Mobile Apps for Intelligent Building Management and Rental Operation (JS7-11)

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Introduction
- Smartphone is an essential, electronic, hand-held device that human beings rely on
- Make our lives more convenient
- Make our lives more convenient

Project Aim
- Combine this location information (NFC) with a smartphone to develop effective portable management
- Useful impact on society
- Raise attention of this new technology

NFC (Near Field Communication) can provide an effective way of finding location by reading tags and obtaining information about the location.

Hardware
- The NFC system will be used to replace the existing GPS in a property management application.
- It is able to provide an exact location for users to acquire further more information related to the location.

Software
- Java programming language on Android platform have been our main programming tools and languages in our project

Design Specification

<table>
<thead>
<tr>
<th>Hardware Specification</th>
<th>Software Specification</th>
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<tbody>
<tr>
<td>Tags installed in apartment lift lobby and every single flat</td>
<td>Java programming</td>
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<tr>
<td>Low cost, but effective way of getting location</td>
<td>User programming</td>
</tr>
<tr>
<td>Easily obtain existing location information by using a smartphone</td>
<td>Conversation system</td>
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Features
- a) Property management automation
  - Application
  - Work order
  - Vacancy search
  - Facilities booking
- b) Monitoring
  - Rental and facilities status
  - Schedule of use of facilities
  - Work order progress
- c) Communication
  - Conversation system

Merits of the Project
High mobility
- Online property management software can be replaced by a smartphone application
- Social Networking
  - Communication system provides channel for communication
- Energy Saving
  - Intelligent management can reduce power consumption

Challenges and existing problem
- NFC is NEW to the smartphone market
- No resources for reference
- Not enough expertise
- Can only be used in limited smartphones only

Summary
- NFC system is not a popular technology that it is difficult to find a smartphone that embedded NFC chip.
- We know that it will be a new trend for interacting with smartphones and social networks.
- We develop the portable management app successfully but it is only the basis of the whole aim.
- We think that NFC system should be more popular since there is not enough NFC devices in the market.
- If more NFC devices are developed, more applications which is related to NFC system are implemented.
- Our app can be a reference for further projects in the future.