

Executive Summary

Tanner Haney and Peter Mancuso are officers for the Brigham Young University chapter of Beta Alpha Psi, an accounting fraternity. The national organization requires that each member of the fraternity attend a certain number of the chapter meetings. At the end of the year the officers need to submit a report detailing attendance figures for these meetings. The Brigham Young University chapter is quite large, which makes it difficult to keep track of who is attending meetings and who is not. Traditionally creating the end of year report has been a complicated and time consuming process. Members have been asked to keep track of their attendance themselves, which has resulted in lower reported attendance figures than the actual amount. The failure of some members to report their minutes has made it difficult for the chapter to meet the minimum required attendance figures.

The chapter is also required to compile a report of the members who attend chapter-sponsored service projects. In the past, members have self-reported their attendance at these events as well. The result has been that the service projects have been well attended, but the attendance figures reported to the national organization have been poor.

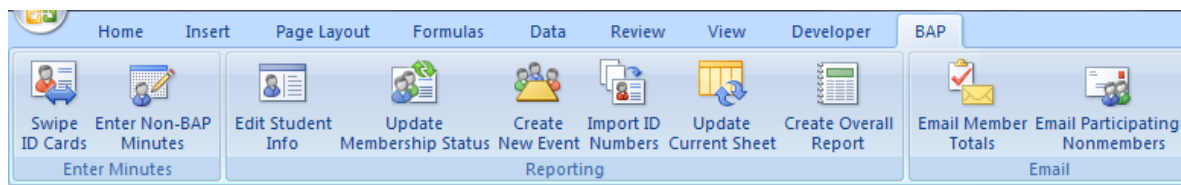
In order to solve this problem, card scanners were purchased and ID cards are swiped when members arrive at each meeting and service project. This allows the chapter to compile a list of ID numbers in a spreadsheet, but now they need to convert this information into a meaningful report that can be used by the officers and that can be sent to each member to inform them whether they have attended the necessary number of meetings and service projects or not.

In order to address this need, we created a form that allows us to enter and edit the list of names, emails, and student IDs of all our members. Next, we created a form and corresponding procedure that automatically converts a card swipe, which records a student's ID number in the midst of other characters, into the student's name. Finally, we created procedures that enable us to generate an overall report for our use as well as a report that will be automatically emailed to each member containing their name, list of activities attended and number of both professional and service minutes earned. Emails can also be sent to those who attend our meetings but are not yet members in order to encourage them to join our organization.

Our project allows for easier collection of attendance information and report generation that will assist our club in reporting to the national organization. It will also allow us to better communicate with our members and those attending our meetings in order to further our mission of scholarship, service and integrity.

Solution

For our solution, we created a new BAP tab that controls a variety of procedures. This portion of the report will identify each button and the functions that they perform.



“Swipe ID Cards” button. When this button is clicked a form is opened for entering ID numbers. The first combo box on this form is to select an event to record ID numbers for. If an event has not yet been created, the user can click the “Create Event” button to create a new event. The next box is to record the amount of minutes that the student will earn by attending the meeting. Finally, the last box is to enter the student’s ID number. Because we are using a magnetic stripe reader, the ID number entered will contain extra characters. When the form is submitted (which happens automatically when an ID card is swiped) the extra characters are removed and the ID number is entered into the corresponding event’s worksheet. If the student has attended a meeting before, their information will be imported from the “Student Info” worksheet. If there is no information for the student, the ID number and minutes will be entered and the other information left blank until the “Update Current Sheet” procedure is run.

“Enter Non-BAP Minutes” button. Some of the members participate in service and professional activities outside of the BAP organization that count toward their minute totals. By clicking this button, a form is launched that enables the user to enter minutes for these activities. The form contains a radio button to identify whether the minutes are for a professional or service activity. There is also a list box that allows the user to select the student to apply the minutes to. Finally, there is a box where the minutes can be entered. When the form is submitted, the student ID is added to the corresponding the Non-BAP event sheet. If the student is already on the list, the minutes are added to the current total minutes. Finally, the “Date Updated” field is changed to the current date.

“Edit Student Info” button. This button is used to allow a user to search for a specific student and then edit that student’s name, e-mail or membership status. Given the essentiality of the student ID as a primary key throughout the program, we do not allow a user to change that field through the user form. The find form has functionality to find the first and the next entry matching the search criteria. In addition, you can delete entries from this form. (See image for Find Registrant) Selecting the “Edit” button pulls up the Update Registration Information form. It will populate the person’s info that was just searched for. If no search has been enacted, the edit form will populate with the student information from the active cell in the Student Info worksheet.

When both forms are closed, the workbook automatically updates any changes to all worksheets.

“Update Membership Status” button. This button is used for updating the list of who is and is not a member of BAP. A current list can be downloaded from the BAP website and pasted onto the “Members & Initiates” sheet. Once the list has been updated, the user clicks the “Update Membership Status” button, which then identifies which students on the “Student Info” sheet are members and then sorts the sheet by member status. The individual event sheets are also updated and sorted.

“Create New Event” button. This button opens a form used to create a new BAP event. A title can be entered along with a date and default duration. The default duration will be used to load the “Enter Student ID” form when it is launched. Finally, the radio button is used to identify whether the event is a professional or service event. When the form is submitted, a new sheet is created and named according to the event title.

	A	B	C	D	E	F	G	H
1	Type:	Service	Duration:	50	Date:	12/2/2011		
2	Student ID	Name	Last Name	First Name	Minutes	Member or Candidate?		
3		Donohue, Matthew	Donohue	Matthew	50	Yes		
4		Nelson, Kelsey	Nelson	Kelsey	50	Yes		
5		Gallacher, Kate	Gallacher	Kate	50	Yes		
6		Pronk, Ben	Pronk	Ben	50	Yes		
7		Cook, Chelsie	Cook	Chelsie	50	Yes		
8		Johnson, Allison	Johnson	Allison	50	Yes		
9		Lund, Eliza	Lund	Eliza	50	Yes		
10		McCardell, Christina	McCardell	Christina	50	Yes		
11		Nelson, Coleman	Nelson	Coleman	50	Yes		
12		Barrett, Catherine	Barrett	Catherine	50	Yes		
13		Graff, Cason	Graff	Cason	50	Yes		
14		Gilbert, Thomas	Gilbert	Thomas	50	Yes		
15		Wallace, Thomas	Wallace	Thomas	50	Yes		
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Typical Event Sheet

“Import ID Numbers” button. Because a magnetic stripe reader will not be used for every event, there needs to be a way to import ID numbers to a list of names. The “Import ID Numbers” button meets this need. After creating the event and filling out the first name and last name fields, the user presses this button to import ID numbers onto the sheet. The ID numbers are used by the other procedures to identify which members earned the minutes.

“Update Current Sheet” button. This button is used for two main functions. If, for some reason, a list of ID numbers is collected in Excel without using this spreadsheet, a new event can be created and the list can be pasted in. The “Update Current Sheet” button will then remove non-numeric characters from the ID numbers and then import the data from the “Student Info” sheet. The second function of this button is to collect information for the students who are not yet on the “Student Info” sheet. If any of these ID numbers are found on the current event sheet, excel will add the student number to the “Student Info” sheet. Excel then will go online to the BYU directory to find the corresponding student’s name and email address. If the user is not logged in, a login form will appear. After logging in, the student information is found and imported to the “Student Info” sheet and the current event sheet.

“Create Overall Report” button. This button will create a report that calculates the total professional and service minutes accumulated by each student. The report opens in a new workbook and contains the student name, membership status, events attended with corresponding minutes, and total professional and service minutes accumulated by all event participants as well as member’s only totals. This report can be used to identify the club’s progress in achieving its required minutes. It can also be used to identify individual members’ progress toward meeting their minute requirements.

	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Lightning Peak	Angel Tree	Deloitte	PwC	Dell	Dr. Hobson	Roger CPA	KPMG	Ernst & Young	Forensic	Grant Thornton	Professional Minutes	Service Minutes		
2			50	50							50	350	0		
3			50	50		50					50	200	0		
4				50	50			50	50		50	300	0		
5	50		50	50				50	50		50	300	50		
6	50		50			50					50	200	50		
7	50			50							50	100	50		
8	50		50			50						100	50		
9		50	50	50		50	50	50		50	50	350	50		
10		50	50	50	50		50		50	50	50	350	50		
11		50	50	50		50		50		50	50	350	50		
12		50								50		50	50		
13		50	50	50		50					50	200	50		
14		50	50	50		50			50			200	50		
15		50				50		50				100	50		
16		50	50	50		50		50	50	50	50	350	0		
17		50	50	50	50				50			200	50		
18				50	50	50		50				50	0		
19			50	50	50		50	50		50	50	400	0		
20		50	50	50		50						200	50		
21							50					50	0		
22		50	50	50	50		50	50	50	50		350	50		
23			50	50		50		50	50	50	50	400	0		
24			50	50	50		50	50	50	50	50	400	0		
25						50				50		100	0		
26						50						50	0		
27			50									50	0		
28			50				50		50		50	200	0		
29				50			50	50	50		50	250	0	Total Member Professional Minutes	Total Member Service Minutes
30					50	50	50	50	50	50		350	0	22550	1600
31			50	50	50	50	50	50	50	50		400	0		
32			50	50								100	0		
33									50			50	0		

Portion of Overall Report With Totals

“Email Member Totals” button. Selecting this button will search through the Student Info worksheet for all registrants who are members or candidates (denoted by a “Yes” in column F). It will then ask for the name and e-mail address of the officer running the e-mail program. After gathering this information, an e-mail that contains all the events a person has attended, as well as the totals for each of 4 categories of minutes, is sent to all members/ candidates. The e-mail is sent from an e-mail account created specifically for this program. After sending the e-mails, the date and time is recorded. The member totals e-mail is as follows:

Enter Officer Contact Info

Officer Name:

Officer Email:

OK

BAP Minutes for Peter Mancuso

bap.gammaalpha.byu@gmail.com to plmancuso

show details 10:05 AM (0 minutes ago) Reply

Thu, Dec 8, 2011 at 10:05 AM

Dear Peter,

Thank you for all of your participation this year in the Gamma Alpha Chapter of Beta Alpha Psi at BYU. This e-mail is to inform you of the number of participation minutes we have on record under your name. Below you will see a list of all the events you have attended, followed by the total number of minutes accumulated, according to our database. If your records are different than these numbers, please contact Peter Mancuso at plmancuso@gmail.com.

In addition, please go to bap.byu.net and report any unreported BAP and non-BAP minutes. Thank you.

Sincerely,

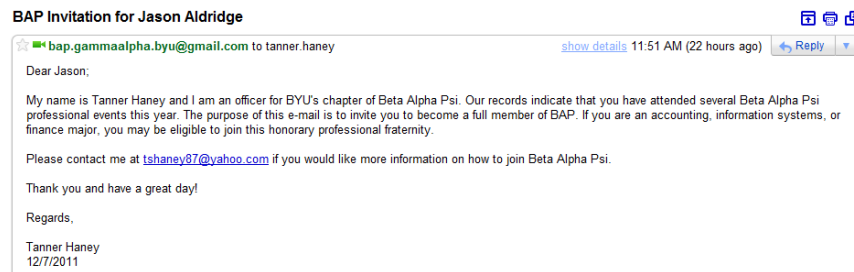
The BAP Officers

Numbers as of 12/8/2011:

BAP Prof. Events: Deloitte, PwC, Dell, Dr. Hobson, Roger CPA, KPMG, Ernst & Young, Forensic, Grant Thornton
BAP Professional: 450 Minutes
Non-BAP Professional: 0 Minutes

BAP Service Events:
BAP Service: 0 Minutes
Non-BAP Service: 0 Minutes

“Email Participating Nonmembers ” button. This runs a procedure similar to the Email Member Totals button. The main difference is the recipients of the email and the content of the message. The procedure searches for all students who are not members or candidates and who have a BAP Professional minute total that exceeds 200 minutes. The purpose is to find those who have attended meetings and events but haven’t decided to join our fraternity. The procedure then sends an email inviting these folks to join our organization.



Learning and Difficulties Encountered

One of the most challenging parts of our project was to interact with Internet Explorer. This was especially true for the new BYU login page as well as the online directory. The submit buttons were not named, so it was difficult to click on them. At first we tried to use the “sendkeys” function, but that was not reliable. In the end, we found a solution online that could be adapted for our program. It uses a loop to cycle through the different input tags to find the submit button. This solution solved the reliability problems we were having.

Another difficulty we encountered when working with Internet Explorer was actually extracting the data that we needed. At first we forgot to include a command for VBA to wait for the page to load, so it could not find the data that we were looking for. This was quite frustrating until we figured out what the error was. Once we were able to find the data we needed, it was difficult to extract in a usable form. It was surrounded by a lot of white space and, although the “trim” function removes some of it, there was still a considerable amount of white space that made the data unusable in Excel. We discovered that the “clean” function was the answer that we needed to fix the extracted data.

One challenge that we faced involved sending different e-mails to different groups of people on the same master list. We weren’t sure how to go about dividing the list and matching multiple criteria to get the desired target. The challenge came specifically with trying to email the nonmembers. This was because we only wanted to e-mail those who had over 200 BAP professional minutes. In order to solve this problem, we incorporated a few other procedures from the workbook to calculate the total minutes. Then we divided members/candidates from nonmembers. We could the use a simple if statement to run through both columns and determine status and total minutes to find those meeting the desired criteria.