

Development Team:

Glendale Community College: Office of Information Technology

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Dual-boot PCs and iMacs for Academic Use

Executive Summary

To provide a simple computer solution for running multiple operating systems on a single PC, that helps promote student success by providing simplicity, functionality and flexibility, while demonstrating proper stewardship for the district.

Description:

Following in kind with much of the industry, the Office of Information Technology (OIT) at Glendale Community College (GCC) collectively made the decision to stay with XP and not deploy Vista campus wide. However, The Business department who teaches the CIS curriculum was hard pressed to meet certification and testing standards, and needed to have the ability to train students using Vista. At the end of the Spring Semester 2009 OIT was made aware of the need to provide the Vista operating system in the Business classrooms and open lab areas. The main criteria was; to provide a simple solution that helps promote student success through functionality and flexibility, while demonstrating proper stewardship for the district.

Since there was no official move to upgrade to Vista, OIT was confronted with the challenge of how to best serve the campus, particularly in the new Business building. The conundrum lied in the fact that the Business rooms are a schedulable resource in R25 and the possibility of another department, not yet ready to use Vista, may need to use one of those computer classrooms. The question to answer was, “How to make both Windows Vista and XP available for use on a single computer?” After meeting with the Business department to understand their needs, OIT had to come up with a deliverable that would meet Business’ needs yet maintain a consistency for all other users. Though Virtual machines are a stable and common technology, it was decided that the VM environment could inhibit the functionality of the Vista or XP environment. In addition, a VM could also be confusing for those who are less tech-savvy to operate. The decision was to enter into uncharted territory - that of dual-booting a computer using both Vista and XP.

Having both Microsoft operating systems on a single computer provides ability to keep Windows XP accessible and maintain the eGCC look and feel that is standard across the campus. A simple boot menu with choice of “X” for

Windows XP and a “V” for Vista provides a simple prompt for those students who are being taught in the Vista environment. Those students are able to follow through their text books allowing them to progress through the course to a successful completion. A simple restart of the computer resets it to the boot choice for those who choose to use Windows XP. OIT believes that this functionality and flexibility provides a work place for students to be successful on pretty much any computer with the dual-boot image.

Another point for student success was the ability to incorporate a scratch or storage drive for student use. This functionality promotes student success by providing the student the ability to save and- or work from the computer hard drive thus increasing system performance by making the applications run more efficiently. Thanks to some crafty design, GCC had come up with a partitioning scheme that meets those objectives, as well as, being visible to all operating systems installed on the computer. This includes the OSX side on our dual-boot iMacs.

This functionality and flexibility for the students led to another point of concern. In today’s economic climate, could OIT make this work on our existing computers? The development team found that the design would take too long to develop if we needed it to work on all models past and present. The decision was made to make it work on only the latest models of our PCs. We set a cutoff point as to how old the computers could be and made sure that those models were the only ones used for this image. In the HT1 PIT certain pods of computers were designated for the dual-boot image and those pods were denoted by the floating boot menu on the display. The fact that the development team could get the image to work on existing computer exemplifies Maricopa stewardship. Nothing needed to be purchased to make this a success. The only cost was that of development and deployment time.

Lessons learned during this project have set the foundation to continue the practice of dual-booting campus computers with the latest operating systems. Should student text books advance with software and technology or lag behind, GCC has the ability to maintain teaching standards for specific courses allowing the students a learning environment that lends itself to personal success.