Project Overview:
Rooms-To-Go

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Overview of Components

Hardware
15.6" ELO Android based tablet. Internally designed power and stand combination.

Display Software Development
AIR for Android with Flash Builder 4.7.

Server Software Development
AIR for Windows with Flash Builder 4.7.

Back-end Development
MSSQL database with companion ColdFusion CFC objects for data IO. Custom TCP communication protocol for client-server data transfer.

Supporting Software Development
Content creation tool - AIR for Windows with Flash Builder 4.7.

Display Content Data Development
Custom file that includes graphical data and XML informational header for dynamic data.

Hardware and Software Management
Moki Manage. Cloud based device management platform – moki.com

In-Store Digital Pricing Displays
Adobe Flex for Android based solution

The Company

Rooms To Go Incorporated is a Florida based furniture store chain founded in 1990 by Jeffry Seaman. It is currently the 3rd largest US furniture retailer with over 225 stores across 10 states and Puerto Rico.

The Problem

Rooms To Go requires approximately 27,000 printed product information and pricing sheets to display with each "room scene" within their stores. Their aggressive promotion schedule demands that updated sheets be designed, printed and shipped to all stores for any information and/or pricing changes. This continual process incurs considerable shipping costs as well as costs associated with printer maintenance and consumable materials. Any errors found with the printed material after it's been shipped incurs additional costs and potentially serious revenue considerations if those errors include incorrect pricing.

The Solution

Architect and develop a digital solution to replace the printing and shipping of physical material and allow the digitally created content to be transferred and displayed on fixed devices. Allow for real-time and scheduled content deployment and react to pricing changes made to core SKU or promotion data changes as they occur.

The Process

As third-parties were consulted on creating the custom hardware needed, I began by separating the software requirements into the individual components that would be necessary. I identified and outlined the functionality of three separate applications; the client device content display APK, the server application to control the client devices and the software tool to manage the content created by the graphics department. After a substantial cross-departmental discovery phase I designed and created the underlying SQL database and accompanying ColdFusion CFCs to allow for remote access to the data as well as connectivity and triggers to detect pricing changes from a separate legacy database and core business logic. The client device APK was developed in Flash Builder and Adobe AIR for Android. The server application was developed as a Windows server application in Flash Builder and Adobe AIR with a separate library of common class files that would be used across both code bases. This included a custom TCP based communication protocol that conformed to RTGs network security architecture as well as a custom file type to store and transfer digital product content to client devices.

The Results

After creating release candidates for all software components, a pilot was conducted with five devices over a three week period at a single store. Each device displayed unique content relevant to the room group it was associated with. When the system was demonstrated to RTGs founder, Jeffery Seamen, the pilot was expanded to include twenty three room groups over ten stores across Florida and Georgia.

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