



From a technological standpoint, CityMurmur is a web application that periodically scans a pool of news sources, blogs, and online newspapers searching for references to local streets, points of interest and areas of the city. Using this information the application is then able to plot topographical and semantic maps of the city according to the topic discussed by the news source (culture, society, ...), the source's typology (blogs, online newspapers), and its scale (local media, regional media).

The media pool

The core of the application is a collaboratively created news sources pool classified both through denotative and connotative categories. The pool includes all the sources appearing in the official local media list, with the addition of online editions of the most important newspapers, online free-press newspapers and personal blogs linked to the city. Beside this editorial sources selection operated by the authors of the project, CityMurmur.org provides a section of the website for user contributions to the news pool.

Every six hours each feed of the pool is downloaded and all the news of the feed are scanned in order to see if any street or square of the city is mentioned. All the news containing a geographical reference are categorized by type of the source (blogs, online newspapers...), the scale of the source (local, regional, national...) and the topic discussed by the source (culture, society, politics, sports, environment...). Beside this denotative categorization, a connotative description is obtained by extracting relevant keywords from the news through a basic text mining algorithm.

The project

The CityMurmur project constitutes an early experiment in addressing the need of a new narrative for the media city. A representation aimed at displaying not so much the geometrical characters of the city, as its new, media-determined shape.

The aspiration is to experiment new cartographies, built on news and rumours rather than on streets and buildings, suitable for the representation of the multiple identities that overlap in the media narrative. The objective is to expose the media discourse on the city, and to visualize the reciprocal influence between mediated messages and the social and physical reality of the city.

The topographical reality made up of streets, squares and points of interests, intersect with the semantic reality of news, rumours, and information coming from various sources, and the images that result from this interaction merge into the urban geography. These images create a media cartography, a new representation of the collective narration that aims to show the influence of media on the city, describing the information flows and linking them to a physical geography.

Mapping

Using the data and information collected by the application and matched to the city streets, two classes of visualizations are produced: a Topographic Map and a Semantic Map. In the Topographic Map, new media cartographies are drawn using free GIS data from OpenStreetMap in order to show the geographical distribution of media attention on the city. The map is obtained modifying the thickness of each street and point of relevance of the city as a function of the amount of the news related to them. Each element is coloured according to the most frequent value of the category (chosen as colour criteria) found in its news collection.

The Semantic Maps represent the semantic proximity of places while completely ignore the city's geographic space. This visualization shows a network graph where the nodes are keywords coming from the news – related to the city – and the links are the places that physically connect those terms. The size of every keyword-node describes its impact on the city, while the thickness of the starting and end point of each link is related to the presence of the keyword in each place. The colour of the nodes indicates the most relevant value for those terms, according to the category chosen as colour criteria.