SECRET

25th Anniversary

1988 Annual Report

OFFICE OF Information Technology

SECRET

1988 Annual Report

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FOREWORD

A renewed commitment to customer service and system availability marked OIT's activities in FY 1988. In pursuing this number one priority, we took decisive action to structure the Office and position our assets in order to deliver the highest quality central computing and domestic communications services to the Agency and the Intelligence Community. The results, I am pleased to report, were manifested in significant operational and developmental accomplishments.

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Most notable is the fact that 1988 will long be known as the year of the moves. With virtually no interruption in customer services, both the and Northside Centers were relocated to and combined in the New Headquarters Building. Many people share in and should be proud of this accomplishment—the largest, most complex, and most time sensitive move of its type in history. Notwithstanding this tremendous effort, extensive office relocations to the New Headquarters Building were simultaneously supported; and despite the problems associated with new building occupancy, OIT personnel were able to achieve in excess of 98% connectivity for office ADP equipment on the day of, or the day following the relocation.

While these unique achievements were underway, progress was also made on a broad front of other activities including the delivery of significant software systems for corporate database and other users, upgrades to numerous voice and data circuits, the automation of manual functions in the computer and communications centers, the development of an extensive customer outreach program, the creation of the OIT Service Desk as a single point of contact to resolve customer computer and communications problems, and the successful procurement of a new standard Agency computer workstation.

The year 1989 promises to be a year of consolidation. We plan to begin the installation of the new workstations, improve connectivity on the existing network, see that standards of service are met and exceeded, and begin implementation of a new data network architecture. In doing so, I call upon all members of the OIT team to rededicate themselves to our office goal of 100% availability.

As ever, I am impressed by the skill and enthusiasm shown by OIT careerists in doing their jobs. I am confident that OIT will continue to make a major contribution to the overall intelligence effort.

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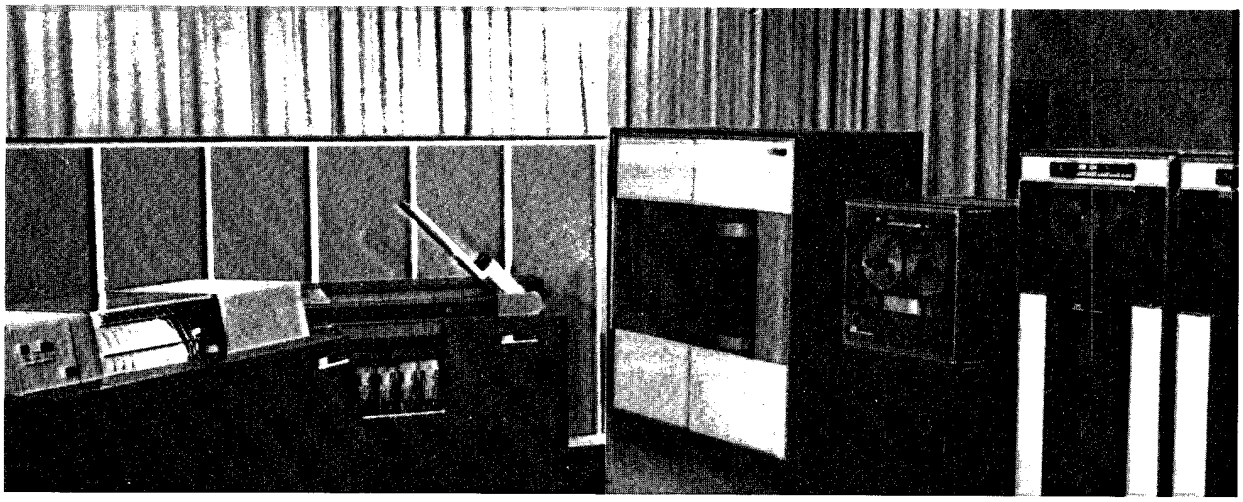
Edward J. Maloney
Director of Information Technology

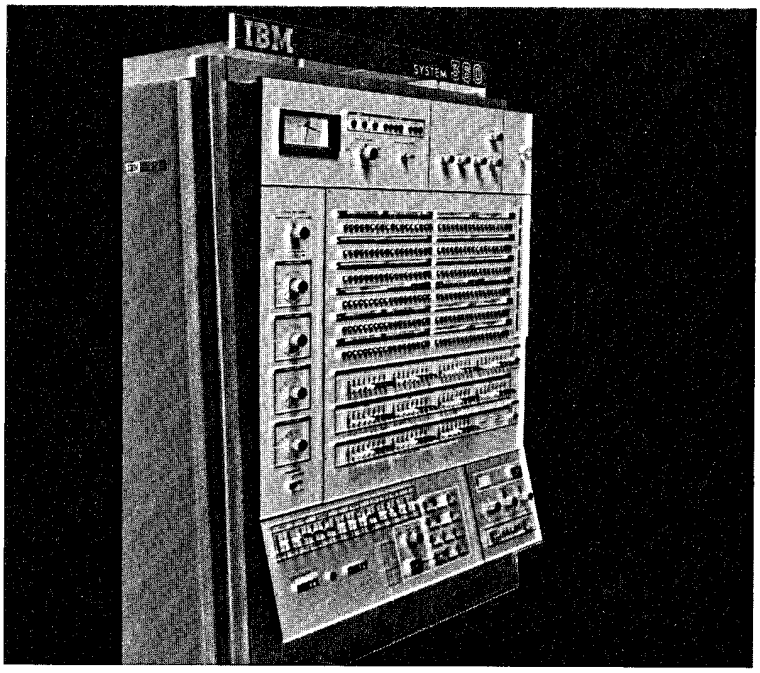
Computer Hardware Then . . .

In 1960



IBM 1402 Printer, 1402 Card Reader, and 729 Magnetic Tape Unit

In 1965



IBM System 360

25 YEARS OF AGENCY COMPUTER SERVICE

It is early in 1963—two years after the Agency has moved to its then new Headquarters Building in McLean. In the Comptroller's offices at South Building sit two RCA tube-type computers recently acquired to replace aging 1950s Electronic Accounting Machines (EAM) used for payroll processing. In the DDO (then DDP) two early model IBM computers handle work that others can only guess about. In the Central Reference Service reside dozens of EAMs which process the DDI database of punched aperture cards and which must be "programmed" by manually inserting the proper wires into the proper wire board logic slots. In 1963 scientific and business applications programming was unknown; we were sorters of punched cards.

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It was this environment which [redacted] the pioneer of information technology at CIA, found upon arriving the previous year from NSA. And from these disparate elements, on 5 August 1963, came the genesis of the present Office of Information Technology—the DS&T Office of Computer Services (OCS)—placed within the DS&T in recognition that this new office was to be involved in computer *science* and was not merely a provider of ADP support.

Room GC03 Headquarters became the home of the Agency's first computer center and the first 15 OCS employees. New, but thoroughly unreliable, IBM models 1401 and 1410 were added to provide administrative, intelligence, and scientific support. How did we operate then? Certainly much differently than today. Interactive service as we know it didn't exist; decks of computer cards reigned supreme, and the computers were provided for specific dedicated purposes and for specific periods of time. Only one program was processed at a time, and process scheduling was determined by the computer operator or shift supervisor. It was rare for a CPU, tape drive, or printer to run error-free more than 30 minutes, and a simple FORTRAN program requested by a young analyst named Les Dirks (later to become DDS&T) took hours, including multiple passes by the 1410 computer and, at one step, produced over 16,000 computer cards which in turn had to be reloaded for another pass.

But computing was beginning to come to CIA and, notwithstanding the reluctance of the Agency ADP Committee, a state-of-the-art, scientific processing IBM 7090 was acquired by

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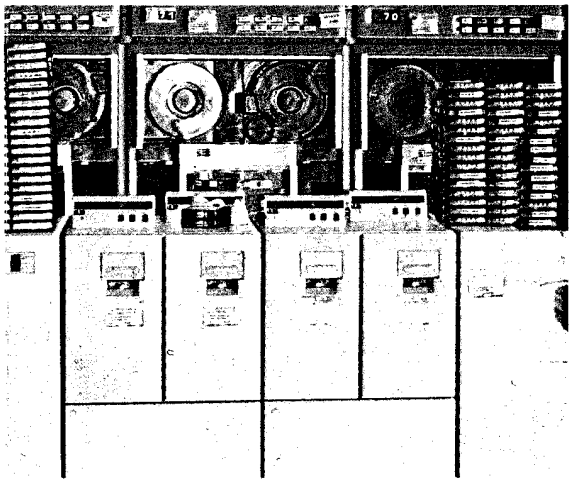
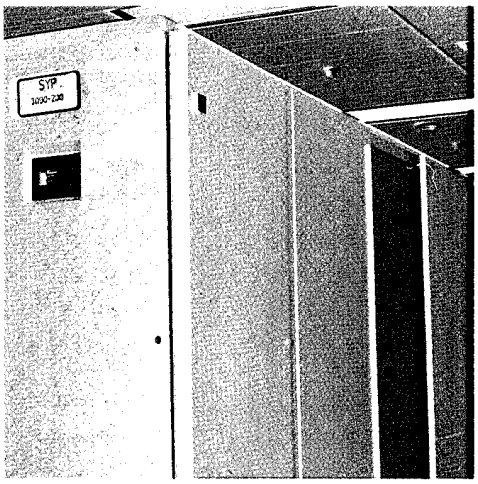
[redacted] in 1964 and was soon logging in excess of 125 hours of processing time per month. Here, first by the ADP Committee, and to be repeated time and again by others, growth in the demand for ADP resources was to be seriously underestimated.

The second generation began in 1965 with IBM's announcement of the 360 series including the 360/65, which was touted as a replacement for both business and science application computers and capable of processing both COBOL and FORTRAN programs. Debates raged over whether computer power should be decentralized; the Agency opted for the large systems which offered speed and sophisticated processing for batch and interactive users. Advances arrived quickly: first, a 360 operating system capable of executing up to four programs simultaneously, next a 360/195 which was four times faster than the 360/65, and next a 360/67 with the virtual memory (VM) operating system that by 1969 permitted 25 development and production applications to run concurrently. Organizational changes arrived also with the cognizance and operation of the DO and DI computer centers transferred to OIT in order to achieve economies of scale. Still, desktop terminals were unknown.

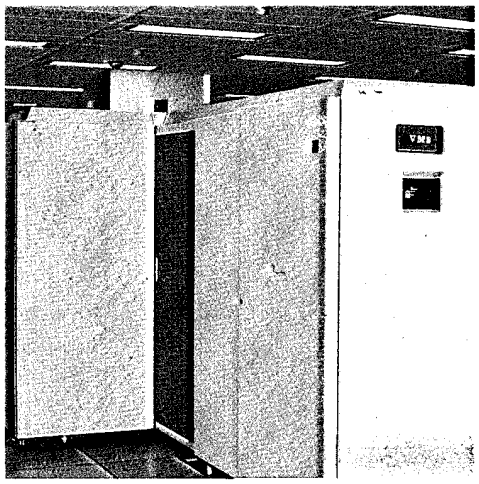
. . . And Now



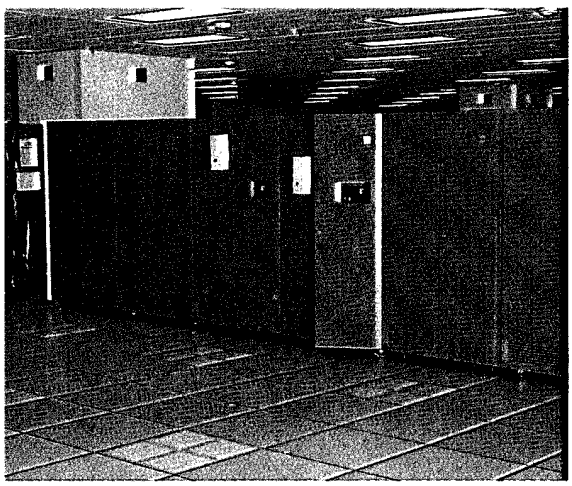
Tape Drives For Round
And Square Tape



IBM 3090 Mainframe CPU



IBM 3690 COMTENS



IBM Disk Drives

VM, with its interactive capabilities, was to change the very face of the computing environment in the 1970s and beyond. We saw the vast advances in computer hardware and operating system technology with the 370 series; we saw implementation of GIMS (Generalized Information Management System) to provide administrative support; we saw the development of SAFE (Support for the Analysts' File Environment) as the infrastructure for the production of intelligence; we saw the creation of AIM (Automatic Information Management) as a home-developed electronic mail system; and we saw the advent and proliferation of the desktop terminal and later the personal computer as the critical element of the computing network. We routinely achieve high levels of system availability, and aim for 100% as our goal. The success of these systems, as well as the recent entries in the corporate database area have served to whet our customers' appetites for further ADP support and for workstations or personal computers to be installed in every office in the Agency.

Today, after a series of organizational alignments and changes of name (OCS to OJCS to ODP to OIT), we operate and maintain for the DA, DI, DO, DS&T, and DCI Area a
25X1 computer network of 27 mainframe computers, [redacted] workstations, and in excess of 1,500 billion characters of online data storage. In fact, OIT has the largest complex of VM systems and users in the world. We also recently have acquired responsibility for domestic communications, records management, and the administration of the Freedom of Information Act and related programs. In every sense of the word, we provide, on this our twenty-fifth anniversary, a full range of information services to our customers—the employees of the Central Intelligence Agency. We pledge our best efforts toward continuing our tradition of innovation and service.

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OIT: PROVIDING BACKBONE UTILITIES AND INFORMATION SERVICES

The Office of Information Technology, as a major telecommunications and computer utility, serves the Central Intelligence Agency and the Intelligence Community in a variety of forums such as:

- computer center operations
- domestic secure/non-secure voice and data communications
- customer applications programming
- information management services

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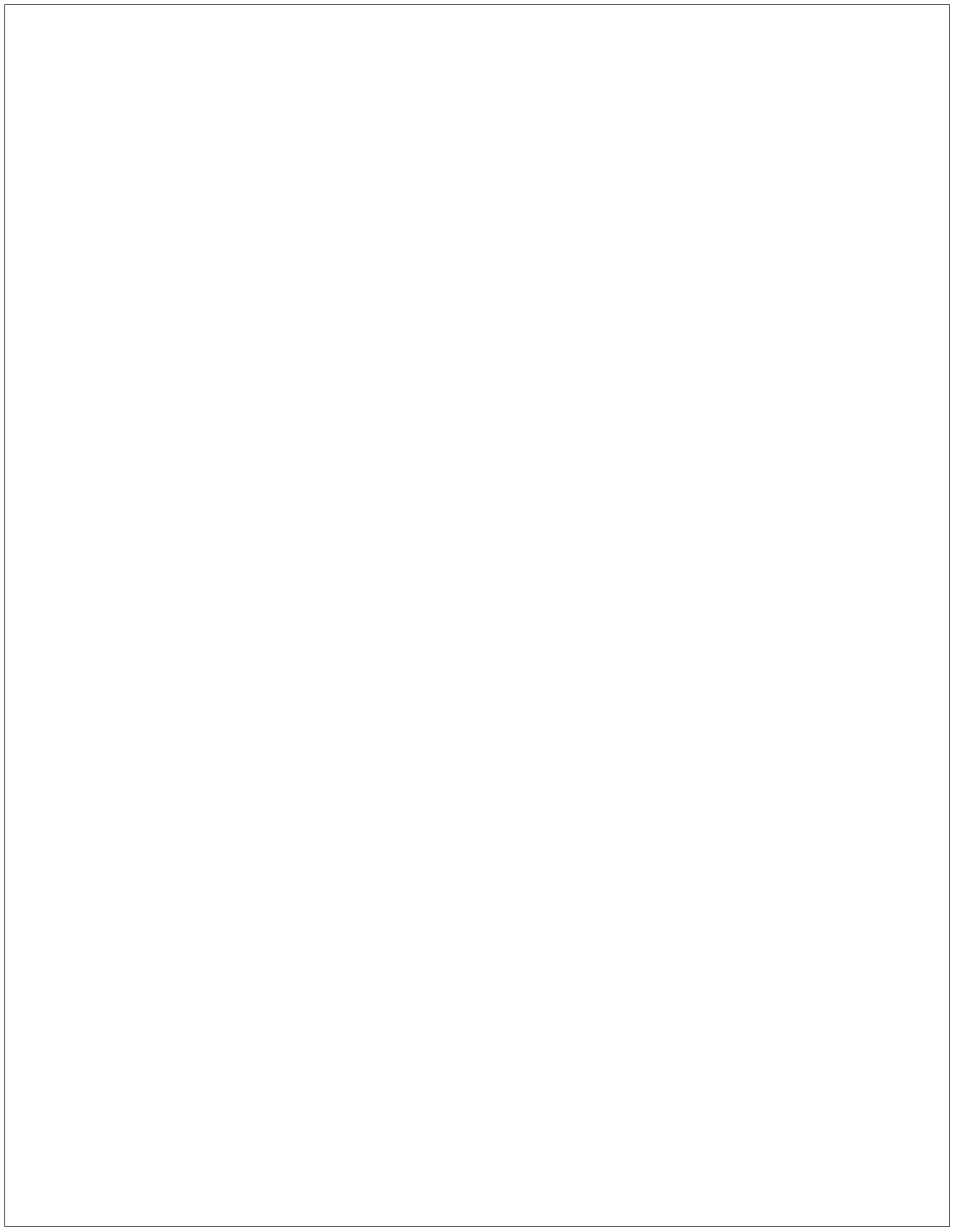

In meeting these responsibilities, OIT provided a full range of information technology services to its customers from developing and administering information management policies, to developing sophisticated hardware and software systems, to operating and maintaining a large, complex network involving state-of-the-art central processors, voice/data switches, and communications transmission equipment. In doing so, we managed some 27 mainframe computers and supported [redacted] individual workstations as well as [redacted] secure and non-secure telephones distributed throughout the Headquarters area [redacted] The accompanying graphs highlight the scope of these responsibilities.

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In the following pages of this year's annual report, we will look more particularly at some of our achievements. They have been brought about by the talented and committed individuals who together comprise the OIT Team.

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[redacted]

25X1 **IT ON THE MOVE**

By the early 1980s it became apparent that facilities comprising the [redacted] and Northside Computer Centers could not keep up with new technology developments and the increasingly complex needs of OIT customers. The CIA Computer Center in the New Headquarters Building was therefore designed to accomodate the growth and change needed to meet the Agency's information processing requirements of the 1990s.

The moves of the two centers to the new building in 1988 were made over two holiday weekends. The move of the [redacted] which handles Agency general computin 25X1 services, made over the Memorial Day weekend, was one of the largest and most complex computer center moves in history. The Northside Center, which handles SAFE services for analysts, was moved over the Labor Day weekend. The two moves, as well as the relocation of computer centers supporting the Agency's counterterrorism effort (DESIST) and the Intelligence Community's COMIREX, were made with virtually no interruption in services.

25X1 A few statistics reflect the magnitude of the task of moving the [redacted] r. More than 50,000 feet of cable had to be disconnected and reinstalled. In addition, 5 central processing units, 30 tape drives, more than 1,000 disk units and their controllers, and a tape library consisting of some 8,000 tapes had to be moved.

In sum, a combination of planning, teamwork, and effort by many people allowed OIT to accomplish these most complex tasks successfully in a very short time.

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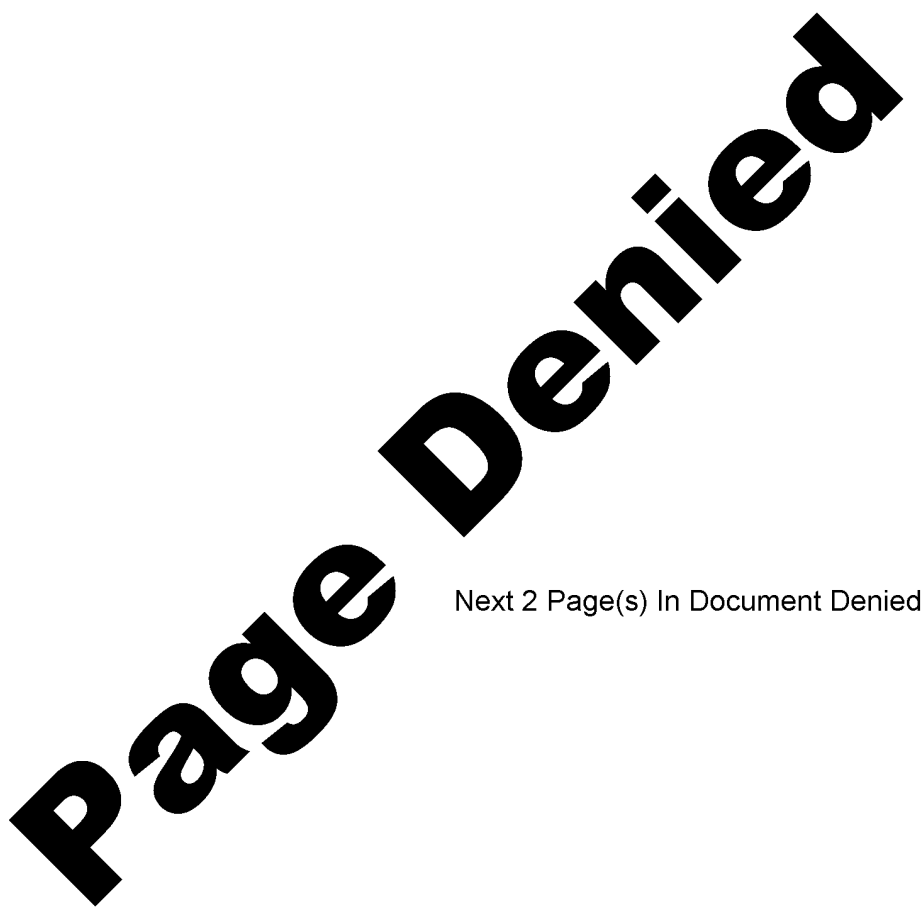

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OIT OCCUPATIONAL PANELS

OIT is strongly committed to the career development of all its employees. Toward that end OIT established an Occupational Panel System in 1988. Based on experience or current job assignment, each OIT employee through grade 15 or IS-04 was assigned to one of seven Occupational Panels. Flexibility is included within the system to permit assignment changes among the following panels:

- Administration (MZA)
- Development (MZD)
- Information Handling (MZI)
- Operations (MZO)
- Secretarial (MZB)
- Senior Officer (MZS)
- Technical (MZT)

Each panel will be responsible for providing career development assistance to employees within its purview. This assistance includes guidance and counseling in job assignments, training, and career counseling, as well as recommendations for rotational assignments. Performance evaluation and employee promotions will remain the responsibility of line managers and the OIT Evaluation Panels. The results of Evaluation Panel deliberations will be reviewed by the Occupational Panels for information useful in the career counseling process.

The OIT Occupational Panel concept is a dynamic approach to career management. Thus, refinements are anticipated as the system begins to mature in OIT and suggestions for improvement are made by panel members and employees.

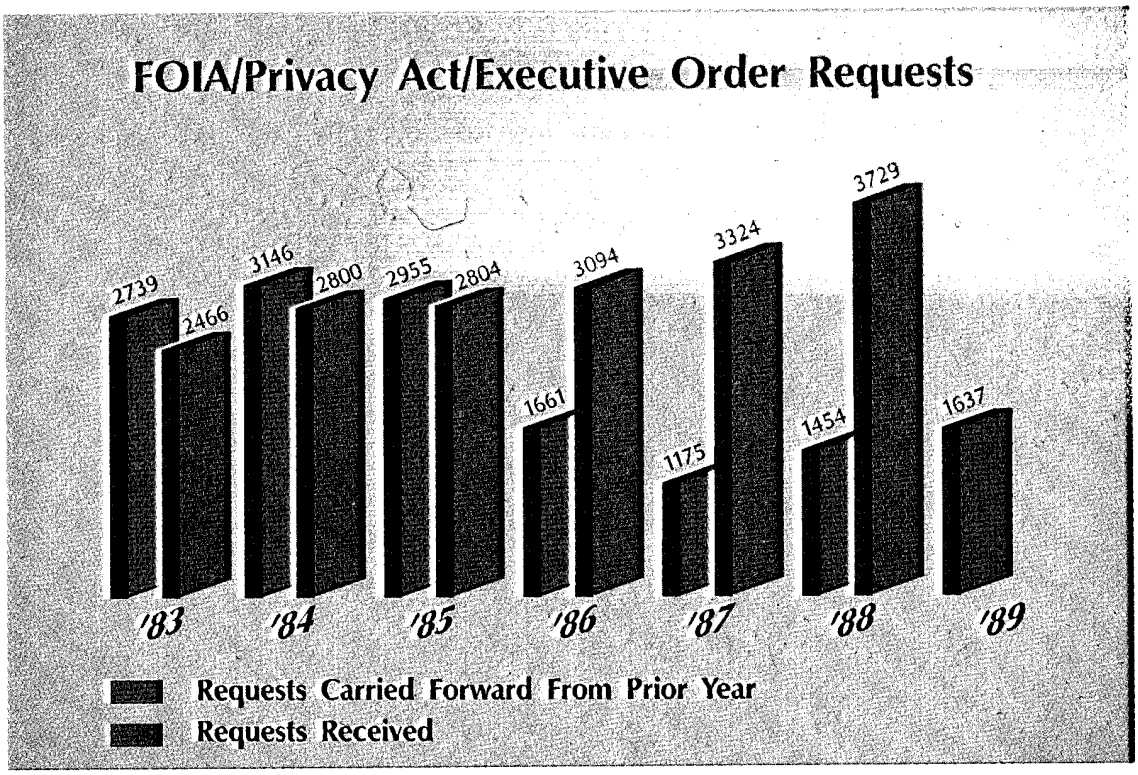
Career Management Officers:

a. Serve as career counselors for individuals assigned to their panel.

b. Ensure that assignments are consistent with an individual's grade and experience.

c. Communicate on a regular basis with individuals assigned to their panel concerning career development options, training opportunities, and reassignment choices including rotational positions outside OIT.

d. Coordinate closely with the OIT Group Chiefs and the OIT Personnel Branch.



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OIT AND THE FREEDOM OF INFORMATION ACT

1988 was the first full year of OIT's responsibility for the highly visible task of responding to requests for information under the Freedom of Information Act (FOIA), the Privacy Act (PA), and Executive Order (EO) 12356. This year, as in the three preceding years, the number of requests continued to grow, increasing over 15 percent. Today, we receive and process on an annual basis some 1800 FOIA requests, 1600 PA requests, and 350 EO declassification requests.

The following examples give the flavor of the types of requests handled by OIT under the FOIA:

- Several requests in 1988 asked for information concerning CIA relations with universities. Apparently these requests were generated by a number of news stories on the subject during the year. We provided information concerning overt contacts, if any, and refused to "confirm or deny" the existence of other records concerning covert or confidential relationships.
- One request, citing *Piercing the Reich* by Joseph Persico, asked for copies of the World War II OSS training manuals, cover stories, fabricated documents, recruiting, and training.

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The task of responding to an FOIA request entails examining Agency files, determining what information is responsive to the request, and, most important, ensuring that information which is classified or relates to intelligence sources and methods is protected. The task is a continuing and considerable one and involves the expenditure of well over 100 work years of effort annually.

OIT also performs related informational activities. It administers and manages for the Director of Central Intelligence the congressionally mandated Historical Review Program, which is responsible for selecting, reviewing, and transmitting to the National Archives and Records Administration (NARA) those Agency records deemed to be of significant historical interest. It also assists other components within the Office of the DCI by performing classification reviews of manuscripts submitted pursuant to the Agency Secrecy Agreements and damage assessments occasioned by the compromise or other unauthorized disclosure of classified information.

OIT AND COUNTERTERRORISM

OIT support to the Agency's counterterrorism effort traces back a number of years to the initial development of DESIST (Decision Support and Information System on Terrorism), a standalone storage and retrieval system in the Counterterrorism Center (CTC) of the Directorate of Operations. The CTC supports the counterterrorism operations of the Intelligence Community (IC), and OIT is responsible for managing and operating the DESIST system, expanding its availability as required, and developing systems to add to the CTC's capabilities.

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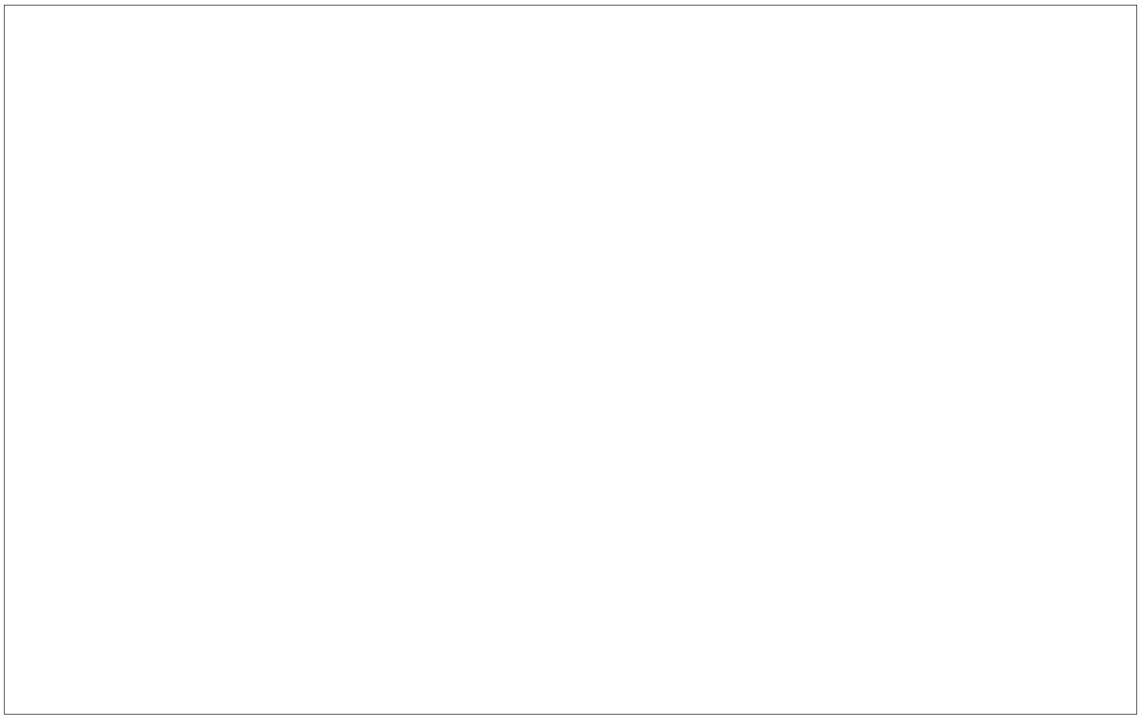
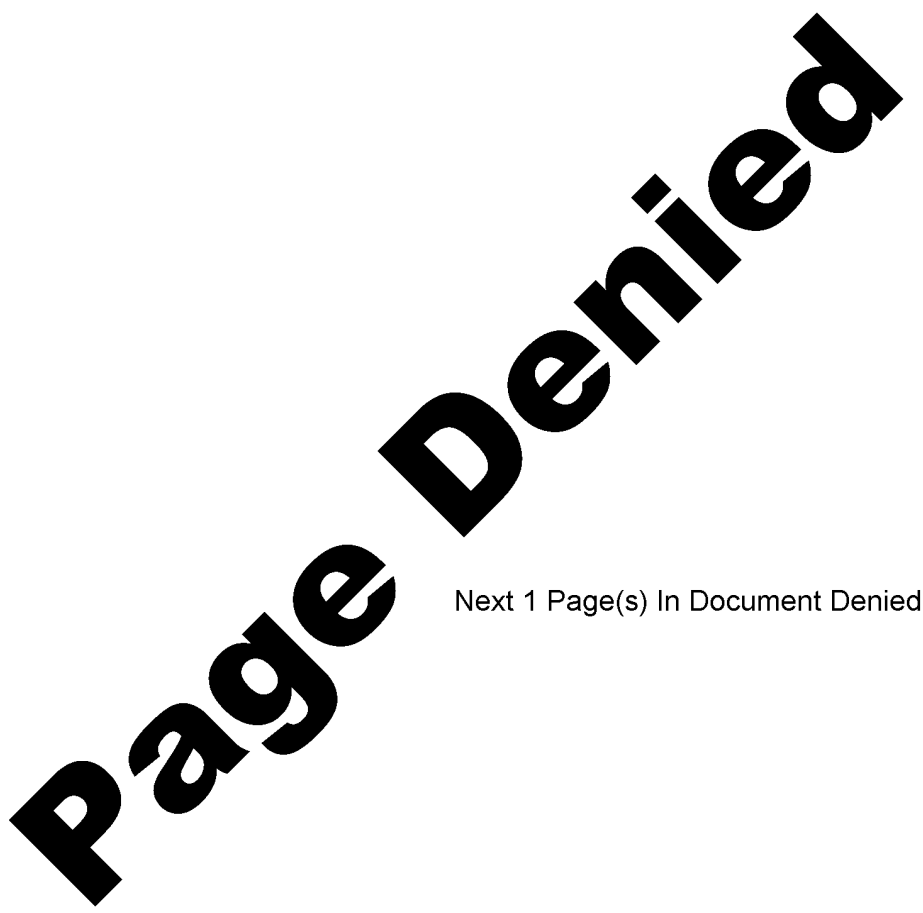


OIT is also cooperating with the Office of Research and Development (ORD)/DS&T in the development and delivery of a natural language processing system known as DEFT (Data Extraction From Text) that has the ability to extract automatically certain terrorism-related information from a cable to facilitate the updating of CEAS.

In sum, OIT continues to play an active and critical role in the Agency's counterterrorism effort.



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Review of 1988

In 1988, the Office of Information Technology provided significant support to the Agency's operational, analytical, and administrative components as well as the Intelligence Community (IC). In addition, OIT made a number of major contributions that will assist the Agency generally.

General Support

In the past year OIT, working with our customers, selected the Intel 301Z as a new Agency-supported PC/workstation to replace the IBM 3270 PC/AT, which is no longer being produced. The Intel 301Z from Iverson Technology Corporation was chosen as a result of a competitive procurement. This workstation not only satisfies OIT's commitment to use commercially available hardware and software and thus facilitate system connectivity, but also has powerful computing capabilities, is twice as fast as the IBM 3270 PC/AT, is competitively priced, and can be configured to satisfy the diverse needs of customers.

The Physically Challenged Employees Resource Center (PCERIC) was established in 1987. In March 1988, OIT and the Office of Personnel (OP) sponsored an Adaptive Technology Awareness Day at which workshops were held to demonstrate state-of-the-art computer-adaptive equipment for the physically challenged as well as to heighten public awareness of their potential.

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Support for Operations

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[redacted]

[redacted]

Support for Analysis

[redacted]

To help analysts and collection requirements officers in their imagery tasking, OIT is developing TESS (Tasking Expert Support System). When completed, TESS will allow COMIREX officers to nominate Directorate of Intelligence (DI) requirements for imagery tasking quickly, efficiently, and accurately. Agency and Intelligence Community officers consider TESS a major step in improving imagery tasking.

Upgrades to the memory and solid state disks of the CRAY XMP24 supercomputer installed in 1987 have converted the supercomputer to an XMP216, its maximum configuration. Each solid state disk now has a capacity of 128 million words; the former capacity was 32 million.

Support to the Intelligence Community

Started in 1987, the move of the COMIREX Automated Management System (CAMS) development and production services to the New Headquarters Building was completed in 1988. OIT also converted CAMS tapes to IBM's new tape technology as a measure designed to save valuable space.

Two software releases, installed without interfering with production, contributed to a major increase in the CAMS availability rate to 98 percent. These new releases also mean that CAMS is prepared to accommodate expected increases in processing and collection requirements.

OIT also met three scheduled milestones for delivery of software for CAMS Phase IV. Phase IV is designed to support the Intelligence Community's systems which are expected to be operational in 1990.

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Support for Administrative Services

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25X1 In 1988, OIT continued to install management tools for Agency components

To improve the ability of the Agency's office of Congressional Affairs and the Office of the Comptroller to manage their voluminous paper records, OIT developed and delivered ARCHIVES, a state-of-the-art document scanning, storage, and retrieval system that makes use of the Palantir Compound Document Processor, a local area network of SUN workstations and full-text retrieval software. ARCHIVES is able to convert essentially any typed or printed work into machine-readable code and to conduct sophisticated full-text searches on the resulting database.

For the Office of Medical Services (OMS), OIT provided the first phase of a system called MIDAS (Medical Information, Diagnosis, and Artificial Intelligence System). MIDAS will consolidate a number of diverse systems and databases, thereby giving OMS greater capability and flexibility in handling medical tests and their results.

For the Office of Training and Education (OTE), OIT delivered the Training and Education Automated Management System (TEAMS). TEAMS lets Agency employees register for OTE courses electronically, thereby improving the management of the registration process and permitting the processing of an increased volume of training requests.

Installation in all 10 Recruitment Activity Centers of the Recruiter Applicant Processing System (RAPS) was completed in 1988. RAPS tracks processing of applicants and serves as a management tool for the Office of Personnel (OP).

Also for OP, OIT delivered the Insurance Claims, Accounting, Reporting, and Enrollment (ICARE) system in 1988. ICARE supports the claims adjusting and enrollment functions of the Insurance Operations Division of OP.

Other computer systems for OP that reached operating capability during the year were:

- CDPerS, OP's Corporate Data Personnel System, which provides OP with the ability to retrieve rapidly a subset of the Agency's personnel data.
- ELECTAS (Electronic Time and Attendance System), which is used throughout the Agency to record time and attendance information.
- FERS-THRIFT, which provides basic record keeping as well as loan processing and fund transfer functions for Agency personnel participating in the Federal Employees Retirement System-Thrift Savings Plan.

Office of Information Technology
1989 Objectives

As we move ahead in 1989, OIT has three main objectives:

- Availability
- Simplicity
- Decentralization

The latter two objectives will contribute to our overall goal of providing customers with 100% system availability.

Through meeting these objectives we intend to provide the highest level of ADP and communications support for the business of this Agency—the collection and production of timely intelligence.