

GPS Analysis and Data Mapping using Cloud Server

Guk-Han Jo¹ and Young-Joon Song²

¹Department of Electronic Engineering, Kumoh National Institute of Technology,
61, Daehak-ro, Gumi, Gyeongsangbukdo, South Korea
¹rnrks12@kumoh.ac.kr, ²yjsong@kumoh.ac.kr

Abstract. In this paper, we collected GPS information from mobile and various smart devices using cloud server and performed analysis and mapping in the cloud to find out what works users performed on collected dates. The cloud server collects the data collected consistently and visualizes it to improve the legibility. Visualization is one of the important factors in big data. Within the cloud server, users can also share their work in the past.

Keywords: GPS, Cloud server, mapping

1 Introduction

Recent developments of cloud servers and smart devices have led to the development of devices that are portable and small in size. If visualization such as maps, graphs and charts is performed on various operations occurring in such smart devices, it is possible to increase the legibility of data to the user and provide convenience. In this study, we have studied the method of displaying the photos and videos of the places that the user performed or traveled by mapping the tasks such as search, photographing, video shooting, and travel performed on the smart device on the map. In order to do this, it is necessary to extract the GPS and the extracted GPS data can be used in various map applications such as Google map[2].

2 GPS Analysis and Mapping

The cloud server can be connected to the wireless Internet. Authorized users can share software and information[4], such as data and programs, through a connection to the cloud. It performs storage management and partition processing of data through virtualization of resources. In this study, GPS information is needed to map data using cloud server. In many cases, GPS information is included when taking actual pictures or video[1]. There is a method of collecting GPS information or collecting it in real time from a smart device executed by GPS function. The mapping is also used as a mobile app[3].

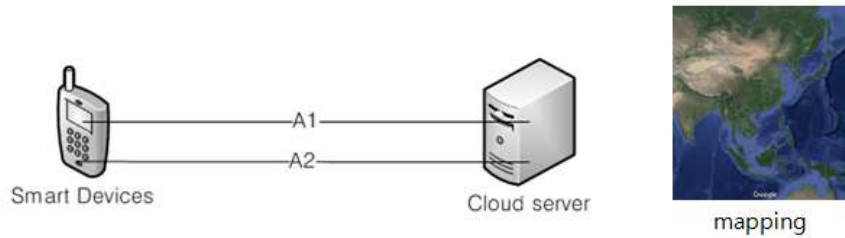


Fig. 1. Configuration between cloud server and smart device

Figure 1 shows Configuration between cloud server and smart device. When the smart device delivers the GPS information and the date to the cloud server, the cloud server prepares the mapping on the map. Then, the data such as the photo, video, and search history transmitted from the smart device is displayed on the map. A2 shows the functions provided by the cloud server in the smart device. The smart device can store and share these mapped information through the cloud server without worrying about the storage capacity.

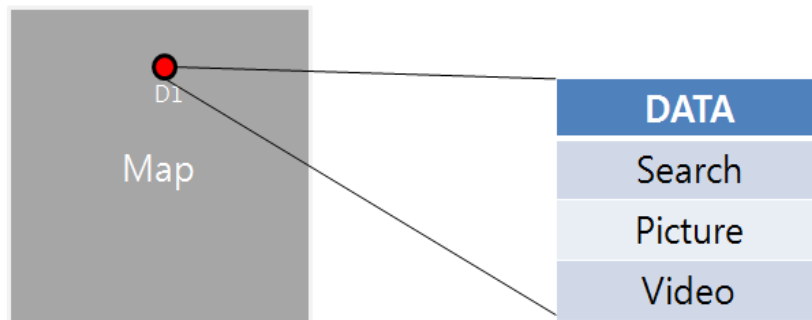


Fig. 2. Mapped Data Smart Device Connection Diagram

Figure 2 shows Mapped Data Smart Device Connection Diagram. D1 is the point on the mapped map. D1 includes GPS information and search history and date, and information such as photographs and videos. In order to make it easier to understand at a glance, after mapping the data to a map, you can link through the click. In the case of a lot of movements such as traveling or business trips, past data storage and visualization through mapping is a convenient way to keep memories while providing convenience.

3 Conclusion

In this study, GPS information and date information of the user are collected and visualized through the cloud server. Information such as photos and video links the original data via links, providing convenience for users and enabling smart travel. It is expected to be used mainly in the theme of travel in the future. It can also be used in various business fields such as business trips and meetings. In addition, application of such technologies as augmented reality and hologram can effectively visualize the data, share resources in the cloud server, and easily access and utilize various data through virtualization.

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