

An empirical analysis of the patterns and variations in map use based on a web survey: Focusing on the use of web maps

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The dissemination of digital maps and the Internet has promoted use of maps on the web (viz., web map), changing people's manner of map use. While previous studies were mainly concerned with the conceptual or technical aspects of web maps, few empirical studies were conducted on how ordinary people use maps on the web. The aim of this paper is to clarify the variation of map usage among ordinary people and factors affecting it by focusing on the maps on the web. Data were collected through a web survey to 635 people in Tokyo Metropolitan Area on the frequency and purpose of the usage of various maps. The factor analysis applied to the data on the frequency of the map use revealed that the maps can be classified into three groups: web map, guide map, and multipurpose map. Then the relationship between use of these maps and the attributes of the respondent were statistically tested. Results indicate that guide maps were used more by women, while multipurpose maps were used more by men. The use of multipurpose maps is closely related to the respondents' experience and spatial thinking skills. The use of guide maps is also related to one's interest in maps/geography and information technology skills. However, the use of web maps has almost no relationship with the attributes of the respondents. This implies that since using web maps requires few skills, variation in their use is minimal. Hence, web maps can be a useful tool for disseminating participatory mapping/GIS involving various entities.

Keywords: map use, Internet, web map, web survey, geospatial information