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DATA PROCESSING
LONG-RANGE MANAGEMENT PLAN
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3 - REQUIREMENTS

3.1 GENERAL SERVICES

The workload trend for general services has been one of constant growth for the past several years. Requirements submitted by various Agency offices assist ODP in its plans to expand and enhance ADP-related services. Most offices submit annual projections of their requirements; others submit detailed long-range plans. All of these are vital to ODP's planning efforts. On the basis of these user contributions and through an analysis of growth patterns, ODP prepares budgets and coordinates communications and space plans for needed facilities on a timely and cost-effective basis.

3.1.1 Online VM Services

VM service, upgraded by the installation of an IBM 3033 MP (multiprocessor) during the second quarter of FY81, continues to grow at a rate slightly higher than projected in previous plans (Figure 1). As a result, a new IBM 3081 will be installed during the second quarter of FY82 to keep pace with demands. In addition, a functionally identical copy of the VM system has been made available to the Special Computer Center (SCC) for DO users. Further, a study is under way to consider off-loading some of the VM workload to the Technical Analysis and Display System (TADS) CPU. However, even with these changes, it is projected there will be a need to support concurrent users through the central service CPU by the end of FY82. Currently, more than VM passwords have been issued. To meet demands for paging on the VM system and to maintain acceptable interactive response time, ODP will procure three solid-state device (SSD) subsystems to complement the drums currently in use. Each of these is equivalent to two of the fixed-record disk (2305) subsystems.

3.1.2 Batch Services

The capacity to process the batch workload (Figure 2) is divided among the several CPUs in the MVS Operating System (OS). ODP's goal is to:

- o Process all jobs overnight
- o Provide reasonable turnaround during prime time
- o Provide adequate backup capacity

The backup strategy is to use the primary batch processor for any other service that has failed. With this procedure, the negative impact on users is marginal, since the batch service is divided among several CPUs. As long as the batch system is responsive, it is a relatively cost-effective method to meet the needs of a large number of users. The annual growth rate for batch service remains as

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it has for some years, at about 15 percent. Figure 2 has been modified slightly this year to show a minimal backup capacity; also the 24-hour workload has been changed to indicate a high-low range, thereby more clearly illustrating how the maximum 24-hour capacity is utilized.

3.1.3 Generalized Information Management System (GIMS)

25X1 GIMS is used to provide database management service (Figure 3). Currently, there are 38 databases on the production CPU and more than [] GIMS passwords have been issued. The service was upgraded in October 1981 when it was transferred to an Amdahl 470 V/8. Growth rate is projected on the basis of increased activity on existing databases and the addition of new databases. In addition to the 38 databases previously cited are 6 databases on the CAMS CPU and 3 databases in SCC for DO users. Growth projections depend on a number of factors, including availability of terminals, adequate space, and proper user training. An additional 11 databases are candidates for GIMS management in the near future; 59 are undergoing tests on the GIM Development (GIMDEV) system.

3.1.4 Office Automation Services

This new service category, Office Automation Service, groups such support elements as terminals, printers, graphics display, word processors, and related software, which were treated separately in previous ODP plans. ODP considers this service an extension of support offered by the central computing facility and as part of the overall effort to maximize electronic data-processing assistance to end users. In so doing, ODP has sought to decide on a limited product line, thus offering economies of scale and, at the same time, maximum service to a disparate user community. The ODP product line is shown in Attachment D, along with other relevant information. As perceived by ODP managers, the product line should offer:

- o Capability to cluster terminals
- o Inexpensive devices for simple tasks
- o IBM 3270 compatibility
- o High-speed communication
- o Reliable color-graphics terminals
- o TEMPEST-tested, medium-speed, high-quality printers

ODP continues in its efforts to fulfill these product-line requirements, which continue to be on ODP's agenda. ODP is committed to have hardware and software tools designed to assist analysts to improve the intelligence end-product and increase the speed with which it reaches the customer. ODP also is required to train analysts to fully utilize advanced, more sophisticated systems, which include small, remotely located devices that will be easy to use.

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While users require easy-to-use, friendly terminals, managing the network within which these terminals operate calls for a different, more sophisticated set of skills for fine tuning, problem determination, and problem solving. Rapid problem detection and correction require highly skilled personnel in software, hardware, and communications technologies. Because of these factors, providing simplicity to the user adds to the cost; further, the variety of terminals needed adds to the complexity of the maintenance process.

3.2 MAJOR PROJECT REQUIREMENTS

Because of size and/or security considerations, service for some users is provided on independent CPUs. Additional, ever-increasing requirements for independent CPUs is more predictable and easier to control than requirements for shared systems. In ODP's hardware-replacement plan, services via independent CPUs are beneficiaries of resources no longer needed for shared services.

3.2.1 Support to the Intelligence Community (IC): CAMS and 4C

Because non-Agency personnel access the CAM system, current CAMS service is provided out of SCC on a CPU isolated from the ODP network. Limited enhancements are envisioned for the current system (Figure 4). Two megabytes of memory will be added in FY82 to alleviate a paging (storage) problem and provide for a graphics application. Most of ODP's efforts will involve the development of an enhanced CAMS II, programmed to become an online production system in FY84, to coincide with a new [redacted] system. In mid-FY82, a developmental CPU for CAMS II will be relocated to the contractor's facility. In early FY84, a new CPU will be installed in RCC for final system testing; this CPU then will become the CAMS production CPU. Later, another CPU will be installed for backup and additional development.

The 4C System (which replaced the SPECLEAR batch system in August 1981), is now operational, using the GIMS software developed by Electronic Data Systems (EDS).

During FY82, when online space is available, 4C will be moved to an electronically isolated community system. After all terminals have been installed and users have been connected, little or no growth nor further developmental work is anticipated.

In addition to these projects, the Intelligence Community receives other support from ODP. For example, training in the use of GIMS is provided to the Department of Justice (FBI) and the Department of Transportation (FAA). ODP-provided support to IC includes:

- o More than [redacted] name traces
- o Approximately 70 percent of the security approvals processed by the special-clearance system
- o More than [redacted] the Office of Security

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- o More than 1300 bibliographic queries of the Office of Central Reference (OCR) online files
- o More than 700 biographic-information searches

3.2.2 Support to the Directorate of Intelligence (DI)

DI provides ODP with a detailed long-range plan each year, from which ODP determines future growth and workloads. In addition to the general service provided under VM and batch, ODP runs two dedicated CPUs for DI support--the OCR service and TADS. The OCR service consists of a number of online applications for bibliographic-database update and retrieval, and for cable traffic text-search capability. The Pilot Mail Operation (PMO) is serving as a test bed and training facility for future SAFE users. The growth rate of OCR requirements is fairly stable and, as far as can be determined, the current level of support will be adequate for this planning period. The upgrade objective is for a simpler, more easily maintained system with improved reliability.

Project TADS currently operates on a dedicated CPU. The workload consists of both production by Office of Strategic Weapons Research (OSWR) analysts and developmental work by the contractor, TRW. There is considerable IC interest in this system, especially from Foreign Technology Division (FTD) in Dayton, Ohio. The TADS CPU is considered a candidate for off-loading a portion of the VM workload if the main VM system becomes saturated.

3.2.3 Support to the Directorate of Operations (DO): HUMINT

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3.2.4 Corporate Management Systems

ODP is deeply involved in developing and upgrading the corporate management systems used by the Agency in its day-to-day operations. Working closely with the Offices of Logistics and Finance, ODP has committed major resources to new logistics and unified payroll systems. ODP also is a major supporter of OL in its efforts to automate the printing and reproduction processes. The automation of medical records also is an ongoing endeavor with the Office of Medical Services (OMS). A new Personnel Resource Information Management (PRIM) System is being developed jointly with the Office of Personnel (OP) to make data from the PERSIGN system more readily available to Agency line-managers.

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4 - ODP CUSTOMER SUPPORT GOALS

4.1 END-USER PROGRAMMING

Innovations in the fields of telecommunications and database systems have provided end users with the capability to develop their own projects--structured to fit the needs and priorities of their own organizations. As a result, system development by the central support facility has become more complex. Problem determination and correction call for a higher level of expertise; computer operators need more technical sophistication to manage the range of requirements among dispersed equipment. Increased complexity of software for unique applications means that system's software experts are needed for installation, tuning, and problem determination. ODP expects to meet the challenge of this emerging technology and to develop a new category of service for end users who do their own programming.

4.1.1 Goal

ODP's goal is to create a category of service that provides a variety of support to user programming, with emphasis on software packages adaptable to the maximum number of requirements.

4.1.2 Plans

To enhance customer support, ODP plans to:

- o Develop a software package that will produce routine graphs and bar charts.
- o Provide a statistical package that produces common management information statistics.
- o Obtain software packages with the widest applicability for report generation, database management, and query languages.
- o Develop a common set of programs for the Delta Data 7260 and establish a Delta Data user's group.
- o Obtain the latest Computer-Assisted Instructions (CAI) facilities, to provide training and assistance, whenever possible.
- o Develop online documentation to complement the above-listed services.

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4.2 AUTOMATED OFFICE

ODP plans a variety of tools that, when properly implemented, offer significant improvements in many routine office functions. Word processing (WP) and word-processing equipment (WPE) are the most visible of the office-automation tools and, to date, the most difficult to control. Yet, controlling WPE is one of the keys to a successful office-automation plan. The moment information is typed, the capability should exist for transferring it to a computer environment. ODP Applications conducts WP studies for Agency components that include a requirements analysis, cost justification, alternative solutions, and recommendations.

4.2.1 Goal

The automated office offers a category of services to customers that will allow a smooth transition to automation with software and hardware that are both friendly and adaptable to a normal office environment.

4.2.2 Plans

In support of the automated office concept, ODP plans to:

- o Standardize equipment and software with compatible communications features for integration into RCC computer systems.
- o Provide an electronic mail service.
- o In collaboration with OL and OC, improve output capabilities, especially high-quality printing, by establishing regional centers where demand so dictates.
- o Extend the use of an automated-registries software package.
- o Provide adequate training and facilities for user assistance.

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6 - GENERAL HARDWARE SUPPORT GOALS

6.1 BACKGROUND

As indicated in subsection 1.4, "Accomplishments," ODP has many diverse objectives. Because of the variety of technologies and changing user requirements, ODP must adhere to a unified plan. A complicating factor is the continuing relocation of users within the metropolitan area while demands increase for a secure and reliable network that extends beyond Headquarters; currently about 50 percent of the user community is in that category.

For the user, the most visible planning relates to the hardware and communications technology as it involves the network. The new technological requirements have placed ODP at the center of a large network of several thousand terminal and minicomputer users who rely on them for everyday tasks and communications with large databases. This long-range plan attempts to give direction and control to anticipated network growth.

Information-processing requirements placed on ODP must be reviewed carefully to ensure their compatibility with other strategic goals. Equally significant is the realization that ODP cannot satisfy all requests and that users must be made aware of the limitations of planned resources. This section highlights ODP objectives and provides a blueprint for the various processes that support ODP's overall strategic goals.

ODP management plans and budgets for hardware to be used adjacent or connected to the central-processing facility. In other cases, ODP develops hardware standards that have Agency-wide application which, although using ODP expertise and documentation, may be budgeted for and procured by other components to solve their unique processing problems. Examples of such hardware standards are the Delta Data microprocessor system, the Design 100 hard-copy printer, the IBM 370-compatible minicomputer project (GIMINI), and a standard word processor.

6.2 GENERAL SERVICES SUPPORT

ODP's main thrust regarding hardware is to provide end users with conveniently situated, reliable, and friendly work stations that have the central CPU power needed to support the network. Equipment must be in accordance with current security regulations and approved by OC to meet emanation standards. Traditionally, ODP has budgeted, selected, procured, and maintained its computer equipment. However, during the past few years, this procedure has been difficult to implement because of budgetary restraints, especially where terminals are concerned. Despite these restraints, ODP will be able to meet essential requirements if users list their requirements and priorities. The procedure described does not preclude having users with special requirements submit budgeted funds to ODP for ADP procurements; this is especially true for large requirements and those projects listed in section 5 of this document.

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The Comptroller has instructed user offices to budget for minicomputers. If the requested minicomputers are IBM 370-compatible, ODP will support and maintain them to the extent possible. The requirement for minicomputers stems from such considerations as security, critical response time, administrative concerns, and the commercial availability of applications and software implemented on minicomputers.

ODP's goal is to provide support for a standard set of hardware and software for the distributed-processing network.


6.2.1 Minicomputer Plans

ODP is formally supporting a standard minicomputer alternative to the ODP central service. It is envisioned that the minicomputer alternative will support ODP operating and database-management systems; this will permit straightforward, applications-software processing on either the standard minicomputer or a central-service mainframe. Justification for this approach is increased security, and/or improved service to the user.

6.2.2 Computer Terminal Plans

Using an annual user survey as the basis to determine terminal requests, ODP will continue to budget for standard terminals. In addition, replacement of all old terminals will proceed as requirements are surfaced, subject to the availability of funds. Whenever a terminal is no longer maintainable, it also will be replaced by a newer model. When offices are relocated, new terminals may be installed to replace old terminals--again subject to the availability of funds. The following illustration reflects the installation history and demands for all terminals as monitored by ODP through an annual requirements survey.

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Terminal Installation History and Demands

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