UMBC
AN HONORS
UNIVERSITY
IN MARYLAND

Division of Information Technology

Annual Report 2010

DoIT By The Numbers

277,500,000 MB (megabytes) of usable storage or 277.5 TB (terabytes)

230,000,000 Email messages sent and received (estimate)

7,637,683 *my*UMBC logins (includes 8,657 Paws, 4,677 News Items & 1,834 Spotlights)

200,633 Documents stored on ImageNow (41,428 since 9/1/09)

143,565 Page views of Blackboard on most active day (9/9/09). Daily average = 57,505

22,109 Support tickets resolved (7/1/09 to 6/30/10)

21,248 Wired data ports on campus

12,534 Help support calls (1/1/10 to 6/30/10)

8,116 Telephones on campus

5,000 AV service transactions (e.g., deliveries, laptop loans, support incidents)

3,800 Computers in Active Directory (AD)

2,500 Students using "audience response systems" (aka "clickers")

1,700 Weekly downloads of content on iTunes@UMBC

1,430 Blackboard course sections (not including 215 multiple section Bb sites)

901 Wireless access points (80 percent campus coverage)

350 Daily views of UMBCTube (on YouTube)

100 Subscribers to the UMBC Digital Storytelling Community of Practice email list

78 FT DoIT staff (32 UMBC alumni)

72 PT DoIT student employees

Year in Review
By Jack Suess, VP and CIO

Welcome to the Division of Information Technology's (DoIT) first annual report. Reflecting on this time last year, our focus was on four major initiatives:

- The launch of the Student Administration (SA) project;
- Updating our infrastructure for email and storage;
- Deployment of our new High Performance Computing (HPC) research cluster; and
- Supporting academic continuity in preparation for concerns over the H1N1 virus.

While success is never final, all four initiatives are now in place as a foundation to build upon. We continue to work with the functional offices and Michael Busges on advancing SA to meet the needs of the campus. We updated our email and storage infrastructure and had no major events this past year, but continue to struggle with spam caused by successful "phishing" attacks that trick users into giving up their account passwords. The new HPC research cluster, initially delayed due to issues with cooling, was finally launched in the spring giving us a ten-fold improvement in HPC; and the lessons learned in supporting H1N1 were tested during the snow events this past February and are being integrated into training we provide faculty.

In addition, we began work on four additional priorities designed to improve your experience in using technology at UMBC:

- Upgrading Blackboard to version 9;
- Supporting iStrategy for financial reporting;
- Migrating to Google Apps for Education; and
- Launching *my*UMBC 3.0.

Blackboard 9 is the first offering since Blackboard and WebCT merged in 2006, and will serve as the basis for new innovations, including our own. UMBC has been reworking the integration with SA for course enrollments, but we are also looking at new services, such as ways to integrate the Bb grade book back into SA and improve reporting of how students, faculty and staff use Bb.

The iStrategy initiative is a partnership with Financial Services that will greatly improve financial reporting. While this will be a multi-year effort, we expect to see Financial Services release the first phase of this in the early fall by providing new tools for tracking state-support budgets. Future phases will work on integrating other fund sources such as grants and projects.

Over the summer we successfully completed a contract with Google and have migrated all new students over to Google Apps for Education. Starting this Fall, all other students will be eligible to begin moving their mail over. The switch to Google covers much more than email and we expect students to appreciate the collaborative capability of Google Documents.

The launch of *my*UMBC 3.0 is intended to tie all these initiatives together and provide a framework for supporting the community. We have streamlined the interface, revamped the topic pages, and built a new group interface into *my*UMBC that allows groups to have a shared calendar, spotlights, documents, and other resources necessary for collaboration.

For the next few years a key focus of DoIT will be responding to the IT Restructuring Report recommendations (see back cover). I'm very excited about the opportunities for collaboration this affords DoIT in working with other units and look forward to working with our Faculty Senate Computer Policy Committee and IT Steering Committee on plans and recommendations.

Lastly, let me thank the DoIT staff members who so ably did their jobs this past year. DoIT staff members are nationally recognized for their work and I'm honored to have the opportunity to lead this Division.

FY 10 Accomplishments

Administrative Computing
- Completed first full academic year under Student Administration (SA).
- Finalized the legacy Student Information System (SIS) on HP3000 to SA. Solution involved Multiple Vendors:
  - Oracle/PeopleSoft for most SA processing
  - T2 Systems for Parking Management
  - CashNet for Student Business Services
    - eBilling
    - Monthly Payment Plan
    - Electronic Payment Gateway
    - Cashiering
- Established quarterly updates to HR and SA.
- Transitioned DoIT staff to new technologies removing need for external consultants.
- Enhanced SA reporting via REX Data Warehouse (iStrategy)
- Expanded Document Imaging to the Office of Financial Aid and Scholarships
- Expanded the SA Advising Module for a more comprehensive Advising Process
- Developed Person of Interest (POI) process to expedite new faculty, staff, and students access to university systems (e.g., parking, *my*UMBC, Blackboard, etc.).
- Performed annual system update for Document Imaging (ImageNow)
- Performed annual system update for Data Warehousing (iStrategy)
- Implemented code management system for PeopleSoft to meet audit requirements
- Achieved USM audit compliance for logical access and code management
- Performed annual system update for DoIT Help Desk (RT)
- Expanded Help Desk (RT) solution for other campus support requests
  - College of Engineering and Information Technology (COEIT)
  - Financial Aid and Scholarships
  - Graduate School
  - Parking Services
  - Registrar's Office
  - Student Business Services

Teaching, Learning, and Technology
- Supported the campus "Instructional Continuity" efforts including distribution of 140 MP3 audio recorders to faculty and providing short (5 min or less) "just in time" online videos showing essential Blackboard tasks.
  - FA2009 Bb usage (1,430 sections) increased 30 percent vs FA2008 (1,014 sections). Nearly 70 percent of UMBC's course offerings now use Bb.
- Piloted 24/7 basic (Tier 1) Blackboard support using Presidium Learning, Inc. Since launching in November 2009, UMBC has averaged 246 calls, 192 tickets, and 1,700 views of 216 online knowledge base articles each month.

DoIT's Steve Anderson demonstrates how to use an MP3 recorder to capture lectures that can be posted in Blackboard. In 2009-10, the Provost's Office purchased 200 units and DoIT distributed 140.

Teaching, Learning, and Technology continued

Karin Readel

- Completed search for Director of Instructional Technology resulting in hire of Karin Readel, formerly senior lecturer in Geography and Environmental Sciences.
- Implemented a custom "Check My Activity" (CMA) Blackboard report that allows UMBC students to compare their own activity against an anonymous summary of peers. If instructors use the Bb grade center (about half of all Bb courses do so), students can compare their activity with students who earned the same, higher or lower grade for any assignment. To date, the CMA averages 1,300 visits per week (80 percent is repeat traffic), spending 1 minute to view 2-3 reports.
- Collaborations with the Provost's Office included support of six faculty for the first ever Fall semester hybrid learning pilot in courses with 40-70 students—UMBC's most acute classroom shortage. DoIT also worked with Academic Services and Facilities management to develop UMBC's first Classroom Maintenance Plan.

Summer 2009 Digital Storytelling Workshop Participants

- Switched "audience response systems" (aka "clickers") by adopting Turning Technologies, after extensive consultation with the Student Government Association (SGA) and Faculty Senate Computer Policy Committee (CPC).
- Offered the 5th annual Digital Storytelling Workshop attended by 13 faculty members and facilitated by four experienced faculty "alums," who are now experienced practitioners

Infrastructure, Security and Disaster Recovery

- Completed cooling upgrade in ENG data center to accommodate new 84 node research cluster (Cost ~120K)
- Upgraded door access control systems (Lenel) to new version
- Upgraded Campus Shibboleth Identity Provider (IDP) service.
- Video Surveillance Cameras are being added to the roof of Fine Arts and the roof of Public Policy. Public Policy Camera is being funded by the PAHB project. Office of Residential Life (ORL) is funding the Public Policy camera as a part of the Patapsco addition.
- Network service is being extended to Columbus Center.
- Backing up our data to the USM Headquarters.
- Lenel upgrades for both ORL and the Main Campus

Improve DoIT Services

- Upgraded Scantron system to use Campus ID
- Problem management committee formed (meets weekly on Tuesday mornings, reps from each DoIT department)
- Deployed customer service survey in March 2010

Campus Web Development and Communications

- New *my*UMBC infrastructure configured and brought into production by Campus Portal group.

Research Computing

- 84 Node Research Cluster (Tara) setup and brought into production.
- Research storage (7410) brought into production for the cluster as well as ongoing consolidation of Research storage moving forward (consolidation phase almost completed).
- Transition of Research groups from previous HPC cluster to new 84 node cluster and HPC cluster brought out of service.
- Produced five episodes of "UMBC in the Loop" about research of faculty in arts and sciences that appeared on the nationally syndicated ResearchChannel and YouTube. Stories included the following:
    - *Manil Suri* - UMBC President Freeman Hrabowski interviews Dr. Manil Suri, professor of mathematics and best-selling novelist on his teaching, research and two novels, "The Death of Vishnu" and "The Age of Shiva."
    - *Christopher Corbett: Orphans Preferred* - Host Ed Beimfohr interviews Christopher Corbett, Author of "Orphans Preferred: The Twisted Truth and Lasting Legend of the Pony Express."
    - *Preminda Jacob: Celluloid Deities* - UMBC Arts professor Dr. Preminda Jacob discusses her new book "Celluloid Deities" with mathematician and novelist Manil Suri.
    - *Carlo DiClemente* - Mike Lurie, Director of Media Relations at UMBC talks with Dr. Carlo DiClemente, Professor of Psychology about two of his books: "Changing for Good" and "Addiction and Change."
    - *Stephen Braude* - Chair of the Department of Philosophy and author of "The Gold Leaf Lady and Other Parapsychological Investigations" is interviewed by Dr. John Rennie Short.
    - *John Rennie Short* - professor of Public Policy at the University of Maryland, Baltimore discusses his two most recent books, "Cartographic Encounters" and "Cities and Nature" with host Stephen Braude.

FY11 Goals

Administrative Computing

- Improve campus access to information through expanded use of iStrategy and related reporting tools in finance, student billing, and financial aid.
- Work with functional offices to:
    - Streamline course scheduling prior to spring 2011;
    - Improve grants management business processes; and
    - Expand campus use of document imaging.
- Upgrade HR/SA and Finance to peopletools 8.50; plan Finance hardware upgrade.
- Work with SA Executive Committee to:
    - Ensure important SA processes for grades, scheduling, billing, advising, and financial aid operate efficiently.
- Work with SA Academic Advisory group, identity SA enhancements to support faculty and academic departments.
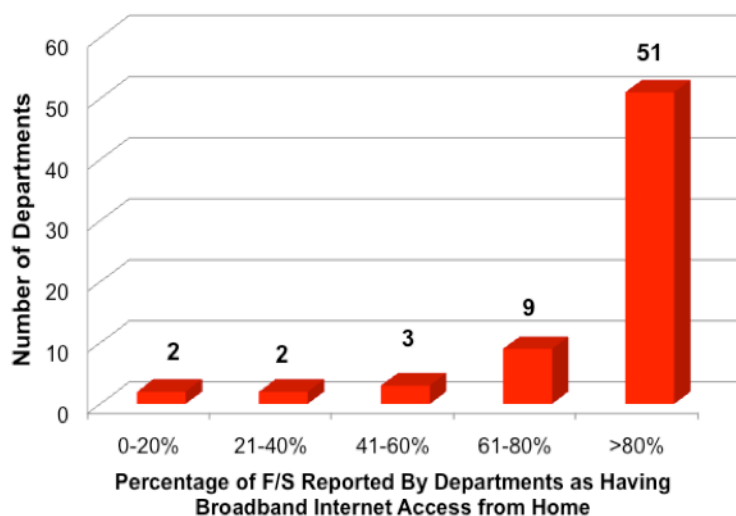
Teaching, Learning and Technology

- Support pedagogical innovation and instructional continuity:
    - Promote greater faculty adoption of Blackboard's online grade center and "adaptive release" function to increase student feedback and self-paced learning opportunities.
    - Continue the faculty hybrid course redesign program
    - Pilot migration of Bb student activity data into iStrategy for deeper analysis and identification of effective practices and practitioners.
- Work with Faculty Development Center, continue our faculty brownbag workshops
- Work with the Deans to support innovative, effective and efficient use of CASTLE
- Continue to promote and support use of digital storytelling in courses.
- Work with Provost's Classroom committee to expand and manage our instructional AV resources.
- Support adoption of new Turning Technologies "clickers"

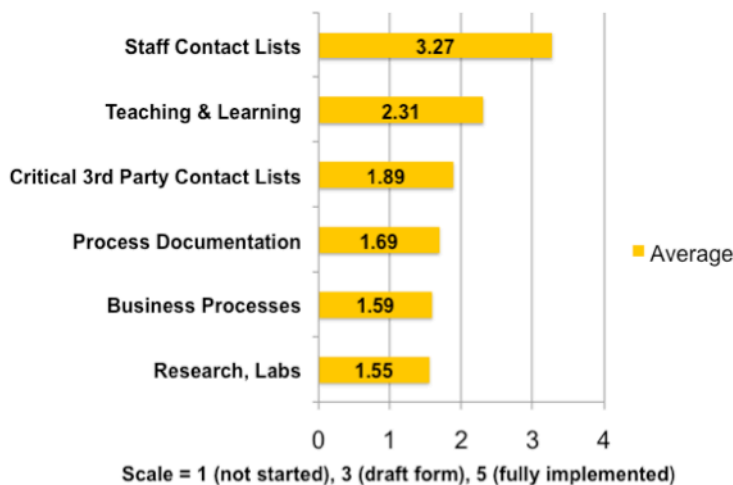## Infrastructure, Security and Disaster Recovery

- Successfully transition our student email to Google Apps for Education. Also, move our faculty-staff spam filtering to Google.
- Develop multi-year plan for updating computing infrastructure upgrades
- Work with the UMBC Business and Academic Continuity Committee to update or develop campus planning, implementation and assessment.
- Work with Management Advisory Services to prepare for the legislative audit that will start in mid-year 2011 by reviewing and updating our documentation and policies for IT security.
- Support the transition of infrastructure services from COMB to UMBC.
- Monitor construction plans for Performing Arts and Humanities Building (PAHB) and the Communications Tower.
- Successfully partner with Montgomery Community College to deploy a Virtual Computing Lab (VCL) environment.

Internet Access at Home

Source: Summer 2010 UMBC Business and Academic Continuity Survey

Department Preparedness Rating

Category	Average
Staff Contact Lists	3.27
Teaching & Learning	2.31
Critical 3rd Party Contact Lists	1.89
Process Documentation	1.69
Business Processes	1.59
Research, Labs	1.55

Scale = 1 (not started), 3 (draft form), 5 (fully implemented)

Source: Summer 2010 UMBC Business and Academic Continuity Survey

Improve DoIT Services

- Support the DoIT Problem Management Committee's rollout of monthly metrics and identify a set of support recommendations to build organizational capacity in DoIT.
- Transition support of COMB IT services to UMBC
- Develop a plan for DoIT and Library collaboration in support of the Student Learning Center.
- Support the implementation of the Provost's strategic planning initiatives in restructuring IT.
- Successfully partner with Hilltop Institute and Commonvision on shared positions.

Campus Web Development and Communication

- Release *my*UMBC 3.0 for start of Fall 2010.
- Develop a proposal through the IT Steering Committee for meeting the web development needs of departments on campus.
- Upgrade the Confluence Wiki server to the new version and revamp DoIT's Frequently Asked Questions (FAQs).

Research Computing

- Develop long-term plans for addressing the growing needs for research file storage.
- Develop a multi-year facility plan to address the needs of HPC.

ASSESSMENT & METRICS

2009 Educause Center for Applied Research (ECAR) study, *Undergraduates and IT*, completed by 30,000 freshmen and seniors at more than 100 colleges and universities:

UMBC's "most or almost all" student responses (selected questions):

• How many of your instructors use information technology (IT) effectively in courses: 46.2% vs. 43.5% (national avg.)

• How many of your instructors provide students with adequate training for the IT in courses: 32.8% vs. 31.3% (national avg.)

• How many of your instructors have adequate IT skills for carrying out course instruction: 45.1% vs. 43.2% (national avg.)

User Satisfaction Results (survey available on all resolved RT tickets since March 2010)
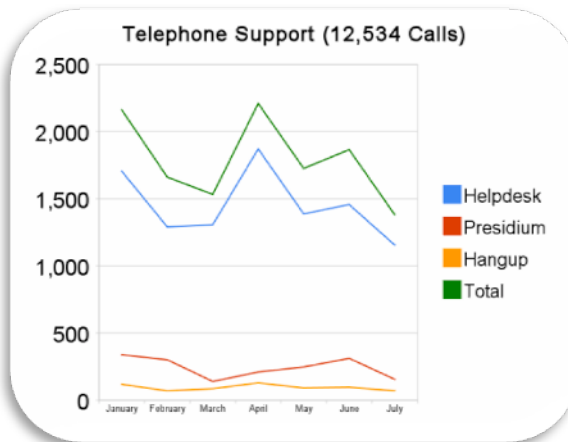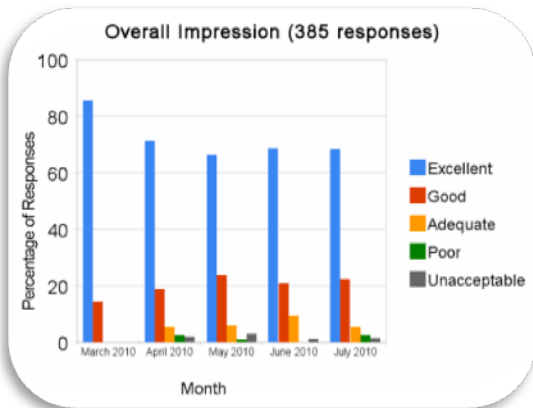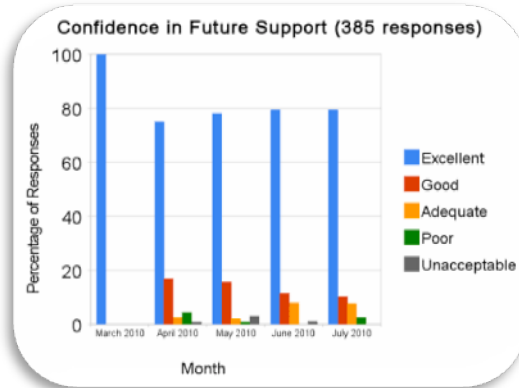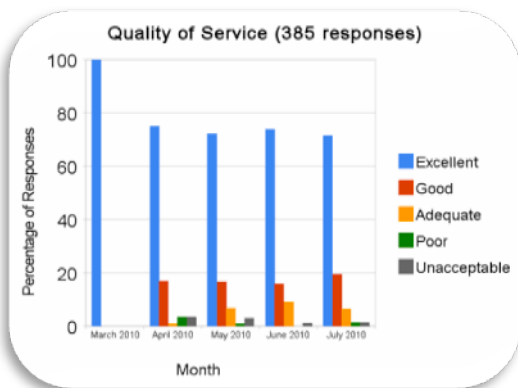
DoIT Response to the IT Restructuring Plan
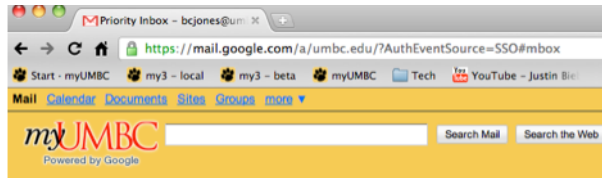
1. Leverage cloud services and move student email to Google Apps for Education (Fall 2010)

2. Augment computer labs by establishing recommended laptops for students and launch the Virtual Computing Lab (VCL) pilot (Fall 2010)

3. Revise UMBC's cell phone policy (Spring 2011)

4. Create a subcommittee to review software site license support (Spring 2011)

5. Migrate Oracle calendar users to Google Calendar or Microsoft Exchange (Spring 2011)

6. Facilitate volume computer purchase discounts across all divisions by leveraging "best pricing" terms of the Provost's annual "Computer Replacement Initiative" (CRI) (Spring 2011)

7. Create a subcommittee to review campus web development (Spring 2011)

8. Develop Library & DoIT Support Plan for the Student Learning Center (SLC) (Spring 2011)

9. Leverage Educause and Internet2 for all campus IT staff to support access to professional development (Fall 2011)

10. Use RT request tracking system for all IT service requests (Fall 2011)

11. Use Confluence knowledge base wiki for all campus IT documentation (Fall 2011)

12. Provide DoIT trained student web development program (Spring 2012)

13. Develop hybrid staffing model and pilot 1-2 examples (Spring 2012)