SensePlace2
Harnessing Twitter to support situational awareness and crisis management through geovisual analytics

Establishing and maintaining Situational Awareness is a fundamental requirement for effective crisis management. The information contained in social media has been recognized by the crisis management community (e.g., the August, 2010 Red Cross Emergency Social Data Summit) and by researchers in crisis informatics as a potentially rich source of time-critical information that can enhance situational awareness and alert practitioners to events and situations needing their attention.

We have applied a visual analytics perspective to develop and implement visually-enabled information foraging and sensemaking tools for leveraging data made publicly available in social media. SensePlace2 has been designed to integrate multiple text sources (e.g., news, RSS, blog posts). Our initial focus is on Twitter, the most widely used microblogging application. SensePlace2 uses a crawler to systematically query the Twitter API for tweets containing any topics deemed to be of interest. Each tweet is then processed and key information (locations, organizations, persons, hashtags, URLs etc.) is extracted.

SensePlace2 is a map-based web application. The client side of the application supports overview and detail maps of tweets, place-time-attribute filtering of tweets, and analysis of changing issues and perspectives over time and across space as reflected in tweets. The default SensePlace2 interface (shown below) includes a query window, map, time-plot / control, relevance-ranked list of tweets, and task list. The primary display views (map, time-plot/control, and tweet list) are dynamically coordinated. Our approach is user-centered, using scenario-based methods to guide design and validate implementation. The current SensePlace2 architecture and user interface reflect user input from a structured survey of emergency management practitioners.

For additional details about SensePlace2, please see:


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