

# *MY PRIVACY AT RISK, IS IT SAFE?*

# AGENDA

**Is Privacy an issue?**

**Are people aware of their privacy risks?**

**How to inform people on their privacy risks?**

## THE PROBLEM...



A large majority of Europeans engage with Online Social Networks (OSNs)

- 74% of users consider that they **do not have sufficient control**
- 70% **are concerned with the way** such data are handled by

- ❖ Personal data sharing is a complex and pervasive process that is still not well understood;
- ❖ Native Mobile Applications acting as Data Silos;
- ❖ Data Processors vs Data Collectors
- ❖ Personal Data Fragmentation
- ❖ Upcoming EU General Data Protection Regulation – harmonisation of EU’s legal framework and improvement of users’ control over their shared data

# GENERAL DATA PROTECTION DIRECTIVE



## Article 5 of the ePrivacy Directive

An app developer may use third party libraries with software that provides common functionalities, such as for example a library for a social gaming platform. The app developer must **ensure users are aware of any data processing undertaken ....**

To the extent that the app developer has outsourced some or all of the actual data processing to a third party and that third party assumes the role of a data processor then the app developer **must comply with all obligations related to the use of a data processor.** This would also **include the use of a cloud computing provider** (e.g. for external data storage).

## Article 17



It requires from the manufacturers of a device or an application to embed data protection from the **very beginning of its design.**

This includes ensuring **the availability of appropriate mechanisms to inform and educate** the end user about what the apps can do and what data they are able to access, as well as providing appropriate settings for app users to change the parameters of the processing.

## HOW REAL IS THIS?

- JUNE 2015, EU Council of Ministers

REGULATION

GENERAL DATA PROTECTION ~~DIRECTIVE~~

- OCTOBER 2015, European Court of Justice



- NOVEMBER 2015, Belgian Court



Facebook 48 hours to stop tracking the online activities of non-Facebook users (**datr cookie**) in Belgium unless they have their explicit consent or face **a daily fine of €250,000**

# UNDERSTANDING PRIVACY FROM END-USERS POINT OF VIEW

I will NOT share this with an app:

86% credit card or bank info



64% medical records



56% home address



35+ are more concerned with sharing all pieces of personal info EXCEPT their location

49% children/s' name



35% physical location



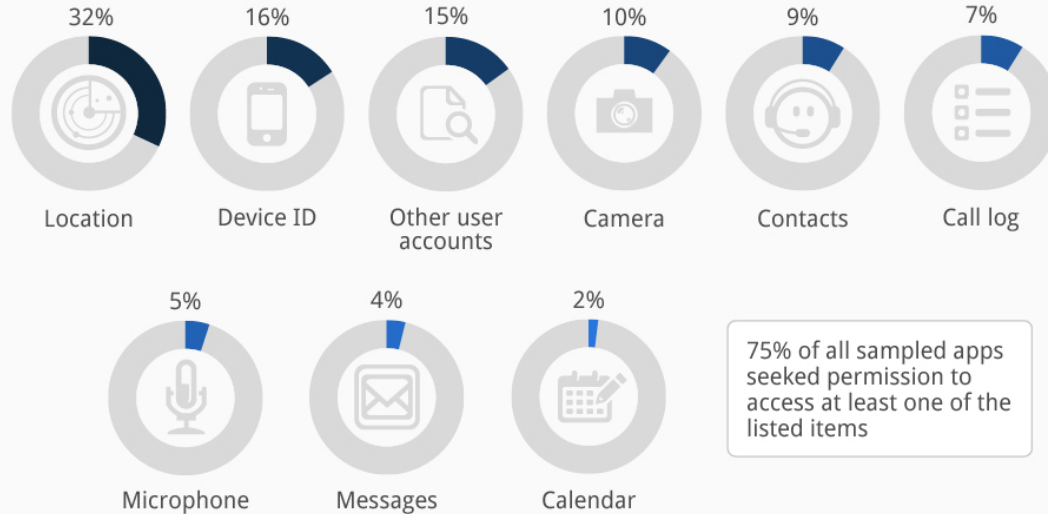
24% birth date



# UNDERSTANDING PRIVACY FROM APPLICATION'S POINT OF VIEW

## 75% Of Mobile Apps Want Access To User Data

Percentage of apps seeking permission to access the following data



Based on an analysis of 1,211 Android and iOS apps in May 2014

Source: Global Privacy Enforcement Network

statista



# MATCHING THE GAP



Predict information about you and your personality by analyzing your digital trail

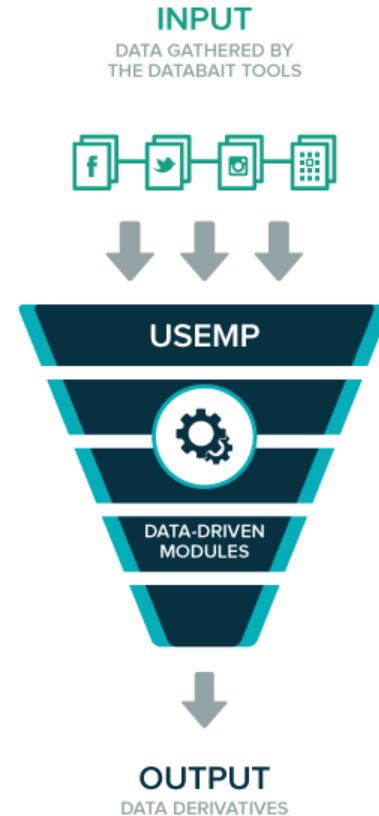


Privacy monitoring and protection solution using automated agents and crowd sourcing information

# DATABAIT

DataBait, the USEMP web application that shows you what happens behind the screen, to the digital trail you leave behind when using services such as Facebook, Google or Twitter.

- Step 1: Connect with your Facebook account
- Step 2: DataBait will access your **public information, friends list, photos and posts**
- Step 3: Install DataBait browser-plugin
- Step 4: get an insight who tracks you and where



# DATABAIT: LOGIN WITH FACEBOOK ACCOUNT

The screenshot displays the DataBait user interface. On the left, a dark-themed sidebar contains a welcome message: "Welcome to DataBait" with a logo, a circular profile picture of a man, and the text "Hi, Andreas". Below this, it shows "Facebook Latest Activities" with two items: "Latest Photo Shared" (a white rose) and "Latest Place Tagged" (Theory Bar&More).

The main content area is light-themed and features a top navigation bar with "Language" and "Databait" menus, and a user profile "Andreas". The main heading is "Discover more..." with the subtext "See the personality behind your posts". Four analytics cards are displayed: "My Disclosures" (person icon), "Audience Influence" (two people icon), "Your Value Creation" (bar chart icon), and "Trackers" (person with eye icon). At the bottom, there are two buttons: "Install DataBait Plugin" (orange) and "Historical Data" (light blue). A warning icon and text at the bottom center state: "DataBait plugin allows you to control the trackers on the pages you visit."

# DATABAIT: PHOTO INSIGHTS



## Interest detection based on images

The tag cloud you see on this page illustrates a profile that can be automatically inferred by Databait from the images that you posted on Facebook. Databait predicts tags from a set of over 17,000 visual concepts following a procedure that is described in more detail [here](#).

## Tag Cloud meaning

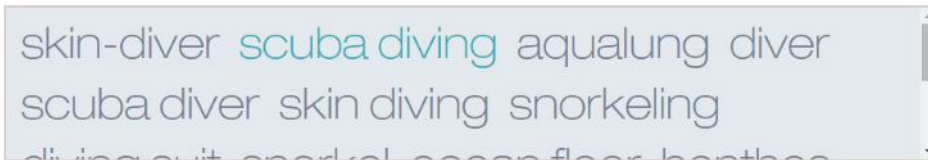
The tag cloud shows the identified concepts with a size proportional to their frequency in the posted online social network images.



## My Disclosures

[Overview](#) [Location Insights](#) [Photo Insights](#) [Brands Insights](#)

Click on a concept to see the related photos.



[more concepts...](#)



## Andreas's scuba diving posted images (10)

Scroll over to see the related concepts.



# DATABAIT: LOCATION INSIGHTS

**DataBait** Language

Databait Andreas

### Andreas's Rome posts (7)

Location detection based on text

The locations you see in this page are the result of an automatic location estimation algorithm that processes the text content of your posts and predicts the location where these posts were taken or the location indicated in facebook.

**Tag Cloud meaning**

The tag cloud shows the identified location at city level with a size proportional to frequency.

Tags are coloured with different colours to indicate how the location was detected:

- Facebook:** information that facebook has available
- Databait:** information that can be inferred by processing the posts

**More**

Text	Source	Confidence
cena con amici, grazie a tutti, alla prossimat	FACEBOOK	100.00%
feels like coming back home	FACEBOOK	100.00%
sono tutti qui	FACEBOOK	100.00%
:D	FACEBOOK	100.00%
@ SPQR	DATABAIT	73.85%

### Andreas's Weehawken posts (2)

Text	Source	Confidence
Unboxing my new "PuffyTeddyBear" :)	DATABAIT	18.84%
how many times has this happened	DATABAIT	15.66%

Washington, D.C.  
Sikhisma Rome

[more locations](#)

Terms of Use



# DATABAIT: AUDIENCE INFLUENCE



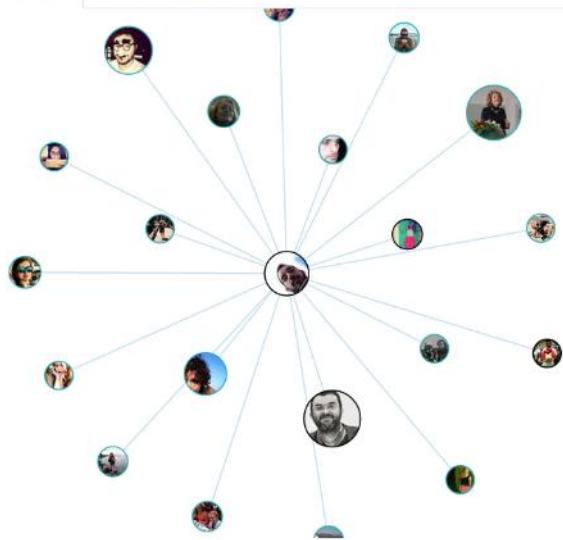
## Audience Influence

Audience Visualization Statistical Data

Beta Version: Please allow sometime to load.

Most Influenced Friends

Detailed Interactions



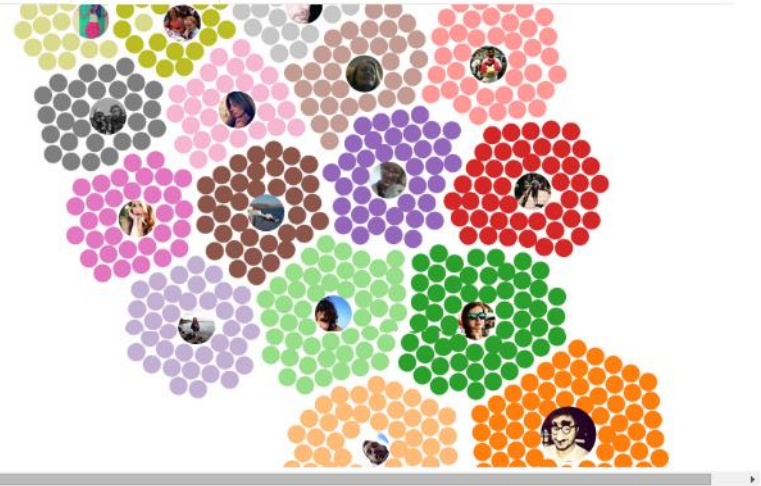
## Audience Influence

Audience Visualization Statistical Data

Beta Version: Please allow sometime to load.

Most Influenced Friends

Detailed Interactions



# DATABAIT: WHO TRACKS ME?

The screenshot shows the DataBait User Trackers interface. The top navigation bar includes the DataBait logo, a home icon, a user profile icon, and the name 'Andreas'. On the left, a sidebar displays statistics: 'Data from 23/11/2015 12:53', 'You have visited 66 Domains', and 'Connected With 725 Third party sites'. Below this is a 'Website info' section with a 'Please Select a Site' prompt and a 'Last Access' field. A 'Reload data' button is located at the bottom left. The main content area is titled 'User Trackers Overview' and features a 'Graph view' tab. The graph displays a network of nodes and connections, with nodes representing domains and connections representing tracking relationships. A 'TOGGLE CONTROLS' section at the bottom includes buttons for 'Visited pages', '3rd party trackers', and 'Blocked trackers'.

This screenshot shows a different view of the DataBait interface. The top navigation bar is the same. Below it is a 'View List' button. The main content area displays a graph view of tracked domains, with a central node and several surrounding nodes connected by lines. Below the graph is a 'View Graph' button. The domain 'www.naftemporiki.gr' is highlighted. A list of tracked domains is shown below, each with a checkmark or a red 'X' indicating its status:

- google-analytics.com
- admian.gr
- amazonaws.com
- nuggad.net
- all-host.net
- clickatlife.gr



# ENABLING THE CROWD



Predict information about you and your personality by analyzing your digital trail



Privacy monitoring and protection solution using automated agents and crowd sourcing information

# PRIVACY FLAG



Privacy Flag engages with the crowd



Crowd provides feedback through PF tools



PF site



Android app



Browser add-on



The information is combined with



Automated privacy enablers



Privacy Flag experts input



Users get privacy risks analysis for:

- Sites they visit
- Mobile Apps they use
- IoT registered networks

THANK YOU

 @andr\_drakos