

Story-Dashboard for the 'senseBox' project

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June 2018

'senseBox' is a 'Do-It-Yourself'-environmental measurement station for beginners. It is easy to program and setup. The gathered data can be uploaded onto the 'openSenseMap' where it contributes to a citizen science project. The data is visible for everyone and can be downloaded for further processing.

As of today the ways of interaction with the raw data is limited. Data can be graphed and an interpolation on the 'openSenseMap' can be executed. If the user wants an individual approach of displaying the data or wants to compare it to an external data source the user has to rely on manually gathering all the data and implement it into a statistic program of their choice. Especially for users with no experience in programming this is not possible.

The goal of this research is the development and analysis of an interface which will offer various means of interaction with the gathered data on the 'openSenseMap'. The focus is on information that can be gathered from a single 'senseBox', e.g. making assumptions about the quality of the sensors or recognizing geographical correlations therefore creating a story to the measurements which later can be shared via social media or other communication channels.

From the raw data a single 'senseBox' produces, valuable information for the user is to be generated. This is hoped to be achieved by visually displaying and comparing the data to that of an official weather station of the 'Deutsche Wetterdienst'(DWD) or the 'Landesamt fr Natur,Umwelt und Verbraucherschutz'(LANUV). Additional comparisons will help to further support the concept of creating a story out of the measurements. The 'openSenseMap' already provides an API to filter and download the data. Likewise the data from the 'DWD' or 'LANUV' can be downloaded.

The steps undertaken during the research start with an analysis of the existing structure and possibilities of the 'openSenseMapAPI'. Following, a first draft should be outlined that describes the features the interface should have. The interface should be easy to use even for users with little to no experience in programming. This usability will be evaluated with a user study at the end of the research.