

CONTEXT-AWARE GEOVISUALISATION: UTILISING PLACE WITH LOCATION BASED DATA

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The proliferation of consumer electronics devices that are Global Positioning System (GPS) enabled has led to an increase in the availability and quantity of data that is geo-located. The position of where certain data has been captured, photographs taken, or places visited can be easily and quickly appended to files generated by a portable device. Related to the capture of information and the subsequent geo-coding has been the need to visualise this data.

Geovisualisation, the viewing of data with an element of location through the frame of that location, has become an important method for sense-making and knowledge discovery (Dykes et al., 2005, Fabrikant & Lobben, 2009). Recent research in this relatively new field has positioned it as being more akin to geovisual analytics, with an emphasis on the cognitive elements of data exploration through highly interactive interfaces rather than simple, static displays. This repositioning highlights the importance of understanding the human factors of interaction with location-based data and the interfaces designed to present them (Fabrikant & Lobben, 2009).

At the same time, research into context-awareness and location based services has investigated the role of location as context to the delivery of information and services. This research views context as a mostly technical concern that is, the notion of context has been restricted to that which is sense-able in the environment, and have involved systems constructed around technology such as GPS and RDF chips, amongst others (Dourish, 2004). Whilst important, this technology driven approach to context does not fully incorporate the unique cultural, social and individualistic interpretations of context that these technologies often reside in. Particularly, there is room to consider the notion of location as something subjective and qualitative rather than objective and factual (Dourish, 2006).

This poster will first explore the role that perception has in complex problem solving and knowledge discovery, and will demonstrate the benefits geovisualisations can augment and facilitate our natural ability to see novel, surprising and otherwise invisible relationships between information. As well, it will discuss the role of location in problem solving and decision making in the context of a current research project that is being conducted in partnership with Parks Victoria. Particular, the idea of location as a subjective interpretation of space will be explored.