ADP News

So long, ADP. Hello DoIT.

An era in campus computing will end on March 1 when ADP, MACC, and Telecommunications consolidate under the Division of Information Technology’s banner. For 22 years, ADP has delivered mainframe computing, office automation, and a host of other services to UW-Madison. Those services will continue, although the ADP organization will disappear.

Early in March, DoIT will contact all of its customers to discuss the reorganization and how it will affect them. But rest assured that you will continue to receive the service you’ve counted on over the years.

Although ADP News may be gone in name, we will continue to keep you posted on campus computing through a new DoIT newsletter. The mailing lists from the ADP, MACC, and Telecommunication newsletters are now being merged. The new DoIT publication will serve a broader audience of technology users at UW-Madison and beyond. Look for the first issue of the new DoIT newsletter this May.

Great moments in data processing:
A look back at 20 years of system development milestones at ADP

Administrative Data Processing was created in 1972, following the merger of the University of Wisconsin System and the Wisconsin State University System. Two computing groups joined to form ADP, which was dedicated almost exclusively to developing, supporting, and operating mainframe teleprocessing applications.

Although its role in campus computing has greatly expanded in the two decades since, ADP has continued to focus on providing information technology services to academic and business administrators and to faculty, staff, and students for their administrative needs. Thousands of data processing systems have been delivered, enabling staff to efficiently manage the affairs of the institution.

By 1976, ADP had more than 150 employees, was supporting 115 terminals on campus, and began publishing a newsletter, called ADP News. The number of terminals was the largest in the Big Ten at the time, and ADP was a pioneer in providing online access to data. In fact, UW-Madison was one of the first universities to make all of its administrative systems available online.

By late 1979, ADP’s service had expanded to include minicomputer-based word processing and other office automation tools. That service would grow from five workstations at ADP and one at UW Publications to almost 1,800 campuswide by the late 1980s. A wide range of office automation products, including electronic mail, spreadsheets, and network access, was made available on those workstations.

In the 90s, ADP has been helping users plan, acquire, and install local area networks to maximize the power of thousands of microcomputers on campus.

See "History" on page 2
In 1980, ADP and UW-Madison Libraries took the first steps toward library automation by installing computer terminals and wand readers in the Reserve Book Room. Over the next 14 years, the Network Library System — with its online public catalog, circulation, and other systems — would become an indispensable research and instruction tool for students and faculty.

The wealth of information available worldwide on the Internet has become more accessible thanks to Gopher, an electronic tool developed at the University of Minnesota. ADP and other campus organizations joined forces in 1992 to establish WiscINFO, a UW-Madison campuswide information system based on the Gopher software.

Software design and implementation at ADP have been characterized by revolutionary change. In the 70s and 80s, ADP began to rely less on procedural languages (such as COBOL) for writing program code and moved instead to languages such as NATURAL, DABAL, SAS, and SuperNatural. An important result of this transition has been an expanded role for users, many of whom are now doing their own reports and queries against institutional databases.

In 1986, ADP adopted DB2 as its relational database management system, making possible more independence for the University’s mainframe application programs and permitting integrated, flexible data structures. That would set the stage for such systems as IADS.

In the late 1980s, the Integrated Appointment Data System, or IADS, was a major achievement for ADP and the administrative offices that guided its development. IADS integrated personnel-related information from accounting, payroll, personnel, and budget, and made it easier for campus staff (most of whom were not programmers) to use the University’s administrative data.

Since then, many IADS-related projects have improved the University’s administration. Payroll History, Person Information, Budget redesigns, and employee benefits systems are just a few.

By the time IADS arrived in the late 80s, UW-Madison had long enjoyed the benefits of integrated databases for student and curricular systems. The Integrated Student Data System (ISDS), which was formalized in 1978 and based on work done in the late 1960s by one of ADP’s predecessor organizations, provided a single source for student data. By eliminating duplicate systems, ISDS made possible more accurate and timely data and helped to codify business rules for storing and updating student and curricular information. ISDS also provided a solid foundation for touchtone registration.

After two years of intensive development and three semesters of pilot testing, automated student registration became a production system in the fall of 1989. This cooperative effort of ADP, the Instructional Space Office, and the Registrar’s Office not only freed students from the ritual of standing in line to register, it automated much of the registration process for departments and University administrators.

In 1990, the availability of data and the tools to easily analyze and report that information led to an ADP initiative called User Access to Data. The goal of the User Access program is to enable University staff to see what data is available, select the data they want, and bring it to their microcomputers for use with spreadsheets and other software tools.

As the consolidation into DoIT neared, ADP was building on its successes in distributed computing and client/server computing.

- NLS was an early distributed computing application, dating from 1980 and now in a state-of-the-art UNIX environment integrated with mainframe databases.
- Touchtone registration is a major distributed computing application that involves DEC machines and the IBM mainframe.
- EASI, WiscINFO, and MacNLS are all client/server applications and are among largest and most widely used of the University’s information technology tools.

Other studies and pilot tests continue, all with goal of providing easy access to information — no matter where it is stored.

Those efforts, like all of the services provided by ADP, will carry on as DoIT pursues its new mission.
DIAL ACCESS

WiscWorld dial access:
What does it mean for ASK users?

Since WiscWorld dial access became available to students last September and to faculty and staff in January, users have completed more than 500,000 phone calls to the system. Almost all of those connections have been “successful,” meaning that the user dialed, connected to the University’s server, and launched a WiscWorld application without a hardware or software problem.

The reliability and popularity of WiscWorld dial access has raised questions about the future of ASK, a DoIT/ADP service that allows a microcomputer with a modem to connect to the ADP mainframe over a phone line and function as a 3270 terminal. ASK has long been a convenient, reliable tool for people who only need occasional 3270 access.

But now WiscWorld also offers that service with TN3270, an Internet protocol that provides a connection to mainframe teleprocessing. So how do ASK and WiscWorld dial access compare? ASK costs $0.09 a minute or from $96 to $120 a month; WiscWorld is free. ASK is slower than WiscWorld. ASK is based on an obsolete hardware platform (the IBM Series/1); WiscWorld is as current as you can get.

The question is “Should ASK users switch to WiscWorld dial access?” The answer for UW-Madison faculty and staff is probably “Yes.” Those not affiliated with UW-Madison should continue to use ASK until a statewide WiscWorld-like service is available.

If you do switch to WiscWorld, you may notice that the screen display is somewhat different from the ASK display. You may also notice that 3270 keyboard mappings are different. The ASK key combination that gave you PF-13, for example, may give you different results in WiscWorld’s TN3270 environment. For a chart of WiscWorld’s 3270 key mappings, see “WiscWorld Version 1.1 Release Notes,” available on WiscINFO (see “About WiscINFO and WiscWorld Services at UW-Madison”) or in paper form from the DoIT Customer Center at 1210 W. Dayton St. Because the WiscWorld TN3270 environment is new, DoIT may have to refine it in a future release.

WiscWorld computing services include access to WiscINFO (and the worldwide resources of the Internet), the Network Library System, the EASI transaction (for students), and electronic mail. WiscWorld is only available for the Macintosh and DOS platforms; it is not yet supported on the Windows, OS/2, and Unix platforms. Users of ASCII terminals who want access to the DoIT mainframe should continue to use ASK.

For more information, including how to acquire WiscWorld, see WiscINFO (select “About WiscINFO and WiscWorld Services at UW-Madison,” the top pick on the WiscINFO menu).

For more information on dial access for faculty and staff, contact Jess Anderson (anderson@macc.wisc.edu, 2-5888).

 UW System Administration payroll merges with UW-Madison

DoIT staff recently completed the first step toward a single University Payroll Processing Center.

In late December, staff in the Payroll and Benefits area successfully merged the UW System Administration payroll operations into UW-Madison’s Peterson Processing Center (PPC).

For 20 years, two payroll and accounting operations have served the University System. But over the next several years, the two payroll centers — PPC and the WARF Processing Center — will be combined into a single unit, the University of Wisconsin System Administration Processing Center (UWPC).

Neal Deunk, project leader for the System Administration Conversion, says this group was chosen because of its size — fewer than 300 people, or less than one percent of the total PPC volume. Deunk explains, “It was an exercise to show that we could work toward combining the two systems.”

The System Administration payroll data was entered into the PPC system last September. It was maintained simultaneously on the PPC and WARF systems for three months before the move to PPC was made final in December. Deunk described the move as “a very clean conversion.”

University officials established the UWPC to defray the costs of running and maintaining two payroll and accounting systems. At a time when University resources are tight, Deunk says, “Maintaining two systems that do essentially the same thing does involve a cost. In the long-run, there will be a benefit to having one system.”

The processing center merger will be an ongoing effort.
PRINTING

Print mainframe output on your Novell LAN printer

A new DoIT/ADP service called WiscPrint II makes it possible to generate mainframe output, such as student transcripts, on printers attached to any Novell local area network at UW-Madison. This can save a lot of time and money for campus departments.

WiscPrint II simply sends the print file from the mainframe to a print queue on the Novell LAN. The service has three big advantages:

**Speed** — The output is printed quickly; most files are delivered to LAN print queues within 30 seconds and print soon after.

**Reliability** — To deliver print files, WiscPrint II does not rely on intermediate (and sometimes poorly monitored) Internet gateways. Instead, it links directly to local Novell LAN file servers via the campus network. If print doesn’t arrive as expected, you can check the LAN print queue; if the print file isn’t on the queue, just call the Help Desk.

**Low cost** — WiscPrint II carries a modest price tag — a one-time registration fee of $480 and an annual subscription fee of $80. No new equipment is needed. A LAN administrator can easily configure the system to receive mainframe output.

A good example of using WiscPrint II is the simple one-page transcript, the most common document produced by ADP network printers. Say a staff person in the InterCollege Programs (ICP) office wants to print a student transcript. He or she requests the transcript with mainframe transaction SICC (one of 11 such transactions available for different departments), goes to ICP’s Novell LAN printer, and picks up the paper copy in about 30 seconds. He or she can monitor the status of the print job with the PCONSOLE utility.

WiscPrint II is an alternative to a service called WisPrint, which ADP made available in 1992. WisPrint sends print files from the DoIT mainframe to remote printers that have Internet addresses. It was not intended for printing on demand, as WiscPrint II is, and it has proven to be too slow for that purpose. Moreover, WisPrint requires that the user’s LAN be equipped with an Internet gateway, which can be expensive to install and difficult to maintain.

To set up your Novell LAN for WiscPrint II, contact Doug Woodworth at 263-4628 or send e-mail to doug.woodworth@mail.admin.wisc.edu.

SYSTEMS DEVELOPMENT

ADP tests the KnowledgeWare analysis and design methodology

ADP is replacing its “homegrown” approach to systems analysis and design with a new methodology and tools.

In January, ADP began a pilot project using KnowledgeWare’s ForeSight methodology and the Application Development Workbench (ADW) toolset. According to Lon Schoor, ADP Development Center Area Manager, the new approach will make systems development more effective.

Schoor describes the ForeSight methodology as a cookbook, of sorts, and ADW is the computer-aided software engineering (CASE) toolset used to support the methodology.

The methodology describes and defines the who, what, where, when, why, and how during each step of the four phases of the system development life cycle: planning, analysis, design, and construction.

Today, there is no formal methodology for system analysis & design at ADP. Schoor describes it as a “homegrown, process oriented” approach, which focuses on the process an application performs.

The ForeSight methodology is more “data oriented,” Schoor explains. It looks at the underlying data that makes up an application and the role it plays in various business processes.

By focusing on data as the foundation of a system rather than what the system does, the business processes can change significantly without requiring major system changes. Data is more static and therefore makes a more stable foundation. “The system is easier to develop and less costly to maintain in the end,” explains Schoor.

ADP will pilot test the methodology and the toolset on the Deduction Redesign project. The pilot project will be completed in May.

During the pilot, a core group of staff will evaluate the new product while receiving training in the new methodology from a KnowledgeWare consultant.

Following the pilot, the core group will review the methodology and tailor it to our campus environment. After the tailored methodology is ready, it will be pilot- ed once again. If everything works well, it will be rolled out to the entire organization by late summer.

For more information about ForeSight and the ADW toolset, contact Lon Schoor at 263-7316, or by email at lon.schoor@mail.admin.wisc.edu.
User Access projects will continue to grow under DoIT

By Susan Puntillo

By now, you've probably heard about the merger of ADP, MACC, and Telecommunications. I won't dwell on the specifics, except to address the effect on the User Access Project.

We have only good news for you. Our project and products have expanded in scope. We are now part of a group called End User Computing — that's what we are all about anyway. Concentrating the variety of end-user projects into one area will provide you with better service. We'll still have SuperNatural, we'll continue to build the data warehouse, making more data available to you, and the desktop access project is progressing. We've added WiscWorld, email, and all shared-use systems.

Comings and Goings
Ted Stresemann has retired and tells us we should all join him as soon as we can. Scott Manley will be moving to a new group called Strategic Consulting, where some of you may actually see more of him than you used to.

New Offerings
Just because we've been reorganizing doesn't mean we haven't been busy. I don't want you to think we haven't been taking care of our primary business — YOU. Since the last newsletter, we have added the long-awaited cross reference list to WiscINFO and Inquire. Now you can look up a data element and see what view it is in, or check to see if it's available. In addition, several new data views have moved from pilot stage (which we discussed in the last newsletter) to full releases.

They include:
- UW-UA_STDTS_COLLEGE
- UW-UA_STDTS_CRSSES
- UW-UA_STDTS_CRSSES_C
- UW-UA_STDTS_DEMO
- UW-UA_STDTS_DEMO_AD
- UW-UA_STDTS_DEMO_C
- UW-UA_STDTS_ETHNIC
- UW-UA_STDTS_GEN
- UW-UA_STDTS_HELP_DESK
- UW-UA_STDTS_MAJOR
- UW-UA_CLASSIF_CODES
- UW-UA_COLLEGE_CODES
- UW-UA_ETHNIC_CODES
- UW-UA_HIGHSCH_CODES
- UW-UA_HOME_ADDR_CODES
- UW-UA_MAJOR_CODES
- UW-UA_CY_BDGT_SAL

The new data views deal primarily with student data. For more information about each of these views, see WiscINFO or Inquire. We have included six views that contain code look-up information. Many of you requested this data to help you know what values to use in search criteria. Let us know if they help.

One view you may find particularly helpful is the UW-UA_STDTS_CRSSES_C view. This view allows you to select class roster information. Several people are using it to electronically load roster information into spreadsheets for academic staff to use.

The long-awaited budget view, UW-UA_CY_BDGT_SAL, is available. The budget office and L&S have been pilot testing the view and report that they can't live without it. Let us know what you think.

Please watch the new DoIT newsletter, attend the user group meetings, and check WiscINFO for announcements of new products and services. If you need data that is not available, contact any of the User Access staff to discuss what you need and how to get it.

SUPERNATURAL CLASSES

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The Training Room has moved to B119 Computer Science & Statistics. To register, call Jennifer Crandall. Beginning and intermediate classes are available; ask about them when you register.

USER GROUP MEETINGS

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Meets in room 3139, Computer Science & Statistics Bldg., 1210 W. Dayton St.

CONTACTS

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Class Information & Documentation: Jennifer Crandall: 262-6650
jennifer.crandall@mail.admin.wisc.edu
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To order documentation, place a mark before the publications listed on this form that you want. Return the form to:

ADP Documentation Services
1210 W. Dayton St.
Madison, WI 53706

Please include your name, department, and address, and we will send the requested materials to you in campus mail. All documentation on this form is free.

For information about documentation not listed on this form, call 263-6885. If you prefer to submit your request by email, send it to ZZDOCSEVR (serv.zzdocserv@mail.admin.wisc.edu).

ADP General
- ADP Glossary of Terms (5/93)
- ADP Systems and Services (3/92)
- ADP Training Resources for ADP Users (4/92)
- Writing User Guides at ADP (12/88)
- Computer-based Training (CBT) available to mainframe and Wang VS users (12/88)

Microcomputers and LANs
- cc:Mail User Guide — v. 1.0 for DOS and Windows machines (7/92)
- cc:Mail User Guide — v. 1.0 for Macintosh computers (7/92)
- Downloading an ADP Mainframe Data Set to a Macintosh EXCEL Spreadsheet Using the Internet and Hyper FTP (7/92)
- KERMIT: Using Your PC as a Mainframe Terminal (11/88)
- LAN Access User Guide — v. 4.0 for DOS and Windows (7/93)
- Local Area Network User Guide, v. 3.0 for DOS and Windows machines (1/93)
- Local Area Network User Guide, v. 1.0 for Macintosh computers (3/92)
- Using the IBM PC and YTERM to Dial ADP’s Mainframe (12/88)
- Using the Wang PC to Dial ADP’s Mainframe (1/85)
- Wang PC-IBM PC Emulation (5/85)

Mainframe
- Accessing ADP’s Mainframe with Telnet/Tn3270 (3/90)
- ASK: Dial-up Access to ADP’s Main Computer (12/88)
- Sample Templates for ASK CNAM, UNAM, DNAM: Name Lookup Transaction Reference Cards (4/90)
- PRINTTCP Version 1.1 Printing files sent through TCP/IP on ADP’s laser printers (AOS0-0026)
- MacPRINTTCP Version 1.0 sending PostScript Files Via Wiscnet from Macintosh computers to ADP’s Laser Printers (11/91)
- The DoIT Handbook of Mainframe Services (9/93)
- Teleprocessing at ADP - A Reference Card for 3270 (12/88)
- Teleprocessing Transaction Catalog (1/93)
- Teleprocessing Transaction List (10/91)
- Teleprocessing - 3270 Reference Card: Teleprocessing from Wang Workstations (12/88)
- User Programmer Basic Guide: ISPF/PDF and SDSF at ADP (2/89)
- Using ADDI to Locate Vendor Information, reference card (8/85)
- Using UWTC Utilities (4/90)
- UWTC Instruction Manual (5/90)
- UWTC Instructions Reference Card (12/89)
- UWTC for Programmers (5/90)
- Printing with UWTC (12/89)
- WspPrint User Guide (12/82)

ADP News
Editors: Joe Rosemeissl & Peggy Merrick-Bakken
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DISTRIBUTED COMPUTING

Project Mandarin brings DoIT closer to client/server goals

As part of an ongoing effort to bring client/server computing to campus, DoIT staff are conducting a pilot project of Mandarin, a set of tools and services developed at Cornell University for building, running, and administering client/server applications.

The pilot project will make the Extended Access to Student Information (EASI) program operational within the Mandarin framework.

Today, when a student operates EASI from a campus terminal, the program runs a single, dedicated mainframe session in the background to obtain the requested information. In Mandarin, EASI appears to operate as it always has. But, in fact, it sends numerous, short requests to the mainframe rather than maintaining a single, extended connection. The change is transparent to the student operating EASI, but is very different in terms of computing.

As part of the conversion to Mandarin, the EASI transaction was rewritten using object-oriented programming. The old program consisted of nearly 70 routines; the developers cut that number to 17.

One of the benefits of rewriting the program is that each of the “pieces” can be reused by other programs in the future, which should reduce future development time.

Jack Keel, Mandarin project leader, says “The thing I like about Mandarin is that it’s a complete working system against which we can compare and contrast other client/server systems and products.”

What is Mandarin?
Mandarin consists of a developer’s tool kit and a collection of services that facilitate rapid creation of client/server applications. Mandarin technology is being used at Cornell University to create a number of services that deliver information to students, faculty, and staff.

Mandarin offers the following features:

A directory interface — A graphical user interface (GUI) that provides the illusion of simplicity to users. Many different services, such as EASI, email, or WiscINFO, could be listed within a single directory from which users can start the services.

Authentication — Mandarin includes a Kerberos authenticator that provides a level of security for services that request passwords or PINs for access.

Version Control and Software Distribution — The people maintaining the Mandarin services can make new versions of software available at any time, and Mandarin will automatically update the version on users’ machines the next time they use it. The Version Control Service checks to see if the software is current, and the Software Distributor gives each user the option to have the most recent version loaded on the spot.

Authorization Service — This tells what access rights and privileges have been assigned to an individual user.

These core elements provide the framework for making many University services available quickly and at low cost. Keel says Mandarin is still under evaluation because many online campus services might fit within its scope. For example, WiscWorld services might work well using Mandarin’s distribution servers.

RESEARCH

Library adds 14 data bases to NLS

At the beginning of the semester, staff from DoIT and the UW-Madison Libraries made 14 new data bases available for campus-wide access through the Network Library System (NLS). These data bases are the highest-use journal indexes published by H.W. Wilson Co.

In the past, these data bases could only be used from PCs connected to the library’s CD-ROM network or in printed form. Each data base indexes hundreds-of-thousands of journal articles, some with abstracts. The indexes are organized by the following subjects:

- Applied Science & Technology
- Art
- Biography
- Biological & Agricultural Business Abstracts
- Cumulative Book Indexes
- Education
- Essays & General Literature
- General Science
- Humanities
- Index to Legal Periodicals
- Library Literature
- Reader’s Guide Abstracts
- Social Science

Users can search each data base separately through the standard NLS user interface. An enhanced version with the MacNLS interface will be released later this year.

The indexes were moved from CD-ROM to an IBM RS/6000 computer to support many more simultaneous connections. Access

See “NLS” on page 8
“NLS” continued from page 7

to the 14 data bases is limited to users at UW-Madison. They can also be accessed by dial-in through WiscWorld on or off campus, due to the WiscWorld dial-in server authentication feature.

Users should be aware that, for technical reasons, more than 25 other data bases remain accessible only through the library network, which has public workstations in all major libraries and many small ones. These data bases will be more useful than the Wilson data bases in many cases, depending on subject matter. If you’re unfamiliar with the NLS user interface, you can get a full explanation of its commands and features by selecting “NLS Online Catalog User’s Guide” on the NLS main menu.

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