Docket #: S10-408

A Smartphone-based Asset Management System

A method of tracking an inventory of objects via a mobile communications device includes acquiring an image of one or more of the objects via the mobile communications device, which also collects a location of the mobile communications device while acquiring the image of the one or more of the objects. The location and image are transferred from the mobile communications device to a remote server via a wireless network, such that the one or more of the objects are identified at the server based on the image, and the location and identity of the one or more objects are stored on a database associated with the server.

Applications

- Automatic generation of a new asset inventory using a smartphone.
- Querying an existing asset inventory using a smartphone.
- For book spine recognition, applications include using a smartphone to index or find books of interest in (i) a library, (ii) a bookstore, (iii) a personal book collection.

Advantages

- Accurately managing a large set of assets is a difficult, time-consuming task for many people and institutions. Asset inventories are typically maintained by manual updates or deployments of barcode or radio-frequency identification (RFID) technologies. Manual updates are costly in terms of human labor and error-prone results. Expensive barcode or RFID systems, on the other hand, may only be affordable to large institutions and require physically attaching a tag to each asset. Given these disadvantages, a more efficient and affordable asset management system is desired.

- We leverage the widespread availability of commodity smartphones. By taking a photo of a group of assets with a smartphone, we automatically recognize the identity and location of these assets, and subsequently add the identity and location into an asset database. We do not need to attach any tags physically to the assets, nor do we require specialized sensors or tag readers.

Patents

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Innovators

- Jatinder Pal Singh
- Bernd Girod
- Cheng-Hsin Hsu
- Kyu-Han Kim
- David Chen
- Sam Tsai

Licensing Contact

Imelda Oropeza

Senior Licensing Manager, Physical Sciences

Email