

Stuck in Nerdville-Implementing a Laptop Checkout Program via Information Commons

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ABSTRACT

Keeping up with the children of the 'now' generation, requires variety, entertainment, and the 'wow' effect. They require information fast, frequent, and at their fingertips. They want to be mobile and online at the same time. While the provision of wireless networking, a common trend among higher learning institutions, has done a decent amount of progress, it does not provide equal access to all. How do we address the demands of this generation when some of them don't own a laptop/computer, have access to a wireless card, or access to software applications to assist with coursework...or, more commonly, plain forgot to bring a computer to a research classroom or library area?

Baylor University has a new approach in providing computing services to the 'now' generation. The traditional computer lab setting with multiple rows of workstations is still prevalent and highly successful on campus. In expanding the traditional computing model to offer flexibility, mobility and a relaxed environment, an Information Commons facility was piloted incorporating some desktop units with a laptop checkout program. This program allows students to utilize wireless services on campus and accommodates them by offering many locations and environments. Faculty, staff and students can checkout equipment based upon individual or class need. The implementation of this program and initial costs associated are comparable with the types of services offered within a traditional facility. The overall success of this program spirited a new computing facility model expanding across campus. This model will soon be the new generation of computing facilities for higher education.

Categories and Subject Descriptors

C.5.3 [Computer System Implementation] Microcomputers – portable devices.

General Terms

Design, Documentation, Management, Performance, Reliability, Security, Verification

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Keywords

Laptops, laptop checkout program, traditional computing lab, information commons, environment, portability, lab consultants, wireless networking, 1x authentication, library, check-in, check-out.

1. HISTORY

Baylor University is comprised of approximately 14,000 students and has a student to faculty ratio of 19 to 1. Over the past couple of years, our university has had significant changes to our Information Technology Services structure. One initiative in this structural change was to help promote technology within the various library facilities throughout campus. In doing so, we formed the 21st Century Library that helps connect people with information resources. The 21st Century Library is comprised of the Academic Technology Services, Student Technology Services, Research Computing Services and the traditional library departments. One of the main responsibilities of the 21st Century Library is to provide students the services and support necessary for their academia through providing research assistance, research materials, computing facilities, technical support and study environments.

2. INTRODUCTION

Baylor University, like many campuses, began providing technical support for campus students through computing facilities located in a laboratory environment mainly comprised of Macintosh computers. It became apparent that the addition of PCs in our computing facilities was vital in order to keep current with mainstream corporate America. Once again, these facilities are being impacted not only by trends in corporate business, but also by generational trends. To keep up with this 'now' generation, Baylor, a typically traditional, conservative, old-fashioned university, was in need of a facelift that managed to keep the university's primary principles at the center of these changes. Popularity of wireless computing, funding from donor contributions, TIFB grants and an innovative staff created the opportunity to try to meet the needs of this 'now' generation while also offering more classroom technology resources for use by faculty. Thus, an Information Commons was created to provide a new presence to traditional computing facilities while also creating a new community for students on campus. The success of this program is influencing any new construction on campus. It is obvious that this new model of computing facilities could greatly impact other universities too.

Throughout this presentation, correlations to the movie *Pleasantville* will be related to the transition of campus computing facilities to a new age information center. [1]

3. HOW IT ALL BEGAN

In order to move out of 'Nerdville' and into 'Pleasantville' many changes had to occur just as the people of 'Pleasantville' slowly transitioned and adapted to a new mindset. In watching the movie, the characters gradually change and color begins to transcend this black and white community. The first incorporation of the new module for computing began in the fall of 2001 with the implementation of a laptop checkout program in the central library offering students six available machines for a two hour checkout period allowing client use of the equipment anywhere in the library complex while the design of an information commons was under construction.

An information commons was initially defined as one centralized location for students to obtain general information related to library resources. However, a technology twist redefined the idea of an information commons for our design team. Currently, the campus model for an information commons encompasses some reference desktop workstations, large open spaces with mobile and comfortable furnishings, collaborative group study areas, network ports and wireless accessibility, wireless laptops available for checkout and technology support/quick reference staff available as a help desk service point. The laptop checkout program quickly became a part of the Prichard Family Information Commons as it offers students the flexibility of working at any comfortable location indoors or out in the gardens, at tables versus small lab space and loud or quiet study areas much like the combination of a coffee shop inside a bookstore. Clearly in this process, identifying new location points and remodeling old locations must be a part of this gradual transition as funding always dictates the amount and rate of the changes designed for many of the campus buildings. It also became apparent that success must be proven in order to get further support and funding to complete expansion of this new computing facility model.

Two facility test sites were identified. One facility in the main central library of campus became the Prichard Family Information Commons opening in the fall of 2002. Once construction was completed it was determined that all checkout laptop units be relocated to this newly formed facility that would act as the primary service point for wireless laptop checkout services. Additional units were purchased for the new facility which brought the unit numbers available for checkout to nineteen. Shortly thereafter it was evident that the checkout time period needed to be modified from a checkout of two hours to a checkout of four hours, while also allowing clients further flexibility by no longer limiting the units to the library complex. By the spring of 2003, due to the demand and popularity of the program seventeen additional units were purchased for the checkout program. The spring of 2003 also marked the grand opening of the Prichard Family Communication Commons in the Stacy Riddle Forum, also known as the Panhellenic building. This facility was outfitted with fourteen reference desktop workstations, twenty laptops, presentation equipment and the mobile seating environment similar to that of the Prichard Family Information Commons in the central library. The success of these facilities and the laptop checkout program generated the need to equip our largest traditional computing facility with a laptop checkout program.

The Prichard Family Information Commons also hosts the Gregory Presentation Group Study Suites permitting clients to checkout portable projection equipment and a small conference style room

intended for group presentation rehearsals and collaborative group study sessions. Currently there are four presentation suites available on a reserve schedule complimenting the time period of the laptop checkout units. Reservations for these facilities are documented with the Outlook Calendar functions coordinated by the Lab Consultant staff at the help desk service point in the Prichard Information Commons. Clients may view the schedule from any campus computer utilizing Outlook Web Access or Outlook.

4. WHERE ARE WE NOW

At Baylor, nicknames are generated for many of our buildings or facility services. There is the "garagemahall"...a new parking garage housing office suites hosting the majority of the Information Technology Services unit, a Chili's Restaurant and a Starbuck's. "The Pat Cave"...the Pat Neff Administration Building is the location where important university decisions are made. And now the "Gucci Lab"...the Prichard Family Information Commons because of the student displayed artwork, the modern lighting, the customizable seating layout, the stylish fabrics and the warm atmosphere. There are many things to learn about creating this type of simulated environment making libraries and other important areas of campus the most populated locations.

4.1 Rules of Customer Service

One should never forget that any service cannot be successful without facilitating an environment welcoming the clients and meeting their needs/desires. They are first and foremost the reason why we offer services. Secondly, it is always important to ensure that the consultants interact with the client throughout the checkout process rather than becoming robotic. In this process it is imperative the consultants communicate the policies and procedures associated with the laptop checkout program from the ten dollar an hour late fee assessed to the client's university account to selection of components available for use with the laptop device. Finally, the efficiency and accuracy of checking out the materials to the client is essential. Clearly a client cannot be expected to wait 6 minutes as the equipment is prepared for use.

4.2 Checkout System

In the initial implementation of the laptop checkout program a paper checkout system was utilized as a means for tracking components that were checked out to clients. With the use of technology, more or less being a part of the Information Technology Services, it was evident the paper trail must disappear. Making use of technology resources is the best mechanism for monitoring a checkout and return of equipment for inventory and usage tracking purposes. Thus, the integration of Innovative Interfaces III system, already operated by the library for book materials, was modified for laptops and all related components. Most of the modification was in relation to the data entry of the laptop and laptop component devices into the already existing system per the time regulations associated with these materials. Some of the modifications included the purchase of additional equipment to aid in this process.

4.3 Policies and Procedures

As mentioned earlier, a late fee is generated to clients charging ten dollars an hour. Assessing this fee ensures that the laptop and all laptop components are returned. The intention is for clients to be held accountable so that services can continually be offered fairly to

all. To accommodate client need, the laptop and components can be renewed as many times as he/she chooses even in times of a waiting list.

A policy exists making clients accountable for returning checked out equipment by charging the client's university account the replacement cost of the laptop and all components. However, clients are not charged for damaged/dropped equipment, daily wear and tear or nonfunctional operating systems. Due to these occurrences, the necessity to have backup equipment for usage is important to maintain an adequate inventory and therefore meet the demand of clients.

The thought of having all laptops checked out at the same time was unthinkable. Originally, a paper waiting list was developed to help facilitate the availability of checkout equipment. However, after visiting a local restaurant, it became clear that a coaster call system would better serve the needs of our clients as well as the staff. Once a paper waiting list began for a coaster, the need to pursue the addition of laptops and components for usage was crucial.

4.4 Technical Aspects

All laptops currently available for checkout operate under Windows XP using domain accounts for authentication. Primarily a webpage entitled Netauth was the source of gaining network access via a campus username and password. Within the last year the increasing need to be conscientious of heightened security hazards spurred the movement toward a more secure 1x authentication scheme. In order for this to be successful a third party software application was needed to grant users access to the network without caching user profiles. DeepFreeze Enterprise protects the laptop images from unnecessary changes to the system profile which could prevent the system from being inoperable. This also protects equipment from potential virus outbreaks, the new concern for any campus computing support staff.

The desire to have a configuration that is the same on all general access computing machinery has led to the development of a universal configuration that can be used on a variety of different machines. PowerQuest Deploy Center distributes an image simultaneously accomplishing this goal. This overall process greatly reduces the total number of machine configurations needed to outfit several general computing environments as well as reducing man hours, which is much needed. The only drawback to this process is the fact that older machinery does not always function optimally nor does it always manage the size requirements of the configuration.

Making printing services available to any wireless device including the laptops available for checkout became imperative. A webpage was developed in which clients download a script that runs to connect their machine to a print queue based on location. This process requires a campus username and password in order to grant print privileges. This system is also integrated with our print management system allowing the departments to monitor client, more specifically student, print usage. PCounter is the print

management system in place and is easily adaptable for use by a campus relying upon wireless services for more and more daily tasks.

5. WHERE ARE WE GOING

The overall success of the laptop checkout program, combined with an information commons structure, has led to many different departments campus-wide requesting the implementation of similar facilities within high traffic locations. In order for the expansion of this program to be successful, many things have to be factored.

- Funding
- Location
- Hours of operation
- Management of facility
- Electronic checkout system
- Facility standards, ie...electrical outlets, network jacks, space, etc...
- Budgeted rotation schedule of equipment
- Expandability in that location
- Regular assessment of lost/damaged equipment costs
- Secured storage of Peripherals/Laptops
- Marketing strategies

6. CONCLUSION

The Baylor University campus is experiencing rapid growth with the addition of new buildings, programs, and the charge to become one of the nation's top-tier universities. Much of this has been publicized by the local and national news. The campus is choosing to expand rapidly during a poor economic time, and this is causing many staffing, funding and enrollment obstacles. It is always pertinent during these times to work as a team to accomplish the overall mission of the university by meeting these challenges in innovative ways. Remember to utilize any resources available in the form of alumni, federal grants, student involvement and the local community. Weighing the successes is always more significant than focusing on the failures.

7. ACKNOWLEDGMENTS

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8. REFERENCES

- [1] Pleasantville. Dir. Gary Ross. Perf. Tobey Maguire, Jeff Daniels, Joan Allen, William H. Macy, J.T. Walsh, Don Knotts, and Reese Witherspoon. 1999. DVD. New Line Productions, 1998.