**Deep Mapping meets Public Participatory HGIS: The next generation of the Keweenaw Time Traveler**

Lafreniere Don; Scarlett Sarah; Trepal Dan; Williams Ryan; Juip James; Pastel Robert; Kitalong Karla

Michigan Technological University

**Abstract**

In this paper, we report on our relaunch of the Keweenaw Time Traveler (KeTT) project. KeTT was founded in 2015, and since its inception has employed a public-participatory historical GIS (PP-HGIS) approach to create a historical spatial data infrastructure (or deep map) to empower a post-industrial community in heritage preservation efforts, reconstructing family histories, geoheritage, environmental history, and a host of spatial humanities research projects. For the past several years, volunteer community groups and individuals interested in the history of the region have been transcribing historical maps, classifying map features, geocoding locations, and contributing place-based memories and photographs. Meanwhile, an interdisciplinary team at Michigan Tech University has been geocoding and record-linking IPUMS complete count census data, school records, employee records, and city directories. The almost 20 million variables covering 1880-1950, created by both researchers and the public, are linked together and accessible via a new online deep map that launched in spring 2022. The new online deep map was designed through a public design charrette process over a two year period (2020-2022). Our paper will outline the implementation of the new online deep map, the challenges and opportunities that PP-HGIS and design charrettes brings to the spatial humanities, and we will discuss the issues of sustainability of big-data and public facing projects.

Keywords: Deep Mapping, PPGIS, Historical GIS, Heritage, Census