EXPRESSIVE 2016

# The Aesthetics of Routine

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#### Abstract

People that collect data about themselves are not necessarily interested on the data, but in the resulting information and how it can be used in order to learn something about them [Yau09]. This project proposes an artistic approach to the use of data from self-tracking applications. By combining an artistic perspective with an information visualization approach, we expand the frontier of the visual translation of data from self-tracking, with the goal of enabling the users to seem themselves in the artworks using their own data.

Categories and Subject Descriptors (according to ACM CCS): Visualization [Human-centered computing]: Visualization application domains—Information Visualization

#### 1. Introduction

The technological evolution, among with the Internet, allows designers and artists to become "information architects", allowing them to use technology and information throughout the creative process [Ves07]. Self-tracking (the process, either automatic or not, of gathering and analyzing data about our social behavior and our body) allows many users to discover unknown patterns about themselves, and improve the quality of their lives. This data art project uses data from the Reporter app, made by Feltron, DrewB and Friends. The mobile application sends a few randomly timed surveys each day, and pairs the answers with automatic measurements. The data that is automatically saved is mapped by the developed application in order to stop being a complex set of number, and gain a meaning and a human context. In this way, the generated artwork tries to represent the individuality and uniqueness that characterizes each person and each set of data, as well as some of the everyday life's chaos. Information Visualization is introduced as a tool to help us understand and humanize abstract data, that becomes a new medium to designers and artists. The visual inspirations for the creation of this project range from several pieces of art, to musical scores, to graphic design work.

## 2. Approach

The Reporter app automatically collects 9 different types of data (connectivity, battery, localization, weather, time and date, steps, report impetus, audio, photoset). Each type of data was associated

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© 2016 The Author(s) Expressive Proceedings © 2016 The Eurographics Association with a visual element, and it was thought how this element would interact with the other visual elements.



Figure 1: A week in February.

## 2.1. Steps, Weather and Awake Time

The first data set to be mapped was steps, weather (temperature and humidity), and how much time the user spends awake. To represent this information we used rectangles. Each row of rectangles represents one day of data, and each column of rectangles represents one report inside that day. The color of each rectangle corresponds to a mapping between the temperature and the air humidity on that moment. That is, as the temperature increases (throughout the year) the colors become warmer, and as the humidity increases the colors become stronger (more saturated) – when it was impossible to record weather data, the rectangle is filled with a grey color. The

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height of each individual rectangle is mapped according to the steps recorded by the application (the steps given between the previous and the current report). Finally, the width of each column of rectangles (each day) corresponds to the time that the user spent awake in that day – that is, there are days that are literally longer than others (Figure 1).

# 2.2. Localization

The localization (country) is an attribute that we wanted to display in order to always be present in a subtle way, but, when changed, to cause a reaction on the viewer. So the country was mapped with as a continuous line (like a timeline) on the top of the visualization (Figure 2). It is always present and is subtle in all the artifacts, however, when there is a different country, or more than a country (Figure 3), in the represented week, the reader will easily notice a change on that artifact, when compared to others.



Figure 3: Three countries displayed.

# 2.3. Report Impetus, Battery, Time and Date

The attribute Report Impetus indicates how the report was triggered. There are 5 types of reports: the report button was tapped; the report button was tapped while Reporter is asleep; report triggered by notification; report by setting the app to sleep; report triggered by waking up the app. The canvas is horizontally divided in the number of represented days (usually 7), and it was given a symbol for each type of trigger (square, filled square, circle, filled circle, diamond). Each symbol is placed into the area of its respective day, according to the hour (Y axis) and the minute (X axis) of the report. The battery element is placed in the same place of the Report Impetus element, and it is displayed as a pie chart that is filled according to the level of battery (0 to 100%) on the moment which the report was triggered.

#### 2.4. Connectivity

The connectivity is displayed with lines that connect the positions of each report. If the user was connected to wi-fi the line will be dashed, if he was connected to mobile data the line is solid, and if he was not connected the line will not exist.

#### 2.5. Photoset and Audio

The photoset corresponds to the photos taken between the current and the last report. The photos are mapped using circles also placed on the area of the specific day. The report with the most photos taken will have 6 circles, and the report with the least photos taken will have only 1 circle. Finally, the audio is mapped in straight lines that are distorted according to the average audio captured. There is a line per report that is also horizontally placed into the area previously divided for each day, and vertically placed according with the captured audio peak. So, the set of lines that is vertically higher on the artwork, correspond to the day where the audio peak was higher. Figures 4 and 5 depict the visual representations of a February and April 2016 of a specific user, additional artworks are available at: http://cdv.dei.uc.pt/the-aesthetics-of-routine/.



Figure 4: Artwork of a week in February.



Figure 5: Artwork of a week in April.

### 3. Conclusions

Using the data from the self-tracking app Reporter we are able to collect data that allows us to explore and use everyday life information to create abstract visualizations and art. The way the elements are placed and interact in the artworks intent to translate everyday life, so the user (and owner of the data sets) can almost seem himself and his life in the artwork.

## References

- [Ves07] VESNA V.: Database Aesthetics: Art in the information of overflow. University of Minnesota Press, 2007. 1
- [Yau09] YAU N.: Seeing Your Life in Data in Beautiful Data. O'Reilly Media, 2009. 1

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# THE AESTHETICS OF ROUTINE

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#### The Data

Self-tracking (the process, either automatic or not, of gathering and analysing data about our social behavior and our body) allows many users to discover unknown patterns about themselves, and improve the quality

# The mobile application sends a few randomly timed surveys each day, and pairs the answers with automatic rements. Information Visualization is introduced as a tool to help us understand and humanize abstract data, that becomes a new medium to designers and artists. The visual inspirations for the creation of this project range from several pieces of art, to musical scores, to graphic design work.

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types of data (connectivity, battery, localization, weather, time and date, steps, report impetus, audio, photoset). Each type of data was associated with a visual element,

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References

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- 1-4 Artworks from several weeks of February, March and April.
- 5 Visual elements that represent each of the 9 different sets of data.