One Phone to Rule Them All

A Case Study

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Connection?

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Near Field Communication (NFC)

NFC builds upon RFID systems by allowing two-way communication between endpoints

Due to short transmission range, NFC-based transactions are possibly secure

The basic NFC communication operation became an accepted ISO standard (ISO/IEC 18092) in 2003

Connecting systems

- Library Management System
- RFID
- SIP_2 protocol

- Application to allow communication

Design

- Creation of web service to Voyager using SIP_2 protocol
- JSON communication standard for transfer of package information using XML
- Build application to communicate with JSON through to Voyager to request patron information

Application

- Application created and published to PlayStore – mimics existing links to information
- Preliminary interface design

2 Phases

1 – Application opened on smart phone – user asked to enter library barcode, barcode retained in memory

2. Scan the RFID tag

- Screen displays book information

- If item able to be borrowed, a button available “Borrow This Book”

- “Please Keep the Phone on the RFID Tag”

Phases cont.

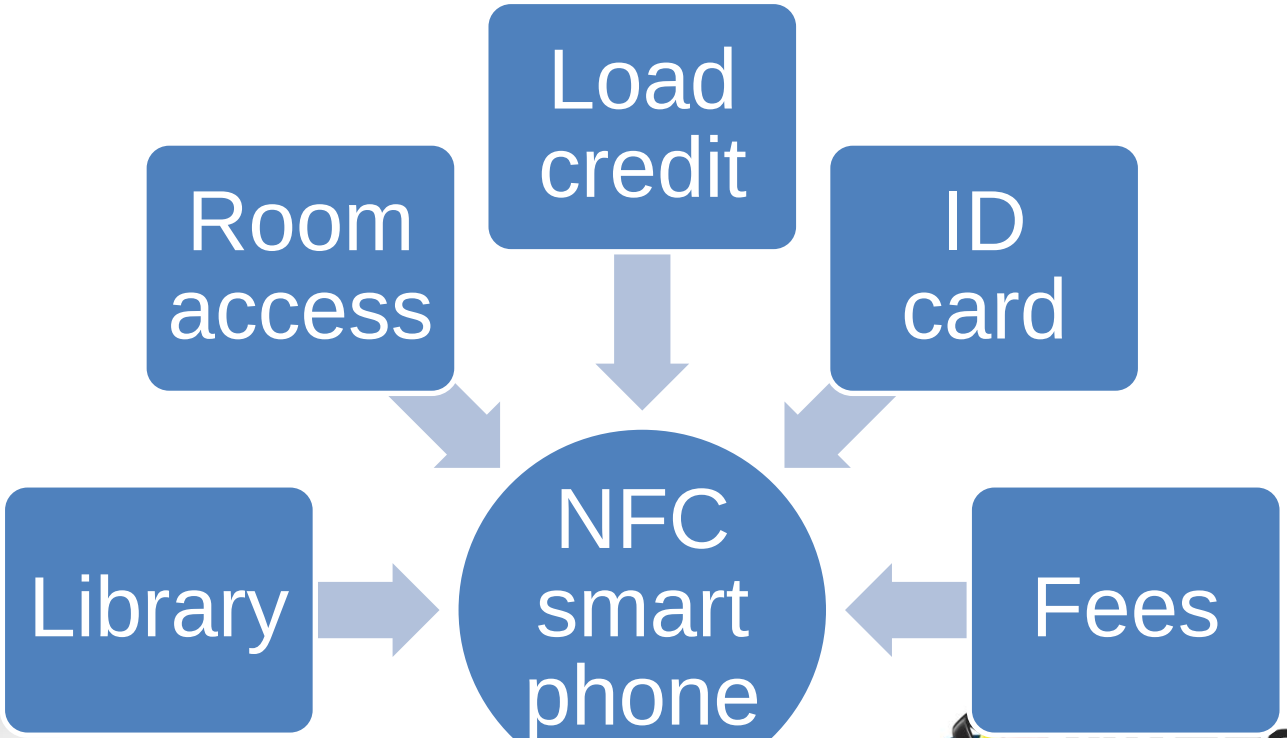
- Information goes to the server with the RFID information

- Book barcode is linked with user barcode "Do You Wish to Issue?"

- Item may or may not be issued depending on circumstances – a message will display upon completion of action

One phone that rules them all

Near Field Communication technology - lets smartphones communicate with other devices containing a NFC tag



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