

Almanac

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IN BRIEF

Summer Hours: In a Speaking Out letter that starts on page 11, Mrs. Helen O'Bannon cites changes in University activity levels and other factors behind the decision to start summer hours in July instead of June.

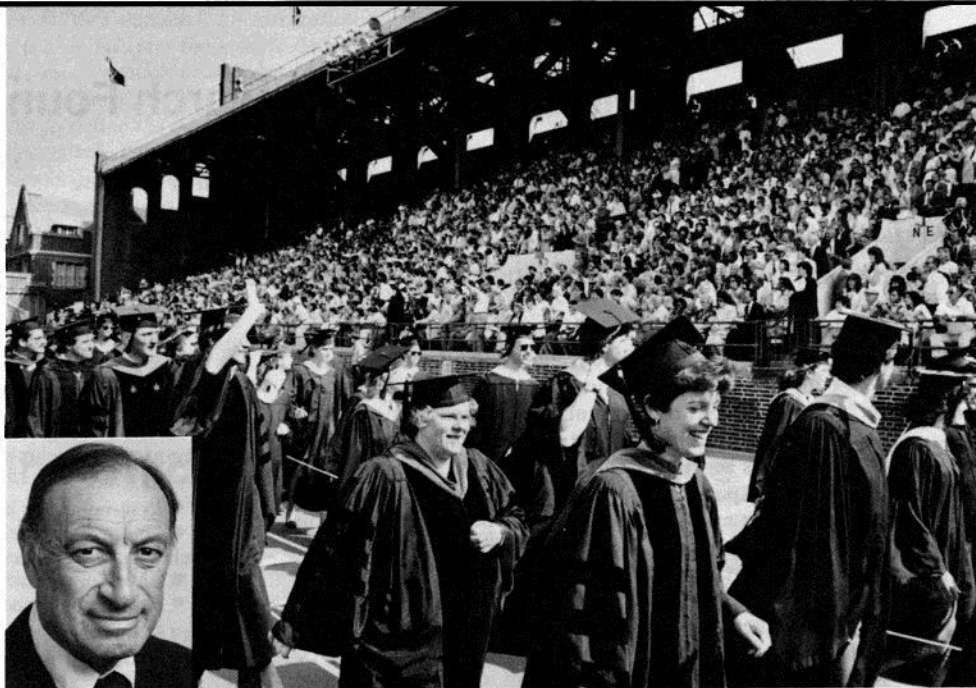
United Way: Leading next year's United Way/Donor Option campus campaign will be the incoming Senate Chair, Dr. Roger Soloway, and Dr. Marna Whittington, vice president for finance. Stuart H. Carroll, executive vice president of the General Alumni Society, will again be staff coordinator.

Dana Fellowships: Under a \$1.9 million grant from the Charles A. Dana Foundation, one- and two-year fellowships are open to residents and graduates of residencies in the clinical neurosciences (including neurology, psychiatry and neurosurgery), according to Dr. Robert Barchi, director of the David Mahoney Institute of Neurological Sciences. The Dana program was set up to give top-flight young doctors an option to choose research careers despite often heavy medical-school debts that have threatened what amounts to a "brain drain" from research at a time when technological innovation has helped open up promising routes to solving such diseases as Alzheimer's, Dr. Barchi said.

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Pullout: Summer on Campus

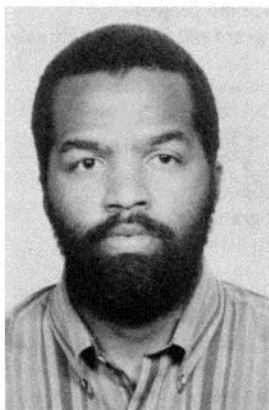


Sieve Shaw

Outdoor Commencement: Holding Commencement Exercises on Franklin Field for the first time, Penn made room for a crowd of 25,000 (including some 3500 graduates and their families), a record turnout some 10,000 above last year's gathering in the Civic Center. Among those taking a special interest were the reunion Class of 1936, whose classmate Dr. Edward B. Shils, the George W. Taylor Emeritus Professor of Entrepreneurial Studies, was on hand to take another earned degree from Penn. Just 50 years after taking his bachelor's degree from Wharton, Dr. Shils (inset) added a J.D. from the Law School. This year Dr. Shils will retire from the directorship of the Sol C. Snider Entrepreneurial Center; but he will continue to teach political science and serve as the University's Judicial Administrator. (And maybe, he says, he will also practice law.) Other highlights for the University family were the award of honorary degrees to Dr. R. Jean Brownlee and Dr. Herman P. Schwan; the return of Nobelist-Alumnus Dr. Michael Brown as Commencement Speaker; and, in the pre-Commencement week, the special dinner launching a scholarship fund in honor of Dr. Digby Baltzell on his retirement.

DuBois House Master: Allen Green

Allen J. Green, a lecturer in history who has also taught in the Afro-American Studies Program here, will be Faculty Master of DuBois College House in the coming year, Vice Provost for University Life James J. Bishop has announced. Mr. Green, who came to Penn in 1984 on a Fountaine Fellowship as visiting pre-doctoral fellow in history, took his B.A. in black studies and political science from Iowa's Luther College in 1976 and his M.A. in African history from Tanzania's University of Dar es Salaam in 1979. He also holds the C.Phil. in history from UCLA, where he was a research assistant. As a Fulbright Fellow in 1983 he conducted research in London and Tanzania on the migration of Mozambicans to Tanzania. In Philadelphia, Mr. Green has also served as research assistant to the Afro-American Museum, conducting oral family history reviews for the Black Philadelphia Migrations Project. At DuBois, he succeeds Professors Ivar Berg and Sam Sylvester, who shared the Mastership last year; Dr. Berg earlier shared the post with Dr. Houston Baker.



Allen J. Green

Boost to Sensor Research

This week the Moore School dedicates a new Center for Sensor Technologies and a \$1.2 million microfabrication laboratory for the manufacture of unique microchips and similar tiny components for use in the new sensors.

Dr. Jay N. Zemel, professor of electrical engineering and head of the new center, said advances in sensor research are needed because computers can now process information faster than sensors can collect it. Projects already completed or underway at Penn in this field include giving a "sense of touch" to robotic hands; helping process specialized alloys in the steel industry; biomedical implants to monitor patients' blood sugar levels; and field detection of sulphur compounds that lead to acid rain.

General Ledger Accounts on Requisitions and C-Forms

Effective immediately, any departments using general ledger accounts on their requisitions and Accounts Payable C-Forms will NOT be required to have these forms approved by the Comptroller's Office. All forms should be sent or delivered directly to the Purchasing Department or Accounts Payable.

Since the approval policy went into effect, almost all of the forms have been completed appropriately. Any departments preparing the forms incorrectly were notified.

If the situation should somehow reverse itself, and the accounting integrity declines, we will again have to resort to the "old" approval policy. Please continue to review all requisitions and C-forms carefully before processing. Direct any questions you may have to the Comptroller's office.

Thank you for your cooperation and patience in resolving this matter.

—Marvin Alexander, Assistant Comptroller

Reconstituted Research Foundation

The following description of Research Foundation application procedures will be operative for the 1986-87 academic year. The new Research Foundation incorporates two previously independent funding mechanisms, the Research Fund and the Research Foundation.

The Research Foundation: Purpose And Procedures

A. Statement of Purpose

The University of Pennsylvania newly reconstituted Research Foundation provides support to individual investigators, institutes, centers and research groups in an effort to stimulate and strengthen research initiatives at the University. The Foundation encourages preliminary exploration of new fields across a broad spectrum of disciplines. In so doing, the Foundation expands opportunities for faculty to attract support and resources from external sources while encouraging work in fields that are traditionally underfunded.

The Foundation supports two levels of grants. The first level, Type (A) grants support in the range of \$500 to \$5,000. The second level, Type (B) grants support in the range of \$5,000 to \$50,000. While the review criteria for type (A) and (B) grants is similar, the standard application for a type (A) grant is briefer than that for a type (B) grant, reflecting respective funding levels. However, several general factors used in determining eligibility to the Foundation apply for both type (A) and (B) grants. These are:

- Value for development of the applicant's research potential and progress
- Merit (quality and importance and impact of the proposed research)
- Potential value for enhancing the stature of the University (including but not limited to sustaining or improving the quality of a department)
- Budget appropriateness in terms of the project proposed, including consideration of need and availability of external support

B. The Application Process

The Research Foundation Board will review type both (A) and (B) applications in the fall and spring of each academic year. Applications for the spring cycle are due on or before March 15 of each year. Fall cycle applications are due on or before November 1 of each year.

An original and ten copies of both Type (A) and (B) proposals should be submitted to the Office of the Vice Provost for Research. Late proposals will be held for the next award cycle.

Type (A) proposals are three to five pages in length with a brief description of the proposed research and the specific needs which the proposed grant will cover. A cover page to the proposal should include:

1. Name, Rank, Department, School, Signature of Department Chairperson and Dean
2. Title of proposal
3. Amount requested
4. 100-word abstract of need
5. 100-word description of the significance of the project for the educated non-specialist
6. Amount of current research support
7. Other pending proposals for the same project
8. List of research support received during the past three years, including funds from University sources such as school, department, BRSG, or Research Foundation

9. A budget list that justifies the specific items requested and assigns a priority to each item. Budgets should not exceed a two year maximum time period.

10. A one page biographical sketch giving educational background, academic positions held, and five recent publications.

Categories of Research Foundation support for Type (A) proposals will focus on:

- seed money for initiation of new research
- limited equipment requests directly related to research needs (not including word processors or computer terminals)
- travel for research purposes only
- publication preparation costs

Type (B) proposals are limited to ten single-spaced pages in length. The following format is suggested for type (B) proposals:

I. Cover Page

1. Name, Title, Department, School, signature of Department Chairperson and Dean.
2. Title of proposal
3. Amount requested
4. 100-word abstract of need
5. Amount of current research support
6. Other pending proposals for the same project
7. Listing of publications and research support including titles, amounts, and grant periods, received during the past five years, and a brief curriculum vita for the principal investigator

II. Introduction (2 to 3 pages)

1. Objective: Statement of the objectives and scientific relevance of the proposed work.
2. Significance: Evaluation of existing knowledge and work in the area

III. Methods of Procedure (3 to 4 pages)

Description of the experimental design and procedures to be employed

IV. Description of the significance and impact of the project

V. Description of how a Research Foundation grant will facilitate acquisition of future research funds

VI. Budget (one page) 2 year maximum

Listing of each budget item in order of priority

Categories of Research Foundation support for Type (B) proposals focus on several areas of need. These are:

- Matching funds, vis-a-vis external grant sources
- Seed money for exploratory research programs
- Support for interdisciplinary research initiatives
- Faculty released time

Requests for student tuition and dissertation fees are not appropriate categories under the Foundation. Computer hardware and software requests should first be directed to the funding mechanisms established by the Office of the Vice Provost for Computing. However, requests for hardware and software may be considered by the Foundation in the event that alternative funds are not available.

Following is the report of the Office Automation Task Force which I sent April 25 to the Deans, Vice Presidents, Directors, and Business Administrators. The committee was composed of representatives from offices and academic units around the University. They have been meeting over the past year to determine standards and recommendations for office systems. I have accepted the report and we will be moving to the standards and recommendations contained in it. The scope of the report covers administrative office systems, whether those office systems are in academic departments or central administrative offices. It establishes standards for integration of those systems with University computer systems and text transmission services. It also indicates the specific hardware and software which will be supported by systems enhancement, training, and documentation at the University level. The report does not address word processing systems used exclusively for academic purposes. The Office of Data Communications and Computing Services is working on a complementary report to define the data communications standards for office systems. This report will be released by July 1. The two reports will define the office systems environment recommended for the University together with data communications standards and text interchange standards that are required. This a major step forward in definition of information systems at the University. I and my staff will be delighted to talk with you or with anyone on your staff about these directions.

—David L. Stonehill, Vice Provost for Computing

Report of the Office Automation Task Force

April, 1986

From the Chair of the Task Force

In November of 1984 I convened a Task Force that I charged with the development of the University's approach to office systems. The following report and recommendations were submitted to me by that Task Force, in February of this year. I have reviewed and approved this report and accepted its recommendations as the administrative standard for office systems.

The Office of University Management Information Services (UMIS) has initiated a three phase pilot project to develop internal expertise and documentation on the office systems products. The first phase of this pilot project is a joint effort of UMIS and Wharton Computing and Instructional Technology. Phase I will deal exclusively with the DEC All-In-1 office system. Subsequent phases will deal with IBM's DISOSS, Personal Services, and the System/36 office environment. Reports on the pilot project will be printed in subsequent issues of the *Almanac*.

The Information Services Center of UMIS will take the lead in the pilot projects for office systems and subsequent support of the administrative offices implementing and operating these office systems. If you have any questions about the following document feel free to contact the UMIS Information Services Center at Ext. 5063.

—Larry White, Executive Director of UMIS

Summary

The Office Automation Task Force was charged by David Stonehill in November 1984 to develop the University's approach to office systems. The University has undertaken major initiatives in end user computing, applications development, and networking. An office automation strategy is needed to maximize the benefits derived from these separate initiatives. With this strategy, we will be able to develop a structured environment in which to provide help and support, and to expand the cost effectiveness of dollars spent by providing value-added function.

The committee recognizes that adoption of standard office automation tools becomes more difficult as the targeted user population grows. Therefore, our basis for determining standards applies primarily to administrative activities at Penn as opposed to instructional and researcher activities where usage of office automation tools is less intensive.

Our objective is to facilitate the exchange and sharing of information at the University of Pennsylvania. We refer to a package of information as a document. A document may include text, data, voice, graphics, image, or video. The scope of this effort is to define the tools and facilities to support document preparation, distribution, storage, and retrieval for administrative office systems. Applications that use documents or data in a specific way are not within the scope of this effort. Once the office systems tools and facilities are defined, then applications can be developed, both by UMIS and by end users, through the use of these tools and facilities.

Our strategy was to define three key elements:

- a common hardware and software base
- interchange standards
- a central interconnect facility.

Our recommended implementation of this strategy is to use IBM Personal Computers as individual workstations; to connect individual workstations to the University Backbone Network either directly, or through a departmental processor (either the IBM System/36 or the

DEC VAX), or through a local area network¹ to use IBM's Document Content Architecture (DCA) as the standard for document structure, and IBM's Document Interchange Architecture (DIA) as the standard for document packaging; and to use IBM's DISOSS as the central interconnect facility. The document will describe the process followed to arrive at the recommendation, and the recommended hardware, software, and implementation strategy.

Evaluation Process

The initial work of the task force was divided into two efforts: the definition of areas requiring standards and the definition of required functions for an office system. These definitions formed the basis for an initial set of requirements. Subsequently UMIS became involved in a separate project to determine the electronic communications requirements of the Franklin Building. As part of that effort, representatives of all offices in the Franklin Building were interviewed, and it soon became apparent that networking and office systems could not be considered separately.

This UMIS group then identified the major office automation vendors. After some preliminary screening, the requirements, which by now included networking considerations, were presented to each vendor. The vendors then responded, both in informal meetings and discussions and with formal presentations. In this iterative process our questions and requirements were refined in response to the answers and product offerings that we found. The list of considerations evolved into these:

Functional Requirements

- Word Processing
- Electronic Mail
- Document Storage and Retrieval

Use of the Installed Base

- Central Administrative Mainframe Computer
- IBM Personal Computers
- Synchronous terminal network
- Asynchronous terminal network
- IBM & DEC minicomputers
- Other large academic computers
- Other communicating devices

Standards

- Usefulness
- Restrictiveness
- Penalties

Future Directions

- The Vendor
- The University

Under functional requirements, we were looking for products which aided document preparation, distribution, storage, and retrieval. Our special requirements here were our need for electronic document sharing to utilize the University Backbone Network (PennNet), our need to ensure appropriate privacy and confidentiality while sharing documents, and our need for flexible and powerful tools to retrieve shared documents. The required and desired office automation functions contained in the Appendix were evaluated in all vendor products reviewed. Other functions, such as voice mail, calendaring, image processing, and graphics, were considered as value-added functions in addition to a core of document creation, distribution, storage and retrieval. In looking at the impact of any proposed solution on the installed base, we considered what functions older workstations would be able to use, how their useful lives could be prolonged, and how easy a transition to the new technology would be. We also considered whether a proposed solution would take advantage of the full capabilities of the newer, more powerful machines now in use. Lastly, we considered how office systems would

work in conjunction with other computing, both that which is done on individual workstations and that which is done on larger shared machines.

We evaluated standards by weighing the benefits (if everyone follows them, what do we gain?) against the restrictiveness (how hard is it to follow them?) and the penalties (if someone doesn't follow them, what happens?) inherent in using each proposed standard. This was believed to be important because we assumed that while the administrative community could evolve to a set of clearly defined standards for hardware and software, the academic community, with so many unique requirements, could not. We therefore attempted to define the standards so that those able to conform would derive benefits (ease of use, power) from conforming, while those unable to conform would still be able to participate, albeit with limited functionality.

The final consideration was to relate the current deliverables and future directions, as stated by the vendors, to the current environment and future directions of the University. Here we considered the vendor's corporate health, upgrade migration history, and compatibility with other vendors on campus. We considered how each solution could work with the institutional administrative data base, with applications (both office specific and institutional), and with the University PennNet.

Based on these considerations, the vendors were narrowed to six: IBM, Digital Equipment Corporation, Wang Laboratories, Hewlett-Packard, Xerox, and AT&T. After further investigation Hewlett-Packard, Xerox, and AT&T were eliminated from further consideration based on their lack of support for one or more of the following: basic institutional office functions, support for the existing base of hardware, use of proprietary hardware and/or software standards without adequate interfaces to the products of other vendors, and uncertainty as to their future directions in the office systems market. Wang was eventually eliminated because their approach to Office Automation was functionally very similar to DEC, but the DEC implementation was considered to be technologically cleaner and more efficient. This narrowed the selection to IBM and DEC which led to the recommendation for a combined solution.

IBM's solution is based on their product DISOSS (DISTRIBUTED Office Support System) and Personal Services, which provides the user interface to DISOSS. Personal Services runs on IBM Personal Computers, the IBM System/36 minicomputer, and the IBM mainframe computer. Documents created in IBM's Displaywrite could be distributed by Personal Services and stored and retrieved from DISOSS libraries which reside on a mainframe computer. Any device that can communicate with the mainframe computer can participate to some extent. IBM's DCA/-DIA architecture would be the standard for exchanging and sharing documents. All major office automation vendors have announced their intention to support this standard. The IBM solution is the only one which provides the flexible and powerful document storage and retrieval capabilities that we see as necessary. The IBM solution is currently weak in distributed support for mini and micro computers, but it is IBM's stated intention that this will be corrected when the IBM Token Ring Network, which was announced this past fall, is fully developed.

DEC's solution is based on their product All-In-I, which runs on the VAX minicomputer. Documents created in WPS-PLUS, the DEC word processor that runs on both the VAX and on IBM PCs, could then be distributed through All-In-I to other All-In-I users or to DISOSS users. All-In-I does not provide the kind of institutional document facilities that are provided by DISOSS. The orientation of All-In-I's filing facilities is the owner of the document, not the subject of the document, and therefore retrieval requires knowing who stored the document. While this orientation may be effective within an office, it is not conducive to the sharing of documents across offices. DEC provides a bridge from All-In-I to DISOSS for institutional document storage and retrieval. This bridge uses the DCA/DIA architecture. Multiple VAXes that are linked together through DECNET need not run All-In-I on each machine, but can have one or more machines as All-In-I servers. This will be especially attractive to academic users who communicate with the administrative

continued past insert

¹ At the present time the Office of Data Communications and Computing Services is reviewing several alternative local area networks paying particular attention to their functionality in an office environment and compatibility with the backbone network currently being installed. They expect that, by July 1, 1986 this review will have reached the stage where it will be possible to make recommendations regarding which local area networks will be suitable and estimates of when those local area networks will be supported.

Summer on Campus

Summer on Campus

Summer on Campus

Summer on Campus

community as one small part of their total computer activity.

Our solution is to combine these product offerings; to use IBM Personal Computers as individual workstations; to connect individual workstations to the PennNet either directly, or through a departmental processor (either the IBM System/36 or the DEC VAX), or through a local area network¹ to use IBM's Document Content Architecture (DCA) as the standard for document structure, and IBM's Document Interchange Architecture (DIA) as the standard for document packaging; and to use IBM's DISOSS as the central interconnect facility. There is still significant diversity of opinion in the trade press on the strengths and weaknesses of these products, but an alternative recommendation to do nothing until there is more uniformity of opinion is deemed incompatible with current office system requirements.

Recommendation

We believe that the process conducted to date has led us to a prudent choice of hardware and software suppliers to serve the long-term office automation needs of the administrative community of the University. Within size-limited organizations, the recommended technologies can be installed today with confidence that anticipated benefits will result. However, the committee recognizes that a highly technical study needs to be completed to prove the feasibility and cost effectiveness of the proposed standards for University wide implementation. Issues such as investments in existing equipment, retraining, conversion and universal connectivity (networking) need to be resolved. Without such a study, no realistic timetables for implementation on a University wide basis can be developed, nor organizational commitments made.

Finally, the committee feels that continuing leadership will be required from the Vice Provost of Computing's Office and recommends that the Vice Provost determine the most expeditious means to implement the recommendations which follow:

I. The standards summarized in the table below should be used as the basic tools of an administrative office system. The recommended primary vendor of products to support University administrative office systems is IBM with DEC providing products as a significant secondary vendor.

¹ See footnote on previous page.

Standards For Office Systems

	Recommended
Hardware	
Workstation	IBM Personal Computer
Individual Connection	3270 Emulation or Protocol Conversion
Local Area Network	To be determined by Office of Data Communications and Computing Services
Departmental Machine	IBM System/36 or DEC VAX
Software	
Document Preparation	Displaywrite or WPS-PLUS
Document Distribution	Personal Services or All-In-1
Document Storage and Retrieval	Personal Services or All-In-1
Mandatory	
Interchange	
Document Structure	Document Content Architecture (DCA)
Document Packaging	Document Interchange Architecture (DIA)
Central Interconnect	
Mail System	DISOSS
Document Library	DISOSS
Network	PennNet

Note: Mandatory standards are those which will be required of any system which interconnects with other computers or networks. Recommended standards proscribe equipment and software which are known to meet the mandatory standards and which will, furthermore, be supported with enhancement, documentation and training by UMIS and Data Communications.

II. A pilot project using all of the recommended technology should be installed in a reasonably sized domain which currently has significant need of office automation support. The pilot study should:

- test the added values of office automation tools;
- develop administrative procedures for the use of office automation tools for later use throughout the University. Penn needs to begin to master the administrative (non-technical) challenges associated with installation of these tools;
- evaluate the performance of the proposed tools from the user, administrator and technical perspective.

The pilot should be small enough to be installed and tested in 12 months and be independent of PennNet as a provider of networking services for workstations included in the pilot.

III. A study for University wide implementation of the proposed standards should be conducted. This study will not characterize the need for office automation, or justify investments in office automation. Those activities should be conducted at the time expenditures for office automation are proposed. It will, however,

- identify open technical issues associated with University wide implementation and connectivity of workstations using the recommended tools;
- identify technical issues associated with incompatibilities between currently installed equipment throughout the University and the recommended standards;
- identify technical issues associated with conversion from installed office automation tools to the recommended tools;
- identify potential solutions such as anticipated product announcements which could resolve the technical issues identified in a), b), and c) above; and
- develop plausible migration strategies toward the proposed standards for the major categories of installed equipment within the University.

Completion of this study will require knowledge of the current state of office automation applications at Penn, and detailed knowledge of the various technical hardware, software, and networking components required to support office automation services in a fully networked environment.

—Lawrence J. White
Executive Director, UMIS

—Francesca Seidita
Manager, UMIS,
Information Services Center

The Office Automation Task Force

Joel Adler, Assistant Dean, Computing and Educational Technology, School of Engineering and Applied Science

Leo Blake, Director, Computer Services, School of Dental Medicine

Kenneth Campbell, Associate Comptroller

Vince Conti, Director, Management Information Systems Project

David Cossey, Director, Computer and Instructional Technology, Wharton School

Steven Derby, Director, Development Operations, Development and University Relations

James V. Maugeri, Director, Student Systems and Information Services Center, UMIS

George McKenna, Director, Network Development and Operations, Data Communications and Computing Services

Karen Miselis, Vice Dean, Planning and Analysis, School of Arts and Sciences

Peter Olds-Clarke, Director, Budget and Finance, School of Veterinary Medicine

Joseph Penderghest, Director, Finance Systems, UMIS

Jeff Seaman, Director, Computer Resource Center

David Stoltzfus, Director, Data Resources and Technical Services, UMIS

Doug Strong, Director, Research Planning and Analysis, School of Medicine

Gary Truhlar, Director, Human Resource Systems

Appendix: Office Automation Products

There are many vendors of Office Automation technology in the marketplace today. Each offers a variety of products and services. The value of these services and products varies greatly depending upon the primary activities of the office in which they are implemented. For instance, image processing might be very useful in the Publications Office, but of little or no use in the Payroll Office. Therefore, the UMIS investigating group decided to concentrate the investigation of functionality on those products or services with the broadest application across the institution. These functional products were decided to be: Word Processing, Electronic Mail, and Library Services. Other Office Automation products such as voice mail, calendaring, image processing, and graphics were not ignored, but were considered to be value-added functions to a core Office Automation implementation.

Word processing is the most mature of the three Office Automation products. It has existed at the University of Pennsylvania since the mid 1970s. Few, if any, University offices are without some form of word processing capability and it will therefore be the most difficult product to standardize now. The required features of a word processing product are:

- On-line Help Facilities
- Multiple Formatting Options (Tabs, Margins, Centering, Indent, Underline, Bold and Pagination)
- Footnoting, Sub and Superscripts
- Text Search and Replacement
- Internal and External Move/Copy
- Text Import, Export and Merge
- Spell Checking
- Multiple Print Options and Support for a variety of printers
- Filing and Retrieval within the word processing system

Other features such as integrated graphics, scientific notation and special alphabets were considered desirable but not required to satisfy the administrative application of Office Automation.

Electronic mail has existed for many years on mainframe and minicomputers, but with few exceptions has been used only by programmers. It was limited to the community connected to a single computer and its human interface normally required computer sophistication. The introduction of Office Automation as a product line has changed all of that. There are now many electronic mail products which provide an electronic communication vehicle for unsophisticated computer users. The required and desirable features of an Electronic Mail product are:

- **Packaging**—The product must be able to electronically distribute packages consisting of one or more documents.
- **Distribution**—The product must be able to distribute packages to a single individual or distribution list of individuals in a single operation. Mail that is received should be easily redistributed.
- **Addressing**—The addressing of packages must be in a familiar format, such as an individual's name, as opposed to codes. It is also required that packages with unrecognized addresses should cause the electronic mail system to prompt the sender with all possible matches (using homonyms) for selection.
- **Privacy/Confidentiality**—Packages must be capable of being secured from access by individuals other than the intended recipient or those authorized by the recipient.
- **Package Flexibility**—Packages to be mailed must be able to be made up of a combination of both traditional text (word processing documents) and data (eg. spreadsheets, data files, etc.). It is desirable that packages be able to include graphics, voice, image, and video and that these packages can be displayable at the workstation.
- **Audit Trail**—It is required that the sender be able to receive notification of delivery of the transmitted package and the recipient receives verification of the sender's identity. It is desirable that the sender be able to receive notification that the recipient has accessed the package. It is desirable that the recipient be capable of setting automatic responses and automatic forwarding and that the recipient be able to verify the identity of the package originator and any other intermediate destinations prior to its receipt.
- **Networking**—It is required that a package be able to be originated on one electronic mail system and deliverable to another electronic mail system of the same vendor. It is desirable that a package be able to be originated on one

electronic mail system and delivered to another electronic mail system of different vendors, both within the University and external to the University.

• **Customizing Capability**—It is desirable that the electronic mail system have application program interfaces sufficient to allow development of applications unique to the University or unavailable from the product vendor.

Library Services is the most recently developed product of the three and therefore the least mature. Library services for Office Automation functions are not unlike data base services for data processing functions. The major difference is that library services provide the tools to manage unformatted information and data base services provide the tools to manage formatted discrete data. Word processing and electronic mail are productivity aids in the creation and distribution of documents, but library services represent the key elements necessary to manage and use the information contained in documents. The required and desirable features of a Library Services product are:

- **Storage Flexibility**—The product must be able to store both text (word processing documents) and data (eg. spreadsheets, data files, etc.). It is desirable that it be able to store graphics, voice, image, and video.
- **Retrieval**—The product must support the assignment of at least five indices per document. These indices must be able to be used individually and in combination for retrieval. It is also required that the product provide the capability of centrally administering the assignment and use of the indices.
- **Privacy/Confidentiality**—Stored documents must be capable of being secured from access by individuals, categories of individuals, and definable organizational boundaries. It is desirable that access be controllable by document content.
- **Library Distribution**—It is desirable that a library product of a single vendor be distributable to multiple machines (ie. mainframe, minis and micro computers).
- **Accessibility**—It is required that documents in distributed libraries be accessible to workstations that are "attached" to the central or a local library system of the same vendor. It is desirable that a document search involving multiple libraries of the same vendor be transparent to the operator.
- **Compatibility**—It is required that the institutional library be capable of electronically sharing documents with local library products of other vendors from the office automation workstation.

We cannot choose the best word processing product, library services product, and electronic mail product independent of each other. These products must be integrated with one another to form a viable University administrative office systems solution. If this were not so, then individual offices could implement independent solutions with no greater or lesser impact on the potential institutional gains. Although there are gains to be had from Office Automation in each office the greatest potential can be realized in the sharing of information across offices, within buildings and between buildings throughout the campus. This cannot be done effectively without an institutional initiative that manages the process and sets clearly defined standards that facilitate information sharing within and among buildings.

One such standard which is key to accomplishing Universitywide electronic information sharing is the document architecture. The emerging defacto standard is IBM's Document Content Architecture/Document Interchange Architecture (DCA/DIA). The most recent implementation of IBM's Displaywrite word processor creates documents that conform to this architecture, and documents created by other major vendors are convertible with varying degrees of ease and success. The importance of a standard document architecture is relevant to applications of document storage, retrieval, and distribution. It therefore seems prudent to require a product solution which conforms to or can coexist with DCA/DIA.

Office automation products which operate in a multiprocessor (ie. mainframes, minis, & micros) environment would allow the greatest flexibility in addressing individual office requirements while maintaining institutional standards. On the other hand, the human interface must be identical in each processing environment to permit workstation operators to navigate among environments in an efficient manner.

The potential gains to be realized from implementing office automation products will be greatest where product function, integration, flexibility, consistency, and conformity is the greatest. A product decision must be a balance of all of the above.

Speaking Out

To Ye Editor

I see that the stores at 34th and Walnut are to be called The Shoppes at Penn Square. I assume that among the shoppes will be a floriste, a computer shackcke (Ecce DECce?), and a drugge storre.

Ah, pretension!

—David K. Hildebrand, Professor of Statistics

Space Allocation

As a recent graduate of the University, I read with considerable interest Dr. Robert Giegengack's letter describing the *Space Crisis in the Geology Department—Part II* (May 20, 1986). I am surprised that our University with its vast physical plant could not accommodate the Engineering School's growth more efficiently. I am alarmed that a S.A.S. department has lost a professor and half a dozen Ph.D. candidates to competing institutions for lack of space!

These circumstances cry out for an official policy on space allocation which should drive the University's long-range facilities planning. I ask the Faculty Senate to address this issue in the fall so other departments will not find themselves in the same position as the Geology department in years to come.

—Paul M. DeAngelis, Wharton '86

WEOUP on 'Hours'

At the May 20 meeting of Women for Equal Opportunity at the University of Pennsylvania, the membership unanimously directed us to state the objections of this group to the damaging effects of the sudden withdrawal of summer hours during the month of June.

Notification of a change in this longstanding benefit (dating at least beyond three decades in the memories of the undersigned) was made at the beginning of May—after:

- Employees had registered for 4:30 p.m. courses through the College of General Studies. (And supervisors signed their forms under the impression that 4:30 would be closing time.)

- Parents (both male and female) had made arrangements for child care predicated on a 4:30 closing all three of the months. (Making plans with centers or with babysitters that assumed, as in years past, paying for only a certain number of hours.)

- Offices had scheduled coverage of vacation dates based on the availability, and the cost, of ten hours' less temporary help in the month of June. (Reserving only certain funds out of budgets framed on the basis of past years' spending for this purpose.)

At least as damaging to staff relations as these objective, physical and financial dislocations is the symbolic breach of a longstanding tradition and the widely held belief that this is but the first step in curtailing "soft dollar" benefits which have been given in the past "instead of a raise." (There have been many explanations for the summer hours over the decades, among them cooperation with the city in the spread of peak traffic and peak energy loads, plus energy savings for Penn itself. The one that has consistently registered among employees here is the advice of numerous personnel officials

over time that "We may not appear to pay competitive wages, but when you figure the soft benefits, we make it up to you.")

Speaking now for ourselves in amplification of the views expressed at the meeting, it appears to us as if someone has fed gross numbers of hours and of people into a computer somewhere and come up with a piece of paper that says, "Wow, if we keep 5000 people here an extra ten hours a month, we can save 50,000 hours a month."

We don't believe numbers alone can tell the story. The computer is not going to tell you whether more gets done, or less gets done—or even how much there is to do or can be done—in different areas when the Commencement drop-off changes the very essence of campus life. In academia, "time" takes on a different value when the academic enterprise slows down—and to many, summer is a time of higher productivity per staff member, per hour, because the activities and projects change.

Furthermore, it has been our experience (in our summer planning tasks, research work, committee work and extensive contact with other office staffs besides our own) that staff stay not only to 5 p.m. but well beyond that time, regardless of the month or season, when there is work to be done. Every dean, director or supervisor has the year-round right to ask people to stay if they are needed. And people stay willingly. Some offices have never taken off at 4:30 because their work is heavy in the summer, or it involves research or personal care that is year-round. In some offices the staff spell each other when not all can take advantage of the 4:30 closing. But that does not make it sensible to hold all staff arbitrarily to a year-round peak schedule when the peak is not general.

This half-hour has given staff some time to breathe, to get the jump on the commuter rush, and sometimes, in some offices, the relief to work quietly after everybody else has cleared out, and still get home at a decent hour.

It has been a "thank-you" for working under pressure, at less than munificent salaries, the rest of the year. Its removal is a rude reversal that says staff are not in fact as appreciated, even in soft-dollar ways, any more.

So, on behalf of the membership of WEOUP we ask "What are you doing to our lives? What are you doing to our course-work? What are you doing to our child care arrangements? What are you doing to the idea of a University community that respects the human needs of all its members?"

—Helen C. Davies, Professor of Microbiology, President, WEOUP

—Adelaide M. Delluva, Professor of Biochemistry, member and former president

Two Points on 'Hours'

With respect to the University administration's recent curtailment of summer hours, two points deserve attention.

First, the announcement of this change in a small corner of *The Penn Paper* dated May 1, 1986, was not accompanied by any explanation for the curtailment. In the

meantime, *The Summer Pennsylvanian* of May 22 quotes the Senior Vice President as specifying productivity as an underlying justification. This amounts to an inherent criticism of University workers' productivity during summer months over the past decades—without documented, substantive review of said productivity.

Second, in the same article the Senior Vice President stated that shortened summer workdays do not constitute an employees' benefit "It's not in our personnel booklet." To avoid quibbling over semantics and technicalities, I suggest that we refer to the summer hours henceforth as a *perquisite*. In common usage (corroborated by three dictionaries I consulted), a *perquisite* is something additional to regular profit or pay, resulting from one's position or employment, especially something customary or expected.

I respectfully request that my name be withheld when this letter is published, to protect me from reprisals—particularly in view of the fact that a high-level administrator other than my supervisor has already reprimanded me for supporting the petition for the restoration of normal summer hours.

—Name withheld upon request

Ed. Note: The letter above was published under the *Almanac* Guidelines that allow for withholding of names under some circumstances, provided the author's identity is known to two persons, normally the editor and the chair of the *Almanac* Advisory Board. In this instance the name was furnished to Karen C. Gaines, editor, and Dr. Lucienne Frappier-Mazur, chair-elect of the Board. *Not published* is a letter on the same topic, signed "Anonymous." If the unknown author(s) wish(es) to know the procedure for review to withhold signatures, information is available at Ext. 5274.

Response

The following text is not a direct response to the letters above, but was written earlier in reply to letters published May 20. In the absence of Mrs. O'Bannon at presstime, this text was released by the President's Office as a general statement of the need to staff University offices to 5 p.m. in June.

Why the June Hours

In response to the petition that is circulating regarding summer hours in 1986 and the letters to Dr. Sheldon Hackney in last week's *Almanac*, let me clarify the following points:

First of all, none of the people who signed the petition will be reprimanded for expressing their opinions. Our Guidelines on Open Expression allow faculty, staff and students to express their opinions freely as long as it doesn't interfere with their duties during office hours.

With that confusion out of the way, let me address the issue of summer hours.

Like the week-long Christmas break, the summer hours schedule is—and always has been—a discretionary option evaluated each year by the President and his management group. It is not an employee benefit, nor is the reduction in summer hours listed in the Personnel Policy Manual or the "Benefits at

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(continued from page 11)

a Glance" statement given to each new employee.

Two years ago the Council of Deans asked the Office of Human Resources to review the customary practice of allowing staff to leave work a half hour early in June, July and August. The issue was taken up by the Human Resources Council.

The concern was whether this tradition, which began in the post-World War II era, continued to be relevant. In that era of non-air conditioned buildings, employees were allowed to leave campus at 3 p.m. if the temperature and humidity reached a certain level. Further, the reduction in summer hours was *unofficially* used as a form of compensation for the less-than-market wages offered at Penn at the time.

Four decades later, salary scales at Penn are commensurate with the other professional organizations in the area, both profit and non-profit. And the University is virtually a 12-month-a-year operation with many

departments and schools requiring full-time support.

This fact is especially evident during the busy month of June. Staff members are involved in the increased workload that accompanies the end of the academic year and in closing the accounts for the end of the fiscal year. In addition, supplies must be ordered, schedules refined and questions answered from the growing number of people who are on campus each summer, such as students participating in community programs here, foreign scholars recruited to this University, and students attending Penn's summer sessions.

Now, more than at any time before, as tuition rises and federal dollars for education and research shrink, we must justify the job we are doing by examining the productivity of our staff and the deployment of all our resources.

With the increased need for charitable donations and corporate and government research grants, the University's business

practices are under constant scrutiny. Paying competitive wages for less work may put Penn at a distinct disadvantage when viewed by the external world.

At the same time, we realize that some employees have come to expect a 32½ hour work week each summer and enjoy that extra half hour of daylight. Taking these factors into consideration, we have determined that we can afford summer hours this year only during the months of July and August.

Using the same criteria, January 2, 1987 was added to the Christmas break schedule. Since it falls on a Friday, it would be inefficient to bring the workforce back for this one weekday.

We realize that this is an emotional issue among some members of the University community, and the decision to extend normal working hours through June was not made lightly. Nonetheless, it is a decision of presidential discretion. I regret any inconvenience this decision may have caused.

—Helen O'Bannon, Senior Vice President

The crime report, below, is the last weekly one to be published until September when *Almanac* resumes weekly publication. In the summer issue, scheduled for July 15, there will be a summary report of the types of most frequently committed crimes, the likely locations, and tips on prevention.

Department of Public Safety Crime Report—Week Ending Sunday, May 25

The following report includes a weekly count of all reported crimes on campus, a listing of all reported crimes against the person(s), as well as the campus area where the highest amount of crime has occurred that week with a listing of those crimes.

Total Crime

*Crimes Against the Person—2, Burglary—2, Theft—22, Theft of Auto—1, Criminal Mischief—2, Trespass—1

*5-21-86 12:55 PM 3400 Blk. Walnut Suspects beat vendor while attempting to take goods
*5-24-86 3:36 AM 100 Blk. 36th St. Male had bike stolen at point of gun

Area/Highest Frequency of Crime

Date	Time Reported	Location	Incident
Spruce St. to Walnut St., 33th St. to 34th St.			
5-19-86	1:15 PM	Bennett Hall	Room forced open/phone taken/desk gone through
5-19-86	3:48 PM	Moore Lab	Wallet taken—unattended/unsecured room
5-21-86	4:28 PM	Hayden Hall	Unattended/unsecured bike taken from 2nd floor hall
5-22-86	11:57 PM	Hayden Hall	Secured bike taken from rear of building
5-23-86	9:41 AM	Moore School	Computer equipment taken from various rooms/no forced entry
Spruce St. to Locust Walk, 37th to 38th St.			
5-21-86	5:09 PM	McNeil Bldg.	Front wheel of bike taken from secured rack
5-22-86	2:29 PM	McNeil Bldg.	Unattended backpack taken, recovered/wallet taken
5-23-86	3:00 PM	McNeil Bldg.	Gym bag & personal items taken from unsecured room
Spruce St. to Locust Walk, 34th St. to 36th St.			
5-21-86	3:28 PM	Furness Bldg.	Wheel taken and recovered/arrest made
5-22-86	4:26 PM	Houston Hall	Unattended pocketbook taken from room
5-22-86	4:35 PM	Houston Hall	Unattended purse and contents taken
Spruce St. to Locust Walk, 36th St. to 37th St.			
5-19-86	4:19 PM	Steinberg/Dietrich	Wallet taken—unattended/unsecured room
5-21-86	3:00 PM	Steinberg/Dietrich	Change purse taken from unlocked/unsecured office
5-23-86	4:36 PM	Steinberg/Dietrich	Wallet taken—unattended/unsecured room
Locust Walk to Walnut St., 34th to 36th Streets			
5-23-86	2:39 PM	Van Pelt Library	Secured bike taken from rack
5-23-86	3:27 PM	Meyerson Hall	Secured bike, lock & chain taken from rack

Safety Tip: The most common item stolen at Penn are wallets. They are generally taken because of carelessness, being left in an unsecured room and unoccupied area. When checks or credit cards that were in the wallet are used, the personal inconvenience is magnified.

Update

MAY ON CAMPUS

MEETINGS

29 Lesbian and Gay Staff and Faculty Association; noon. For location or additional information: Bob Schoenberg, Ext. 5044.

MUSIC

30 Trans-Sonic: A Festival of New Music, featuring performances by Steve Roach, the Mikel Rouse Broken Consort, The Night Crawlers, and Darren Kearns, 8 p.m., Harrison Auditorium, University Museum. Tickets: \$10 for each event, at Houston Hall Records. Information: 483-7888. Through June 1. (WXPJ).

TALKS

27 Avian Retroviral Vectors Designed for Use In Vitro and In Vivo; Dr. Stephen H. Hughes, Frederick Cancer Research Facility, Frederick, MD; 4 p.m., Wistar Auditorium. (The Wistar Institute)

29 Genetic Analysis of the Function of Retroviral Oncogenes Using Neutrophil Cells in Culture as a Host System; Dr. Georges Calothy, department of biology, Institut Curie, Orsay, France; 11 a.m., Wistar Auditorium (The Wistar Institute).

Interrelationships Between the Brain and the Immune System: Role for Thymosin Peptides; Nick Hall, department of biochemistry, George Washington University; 4 p.m., Seminar Rooms, Suite 100-101 Med Lab Building (Pharmacology Department).

30 Molecular Basis of Neurotransmitter Plasticity; Dr. Ira Black, department of neurology, Cornell University Medical School; 4 p.m., Seminar Rooms, Suite 100-101 Med Lab Building. (Pharmacology Department).

Almanac

3601 Locust Walk, Philadelphia, Pa. 19104-6224
(215) 898-5274 or 5275.