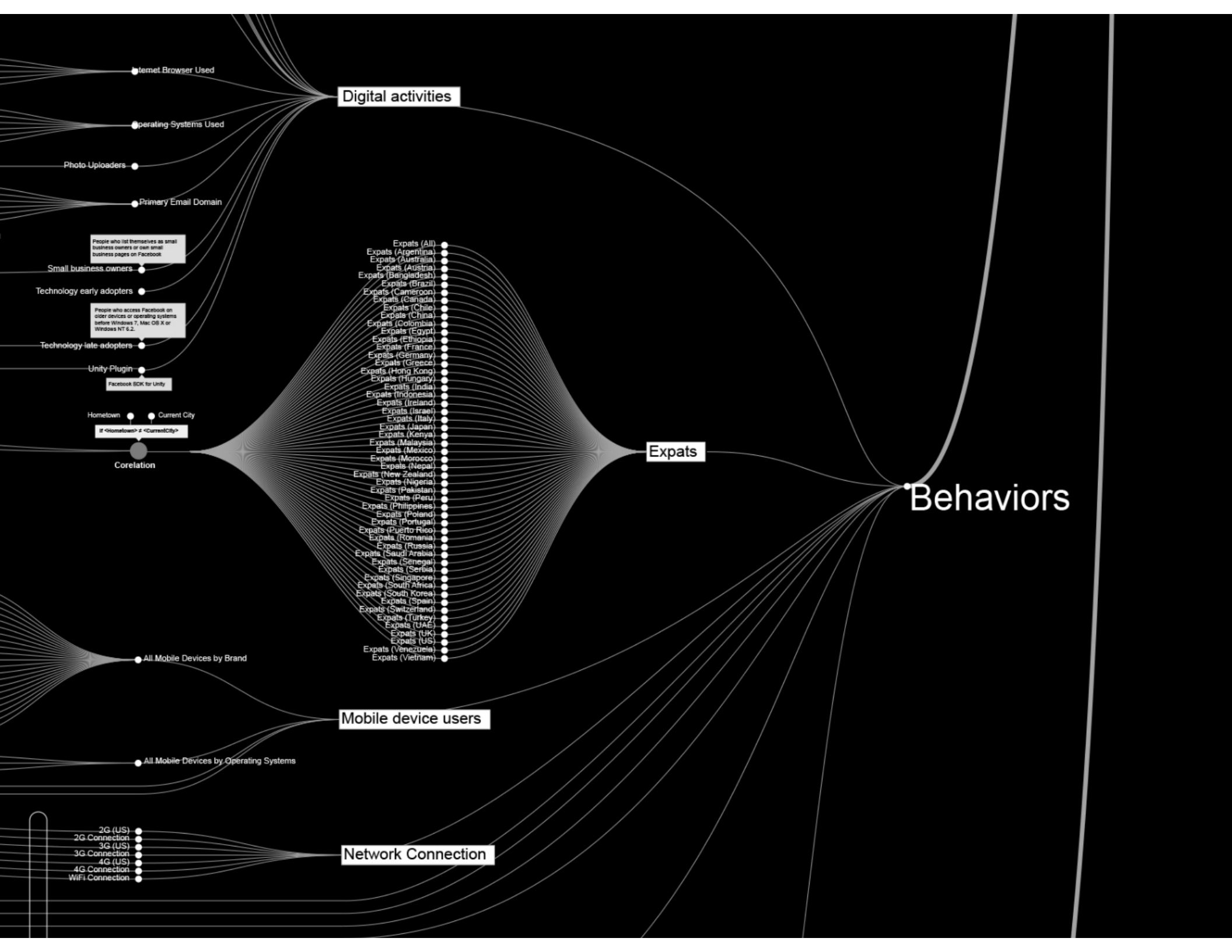
Expecting a Baby

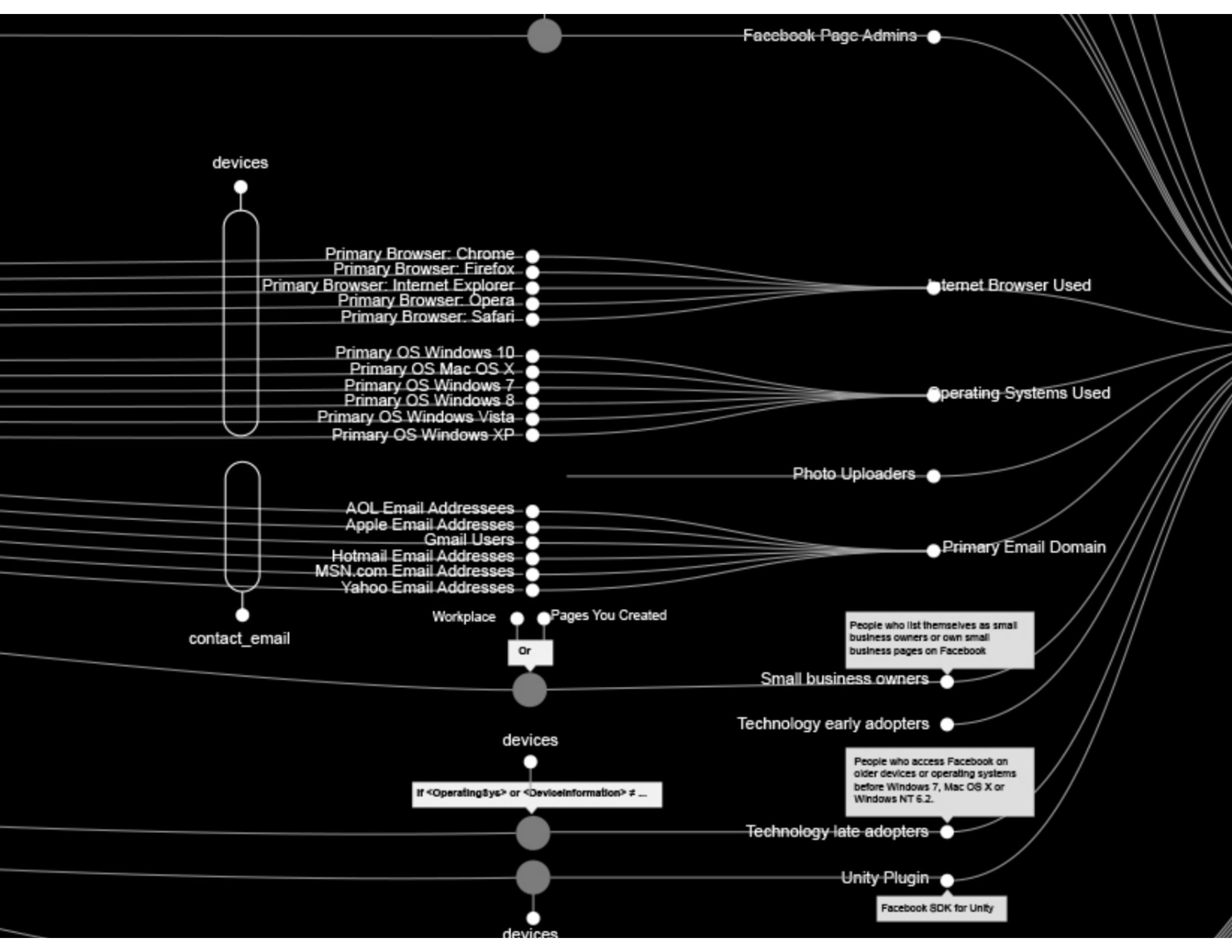
?

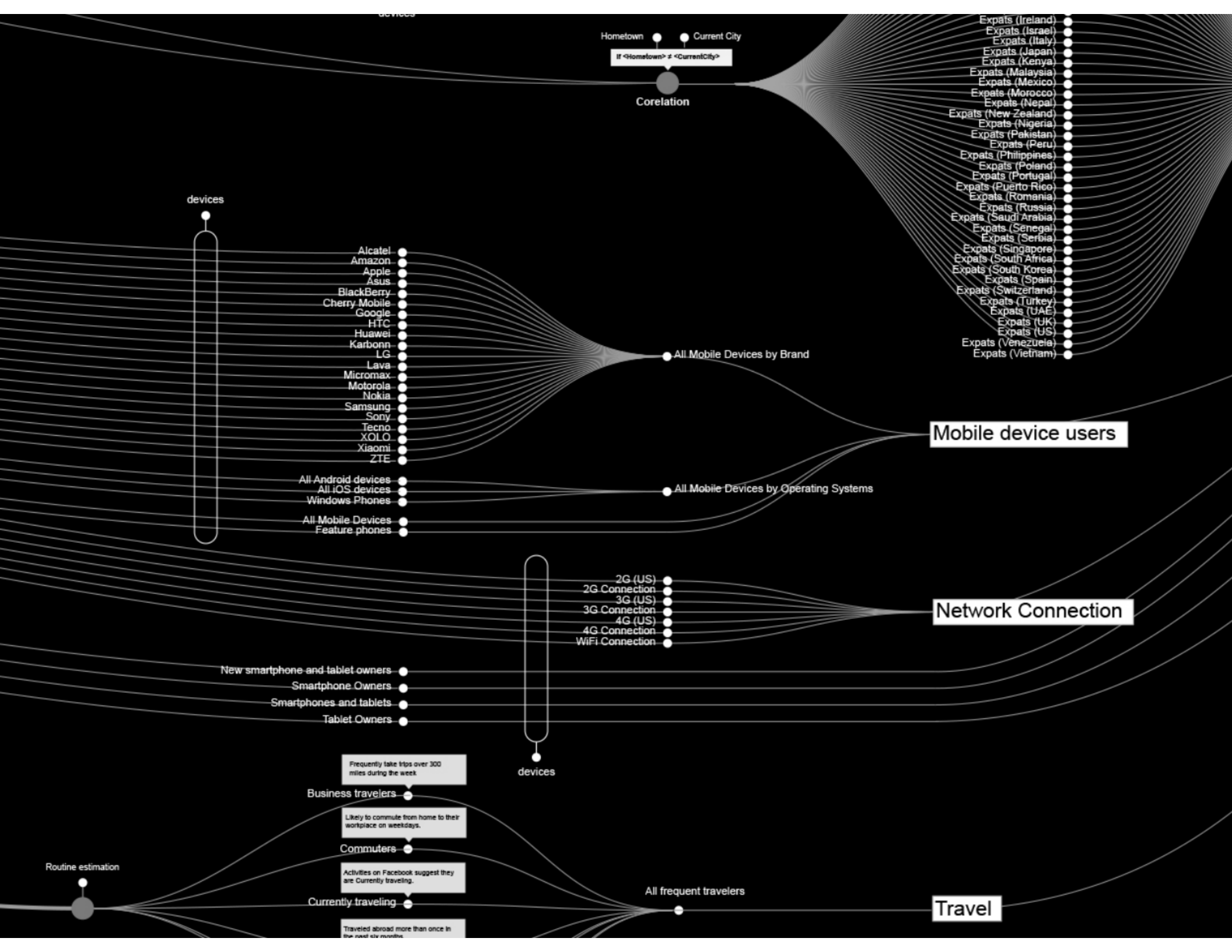
- Likely To Engage in Politics (Conservative)
- Likely To Engage in Politics (Liberal)
- US Politics (Conservative)
- US Politics (Liberal)
- US Politics (Moderate)
- US Politics (Very Conservative)
- US Politics (Very Liberal)

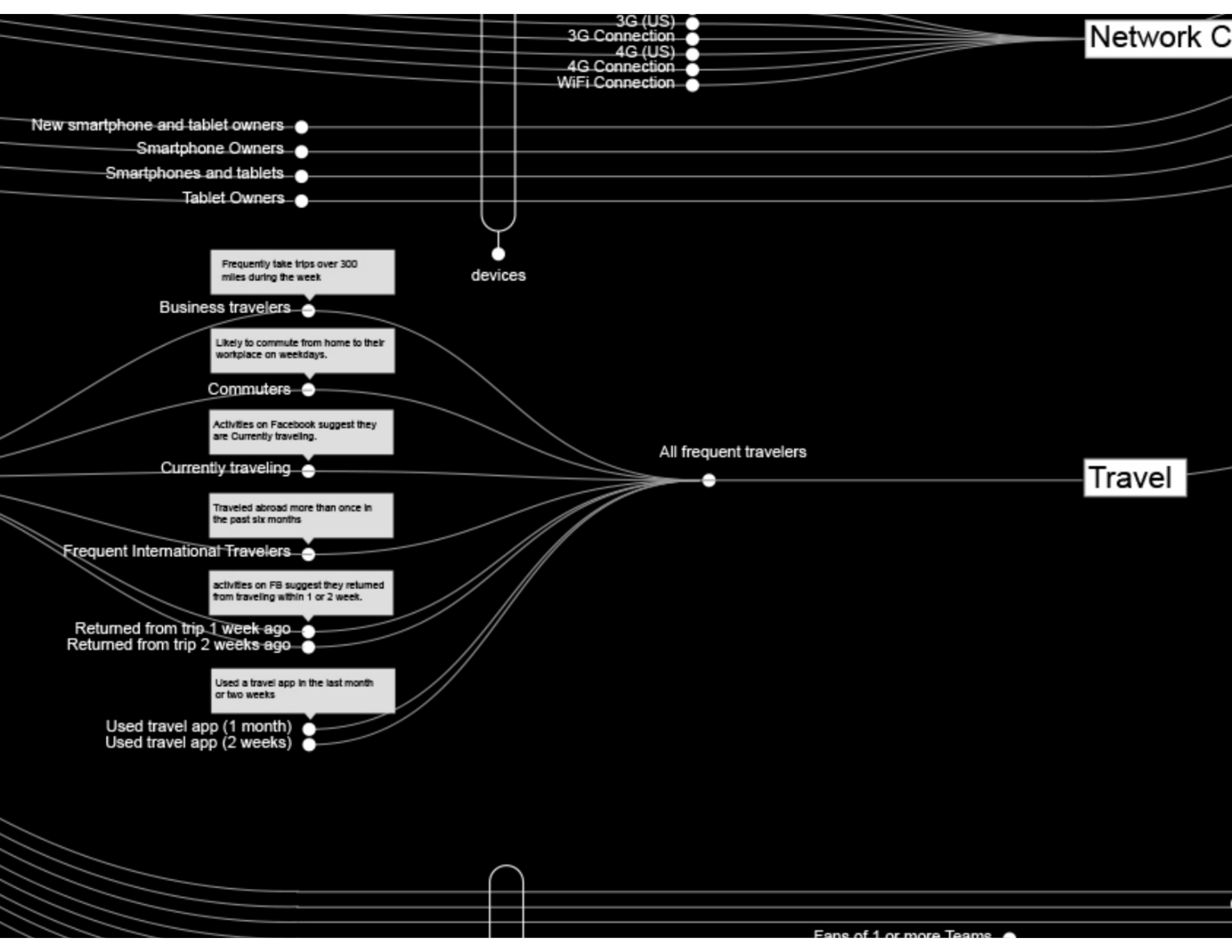












Inside Facebook Algorithmic Factory

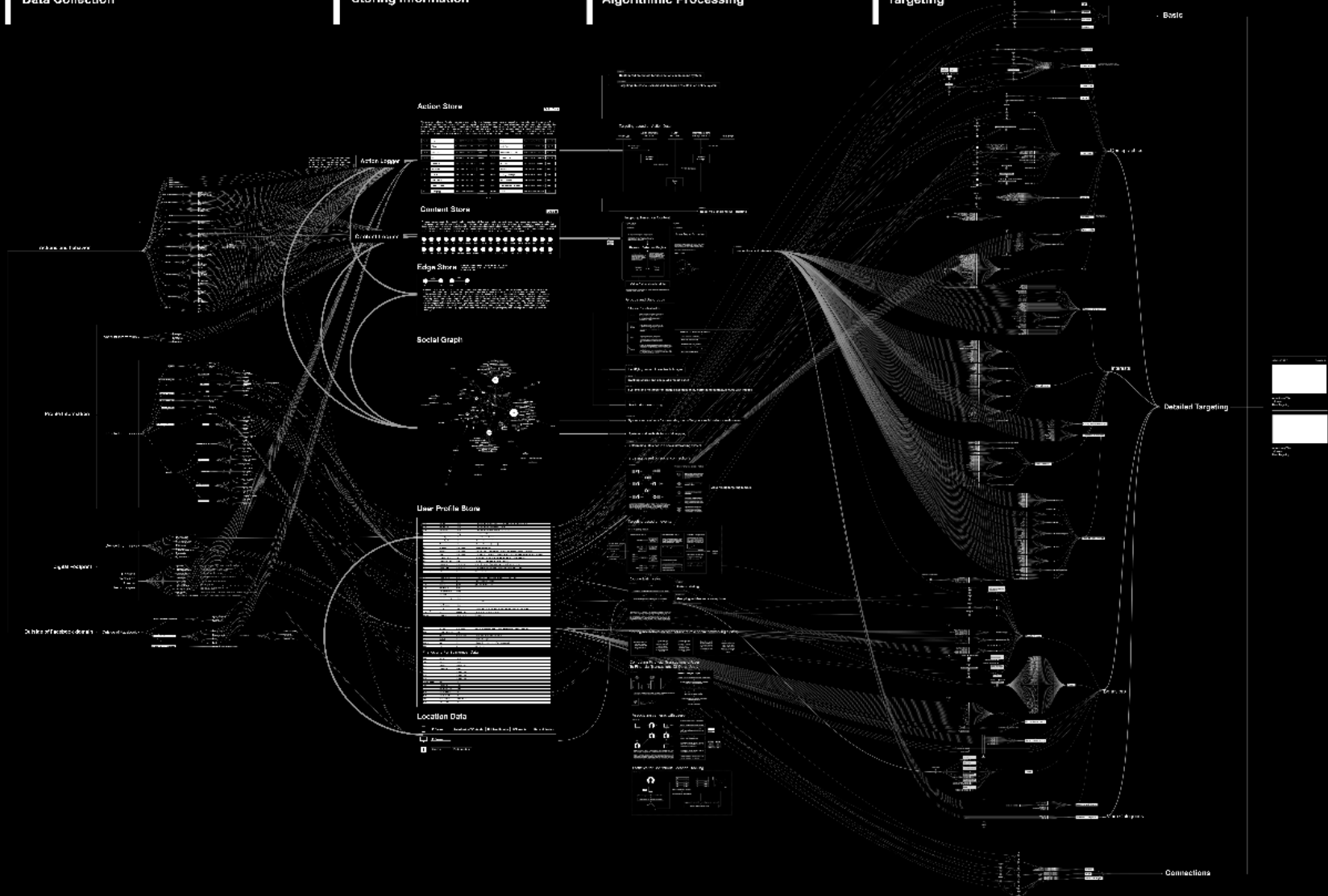
How user behavior is tracked across a global network of servers and data centers to power targeted advertising.

Data Collection

Storing Information

Algorithmic Processing

Targeting



Action Store

Action Data

The action store maintains information describing actions by social networking system users internal to the social networking system, as well as actions performed via third party websites that communicate information to the social networking system. Users may interact with various objects maintained by the social networking system, and these interactions are stored in the action store. Examples of actions or interactions stored by the action store include: commenting on posts, sharing links, tagging objects, and checking-in to physical locations via a mobile device or other client device. Additional examples of interactions with objects on the social networking system included in the action store include commenting on a photo album, transmitting messages to another user, joining an event, joining a group, becoming a fan of a brand page, creating an event, authorizing an application, using an application, interacting with an advertisement, and engaging in a transaction.

User ID	Like	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Post	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Share	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Visit Page	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Comment	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Interacting with Ad	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Tag	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Follow Link	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Check-In	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Post link	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Message	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Add Friend	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Join Event	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Change Settings	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Join Group	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Visit website	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Create Event	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Comment on 3rd party..	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Using App	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Place	Time : DD/MM/YYYY HH:MM:SS	Object ID

...

Content Store

Storage

The content store stores objects representing various types of content. Examples of content represented by an object include a page post, a status update, a photo, a video, a link, a shared content item, a gaming application achievement, a check-in event at a local business, a brand page, or any other type of content. Objects may be created by users of the social networking system, such as status updates, photos tagged by users to be associated with other objects in the social networking system, events, groups or applications. In some embodiments, objects are received from third-party applications, which may be external to the social networking system. Content "items" represent single pieces of content that are represented as objects in the social networking system.



Action Logger

Content Logger

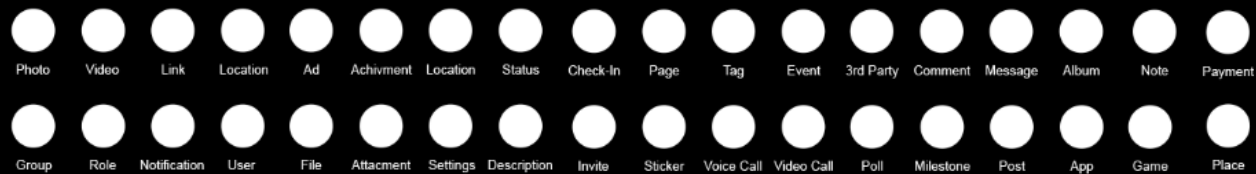
User ID	Join Group	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Visit website	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Create Event	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Comment on 3rd party..	Time : DD/MM/YYYY HH:MM:SS	Object ID
User ID	Using App	Time : DD/MM/YYYY HH:MM:SS	Object ID	User ID	Place	Time : DD/MM/YYYY HH:MM:SS	Object ID



Content Store

Storage

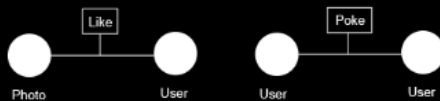
The content store stores objects representing various types of content. Examples of content represented by an object include a page post, a status update, a photo, a video, a link, a shared content item, a gaming application achievement, a check-in event at a local business, a brand page, or any other type of content. Objects may be created by users of the social networking system, such as status updates, photos tagged by users to be associated with other objects in the social networking system, events, groups or applications. In some embodiments, objects are received from third-party applications, which may be external to the social networking system. Content "items" represent single pieces of content that are represented as objects in the social networking system.



t Logger

Edge Store

The edge store stores information describing connections between users and other objects on the social networking system as edges.

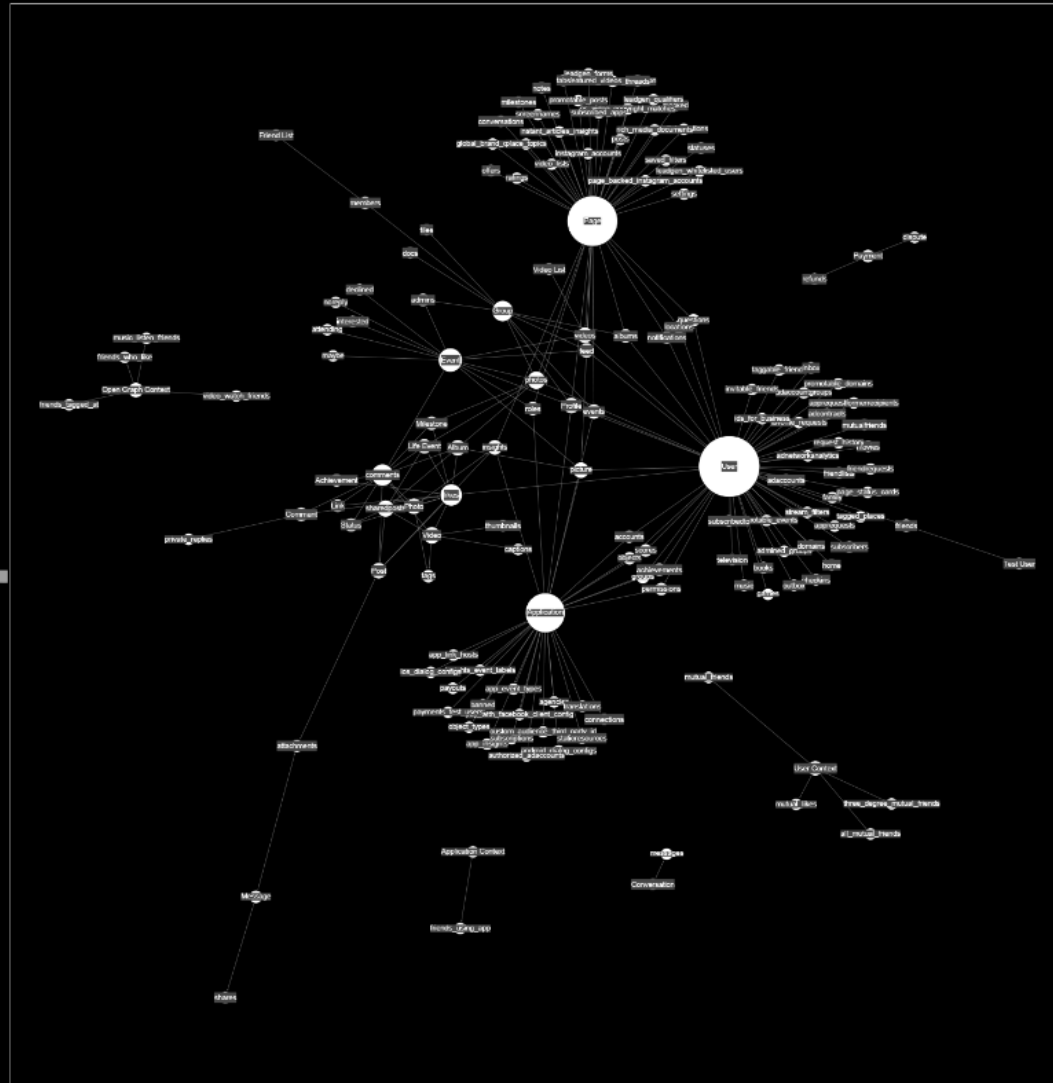


The edge store stores the information describing connections between users and other objects on the social networking system in edge objects. Some edges may be defined by users, allowing users to specify their relationships with other users. For example, users may generate edges with other users that parallel the users' real-life relationships, such as friends, co-workers, partners, and so forth. Other edges are generated when users interact with objects in the social networking system, such as expressing interest in a page on the social networking system, sharing a link with other users of the social networking system, and commenting on posts made by other users of the social networking system. The edge store stores edge objects that include information about the edge, such as affinity scores for objects, interests, and other users. Affinity scores may be computed by the social networking system over time to approximate a user's affinity for an object, interest, and other users in the social networking system based on the actions performed by the user. Multiple interactions between a user and a specific object may be stored in one edge object in the edge store, in one embodiment. For example, a user that plays multiple songs from Lady Gaga's album, "Born This Way," may have multiple edge objects for the songs, but only one edge object for Lady Gaga.

Social Graph

user that plays multiple songs from Lady Gaga's album, "Born This Way," may have multiple edge objects for the songs, but only one edge object for Lady Gaga.

Social Graph



User Profile Store

SUP

Inter

User Affin

Top

Historical Obj

CA 200804 A1

Ident

US 2001 0 02

Track

CA300083M

System

WO 200707

So

WO20020211

System

WO 200707

System

CA 200119

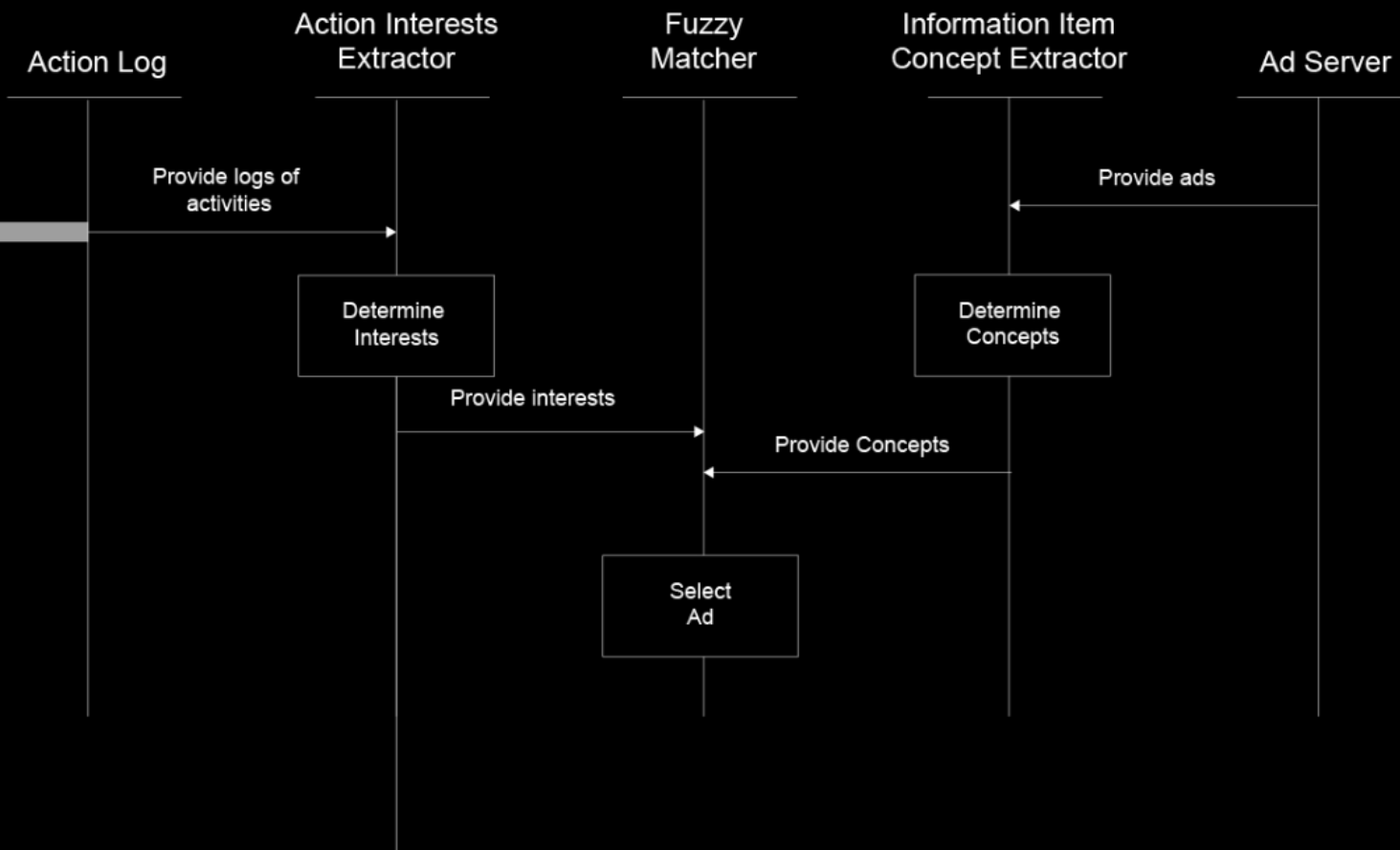
De

Target

US 2014008

A need
affinity
offer a
relevant
dataset
ready to
be target

Targeting based on Action Data



CA2879830 (A1)
Negative Signals for Ad Targeting

Targeting based on Content



CA2879830 (A1)

Negative Signals for Ad Targeting

Targeting based on Content

Keywords

WO 2014/085113 A1

The keyword selection engine selects candidate keywords associated with a content item using a topic extracted from the content item by the topic extraction engine. The candidate keywords may be retrieved from a keyword store.

Keyword Selection Engine

The keyword store includes multiple keywords and associates one or more topics and one or more expected values with each keyword. Hence, the keyword selection engine retrieves candidate keywords from the keyword store associated with the topic extracted from a content item.

The value store stores data associating one or more expected values with keywords. In one embodiment, the value store includes data describing one or more user categories and associates expected values of keywords with one or more user categories.

Keyword Store

Value Store

Value Calculation Module

The value calculation module creates and updates the expected values stored in the value store or in the keyword store

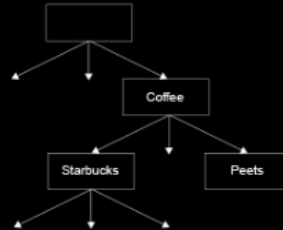
Topics

US 20140089400 A1

User Topic Extractor

Topic extraction engine identifies one or more topics associated with objects in the content store. To identify topics associated with content items, the topic extraction engine identifies anchor terms included in a content item and determines a meaning of the anchor terms.

Taxonomy



US 20140089400 A1

User Actions and Interest

Image pixels

Metadata

Groups and Subgroups

US 20140089400 A1

Sub-group Formation Module

Interests

A seed user selection module gathers information about potential seed users of the social networking system to generate a seed cluster of users that share a selected affiliation, interest, or characteristic.

Can scoring module to determine an analytical score for a page or a user based on the page's connections or the user's connections on the social networking system.

Form sub-group description

CA 2908554 A1

Identifying content in electronic images

US 8805815 B2

Tracking source and usage of a media asset

CA2920193A1

Systems and methods for image classification by correlating contextual cues with images

WO 2007070676 A3

Social data recording

WO2008021104A3

Systems and methods for measuring user affinity in a social network environment

WO 2007070676 A3

Systems and methods for social mapping

CA 2891119 A1

Determining influence in a social networking system

Targeting based on social connections

US 20140089400 A1

Inferential Targeting Cluster Module



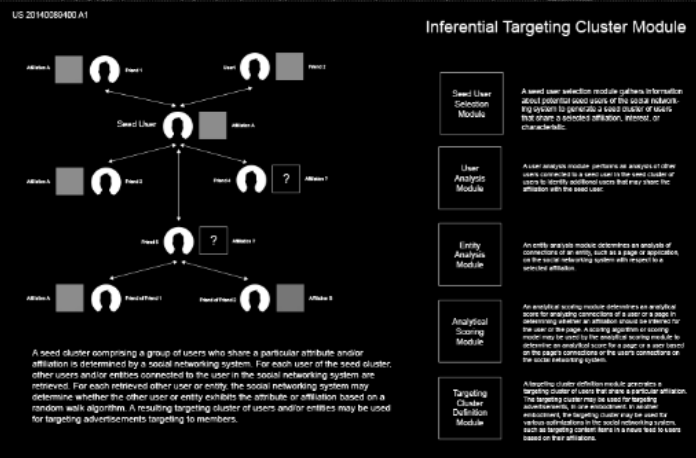
Seed User Selection Module

A seed user selection module gathers information about potential seed users of the social networking system to generate a seed cluster of users that share a selected affiliation, interest, or characteristic.

Systems and methods for social mapping

Determining influence in a social networking system

Targeting based on social connections

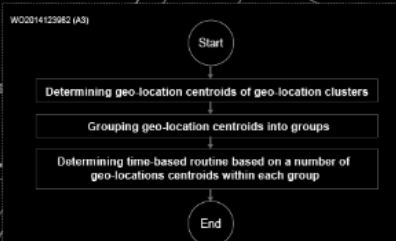


Advertising targeting module

Targeting based on events

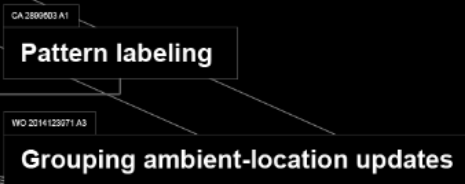


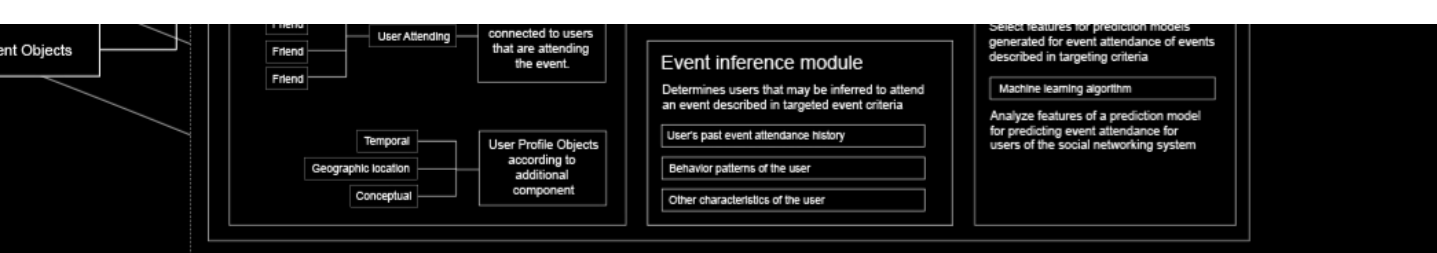
Routine Estimation



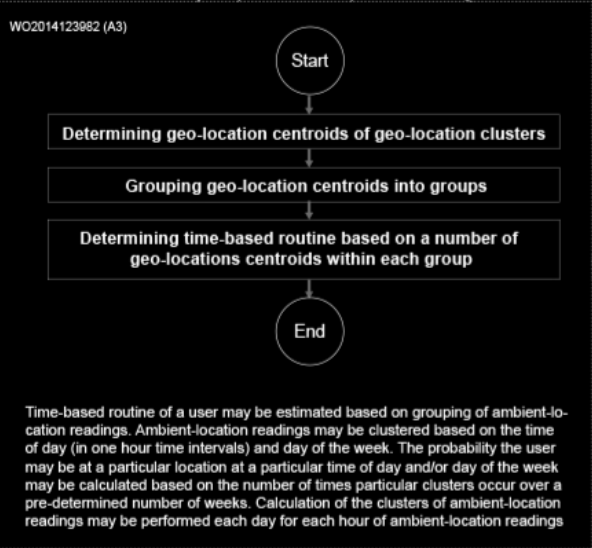
Pattern labeling

Grouping ambient-location updates

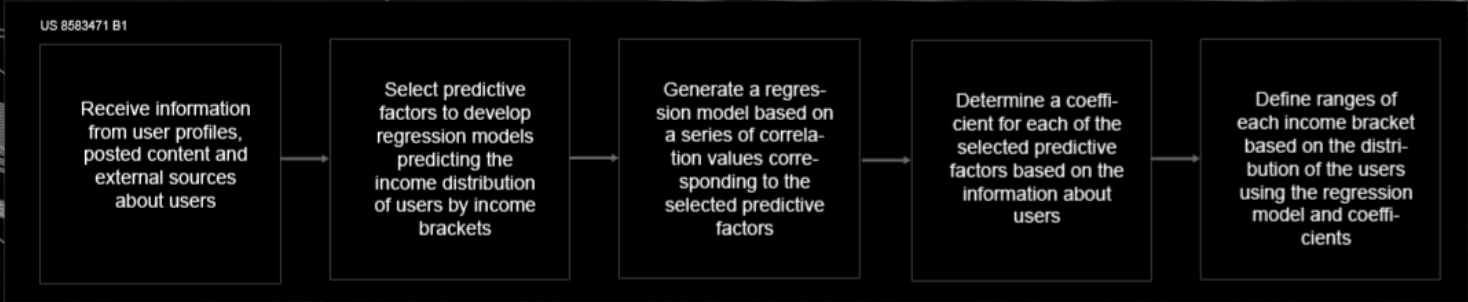




Routine Estimation



Inferring household income for users of a social networking system



Comparing Financial Transactions of User To Financial Transactions Of Other Users



from user profiles, posted content and external sources about users

regression models predicting the income distribution of users by income brackets

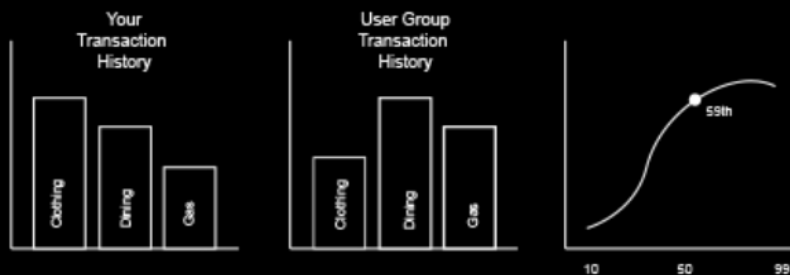
a series of correlation values corresponding to the selected predictive factors

cient for each of the selected predictive factors based on the information about users

each income bracket based on the distribution of the users using the regression model and coefficients

Comparing Financial Transactions of User To Financial Transactions Of Other Users

US 20140222636 A1



Your transactions are compared to other users having an age within a threshold of your age, in your current location, and sharing your interests.

Financial Account Store

A seed user selection module gathers information about potential seed users of the social networking system to generate a seed cluster of users that share a selected affiliation, interest, or characteristic.

Transaction Analysis Engine

Retrieve transaction history associated with the user

Retrieve characteristics associated with user by social networking system

Select characteristics associated with user

Identify additional users having one or more selected characteristics

Retrieve transaction histories associated with additional users

Provide comparison

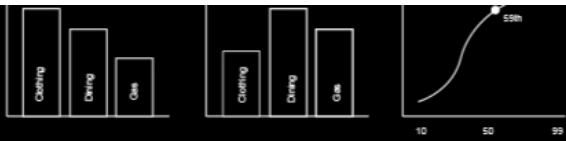
Associating cameras with users

US 8472662 B2



Camera Identification Module

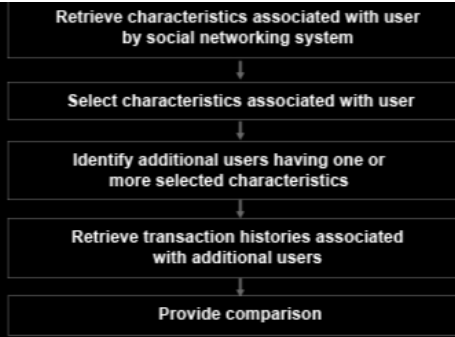
Receive images associated with a user



Your transactions are compared to other users having an age within a threshold of your age, in your current location, and sharing your interests.

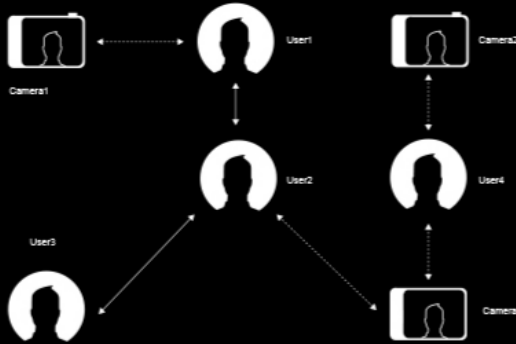
Financial Account Store

A seed user selection module gathers information about potential seed users of the social networking system to generate a seed cluster of users that share a selected affiliation, interest, or characteristic.



Associating cameras with users

US 8472682 B2



Images uploaded by users of a social networking system are analyzed to determine signatures of cameras used to capture the images. A camera signature comprises features extracted from images that characterize the camera used for capturing the image, for example, faulty pixel positions in the camera and metadata available in files storing the images. Associations between users and cameras are inferred based on actions relating users with the cameras, for example, users uploading images, users being tagged in images captured with a camera, and the like.

Camera Identification Module

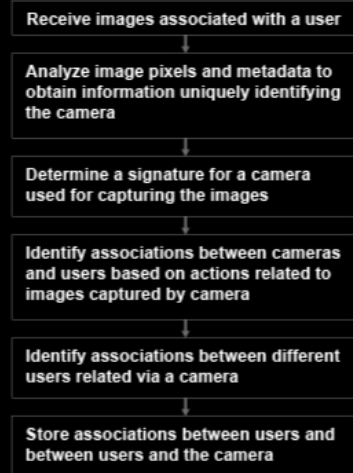
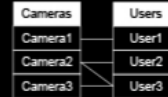


Image pixels
Metadata



Statistics for Continuous Location Tracking

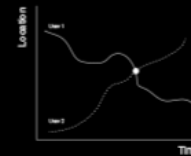
US2015011241 (A1)



Continuously collect location information
Upload collected location information



Store information in raw form
Extract statistics and features



The Facebook Algorithmic Factory

Behavior is tracked, stored, analysed and transformed into the product

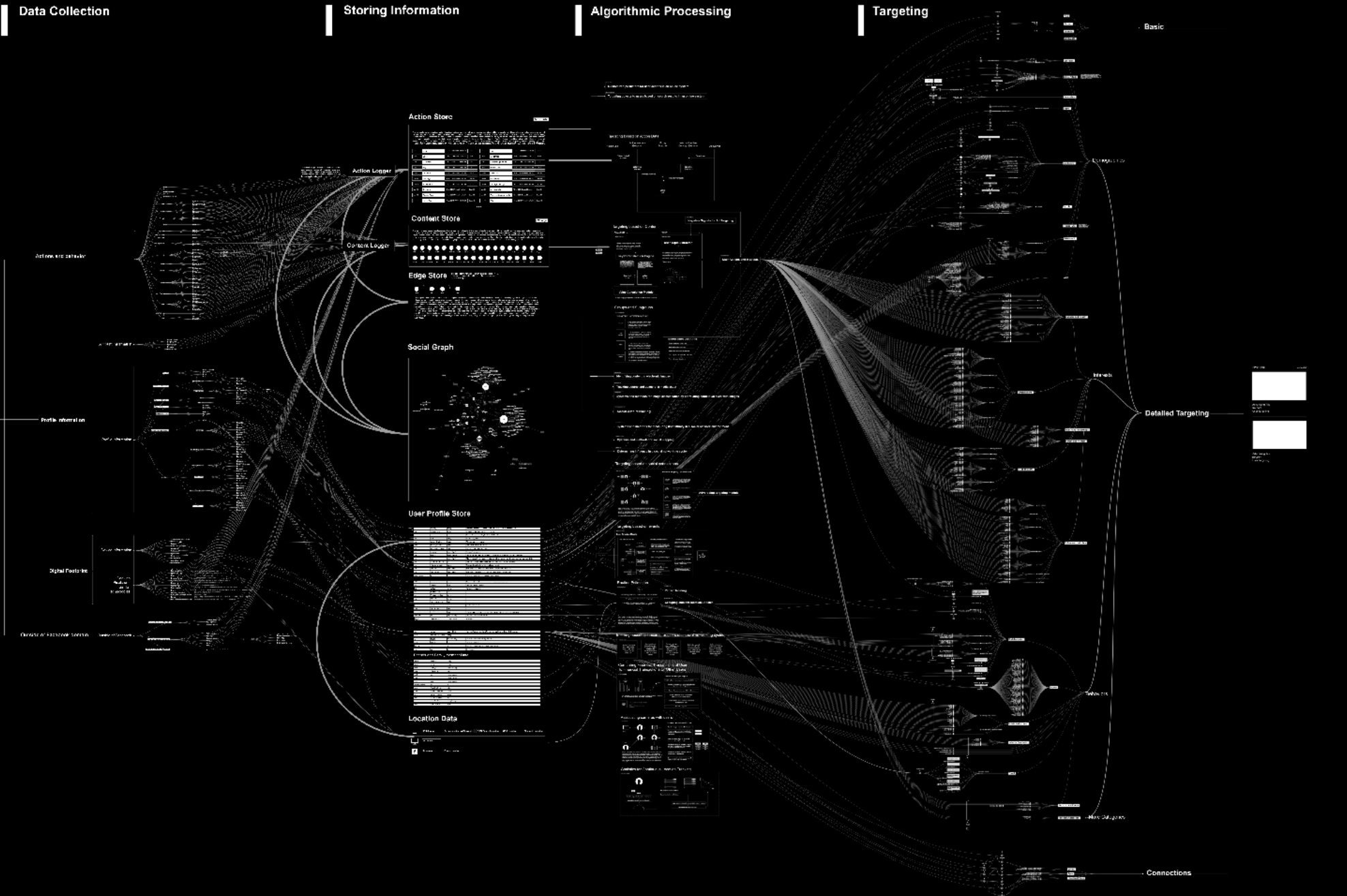
Data Collection

Storing Information

Algorithmic Processing

Targeting

Basic



Connections