

# **Rental Database Project**

**By: Jake Taylor and Adam Turner**

## **Company Background**

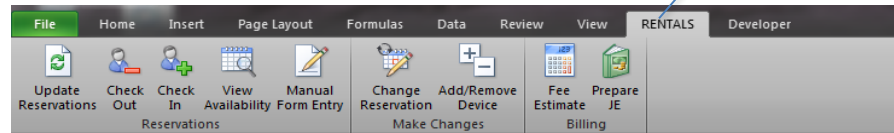
The Cell Phone Office is a service provided by Brigham Young University. The main responsibility of the Cell Phone Office is to manage the cellular lines for faculty, staff, and their families. The Cell Phone Office also manages international and domestic rental phones and Mi-Fi devices, which are available to faculty and staff.

## **System Overview**

The VBA project manages these international and domestic rental phones and Mi-Fi devices, keeps track of and prepares billing journal entries, and reduces the manual steps needed to reserve and complete a rental transaction. The VBA project includes 9 functions for the Cell Phone Office to utilize, all conveniently located on a custom ribbon tab titled “Rentals”. Behind these functions there are 6 modules and 28 user forms used to automate the rental process. We estimate that between our combined efforts, over 100 hours were spent working on this project.

# Implementation Documentation

Custom Tab



Home Sheet

AT&T Loaner Phones			
Device Name	Phone Number	Current User	Return Date
iPhone 1	801-362-6085		
iPhone 2	801-361-0607	Roger Webb	4/20/2014
iPhone 3	801-368-4642		
iPhone 4	801-319-6351		
iPhone 5	385-201-0066		
iPhone 6	801-310-6594		
iPhone 7	801-319-0958		
iPhone 8	801-319-7796		
iPhone 9	801-310-5941		
iPhone 10	801-319-7622		
iPhone 11	801-228-8352		
iPhone 12	801-310-0439		

Sprint Loaner Phones			
Device Name	Phone Number	Current User	Return Date
Demo 1 (GS2)	801-921-3907		
Demo 2 (Viper)	801-358-3839		
Demo 3 (Viper)	801-318-0409		
Tab 3	801-318-9615		
Mifi	801-259-3768		

Verizon Loaner Phones			
Device Name	Phone Number	Current User	Return Date
Loaner 1	801-592-8115	Joe Price	4/14/2014
Loaner 2	801-372-5361		
Loaner 3	801-360-1528		
Loaner 4	801-592-8117		
Loaner 5	801-857-5135		



1. Logs into Google Doc to retrieve rental requests submitted by user via Google Form
  2. Imports all new requests into rental database
  3. Creates billing entry with estimated base costs
  4. Assigns reservation order based on nearest check out dates
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1. User form appears to select the carrier
2. User form appears to select the user and the rental device

A screenshot of a "ATT Check-Out" dialog box. It has a title bar with "ATT Check-Out" and a close button. The content is divided into two sections: "1) Select the User:" with a text field containing "Gove Allen" and a list box below it; and "2) Select the Rental Device:" with a list box containing "iPhone 1", "iPhone 3", "iPhone 4", "iPhone 5", and "iPhone 6". At the bottom are "Submit" and "Cancel" buttons. A small note says "Be sure the user has filled out a rental form".

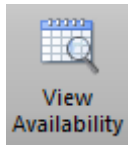
3. Displays user's name on home page with assigned device
  4. Updates the request data with the new status and the assigned device phone number
- 



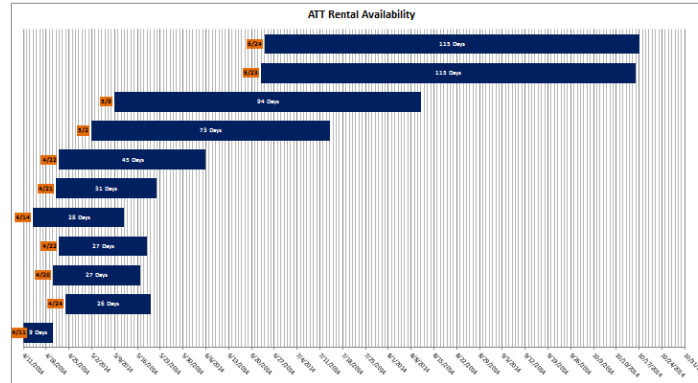
1. User form appears to select the carrier
2. Another user form then appears to select device to check in

A screenshot of a "ATT Check-In" dialog box. It has a title bar with "ATT Check-In" and a close button. The content is divided into one section: "1) Select the device:" with a list box containing "iPhone 2" and "iPhone 6", where "iPhone 6" is highlighted. At the bottom are "Submit" and "Cancel" buttons.

3. Removes user from home screen
4. Updates the request database with the new status



1. Creates a Gantt chart that displays the ATT checked out and reserved phones
2. This allows users to view availability for present and future dates.



1. If for any reason the user is not able to submit a reservation request then a form can be manually filled out and submitted via the excel workbook.
2. The form below allows for manual entry and adds the record to the master file location.

Enter a New Request ✕

**Fill in all of the boxes in the form below then click "Submit".**

**Personal Information**

First Name:  Email Address:

Last Name:  Contact Number:

**Device Information**

Is this device for domestic or international use?

Do you need a cell phone (intl or domestic) or MiFi (domestic only)?

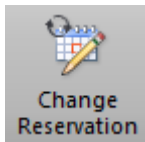
**Billing Account Information**

Operating Unit:  Account:  Class:

**Rental Dates**

Start Date:  Return Date:

**Submit** **Cancel**

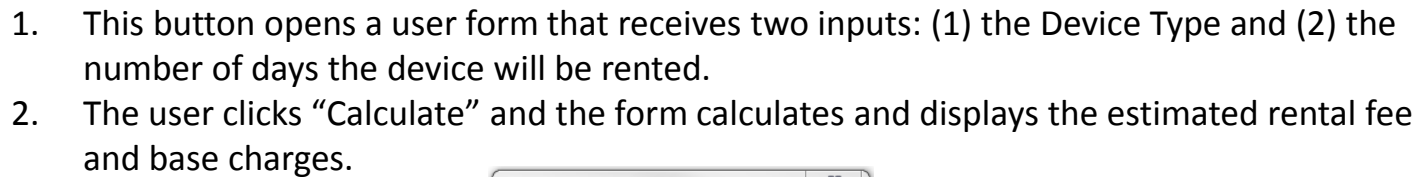


1. This button will allow a user to change or delete a reservation.
2. First, the user will be prompted to select the user from a list box (see below).
3. Pressing the delete option will completely wipe the record.
4. Pressing "Modify" will open a request form that will populate with that user's information.

A dialog box titled "Select a Name" with a close button. It contains the text "Whose request would you like to change?" and a list box with the following names: Tyler Griffin (ATT), Kerry Muhlestein (ATT), Ray Huntington (ATT), Holly Jenkins (ATT), Mark Hansen (ATT), Byron Merrill (ATT), and John Shurtleff (ATT). At the bottom are three buttons: "Modify", "Delete", and "Cancel".

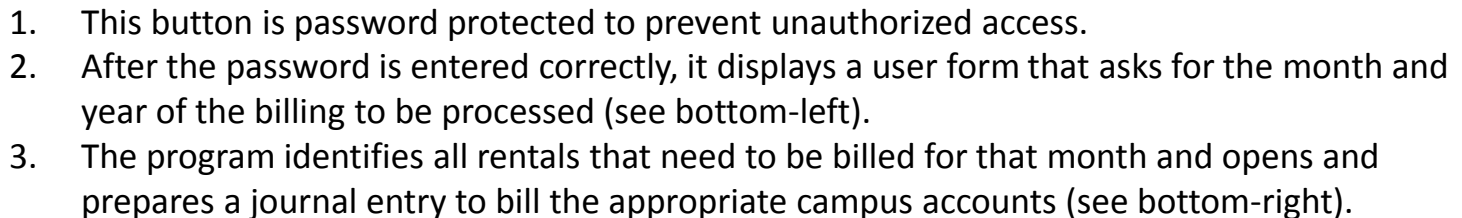
1. This button will allow devices to be added or removed from the home screen.
2. The user will be asked to select a carrier.
3. Then it asks if they would like to "Add" or "Remove" a device.
4. If "Add" is selected the user will be asked for information regarding the device to be added.
5. If "Remove" is selected the user will be provided with a list of current devices which they can choose from.

A dialog box titled "Add a New AT&T Device" with a close button. It contains three text input fields labeled "Name for New Device:", "New Phone Number:", and "Add this Device to the...". At the bottom are two buttons: "Submit" and "Cancel".A dialog box titled "Remove a Device - Verizon" with a close button. It contains the text "Choose a device from the list to the right that you would like to remove from the rental database." and a list box with the following names: Loaner 1, Loaner 2, Loaner 3, Loaner 4, and Loaner 5. At the bottom are two buttons: "Remove Device" and "Cancel".



The screenshot shows a window titled "Rental Fee Calculator" with a standard Mac OS X title bar (red, yellow, and green buttons). The window contains the following elements:

- Device Type:** A label followed by a dropdown menu showing "ATT-Cell Phone (Int)".
- Number of Days:** A label followed by an empty text input field.
- Rental Fee:** A label followed by a gray rectangular output field.
- Prorated Data:** A label followed by a gray rectangular output field.
- Est. Base Charges:** A label followed by a gray rectangular output field.
- Footnote:** The text "\*Plus Usage and Taxes" is located below the "Est. Base Charges" field.
- Calculate Button:** A button with the text "Calculate" is positioned at the bottom center of the window.



Rental Billing

Which month's usage are you processing?

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

Year:

Journal Entry			Journal Source: 077			Journal Header Date: 05-31-2014			
Department: Purchasing and Travel									
Prepared By: Cell Phone Dudes									
PeopleSoft Financials			-- Select a Journal Operation --			60.00 Debit Amount 60.00 Credit Amount			
						Last Updated 11/15/2013			
Line	Journal Id	Journal Header (254)/ Line Description (30)	OperUnit	Acct	Class	Debit	Credit	Reference	mm-dd-yyyy Date
J0001	CELLRENT1	Cell Phone Rentals for invoice dated 00/00/14							
00001		Monthly Invoice Payment- Rent	000000000	0000	00000		60.00		
00002		RMT: 4/1-4/20/2014: L111, F	12345678	1234	12345	20.00		555555555	05-31-2014
00003		RMT: 4/3-4/4/2014: L111, F	87654321	4321	54321	40.00		777777777	05-31-2014
00004									
00005									
00006									

## Discussion of Learning

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- ❖ This project was a rewarding experience for the both of us. It was truly enriching to have been able to implement the majority of the topics discussed in class. For example, the Rental Database project includes web queries, working with named ranges, do loops, for loops, arrays, automated charts, user forms, customized ribbon, variable scope, as well as other topics.
- ❖ We originally planned and created a user form in Excel to be sent to potential users through an automated email. This portion of the project was already completed when we later discovered the ease and efficiency of implementing the same procedure through a Google Form and then scraping the request data from a Google Spreadsheet. This meant going back and redoing some of our project, but we were convinced that it was the best method to use for accomplishing that task.
- ❖ Additionally, we benefited from this project by gaining valuable experience in the Excel VBA environment while producing a useful tool for our workplace. The experience gained here will undoubtedly serve us in our future job positions.

## Assistance

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- ❖ Initially we ran into difficulty with scraping the request data from the Google spreadsheet. We were able to use Dr. Allen's "Agent" class module to log in to our Google account at drive.google.com; however, we were unsuccessful at sifting through the source code of the site to get our data. We met with Dr. Allen in his office, and in a matter of minutes he was able to help us get it working. He was also generous enough to meet with us on at least one other occasion to seek guidance on the structure of our code.
- ❖ Throughout the course of the project we learned the value of online Excel forums like [mrexcel.com](http://mrexcel.com) and [stackoverflow.com](http://stackoverflow.com). We frequented these sites for guidance and ideas while trying to implement procedures that we were not familiar with.