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A FRAMEWORK FOR ONLINE SPATIO-TEMPORAL DATA VISUALIZATION BASED ON HTML5

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Keywords: Spatio-temporal data, Web based visualization, HTML5, WebSocket, Canvas

Abstract. Web is entering a new phase — HTML5. New features of HTML5 should be studied for online spatio-temporal data visualization. In the proposed framework, spatio-temporal data is stored in the data server and is sent to user browsers with WebSocket. Public geo-data such as Internet digital map is integrated into the browsers. Then animation is implemented through the canvas object defined by the HTML5 specification. To simulate the spatio-temporal data source, we collected the daily location of 15 users with GPS tracker. The current positions of the users are collected every minute and are recorded in a file. Based on this file, we generate a real time spatio-temporal data source which sends out current user location every second.By enlarging the real time scales by 60 times, we can observe the movement clearly. The data transmitted with WebSocket is the coordinates of users' current positions, which will can be demonstrated in client browsers.

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