Towards a socio-economical evaluation framework of Volunteered Geographic Information (VGI)

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Abstract

Neogeography, originally an old phenomenon, but is a new subject matter of this modern digital age with World Wide Web and satellite technology. Volunteered Geographic Information (VGI), using the web 2.0 platform with wikilike initiatives has enriched and is developing the idea of Neogeography in the digital earth. VGI is the harnessing of tools to create, assemble, and disseminate geographic data provided voluntarily by individuals (Goodchild, 2007). Some examples of this phenomenon are Wikimapia, OpenStreetMap, and Google MyMaps. These sites provide general base map information and allow users to create their own content by marking locations where various events occurred or certain features exist, but aren't already shown on the base map. It has a big hope to bring a positive change in the social life and economic sector among the neighbours of our digital neighbourhood. It is introducing a new business, new economics and a new way of thinking about the future of Geographic Information Science (GIScience). This study aims to provide a framework to evaluate the socio-economical value of VGI.

Key Words: Neogeography, VGI, Digital Earth, Digital Neighbourhood, Web 2.0 etc.

Background and Relevance

On the backdrop of the need to asses the socio-economic impact of Geographic Information in the context of Neogeography with the contributions through Volunteer's Initiative, it is necessary to do relevant studies. The ECOGEO project (http://ecogeo.scg.ulaval.ca/) at the Center for Research in Geomatics (CRG), Laval University is launching research work with a view to provide an economical Model of the GI (Geographic Information) sector in the province of Quebec. The study presented here is a part of the ECOGEO project as a PhD research.

NeoGeography in GIScience context: The introduction to *Neogeography* is a recent subject matter of discussion in the field of Geographic Information Science (GIScience), Public Participation GIS (PPGIS), and Volunteers Geographic Information (VGI). In this modern digital age the term "Neogeography" was coined by the fine folks at Platial, where they explained neogeography "*is a diverse set of practices that operate outside, or alongside, or in the manner of, the practices of professional geographers".*
From my concept, Neogeography is the mapping Mashup, using the web 2.0 as the platform with the help of GI Volunteers. That's not all it also explores the discovery of anything new on the earth. Though neogeography is largely about presenting and reporting information through map-based interfaces, it's more about distributing information than it is about creating it, and therefore, it is a type of GIS.

Volunteer… what is VGI and who are the V in GI? The term "volunteered geographic information" (VGI) refers to GI which is created in collaboration by users who usually don't have special skills in handling spatial data (Cara et al., 2007). Relying only on GIS experts neglects the fact that involving interested users is an important step towards an open and democratic approach for PGIS (Rattray, 2006; Tulloch, 2007). *Christmas Bird count* is a longstanding example of VGI, in effect, Wikimapia is a volunteered gazetteer, produced entirely by individual citizens, and providing richer descriptions of places (Goodchild, 2007).

GeoWeb 2.0 as a platform for the Neogeographers: The geo-bloggers and the Neogeographers are using web 2.0 as their platform to contribute in creating content. Web 2.0 introduce business model through creating places online where people would like to come together to share what they think, see and do. When people come together over the Web, the result can be much more than the sum of the parts. Using Web 2.0 strategy, a company can start by offering a free service, such as a free search capability (Google) or a place to store, organize, access, and share personal photos (Flickr). The next step is then to reach a critical mass of active uploaders or users of the service to create powerful cross-network and social network effects. These network effects then can be mined for advertising and targeted pay-per-click marketing. Who would have thought a great free search web site could make billions of dollars per year! (Shuen, 2008)

Methods and Data

This study will try to provide an evaluation framework to asses the social and economic dimension of Neogeography (and particularly of VGI), where the volunteers are the main contributor of the contents. This research is based on three main components; the Volunteered Geographic information, the GIVolunteers and; the Web 2.0. The economical value of those three components is supposed to meet to a particular and same point and at the same time will perform to build the socio-economic framework of VGI.

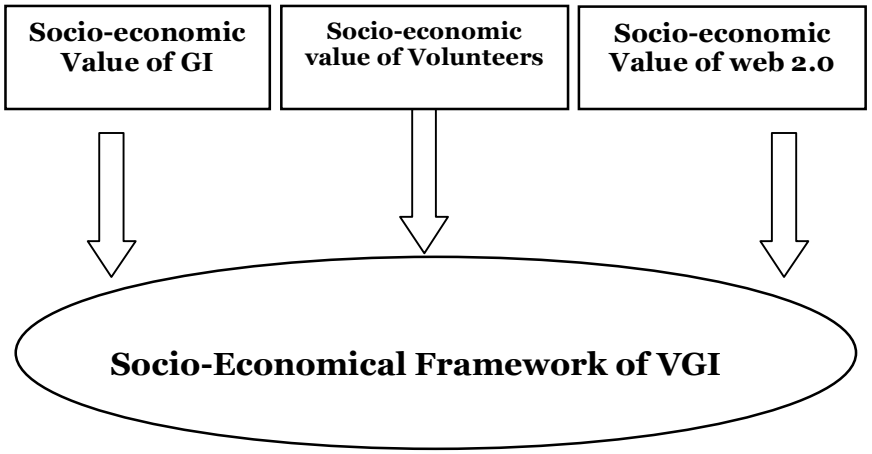

Figure 1: Three main components building the Socio-Economical Framework of VGI

The objectives are in the course of definition, but the project aims to design, develop and test an economic model; likely to help us to evaluate the socio-economic benefits of the initiatives of voluntarily collected amount of knowledge and Geospatial data.

Moreover the main objective of this study is to propose an evaluation framework for achieving socio-economic benefits of the new business model of VGI.
The specific objectives are:

- to improve knowledge about the strengths and the opportunities of VGI,
- to provide an evaluation framework of VGI.

The method to reach the objectives will be in two parts; the first one is theoretical and the second one will be operational. In the first step the theoretical framework – the state of the art will be presented in association with bordering the several components of the research theme. The scope and extent of the research will also be discussed in the first step. In the second step an evaluation framework will be built based on the previous step. The research work will proceed through testing and evaluating the framework.

Results

This research project is ongoing and it is a part of my PhD research topic. There is no result yet since I am on the preliminary stage of the research.

Conclusion

The social and economical value of any voluntary production is praiseworthy and therefore VGI is valuable in the socio-economic view. The users are the creator of the content and they create it willingly. In case of production of Geographic Information without the volunteer, the production of first copy is high because of the collection cost. In VGI the GI is collected without any cost and the volunteers produce the information with their own interest for their own sake. User-Created-Content is becoming an important economic phenomenon with direct impacts on a widening range of economic activates. The social behaviour will be obviously influenced by his impact. Moreover, the social and behavioural changes are interrelated with the change of economic conditions and can never be seen as isolated. So, when there is a change in the economy there is a change in the society and vice-versa. Neogeography, VGI and web 2.0 is supposed to bring a positive effect in mapping science, market of geospatial database and among the users community.

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