INDIANA UNIVERSITY-PURDUE UNIVERSITY FORT WAYNE

CPET 565
MOBILE COMPUTING SYSTEM

"MOBILE CUSTOMER SUPPORT SYSTEM"

Presented to Prof. Paul .I. Lin

By

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DATE: 12-10-2012

Outline

- Executive Summary
- Problem statement
- Introduction
- The Innovation Need Challenges
- Initial Investigation and Findings
- Existing IT Infrastructure (Software & Hardware)
- The Mobility Pilot Project Plan
  - Using "Microsoft Project" to design project plan
  - Tasks/Subtasks/Resources/Cost
  - Milestones
- Project Risks Assessment and RO

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Outline

- The Design of System Architecture
  - Hardware
  - Software
  - Considered Vendors
- Data and Information System Modeling
  - Use cases
  - UML modeling for mobile application data
  - Data access, Query etc
- Business Process Modeling for Mobile App
- Mobile Device Middleware
- Mobile Device Program Design
- Pilot Project Testing
- Summary/Lesson Learned
- References

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Executive Summary

- This report provides an analysis and evaluation of the need to plan for a Mobile Enterprise Strategies to explore the new mobile technologies with business intelligent so that the company can stay innovative, competitive and possibly increase their capabilities, revenue/sales, and expand their global markets.

- Methods of analysis include:
  - The Innovation Need Challenges
  - Initial Investigation and Findings
  - IT Infrastructure (Software & Hardware)
  - Project Risks Assessment and ROI.

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Executive Summary

- The report also provides the detail for the Mobility Pilot Project Plan which include:

    - Tasks/Subtasks/Resources/Cost
    - Milestones
    - The Design of System Architecture
    - Data and Information System Modeling
    - Business Process Modeling for Mobile App
    - Pilot Project Testing

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Problem statement

- What elements would make a company success.

- There will be customer who need help or not happy with what they purchased.

- There are not much choice for customers to get help other than find the company's support information and call or Email them.

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Introduction

- The Mobile Customer Support System (MCSS) mobile App Pilot Project is to design a service type mobile App for companies to help the customers to diagnose, troubleshoot and solve the problems in couple easy steps.

- The app will provide the new technology with the traditional one so the user will be able to choose the way they want or they feel comfortable to get help.

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The Innovation Need Challenges

- Mobile device management and data synchronization
- Deploying mobile applications
- Maintaining high levels of security
- Selecting the right carrier and wireless service provider
- Data synchronization and device configuration

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Top Mobile Carrier

| CARRIERS	VERIZON	AT&T	SPRINT	T-MOBILE
Contract(2Years) Unlimited Voice, Text& Data	N/A	N/A	$80	N/A
Prepaid Unlimited Voice, Text& Data	N/A	$50	N/A	$50

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Initial Investigation and Findings

- Our business types is move currently moving from E-Commerce or M-Commerce.
- More mobile applications are being developed.
- Need to increase employee productivity
- Need to drive future value
- Need to increase consumer satisfaction

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Existing I.T Infrastructure (Hardware)
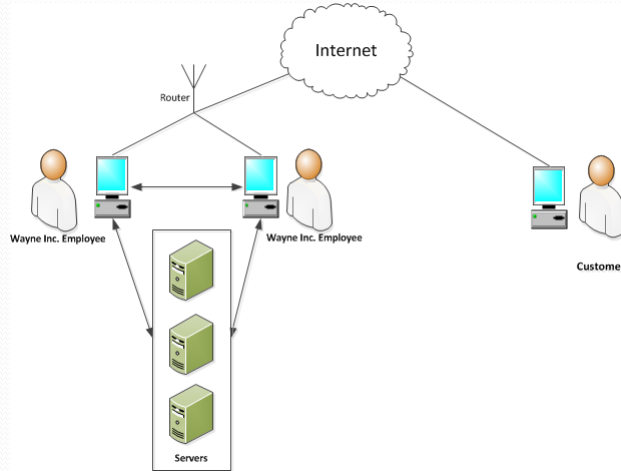
Existing I.T Infrastructure (Software)
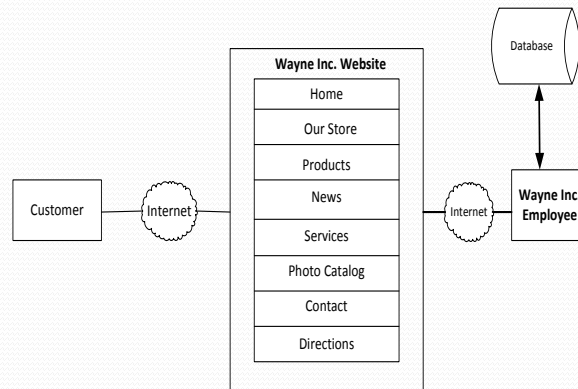
Tasks/Subtasks/Resources/Cost

Tasks	Subtasks	Resources	Cost
Conduct a thorough study on the existing system	Study the business process and current problems	Staff	$2,000
Conduct a research on the effective ways of integrating the new system to the existing one	Conduct a research on other companies that have implemented enterprise mobility, find out the challenges that they faced and how they overcame it	Staff	$2,000
Design a system architecture for the new system	Design hardware and Software architecture as well as the communication interface.	Staff, fully loaded working facility	$3,000
Designing the UML diagrams	Design the Use case, class diagram, packages and object diagram, sequence diagram, collaboration diagram and state chart diagram	Staff, fully loaded working facility.	$3,000
Develop the application		Staff, fully loaded working facility	$20,000

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Milestones

- Mobility Pilot Project Startup   Wed 9/12/2012
- Conception Phase   Thu 9/27/2012
- Study Phase   Mon 10/1/2012
- Design Phase   Thu 10/11/2012
- Implementation Phase   Tue 11/6/2012
- Execution Phase   Sat 12/1/2012

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Project Risks Assessment and ROI

Item	Knowledge and experience risk	Item	Technology
K1	an issue outside of the scope	T1	technology being obsolete
K2	Lack of experience	T2	no compatibility of current software and very high up-gradation fees
K3	consequences due to issues resolution by trial and error	T3	Hardware out of date
Item	**Budget**	**Item**	**Team factor**
B1	Unexpected increased cost of R&D	F1	Conflicts
B2	Underassessment of service demands from customers	F2	High turnover ratio
B3	Increased/unexpected competition		
B4	Downturn in the economy		

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Project Risks Assessment and ROI

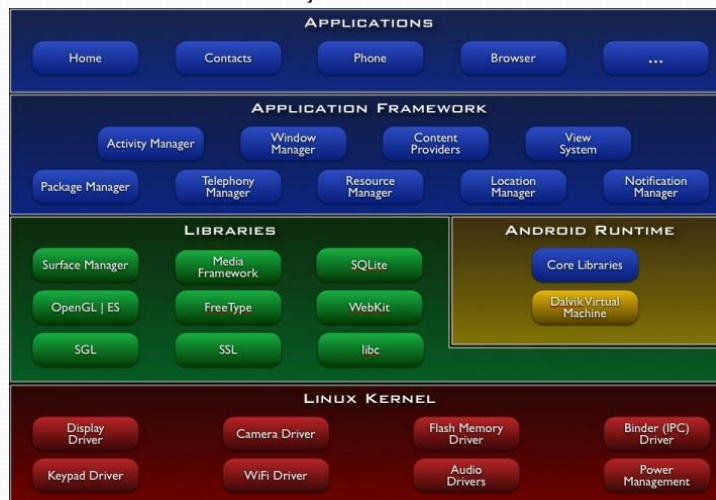| Severity of consequences	Impossible	Improbable	Remote	Occasional	Probable	Frequent
Catastrophic						
Critical		B4,F2	K3,B2,T1	B1	B3,T2	
Marginal		F1	K1,T3	K2		
Negligible						

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The Design of System Architecture

Hardware
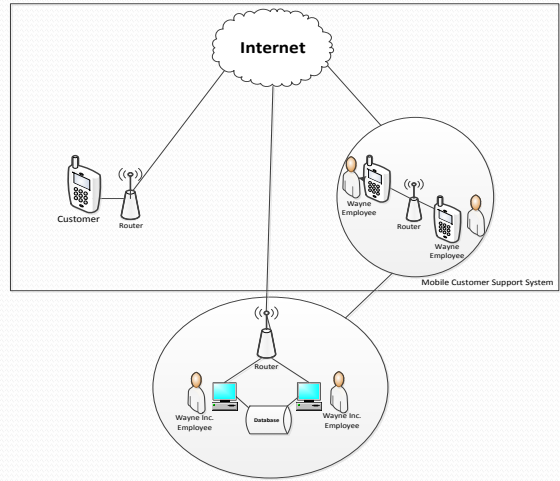
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The Design of System Architecture

Android System Architecture
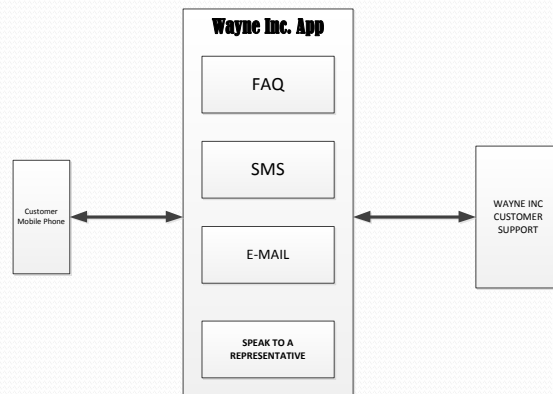

Source: Android Inc.

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The Design of System Architecture

Software

Wayne Inc. App

FAQ

SMS

E-MAIL

SPEAK TO A
REPRESENTATIVE

Customer
Mobile Phone

WAYNE INC
CUSTOMER
SUPPORT

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Considered Vendors

COMPANY NAME	DEVELOPMENT COST	PROJECT DURATION
Y Media Labs	$12,000-$20,000	5-6 Weeks
Applico	$25,000-$50,000	2-4 Months
Willow Tree Apps	$25,000-$50,000	3-6 Months
Mobisoft Infotech	$12,500	2 Weeks

• Y Media Labs (Preferred)

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Data and Information System Modeling

Use Case Model
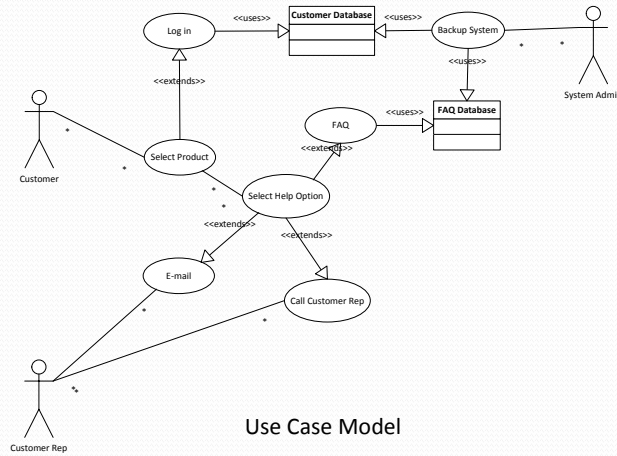
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Data and Information System Modeling
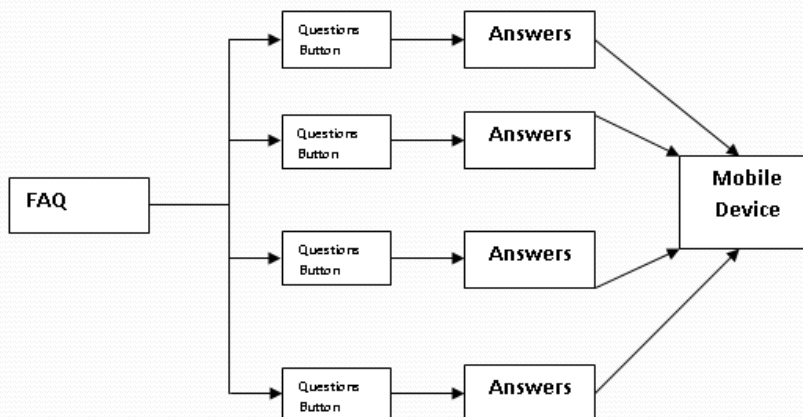

Class UML

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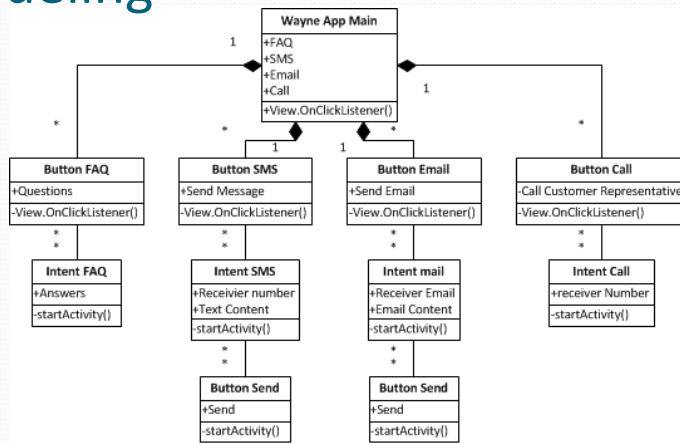
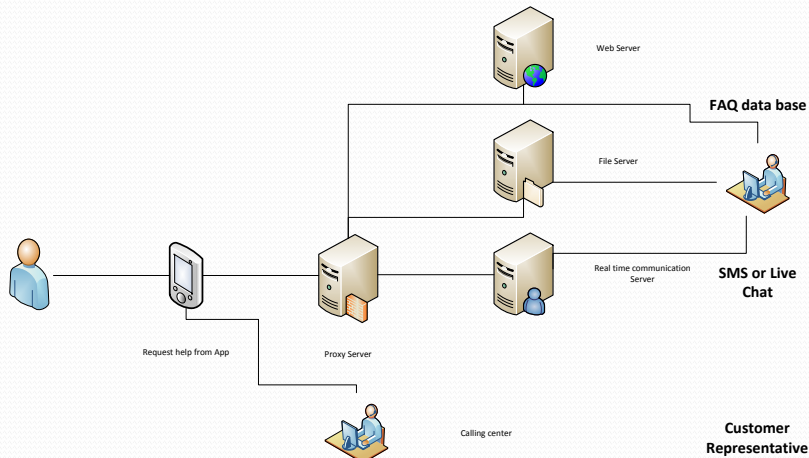# Data and Information System Modeling
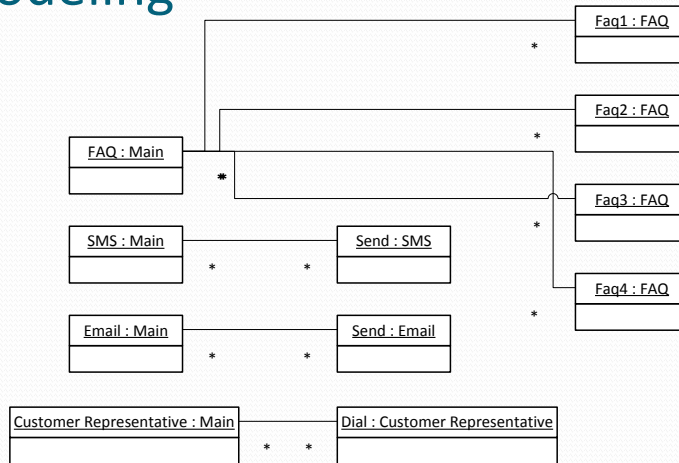
Object UML

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Data access

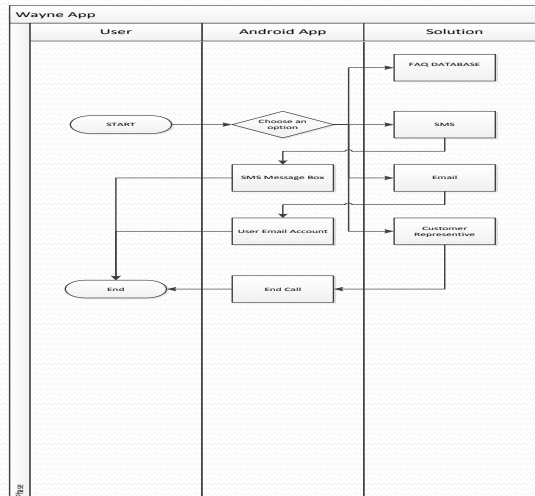24

Business Process Modeling for Mobile App


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Mobile Device Program Design

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Summary and Lessons Learned

- Thorough analysis and evaluation on the need to implement Mobile Enterprise.

- The need to understand the challenges in implementing enterprise mobility.

- The need to understand the existing system before implementing a mobile enterprise.

- The need to understand how to integrate the new system into the existing one.

- How to design and develop a mobile application for a Customer Support System.

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Pilot Project Testing

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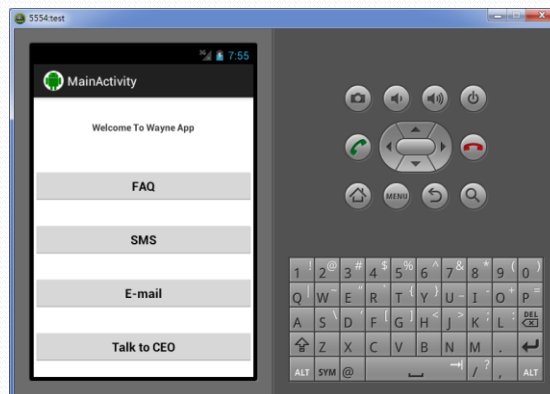
*For
Listening*

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