

Geospatial data gathering using cloud GIS and smartphones: its advantages and significance

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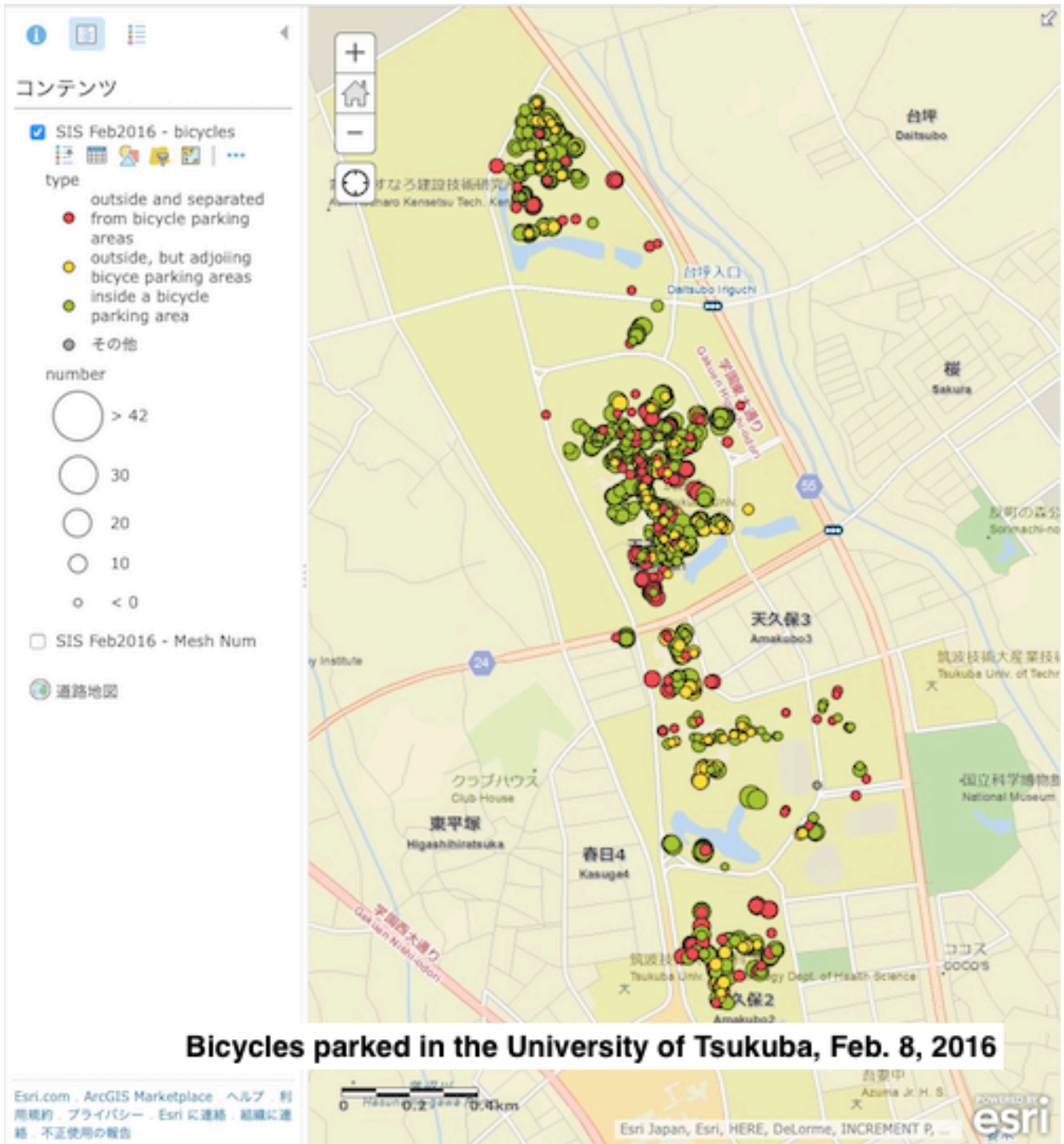
The authors examined the advantages and significance of the use of cloud GIS and smartphones to collect geospatial data in a fieldwork.

For this purpose, the authors conducted an experimental study in which the distribution of bicycles parked in a whole university campus was investigated.

The authors implemented a web-GIS map on ArcGIS Online, a cloud-GIS service by ESRI, to map the location of bicycles. Thirty students surveyed the distribution of bicycles in their assigned areas using smartphones on-line. They could record the data about bicycles onto the web-GIS map using ESRI's Collector for ArcGIS, an application for data collection, installed on their smartphones. The authors had a questionnaire on the students' experience after the investigation.

Results of this study showed that the use of cloud GIS and smartphones in a fieldwork made simple, quick and cooperative investigation possible, triggered interests in using GIS, and stimulate spatial thinking. The authors argued that advanced use of them should be developed to enhance its advantages and significance.

Keywords: cloud GIS, smartphone, fieldwork, geospatial data, geography education



Bicycles parked in the University of Tsukuba, Feb. 8, 2016