FROM THE DESK OF . . .

ED MALONEY

DIRECTOR OF INFORMATION TECHNOLOGY

4 May 1988

NOTE FOR: ADDA

SUBJECT: OIT Annual Report

Hank,

   Attached is a copy of OIT's Annual Report,

highlighting our people and their activities
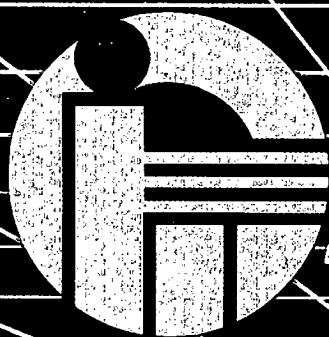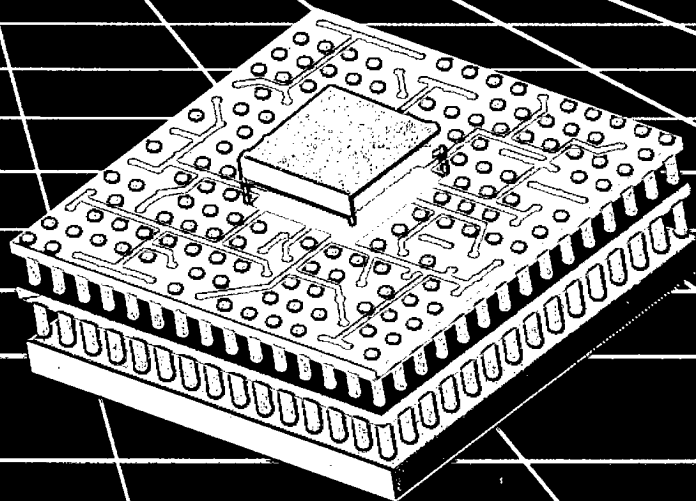
and summarizing our accomplishments for 1987.
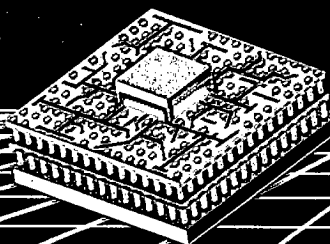
STAT

Edward J. Maloney

PDIA REGISTRY
FILE: 5 0 - 2

SECRET

OFFICE OF
Information
Technology

1987 Annual Report

SECRET

STAT

Page Denied

Next 4 Page(s) In Document Denied

SECRET

SETTING INFORMATION PROCESSING STANDARDS

The burgeoning information technology marketplace presents enormous opportunities to improve the effectiveness and lower the cost of Agency information systems. Converting the OIT mainframe network to support commercial standards will provide many benefits to OIT customers. Although in-house developed solutions made sense in the past, this is less often true today. Adopting commercial standards will permit the use of a wide range of reliable, lower cost, commercially available products and ensure that these products are compatible and communicate efficiently.

In 1987, OIT established two groups with Agency-wide representation to assist in the development and coordination of information processing standards. The Architecture Working Group (AWG), composed of technical personnel, develops the standards that guide the selection of hardware and software products. The Customer/Standards Committee (C/SC), composed of senior directorate representatives, reviews these standards to ensure their Agency-wide acceptance before recommending them for approval to the Director of Information Technology. By agreement of the Customer/Standards Committee, approved standards are applicable to all Agency information systems unless a specific waiver is granted.

In 1987, five standards were adopted at the recommendation of the C/SC. These standards are concerned with:

- Electronic Mail Interchange—for connecting departmental electronic mail systems with the Agency-wide system.

- Document Interchange Format—for the transfer of documents from one processing environment to a different one.

- 3270 Protocol—for communications between workstations and the mainframe.

- Database Management System Data Language—requiring a standard data language, SQL, for all Agency systems and applications.

- Levels of Service—providing standards for response time and availability for a wide range of services.

SECRET

SECRET

**A BIG CHANGE—
PERSONAL COMPUTERS
AND PBX**

In 1987, OIT continued the changeover to desktop computing and began upgrading the Agency's secure communications services. New and more versatile personal computers (PCs) with considerably increased computing power have been installed as new equipment or as replacements for the older Delta Data terminals throughout the Headquarters complex. The PC also opens the way to a wealth of commercially available software heretofore unavailable with the mainframe network. In addition to PCs, OIT began installing integrated voice and data private branch exchanges (PBXs) or communications switches in the new and original Headquarters Buildings and at Reston. The new PBXs not only have a greater capacity than their predecessors, but also provide modern telephone services such as call forwarding and the ability to handle secure data and voice communications simultaneously.

In the future, PCs will be connected through the secure telephone. To access a computer system, such as VM, the customer will "dial" the appropriate number. This system will allow a large number of customers to share the limited number of hook-ups ("ports") to the mainframe computer. Easier and cheaper equipment installation and relocation will also be possible. In addition, the new equipment will permit use of the 3270 communications protocol, which has become the industry standard for linking with IBM computer mainframes. The advantages of this protocol are that it permits the use of commercial equipment and software with minimum modification and supports a much higher data speed than possible with the prior approach.

Page Denied

SECRET

**INSTALLATION OF A
CRAY SUPERCOMPUTER**

In 1987, a high-speed scientific computer was installed in the New Building Computer Center through a joint effort by OIT, the Office of Information Resources (OIR), and the Office of Scientific and Weapons Research (OSWR). The Cray Research XMP/24 Supercomputer is the most advanced scientific computer available. It has a processing speed of 117 million floating point operations per second (MFLOPS) per processor, making a total of 234 MFLOPS for this dual processor system. This extraordinary speed (by some measures more than 20 times faster than an IBM 3090—IBM's largest mainframe computer—for certain applications) will make the Cray invaluable for processing numerically-intensive computer models and simulations developed by OSWR.

Among the applications being planned for the Cray are:

- Trajectory simulation and reconstruction
- Non-acoustic anti-submarine warfare studies
- Satellite orbit determination
- Computational fluid dynamics modeling.

25X1
25X1

Analysts will access the Cray, which is connected to the ⬜⬜⬜ Center by a fiber optic link, through the ⬜⬜⬜ VM interactive and MVS batch services. IBM 3090 CPUs are used as front-end processors to complete the link.

The Cray successfully passed an acceptance test in December 1987 and will be ready for limited production use by the Directorate of Intelligence in early 1988.

7
SECRET

SECRET

PCERIC

OIT's Customer Service Group has established the Physically Challenged Employees Resource Information Center (PCERIC) to assist physically challenged employees in the use of information-processing technology.

As part of its mission, PCERIC is creating a laboratory to test and evaluate computer enhancements using prototype devices for a variety of work environments. Currently, the laboratory is testing an IBM PC/AT with a Microvitec 19-inch high-resolution monitor which allows an employee with limited vision to obtain a much larger and sharper image than can be presented on a standard screen. Also being tested are an LED 120 Braille workstation and a Versa Braille lap-top personal computer. PCERIC has on order other devices to assist employees with limited vision and those with restricted hand mobility. These devices include a voice synthesizer used to "read" files received electronically and a voice recognition product that enables an employee to create text by speaking into a noise-reducing microphone.

The PCERIC staff will head the Agency's representation on the Interagency Committee for Computer Support of Handicapped Employees (ICCSHE). This committee was established by the General Services Administration (GSA) in 1984 to "advance the management and use of microcomputer and related technology in order to promote the productivity and achievement of physically challenged Federal employees."

Another PCERIC function is to keep abreast of the latest technological advances in this field. To do this, the Center works closely with industry leaders, such as IBM and AT&T, which have established national support centers for research and development of adaptive devices.

SECRET

SECRET

**KEEPING OUR
CUSTOMERS INFORMED**

Three OIT activities were initiated in 1987 to enhance the way our customers can learn about recent technical developments as they pertain to OIT services and the overall information processing environment. The results of this effort can be seen in a publication entitled *OIT Directions,* in an online program called OITPUBS that makes a number of Agency information processing publications immediately available to customers, and in a video tape series entitled "Lunch and Literacy" shown on Agency cable TV Channel 5.

OIT Directions is a quarterly publication designed to inform customers about new developments in OIT services and plans. In general, OIT's direction is toward use of industry standards and products rather than maintaining an environment that is unique to the Agency. During the year, *OIT Directions* discussed the IBM 3270 protocol, system network architecture and its effect on OIT systems, and OIT technology to assist physically challenged employees.

OITPUBS is the online computer tool that provides customers access to publications on how the OIT information systems work. Among the available publications are OIT *Tech Notes,* the OIT *Training and Information Branch Bulletin,* the OIT *Information Center Newsletter,* the Office of Security's *Bits & Bytes,* and *AIM Hints.*

"Lunch & Literacy" is OIT's cable TV series covering current developments in the fields of information processing and management. Tapes are shown twice each working day on such subjects as: the future of personal computers, SQL/DS and relational data base systems, the end-user revolution, principles of telecommunications, artificial intelligence in business, system network architecture, local area networking, and management and presentation techniques.

OIT will continue to improve the way it keeps its customers informed and solicits comments that will strengthen these and other OIT information programs.

SECRET

THE FRED RUFFING MENTOR AWARDS PROGRAM

25X1

25X1

25X1

25X1

As one result of our determination "to seek out the best people and make them better," OIT has established the [   ] Mentor Award program to reward individuals who not only perform at high standards themselves but also help others realize their potential. The program is dedicated to the memory of [   ] an Agency data-processing pioneer, who exemplified these traits.

In 1987, [   ] were selected from among 28 OIT employees nominated by their peers as those who serve as role models for others and exemplify the criteria for this prestigious award.

Nominees for the [   ] Mentor Award are individuals who:

- serve as role models

- exemplify a commitment to excellence in job performance

- help co-workers achieve their potential, thereby increasing their value to the Agency

- listen and share ideas

- are zealous in finding ways to satisfy customers and infuse the office with that zeal

- encourage risk taking and support good tries.

25X1

Any OIT careerist or any person assigned to OIT is eligible to receive a [   ] Mentor Award, and any employee can nominate any eligible employee regardless of either person's position or grade level. A special panel, appointed by the Director of Information Technology (D/OIT), and the OIT Career Service Board review the nominations and recommend awards to the D/OIT who can approve up to four $2,500 awards annually.

13
SECRET

SECRET

Review of 1987

In 1987, the Office of Information Technology provided significant support to the Agency's operational and analytical components and to the Intelligence Community (IC). In addition, OIT made a number of major contributions that will assist the Agency in the general support and administrative areas.

Support for Operations

Support for Analysis

Two major achievements in 1987 in support of the Directorate of Intelligence (DI) were the installation of a Cray supercomputer in the New Headquarters Building and the delivery of a new version of the Support for the Analysts' File Environment (SAFE) system.

SAFE is a joint Defense Intelligence Agency/CIA automated intelligence retrieval and distribution system that serves several thousand analysts in the two agencies. As of late 1987, there were over 5.5 million documents in the SAFE central document files with about 50,000 documents being added each week. The new version of SAFE, SAFE 3.0/3.1, provides new features including conversion of DIA online applications to the SAFE environment. It also will serve as a base to which even more advanced applications can be added over the next several years.

Support for the Intelligence Community

During the year, OIT supported Intelligence Community (IC) counterterrorism programs, expanded the CO-MIREX Automated Management System (CAMS), participated in an interagency investigation of security problems and developed a computer model to relate intelligence collection strategies with the intelligence product and resource expenditures.

A new CAMS release provided 28 major new or enhanced software capabilities, chief among them being the ability to meet requirements of an agency of the Defense Department for tasking a national collection system. Software being developed for CAMS will have 19 more new or enhanced capabilities.
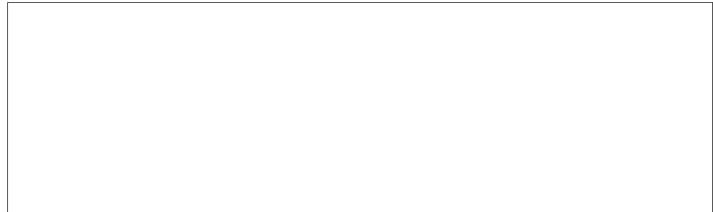
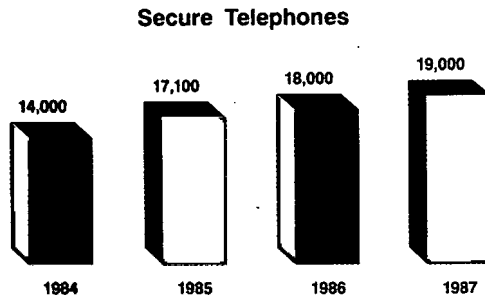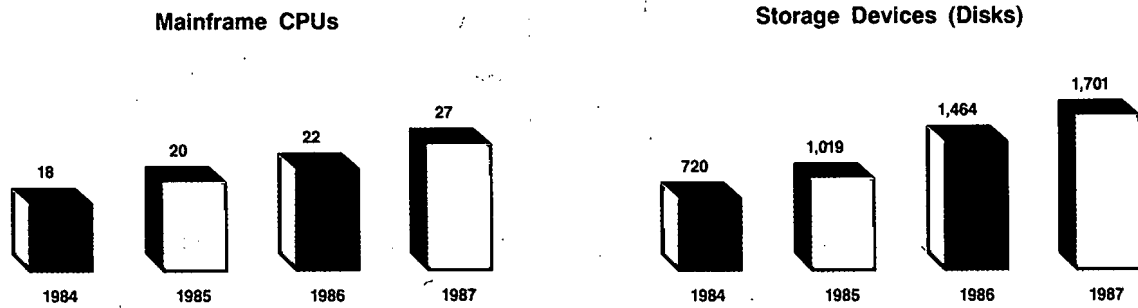In support of intelligence collection tasking, OIT developed the Collection System Evaluating Methodology
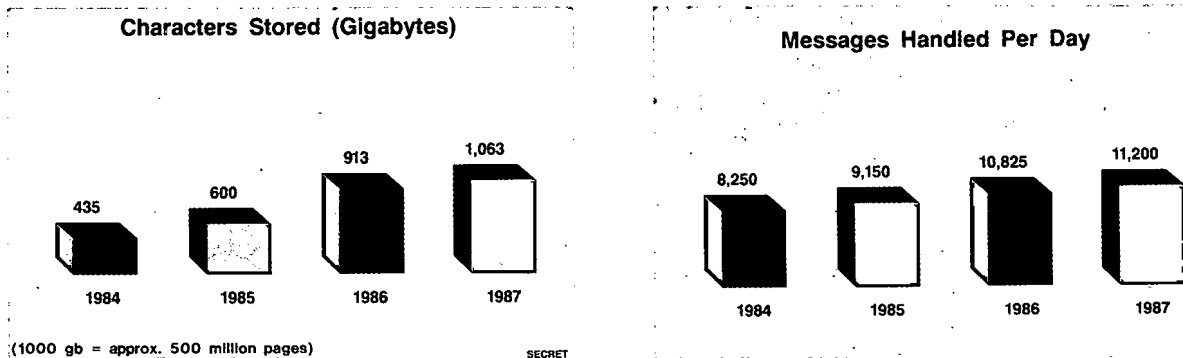
15
SECRET

SECRET

KEEPING UP

During the year, OIT tried to keep pace with customer demand by installing new equipment . . .

Mainframe CPUs

18 — 1984
20 — 1985
22 — 1986
27 — 1987

Storage Devices (Disks)

720 — 1984
1,019 — 1985
1,464 — 1986
1,701 — 1987

Secure Telephones

14,000 — 1984
17,100 — 1985
18,000 — 1986
19,000 — 1987

. . . as workload continued to grow.

Characters Stored (Gigabytes)

435 — 1984
600 — 1985
913 — 1986
1,063 — 1987

(1000 gb = approx. 500 million pages)

Messages Handled Per Day

8,250 — 1984
9,150 — 1985
10,825 — 1986
11,200 — 1987

SECRET

16
SECRET

SECRET

(CSEM), a computer model that will assist Agency and IC Staff officials in selecting intelligence strategies that provide an optimum intelligence product for the resources expended. The model also will be used to provide supporting data for IC budget submissions to Congress.

General Support

In 1987, OIT enhanced the Agency telecommunications network and developed or modified software that supports Agency administrative functions.

Progress was made on upgrading the Message Handling Facility (MHF), a project that began in 1986. This system is designed to support cable communications MHF forwards cables to designated offices, ensures secure cable transmission, and provides 30-day storage. Moreover, installation of a fiber optic cable link between the main Automated Printing and Reproduction System and remote sites has increased the speed of message traffic by 250 percent.

In Reston, communications services were activated. This included: secure and nonsecure voice and data support, a fiber optic grid for internal Wang operations, a fiber optic transmission system to Headquarters, and a communications equipment room.

Looking to the future, OIT completed development work on implementing a new IBM communications architecture known as Systems Network Architecture (SNA). When fully implemented, SNA will greatly improve OIT's network control and ability to interconnect with other networks and a variety of vendor products.

For the Office of Personnel, OIT enhanced the Integrated Applicant Processing System (IAPS) that provides automated tools to improve processing of applicants for Agency employment. The Central Applicant Processing System (CAPS) was also upgraded to accept information from the Offices of Security and Medical Services. In addition, the Recruiter Applicant Processing System (RAPS), a PC-based system that provides the capability to keep track of applicant processing and generate related correspondence, was delivered RAPS will expedite

the recruitment process and provide better management information.

OIT's development of the Automated Retirement and Separation System (ARSS) to automate posting and maintenance of retirement information helped save many hours in overtime previously needed to manually perform these functions. OIT also contributed significantly to Agency implementation of the Federal Employees Retirement System (FERS) by developing new software to accommodate contributions to the Thrift Savings Plan and to reflect election of FERS by Agency employees.

For the Office of Security, OIT developed the Personnel Access Security System (PASS), a new badge system for controlling both entrance to and departure from Agency buildings of staff employees, contractors, and visitors. PASS has been installed at all entrances to the Headquarters Building, the Visitor Control Center off Route 123,

For the Office of Finance (OF), OIT activated secure communications circuits between to provide OF a means of receiving contract audit reports electronically. These circuits reduce the turnaround time for audit reports by 3 weeks. Also for OF, OIT activated the Agency Budget Formulation (ABF) system, which provides tools for creating and prioritizing budget packages.
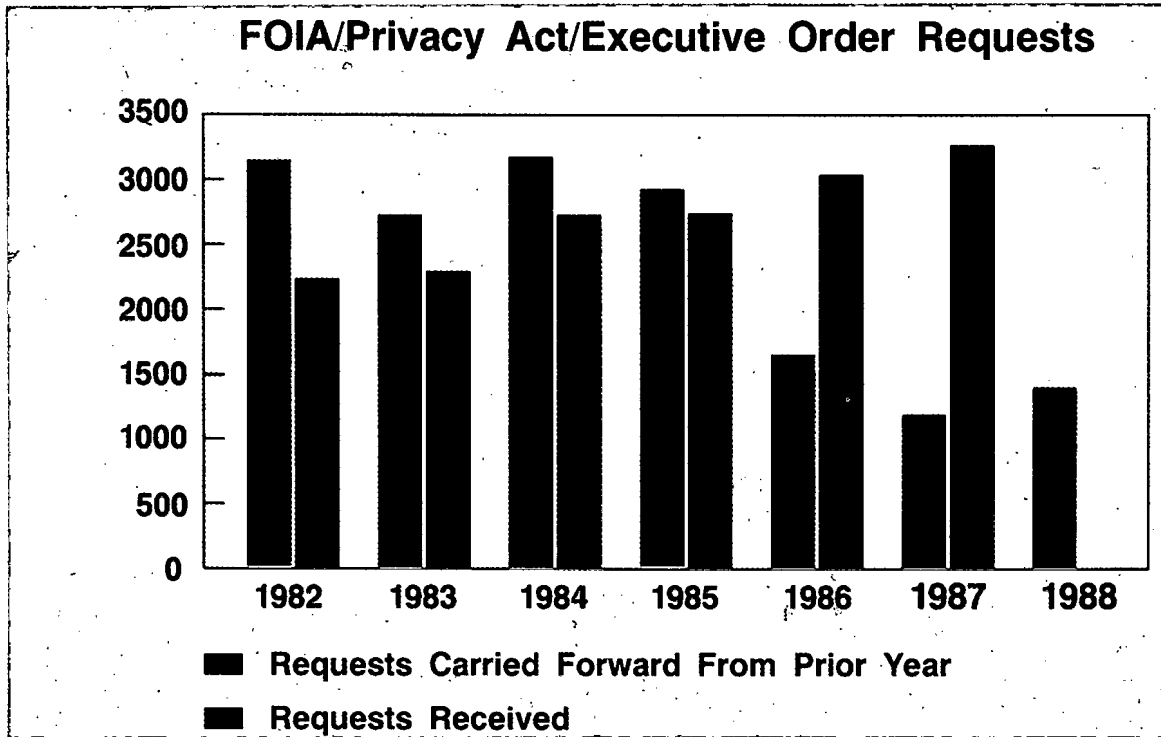
OIT developed for the Public Affairs Office (PAO) a program called Public Affairs Catalog (PACS) to assist the PAO in filing and retrieving the growing body of media articles of interest to senior Agency officers and their staffs. This system has saved precious space and improved PAO's ability to search for media items.

As part of its information management responsibilities, OIT achieved more efficient utilization of the dwindling storage space for records at the Agency Archives and Records Center. OIT also completed a major upgrade of the Records Center and Archives Management System (RAMS), a computerized inventory and accountability system for retired records.

As 1987 ended, OIT also became responsible for prepublication review, national security classification and declassification, the management of requests for the release

17
SECRET

SECRET

FOIA/Privacy Act/Executive Order Requests

■ Requests Carried Forward From Prior Year
■ Requests Received

SECRET

SECRET

of information under the Freedom of Information and Privacy Acts, and the mandatory review provisions of Executive Order 12356. These functions—formerly performed in the Office of Information Services, and, more recently, in the Office of the Deputy Director for Administration—are now performed by OIT's Information Services Division.

OFFICE OF INFORMATION TECHNOLOGY 1988 OBJECTIVES

As we move ahead in 1988, OIT's objectives are:

- **To support the Agency move to the new Headquarters building** by relocating, with minimum disruption, Agency computer and communications centers as well as decentralized customer workstations and equipment.

- **To enhance customer service in the face of shrinking resources** by completing installation of the PBX-based secure communications network, fielding a new standard workstation, meeting or exceeding OIT's level of service standards for performance and availability, and implementing a new data network architecture.

- **To continue integration of OIT's three disciplines:**

  — communications
  — automatic data processing
  — information management

SECRET

SECRET

SECRET