

Towards Human-Centered Mobile Mappings: Methodologies and Implementations

Min Lu and Masatoshi Arikawa

Center for Spatial Information Science, The University of Tokyo, Japan

Abstract. In recent years, online web mapping products have become well developed and widely used in mobile environments. Location-based mobile applications also use web mapping services to provide map-based functions. The rapidly growing user-generated geospatial content also primarily uses web mapping for base maps. However, the fast growth of outstanding web mapping products has brought up new issues in the use of maps in mobile environments, one of which is that the diversity of maps is insufficient in mobile environments. Computer-generated maps used by web mapping are accurate and generic for multiple purposes, but the diversity of geoinformation representation is insufficient to satisfy a wide variety of user groups' requirements when used for specific purposes. On the other hand, various well-designed conventional maps are still widely used in the printed media for people's daily uses, such as the maps in guidebooks and leaflets for tourism and city exploration, the maps on newspapers and in magazines for presenting arguments and proposals, and so on. Such maps often have a sense of human-centered design in map communication within a limited medium. However, they are less used in current digital mobile environments. The purpose of this research is to study, design and develop a new mapping platform for introducing human-centered maps to the latest digital mobile devices to combine the advantages of both.

Keywords. human-centered maps, mobile mapping, georeference, prototype development