

# Integrated Geographic Data Visualization with Open Government Data – Seoul Metropolitan Government of Korea

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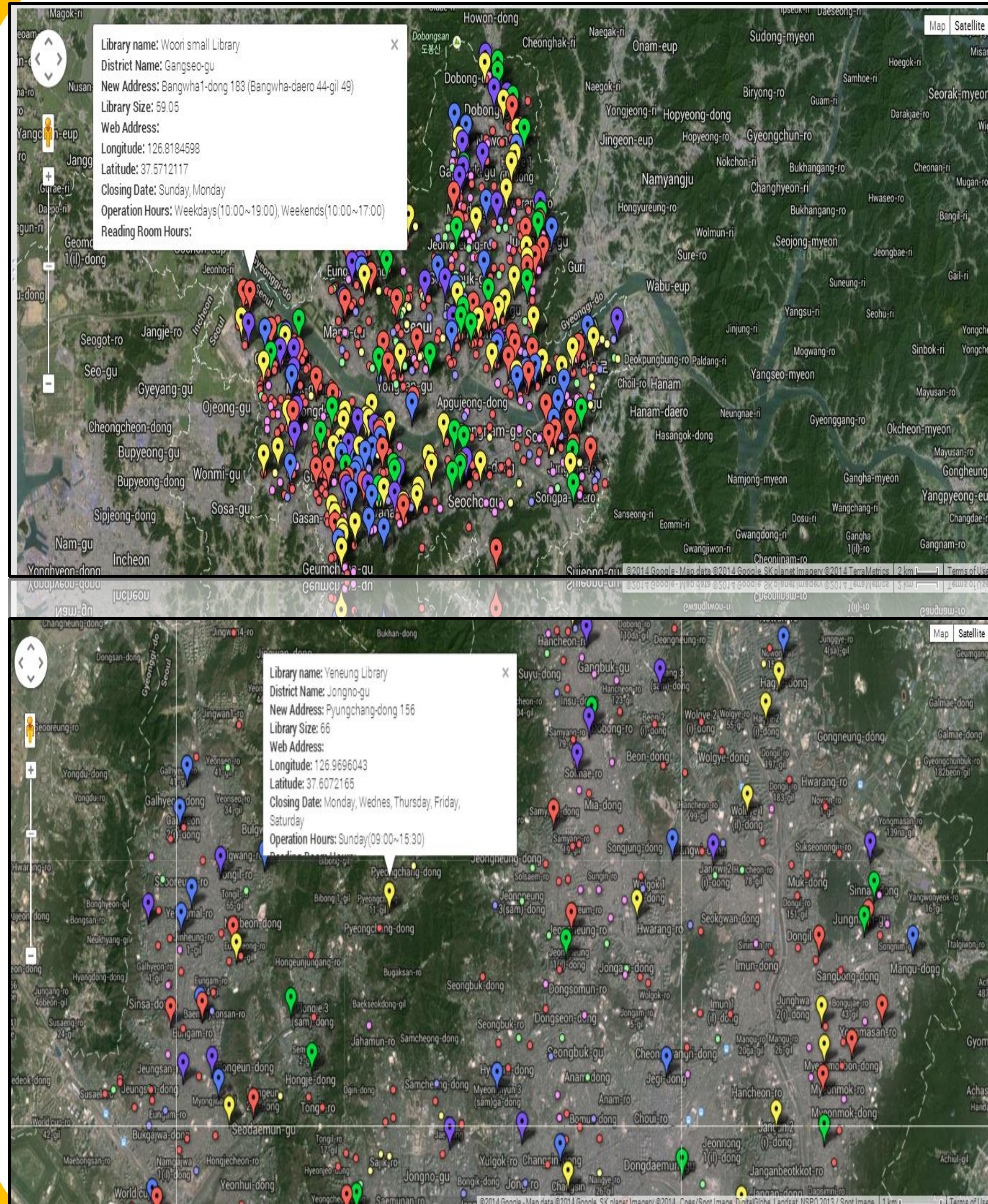
## Background

Open government data to the public to freely be available to reuse and mash-up can lead to new services. The Republic of Korea openly provides two address systems to the public; the *new address system and the old address system*. Korea currently uses both addressing systems. The old address system, the East Asian system, assigns addresses chronologically rather than geographically. The other, a new address system, is the street name-house number system, which assigns according to road, street and avenue names, and this is much closer to the international address system. Although the new address system was released in July 29, 2011, this system brought a nationwide confusion to the public because the people had been using the old address system for decades. The old address system will be officially abandoned beginning December 31, 2013. This demands innovative ways to efficiently serve to the public.

Friedman (2008) mentioned that the main goal of data visualization is its ability to convey clear and effective communication of information. In this study, a geographic data visualization service with integrated data is using Google Maps to discover public usage of open government library data.

## Data Collection

The analysis of a dataset in 775 small-sized libraries located in Seoul, Korea was performed. Data was collected from open government data which is distributed by the Seoul Metropolitan Government of Korea. This data is available at the [Seoul Open Data website \(http://data.seoul.go.kr/\)](http://data.seoul.go.kr/).



Open Government Data is turned into visual maps with geographic data, such as latitude and longitude, by plugging them into Google Maps. Each library from the dataset displayed with icons in Google Maps. The map can be visually enlarged or shrunk, and each library is categorized by its library size. Each library is pinned with icons in Google Maps. Using the library dataset, each icon provides integrated library information; *new address, district name, library size, longitude, latitude, web address and closing date, operation hours, and reading room hours*.

Among the 25 districts in Seoul, the districts with a high standard of living, such as Seocho and Gangnam, both ranked in the 23<sup>rd</sup> and 25<sup>th</sup> respectively regarding average library size, and both ranked in the 1<sup>st</sup> and 5<sup>th</sup> respectively in total library size, and ranked 20<sup>th</sup> and 21<sup>st</sup> respectively in the number of libraries among the 25 districts. Although library hours is an important element, results show that closing data field of the libraries is only used by 19%, operation hours data field of libraries is only used by 1.5% and reading room hours field of the libraries is only used by 1.3% in the released data.