

enhance the models for measuring and evaluating the use of maps. This paper discusses enhancements to the original map use cube developed by MacEachren and Kraak (1997) that form the basis for a web map use cube model.

The web map use cube considers the broadened and diverse user base globally that accesses web maps in some form or another, thanks to the expansion of online maps and virtual globes. These users are offered a range of functionality for manipulating the map according to the purpose of the map. They do this in the context of the data, which if known, informs the map view. Otherwise, they utilise higher level geospatial functionality to manipulate and visualise the map to explore and reveal what is unknown. Hence, the data context is important to visualise the map in such a way as to effectively communicate its message to the target user.

Being able to construct a map that is effective in communication is an ongoing challenge. With the continued growth in web mapping and web services technologies, there is an increasing need to automate the contextualisation that needs to occur as a web map is constructed and manipulated. Further research is needed to identify the intelligent contextual environment, not only for the data, but also for users and the functionality required. As web mapping technology becomes smarter, so too do web maps need to communicate much more intelligently – linking users, functionality and data to impart knowledge and wisdom.

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