CAEL Partner Manual Revision

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Abstract

Our team has successfully completed the updating of the CAEL (Computer Aided Engineering Labs) Partner manual. The Partner program is the group of volunteer lab assistants for the Mechanical Engineering and Chemical Engineering departments. The manual is used in training new partners and as a reference for current partners. At the beginning of the project the Partner manual was filled with outdated, incorrect, and poorly written information. The manual has been updated in content as well as grammar and formatting. A major step in the process was converting the manual from Adobe FrameMaker to Microsoft Word. This change should make the editing process easier for a large group of people such as the Partners. The success of this revision of the manual was emphasized when all of the Partners in Training were accepted into the program recently. They mark the first group to train in under the new manual.

Introduction

The CAEL, or Computer Aided Engineering Labs, includes nine computer labs from both the Chemical and Mechanical Engineering departments. The CAEL Partners are a group of volunteers who have been trained by their fellow Partners to become lab assistants in the ME-EM and ChemSci Buildings. Each member of this distinguished organization has completed a full semester of training, including one on one time spent in the lab helping users under the guidance of a Senior Partner. The Senior Partners are Partners who have been
selected to help teach the Partners in Training (PITs) because they have been
recognized as leaders in the Partner program.

Each of the PITs comes from a different background. The degree of computer
knowledge is extremely wide for any given group of PITs. Another factor that
plays into the diversity of the group is the ethnicity of the members. There are a
number of students participating who do not speak English as a natural
Language. Similarly, Partners come from departments across campus, not just
the Chemical and Mechanical Engineering departments. It is truly a diverse
group.

Further complicating the task of training in this diverse group is the diversity of
the software that is supported by the Partners. The computers include Sun
workstations as well as Dell PCs. Among the software supported on both of
these platforms are various email packages, web browsers, 3D modeling
software, basic and advanced Unix commands, and everything in between. The
Partners also must be taught the basics of how to troubleshoot problems that do
not have straightforward answers, how to diagnose and correct printing
problems, and how to properly check out equipment and enforce the CAEL
policies.

To aide the Senior Partners in the task of training the PITs, the Partner manual
was written by the Senior Partners. This task was completed years ago, and
much has changed since then. Senior Partners have updated the manual intermittently over the years. Because the manual was written and updated by so many Partners, the formatting of the document varied from chapter to chapter, and sometimes even from paragraph to paragraph.

It became clear that the manual was in dire need of updating after the addition of 120 new computers and various other changes in the computing environment. It had also been a few years since anyone had seriously looked at the entire manual in detail. Thus, Mary, who recently trained in using the outdated and dilapidated manual, decided to enlist a few brave souls to assist with bringing the Partner training manual up to date.

**Formatting**

The original CAEL Partner Training Manual was written in Applix. This was then converted to an Adobe FrameMaker format. The problem with FrameMaker is that although it is considered to be a superior page presentation format, most users are most comfortable and more proficient using Microsoft Word. For this reason Mary and Andy took up the task of converting the manual from the FrameMaker format into the more "standard" Microsoft Word format. Also, the original FrameMaker files did not have consistent formatting throughout and so therefore changes had to be made to make all chapters look similar visually.
As a result of the conversion process, some of the text was aligned partially off the page. Obviously this had to be corrected by hand for each chapter once it was converted to Word format. We made decisions on how to layout the pages in an effort to make them more readable and adhere to the C.R.A.P. (Contrast, Repetition, Alignment, and Proximity) principals. The layout was dramatically improved during this conversion process as a result of these decisions. Examples of the updated chapters can be found in the appendix.

Each chapter now conforms to a set of guidelines laid out by our group. These guidelines will be available to future Partners as they find the need to update and further maintain the manual.

**Revisions**

Following the initial conversion of the format, Todd and Tim took up the task of reading and revising the chapters. The fact that both Tim and Todd are Computer Science Majors adds value to the project because a lot of the CAEL training manual deals with troubleshooting UNIX based computers. Todd and Tim both are quite versed in the inner workings of UNIX and thus could revise the actual validity of the content rather than just seek out grammatical and structural errors. This process went along fairly quickly. The chapters were already fairly easy to read and follow along. The errors corrected were mainly grammatical errors.
After Todd and Tim had completed their revisions of the chapters, Andy and Mary supplied the resulting chapters to the PITs during partner Training for user testing. This provided more useful feedback for the second revision of the documents.

The ability to do real-time user testing was a definite plus for the project. Not only was our team able to submit proposed revisions but we were able to have these proposals tested by the actual people that would be using these documents in the future.

The process of revising was a key part of the entire project. It was also one of the most time consuming steps of the entire process, but the end result was quite acceptable.

**Updating**

The revisions made by Todd and Tim, along with the comments from the PITs, were all taken into consideration as the final revision of the chapters were made. In this final revision, the changes were merged into the chapters. It was also determined that some of the initial information contained within the chapters was out of date and needed to be revised. This scenario is not uncommon when dealing with the ever-changing computing environments of the CAEL.
Another such example of this change was the addition of "Chapter 3+: Introduction to tcsh". It was determined that there was simply too much information in Chapter 3, and in fact much of was more closely related to tcsh, a common Unix command interpreter.

**History**

We thought that it was important to have a recorded history of the CAEL Partner program so that new partners can see how the program has evolved over the years and use that knowledge to help make future changes to keep the CAEL Partner program current and useful. Mary attempted to contact past CAEL Partners: Shannon Pipik, Robert Hall, Chris Williams, and Margaret Landsparger. Mary received only limited information back from the former CAEL Partners. At this point we do not have a sufficient amount of information to warrant creating a history document. However, we do still believe that documenting the history of the CAEL Partner program is important and so we will continue to contact sources and collect information.

**Conclusion/Future**

The fact that information contained within the manual changed within time when the revisions began to the present time is indicative that the manual will need continuing maintenance if it is to be kept up to date. This maintenance can now be performed more easily than before by the Partners on a regular basis.
Each semester, a new class of PITs is trained in, and each semester the order things are trained in is adjusted to try and accommodate for problems that were experienced the previous semester. The manual can now be updated with ease to reflect these and other changes.

With crisp formatting and an easy to read font the manual is now both easier to read and easier to edit. It is our belief that this manual is now better suited to the purpose of training the future Partners.