<PayPal Mobile / E-Comm App>

Vision

Version <2.0>

Revision document History

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Vision

# Introduction

## Purpose

The purpose of our solution is to provide a quick way to list and sell items online for merchants that do not already have websites. At a later date we would also like to target merchants with existing websites.

The purpose of this document is to identify features, needs, and stakeholders of the solution. It should be viewed as a communication tool between the developers of the solution and the client.

## Scope

Our solution includes a mobile barcode reading application and e-commerce web application. These applications are linked; updating items in one application will produce changes in the other. The mobile application relies on the PayPal Button Manager API for generating "Buy Now" buttons. Also, a public UPC database is employed to obtain item descriptions. The e-commerce application is a hosted solution where users can create their own space to market their products.

## Definitions, Acronyms and Abbreviations

### Definitions

PayPal Button Factory - A PayPal provided facility for generating HTML code for displaying “Buy Now” buttons.

PayPal Sandbox - An area to test transactions with PayPal using virtual money.

### Acronyms/Abbreviations

PayPal WPS - Websites Payment Standard  
API - Application Programming Interface

UPC - Universal Product Code

## References

Gartner, 2010 <http://www.gartner.com/it/page.jsp?id=1434613>

Forrester, 2010 <http://mashable.com/2010/10/21/small-business-smartphones/>

# Positioning

## Business Opportunity

While only 17% of Americans own a smartphone, 49% of small business owners are smartphone owners (Forrester, 2010). The Android platform is poised to become the second most widely-used mobile operating system this year and is predicted to be the most widely-used by 2014 (Gartner, 2010). For these reasons we are targeting small business owners with Android smartphones. We will provide them a quick and easy process by which they can directly sell their products, edit the prices of commodities, and expand their consumer reach by scanning UPC codes using their smart phone. This will greatly simplify the process of selling items online. Also, it is sure to benefit merchants dealing with a wide range of products. Currently merchants waste a lot of time doing time-consuming and sometimes redundant work, filling up details about the product to be sold and making it available to the consumer while their time would be better served in expanding their business. Additionally, adding a PayPal button would be a lucrative business strategy on the merchant’s part (if he is not already doing this) as it would increase his potential customer base by around 8-10%. Existing PayPal users making purchases will have the added option and also the security of making payments via PayPal.

## Problem Statement

Currently available means of listing products for purchase are cumbersome and time consuming. This translates to increased effort and delay in listing the product for purchase by the merchants. This translates to lost business for the buyer. A successful solution would greatly reduce the time taken to make a product available for purchase by quickly creating PayPal buttons and enabling the products to be listed on the vendor’s site instantaneously thereby making more efficient use of the time spent by the vendor.

## Product Position Statement

For small to medium sized businesses who would like to reduce time spent making products available for purchase our solution is a mobile application that allows users to scan UPC barcodes to generate PayPal buttons. Our product makes the time-consuming task of inventory management mobile and easy.

# Stakeholder and User Descriptions

## User Environment

A merchant uses a mobile phone to scan the barcode. Major platforms which are in use today are Android and iOS. In the future, Windows Mobile may become a major contender when new functionality is added that rivals Android and iOS platforms. Our Application needs to be integrated with the PayPal Button Manager API.

## Stakeholder Profiles

### <Client>

|  |  |
| --- | --- |
| **Representative(s)** | XXX |
| **Description** | The group of people we are developing for at PayPal. |
| **Type** | These people are experts in the area of merchant services, project management, and development. |
| **Responsibilities** | This client is sponsoring the project so they would like to see it be completed in the given time-frame. |
| **Success Criteria** | The client would define success as having a completed and working project. |
| **Involvement** | This stakeholder provides the features, needs, and scope necessary to develop the project. |
| **Deliverables** | Vision Document, Prototype(s), Software Requirements Specification, Software Development Plan |
| **Comments / Issues** | None. |

### <Users>

|  |  |
| --- | --- |
| **Representative(s)** | Merchants with mobile phones |
| **Description** | The end-user of the product being developed. |
| **Type** | These people fall into many categories. Most of the users can be considered to be business people. Some can just be considered to be a casual user (in the case of some small businesses). |
| **Responsibilities** |  |
| **Success Criteria** | Reduction in time spent making a list of distinct products available for purchase by potential customers. |
| **Involvement** | This stakeholder will use the product. |
| **Deliverables** |  |
| **Comments / Issues** |  |

### <Developers>

|  |  |
| --- | --- |
| **Representative(s)** | XXX |
| **Description** | The group of people who are developing the system for PayPal |
| **Type** | These people are experts in the field of Mobile Application Development and Web Development. |
| **Responsibilities** | This stakeholder has to ensure that the system is developed according to requirements, needs, and scope in a timely fashion. If any of these criteria are not adequately met then that will be reflected via a project grade in the CST415/598 course. |
| **Success Criteria** | A working product which captures and satisfies all the needs and features required by the client in the given timeframe. |
| **Involvement** | These stakeholders gather the needs, features and scope from the Client stakeholders and implements, develop and test the system. |
| **Deliverables** | These stakeholders need to develop the system within the given time frame for their Client Stakeholders. |
| **Comments / Issues** |  |

## User Profiles

### <Casual User>

|  |  |
| --- | --- |
| **Representative(s)** | Regular PayPal users and merchants wanting to sell online. |
| **Description** | Merchants with mobile phones that wish to sell products. |
| **Type** | A user that is not necessarily technologically savvy. Novices to the business and computer world. These people may just be selling products as a hobby. |
| **Responsibilities** |  |
| **Success Criteria** | This user defines success by being able to quickly sell products online with the option to accept payments via PayPal.  The user is rewarded by the time that they saved. |
| **Involvement** | This type of user is only interested in the end-product. They just want the end product to be reliable, perform well, and have the functionality that they need to sell items. |
| **Deliverables** |  |
| **Comments / Issues** | While our product may make this user’s job easier, it may take a while for this type of user to understand how to use the system. Additionally, it may be hard to market this type of user. |

### <Business User>

|  |  |
| --- | --- |
| **Representative(s)** | PayPal merchants |
| **Description** | These people own a small to medium-sized business. |
| **Type** | A user that is both business and technologically savvy. |
| **Responsibilities** |  |
| **Success Criteria** | This user defines success by being able to quickly and easily create a PayPal button.  The user is rewarded by the time that they saved. |
| **Involvement** | This type of user is only interested in the end-product. They just want the end product to be reliable, perform well, and have the functionality that they need to sell items. |
| **Deliverables** |  |
| **Comments / Issues** |  |

## Key Stakeholder / User Needs

The key problem with the existing scheme is the amount of time that a merchant spends making a product available for purchase. Currently the merchant must login to the PayPal website and list his item via a local classifieds ad or anywhere online, for that matter, and request to be paid via PayPal by adding Buy Now buttons. The merchant must do this manually for each and every discrete item, which can be rather cumbersome and time consuming.With our solution, all the merchant needs to do is scanning the product UPC code with his smart phone and a Buy Now button associated with that item would be created. There is no need to learn anything new. A hosted solution is preferred over a downloadable package solution by the primary stakeholders.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** | |
| Need to sell their item(s) | High |  | Conventional Paypal button creation | | Mobile PayPal button creation |
| Need to add items anywhere | High | 3G Coverage |  | | Mobile barcode scanning |
| Need to manage product inventory | High |  | Manual product inventory management | | Mobile/Website inventory management |
| Need to change product information | Medium |  | Manually updating information | | Mobile/Website product information updater |
| Need to avoid manually updating inventory | Medium |  | Manual product inventory management | | Automatically keep track of inventory (PayPal Button Manager API allows inventory management) |

## Alternatives and Competition

### <Creating PayPal buttons normally>

Manually creating PayPal buttons using the PayPal website is free. Our solution is not free so we will have to entice merchants with functionality that is worth the cost of the monthly subscription.

### <eBay>

eBay will be our biggest competitor. Our solution would have to convince customers that it is both cheaper and easier to use than eBay.

# Product Overview

## Product Perspective

Our product utilizes the PayPal Button Manager API to generate PayPal buttons. Also, our product fetches data from a public UPC database.

## Summary of Capabilities

1. When users scan a UPC barcode they will be able to easily add a PayPal button and a description of the item to their own websites.
2. Users will be able to set inventory details via their mobile device.
3. When items are purchased inventory will be decreased automatically.

**Needs to Features Mapping**

|  |  |  |
| --- | --- | --- |
| **ID** | **Business Need** | **Supporting Features** |
| BN1 | Need to sell their items | Feature(s): F1, F6, F7 |
| BN2 | Need to add items anywhere | Feature(s): F2, F8, F7 |
| BN3 | Need to manage product inventory | Feature(s): F3, F7 |
| BN4 | Need to change product information | Feature(s): F4, F7 |
| BN5 | Need to avoid manually updating inventory | Feature(s): F5 |

## Assumptions and Dependencies

No assumptions are made. Dependencies were not identified.

## Cost and Pricing

Pricing was not examined.

## Licensing and Installation

Our product will be licensed to users based on a monthly subscription fee. This subscription fee will allow users to have access to our e-commerce website (where they can sell their products) and allow access to the mobile application.

The e-commerce site will be using a hosted deployment model. This means that merchants will not need to download or install anything except for the Mobile Application. They will be able to come to the e-commerce website and create their own space for selling their products.

# Product Features

Features are prioritized according to importance:

## <F1, Create buy-now button>

Description: Application will generate buy-now source code according to the user’s input.

Status: Approved

Benefit: Critical

Effort: Medium

Risk: Medium

Stability: Non-Volatile

Target Release: Version 1.0

Reason: Client requested (from interview)

## <F2, Scan product bar codes into inventory>

Description: Application will get the bar code product information by scanning and will add the product into inventory.

Status: Approved

Benefit: Critical

Effort: High

Risk: Medium

Stability: Non-Volatile

Target Release: Version 1.0

Reason: Client requested (from interview)

## <F3, Inventory management (including initial inventory) from smartphone>

Description: Users are allowed to manage inventory with functions including view, add, remove, and update.

Status: Approved

Benefit: Critical

Effort: Medium

Risk: Low

Stability: Non-Volatile

Target Release: Version 1.0

Reason: Client requested (from interview)

## <F4, Manage product information>

Description: Users are allowed to manage product information including view, modify, and discard after scanning.

Status: Approved

Benefit: Critical

Effort: Medium

Risk: Low

Stability: Non-Volatile

Target Release: Version 1.0

Reason: Client requested (from interview)

## <F5, Automatically reduce inventory upon sale and notify user>

Description: After selling the product, inventory will automatically be reduced and users will receive a receipt of the transaction.

Status: Approved

Benefit: Critical

Effort: Medium

Risk: Low

Stability: Non-Volatile

Target Release: Version 1.0

Reason: Client requested (from interview)

## <F6, Email buy-now button code>

Description: The generated buy-now button source code will be automatically e-mailed to the user.

Status: Approved

Benefit: Critical

Effort: Low

Risk: Low

Stability: Non-Volatile

Target Release: Version 1.0

Reason: Client requested (from interview)

## <F7, Users must be able log in and log out of the system>

Description: Application requires that users have log in via a user name and password. Users must have the ability to register.

Status: Approved

Benefit: Critical

Effort: Medium

Risk: Low

Stability: Non-Volatile

Target Release: Version 1.0

Reason: Client requested (from interview)

## <F8, Users can take a picture and fill in product information>

Description: A picture is taken and then uploaded so that the user can use it with their listing.

Status: Proposed

Benefit: Important

Effort: Low

Risk: Low

Stability: Possibly volatile

Target Release: Version 1.0

Reason: Developer idea

# Constraints

## Usability

The mobile application must be as user-friendly as the existing method of creating PayPal buttons.

Users should not be required to install packages (no need for installing PHP or MySQL).

## Performance

The overall process of creating a PayPal button with our mobile application must be faster than conventional methods.

The E-Commerce server must be available 99.999% of the time.

## System

The E-Commerce server will need Linux/Windows, Apache, PHP, and MySQL. There will need to be two dedicated machines. Both will need a 100Mbps pipe to be able to support thousands of users. Two servers are needed to provide fault tolerance, load balancing, and redundancy.

## Environment

The E-Commerce server will be in a datacenter so temperature, humidity, radiation, power outages, et cetera will be covered by the contracted datacenter.

# Documentation Requirements

## User Manual

The purpose of the User Manual will be to teach users how to use the mobile application and e-commerce solution. It will instruct users on how to sign up, how to create their own e-commerce site (hosted on our website). It will be written very much like a tutorial. It should be very well organized and it should include a Frequently Asked Questions section, a glossary, and a table of contents.

## On-line Help

On-line help documentation will be vital as not all users may have the user manual in front of them. It will provide the same details as the written User Manual to avoid confusion.

## Installation Guides, Configuration, Read Me File

Installation guides should not be necessary for the e-commerce site given that no installation actually needs to occur. An installation guide will have to be written for installing and configuring the mobile application. Configuration information will also be needed to show users how to configure their hosted websites and begin selling items.

## Labeling and Packaging

Once a logo is produced it should be added to both the mobile application and the e-commerce site to establish a brand and market to new customers. Copyright notices should also be displayed to protect intellectual property.