

2010 Technology Assessment

Richie Fugiel | July 2010
Athletic Academic Advising

Objective

Review the overall efficiency and reliability of the 18 computer assets provided by Athletic Academic Advising (AAA) available for the use by DePaul student-athletes.

Method

Computers available for use by student-athletes were tested based on their anticipated use. The following have been identified as the primary functions to be used by DePaul student-athletes along with the associated programs:

- Log In
- Web Browsing – Internet Explorer, Mozilla Firefox
- Word Processing – Microsoft Word

The efficiency for each computer was determined by the loading time needed to accomplish each function via the following method:

- Task 1: User Log In
- Task 2: A program, such as word, associated with a primary function, word processing, was loaded
- Task 3: User Log Off

This method best simulates the predicted interaction between student-athlete and computer. Task 1 and 2 were timed from the moment each was requested to when each task was successfully completed. To limit potential outside variables, maintain consistency and follow anticipated interaction, each computer was logged off between each iteration.

Computer analysis also included a hardware comparison. Hardware is the core to each computer; old or outdated hardware can cause slow load times as well as jeopardize reliability and efficiency.

Following the testing each of the 18 computers were then grouped into three categories:

New

- Installed within past 12 months
- Hardware is current???
- Overall student-athlete experience exceeds expectations
- Load times exceed average

Adequate

- Installed within past 36 months
- Hardware is current or within one generation of current
- Overall student-athlete experience meets expectations
- Load times meet average

Dated

- Installed over 36 months ago
- Hardware outdated
- Overall student-athlete experience is below expectations
- Load times are below average

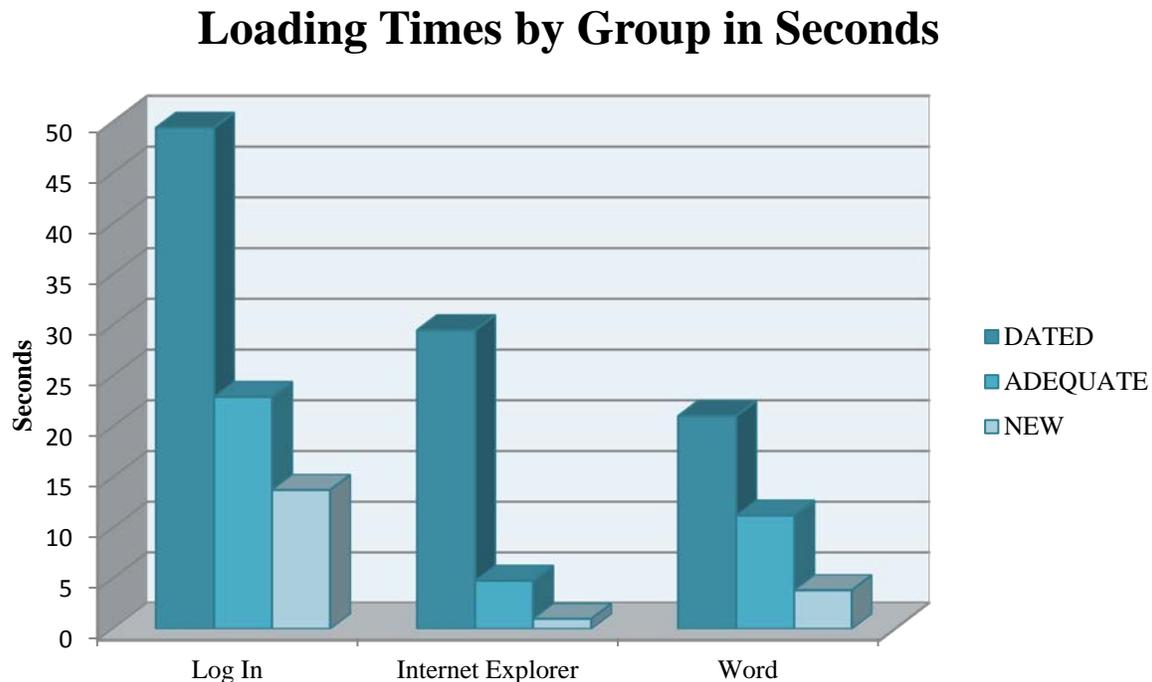
Results**Figure 1 – Group Comparison Table**

	GROUP		
	DATED	ADEQUATE	NEW
# of Computers	10	6	2
Warranty Expired For:	40.6 Months	N/A	N/A
LOADING TIMES			
Log In	49.45 Seconds	22.91 Seconds	13.75 Seconds
Internet Explorer	29.49 Seconds	4.78 Seconds	1.00 Seconds
Word	21.04 Seconds	11.22 Seconds	3.83 Seconds
COMPONENT			
Processor	Pentium 4 CPU 3.06GHz	Pentium D 3.00GHz Core 2 Duo E4400 2.00GHz Core 2 Duo E6300 1.86GHz	Core 2 Duo 2.8GHz
RAM	512MB DDR	1024MB DDR2	2048MB DDR2

The average life expectancy for a computer ranges between 30,000 and 50,000 hours, roughly 3 to 6 years. Computer life expectancy is based on average computer use with limited additional stress on hardware components. Added stress to hardware such as, running large programs or overuse, will decrease the overall life expectancy. The three year warranties accompanying dated computers expired in 2007 placing their age approximately at six years, the latter end of their standard life expectancy. However, with the additional stress of being a lab computer, the life expectancy could be shortened. Over the past twelve months, AAA has experienced the failure of six computers of similar makes rendering them completely useless.

In comparison to current technology standards, the hardware of adequate and new computers meet the standards while dated computers using an Intel Pentium 4 CPU 3.06GHz and 512MB DDR RAM linger behind. The Intel Pentium 4 CPU 3.06GHz processor was first introduced in November 2002. Since being installed Intel has retired the Pentium 4 series to focus on the Core Duo. Along with an outdated processor, each computer is installed with 512MB DDR RAM which has been cycled out in favor of DDR2 and most recently gearing towards DDR3. Outdated hardware presents the most likely reason for long load times and an overall slow computer. Compound outdated hardware with standard wear over approximately six years can cause computers to deteriorate quickly.

Figure 2 – Loading times by Group



On average a dated computer will take 49.45 seconds to log in two times longer than an adequate computer and nearly four times slower than a new computer. Launching Internet Explorer takes 29.50 seconds over seven times longer than an adequate computer and nearly two times longer to load Microsoft Word. Overall the dated computers reported significantly slower times during all loads in comparison to both the adequate and new computers.

Conclusion

In total, AAA has capacity for 23 work stations. Currently, AAA is able to fill 18 of these areas, leaving 5 areas vacant. Of the 18 computers available 10 are deemed as dated meaning 56% of the computers provided by AAA fail to be consistently reliable or efficient. In addition, student feedback regarding AAA services provided stated computer efficiency and reliability as a primary issue. The findings support this claim prompting computer replacement to be the key focus in AAA to help DePaul student-athletes both now and in the future. The current situation in AAA requires student-athletes to set aside extra time for lab computer use anticipating computer issues. To provide DePaul student-athletes with the best possible service, computers considered dated should be replaced with more efficient and reliable computers to suit the needs of student-athletes. Currently four computers in the adequate group are cycled every three years, computers replacing dated units should be placed on a similar cycle. The cycle allows AAA to acquire new computers equal to current technological standards, allowing for constant efficiency and continual reliability.