PowerPitch Software Requirements Specification
## Revision History

<table>
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<tr>
<th>Name</th>
<th>Date</th>
<th>Reason</th>
<th>Version</th>
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<tbody>
<tr>
<td>Jordan Checkman</td>
<td>Nov 18th, 2011</td>
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Introduction

1.1 Purpose
An issue professional presenters often run into is that they are given a large stage, an eager audience, and a podium that they must stand by for the entirety of their presentation. Remote controls exist to solve this problem, but come with their own limitations. It seems like a presenter must choose between accessing the information on their slides and freedom of movement while presenting. But no longer.

PowerPitch aims to solve this problem by providing the benefits of using a remote control while still granting access to presentation notes and slides. PowerPitch runs on most Android 4.0 devices, and communicates with a Windows 7 client via Bluetooth or a local Wi-Fi network. It allows presenters using Microsoft PowerPoint software to see previews of their slides and presentation notes while wirelessly controlling the flow of their presentation.

1.2 Scope
This document specifies all of the software requirements both functional and non-functional for the PowerPitch presentation system. It encompasses both the Android device application and the Windows server program and details their functionality, performance, and the way the user will interact with them.

The intended audience of this document are developers and stakeholders.

1.3 Overview
The following contains background information regarding the PowerPitch system and its requirements.
Overall Description

2.1 System Interfaces
The PowerPitch presentation software integrates two discrete systems to provide functionality.

**Server:** The PowerPitch server software provides programmatic access and control over the PowerPoint software running on the user’s computer. It handles transmission of slide images and information, as well as authentication and pairing with a PowerPitch enabled Android device.

**Client:** The PowerPitch client software is the primary interface to the system. It allows the user to view and control their PowerPoint presentations remotely by interacting with the server running on their PC.

2.2 User Interface
The PowerPitch client interface primarily consists of a gallery view which allows the user to view their current slide and its notes, as well as smaller previews of the previous and next slides. Presenter notes, as well as additional navigation functionality and settings can be found below this view.

The PowerPitch server interface is intended to be as transparent as possible. It displays a simple window with options for choosing a PowerPoint, creating a wireless connection of your choice, and starting the slideshow.
Functional Requirements

<table>
<thead>
<tr>
<th>Priority Level</th>
<th>Description</th>
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<tbody>
<tr>
<td>Priority 1</td>
<td>All requirements of Level 1 must be satisfied. These are essential features.</td>
</tr>
<tr>
<td>Priority 2</td>
<td>Requirements of Level 2 may be satisfied by the target date pending requirements of Level 1 are complete. These are desirable features.</td>
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<tr>
<td>Priority 3</td>
<td>Requirements of Level 3 may or may not be satisfied. These are extra features.</td>
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3.1 PowerPitch PowerPoint Server Requirements

100) Double clicking the PowerPitch program icon on a Windows 7 machine opens the PowerPitch Server application.

101) The Server application displays the following options:

- Select PowerPoint (Button)
- Use Wi-Fi (Checkbox default = unchecked)
- Use Bluetooth (Checkbox default = unchecked)
- Create Connection (Button default = not selectable)
- Quit (Button)

102) Selecting “Select PowerPoint” brings up the open file dialog screen.

103) Checking “Use Wi-Fi” prompts the server to attempt a Wi-Fi connection with the client when the “Create Connection” button is selected.

104) Checking “Use Bluetooth” prompts the server to attempt a Bluetooth connection with the client when the “Create Connection” button is selected.

105) Selecting “Quit” exits the program.

106) Selecting a PowerPoint presentation file (.ppt/.pptx) from the open file dialog screen opens the selected file in Microsoft PowerPoint.
107) Selecting an invalid PowerPoint file prompts the user to select a valid PowerPoint file to continue.
108) Selecting “Cancel” from the open file dialog screen closes the dialog and prompts the user to select a PowerPoint file to continue.

109) Upon selection of a valid PowerPoint file PowerPitch server determines whether the selected file has been opened before.

   If the selected file has not been opened before, PowerPitch creates an archive of the presentation’s slides and notes for future use. These are stored in the PowerPitch application folder.

   If the selected file has been opened before, PowerPitch associates the file with the previously created archive.

110) The selected PowerPoint file is displayed to the right of the “Select PowerPoint” button.

111) If an archive and at least one connection type (WiFi or Bluetooth) are selected, the “Create Connection” button becomes selectable.

112) If an archive and at least one connection type (WiFi or Bluetooth) are selected, the “Paired” link appears.

113) If an archive and at least one connection type (WiFi or Bluetooth) are selected, the PowerPitch logo is replaced with a scannable QR code containing connection information for the PowerPitch client.
Selecting the “Paired” link opens up the Paired dialog screen.

Establishing a connection between the server PC and the client Android device causes the client to determine if the PowerPoint file has been presented before.

If the selected PowerPoint has not been presented before, the archive file is transferred to the device.

If the selected PowerPoint has been presented before, the archive file is not transferred to the device. The presentation is associated with the previously stored archive.

Establishing a connection and transferring or associating an archive opens the PowerPoint presentation in full screen mode on the server PC.

Interaction with the PowerPoint presentation from this point takes place on the client Android device.

3.2 PowerPitch Client Requirements

Selecting the PowerPitch app icon opens the PowerPitch application.

The splash screen is displayed and prompts the user to use the device’s camera to scan the QR code displayed by the client.
120) Scanning the QR code causes a connection to be established and brings the application to the Gallery View.

121) The Gallery View displays the following:

- Current Time
- Previous Slide (image)
- Current Slide (image)
- Next Slide (image)
- Slide Progress (counter)
- Elapsed Time
- Animation Steps (counter)
- Speaker Notes
- Previous (Button)
Next (Button)
Start/Stop Timer (Button)
Reset Timer (Button)
Update Slides (Button)
Jump To Slide (Button)

122) The current time displays the system time for the Android device the client is running on.

123) The previous slide displays an image from the associated archive of the slide that came immediately before the currently selected slide.

124) The current slide displays an image from the associated archive of the slide that is currently selected.

125) The next slide displays an image from the associated archive of the slide that comes immediately after the currently selected slide.

126) Performing a swiping gesture on the Gallery display will advance the previews of the slides forward or backward relative to the swiping gesture’s momentum.

127) Double tapping the current slide after the previews have been advanced via a swiping gesture will set the current projected slide to the one currently displayed. Slide position, Presenter Notes, and Animation Steps counters will be updated to reflect any changes made.

128) After five seconds on inactivity, the Gallery View will re-center the currently displayed slide to the currently projected slide.

129) The Side Progress counter displays how far through the presentation the user is by listing the number of the current slide over the number of the final slide of the presentation.

130) The Elapsed time displays how much time has passed since the user last selected the “Start/Stop Timer” button.

131) The Animation Steps counter displays how many additional animations remain on the currently selected slide.
132) The Speaker Notes display the notes from the associated archive of the slide that is currently selected.

133) Selecting the Previous button is analogous to pressing the left arrow key on a PC running PowerPoint. Animations will advance one step backwards, if no animations may advance backwards, the previous slide will be selected and displayed.

134) Selecting the Next button is analogous to pressing the right arrow key on a PC running PowerPoint. Animations will advance one step forward, if all animations have been completed, the next slide will be selected and displayed.

135) Selecting either the Next or Previous button updates the Previous Slide, Current Slide, Next Slide, and Presenter Notes to reflect any changes in the currently selected slide.

136) Selecting either the Next or Previous button updates the Animation Steps counter to reflect any changes in the currently selected slide.

137) Selecting the Start/Stop Timer button resumes or pauses the timer depending upon its state at the time of selection.

138) Selecting the Reset Timer button resets the timer and causes it to pause.

139) Selecting the Update Slides button causes the server to create a new archive from the selected PowerPoint file, transfer, and associate it with the current presentation.
Selecting the Jump To Slide button opens the Grid View.

The Grid View displays all slides in the selected presentation. The images are taken from the archive file associated with the current presentation. They increase in indices from left to right as a first priority and from top to bottom as a second priority.

Selecting a slide from the Grid View returns the user to the Gallery View with the selected slide set as the current slide.

Selecting a slide from the Grid View updates the Previous Slide, Current Slide, Next Slide, and Presenter Notes.

Selecting a slide from the Grid View updates the Animation Steps counter.

3.3 Connection Requirements

Failure of an established Wi-Fi connection will cause the PowerPitch client to attempt to use an established Bluetooth connection. If a connection cannot be established the user is notified and the application exits.
146) Failure of an established Bluetooth connection will cause the PowerPitch client to attempt to use an established Wi-Fi connection. If a connection cannot be established the user is notified and the application exits.
Non-Functional Requirements

4.1 Software Requirements
The PowerPitch Android Application requires Android 4.0.2 or Android 3.2 to run.

The PowerPitch Server Application requires Windows 7 and .NET framework 4.0 in order to run.

Microsoft PowerPoint 2010 software is required for PowerPitch.

4.2 Hardware Requirements
Client

PC system capable of running Windows 7.

Wi-Fi g/n support.

Bluetooth 2.1 support.

Server

Android device capable of running Android 4.0.2 or 3.2.

Wi-Fi g/n support.

Bluetooth 2.1 support.

Rear-facing camera.
Glossary

**Gallery View**
The main view of the application. This view displays the currently selected slide as well as the previous two slides and the two upcoming slides as thumbnails. This view is scrollable from left to right and right to left.

**Grid View**
The alternate view of the application. This view displays all available slides as smaller thumbnails to give the user greater power in selecting slides further into the presentation. This view is scrollable from top to bottom and bottom to top.

**Swiping Gesture**
A gesture common in touch-based software, it involves the user making a straight line with their finger across the surface of the touchscreen. Both direction and the speed of the swipe are used to determine intent.

**Double Tap**
A gesture common in touch-based software, it involves the user quickly tapping twice with their finger on the surface of the touchscreen.

**Current Slide**
The slide currently selected and in the middle of the Gallery View.

**Displayed Slide**
The slide currently being projected by the PC running PowerPitch server.