

Diploma Thesis

USER EVALUATION OF INTERACTIVE COVID-19 DASHBOARDS

The objective is to conduct user evaluation of COVID-19 dashboards containing geospatial information. It consists of a formative study to identify problematic user interaction aspects in existing dashboards and it is enhanced by comparing two self-developed ones. The nature of this study requires the usage of mixed research methods, combining eye-tracking technologies and Q+I. The results help reveal how the users interact with the dashboards and their functionalities and if the displayed information is correctly transferred.



1st Objective

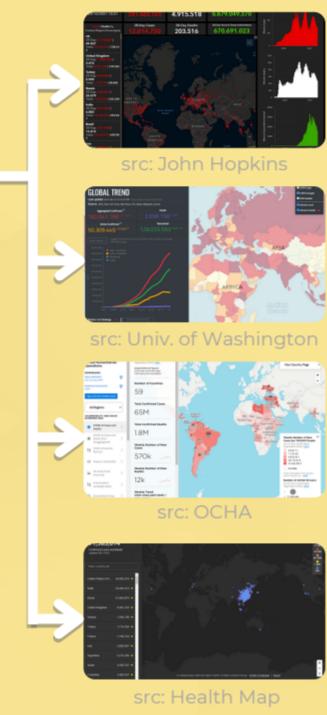
EXPERIMENT I

User testing on existing dashboards to obtain insights on user-friendly functionalities and make recommendations for design improvement

Methods

Experiment

Analysis



Results

- Choropleth map
- Interactive elements
- Search option
- Big title
- List of regions
- Select a date option
- Light aesthetics
- Small credits

- Dot/grad. symbols
- Static elements
- Non-visible tabs
- Small title
- Click and pop-ups
- Time-slider/ graph hover
- Dark aesthetics
- Block of text



2nd Objective

DASHBOARDS

Create stimuli according to Experiment I, by developing two dashboard interfaces within an SDI

Methods

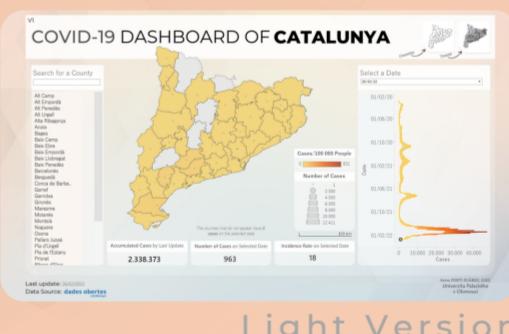
Data Sources



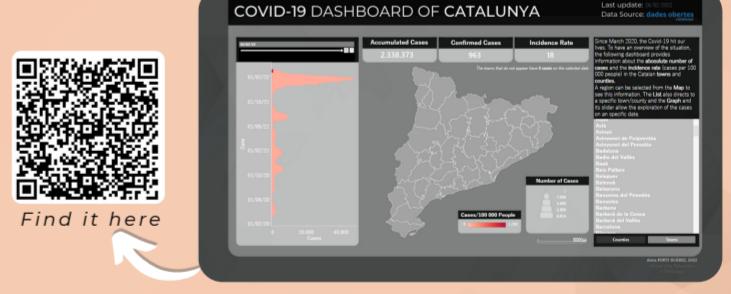
Implementation



Results



Light Version



Dark Version

3rd Objective

EXPERIMENT II

User testing on self-developed dashboards, comparing their functionalities, to elaborate final recommendations, considering Experiment I

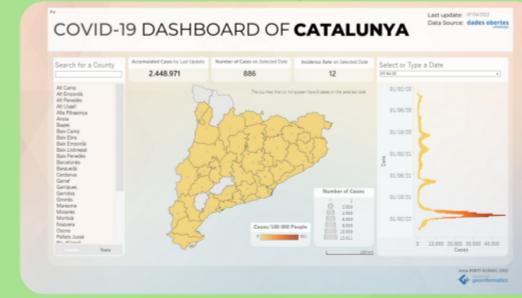
Methods

Experiment

Analysis

Results

- Follow cartographic rules
- Numeric metrics placed on the top
- Tabs near to the element they refer to
- Drop-down or typing date selector



Final Version

Conclusions

Together with dashboard development tools, this work involves the familiarisation with analysis methods in cognitive cartography, both quantitative and qualitative, focusing on eye-tracking and all the technologies related. Besides this, the main aim is achieved by obtaining insights on dashboard user interaction and recommendations are elaborated considering which functionalities they should contain, their appearance and placement in the layout, and their role in communicating and transferring the information properly, in order to improve dashboard interface design.

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