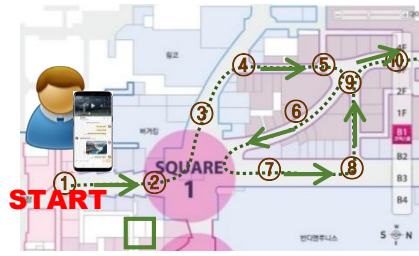


Indoor Positioning System (IPS) for Smartphone Users



Dynamic Site-Surveying

- Using Smart-phone / Surveying devices



**Environment Analyzing/
DB Construction / Update**

- Analysis (DM Tool)
- DB Generation
- DB Update Using Crowded-sourced Data



Hybrid Positioning

- Using Wi-Fi, BLE, Magnetic field, Barometric pressure, Images

Technology Summary

- This technology is an indoor localization platform, which enables any service provider to make indoor location information without installing any dedicated positioning H/W, for indoor Location Based Services (LBS).
- In this technology, by using our smartphone application and surveying devices, both reference location and raw data of several sources, such as Wi-Fi, BLE, magnetic field, barometric pressure, and images, can be gathered dynamically.
- Our platform analyzes gathered data and generates a location database (DB) in a location server. Accurate positions of users can be estimated with the DB and the hybrid positioning system, also the DB can be updated using the data from users.

Potential Applications

- Product/service information solutions
- Location data solutions for structures



Development (TRL : 7)

Advantages

- Reducing collection time and cost significantly by using a dynamic collection method, 18 times faster than the existing static method
- Providing more accurate(<2m) and robust indoor location information by using our patented adaptive particle filtering and stochastic location DB, even irregular pedestrian motion, such as calling, in pocket, swing etc.
- Supporting autonomous update of location DB from crowdsourcing data by using machine learning technology, which minimizes the maintenance fee of frequently changing location DB

Core Patent

- APPARATUS AND METHOD FOR DETERMINING INDOOR COLLECTION POINTS AND COLLECTING HETEROGENEOUS INFRASTRUCTURE MEASUREMENT INFORMATION, KR1694728, US9116006

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