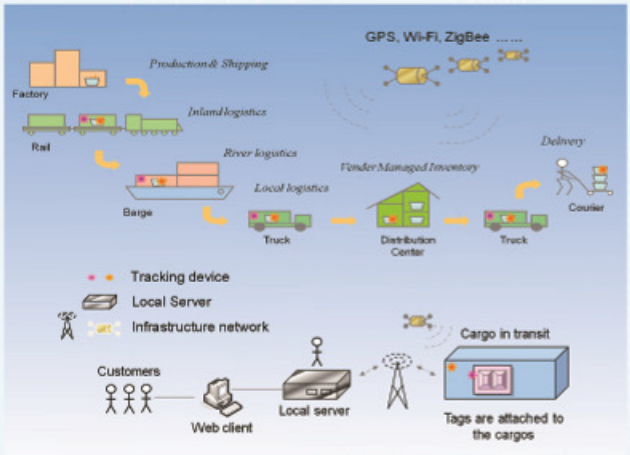
Low-cost Versatile Tracking Device and Technology for Logistic Applications

Project Objectives

With the rapid growth of global business activities, it becomes essential for businesses to manage the logistics flow and to track their goods properly. Continuous monitoring and end-to-end tracking are critical for high-value goods, such as jewelry, electronic products, and legal documents. The objective of this project is to develop the next-generation tracking device and technology which supports continuous, real-time, and ubiquitous goods-level tracking.

Brief Description of the Project

This project leverages the strengths of different wireless technologies to realize a hybrid and collaborative positioning technology. Compared with other existing technologies, the system enjoys better availability, lower total costs of ownership, operation and maintenance. In addition, with the innovative service-oriented architecture and web-service design, the tracking functionality can be accessed via a web browser through the Internet. End users can also track their cargos through their mobile phones or other portable devices.



End-to-End Location Tracking

Positioning Technology	Indoor or Outdoor	Accuracy	Range & Coverage	Deployment Cost	Mobile Unit Cost	Operation & Maintenance Costs
GPS	*Outdoor*	Medium	Long Global	N/A	Low	Low
Wi-Fi	Indoor & Outdoor	*Medium*	Long	Medium	Low	Low
Cellular Network	Indoor & Outdoor	*Low*	Long	N/A	Medium	*High*
RFID	Indoor	High	*Short* Room level	Medium	Very Low	Low
ZigBee	Indoor & *Confined Outdoor*	High	Medium Enterprise Level	Medium	Low	Low
Hybrid	Indoor & Outdoor	High Adaptive	Long & Global	Low to Medium	Low	Low

Hybrid Positioning

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Impact and Contributions

The new tracking technology has a great market value and huge potential. It can be employed in various kinds of location-based applications, such as logistics, asset tracking, security, location-based marketing and advertisement, etc. This enabling technology plays a key role in achieving better service availability, better environmental friendliness and sustainability.

Tracking Devices

Project Team

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Location Tracking on Mobile Devices

Project Funding Source

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Industry Sponsors

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Surface Mount Technology (Holdings) Ltd.

Fleet Management System based on Location Tracking Technology