

## Developing a Place-Name Gazetteer for Singapore by Mining Historical Planning Archives and Selective Crowd-Sourcing

**Authors :** Kevin F. Hsu, Alvin Chua, Sarah X. Lin

**Abstract :** As a multilingual society, Singaporean names for different parts of the city have changed over time. Residents included Indigenous Malays, dialect-speakers from China, European settler-colonists, and Tamil-speakers from South India. Each group would name locations in their own languages. Today, as ancestral tongues are increasingly supplanted by English, contemporary Singaporeans' understanding of once-common place names is disappearing. After demolition or redevelopment, some urban places will only exist in archival records or in human memory. United Nations conferences on the standardization of geographic names have called attention to how place names relate to identity, well-being, and a sense of belonging. The Singapore Place-Naming Project responds to these imperatives by capturing past and present place names through digitizing historical maps, mining archival records, and applying selective crowd-sourcing to trace the evolution of place names throughout the city. The project ensures that both formal and vernacular geographical names remain accessible to historians, city planners, and the public. The project is compiling a gazetteer, a geospatial archive of placenames, with streets, buildings, landmarks, and other points of interest (POI) appearing in the historic maps and planning documents of Singapore, currently held by the National Archives of Singapore, the National Library Board, university departments, and the Urban Redevelopment Authority. To create a spatial layer of information, the project links each place name to either a geo-referenced point, line segment, or polygon, along with the original source material in which the name appears. This record is supplemented by crowd-sourced contributions from civil service officers and heritage specialists, drawing from their collective memory to (1) define geospatial boundaries of historic places that appear in past documents, but maybe unfamiliar to users today, and (2) identify and record vernacular place names not captured in formal planning documents. An intuitive interface allows participants to demarcate feature classes, vernacular phrasings, time periods, and other knowledge related to historical or forgotten spaces. Participants are stratified into age bands and ethnicity to improve representativeness. Future iterations could allow additional public contributions. Names reveal meanings that communities assign to each place. While existing historical maps of Singapore allow users to toggle between present-day and historical raster files, this project goes a step further by adding layers of social understanding and planning documents. Tracking place names illuminates linguistic, cultural, commercial, and demographic shifts in Singapore, in the context of transformations of the urban environment. The project also demonstrates how a moderated, selectively crowd-sourced effort can solicit useful geospatial data at scale, sourced from different generations, and at higher granularity than traditional surveys, while mitigating negative impacts of unmoderated crowd-sourcing. Stakeholder agencies believe the project will achieve several objectives, including Supporting heritage conservation and public education; Safeguarding intangible cultural heritage; Providing historical context for street, place or development-renaming requests; Enhancing place-making with deeper historical knowledge; Facilitating emergency and social services by tagging legal addresses to vernacular place names; Encouraging public engagement with heritage by eliciting multi-stakeholder input.

**Keywords :** collective memory, crowd-sourced, digital heritage, geospatial, geographical names, linguistic heritage, place-naming, Singapore, Southeast Asia

**Conference Title :** ICDH 2019 : International Conference on Digital Heritage

**Conference Location :** London, United Kingdom

**Conference Dates :** November 18-19, 2019