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Accomplishments and Challenges

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NAVAL POSTGRADUATE SCHOOL

ITACS

INFORMATION TECHNOLOGY AND COMMUNICATIONS SERVICES

ANNUAL ACCOUNTABILITY REPORT: FY2008 ACCOMPLISHMENTS AND CHALLENGES

INTRODUCTION

ITACS focused on a number of major projects in 2008, beginning with the upgrade of network fiber and electronics, a multiyear project that will upgrade the Naval Postgraduate School (NPS) campus network, enabling the academic and research community to capitalize on CENIC membership with expanded opportunities in networking, virtualization, design and predictive applications across all disciplines. The continued growth of the NPS network, which has more than quadrupled in the last three years, increasing demands through video applications, research and collaboration, web-delivered services, wireless and distributed learning students, sparked the need for the network upgrade, which will increase bandwidth to 10Gbps backbone and 1Gb for desktops; separate the MIL and ERN; provide support for Power Over Ethernet (POE) and ease of management increase digital media, streaming technologies and high-performance capabilities; provide flexibility, reliability, security and stability; increase active ports from 6,000 to 10,000; provide better monitoring and tools for making real-time decisions and isolate network failures; and increase CENIC to 10Gbps.

In January 2008 COMNAVNETWARCOM expressed interest in developing a common network architecture for the three institutions comprising the Navy Higher Education Information Technology Consortium (NHEITC) — the U.S. Naval Academy, the Naval War College and NPS. The Chief Information Officers of the Consortium participated in a six-month business case analysis to assess requirements for future enterprise networks, detailing the distinctive nature of their strategic missions, the requirements and challenges of the higher education and research programs, the work of the NHEITC, progress to date, and their consortia charter. The first interim report was completed on March 14, 2008; a teleconference was held in July to review the Consortium's Interim Progress Report; and the final report, vetted through the Information Technology Task Force, and endorsed by all three Presidents and CIOs of each institution, was submitted to COMNAVNETWARCOM in late summer. The report recommended maintaining the current research and education networks. A meeting with COMNAVNETWARCOM and NHEITC was held in November 2008 at the Naval Academy. The recommendations of the report were endorsed by COMNAVNETWARCOM.

The Department of the Navy Cyber Asset Reduction Systems (CARS), tasked with collecting requirements for the future for the Next Generation Network, also reviewed NPS networks and systems for efficiencies and reductions in 2008. The Enterprise Architecture effort involved mapping business processes and ensuring that the networks and systems are designed to meet the organization's business needs. The NHEITC worked with COMNAVNETWARCOM and N6 to ensure that the research and educational requirements continue to be met throughout each of these efforts.

In 2007, the Business Practices Implementation Task Force recommended to NPS leadership that an external audit be conducted of how Personally Identifiable Information (PII) is managed and protected at NPS. Campus leadership agreed to the recommendation, and PricewaterhouseCoopers, which conducted an audit at the University of California Berkeley last year, administered an audit at NPS. The PWC final report, acknowledged that NPS leadership had already made strides to stand up a Privacy Act program and had begun assessing the program. The PWC report was endorsed by the President and Provost on January 14, 2008. The most significant recommendation was to hire a full time Privacy Act Program Manager. Mr. Chris Gaucher was hired and assigned to the Information Resources organization as the Director of Information Assurance and Privacy in SEP 2008.

In January, torrential rains and wind caused the subsequent closure of the campus, but throughout the duration of the crisis the ITACS data center remained operational, and connectivity was maintained both on campus and through VPN access, due in part to the implementation of the ITACS Disaster Recovery Plan. The ITACS Disaster Recovery Plan Committee conducted a meeting in mid-January to discuss the "lessons learned", how to support the implementation of a campus-wide Disaster Recovery Plan, and a comprehensive standard for maintaining "essential services" in the event of a disaster, and how to utilize existing technologies to improve campus-wide communications. Four solutions for notifying campus constituents and first responders in the case of campus-wide emergencies were evaluated throughout the year, and the results about the emergency notification systems were provided to campus leaders and to the Director of Facilities for the SW region.

For many months, the interim Dean of Research, Dean of the Graduate School of Engineering and Applied Sciences and ITACS leadership participated in discussions with several vendors about purchasing a high-performance computer for NPS campus-wide research utilization. Sun Microsystems agreed to provide NPS with a supercomputer with five 19" racks, 1100 cores and 10.7 teraflops, and 112 terabytes of disk storage, making this high-performance computer the 232nd most powerful computer system in the world at the time. Funding of \$1.2M was secured for the supercomputer, which is expected to be operational for campus-wide use in January 2009. Monthly meetings are being held to develop policy regarding access, user needs and transparency.

As ITACS looks ahead, four major initiatives will be completed or undertaken in FY 09:

- A Sun Microsystems 6048 “Blade” system with 1152 processors (theoretical peak speed of 10.7 trillion floating point operations per second) will be installed and provide NPS with a major increase in computing capability to help meet its research mission.
- A new telephone switch will be procured and install, increasing the capability and reliability of voice communications at NPS.
- A state-of-the-art Emergency Notification System will be operational, providing leadership with a variety of options to notify all NPS stakeholders of emergency (or non-emergency) situations.
- Major strides will be taken to take advantage of open-source solutions to NPS’ administrative systems by working closely with Kualii, a non-profit organization responsible for sustaining and evolving administrative software that meets the needs of a variety of advanced educational institutions.

ABOUT INFORMATION TECHNOLOGY AND COMMUNICATIONS SERVICES (ITACS)

The ITACS department reports to Dr. Christine Cermak, Vice President of Information Resources and Chief Information Officer of the Naval Postgraduate School. The NPS Strategic Plan, *A New Vision to the Future*, and the IT Strategic Plan, *The Information Revolution: Planning for Institutional Change*, provided the general framework for operational planning in FY08. The Information Technology Task Force (ITTF), comprised of representatives from every major academic area as well as a number of administrative departments, continued to be the vehicle for policy guidance and the establishment of priorities.

The mission of ITACS is to provide technology and communications support for the NPS core mission of teaching, research, and service to the Navy and Department of Defense, and to provide voice, video, and data infrastructure as mission-crucial enablers of innovation and experimentation within the educational enterprise.

ITACS REORGANIZATION

As ITACS completed the final year of its strategic plan and formulated plans for the next five years, the department changed its organizational structure. Mr. Tom Halwachs, former Executive Director of ITACS, agreed to become Executive Director of Financial Systems to lead development of new financial computer systems at NPS.

Mr. Joe LoPiccolo, former Director of Academic Computing Services, assumed the operational responsibilities for ITACS as its Executive Director. Mr. LoPiccolo has provided leadership in the academic and administrative IT arenas for a number of years, and his extensive experience in most areas of the organization uniquely qualified him for this leadership role.

Ms. Terri Brutzman, former Director of Technology Services, became the Deputy Director of ITACS. Ms. Brutzman has worked in a number of areas within ITACS throughout the past ten years, and has contributed a great deal to its collective success. Her outreach with academic areas — most recently serving as a principal investigator on a substantial grant — has strengthened ITACS' support of the academic mission, and her implementation of a layered Information Assurance program has resulted in an effective security posture.

LCDR Warren Yu, formerly of Fleet Numerical Meteorology and Oceanography Center, joined ITACS as its Corporate Relations Manager. In that capacity, LCDR Yu helped to leverage technology investments to benefit alumni relations and to enhance institutional visibility, and also provided technology speakers for campus lectures, and support for internships, faculty exchanges, and grant programs by managing NPS IT corporate relationships. LCDR Yu also served on the NPS Web Implementation team. LCDR Simon McLaren succeeded LCDR Yu in this position in summer 2008.

INFORMATION TECHNOLOGY DATA

Network Operations and Server Support

- Accounts: 5,916 –
 - User Accounts
 - Staff and Faculty – 1913
 - Resident Students – 1958
 - Distance Learning Students – 1715
 - Non Entity Accounts – 350
- Active Phone Lines: 500 digital; 100 VoIP; 2,400 analog
- Audio-Conferencing Ports: 24
- Backup Data: Maximum space available – 66 terabytes (100,000 CDs)
 - *Email – Weekly full backups, rotated every three weeks*
 - *Server/User data – One full backup with incremental forever*
- E-Mail Stored: 820 gigabytes
- External E-Mail Received: 30 Million per year
- Internet Traffic: *Amount of incoming and outgoing traffic through a firewall interface in a typical 24 hour period.*
 - Internal – 106 gigabytes
 - DMZ – 114 gigabytes
 - HPR – 49 gigabytes
- Networks
 - EDU – nps.edu – CENIC
 - HPR – hpr.nps.edu – CENIC
 - MIL – nps.navy.mil – DREN

- Public (for guests) – public.nps.edu – CENIC
 - Wireless
 - DODNet – Monterey DOD interconnect – DMDC, PERSEREC, DLI, NRL, FNMOC, NPS
 - PACBell Research Network
- Servers Supported:
 - Enterprise Servers – 30
 - Academic Servers – 6
 - Departmental Servers – 80
 - DMZ Servers – 110
 - User Data: 32.5 terabytes
 - Profiles and H Drive – 25 TB
 - Group Shares – 7.5 TB

Educational Technology

- Forty-Eight Point Multipoint Control Unit (MCU)/Video Bridge: 1
- ISDN Video-Conferencing Circuits: 165
- Multimedia Presentation Systems: 100+
- Video-Conferencing Facilities: 2
- Video Tele-Education Systems: 7
- 5,808 Class hours recorded and streamed via the Internet in FY08
- 3,358 Class hours recorded and delivered through web-conferencing system in FY08
- 380, 317 Logins to the Learning Management System in FY08
- 3, 780 Courses hosted on the Learning Management System

Applications

- 1,344 (including web-based)

Lab Support

- Servers supported:
 - Academic Software License Servers – 6
 - Classified Servers – 32
- Backup Data: Maximum space available – 2 TB
 - Sever data – Weekly full backup with incremental between full backups, rotated every two weeks
- Lab and Classroom usage:
 - Unclassified
 - Fall 2007: 478 courses
 - Winter 2008: 464 courses
 - Spring 2008: 483 courses
 - Summer 2008: 462 courses

Mainframe

- Mainframe Data: 130 terabytes

Information Assurance

- Approximately 70,000 emails/day classified as spam using Barracuda
- Approximately 12,000 daily alerts within our Intrusion Detection System
 - Critical Patching
 - Information Assurance Vulnerability Alert (IAVA) = 77
 - Information Assurance Vulnerability Bulletin (IAVB) = 75
 - Information Assurance Vulnerability Technical Advisory (IAVT) = 67
 - Patches Installed as a result of above:
 - IAVA = 53,735
 - IAVB = 21,654
 - IAVT = 18,948
 - NPS IT Major Security Incidents.
 - 1 Personally Identifiable Information incidents
 - 5 virus infections (Externally detected)
 - 2 Probes or scans
 - 2 FOUO content posting
 - 1 Classified Spillage
 - 1 Phishing incident

Total: 12

Help Desk

- Number of Remedy cases: From October 1, 2007 to September 30, 2008
 - Urgent – 1,180 Increase of 50% from FY07
 - High – 5,750 Increase of 5% from FY07
 - Medium – 13,944 Decrease of 38% from FY07
 - Low – 3,611 Decrease of 15% from FY07
 - Total = 24,485 Decrease of 26% from FY07
- Remedy Cases by Major Categories
 - Information Assurance – 1,017 Decrease of 48% from FY07
 - Connectivity – 1,129 Decrease of 25% from FY07
 - Hardware – 1,318 Decrease of 15% from FY07
 - IT Services – 11,644 Decrease of 19% from FY07
 - Networking – 1,757 Decrease of 55% from FY07
 - Printing – 611 Decrease of 44% from FY07
 - Software – 4,279 Decrease of 10% from FY07
 - Web Support – 1,493 Decrease of 34% from FY07

- Requests for assistance came in via the following sources:
 - Phone: 12,648
 - Walk-in: 6,375
 - E-mail: 4,328
 - Web: 1,134

The top five categories of requests for assistance fell into the category of IT Services, which includes such items as Password Reset, Software Check-out/Check-in, Locked Account, and General Questions; Software; Networking, Web Support; and Hardware.

On Average of 93% of all requests for assistance were resolved within the Service Level Agreement (SLA) monthly. The remaining percentages represented areas that were awaiting parts, were pending information from the customer(s), or involved lengthier methods and/or means of resolution.

High Performance Computing

- Number of Linux workstations: 80
- Number of Linux users: 250
- Number of HPC Supercomputers: 12 racks, with 180 nodes and 708 processors.
- Number of Supercomputer users: 50
- Current HPC disk space: 30 terabytes

Web Services (annual totals through September 2008)

Total Pageviews

Extranet:	15,112,443
Intranet:	4,969,060

Top Platforms by Hits:

Extranet:	89.13%	Windows
	6.05%	unknown
	4.21%	Macintosh
	0.60%	Linux
	0.01%	SunOS

Top 5 Requested Pages

Extranet:	1,556,393	Home Page
	921,599	Current Students Home Page
	443,982	Search Home Page
	314,756	ITACS Home Page
	218,434	Library Home Page
Intranet:	2,047,199	Student Muster Application Home Page
	1,724,985	Intranet Home Page
	143,602	MWR Calendar of Events
	64,778	Students Home Page
	29,225	Search Home Page

Intranet	95.45%	Windows
	3.40%	Macintosh
	0.95%	unknown
	0	Linux

Total Search Phrases

Extranet:	171,098
Intranet:	18,834

Top 5 Browsers by hits:

Extranet:	80.12%	Internet Explorer
	10.53%	FireFox
	3.31%	Mozilla Compatible Agent
	2.69%	Safari
	0.17%	Netscape
Intranet:	91.24%	Interent Explorer
	5.78%	FireFox
	1.93%	Safari
	0.09%	Mozilla
	0.03%	Netscape

Top 5 Search Phrases:

Extranet:	1,789	Python
	1,514	Blackboard
	1,301	Jobs
	929	Lodging
	892	Homeland Security
Intranet:	991	Blackboard
	524	Map
	447	MWR
	443	DORS
	431	Email

INFORMATION TECHNOLOGY INFRASTRUCTURE

- Intranet
 - 10 GiGE backbone
 - 10/100/1000 to the desktop
 - 9961 network wired connections
- Internet connections
 - DREN OC3 (146 Mbps) (.mil domain)
 - CENIC HPR and DC 1GigE (1,000Mbps) (.edu domain)
 - CSUMB OC12 (655Mbps) (Backup DC connection)
- Wired and wireless
 - 10 GiGE backbone to all academic buildings
 - GiGE connection to Fleet, NWS, DMDC, DLI, PERSEREC
 - 85% wireless coverage to quad
- Internet uptime status (excluding maintenance)
 - MIL - 100%
 - EDU – 99.96%
- VPN access to Intranet
 - EDU VPN Client
 - SSL VPN to EDU
 - CAC MIL VPN

The five categories of recommendations identified in the IT Strategic Plan — Academic Applications and Services, Administrative Applications and Services, IT Management and Resources, Network Infrastructure, and Communications, Partnerships and Outreach — comprise the main body of this report.

ACADEMIC APPLICATIONS AND SERVICES

ACADEMIC AND CLIENT SERVICES

In response to requests from the academic departments for additions and/or changes to software in the Learning Resource Centers, (LRCs), 50 new and updated software applications were added to the five images that support the fourteen LRCs and 74 classrooms throughout the campus. During both the summer and winter break, all LRCs and classrooms were imaged with the new and/or updated software, and were thoroughly cleaned.

The School's first virtual LRC, which replaced a traditional LRC, was set up in Root Hall 228 in December. ITACS assisted Information Sciences in their purchase of the system, and in installing the pioneering technology.

Twenty-three new Gateway PCs were installed in Bullard Hall's LRCs, and 28 new classroom PCs were also installed throughout the campus. After the asbestos abatement project was completed in January, 46 Gateway PCs were installed in Ingersoll LRCs.

In an effort to save \$40,000 annually in toner costs, a proposal was submitted to add 16 new multi-function devices in the LRCs and various departments throughout NPS. Ten Xerox multi-function devices were installed in ten LRCs in December.

Additional accomplishments of Academic and Client Services include:

- Purchasing three new servers through lab recap funding. One server will be used for the new email server in the STBL, a classified lab, and two servers will be used to replace two aging academic license servers.
- Ordering 139 new computers for LRCs and classrooms through lab recap funding. Eighteen of those systems are Apple computers.
- Renewal of 45 software maintenance contracts.
- Procuring an additional 886 Adobe Acrobat Pro licenses to support the increasing need for this software.
- Implementing Windows Vista Volume License Service for all Enterprise Vista installations.
- Creating new Enterprise Vista image and continuing the maintenance of Enterprise XP image.
- Reconfiguring the network in the STBL; creating a new IP numbering scheme, adding a firewall, new switches and an IDS; reconfiguring network to 3 sub networks with different access to each area; setting up DMZ for network protection; reconfiguring different subnets on VLANS through the switch.
- Installing Retna system checking software in the STBL, and instituting a monthly sweep of all systems on the secure network to check for vulnerabilities and any unapplied IAVA's.
- Setting up a new research area for JIEDDO projects in the STBL.
- Coordinating and setting up 27 secure VTC for the classified (SECRET) VTC suite.
- Developing and implementing procedures to transfer information across domain boundaries (i.e., unclassified networks to SIPRNet and JWICS).

EDUCATIONAL TECHNOLOGY

AV/VTE/VTC POLICY

A modified AV/VTE/VTC policy was presented to and endorsed by the Information Technology Task Force in October, and was approved institutionalized as NPS policy by the Academic Plans and Policies Committee.

CLASSROOM TECHNOLOGY UPGRADES

End-of-year funding was allocated for a planned installation of classroom upgrades, which began in late November 2007 and was completed by March 31, 2008. Of the 74 classrooms on campus, 18 received new multimedia presentation systems consisting of a Panasonic PT-FT100U projection system with 3000 lumen, 1280 x 800 native pixel resolution, 16 x 10 widescreen format, and an auto-changing motorized air filter cartridge as well as a new podium and audio-visual routing and control system. Classrooms furnished with the new equipment: Bullard 102 and 103; Ingersoll 322 and 366; Glasgow 113, 114, 115, 129, 130 and 306; Spanagel 136, 208, 231, 321, and 421; and Watkins 146, 147 and 150. AV components were reconfigured into single systems in five classrooms, and new projectors were installed in four auditoriums. The nine year-old equipment in the President's Conference Room in Herrmann Hall was also replaced, including new touch screens.

The Tandberg video bridge was upgraded, providing several new features, including an expanded screen layout capability.

LAB RECAP STATUS

The recommendation that will change the process for how the lab recap process is funded, subject to the same budgetary policies that guide the School, was endorsed unanimously by the IT Task Force at their August 7, 2008 meeting. The issue was put on the agenda of the Provost's Council meeting for action, and the recommendation was approved to provide a separate funding line for educational technology at the

\$500,000 level, subject to usual constraints of resource availability, institutional budget status, etc. The Educational Technology department will submit a written proposal each year, outlining how funding will be spent, and then recap how the money was spent in an *Annual Accountability Report*.

LIFE CYCLE MANAGEMENT PLAN

The Lifecycle Management Plan for classrooms, LRCs, conference rooms, and some labs was presented to the Business Processes, Facilities, and Infrastructure Committee in March, and per President Oliver's request, a list of various campus facilities was compiled for the Board of Advisors when they met in April. The Educational Technology team completed a walk-through of all campus LRCs and classrooms, the results of which will form the basis for the next cycle of technology and environment upgrades.

Additional accomplishments of Educational Technology include:

- Video-tele-education classes: 52 for fall; 42 for winter; 45 for spring; and 44 for summer
- Ongoing effort to test IP VTC link to Harvard University for a computer science course
- A brief to the IT Task Force detailing the latest AV virtual management tool, 'Global Viewer'
- The launch of a podcasting portal for low bandwidth DL student to download classes.
- Streamed and made available via video-on-demand over 5,500 hours of class content.
- Hosted and recorded over 4,000 hours of classes or research projects in the virtual meeting service *Illuminate*.

HIGH-PERFORMANCE COMPUTING (HPC) CENTER

In April, PSSC Labs of Southern California sent technicians to NPS to help install a new cluster called "SVCL" with 264 cores (2.5 GHz Intel 5420 Xeon) that runs at 1.32 teraflop/s, for the Department of Mechanical and Astronautical Engineering's (MAE) Shock and Vibration Computational Lab.

Additional accomplishments of High-Performance Computing include:

- Supporting MAE's new 256-processor cluster.
- Supporting the migration of terabytes of old data for Oceanography to newer their Apple XRAID storage systems.
- Supporting both Oceanography and Meteorology in moving their web server from the .mil domain to the .edu domain.
- Moving a 32-processor IBM computer from Spanagel Hall to Ingersoll Hall; reinstalling the system software and generating operational capabilities on the machine.
- Creating an HPC Wiki to provide HPC training materials to customers.
- Upgrading the memory in the head node to 16 GB, replaced the Fedora operating system with Red Hat Enterprise Linux on the MAE cluster "Cheetah" and reinstall all applications on the cluster with minimal impact to MAE customers.

SONY 4K PROJECTOR

Initiatives related to high-performance computing and a site visit to the CalIT2 facilities at the University of California San Diego last year renewed interest in visualization capabilities at NPS. After consultations with academic leaders, the School agreed to fund a high-resolution Sony 4K projector, which should be installed in the ME auditorium in November 2008. The unit has 10,000 lumens, or three times the brightness of the current projectors, 4096x2160 pixels/8.8 megapixels, and is compatible with different types of signals. The projector supports four DVI inputs and will be installed with an external multi-window video. The 250lb. machine will not affect the projector currently in place in the auditorium. High-end software and technical assistance will be considered in Phase II of the installation.

SYNCHRONOUS COLLABORATION SYSTEMS: *ELUMINATE* PODCASTING

The New Technology and Innovation Center (NTIC) integrated podcasting capabilities into the *Elluminate* system. Recorded classroom presentations can be converted to MPEG-4 video format, making it possible to publish *Elluminate* recordings as podcasts, giving students the ability to download class content to portable digital players such as iPods. Selected courses taught in the VTC are now being converted to podcasts and are being streamed over the web, giving NPS students the ability to download course content to portable devices such as their iPods, digital music players, and/or cell phones. Plans are in place to make selected *Elluminate* recordings also available via podcasts.

VIDEO BRICK (V-BRICK ETHERNET TV) SYSEEM

In March 2008, the Video Brick (V-Brick Ethernet TV system) replaced Webcast-in-a-Box as support for streaming media. Implemented at NPS in 2004, over 100 hours per week — including major events — have been streamed, seamlessly integrating in the existing video-tele-conferencing system. Lifecycle replacement, support concerns, codec limitations through NMCI, LDAP integration, scalability and partnerships with peer institutions have been the main reasons why the generation two of the streaming platform was moved to the V-Brick system. The system enables NPS to encode content in both Microsoft's Windows Media and open source MPEG4 formats, and also provides the capability to encode and stream in DVD quality MPEG2 format for sharing video content with those with larger bandwidth capabilities, such as CENIC partners. V-Brick allows multiple formats, live TV to desktop, synergy with partners, LDAP, customizable portal/video management, better resolution, and simultaneous multiple bit rates. Streaming occurs directly from one or more of the ten VTC encoders and/or two mobile encoders, which have been added existing servers and portals. Special events can bypass the portals. The new enterprise is the Naval Postgraduate School Academic Video Webcast, or NAVCAST. The external link can be found at <http://navcast.nps.edu> and the internal/intranet link is: <http://intranet.nps.edu/navcast>. By being fully LDAP compliant — using standard NPS usernames and passwords to access the system, NAVCast is designed to be highly scalable to meet the needs of the projected growth within the NPS distributed learning environment.

NAVCast can also rebroadcast television signals over the existing NPS IP network, eliminating the need to install cabling in offices and conference facilities that need access to television programming. NAVCast programming is available to internal NPS users via the NAVCast portal. Discussions are underway with the cable provider to finalize the franchise agreement for two live TV channels.

In addition to shows for the Pentagon Channel and the UCTV Research Channel, the new V-Brick streaming system will be one more vehicle to increase the visibility and improve communications throughout the campus.

The software Wirecast, which gives NPS videographers the ability to reduce or eliminate post-production overhead by allowing a videographer to produce a recording in real time or while the event is being recorded, was also adopted, allowing for greater quality and branding of live and recorded public web streams like NPS graduation ceremonies and the Secretary of the Navy Guest Lectures.

ADMINISTRATIVE APPLICATIONS AND SERVICES

BUSINESS SOLUTIONS GROUP (BSG) AND WEB OPERATIONS

In October, the new student muster went live, and includes a code verification process that prevents the use of programs that formerly mustered students automatically. Under the new system, to officially muster, students must type in a code that is randomly generated. The muster is at the following link: <http://intranet.nps.edu/studentmuster/StudentPages/StudentCheckin.aspx>.

The new student muster also features new and improved administrative features which include:

- Creating new announcements and choosing the time at which to publish them
- Editing and/or reviving old announcements
- Viewing and processing Student Leave requests
- Viewing leave by date and status
- Viewing all missed muster for the past three days, two days, and currently
- Viewing daily muster records to see at what time students checked in
- Searching for students by name
- Excluding curriculums from muster list
- Submitting an approved leave for a student
- Recording students that have been alerted of missing muster equal to or more than 5 times a year

MICROSOFT VISTA OPERATING SYSTEM

ITACS tested the interoperability of Microsoft Vista operating system this past year, and determined that Vista is a stable operating system which can be fully supported throughout the NPS enterprise. In preparation for campus-wide support of Microsoft Vista and the Office 2007 Suite, which began on June 16, 2008, changes to the profile server file structure were made. A Vista FAQ web page was created and posted at: <http://intranet.nps.edu/ITACS/WindowsVistaFacts.htm>, and free online training was also made available at: http://www.nps.edu/Technology/Technology/Online_Training.html

Accomplishments of the Technology Assistance Center include:

- Moving 2,516 campus computers to the secure Windows Server Update Services (WSUS).
- Adding all new PCs in the ERN domain to WSUS.
- Moving to Spanagel Hall, Room 105, for the duration the asbestos abatement project that was conducted over the holiday break in Ingersoll Hall.
- Helping to erase the virus, BifRose, on approximately 100 users' computers.
- Processing 40 incoming resident students, and provided two briefings on TAC services for incoming Distributed Learning students — one for EMBA and one for MSSE program students.
- Arranging for support to be provided in stages for the FastData application during its move to Pensacola.

WEB PROJECT UPDATE

A major campus-wide initiative is the conversion to the Web Content Management System. Dr. Fran Horvath, Director of Institutional Planning and Communications and the lead on the web initiative for NPS, identified four main goals of the initiative:

- Identify and categorize web services
- Web servers consolidation
- MIL to ERN transition
- Web Content Management system implementation

To date, accomplishments on the initiative include the completion of the transition from MIL to ERN; the successful pilot of the Web Content Management System in the Dudley Knox Library; an inventory of the web services consolidated sites; identification of missing content and of stakeholders; establishment of business goals for the internal and external sites; creation of functional, technical, compliance and end-user trainings; implementation of Communities of Practice on the SharePoint site; and training for Web Operations staff on the Web Content Management System.

IT MANAGEMENT AND RESOURCES

The FY09 ITACS' budget proposal was presented to and endorsed by the IT Task Force at their June 12, 2008 meeting, and was later presented to NPS leadership.

The following table outlines the money ITACS executed in FY08:

Description	FY08 Execution
Travel	\$ 79,734
Training	\$ 97,695
OPTAR	\$ 2,059,094
Lab Recap \$345K	\$ 332,113
Yr End \$500K	\$ 500,000
POM 08 Increase	\$ 578,982
Network Support Group	\$ 19,815
Python Support	\$ 361,092
Telephone/Communications (TN account)	\$ 658,797
Academic Repair (1L account)	\$ 90,921
Academic Maintenance (1M Account)	\$ 290,361
Certification and Accreditation	\$ 28,709
Fiber Optic Cable Project	\$ 8,450
Indirect (non-labor)	\$ 264,755
Indirect Python Support	\$ 23,055
Reimbursable:	
DMDC (non-labor)	\$ 307,311
NPS Public Works	\$ 675
TRAC	\$ 20,787
DLI	\$ 38,000
Naval Health Research Center	\$ 30,000
IMET:	
Network improvements	\$ 372,672
Labor	
Direct Staff	\$ 4,913,007
Faculty (includes IA faculty)	\$ 762,039
Indirect labor	\$ 435,016
Python Support	\$ 25,284
CHDSL/HSDL Reimbursable	\$ -
DMDC Reimbursable	\$ 473,088

ITACS utilized Lab Recap funds as follows:

Description	Amount
Environmental Fees	\$ 968
Optiplex 755 Desktop MiniTower 223-0591	\$ 33,086
Optiplex 755 Desktop MiniTower 223-0587	\$ 51,563
Optiplex 755 Desktop, Core 2 duo	\$ 42,339
PowerEdge 2950 III, Dual Core Intel Xeon X5260	\$ 21,797
Precision T3400 Convertible MiniTower	\$ 66,176
Mac Pro Z0EM, Xserve, Protection Plan, Monitors	\$ 87,081
PowerEdge 2950 III, Quad Core Intel Xeon x5460	\$ 16,096
Optiplex 755 Desktop (USED RIO)	\$ 13,004
	<hr/>
	\$ 332,110

ITACS utilized end-of year funding as follows:

Sun Blade Room Preparation	\$ 156,299
Kuali	\$ 74,600
Office moves and furniture	\$ 270,510
	<hr/>
	\$ 501,409

RETURN ON INVESTMENT

In addition to the savings in hardware labor, and toner since multi-functional devices (MFD) were installed in the Dudley Knox Library, copied sheets and printed sheets usage have decreased by 33,652 and 60,737, respectively, signifying an excellent return on investment from the new copier contract

INCENTIVE AWARDS PROGRAM

ITACS implemented an Incentive Awards Program, as recommended by the ITACS Awards Committee. Designed to reward performance in a more timely fashion and to improve morale within ITACS, the program includes performance awards, special act awards, "On the Spot" awards, MWR bucks, and an Employee-of-the-Quarter program, "time off" and Special Act awards.

NETWORK INFRASTRUCTURE

THE CORPORATION FOR EDUCATION NETWORK INITIATIVES IN CALIFORNIA (CENIC)

In September 2008, Dr. Christine Cermak was invited to serve a two-year term on the CENIC High-Performance Resource Committee.

MONTEREY PENINSULA DEPARTMENT OF DEFENSE NET (MP DoD-NET)

The Personnel Security Research Center (PERSEREC) located at Heritage Harbor Monterey, transferred their network connection to the Naval Postgraduate School and Defense Management Data Center (DMDC) from a T1 connection to the Monterey Peninsula Department of Defense Net (MP DoD-Net) ring. PERSEREC's connection to NPS is part of NPS MIL network and provides internet connectivity for their organization.

MP DoD-Net added an advanced switch for \$45K at the golf course annex which will allow 10 Gbps throughput for all nodes on the DoDNet. An updated Memorandum of Understanding, which will allow MP DoD-Net to borrow two additional strands of fiber for five years from the city of Monterey. Each member of the MP DoD-Net can pay \$24K to upgrade to 10Gbps, or use the existing 1 Gbps interface at no additional cost. This MP DoD-Net redesign will leverage switched services, replacing the pseudo-ring architecture, creating dramatically more throughput within the network.

Upgrade of fiber to each of the buildings at the golf course annex is underway. Each of the buildings, including those that house the free electron laser and jet propulsion labs, will receive a 10/100/1000 Power over Ethernet Switch with 24 ports, which will provide a 1 Gig uplink to NPS. The conduit through NPS will go through the Monterey Peninsula Department of Defense Net (MP DoD-Net), and clear each building at the annex for migration to a VoIP solution/telephony, increased bandwidth, and internal wireless. San Diego will do the external work at the campground, and US Wire and Mark Beech of Monterey will work with ITACS to complete the \$54K project by early fall. The upgrade was made possible through a partnership with Dean Jim Kays and GSEAS, who will share the cost of the project with ITACS.

NETWORK OPERATIONS CENTER (NOC)

To ensure that all users have sufficient space for their personal and archive PST files, Server Management set quotas for all H drive file systems. Those users who exceeded the quota limit on the present file cluster and required additional file space were moved to the new file cluster server, Denver.

All Network Operations (NOC) personnel — which includes Server Management, Network Operations, Telecommunications and Network Infrastructure — began participating in “Innovation Friday” in early November. NOC personnel participate in cross-training and the sharing of new ideas to further enhance the technology environment and to support the academic and research goals of NPS. Some of the projects planned include IPv6 deployment and integration with domain resources, and a Windows 2008 (Longhorn), Exchange 2007 and VMWare testing environment, but for its initial project, NOC staff are building a test lab in Ingersoll 148 that will be available for use by all of ITACS.

Additional accomplishments of the Network Operations Center include:

- Building six new LINUX servers for the FORCENET project on the nps.navy.mil network
- Implementing Bradford Campus Manager on the external VPN access to the ERN network.
- Implementing spinning disk backup system for essential exchange and file systems.
- Piloting Windows Mobile devices.
- Upgrading the “Steamboat SANS” from a Dell CX3-20 to a Dell CX3-80 scaling from 8 disk array enclosures to 31 disk array enclosures.
- Working on the implementation of MWR Point of Sale system, providing electronic credit card validation.
- Implementing new monitoring tools with the SolarWinds Engineering Toolset and on the web-based Orion software, which will allow the NOC to publish real-time statistics on network operations.

- Continuing to map the coverage of the NGST224 wireless network.
- Continuing to evaluate our current file share environment and move users to ensure they have enough disk space to satisfy their needs.

NEXT GENERATION NETWORK UPGRADE

The basis for the Next Generation Network infrastructure plan is to eliminate single points of failure by providing diverse paths for each academic building; to support *ad hoc* research networks by providing academic buildings a connection to the network core and the ability to connect with any other academic building, and to support emerging technologies and diverse mode, high-speed data, voice and video transmissions. The network requires an upgrade due to increasing demands through video applications, research and collaboration, web-delivered services, wireless and distributed learning students; the continued growth of the network, which quadrupled in the last three years; and the support issues created by using dissimilar equipment, including the lack of patches and upgrade. The goals of the network upgrade are to increase bandwidth to 10gbs backbone and 1 gigabit for desktops, separate the MIL and ERN, provide support for Power Over Ethernet (POE) and ease of management increase digital media, streaming technologies and high-performance capabilities; provide flexibility, reliability, security and stability; increase active ports from 6,000 to 10,000; provide better monitoring and tools for making real-time decisions and isolate network failures; and increase CENIC to 10 gigabits.

A committee was formed to assess network upgrade vendor proposals. To ensure broad-based consultation on the process, the committee included both staff and faculty representatives. The group held closed sessions that included Mr. Bradley Crawford, a representative from FISC. The two top choices were presented to FISC, which then took the lead on discussions and negotiations with the vendors. On October 24, 2008, Ms. Lonna Sherwin of the Network Operations Center hosted vendors' visits to NPS. During the week of November 5-9, 2008, formal presentations by vendors were made, all proposals were reviewed, and initial evaluations were made by the Service Selection Board.

The initial proposals for the network upgrade exceeded the amount allowed; therefore, the project was broken into three Contract Line Item Numbers (CLINs), which cover the Core Data Center, the Building Distribution Center and the Individual Distribution Center. Funding covered an upgrade to core devices, building distribution centers and augmentation to the existing wireless under CLINs 1, 2, and 4. The new vendor proposals were sent to FISC on January 22, 2008, and the contract for the network upgrade was awarded to Trofholz Technologies, Inc. (TTI-Tech) of Rocklin, California, which also has a remote office in Monterey.

The network equipment is from Foundry Systems and will replace the CORE, Server Farm, and Building Distribution Facility equipment. The upgrade will enable a 10 Gig core and building infrastructure. To improve research capabilities, the upgrade will provide 10 Gig to the border router and firewall for the NPS connection to the county of Monterey CENIC connection. The CORE equipment is MLX-8, the Building Distribution Frame (BDF) equipment is MLX-4 and one SX800 to be installed in Bullard and the server farm equipment is SX800. Additional wireless equipment was also part of the contract. For ease of management, the new wireless implementation will allow the Network Operations Center (NOC) to deploy 150 access points using two controllers which will allow centralized management. Additional funding was allocated to procure additional 10 Gigabit cards, a backup controller for wireless to allow for redundancy and the edge switches. The edge switches are Fast Iron models FGS648, FLS648 and FLS624. The FLS series are small and will work well in places like Glasgow, where space is at a premium. Edge switches with POE will be installed in every closet for the lightweight wireless access points. Foundry Corporation donated additional equipment and on-site training for three classes through the NPS Foundation.

The new infrastructure will provide secure and redundant single-mode optic fiber. All connections will go through Herrmann Hall and Ingersoll Hall, and redundant paths are available for all connections. The core network equipment is active monitoring for redundancy, which is helpful when IOS upgrades are needed. The configuration will be VRRP-E, which has high availability in the CORE, and MSTP, which is used for redundancy.

The CORE was built and tested. Work was done each week on one building, and on Saturday mornings the network was brought online. By the following Wednesday, the building routing was moved to the new network. All buildings were completed by mid-October, after which the replacement of the edge switches was planned.

Additional monitoring capability was also procured. INMON, web-based and accessible from a desktop, will be used to monitor the network and provide enhance the security monitoring. Solarwinds' Orion will be used to provide drill down monitoring capability via the web.

A MIL presence will remain on campus for mainframe access and MIL research projects. New equipment was procured to support the network over the older multi-mode infrastructure. A new Juniper border router, firewall and CAC VPN appliance replaced the present CISCO PIX firewall, VPN and border router.

WIRELESS

With the new Next Generation Network upgrade, 150 Foundry lightweight access points were procured. These access points will be controlled by a centralized management system in the NOC. The IronPoint mobility series MC3000 controllers provide centralized configuration and management for ease of deployment, multi-layer security approach, eliminates channel planning and co-channel interference problems, integrates easily with existing infrastructure and is a scalable solution. The radio frequency intelligence automatically selects the best power and channel settings. The NPOC is using the N+1 approach with the controllers giving scalability and redundancy of equipment.

As each building is brought online, the present wireless access points are being replaced with the IronPoint. The access points are POE allowing the NOC to place them in areas where there is no power. Emphasis on placement is within the classrooms and study areas.

COMMUNICATIONS, PARTNERSHIPS AND OUTREACH

CAMPUS PARTNERSHIPS

In FY08:

- Dr. Christine Cermak signed the document confirming that ITACS is meeting the intent of the policy for the Management Inventory Control Program. To date, ITACS has charted initial risk assessments of contracting, the purchasing process, time cards, purchase requests by staff, and will focus on Information Assurance next year.
- ITACS collaborated with the Navy Exchange to bring Apple/Mac products to its customers.
- ITACS developed an online section of NPS technology 'Who's Who' titled "NPS Notables" as part of the NPS Centennial.

CENIC PARTNERSHIPS

In FY08:

- CENIC President Jim Dolgonas visited NPS and met with both President Oliver and Provost Ferrari.
- The Conference Committee of CENIC visited Monterey, had dinner with ITACS leaders and Monterey Assistant City Manager Mr. Fred Cohn, and visited NPS. The CENIC Committee is considering Monterey as the site for their 2010 Conference.

DEPARTMENT OF DEFENSE PARTNERSHIPS

In FY08:

- EDS, NMCI, NAVFAC, NAVFAC SW representatives met regarding the 52 NPS public works seats that the Southwest Region installed at NPS.
- Stakeholders for NPS' distributed learning initiative met with the Director of the Advanced Distributed Learning Initiative for the Office of the Secretary of Defense Dr. Robert Wisher to share ideas on furthering standards for learning object repositories. Discussions included *Elluminate*, VBrick, training, modalities, growth, challenges, problem-solving, and costs of IT support for distributed learning.
- Ms. Terri Brutzman and Mr. Joe LoPiccolo visited the Center for Asymmetric Warfare (CAW) at Pt. Mugu in Oxnard, California for a tour of their facilities. The visit was an important step towards understanding the uniqueness of their geographic location as well as network connectivity challenges.
- Dr. Christine Cermak and Dr. Shelley Gallup, research associate professor and director of FORCEnet Innovation and Research Enterprise (FIRE), signed a Memorandum of Agreement (MOA) which formalizes ITACS' support of FIRE, including housing and maintaining servers.
- The CIO of the U.S. Naval Academy, Mr. Lou Giannotti, the CIO of the Naval War College, Mr. Carlos Andreu, and the Chief Information Security Officer of the Naval War College, Mr. Joseph Topping, joined Dr. Christine Cermak and ITACS managers in a three-day consortium at NPS. The main focus of the meeting was to review and finalize the draft of the business case analysis which the consortium presented to NETWARCOM.

INDUSTRY PARTNERSHIPS

In FY08:

- The President of Global Marketing and the Executive Vice President of Xerox, Mr. Mike McDonald, visited NPS. Mr. McDonald offered to supply evaluation printers to the New Technology Center for campus-wide hands on testing, and he extended an invitation to NPS constituents to visit the Xerox Research Park in Palo Alto.
- Oracle demonstrated Data Vault, which functions as a Privacy Identifiable Information protection product. Because Data Vault is able to integrate with both Python and MS SQLonL, campus constituents were invited to attend the demonstration.
- Xerox presented its DocuShare CPX Platform to the campus and to invited guests of the local government and higher education institutions. DocuShare is a robust knowledge management and process management system that is currently in use at NASA's Mars Rover Project, Stanford University, Tulane University, and the University of Maryland.
- Mr. Bill Vass, President of Sun Microsystems' Federal Division, visited NPS, attended a presentation by Dr. Jeff Haferman of the High-Performance Computing (HPC) Center, and discussed possible collaborative projects between Sun and NPS HPC.
- Representatives from Jeskell Systems visited NPS to present the latest high-performance computer offerings from IBM.
- Dell Computer conducted an interactive workshop on various aspects of Microsoft Vista. Personnel from the Technology Assistance Center and other people from ITACS attended the training.

- BPA Authority for the Dell contract was approved, and orders for IT (computer) requirements not to exceed \$100,000 can now be placed through the Dell Premier Site at <http://intranet.nps.edu/ITACS/OrderComputer.htm>.

UNIVERSITY PARTNERSHIPS

In FY08:

- Dr. Christine Cermak and Dr. Ted Lewis of the Center for Homeland Defense and Security (CHDS) signed a Memorandum of Agreement, which outlines the services that ITACS will provide to CHDS in support of its mission and major support activities.
- President Daniel Oliver, Provost Leonard Ferrari, Dr. Christine Cermak and Mr. Stephen Loeffler visited Dr. Larry Smarr at the CalIT2 facilities at the University of California in San Diego. In addition to discussions with Dr. Smarr, the group also met to discuss issues related to CENIC and the CalIT2 programs with Chancellor Marye Ann Fox, as well as a number of faculty and academic leaders. The team from NPS also met with President Mary Ann Lyons and Provost Julie Sullivan of the University of San Diego.
- In support of the IT strategic Plan, Dr. Christine Cermak visited the University of the Pacific and met with the university's Provost Phil Gilbertson and other campus leaders.
- Dr. Cermak met with VP of Technology Lee Belarmino and Director of Finance Claire Tyson of San Joaquin Delta College, the third institution to join Quali, the community source financial system developed by universities.
- Dr. Christine Cermak, Mr. Joe LoPiccolo and Ms. Terri Brutzman visited San Diego State University to learn more about their connectivity and infrastructure support for Homeland Security collaboration with CalIT2.
- Dr. Larry Smarr, President of the Board of CENIC and Director of the Advanced Technology Center at the University of California San Diego and CalIT2 visualization facilities visited NPS and met with President Oliver, Provost Ferrari and members of NPS academic departments to discuss high bandwidth requirements, research partnerships and telepresence videoconferencing capabilities. Dr. Smarr also presented a talk to the campus titled "From the Shared Internet to Personal Lightwaves: How the Opti-puter is Transforming Scientific Research." Dr. Smarr is interested in conducting monthly videoteleconferences with NPS constituents to further collaborations between NPS and UCSD.
- Vice Chancellor of Information Technology Mary Doyle of the University of California Santa Cruz toured the campus and the IT facilities, participated in IT-related discussions, and also met with President Oliver and Provost Ferrari.
- A team from NPS attended the High-Performance Research Workshop at the CalIT2 facilities, of which demonstrations of virtualization, 4K projection, and the Opti-Cluster were included. Efforts are underway to conduct regular meetings with CalIT2 to develop common funding for joint proposals on collaborative projects, particularly as Asian markets such as Singapore continue to develop stronger network links.

CONFERENCES/SEMINARS: FY08

In FY08:

- **Campus Technology Conference** and visit to Harvard and the Massachusetts Institute of Technology: Mr. Joe LoPiccolo, Mr. Jon Russell and Mr. Cullen Jones of ITACS.
- **CENIC Conference:** Dr. Jeff Haferman presented "An Overview of Research at the Naval Postgraduate School using High-Speed Networks and High Performance Computers."
- **CENIC High-Performance Research workshop:** Dr. Jeff Weekly and Byounghyun Yoo of NPS conducted demonstrations of requirements using high-bandwidth connectivity for scientific research; a team from ITACS attended.

- **Department of Defense High-Performance Computing (HPC) Annual Conference:** President Daniel Oliver, keynote speaker; HPC Technical Manager, Dr. Jeff Haferman, Dr. Gabrielle Jost HPC specialist, and Operations Research Professor Susan Sanchez attended.
- **EDUCAUSE Western Regional Conference:** Dr. Christine Cermak and LCDR Warren Yu presented "Establishing Corporate Relations within an IT Department" and "Igniting Information Technology Corporate Relations."
- **EDUCAUSE Western Regional Conference:** Ms. Terri Brutzman and Mr. Jason Cullum presented "Vulnerability Assessment and Patch Management."
- **EDUCAUSE Western Regional Conference:** Mr. Joe LoPiccolo, Mr. Alan Pires, Mr. Jon Russell, Mr. Jason Cullum, Ms. Michelle Turner and Mr. Nam Nguyen presented an overview and recaps of workshops they attended at the EDUCAUSE Conference. Topics included general trends, Help Desk, Virtualization in Education, Applied Security Metrics, Project Management, Apple's Learning Exchange, and Distance Learning Integrative Teaching Solutions.
- **National High Performance Computing and Communications Council's 22nd Annual Government HPC and IT Conference:** Dr. Jeff Haferman, HPC Technical Manager, attended.
- **Western Association of Schools and Colleges Conference:** Mr. Joe LoPiccolo, Ms. Eleanor Uhlinger and Dr. Christine Cermak were chosen from over 100 applicants to present their proposal on "Applications of New Tools to Enhance Distance Education."
- **Western Association of Schools and Colleges Conference:** Mr. Joe LoPiccolo and Ms. Irene Berry from the Dudley Knox Library presented "Synchronous Collaboration System Evaluation."

INFORMATION TECHNOLOGY RESOURCES DIRECTORY

Christine Cermak	Vice President Information Resources and Chief Information Officer
Joe LoPiccolo	Executive Director
Terri Brutzman	Deputy Director
Jim Hall	Director, Resource Management
Tracy Hammond	Director, Instructional Technology
Chris Abila	Manager, Technology Assistance Center
Jeff Haferman	Manager, High-Performance Computing Center
Bob Gentry	Manager, Data Center Operations
Alan Pires	Manager, Business Solutions Group
Lonna Sherwin	Manager, Network Operations Center

INFORMATION TECHNOLOGY TASK FORCE

	Joe LoPiccolo, Executive Director, ITACS
Doug Brinkley, Senior Lecturer, Graduate School of Business and Public Policy	Thomas Mastre, Director, Office of Continuous Learning
Don Brutzman, Associate Professor, Information Sciences	Robert McNab, Associate Professor, Defense Resource Management Institute
Terri Brutzman, Deputy Director, ITACS	LCDR Kent Meyer
Christine Cermak, Vice President, Information Resources and CIO	Rudolf Panholzer, Professor and Chair, Space Systems Academic Group
James (Jason) Cullum, Information Assurance	Loren Peitso, Senior Lecturer, Computer Science
Peter Denning, Chair, Department of Computer Science and Director, Cebrowski Institute	Jonathon Reedy, Systems Analyst, Dudley Knox Library
Doug Fouts, Associate Dean of Research, Professor, Department of Electrical and Computer Engineering	Jonathan Russell, Director, Academic Technology

INFORMATION TECHNOLOGY TASK FORCE

Simson Garfinkel, Associate Professor, Department of computer Science	Paul Sanchez, Senior Lecturer, Operations Research
Chris Gaucher, Privacy Manager	Judit Sedillos, Manager, Library Systems
Jeff Haferman, Manager, High Performance Computing	Jack Shishido, Supervisor, Comptroller's Office
Jim Hall, Resource Manager, ITACS	Scott Siegel, Assistant Professor, National Security Affairs
Thomas Halwachs, Director, Financial Systems	Kristen Tsois, Lecturer, Defense Analysis
Richard Harkins, Senior Lecturer, Physics	LCDR Warren Yu, Director, IPCOE
Stephen Hurst, Senior Lecturer, Defense Management Resource Institute	Danielle Kuska, Director, Sponsored Programs
Jeffrey Knorr, Professor and Chair, Electrical and Computer Engineering	Robert Koyak, Associate Professor, Operations Research

GOALS: FY2008

ACADEMIC APPLICATIONS AND SERVICES

FY 07 GOALS NOT COMPLETED: EXTENDED TO FY08

- Complete the first annual Classroom Maintenance Plan
- Develop capability for automated monitoring of classroom and laboratory computer systems (60% complete)
- Replace facility media systems, based on the LMP, as resources are available
- Complete the Streaming Portal Phase I
- Evaluate the PC Tablet deployment in CEE for use in the LRC and classrooms
- Evaluate and select a Video Tele-conferencing to the Desktop solution
- Continue implementation of the Enterprise Web Content Management project
- Continue the implementation of the Enterprise Share Point project

FY08 GOALS

- Promulgate VTE/VTC/AV Coordination policy
- Develop High-Performance Computing project plan, including budget for POM10
- Establish NPS "Grid" and link with University of California Santa Barbara: High-Performance Computing
- Expand IP Videoconferencing
- Gain traction on visualization initiative: High-Performance Computing
- Improve High Performance Computing Center aesthetics
- Re-establish the High-Performance Computing "core" Advisory Group
- Upgrade the power in the High-Performance Computing Center and bring up the 128-processor IBMp690
- Assist the TAC manager with determining the best Service Desk/Self-help system.
- Hire a student employee to assist with basic Web site maintenance.
- Begin training Business Solutions Group staff members in Project Management.

ADMINISTRATIVE APPLICATIONS AND SERVICES

FY07 GOALS NOT COMPLETED: EXTENDED TO FY08

- Evaluate a File Transfer Protocol-like appliance
- Evaluate an Identity Management appliance
- Investigate additional hardware encryption options for remote access
- Investigate and recommend an Email Attachment Storage Solution

FY08 GOALS

- Eliminate* expansion to include podcasting, increase courses, increase faculty involvement
- Podcasting Repository Pilot (build a database for storage, access and metadata tagging)
- Present at two major conferences (Educause and WASC)
- Pilot SAKAI as a possible enterprise solution for our next learning management system

IT MANAGEMENT AND RESOURCES

FY07 GOALS NOT COMPLETED: EXTENDED TO FY08

- Formalize Lifecycle Management Plan:
- Institutionalize the use of the ITM software for the decision making process

FY08 GOALS

- Assist in the development of alternative funding requests, including IMET
- Assist in the development of budget and program review submissions
- Continue to improve the Disaster Recovery Plan
- Develop system for approving and tracking training requests
- Institutionalize the use of the ITM software for asset management
- Provide assistance in the transition to the NSPS system

NETWORK INFRASTRUCTURE

FY07 GOALS NOT COMPLETED: EXTENDED TO FY08

- Complete the Certification and Accreditation of unclassified networks, enterprise systems and applications
- Implement SIP (Session Initiation Protocol) server for expanding VoIP capability
- Implement Virtual Server Infrastructure
- Upgrade Intuity Audix voicemail to Modular Messaging
- Upgrade Definity G3R PBX to Communications Manager PBX

FY08 GOALS

- Upgrade to Exchange 2007
- Upgrade SANS to provide more storage capability
- Implement “spinning” backup for major server services
- Implement IPv6/v4 dual stack network in a “sandbox” with connectivity with NRL over DoDNet and DREN
- Implement a manageable wireless network with increased connectivity
- Implement network access control to wired network
- Implement CAC authentication for SSL VPN access on CISCO ASA
- Implement Windows Server 2008 Infrastructure in “sandbox”.
- Upgrade Citrix farm to version 4.5 /64 bit version on new hardware
- Implement CAC VPN access

COMMUNICATIONS, PARTNERSHIPS AND OUTREACH

FY07 GOALS NOT COMPLETED: EXTENDED TO FY08

- Finalize the Higher Educational IT Consortium with the Naval Academy and Naval War College and incorporate within the Navy Educational Enterprise
- Participate in implementing the Regional International Outreach program

FY08 GOALS

- Create or strengthen partnerships with City of Monterey, CSUMB, DoD Monterey Peninsula, EDUCAUSE, DoN CIO, NETWARCOM, Internet2 and CENIC
- Create or strengthen partnerships with industry
- Create or strengthen partnerships peer institutions
- Create or strengthen partnerships with departments and campus leadership

GOALS: FY2009

ACADEMIC APPLICATIONS AND SERVICES

FY09 GOALS

- Complete the annual Classroom Maintenance Plan
- Continue working to establish an NPS “Grid” and link with University of California Santa Barbara: High-Performance Computing
- Continue developing the NPS visualization initiative: High-Performance Computing
- Continue the effort to Virtualize additional classrooms and LRCs
- Develop a web-based request system for audio-visual support
- Develop a NPS iTunes University presence that is integrated with the current NPS streaming system
- Develop a video archiving strategy that meets the needs of the NPS faculty without over taxing campus storage
- Develop strategy for publishing of *Illuminate* podcasts
- Establish Faculty training and support/assistance for Sakai CLE
- Increase the IP VTC capacity for NPS and continue to investigate IP VTC to the desktop solutions.
- Integrate other learning tools into Sakai CLE (Streaming, podcasting, *Illuminate*, Python, etc.)
- Move the Sakai CLE pilot to an enterprise platform and create business processes for the new system
- Prototype automated classroom audio/video podcast recording system for non VTC classrooms
- Re-establish the High-Performance Computing “core” Advisory Group
- Replace two aging academic license servers with new servers purchased through lab recap
- Set up new email server in STBL
- Transition course work from Blackboard to Sakai CLE
- Update the NPS public video portal
- Update the STBL/SCIF VTC systems
- Upgrade to Office 2007 in all LRCs and classrooms

ADMINISTRATIVE APPLICATIONS AND SERVICES

FY09 GOALS

- Continue the Enterprise Web Content Management system for www.nps.edu
- Evaluate a File Transfer Protocol-like appliance
- Evaluate a File Transfer Protocol-like appliance
- Evaluate an Identity Management appliance
- Expand *Illuminate* to include podcasting, increase courses, increase faculty involvement
- Implement the JIRA system as a tracking system
- Investigate additional hardware encryption options for remote access
- Investigate and recommend an Email Attachment Storage Solution
- Move the Enterprise Wiki pilot to an enterprise hardware platform and create business processes to support scaling the capability from pilot to enterprise
- Podcasting Repository Pilot (build a database for storage, access and metadata tagging)

- Present at two major conferences (Educause and WASC)
- Select and implement the best Service Desk/Self-help system

IT MANAGEMENT AND RESOURCES

FY09 GOALS

- Absorb Educational Technology budgeting and budget execution functions
- Assist in the development of alternative funding requests, including IMET
- Exam options for electronic signatures of time cards

NETWORK INFRASTRUCTURE

FY09 GOALS

- Assist NPS in the implementation of Quali Financial Systems
- Assist NPS in the selection of the next Student Management System, piloting Quali Student System
- Complete the network upgrade for the remaining Individual Distribution Facilities (IDF), implementing 1 Gbps to the desktop
- Complete the upgrade of the telecommunications systems in support of the NPS Unified Communication Plan
 1. Upgrade Intuity Audix voicemail to Modular Messaging
 2. Upgrade Definity G3R PBX to Communications Manager PBX
 3. Evaluate the business need for upgrading to e-mail, looking at unified messaging and e-mail archiving as drivers of the next e-mail solution
 4. Upgrade Veramark ECAS to Verasmart.
 5. Procure "911etc" to automate updating of AT&T e911 database with the physical locations of our extensions
 6. Implement on-line web based phone book
 7. Implement AtHoc Emergency Notification System Implement individual on the fly Avaya audio conferencing
 8. Implement Avaya one-X web or desktop on 100 to 200 users (this includes/replaces the SIP server in FY07)
 9. Implement Avaya one-X mobile on 100 government issued cell phones
 10. Implement Avaya soft VOIP on 100 to 200 laptops, linked to user's desktop extension
 11. Implement Avaya soft VOIP phone for Windows Mobile (up to 250 single mode (data) or up to 100 dual mode (data/WiFi))
 12. Implement SIP (Session Initiation Protocol) server for expanding VoIP capability
 13. Retire majority of individual fax extensions, replaced with fax services part of Modular Messaging
- Continue with physical improvements to the Data Center (storage, and improvement to electrical power)
- Continue the establishment of Computer Network Defense (CND) coverage on all networks
- Continue working on the off-site backup solution for NPS
- Continue the Certification and Accreditation process for all networks, enterprise systems and application
- Continue to implement CAC authentication for SSL VPN access on CISCO ASA
 1. Implement Avaya soft VOIP on 100 to 200 laptops, linked to user's desktop extension
 2. Implement Avaya soft VOIP phone for Windows Mobile (up to 250 single mode (data) or up to 100 dual mode (data/WiFi))
 3. Implement SIP (Session Initiation Protocol) server for expanding VoIP capability
 4. Retire majority of individual fax extensions, replaced with fax services part of Modular Messaging
- Continue to improve the ITACS Disaster Recovery Plan

- Develop a Portal to replace the Intranet Website
- Evaluate administrative systems for inclusion in the Kualii solution
- Expand Monterey Peninsula Department of Defense Net capability to include classified data delivery; Secret Internet Protocol Router Network (SIPRNET)
- Implement IPv6/v4 dual stack network in a "sandbox" with connectivity with NRL over DoDNet and DREN
- Implement network access control to wired network
- Implement network access control to the wireless network
- Implement 10G Research network to interface with CENIC research partners
- Implement 10G connection to the TERAGrid
- Implement new backup solution using spinning disks as primary media and with archiving capability
- Implement an external LDAP solution
- Implement Microsoft Mobile Manager
- Implement Windows Server 2008 Infrastructure in "sandbox"
- Pilot record management solution to meet government regulations
- Replace 100 to 200 VIP users digital phones with hardware VOIP phones, redeploy digital phones
- Transfer Defense Language Institute Foreign Language Center and Presidio of Monterey telephone trunks from leased T1 lines onto the MP DoD-Net
- Upgrade version 4.5 64-bit Citrix Presentation servers to 5.0 64-bit Citrix Xen App server
- Upgrade ventilation and security capability in network closets
- Upgrade MIL network to a GIG connection to DREN

COMMUNICATIONS, PARTNERSHIPS AND OUTREACH

FY09 GOALS

- Create or strengthen partnerships with City of Monterey, CSUMB, DoD Monterey Peninsula, and other local partners
- Create or strengthen partnerships with City of Monterey, CSUMB, DoD Monterey Peninsula, EDUCAUSE, DoN CIO, NETWARCOM, Internet2 and CENIC
- Create or strengthen partnerships with industry
- Create or strengthen partnerships peer institutions
- Create or strengthen partnerships with departments and campus leadership