EVALUATING SELECTED VISUALISATION METHODS FOR EXPLORING VGI

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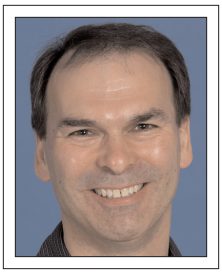
The increasing prevalence of user-generated, or volunteered, geographic information is changing established practices of spatial data production and use in ways that were largely unanticipated in nature or in scope. This paper investigates one dimension of VGI use that has received relatively little attention to date, namely the influence of different cartographic visualisation methods on citizens' ability to explore and understand VGI. Following a brief review of key challenges related to VGI use, the paper describes a web-based software prototype that was designed to allow users to compare several simple geovisualisation and data filtering techniques for VGI exploration. Next, attention is directed to a specific study context where citizens used the software tool to explore a rich data set of locally-produced VGI related to community assets. The paper concludes with a discussion of the results from this experiment.

La prévalence grandissante de renseignements géographiques générés par l'utilisateur, ou information géographique volontaire (IGV), modifie les pratiques établies de production et d'utilisation des données spatiales de manière tout à fait inattendue quant à sa nature et à son étendue. Cet article examine un aspect de l'IGV qui a reçu relativement peu d'attention à ce jour, soit l'influence de différentes méthodes de visualisation cartographique sur la capacité des citoyens à explorer et à comprendre l'IGV. À la suite d'une brève revue des défis clés relatifs à l'utilisation de l'IGV, cet article décrit un prototype de logiciel Web conçu pour permettre aux utilisateurs de comparer simples techniques de géovisualisations et de filtrage des données en vue de l'exploration de l'IGV. Ensuite l'attention se porte vers un contexte d'étude particulier où les citoyens se servent de l'outil logiciel pour explorer un riche jeu de données constitué d'IGV produite localement relativement aux atouts de la collectivité. L'article se termine par une discussion des résultats de cette expérience.



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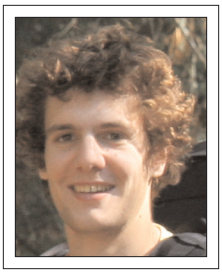

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1. Introduction

The past five years have been witness to an exponential growth in the volume of user-generated content (UGC) associated primarily with the collaborative and social networking focused "Web 2.0" model [*O'Reilly* 2005]. The term "volunteered geographic information" or VGI was coined by *Goodchild* [2007] to identify UGC that contains either implicit or explicit locational references. Many of these data sets are created for personal use (e.g. georeferencing photos, recording a hiking track with GPS, etc.). However, people are increasingly contributing to collaborative "community" data resources (e.g. OpenStreetMap) and, in some cases, updating public sector or commercial spatial data sets as illustrated by TomTom GPS' Map Share system. Over this short period of time, legions of casual users of spatial information technology have begun to create geographic information that is novel in terms of topic matter, form of representation and quality using a number of innovative web-based tools that support VGI production, display and exploration.

The emerging reality that "neogeographers", who lack formal training in geographic or cartographic principles and theories, can easily create their own spatial data has elicited both optimism and concern among the broader public as well as the professionals and institutions that have traditionally served as geographic information gatekeepers [*Turner* 2006]. The most frequently cited benefits associated with the growth of VGI centre predominately on the democratisation of spatial data production and consumption [*Elwood* 2008]. For casual users of geographic information (GI), the collaborative nature of the Web 2.0 environment permits data production to be divided among many individuals. This realigns data creation in light of personal or community needs rather than corporate or government mandates, priorities or capabilities [*Goodchild* 2007]. Integral to this democratisation are new opportunities for individuals to augment, verify and counter official map data with rich spatialised representations of their own such as experiential and