TrackMe

When using the internet and smart devices on a daily basis, data is saved about us and the way we behave; what we click on, how long we wait before clicking, mouse movements and many other things. We are hardly aware of this or able to find out what is saved about us, who knows it and what it is used for - besides the indications of it, for example when adverts for products we looked at recently pop up on other web pages. The problem with this is not necessary the fact that data is saved, or what kind of data it is, but moreso the lacking awareness about it and how difficult it is to figure out exactly what kind of information is collected. As Jennifer Golbeck states in her article, Facebook's Data Use Policy isn't completely unambiguous:

> *"[...] it's made clear that the company [Facebook] collects information you choose to share or when you "view or otherwise interact with things." But nothing suggests that it collects content you explicitly don't share."* (Golbeck, 2013).

So the focus we want to shed light on is all the data that are collected about us online, but also and moreso the (lacking) transparency and user's awareness.

Our concept

With our project we want to focus on the huge amount of data saved about our daily activities online; more precisely on social media - like Facebook. We will bring focus on this by creating a critical design with the aim of making users aware of the tracking and data collected about them. The objective with this being to make them question how and why companies like Facebook collect and save this data, and what the data is used for.

Our program displays data about the user. Most of the displayed data might seem irrelevant or strange to the user, but it is nevertheless tracked. This data is displayed as an overlay with numbers in bright green colors (inspired by The Matrix movie from 1999) on top of a blurred Facebook news feed interface; almost as if we've put a filter on top of Facebook that shows the underlying tracking.

Our program - how does it work?

The data shown in the program is both data derived from user actions but also data tracked by the program without any interaction from the user. The program itself tracks start time and date, current time and also session time. The session time is given in milliseconds, to make the session time the most precise.

The data derived from users' actions are gathered from tracking the mouse movements and clicks. The mouse movements is tracked by finding the coordinates. The program also tracks where the mouse is in the newest frame compared to the last frame's coordinates. When the mouse is clicked it sets a marker and a 'circle of interest' that fades gradually. The number of clicks is also collected. The tracked data is either shown in the left corner or beside the marker, where the mouse is clicked. By visualizing the data this way we want the user to be aware of the tracking.
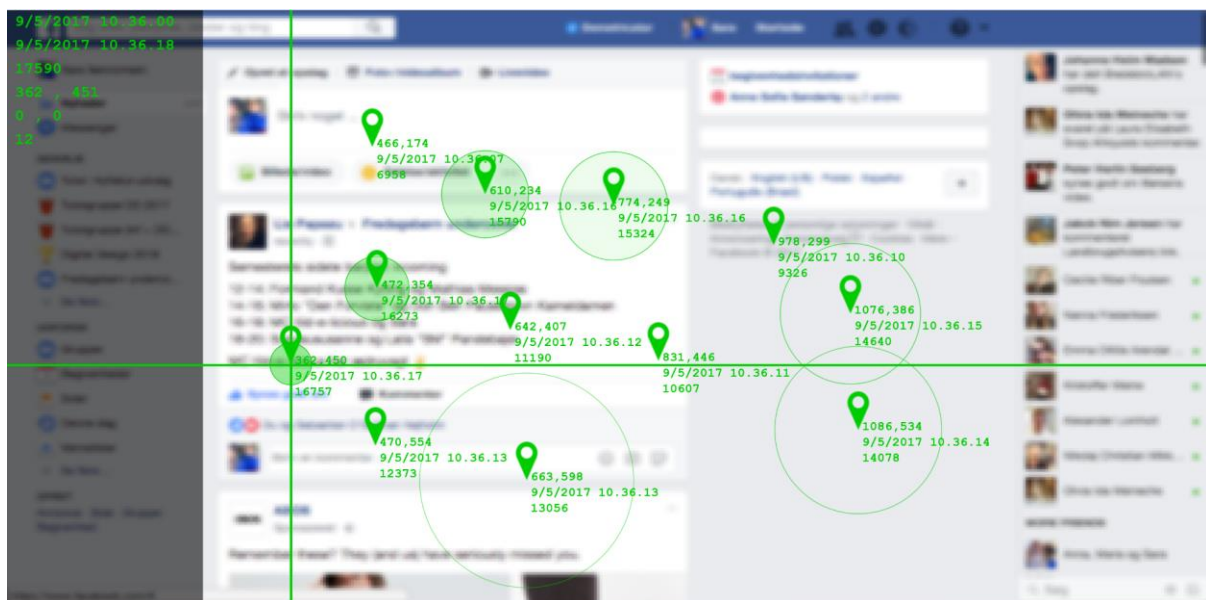

Figure 1 - screenshot of our program. View bigger image here:
https://raw.githubusercontent.com/RikkeBadsberg/FinalProject/gh-pages/FinalProject/screenshot.png

Flowchart

The first part of the flowchart shown in *figure 2* (from "Start" to "Count milliseconds") is about the data that the user cannot interact with or change in any way once the program runs: start time, current time and session time.

The following part of the flowchart represents the user input and is split in two: mouse clicks and mouse movement. These inputs are tracked continuously, showed

in the flowchart with the arrows pointing back to "User input" and thereby creating a loop in the program's collecting and processing of the data.

The flowchart does not have an 'end' because of the constant tracking. Whether the user interacts or not, the program will be tracking.
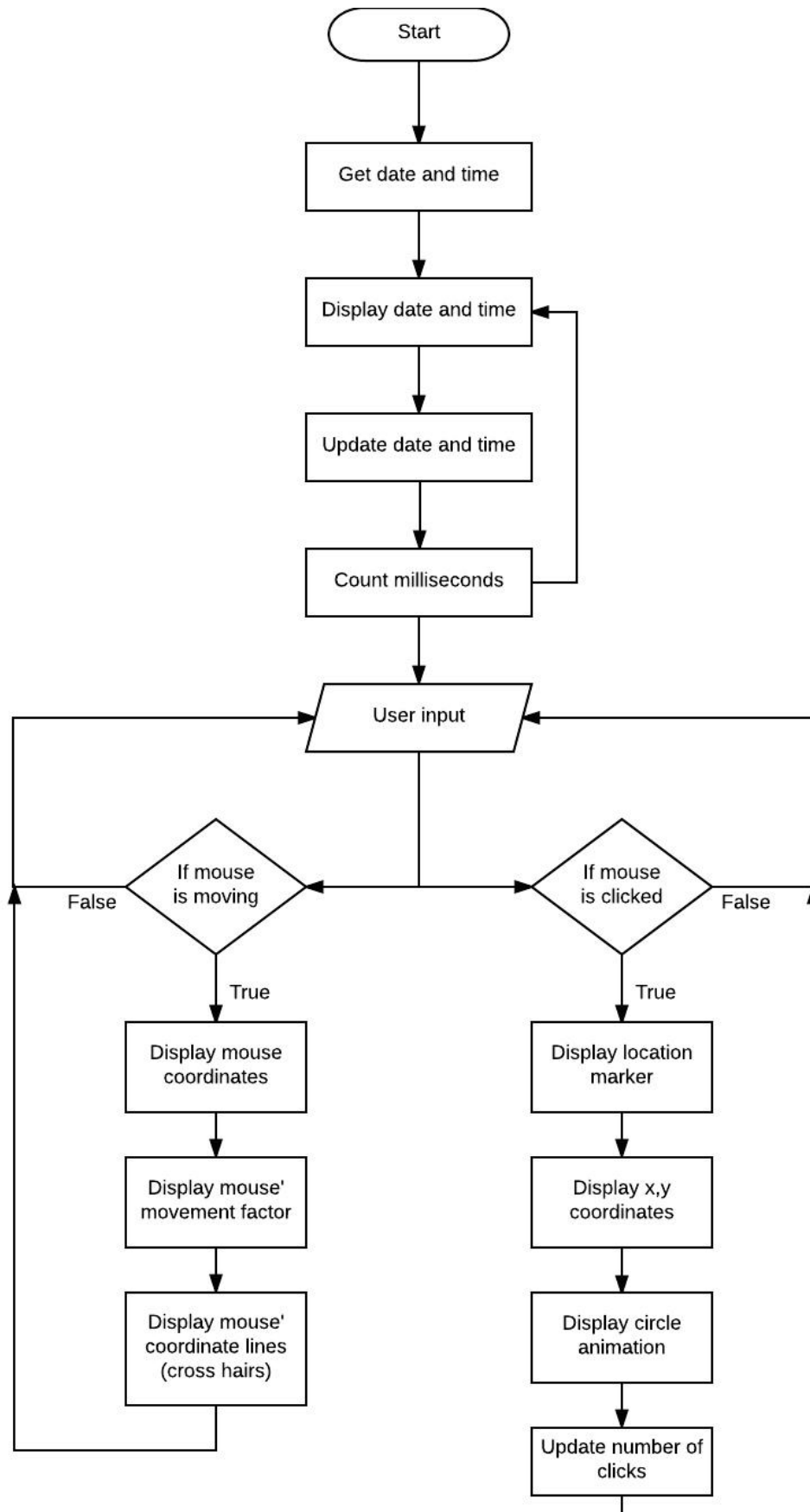

Figure 2 - The flowchart for our program.

Our Program's Aesthetics of Computational Culture

On Second Thought: Facebook wants to know why you didn't publish that status update you started writing, by Jennifer Golbeck, is about the aborted status updates that Facebook collects data about in order to understand its users' self-censorship. The browser itself analyzes and tracks what the user types into the text boxes on the webpage, and Facebook gets the metadata from the browser - not the content, but that is also possible technically. Users generally are not aware of this because in Facebook's privacy policy it is not clearly suggested that they collect content you choose not to share by posting it.

In other words, users know that Facebook collects the data you intentionally share on their platform, such as posts and images - even though you might not think that much about what you allow them to do with that content. Our project focus on how it is possible through the browser itself to track interactions like mouse cursor movement, clicks, session time and so on, as presented and discussed in Huffington Post's article "Facebook Wants To Track Your Mouse Cursor" (Kleinman, 2013). We do this by creating a tracking project that looks like a filter on top of the familiar Facebook news feed interface.

David M. Berry presents in his book "The Philosophy of Software - Code and Mediation in the Digital Age" how datafication and data-mining has become a huge part of our daily lives because of the increasing use of software for various tasks and the enormous amounts of data stored about us (Berry, 2011, 1). The data is rarely used in its raw form but transformed, interpreted by computers and their algorithms (ibid, 3).

The collection of data is both technical data like dataflows, times and dates, but also qualitative data about emotions and experiences; and the information is fed back into users' news feeds, ads and other suggestions (ibid, 6).

Our project focuses on the tracking of user behaviour as technical data collected by the browser. The data is raw in its form, and the apparent purpose of it can be difficult to see. Collecting this kind of data over time from many people and analyzing it statistically using algorithms can lead to discoveries about human behaviour while interacting with a computer screen interface. However, our project does not process
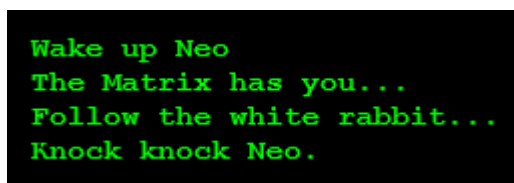
the data - it represents only a fraction of the data-mining process - and it is up to the user to wonder about the purpose of the specific variables tracked.

Besides, the variables are presented as pure data with no description attached. We chose to omit variable names to make the data collection more confusing and alienating to the user.

The project as a critical work

By displaying the tracked data in a certain way, we want the user to become aware of the underlying tracking that we can't see and is not made aware of in any way while interacting. A lot of tracked data might seem 'silly' or irrelevant - or like a part so small it can't really be useful as it is, but it can still be analyzed and used by companies.
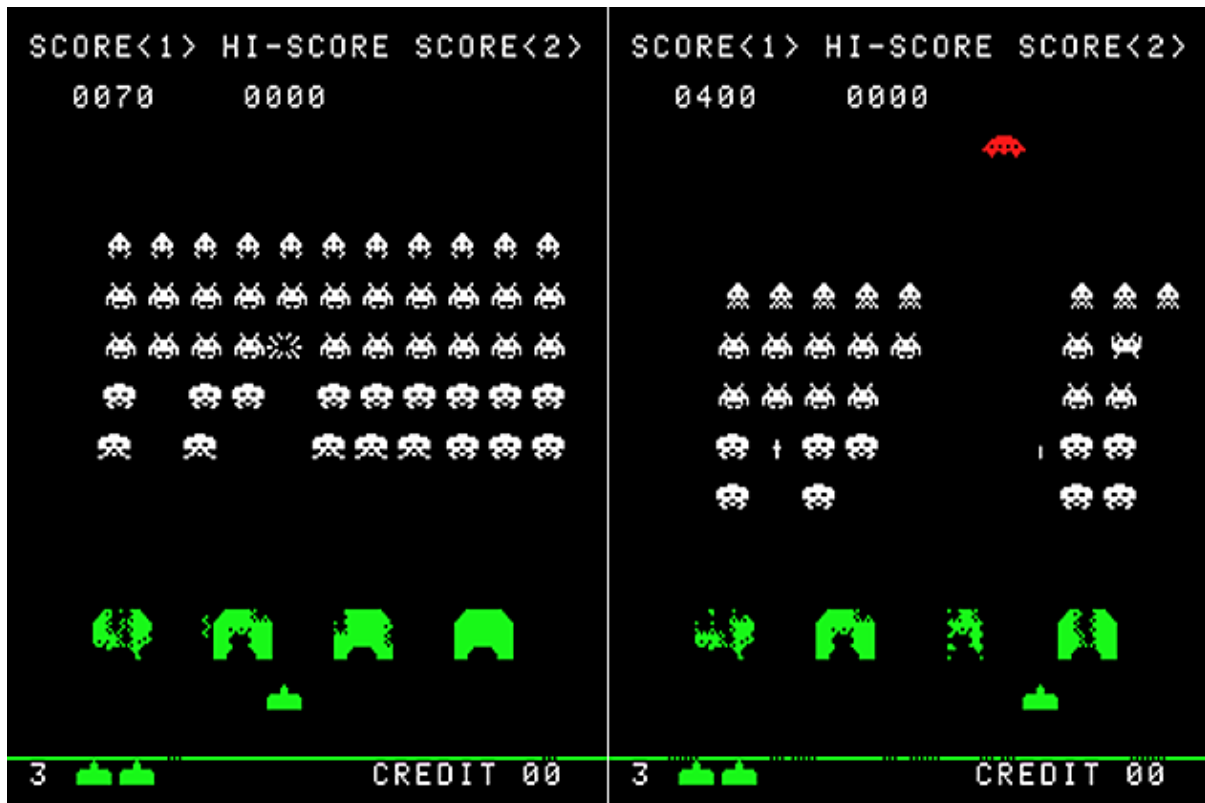
Our program doesn't save the data that is displayed and it doesn't have the functioning Facebook interface, so instead of actually being a tracking program, it's just imitating it. Our critical viewpoint also comes through visually, as the "filter" or the tracking interface is coded as a parody of how software can be perceived - like the 1999 "The Matrix" movie and old school computer games like Pacman and Space Invaders.

https://agrmfp2014.files.wordpress.com/2014/01/matrix-computers.jpg

http://dijitaldevrim.zorlupsm.com/wp-content/uploads/2016/05/Space-Invaders1.png

Literature:

Berry, David M. (2011): "The Philosophy of Software - Code and Mediation in the Digital Age", p. 1-6, Palgrave Macmillan

Kleinman, Alexis (2013): "Facebook wants to track your mouse cursor" http://www.huffingtonpost.com/2013/10/30/facebook-track-cursor_n_4178508.html, Huffington Post (seen 11.05.2017)

Golbeck, Jennifer (2013): "On Second Thought: Facebook Wants to Know Why You didn't Publish that Status Update You Started Writing", http://www.slate.com/articles/technology/future_tense/2013/12/facebook_self_censor ship_what_happens_to_the_posts_you_don_t_publish.html, Slate, (seen 27.04 2017)