Library Department and Committee Reports

Library Reports and Guidelines

6-30-2019

Systems and Digital Technology Departmental Report : July 1, 2018 – June 30, 2019

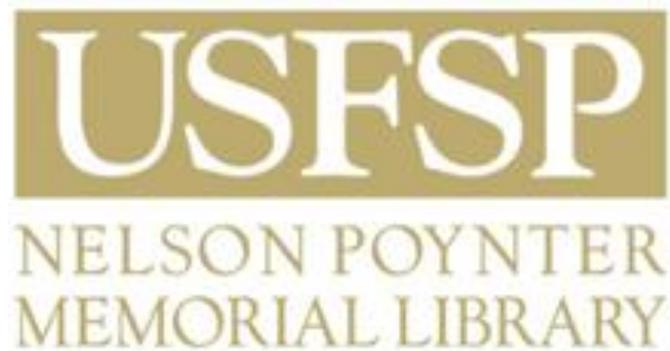Nelson Poynter Memorial Library.

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Systems and Digital Technology
Departmental Annual Report
July 1, 2018 – June 30, 2019

University of South Florida St. Petersburg
Compiled by Berrie Watson

2019

Department Overview

A primary USFSP technology provider in support of the library and services to USFSP students, the Systems and Technology office supports USFSP computing through multiple service endpoints. These include the Student Technology Center, a technology-enhanced student collaboration space, the library web presence, computing and networking technology for the library building's over 200 network device footprint, as well as first tier support for ALEPH, the library management system and other support systems. These various offerings deliver computing services and resources to students, faculty, and staff of USFSP and visiting members of the USF system.

The department consists of Berrie Watson, Department Head (A&P) with duties as system administrator, network manager, and web developer, joined by Mark Couch, Systems Analyst (A&P) with duties as desktop support coordinator and administrator for student/public technology and OLITS computing support. The manager of the Student Technology Center (OPS), Summer Natali, manages a student-based helpdesk, digital makerspace, STEM electronics area, video recording booth and a training/facilitated student learning room.

Significant Departmental Accomplishments

Student Technology Center STEM Offerings

The STC has hosted 3 Virtual Reality events, with attendance increasing by 10-15 individuals each time. Facilitated learning through training workshop attendance also increased, with SPSS being the most in demand, but Photoshop and Excel also gaining interest. Additional sessions in support of Lynda.com/LinkedIn Learning, SPSS, Canvas and Google Docs are scheduled for Fall 2019 within the space.

Faculty are consistently contacting the center for support on specific projects, especially involving MyStudio booth and embedding videos. Dr. Ann-Marie Gunn has reached out about learning Adobe Spark and instructs her students to visit the STC for tutorials. The student assistants have designated time allocated to a specific resource in the Makerspace for additional knowledge and assistance to any student interested in using the product. The STC recently acquired a 3D printer and accompanying software and slicer programs, and has developed a roll-out plan and scheduling system to allow students progressive access to technology as they are properly trained. Classroom and personal project progress will be recorded via spreadsheet.

Lastly, the STC recently partnered with Dr. Sandra Jackson and took part in the planning, ordering, and event scheduling for the STEM Robotics Summer Camp for middle grades. Circuits with Arduino coding, and color coding with Ozobot robots were topics presented.

Study Room Reservation System Implementation, Video Asset Migration
Study room reservations transitioned from a simple paper callback list to a fully online reservation system through the SpringShare LibCal product, and was made more user-friendly through use of NetID authentication, removing a confirmation step from the process. Positioning of the reservation process behind the NetID system increases security for student information and protects from false bookings. Significant frustration and staff time have been reduced.

Two thirds of hosted videos were relocated to the digital archive, so that the collections and the videos are stored in one location through BePress. The video streaming service was brought online in 2019, quite late in the period but the process was swift due to a standard MP4 video format, which had been adopted prior to the move. A third of the videos remain, to be moved in the next FY. The process should be applied to all videos including those hosted on other platforms, copies on BePress have contractual protections for preservation.

AppGuides software information site is ready for publication and promotion. All USFSP computing areas, virtual and on-campus are represented. Next steps are to place a link on all student NetID menus for USFSP, and approach the owner of software.usf.edu for a cross link from that site to our guides. Future directions could also include expanding the concept to all USF system locations with a Systems Tech Fee initiative, if response rates and traffic is high after promotion efforts.

Staff Computer Refresh and Upgrade to Windows 10
Additional computers were allocated by the USFSP administration to support faculty office upgrade for this project, and were distributed as needed to meet Windows 10 minimum hardware requirements. All staff desktop computers were upgraded to the Office 2016 suite of applications, and all student use computers saw adoption of site-licensed software such as the Adobe Creative Cloud Suite, SPSS, Acrobat, ArcGIS, JMP and internet browsers.

Infrastructure Improvements
The primary network infrastructure component, a fiber optic network switch was upgraded to a Cisco 9000 series aggregate switch, allowing a faster backbone connectivity potential of 40GB. All connections from all datacom rooms throughout the library were migrated to the new equipment, which features swappable fans, power supplies and port types adding to the versatility and longer life. Future directions for the infrastructure include network segmentation of the fiber optic devices supporting computing vs camera, phone and wireless infrastructures. Segmentation will provide appropriate speeds and redundancy for both networks.

New IT Locker System Purchased and Implemented for Student Use
Made available through a registration process at the STC, students can power their own devices, and check out laptops independently. STEM accessories cannot be added to the system due to all devices being secured through power connections which unfortunately have no standard for electronics. While

STEM technology installed includes a variety of circuit building, robotics, and microcontroller devices, the IT locker system is currently limited to Apple, and Dell laptops.

Additional Accomplishments

- An emergency duress button system was installed in two locations within the library, both at Circulation and the Student Technology Center.
- Three new computing furniture items were added with year-end funding, will be networked and electrified for use in the next year.
- Multiple Technology Fee funded projects were proposed and funded, including anti-virus infrastructure & server, vSAN storage, student-use computing components, and minor network components to support additional POE (power over ethernet) capability.
- Videos have been hosted on the USFSP Digital archive for the first time. A third of the videos remain to either be moved or removed from the old video server, that may be decommissioned or role changed as a result.
- Along with the NAGIOS intrusion detection system, several security changes were made to reduce the library's attack surface and reduce vulnerabilities. Servers were retired and network changes made in support of this initiative.
- Apple virus protection was added to all laptops and staff machines. Additional management system, JAMF may be used to automate some upgrades in the next year, Mark Couch will assume responsibility for testing and recommending use.

Future Directions

vSAN Storage Backup Allocated and Older EMC Storage Array Devices Decommissioned
The vSAN storage array, which has been installed but not yet configured, will provide storage to replace multiple EMC storage arrays. As the data is migrated, older storage will be decommissioned to save energy and reduce the infrastructure footprint. OLITS data will be a next step in expansion of this unit, as the OLITS EMC storage array has reached end of life.

Implementation of Additional Technology
USFSP Technology Fee initiatives have purchased new equipment for library laptop replacement, student desktop replacement in the Information Commons and refresh of the POY 218 library instruction lab. Also, computing will be available from all study rooms within the library, and expansion of the test of the same conducted on the 1st Floor. OLITS will replace the POY 218 projection system with a large monitor, including all equipment in the instruction station which will be made available for Fall semester 2019.

AppGuides Web Development and Marketing

The AppGuides site functional items have been increased, and nearly all areas and applications have had additions in content making the site more useful. A USF System Tech Fee proposal may be necessary to fund this effort, at which time the service would be a USF System service for all campuses and locations.

Digital Commons Implementation

The USF Tampa library houses an area of specialized computers, called the Digital Commons. This space allows users to use the Adobe Creative Suite of applications on more robust computing platforms, including iMac machines. We will mirror this offering in the training room and north atrium area, with workstation option and software. The STC will consider additional equipment for use that expands students' ability to process video and audio, similar to USF Digital Commons. Marketing will follow availability of the new equipment and services.

Services to OLITS

The Systems department has supported a major hardware refresh project for Instructional Designers and Classroom support staff, completed in the next period. Additional storage may be recommended to replace an older OLITS-specific storage appliance, to unify library and OLITS storage onto the vSAN platform as funds allow.

<u>Significant Staff Accomplishments</u>

Berrie Watson:
- Library Service:
  - Library Leadership Team, Member
  - Library Web Committee, Chair
  - Faculty Learning Community, Immersive Technology Augmented Reality/VR
- Professional Service:
  - VMWare Users Group, Active Fee Paying Member
  - VMWorld Conference and Training Event, Attendee

Mark Couch:
- Professional Development:
  - USFSP Student, majoring in Information Systems Management
  - Expected graduation date: Spring '20

Summer Natali:
- Library Service:
  - Faculty Learning Community, Data Management
  - Summer Technology Camp, teaching support
- Professional Service:
  - Various STEM-Related Events, Attendee

Systems Statistics

	19-20	18-19	17-18	Overall Change
Help Desk: Total Number of Requests	274	271	130	+110% *
Number of Open Use Computers	104	104	104	0%
Laptops for Student Checkout	20****	20	20	0%
Number of Staff PCs & Laptops	87	87	78	12%
Number of Distance Learning Faculty & OLITS Laptops	28	23**	40	-30%
Number of Wireless Coverage Points	20	20 ***	20	0%
Number of Library Servers	22	20	23	-4%
Number of Distance Learning Servers	1	1	2	-50%
Amount of Server Storage	20TB	20TB	18TB Array	12%
Amount of Backup Storage	25TB	25TB	17TB	92%

*39 web tickets included, 91 tickets by Mark Couch, 183 tickets by Berrie Watson
** 40 laptops for OLITS repurposed, 18 Faculty checkout, 10 Systems for Student Checkout
*** Wireless access points were replaced in 2018, with the ability to support far more connections per access point and with greater bandwidth allowance.
**** Laptops have been refreshed, though the number offered remains the same

STC Statistics

The Student Technology Center (STC) provides the most available in-person technology assistance at USFSP with the widest hours of operation. The STC completed its second full year of activity in Summer 2019, and was visited by students over 2,000 times during the 2018/19 year. Additionally, the STC held over 25 workshops. The statistics below include the primary categories of assistance:

Technology Category	2018-2019	2017-2018
Digital Makerspace & MyStudio Booth	99	23
Helpdesk/Tech Support (includes wireless & software/hardware support)	853	317
Events, Training room & Study Space Use	132**	261
Printing	1,034*	89
Total Requests	**2,118**	**690**

* Printing statistics are much more accurate due to a change in the reporting method. Prior to the current period, printing and tech support questions required a user signon, which was replaced with a faster and more reliable collection based upon student assistant collection.
** Event attendance is not a part of the current period statistics, and study space use will be discontinued in future periods as the entire first floor contains study spaces.