

# SNAP

## Enterprise Mobility Pilot Project for Android App



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## Executive Summary

- SeamlessLink Inc. has made \$50K Available for the development of a production update system
- SNAP will incorporate:
  - Smartphones
  - QR-Code Recognition
  - Image upload to database
  - Customer will be able to view production updates via web page

## Introduction

- In the business world corporations strive to serve their customers to the best of their abilities, “the customer is always right”. Customers are ever more demanding from corporations when it comes to information. Customers demand updates pertaining to their orders sometimes on a daily basis. Keeping the customer happy will result in a repeat of orders and will generate much more business for our company. SNAP main intent is to
  - provide users/customers with the latest information and
  - progress updates on their orders or requests.

## The Innovation need Challenges

- SeamlessLink Inc. recognizes that the infrastructure investment will require a majority of the capital investment.  
Some of the infrastructure challenges include:
  - Development of an employee/station application
  - Smartphone investment
  - Middleware development, which will enable interaction with the system
  - Server, Database and Firewall infrastructure
  - Customer accessible Web Page Development and Launching

## Initial Investigation and Findings

- While looking at the different systems that would serve the intended need we have found that a vast majority of our customers would be using some type of mobile device or web application for order tracking. With this in mind we decided to implement the QR-Code system that will enable us to meet the customers' needs with the least outlay of capital needed. The system being designed will enable not only customers but also managers to track the location of a given order in real-time and display updated estimated delivery dates as needed. With this innovative concept in order tracking we will be able to increase efficiency in sales tracking which will increase customer satisfaction and increase customer loyalty.

## Existing IT Infrastructure

- External Site (Internet) displays:
  - History
  - Product
  - Technology
  - Resources
  - Contact Information
- Internal Site (Intranet) provides:
  - Lifecycle management
  - Product Development
  - Manufacturing
  - Customer service
  - Sourcing/Purchasing
  - Management

## The Mobility Pilot Project Plan

Task Name	Duration	Start	Finish
[-] Specification Development	18 days	Mon 10/29/12	Wed 11/21/12
[-] System Requirements	18 days	Mon 10/29/12	Wed 11/21/12
[-] Hardware Specification	18 days	Mon 10/29/12	Wed 11/21/12
[-] Software Specification	18 days	Mon 10/29/12	Wed 11/21/12
[-] Prototypes	45 days	Wed 11/21/12	Tue 1/22/13
[-] Hardware Development	45 days	Wed 11/21/12	Tue 1/22/13
[-] Software Development	45 days	Wed 11/21/12	Tue 1/22/13
[-] Testing	28 days	Tue 1/22/13	Thu 2/28/13
[-] Bench System Implementation	15 days	Tue 1/22/13	Mon 2/11/13
[-] Basic On-Site Testing	5 days	Mon 2/11/13	Fri 2/15/13
[-] System Troubleshooting	10 days	Fri 2/15/13	Thu 2/28/13
[-] Product Roll Out	14 days	Thu 2/28/13	Tue 3/19/13
[-] System Installation	5 days	Thu 2/28/13	Wed 3/6/13
[-] Full Scale Testing	5 days	Wed 3/6/13	Tue 3/12/13
[-] System Implementation	5 days	Tue 3/12/13	Mon 3/18/13
[-] Training	2 days	Mon 3/18/13	Tue 3/19/13
[-] Post-Installation Support	60 days	Tue 3/19/13	Mon 6/10/13

Specification Development	Wed 11/21/12
Prototypes	Tue 1/22/13
Testing	Thu 2/28/13
Product Roll Out	Tue 3/19/13
Traning	Tue 3/19/13

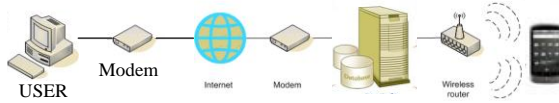
## Project Risks Assessment and ROI

- redhat jBoss Data Grid
  - Priced @ \$15K/year
    - Full customer support
    - Use of redhat server

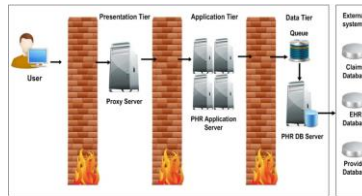


## The Design of System Architecture

- Hardware



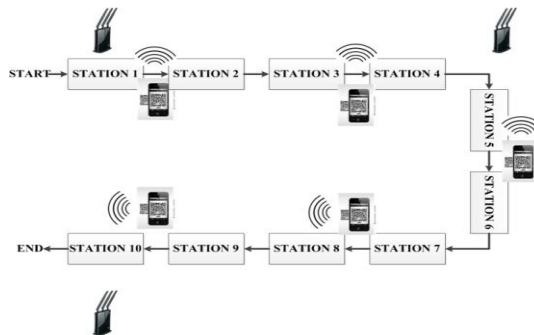
**High Level System Overview**



**Preliminary IT Security Overview**

## The Design of System Architecture

- Hardware



**Internal Production Platform Overview**

## The Design of System Architecture

- Software

- Internal Layer will

- Capture Images
    - Allocate data according to QR-Code



Version 4 (37x33) Content: "Version 4 QR Code, up to 50 char"

- Customer End

- Access server database once credentials have been verified
    - Provide links to various production stage images available

## The Design of System Architecture

- Middleware Vendors include:

Standards: SAG and [X/Open](#) RDA, SAG CLI ( [JCC's SQL Standards page](#) )

Products:

- [Visigenic](#) : ODBC drivers
- [Intersolv \(Q+E\)](#) : ODBC drivers
- [TechGnosis](#) : [SequeLink](#) , ODBC
- [IBL](#) : [EDA/SQL](#)
- [Dataramp](#) : ODBC access via the Internet
- [Microsoft](#) : ODBC, DB-Library/Net-Library, [SQL Server](#) , replication
- [Oracle](#) : SQL\*Net, [Oracle7](#) , Oracle Mobile Agents, replication
- [Sybase](#) : [Open Client/Open Server](#), [OmniSQL Server](#), [InfoHub](#), [Enterprise Connect](#), [EMS](#) , System 10, replication
- [Informix](#) : Online and SE, I-Star, I-Net, I-Gateway
- [CA-Ingres](#) : CA-OpenIngres, replication
- [IBM](#) : [DB2](#) , [DRDA](#) , [DataJoiner](#) , [DataHub](#) , [DataReplication](#)
- [Praxis International](#) : [OmniReplicator](#) (multi-vendor replication)
- [Syware](#) : [DataSync](#) (personal replication)

## The Design of System Architecture

- Supporting Mobile Device
  - 2010 Release
  - 8MP Camera
  - 720p HD Video
  - Bluetooth 2.1
  - WiFi 802.11 b/g/n

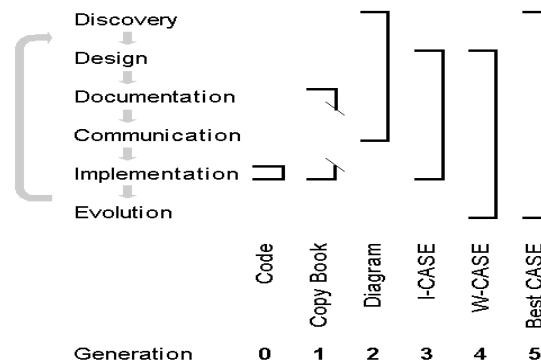


HTC Inspire



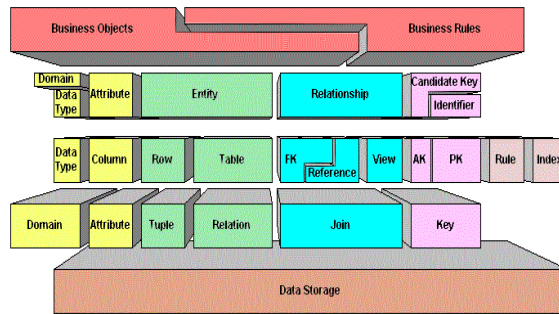
## Data and Information Systems Modeling

- Use Case Modeling

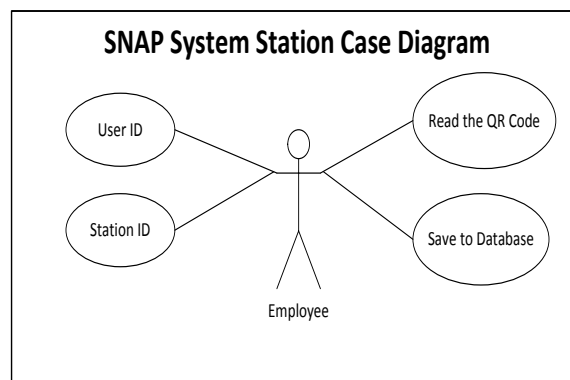


## Data and Information Systems Modeling

- UML Modeling for Mobile Application Data

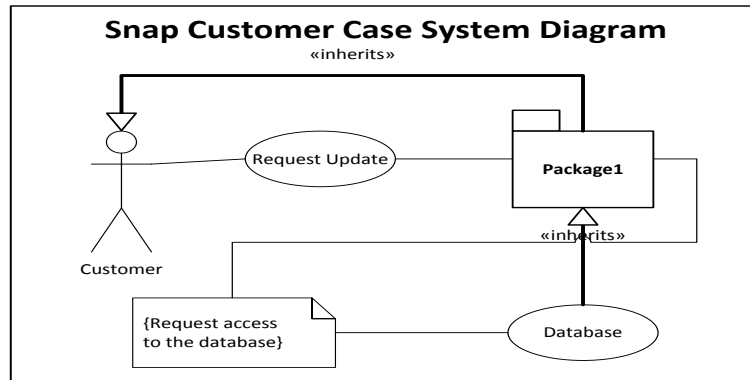


## Use Case Diagrams

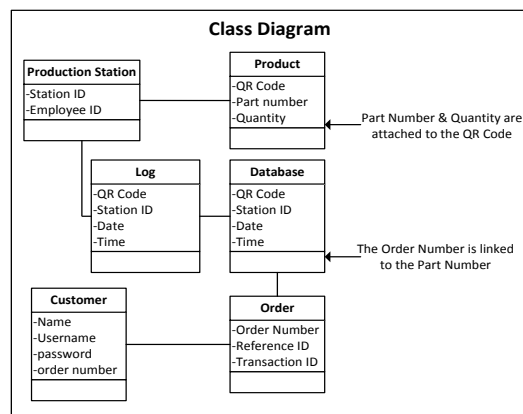




## Use Case Diagrams

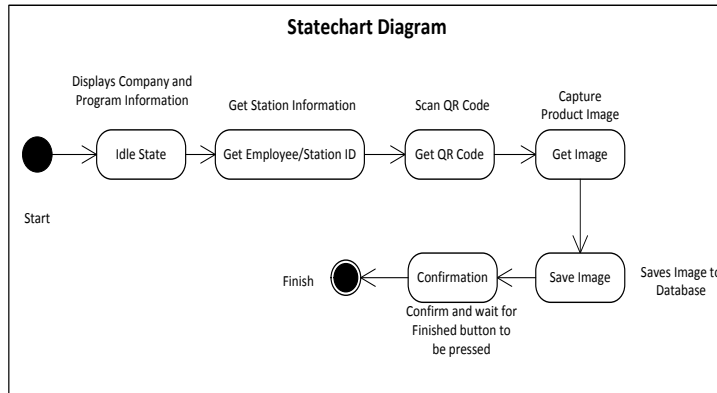


## Class Diagrams



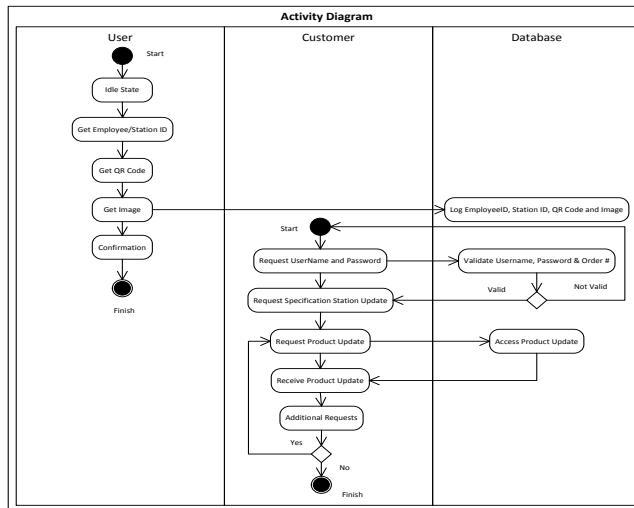
**SNAP System Class Diagram**

## Statechart Diagrams



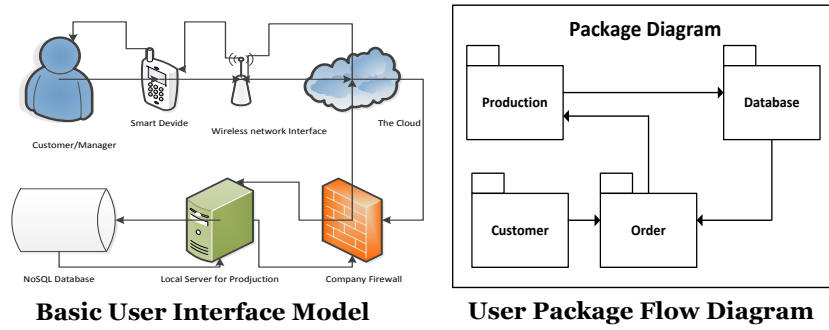
**Statechart Diagram**

## Activity Diagrams

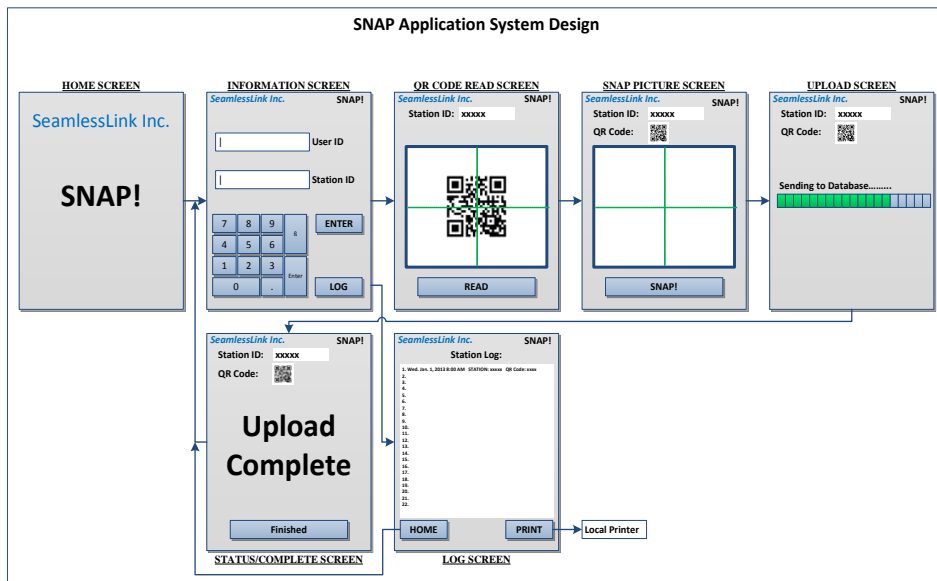


**Activity Diagram**

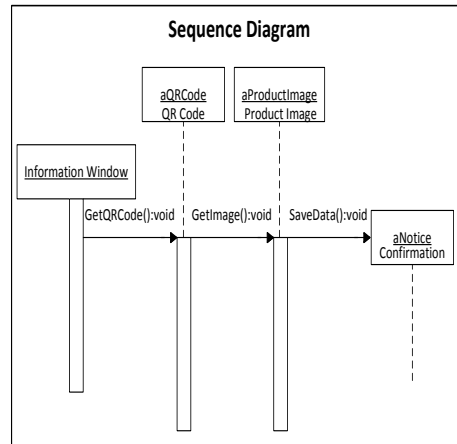
## Business Process Modeling for Mobile App



## Mobile Device Program Design



## Mobile Device Program Design



**App Sequence Diagram**

## Pilot Project - Testing

- TBD

## Summary/Lesson Learned

- ALL

## References/Appendix

### Works Cited

- H. Corporation, "htc quietly brilliant," HTC Corporation, 2012 . [Online]. Available:  
1] <http://www.htc.com/us/smartphones/htc-inspire-4g-att/>. [Accessed 10 Nov 2012].
- A. I. Science, "What is Data Modeling?," 1997-2000 . [Online]. Available:  
2] <http://www.aisintl.com/case/model.html#Steps>. [Accessed 10 Nov 2012].
- "Wikipedia," [Online]. Available: [http://en.wikipedia.org/wiki/Unified\\_Modeling\\_Language](http://en.wikipedia.org/wiki/Unified_Modeling_Language).  
3] [Accessed 10 Nov 2012].