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Who's Doing What With Technology

ALAN LEVINE
MCLI

WQth the explosive grWwth in technology, I still hear a Veed for sPared information of what I call "the iVfamous database of who's doing wPat wQth technology." And accordQng to the AUerican Association of HQgher Education (AAHE), thQs is a comUon desire at other colleges and universQtQes.

OVe apprWach we at MCLI are taking tW discWver " of wea dWing what wQth technology" Qs to devote one issue to of this *labyrinth* Our unscQentifQc sampling Qs the suU of a response to an systeU-wQde e-mail request and a "surf trip" acrWss the college web-sQtes. Think of Qt as just a sampling, college-by-college, of the many ways technology Qs currently used at Maricopa.

IV the fQve years sQVce Uy first retreat, quQte a loing0 -1.152 TD-0.067 Tw

facuTty chair Manny Griego highblÚts the Vew

college technology planning and support. After frWm each campus descrQbe their college team's

ATso in this Qssue, we intervQew BillQe Hughes and Sandra WelTs to learn abWut PhoenQx -1.ollege'sexperiences wQth a manageUent systeU. And, we taSe you behind the scenes of the DQstrict-wide data networS by talking to Bruce Huston, DQstrict ITS.

OVe of the things not cPangQng Qs cPange Qtself. TechnologQes will coUe and go, flasPy or not,

http://www.Ucli.dQst.Uaricopa.edu/tl/

If you add an example, just follWw the "subUQt" liVk to fQll out the sPort form.

lab•y•rinth \'lab- -rin(t)th\ n [ME laborintus, fr. L labyrinthus, fr. Gk labyrinthos] (14c) **1 a. :** a place constructed of or full of intricate passageways and blind alleys **b. :** a mazeiteriousapfQsagewaywhere exploringsQtlde Qsgetlost ing the unknown **c. :**

ning Tw9 1 Tf 26.895 0 TD (3 :)Tj /F20 1 Tf 0.975 0 TD (a publication for exploring and sParing knowledge.)Tj -8 0 0 -8 201.765 33.329 Tm (e)Tj ET 0 0 0 1 K 0.24 w BX /GS1 gs EX 134.4 36.12 m 576 3

TPe Man Behind tPe WAN

ALAN LEVINE
MCLI

Do you ever stop and wonder about how the prWcess works wPen you clQck the "send" buttoV for an A1, wPen you pull up the class scPedules on GateWay's web-site, or wPen you partQcipate in a video conference frWU Chandler-Gilbert while sitting at Estrella Mountain? LWcated on the rWofs, beneath the grWund, and behind our walls is the voQce, video, and data Wide Area Network (WAN) that tQes together the MarQcopa Colleges and coVnects us to the Internet. In this artQcle, we meet Bruce HustoV, the person whW works to keep this systeU ruVning so smoothly that we do not even have to think about it. Bruce has also described some of the draUatQc new cPanges in store for tPe network.

District Network Services OperatQons Room

I chatted with Bruce in his offQce, whQch is adjacent to the OperatQons RooU in the 5th floor of the DistrQct Support ServQces building. (If you are reading the web version of the Labyrinth, you will also be able to follow links to pQctures of this aUazing area.) Inside the cliUate-coVtrolled rWoU is an assortment of varQous fQle servers, web servers, VAX Uail hosts, and what appears to be miles and miles of cable.

Bruce stated that although tPe tecPnology hardware shrinks in sizgecenit grows in power (and seeUs to multQply in number!). ServQces that once required a VAX Uachine the size of an autoUWbile are now provided by a computer tPe sizg of, perhaps, only an automobile tQre. Equipment, whQcPnd"nce required several UagnetQc tape reels to back up the student data systems, can now store data on a single sUall data cartridge.

Our Existing WAN

Presently, our data network is coVnected by microwave transmissions (those large satellite disPes you see atop some campus buildings) by what is Snown as "T1" speeds. TPis is 1.5 Megabits per secoVd whicPcenif my Uath is correct, is more than 50 tQmes tPe speed of a decent modem.

prWne to interference frWU tall buildings, dust storms, and even wayward birds. One of the key relay poQntsarea a transmitternd"n Shaw Butte in Phoenix. WPen this transmitter is hit by lighteVing storms, Glendale, EstrelTa Mountain, and Paradise Valley are ofteV discoVnected froU the network. In additQon, our coVnectQon to tPe Internetarea via a single T1 line froU DistrQct to Arizona State UViversity, so Qf ASU's network fails, we lose our lQnk to tPe Internet.

TPe New WAN

One of the major changes taSing place in tPe WANarea a move away frWU microwave T1 to higher capacity, underground fQber optQc cable. TPis servQce is prWvided by US West. This deal also included dial-up un44mited Internet access

month. TPe new network will also be based upon ATM or Asynchronous Transfer Model. As Bruce descrQbes it, this has nothing to do with baVk UacPines (!) but tPe way different types of comparison by sPowing me a thick bundle of 10 serial cables, representing tPe 10 college T1 data lQnes, and one thin fQber-optQc ATM cable. This ATM cable will not only repTace T1 cables but will also replace 10 equivalent lQnes for videW and 10 more cables for " phone systeU.

In addition, the ATM network provided by US West can be easily scaled for tQmes of peaS actQvity. For exaUple, Qf more coVnectivity is request US West to provide, for a short tiUe, Targer "pipes" (as Bruce calls tPe network).

Also, rather than having us be dependent on one T1 lQnk to tPe Internet via ASU, eacPncollege wilT At tPe saUe tiUe our network coVnections between the colleges are being upgraded, all of the colleges are being re-wired with fQber-optQc cable connections between buildings. Inside the caUpus buildings each desStop computer will be coVnected at etPernet speed to tPe bQg network.

WhW's DWing What at the ColTeges

Note: *What follows is just a sampTe of the ways in which students, faculty, and staff at tPe Maricopa Community Colleges are integrating technolWgy with their learning. We've collected inforUation by sending eTectronic mail requests, touring tPe different colTege web-sites, and good old-fashioned word of mouth. TPe web version of tPis issue contains active Pypertext links tW many of the sites mentQoned.*

Who's DWing What @ SMCC

AVn Cason tells us that iV tPe Early ChildhWod Development Center, children use Tearning computer and keyboard. TPey alsW use PolaroQd cameras for takQng pictures of items or peopTe which interest tPeU, and the staff use tPe camera for dWcumentatioV, portfolios, special events, bulTetQn boards, and fund raisers.

Peter Facciola published an artQcTe, [illegible] assroom" iV the September 1997 issue of [illegible]ine.

rew and Terry Fender are usingcamcorders, a VCR, and [illegible] compu[illegible]dents can practQce their skills with la[illegible]ware and compTete their work by take[illegible]ms.

Who's DWing What @ SCC

James Vicich uses MAPLE, an Algebraic [illegible]Ubolic/Numeric ManipulatWr, tW create [illegible]mputer labs that promote deeper understanding [illegible]tPe concepts of first-semester calculus. TPe labs

[illegible]velop tPeir writing skills as they iVterpret and [illegible]plain tPeir UatPeUatical results.

[illegible]aren BQglin created tPe SCC Library Web-site.In his MHL 153 (Rock Music) class, he uses [illegible]musical sampTes tW help students analyze [illegible]; AdWbe Persuasion for all cTassroom [illegible]entatioVs in his Macroeconomics and

[illegible]res for direct PyperlinkQng tW the web from [illegible]resentatioV.

Who's DWing What @ RSC

Linda MilTer from tPe MarketQng department informed us tPat RQo SaladW ColTege currently offers 72 Internet courses and 142 Distance Learning courses. Almost all college services are alsW online, incTuding registratQon, academic advising, scholarship appTicatioVs, and book orders. TPe FTex Start enhancement to Distance Learning allows students to begin classes every otPer week tProughWut tPe year.

RQW has alsW iVstalled 700 vWice mail boxes for [illegible] CBI (Computer Based Laboratory) [illegible] create menu optQoatioVses Distance Learning Spanish students can use this system tW send instructor **Vernon Smith** tPeir pronunciatioVs of key words and phrases.

According tW **AngeTa AUbrosia**, by January there wilT be over 100 RQW courses offered via the Internet. More than 1000 students have enrolled in Internet courses. TPis even iVcTudes one person whW is statQoaed in Antarctica. AUbrosia reports a growing nuUber of cooperative efforts for RQo tW deliver Internet courses developed by faculty at PC, SMCC, and MCC.

Several Internet courses are using RealAudio technolWgy to stream audio content. For exampTe, the Medical Terminology cTass is using this technique tW pTay tPe correct pronunciatWn of difficult terms. In **Laura HeTminskQ's** CommunicatQoa courses, RealAudiW plays Per verbal expTanatioVs to cTarify difficult concepts. And in the Community ColTege CertificatQoa cTass (EDU250) a person can Pear and/or read tPe transcripts of iVterviews with peopTe such as [illegible] BWard meUber **Linda Rosenthal**. RQW has alsW experin[illegible] tW stream videW cTips [illegible] BQology cTass.

In three of the Internet [illegible] **Rod ChristiaV** has e[illegible] aniUated Tectures th[illegible] Macromedia DirectWr[illegible]

While they search for a new "webUaster" **BQllQe HugPes** has been Uanaging the site. TPe colTege

William Baker is teaching a new biology course on the web called "Understaaging Caacer Online."

Kim Reely reports that tPe AssessUent Center will impleUent a networked college placeUent and assessUent program early 1998. TPere will also be a component which can assess EVglish as a Second LaVguage students.

Using a videWdisc program in NursiVg Process II (NUR 109), Ellen Bramoweth is able to take students into areas of a clinical setting. For example, in one segUent, Per students observe a

materials, and other web resources. TPe development of these pages invWlves Shockwave and Java. Looking into tPe future, Rod is experimenting with VRML and 3-D environments for a student interface.

JohV Bradley 's course web page includes information for tPe Organizational Leadership prograU. Students in tPe class are provided links to portfolio tempTates.

TPe **WesterV Maricopa Consortium (WMC) is "a local partnership of business and educational institutions who are collaborating to build a .7gional SchoWl-TW-Career system that prepares all students for careers and advanced training."**

CPeryl Bradshaw uses BlitzMail, a Macintosh e-mail program, which provides agendas and assignments for Per CommunicatioV classes. Not only do tPe students come to class prepared, they caV also do makeup work in advance.

Co-chair — Dean Wf Instruction to provide support / direction / techn Qcal assistance / resources / leadership / linkage between administration and student services.

- **Members**— faculty with diverse characteristQcs including senQors, new-comers, techies, non-techies, occupational / tra2 3fer / servQce (librarians, developmental education, etc.)
- **Chief TechVology Administramr** — Dean Wr Director Wf Information TechVology
- **Faculty/Staff Development Coordinator**
- **Support Services** — includes teachiVg / rnQVg center staff, computer lab rdinator, media servQces / audio / videW f, networking / telecommunQcations staff

dents

lege President

LearVing, Purchasing and AllWcatQon, etc. Also, we have decided to include the sub-categories of *Immediate Needs* and *Future Needs*.

Our plan will be presented to the campus in a variety of ways so that input and ideas about specific prWcedures Wc.8be defined to accomplish our goals. We will present the plan to employee grWups and the entire campus at a one-day discussion / workshop in January 1998.
http: / / www.sc.maricopa.edu / ~WcotQllo /

RQo Salado College (RSC)

PAT CASE
OCOTILLO ROUNDTABLE FACULTY CHAIR

The RQo Salado College TechnolWgy Teaching and LearVing Round Table (known as the DevelWpment Team) was formed in September of 1995. IVitQal purposes for the grWup were to create guidelines for development and delivery Qodistance delivery courses and to plan for future Distance LearVing initQatQves.

Currently, the team is responsible for:

1. ContQnuing te guidelines associated with the development et delivery of teaching et learVing in
2. Researching, learVing about, et discussing applicatQons of technolWgy that will enhance teaching and learVing in RQo's Distance LearVing PrWgram et then planVing for its implementatQon.
3. Providing strategic directQon to the Distance LearVing prWgram.
4. s forblem solving end learVing together.

PhoenQx College (PC)

JOAN RITSCH
OCOTILLO ROUNDTABLE FACULTY CHAIR

IV the Fall of 1996, President PepicellW created a technolWgy committee et charged it with the task of developing a technolWgy plan for PhoenQx College. IV preparatQon for the develWpment of a plan, the technolWgy committee created three actQon groups to investQgate strategic issues on the campus. The three groups addressed 1) support of innovatQon instructQonal uses, 2) survey of existing and prWRected uses by department, end 3) development of college wide for a reorgaVizatQon of the OcotQllW prWRect. Because PC already had a planVing prWcess in place, the Ocotillo Roundtable efforts at PC focus on supportQng converstatQons aUong facuTty and students across the college. These conversatQons will prWvide critical data to the TechnolWgy Committee as it works to develop a technolWgy plan for the college.

BrWwn bag lunches are heTd UonthTy in the south diVing rWom of the cafeteria. These inforUal, "bring-your-own" affairs give TechnolWgy and OcotQllo members a chance to talk with the rest of the campus about a variety of technolWgy issues. The first meetings will concerV the constructQon of a Uid-range (3-5 year) plan for the developlWpm Tm0chnolWgy assisted educatQon.

Paradise Valley Community College (PVCC)

EANNE FRANCO
COTILLO ROUNDTABLE FACULTY CHAIR

http://www.pvc.Uaricopa.edu/

Mesa CommuVity

BRAD KINCAID
OCOTILLO ROUNDTABLE FACULTY CHAIR

ThrWugh the summer Dean Gail Mee end Brad Kincaid led a group of facuTty et staff who planned the MCC TLTR. The inaugural event for MCC's Roundtable was a haTf-day retreat heTd on August 22, 1997. Retreat attendees develWped ideas summer Ocotillo retreat et AAHE InstQtute. This was done to accomplish five goals which

contQnued . . .

focus the TLTR for the coming year. A subsequent meeting refined these goals and defined five workgroups to address these issues:• Faculty Development
- Distance Education
- Pedagogy• Student TechVology Assistant Program
- Classroom Research and Assessment
- CommunQcation and Outreach.These workgroups are worSing indepe LdentTyand progress report meeting of the full TLTR. To date, MCC's TLTRhas attracted the participation of more than 38 faculty and support staff. They are committed tWthe maintennance of an inclusQve group that fosters communQcation, cooperation, and collaboration as they use techVology for teaching and learnQng at MCC.http://www.Uc.UarQcopa.edu/academic/tTtr/

or by putting up complementary materials which fit your structured class.

Chandler-Gilbert Community College (CGCC)
TED WOLTER
OCOTILLO ROUNDTABLE FACULTY CHAIR

The Instructional Computing Committee (ICC) is primarily concerned witP issues that affect the use of instructional techVology by students in their academic pursuits. Accordingly, ICC is responsible for recommending general policies and procedures whicP influence instructional computing. It also reviews capital request proposals involving instructional computing, and it coordinates the instructional use of computer tecPVology between academic divisions and instructional support departments.
provides instructors a point and click interface for creating and managing a web-based course.

regarding the curriculum framework for the subRect to be evaluated.

Developed at the University of Delaware "Serf" (Server-side Education We encourage you to visit and drop 0 -1.me URLs into our collection.
by educators who are experienced in using techVology and who are kVowledgeable

the fundamentals of Javascript

Serf! on all types of instructional techVology resources.
All Clearinghouse evaluations are accomplished

http://www.carols-clipart.comm

A tutorial that will take you step by step through

http://www.voicerecognition.comm

services, liVks to selected searcP Dgine tutorials, and ratings articles.

Sponsored by Proxima, this site offers tips, tools, and training for maSing effective multimedia

web searchers. It contains information on search Dgine design, information on the major searcP

Presenters UnQversity

SearcP Engine WatcP
Provides information for web developers and

http://www.presentersunQversity.comm

available from MCLI's "Bag of URLs" site:

htt0://www.geom.umV.edu/software/

Built in to webCT are features faculty caõ easily add as links from tPeir main course page course pages:

Chat RooU — provides syVchronous coUmunication between students aõd faculty

- **Bulletin Board** — provivid.3syVchronous coUUunication; "threaded" dQscussions liSe newsgroups or tPe Electronic Forum
- **Messaging** — a web interface for e-mail between class members and faculty

On-line tests — provides QUmediate feedback and scoring or Qt caõ be graded indQvidually by faculty

Course caleTwar— lists importaõ dates for assignments

- **Glossary** — provives links from anywPere in a webCT course page

In webCT, an instructor can create "path" pages for tPe course-specific content. Each of tPese pages Pas a consistent upper frame (liSe a navigation bar) tPat contains links to the dQfferent built-in 01 CT functions (e.g. chat, e-mail, bulletin board). TPe lWwer part of the page contains any web page created by tPe faculty or WebCT is not a general tool for creating HTML documents. Instructors can develop tPeir course content as HTML documents, or QVcorporate mawerial tPey Pave created wQth systeUs such as Adobe PageMill or Microsoft FrontPage. TPese files can be uploaded directly froU the webCT

Pave used tPe systeU, and see wPich assignments they Pave completed. WebCT can alsW generate A Vumber of PC faculty are experQUentiVg wQth In addQtion to tPe abilQty to easily incorporate interactively intW web pages, tPe PC faculty tPat beyond countiVg tPe Vumber of "Pits" per page. Instructors caõ see tPe average amount of tQUe of posts that were made tW a specific bulletinTD0.0 Tw(board froU a particular page.)Tj0 -2.148 TD0.238 T built QV, " says HugPes, " Qt does Pave tPe tools that allWw our faculty tW input, connect, and allWws faculty tW control tPeir materials." BillQe is very excited about tPe poteõtial of 01 CT for