

ROUTING AND RECORD SHEET				
SUBJECT: (Optional) <b>STUDY AND RECOMMENDATIONS: USE OF AIM - WANG SYSTEMS IN OPDA</b>				
FROM: <b>EXO/DDA</b>	<b>EM</b>	EXTENSION	NO.	
			DATE <b>19 OCT 1984</b>	
TO: (Officer designation, room number, and building)	DATE		OFFICER'S INITIALS	COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)
	RECEIVED	FORWARDED		
1. <b>ADDA</b>	<b>19 OCT 1984</b>		<i>J</i>	<b>FYI Great!</b>
2. <b>DDA</b>	<b>19 OCT 1984</b>		<i>J</i>	
3.				<b>Good study. why not?</b> <b>19 OCT 1984</b>
4.				
5. <b>EXO/DDA</b>				<b>for follow-up action.</b>
6. <b>4CMS</b>	<b>11/13</b>	<b>11/15</b>	<b>EM</b>	
7. <b>EXO/DDA</b>				<b>1) The recommended course of action would be a real step forward for CMS.</b>
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*EXECUTIVE SUMMARY*

The Consulting and Assistance Group (C&AG) conducted a study for the Office of the Deputy Director for Administration (ODDA) to analyze current communications methods and facilities, and to propose improved communications through automation. Representatives of each ODDA staff function were interviewed to determine their current requirements. Advantages and disadvantages of three office automation techniques (AIM, Wang and HBWP) were evaluated for each identified communication. The short-to-long term growth and expansion was considered. In developing the recommendations,

In the final analysis, communications within the ODDA and to and from ODDA components could be greatly expedited through increased use of existing automated facilities.

A summary of the 13 recommendations derived from the findings and analysis of this study is outlined below. Details of these recommendations are addressed in Section IV of the study.

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**To effect the recommendations in the ODDA, C&AG will:**

- o **Assist in procuring six Delta Data terminals**
- o **Present AIM/VM training to ODDA Staff**
- o **Assist the ODDA system administrator in obtaining AIM access for ODDA Staff**
- o **Present Wang/VM Interface telecommunication training to ODDA Wang users and assist Offices in acquiring the Wang/VM communication facilities**
- o **Modify memoranda format models on AIM**
- o **Create a correspondence tickler file model on AIM for the front office of the ODDA**
- o **Assist the Safety Staff in submitting their requirements to ODP/MISG**
- o **Create AIM models to control and reserve space in internal training courses for Career Management Staff**
- o **Create Rotational Assignment models on AIM for the Career Management Staff**
- o **Create Position Vacancy AIM models and Wang glossaries for the Career Management Staff**
- o **Create AIM models and modify VM programs for ODDA's front office Weekly Reports**
- o **Create AIM models and Wang glossaries for Budget and Finance reports for the Management Staff**
- o **Assist in planning for the acquisition of a Wang Alliance to replace the Wang 7525 system.**

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Study of Communications and Automated Facilities  
in the  
Office of the Deputy Director for Administration

October 4, 1984

Prepared by:

Consulting Services Branch  
Consulting and Assistance Group  
Office of Data Processing

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## I. INTRODUCTION

The purpose of this study is to recommend automated tools and techniques which will improve efficient and effective communications within the Office of the Deputy Director for Administration (ODDA).

Objectives of this study are to:

- o Analyze the current communications within the ODDA and its staffs
- o Propose interactive communication mechanisms that can be expanded to DDA Offices located outside headquarters

This report presents a description of the ODDA organization; describes findings and analysis of current communications and automated facilities; defines current problems and alternatives; and recommends areas for improved communications through automation. Those communications judged to be most pervasive or to have the greatest impact are addressed in this paper.

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II. FINDINGS AND ANALYSIS

A. BACKGROUND

The Directorate of Administration (DDA) is one of four Directorates in the Agency. This Directorate is comprised of a Deputy Director (DDA), an Associate Deputy Director (ADDA), an Executive Officer (EXO), nine Offices, and a Directorate Staff. The Offices are Office of Communications, Office of Data Processing, Office of Finance, Office of Information Services, Office of Logistics, Office of Medical Services, Office of Personnel, Office of Security, and Office of Training and Education. Functions of these Offices are directly associated as their names imply. Staff functions are designated as Career Management Staff, Management Staff, Special Support Assistant, Registry, and Safety staff.

To determine the current communication requirements, interviews were conducted. Findings of the interviews and the analysis of the available automated facilities are described in this section.

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B. DIRECTORATE STAFF COMMUNICATIONS

CAREER MANAGEMENT STAFF

STAT The Career Management Staff (CMS) provides guidance to the DDA regarding personnel matters that affect the Directorate; provides policies and procedures on Management Generalist (MG) Careerists; coordinates training and assignments; and supports evaluation and promotion panels and boards. CMS is allocated [ ] positions; [ ] are professional and [ ] are administrative support.

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STAT The personnel functions in CMS include, but are not limited to, rotational assignments of MG Careerists, vacancy notice and selection processes, and competitive ranking of MG Careerists and other selected positions in the DDA. To disseminate personnel information these functions require communications with Support Officers in the DDA Offices and those in field stations. Rotational assignments are monitored based on the term of the assignment. On the average, [ ] persons are assigned on rotation from the [ ] MG Careerists in the DDA. As the rotation term approaches a roster of projected rotational slots is prepared and options are made available to extend the assignment, to rotate into a vacated slot, or return to the "home" base. Based upon the option to be exercised rotational allocations are prepared from which candidates are selected by



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a board and the rotational assignment process is culminated. Cables are used to send information to foreign locations. Memoranda and prepared forms are used to notify the Support Officers in domestic locations as well as to notify the Career Board.

To announce vacancies as they occur and to make selections for positions within the jurisdiction of CMS the following manual procedures are required: vacancy announcements are prepared and circulated; applications are acknowledged; applicant summaries are prepared and sent to a panel for review; and candidates are ranked and selected for further consideration and final selection. The annual grade ranking of MG Careerists provides the means for staff to be considered for potential advancement. Staff rosters reflecting personnel and related information are manually prepared and provided to the Career Board for review and categorization.

The training functions involve managing internal and external educational curriculum for the DDA staff. To reserve space in internal training courses procedures require that CMS coordinate with the Office of Training and Education (OTE) and with the Training Officers in the Offices. OTE provides the course schedules which include course names, dates, and sizes. CMS equitably determines the number of slots to be allocated to

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each office. Although allocations are made annually, the courses are offered throughout the year requiring approximately 432 transactions (12 courses with 6 seats allocated per course and 6 runnings of each course). External training information is recorded and maintained by program title of course and by name of nominee. Since external training is funded primarily by the Offices, CMS acts as the coordinator between the Offices and OTE. Approval and program registration are handled by OTE's External Training Board. Nominations for external training sponsored by the Agency Training Selection Board are made through CMS.

Much of the information used by this staff is available through the Agency's automated personnel systems (PERSIGN and PRIM). Training data are available on a training database system, the Generalized Information Management Systems (GIMS). Although several CMS individuals have user identifications (userid) and passwords for access to these systems, few have used them.

#### MANAGEMENT STAFF

Management Staff (MS) is comprised of three distinct staff functions: Finance and Budget, Planning, and Information Control. Finance and Budget personnel provides guidance on the preparation of Directorate program budgets and acts as budgetary liaison with the Office of the Comptroller and the

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DDA Offices. Planning personnel performs Directorate level planning activities in areas such as information handling and emergency planning; and acts as AIM and Wang administrators for the ODDA. The Information Control Officer monitors the Freedom of Information Act and Privacy Act activities, serves as Directorate Records Management Office and is the Automated Data Processing (ADP) Control Officer. MS is allocated seven positions; five are professional and two are administrative support.

The Finance and Budget functions in MS require extensive interaction with the Offices in order to obtain budgetary and statistical data. This interaction takes many forms such as memoranda, reports, briefings, automated systems messages, and telephonic communications.

For example, there is a monthly request from the Comptroller requiring the status of Directorate resources. This requested information is then communicated to the DDA Offices which, in turn, must provide the information to MS for consolidated reporting to the Comptroller. The information is tabulated, edited, and combined into one report. Because of short deadlines, cut and paste methods are used to combine the information received from the DDA Offices into a memorandum.

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Briefings, automated messages, and telephonic communications are used for exchange of information between the Offices, MS and the Comptroller.

Planning functions include, but are not limited to, quarterly reviews, requests and guidance in long range planning, and the emergency preparedness of the DDA Offices. As system administrator for both the Automatic Information Management (AIM) system and the Wang system, MS ensures the accuracy of AIM access when staff changes are made and ensures the integrity of Wang files by periodically backing-up the system.

The Information Control functions in MS include the use of a GIMS database. This database contains Information Privacy Act grievances and related decisions. For the most part, communications involving this staff include hearings and face to face interactions.

#### SPECIAL SUPPORT ASSISTANT

The Special Support Assistant (SSA) staff provides for resolution of problems and coordination of mutual concerns in support of both the Directorate of Administration and the Directorate of Operations. SSA staff is allocated more than six positions; two are administrative support and the remainder are professionals.

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The SSA functions involve coordination with the Support Officers in all Directorates regarding administrative matters. When information is originated by an office that impacts other Directorates, the information is sent to SSA to obtain concurrence by the Support Officers in the other Directorates/Offices. When Support Officers are located outside Headquarters, the information must be communicated via telephone. This requires that the cables, some as long as 10 pages, be read by SSA staff to the Support Officers. Support Officers located at Headquarters usually walk to the SSA's office to read the cables.

In addition, non-domestic travel allowances and travel orders are sent to SSA staff for approval and coordination. This activity requires extensive interaction with various Offices, often on an immediate basis.

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REGISTRY

The Registry provides for distribution of material, controls records and correspondence for the DDA, and provides for printer and file maintenance and for record security. The Registry is allocated two administrative support positions.

The Registry records and controls all incoming correspondence addressed to the ODDA. Each piece of correspondence is

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numbered and logged into a Generalized Information Management System (GIMS) database identified by the acronym DDAREG. This is an interim system pending implementation of an Agency-wide compartmented registry system that is currently in the developmental stage. This system is labeled TRIS (The Registry Information System) and is being designed to control correspondence records from the time they enter the system until they are ready for the archives. After correspondence is recorded in DDAREG, any subsequent outgoing or incoming material that results is traceable via a unique numbering and controlling process. Information recorded in DDAREG includes: document number and date, date received, subject, routing (to and from), classification and copies. During June 1984, approximately 495 pieces of correspondence were logged into the DDAREG system.

Acting as a point of distribution, messenger mail and courier services are funneled through the Registry three times daily. A Pneumatic Tube System is used to convey mail to and from DDA Offices housed at Headquarters.

Correspondence addressed by name to ODDA staff (MS, CMS and SSA) is not included routinely in DDAREG. Therefore, if information is directed to a staff person as well as to the ODDA, responses could be duplicated. Conversely, information

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directed to staff persons may not receive the responses it would have received had it been sent to the ODDA.

In addition, Registry maintains the storage and filing of records and is custodian of both a Xerox 2700 printer and a copier.

SAFETY

The Safety Staff is responsible for the Agency's occupational safety, health and fire prevention programs worldwide. This staff is allocated eleven positions; nine are professional and three are administrative support.

The Safety Staff facilitates the inspection and collection of data on injury, illness, accident and fire claims. Quarterly reports, compiled by injury type, are sent to the Safety Officers throughout the Agency.

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## C. AVAILABLE AUTOMATED FACILITIES

Office automation facilities available in the ODDA may be considered in three fundamental categories: Wang word processor, Host Based Word Processor (HBWP), and Automatic Information Management (AIM). Attachment A lists, by Directorate and Office, the automated facilities in the ODDA.

WANG WORD PROCESSOR

The Wang 7525 Word Processing System is installed in the ODDA. It is a shared-resource, multi-terminal word processor system with seven workstations and three printers connected to a system disk (hard disk). This hard disk stores up to 5 million characters. The telecommunications option is installed on this system to effect transmissions through the Agency's central processing complex to other communicating Wang systems and to VM users. This system also includes a single diskette drive for offline storage of documents. The diskette contains up to 300,000 characters or 120 pages of text.

Each work station screen displays 80 character line length and 24 lines of text, and scrolls horizontally up to 158 characters. User identification and passwords are not required to use the system. However, documents may be password protected by the user to provide confidentiality.

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This system provides the basic word processing features of an electronically controlled visual text processor that allows documents to be created, edited, or printed.

Unit equipment costs (purchase price) to the Agency for the Wang 7525 system are as follows:

CPU - Hard Disk	\$ 6,563
Workstation	2,730
Printer	3,675
External Communication	
Controller (TCB)	1,785
Interface Adapter	350
	-----
Total	\$ 15,103
Monthly Maintenance Cost	\$ 291.71

HOST BASED WORD PROCESSOR

The Host Based Word Processor (HBWP) is a shared-logic, multi-terminal word processor that resides on the VM system. It shares the logic, storage, and peripherals of VM. Thus, HBWP provides extensive control logic and edit capabilities as well as large on-line memory and storage capacities. Text is stored, searched and retrieved as multi-page documents,

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maintaining page format and pagination throughout a number of updates and revisions. Printing can be performed on various high speed printers while text is being keyed or edited.

HBWP is designed for use with the Delta Data 7260T and 8260T terminals that are installed in the DDA. The keyboard of the Delta Data is similar to a conventional typewriter, but it performs programmed functions as designated for use in the WP environment. Each Delta Data screen displays 80 character line length and 27 lines of text. User identifications and passwords are required to access documents residing on the system.

HBWP uses menus to perform many of its functions. Additionally, the built-in capabilities of the Delta Data terminals are used to perform editing functions. These functions include inserting and deleting text, copying and moving blocks of text, automatically locating and replacing words or groups of words, and performing spell verification. The menus provide up to six choices at the bottom of the screen that correspond to the specific functions on the Delta Data or to other functions available.

Shared-logic systems not only share the logic but also share the cost of the central processor. Word processing power that may be cost-prohibitive on other systems becomes more viable when the cost is spread over a number of terminals.

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The unit cost for the Delta Data terminal, version 8260T, is \$2,995.

#### AUTOMATIC INFORMATION MANAGEMENT

Automatic Information Management (AIM), an electronic mail system that resides on the general time-sharing VM system, is designed for use with Delta Data terminals as a general-purpose facility. The AIM system provides for creating, editing, sending, receiving, and filing documents electronically. Documents that are created or received may be filed in folders similar to procedures used in an office. Folders may be privately owned or shared by other AIM users who have access privileges.

As in an office environment, AIM places all documents received into the Inbox folder of the receiver and informs the receiver when incoming electronic mail has not been seen. AIM also places documents sent in the Outbox folder of the sender.

AIM allows functions to be tailored for a specific user or group of users through Alias, Calendar, and Model folders. These folders may be established and maintained for a group or groups. For example, when a committee chairman routinely must distribute information to all committee members, it can be sent with a single command using an Alias.

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The HBWP system is available in AIM and is distinguished by the acronym AIM/WP. It is designed so that an AIM users, using a Delta Data terminal, can perform the same word processing functions as described for the HBWP. For clarification, AIM/WP will be referenced hereafter.

AIM users also can receive documents directly from Wang work stations using the telecommunication capabilities previously discussed.

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## III. PROBLEM DEFINITION AND ALTERNATIVE SOLUTION

## A. APPLICATION OF AUTOMATED SYSTEMS

The basic word processing functions on both the Wang and AIM/WP are similar but present viable trade-offs for the communication needs in the ODDA. In comparison, Wang is designed primarily for word processing and as such is key-stroke driven, whereas, VM/AIM/WP system via the Delta Data is function driven. The Wang system is independent with limited expansion capabilities. However, where financial data are to be formatted, the column and row features of the Wang system is most desirable. On the other hand, AIM/WP is dependent on the central processor, which makes it vulnerable to VM system failures but flexible and adaptable to VM system expansion. A primary advantage of AIM/WP as compared to Wang is the capability to print documents while performing text processing.

To facilitate the communications described herein, the Model and Alias features in AIM should be established for use. Use of AIM will allow access to the VM/AIM system in any location where a Delta Data terminal exists. For example, when attending meetings away from Headquarters and it become necessary to contact several Offices, the AIM facility is most useful. Instead of telephoning each Office, one AIM message will suffice.

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## B. UTILIZATION OF AUTOMATED FACILITIES

The utilization of automated facilities in the ODDA may be contrasted as "underutilized" for communications that could be automated but are not, and "overutilized" for equipment that is operating at or near efficiency capacity.

UNDERUTILIZATION

Described below are the types of communications, the advantages offered by automation, and the facilities suitable for achieving an automated environment.

The Weekly Reports gathered from the nine Offices by varying media are retyped for consolidation into a combined Directorate report. They may be modified by the EXO, ADDA, and DDA. These reports have deadlines at each processing stage which make last minutes changes difficult. One advantage of automation is that electronic transmission of the weekly report eliminates the need to rekey data, and thereby reduces the chance of error. It also will allow concurrent and immediate access for modification and will permit merging of documents for consolidated reports. The AIM facility appears to be most suitable for this application because these reports are usually prepared by managers for managers. Decision-making may occur during the formulation or modification of the information contained in the report.

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The Rotational Assignments and Reserve Space for Internal Training activities in Career Management Staff are primarily manual processes used to control, prepare and rearrange personnel lists. Automation will permit unique text manipulation tasks such as rearranging a rotational vacancy from open to close. Since this is an annual process, the storage and retrieval features of the automation provide added advantages. The calendar and model features in AIM will provide control, data recall, document modifications, and routing. AIM/WP can also be used.

The Position Vacancy activity in the Career Management Staff is a time consuming manual process requiring the use of several internally formatted forms. The steps involved in this task are numerous. Automation of this activity will provide for entry and storage of application data as it is received and for its immediate retrieval, as needed. Automation also will provide traceability of applicant information as it relates to the announced vacancies. The use of the Wang glossary or AIM/WP model capability will allow repetitive text, such as the preformatted forms design, to be entered into the system, then recalled and inserted into a document with few key strokes.

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The Management Staff activities involving the status of Directorate resources are so complex that they require several edits. Information, such as statistical columns, tend to be difficult to format and to edit prior to keying. Because of short deadline requirements and difficulties of compiling financial documents, hastily assembled documents result. Financial data must be gathered from the nine Offices as well as from computer-generated listings. Information from computer listings must first be edited, retyped into a document and corrected. Last minute changes are a common problem, resulting in corrections, cutting and pasting. Time is spent creating charts and graphs and performing mathematical calculations that could be spent on other tasks.

Currently, some of these documents are prepared on the Wang system, which is geared to create, edit, store and retrieve financial data. Use of the Wang system facilitates numerical input and allows number alignment automatically according to decimal position as data are entered. Wide documents are easy to set up with the horizontal scroll feature that allows for extra wide format. Other operations, such as column editing, are also performed. Although Wang features are used by MS, the data are entered from raw, handwritten information that has been extracted from other automated sources. Financial data

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from Offices will need to be made compatible for electronic transmission. Procedures could be made to automatically extract data from those sources that are already automated.

The Cable Coordination activity in the Special Support Assistant Staff is tedious and pressure oriented. The reading via telephone of a 10 page cable requires two persons to convey information for an inordinate amount of time. The accuracy of and security of conveying information in this manner is doubtful. The AIM system, which is accessible to all Agency Directorates, is the vehicle most suitable for this level of communication. Where an alternative to the use of AIM is desired, the communicating Wang system will suffice.

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POTENTIAL OVERUTILIZATION

The Wang 7525 system is operating at approximately 36% of its capacity. This percentage varies according to the frequency with which the system is archived to floppy disks. With the recent increase in the number of work stations the system, it is anticipated that the utilization percentage will increase significantly. Although Wang Company literature states that up to 14 work stations and printers can be connected to a 7525 system, Wang representatives recommend a configuration of five to six work stations and two to three printers for maximum operating efficiency.

To obviate system problems and the potential inability of the 7525 system to process the work in the ODDA efficiently, consideration should be given to up-grading the system to a Wang Alliance. The Alliance system has the same capabilities as the 7525 system as well as more advanced word processing features. Some word processing enhancements available on the Alliance include multiple libraries, system security, document retrieval and filing capabilities. As a desirable security feature, a user identification and password must be entered to access the system.

The Alliance configuration consists of a central processing unit (CPU), disk drives, work stations and printers. Wang

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representatives recommend that 24 work stations, at a maximum, be attached to a CPU. The units of equipment that would be needed for the Alliance system and their costs are:

CPU	\$ 5,250
2 Disk Drive @ 8,400	16,800
TC Board	1,500
	_____
Total	\$ 23,550
Monthly Maintenance	\$ 662.14

In the long term this option may be feasible even at the additional maintenance cost of \$330.43 (\$662.14 minus \$291.11). New work stations would not be required. The work stations attached to the 7525 system are also operational with the Alliance system. Although the CPU for the Alliance requires twice the space, provisions to accommodate the equipment will prove beneficial in the long term. For example, should the Alliance CPU be located in the filing area where the 7525 system is currently located, crowded conditions would exist. However, the filing of hardcopy documents will in all probability diminish with greater utilization of automated facilities, thereby relieving the crowded conditions. On the other hand, the Alliance requires environmental conditions conducive to its operating

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efficiency. The Alliance also needs the commitment and designation of a system administrator whose primary responsibility is that of system maintenance. (Refer to Appendix I.)

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C. TRAINING

The installation of automated systems requires user training.

The objectives of such training are to:

- o Familiarize ODDA personnel with the capabilities of the automated system and to understand the information storage, software and linkage capacities
- o Familiarize ODDA personnel with the basic understanding of what the automated system can or should do, and with an understanding of the system as a tool for operation and control purposes
- o Provide ODDA personnel detailed understanding of the techniques, methods and procedures for interacting with the system.

It was observed that senior-level ODDA personnel relate more effectively to one-on-one training. It seems important to ensure that the system is operational and the data loaded before introducing senior level staff to the system.

Using the above guidelines, a Training Requirements Matrix was developed based on the responses obtained during the interview process. The matrix is appended herein as Attachment B.

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#### IV. RECOMMENDATIONS

The recommendations set forth below represent our assessment of the tasks where the most benefit will be obtained. They reflect current requirements of the ODDA including considerations of:

- o Need
- o Benefit
- o Dependency
- o Cost of Equipment
- o Time Frame

Thirteen recommendations are offered for consideration. The recommendations are listed chronologically, commencing with those tasks that can be undertaken by staff of the Consulting and Assistance Group (C&AG) immediately following acceptance of this study. Time frames for completion of each task is scheduled from the initial date of acceptance. Where cost or dependency is an issue affecting the recommendation, it is addressed accordingly.

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1. PROCUREMENT OF DELTA DATA TERMINALS

C&AG will assist the ODDA in acquiring six Delta Data terminals. It is recommended that Delta Data terminals be provided to selected professional personnel on an as needed basis. In each of the five functional areas of ODDA a professional should have a terminal at her/his desk. The five functional areas are personnel and training in the Career Management Staff, finance/budget and planning in the Management Staff, and the Special Support Assistant staff. With terminals placed on some desk tops and not others, the benefit of applying automated facilities will become evident. Where applicable, the terminals should replace any existing typewriters that are at the desk of the selected professionals. The sixth Delta Data terminal should be provided in a centrally located site in the front office of the ODDA to allow greater flexibility of resources.

From the date of terminal site survey, installation is expected within 60 to 90 days.

The cost to the ODDA associated with this with recommendation is expected to be \$17,970.00.

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## 2. AIM/VM TRAINING

C&AG will present the AIM/VM tutorial to the 16 personnel who indicated desire for such training as indicated in Attachment B. It provides the basis for using the AIM facility and is considered a precursor to the formal AIM course offered by OTE. This tutorial will be tailored to meet the availability schedules of personnel and will be presented to individuals and to small groups on site within the ODDA area.

As an option to the tutorial, C&AG will provide AIM computer based training via Apple II. This method of training will allow persons to become familiar with AIM on an individual self-paced basis. The Apple II is available in the ODP Information Center or can be made available in an area location of ODDA.

These training methods are beneficial because they provide a basic understanding of the subject matter for personnel who are awaiting the formal training from OTE. Since these training techniques are tailored to individual needs, the training will be a continuous effort as need arises. C&AG will coordinate the training to coincide with installation of the Delta Data terminals in order to provide hands-on sessions.

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### 3. WANG/VM INTERFACE

C&AG will present Wang/VM Interface tutorial to the 11 Wang users in the ODDA who indicated the desire for training. The tutorial includes procedures to be followed for transmitting documents from Wang to VM/AIM, VM to Wang and Wang to Wang. This tutorial was provided to Management Staff in the ODDA when the telecommunication feature was initially installed. With the acquisition of additional work stations, the tutorial will be presented for new users. Telecommunications of Wang to VM, Wang to VM/AIM, and Wang to VM high speed printers allow adaptability and flexibility of production. Upon receipt of the Wang work station in SSA on the 6th floor, C&AG will arrange an another presentation to the designated SSA personnel.

These presentations are scheduled for one to two hours and will be arranged in accordance with personnel needs.

### 4. AIM ACCESS

C&AG will assist the ODDA AIM administrator in ensuring that all ODDA personnel are given AIM access and in establishing a group Alias for intra-office communications, etc. AIM access is especially beneficial to senior level administrative staff

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as it allows them to reach users throughout the Agency expeditiously.

Completion of this task is expected to require 1 week.

5. MEMORANDA FORMAT - AIM

C&AG will modify the memorandum models on AIM to duplicate those memoranda depicted in  figures 10-15, and will modify the memoranda in the Wang Glossary, as needed. This will permit the secretaries to call-up models and glossaries to create memoranda. Advantages of using models and glossaries are twofold; an ease of use, and a more consistent format for creating standard memoranda.

Completion of this task is expected to require 2 weeks.

6. CORRESPONDENCE TICKLER - AIM

C&AG will assist the ODDA secretary in creating a calendar on AIM for use as an automatic suspense file of incoming correspondence that requires a reply within a specified period. This activity currently is controlled manually. By providing an automatic reminder of action to be taken on a given day, the calendar feature eliminates need for a paper file.

Completion of this task is expected to require 2 weeks.

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7. SAFETY STAFF REQUIREMENTS

C&AG will assist the Safety Staff in preparing a Computer Request Form to accommodate their requirements. The Safety Staff anticipates the need for future expansion as indicated in the attached Memorandum for the Record, Subject: Future Computer Requirements of the Safety Staff. (Refer to Appendix II.) A Wang Alliance system, consisting of five work stations and two printers, is currently installed in the office. For the communication requirements of these personnel, the Alliance appears to be adequate at this time. Although their other requirements warrant consideration, they are beyond the realm of this study.

Based upon information contained in the above referenced memorandum, it is expected that this task will require 3 weeks.

8. RESERVED SPACE FOR INTERNAL TRAINING - AIM

C&AG will assist in establishing a calendar and building models on AIM that the Career Management Staff can use to schedule internal training courses and to record the assignment of individuals to courses. Implementation of the calendar and models will reduce valuable staff time spent handling paper listings and document files.

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It is estimated that this activity will be completed in 6 weeks.

9. ROTATIONAL ASSIGNMENT - AIM

C&AG will assist in establishing a calendar on AIM to trace impending termination dates of rotational assignments. Although this is an annual process, a sequence of events must occur that will be annotated accordingly on the calendar for automatic recall. In conjunction with the calendar, C&AG will build models so that Career Management Staff can prepare assignment rosters. These rosters then can be used by CMS for dissemination to assignees and for control of responses. To ensure timeliness of the various deadlines required to effect rotational assignments, automation is a distinct advantage.

It is expected that this activity will be completed in 9 weeks.

10. POSITION VACANCY - WANG AND AIM

C&AG will assist the Career Management Staff in developing Position Vacancy Notice procedures. These procedures will include establishing AIM folders and Wang glossaries for use by Career Management Staff. The AIM folders will allow CMS to originate variable text, such as office position grade of position, and incumbent. Such variable text then can be transferred to the Wang system for mass preparation and

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distribution. CMS will be able to use Wang glossaries to recall stored and formatted data for insertion with the variable text received from AIM. Using both the AIM and Wang systems will facilitate immediate access by the person responsible for the position vacancy and will allow updating and storage by support personnel. Paper flow reductions and timeliness will be realized with the use of automated facilities for these procedures.

It is estimated that the activities required to implement this task will be completed in 12 weeks.

## 11. WEEKLY REPORT - AIM

It is recommended that the Weekly Reports from the nine Offices be sent to ODDA electronically via AIM. C&AG will build AIM models and programs which will allow ODDA to consolidate the individual reports into a combined document. C&AG will assist the ODDA in creating generic userids for receipt of the individual reports. This will resolve some of the common problems associated with the current manual cut-and-paste updating and will relieve personnel of these more routine and repetitive tasks. Furthermore, requiring the Offices to use automated facilities will not, for the most part, adversely affect their operations. Of the nine Offices, all have Delta Data terminals.

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As an option during the transition to use of AIM, Offices may transmit Weekly Reports via VM or Wang. Six of the nine Offices have communicating Wang systems.

Implementation of this recommendation is contingent on installation of the terminals and agreement of the nine DDA Offices to submit their Weekly Reports electronically. It is estimated that these models will be implemented in 15 weeks.

#### 12. BUDGET AND FINANCE REQUIREMENTS - AIM, WANG, CUECHART

C&AG will assist in developing procedures that use the automated facilities of AIM and Wang to accommodate consolidation of financial data. To accomplish this it is recommended that request for information be sent to the Offices via electronic means. Likewise, it is recommended that Offices respond via electronic means. C&AG will develop AIM models and programs so that Management Staff can receive and update financial data via AIM, and then pass the data to the Wang system. This will permit MS to produce and maintain financial data on the Wang system. For those Offices where problems exist in the use of electronic media to transmit this data, C&AG will provide instructions to the Offices.

It is further recommended that Cuechart be used for the charts and graphs that accompany these reports. C&AG will provide training and demonstrations on Cuechart.

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Implementation is contingent upon installation of the terminals and agreement of the nine DDA Offices to submit data electronically. Completion of these activities are expected in 18 weeks.

### 13. WANG ALLIANCE

It is recommended that a Wang Alliance be planned for acquisition in FY85 to replace the existing Wang 7525 system. This recommendation is based on overutilization of the 7525 system capacity and minimal security features available on the 7525 system. It is also based on the anticipated future growth of highly technical word processing applications. As a caveat, additional information concerning site planning and system administration for the Alliance system must be obtained prior to procurement of an Alliance system. C&AG will assist with the necessary procurement procedures to expedite them and will assist to ensure that Wang training is provided.

As an FY85 initiative, it is estimated that the equipment could be installed within 10 weeks from the date on which the order is received in the Word Processing Branch of ODP.

The cost to ODDA for this recommendation is expected to be \$23,550.00 (purchase cost). In addition, the annual maintenance cost is expected to be 3,965.16 in excess of current maintenance cost.

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## ATTACHMENT A

OFFICE AUTOMATION FACILITIES  
Units of Equipment in DDA Front Offices and Registry  
As of July 1984

Organization Entity	Delta Data WP	WANG		Printers			Comments
		WS	TC Name	Wang	2700	DI/ TI	
ODDA Front	1	3	WDDAMS	1	-	-	
ODDA CMS	1	1	WDDAMS	1	-	-	
ODDA MS	1	1	WDDAMS	1	-	1DR	
ODDA SSA	-	1	WDDAMS	-	-	-	
ODDA SSA/FBO	-	1*	WDDAMS	1*	-	-	* On order
ODDA Safety	-	5	*	1	-	-	* Alliance
ODDA Registry	2	-		-	1	-	
OC Front	1	6	WOCMS	1	-	-	
OC Registry	4	-		-	-	2TI	
ODP Front	5	2	WODP1	1	-	1DR	
ODP Registry	-	-		-	-	-	
OF Front	2	3	WDDAOF *	1	-	1DR	No Access to TC
OF Registry	1	1	WDDAOF *	-	-	-	No access to TC
OIS Front	1	3	WDDAOIS	1	-	1DR	
No OIS Registry							
OL Front	2	3	-	1	-	1TI	
OL Registry	-	-	-	-	-	-	
OMS Front	1	2	WOMS	1	-	-	
No OMS Registry							
OP Front	1	3	-	1	-	-	WDDAOP 5th fl
No OP Registry							
OS Front	-	6*	-	1	-	-	* TC ordered
OS Registry	2	-	-	-	-	1DR	
OTE Front	1	1	-	1	-	1DR	
No OTE Registry							



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1 November 1983

Guidelines for Wang System Administrator  
and  
Assistant System Administrator

The following outlines the recommended qualifications and responsibilities for both the System Administrator and the Assistant System Administrator. To provide effective back-up to the System Administrator and encourage a sound Wang operating system, both the primary and Assistant System Administrators should have the same training.

Recommended Qualifications

1. Project management experience in a word processing or data processing environment.
2. Prior supervisory experience and ability to deal with Agency personnel at different levels within the component.
3. Understanding of Office or component procedures and organization, and ability to analyze applications for use on the Alliance System.
4. Ability to plan projects and organize people.
5. Understanding of Alliance technology and ability to apply this technology in the Agency environment; for example, operating within the security constraints of the Agency and/or component.

Responsibilities

1. Coordinate all requests for assistance for Wang support and service, and assume responsibility for first-line troubleshooting. This person should have sufficient Wang system knowledge to explain, in detail, the circumstances surrounding the problem and be prepared to supply supporting material (i.e., reports, printouts, etc.).
2. Assume responsibility for system integrity (e.g., perform system back-up of all data residing on the system, monitor disk capacity, perform volume recovery, etc.).
3. Assume responsibility for all system supervisory functions (e.g., create/assign libraries, assign, issue, and control passwords, provide efficient allocation of disk space, etc.).
4. Monitor system-related supplies and be responsible for ordering, as required.
5. Appoint additional assistants or key operators to manage use of particular applications, such as Visual Memory, Telephone Directory, etc.

6. Maintain all Wang-issued hardware and software documentation at the current support version level.
7. Assume responsibility for design, analysis, and implementation of specific applications.
8. Establish system usage procedures including power-on and -off, disk removal, archiving, etc.
9. Coordinate all training; set up specialized training to meet component's specific needs.

MEMORANDUM FOR THE RECORD

SUBJECT: Future Computer Requirements of the Safety Staff

1. The Safety Staff requires the following expansion of computer hardware and software capabilities after the office relocates to the new Headquarters addition:

a. Connection with Delta Data System:

An interface with the existing Delta Data base throughout Headquarters will allow computer communication with other offices in the form of messages, requests and memorandums, etc. This connection will provide the Safety Staff with the ability to send/record pertinent Occupational Health exposure information directly (electronically) to employee medical files. We would not have direct access to read employee medical files, but rather our access would be strictly for adding information. Requires the following purchases:

- (1) Delta Data terminals
- (2) Delta Data printer
- (3) Attendance at intro course

b. Connection with outside Computer Subscription Services:

This interface will enable the Safety Staff to immediate research commercial data bank for information such as (1) Recent toxicological studies and data; (2) Immediate haz/mat direction and/or instruction; (3) Programmed software for various FPE hydraulic calculations; and (4) Titles of recent research publications. These subscription services are required for instant information for immediate decisions in emergency situations and to keep abreast of the latest info on hazardous materials. Requires

purchasing keyboard terminals of Toxline, Medline (Medlar), Chemabstract, and McDonnell Douglas Automation/MCAUTO (FPE link) to provide telephonic communication links to subscription services. Projected initial hook-up of \$4-5 K plus a per use charge thereafter. The initial hook-up includes terminals and printers. The subscription services required are:

- (1) Toxline
- (2) Medline
- (3) Chemabstract
- (4) McDonnell Douglas Automation (FPE link)

c. Expansion of Current Wang Capabilities:

- (1) VDT work station for each employee.
- (2) Additional CPU's - this will allow the growth of unique software capabilities.
- (3) Purchasing of complex language software packages, such as CPM, the package for Wang, this allows for languages up to FORTRAN - we then program our own packages or purchase them (Larry's request for FPE pkgs - use FORTRAN language). The expansion of our current Wang capabilities will allow for future purchases of:
  - (a) Hearing Conservation/Software;
  - (b) Chemical/Physical/Biological - Personal Exposure Software;
  - (c) Radiological - Personal Exposure Software
  - (d) Statistical Software for OSHA Accidents/injuries data.
- (4) Connection into Wang computers throughout Headquarters building.

2. Summary of requirements for expanded computer requirements within the Safety Staff are as follows:

a. Delta Data Interface

- (1) Delta Data terminals;
- (2) Generic printer compatible with Delta Data terminals;

b. Outside lines for Subscription Services:

- (1) Toxline
- (2) Medline
- (3) Chemabstract
- (4) McDonnell Douglas Automation

c. Addition Wang Software for Occupational Health Personal Exposure Data:

- (1) Hearing Conservation/Software;
- (2) Chemical/Physical/Biological - Personal Exposure Software;
- (3) Radiological - Personal Exposure Software
- (4) Statistical Software for OSHA Accidents/injuries data.

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