
Logistics Management Institute

Acquisition Workforce Decision
Support System (ACQDSS)
Interim Capability
Functional Description, System
Specification, and User's Guide

AQ910T1

December 2000

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Chapter 1

Introduction

OVERVIEW

The Defense Acquisition Workforce Improvement Act (DAWIA) requires the Under Secretary of Defense (Acquisition, Technology and Logistics) (USD[AT&L]) to provide oversight of the acquisition workforce and to ensure compliance with the law. The Acquisition Workforce Decision Support System (ACQDSS) provides an enhanced capability for DoD to effectively manage the acquisition workforce as outlined by DAWIA and other provisions of law and policy. ACQDSS

- ◆ provides integrated information on both military and civilian personnel and positions in the acquisition workforce and acquisition organizations,
- ◆ provides comprehensive information regarding personnel and positions in acquisition organizations that fall outside of the purview of DAWIA, and
- ◆ determines the impact of proposed changes to the Acquisition Workforce Career Program.

BACKGROUND

DAWIA mandated that the Secretary of Defense provide continuing management and oversight of the acquisition work force. DoD established the Acquisition Workforce Management Information System (AWMIS) in 1991 to satisfy reporting requirements in Title 10, Chapter 87, Sections 1761 and 1762 of the United States Code. The purpose of AWMIS is to capture acquisition workforce data that are of particular interest to Congress.

Although AWMIS provides some data that support the oversight requirement, it falls short of providing the comprehensive information necessary to

- ◆ ensure that acquisition positions have been properly identified,
- ◆ provide comprehensive information regarding personnel and positions in acquisition organizations that fall outside of the purview of DAWIA,

- ◆ provide information on selected program evaluation metrics designed to support monitoring the implementation status and compliance with the Acquisition Workforce Career Program, and
- ◆ provide integrated information on military and civilian personnel and positions in the acquisition workforce and acquisition organizations.

In fact, no single management system in DoD, including AWMIS, contains all of the acquisition workforce information that is needed to fulfill workforce management and oversight requirements. Taken together, AWMIS, the Civilian and Military Personnel Data Systems, and the Military Manpower Data Systems provide the data required, but not available in any integrated program, to support workforce oversight as required by DAWIA.

ACQDSS DEVELOPMENT

Initial requirements for ACQDSS evolved from LMI research to review the designation of acquisition positions during FY95–FY96. This review demonstrated the feasibility of integrating information from several data systems to improve DoD’s capability for assessment of acquisition workforce composition, member attributes, member activities, and career program (DAWIA) compliance.

Development of ACQDSS began with identifying users and required capabilities. LMI designed the system for acquisition workforce experts and managers. The Deputy Director of Acquisition Career Management identified and prioritized several functional requirements for ACQDSS development. ACQDSS needed to provide a capability to

- ◆ define the workforce of interest, using various perspectives;
- ◆ obtain information on the defined workforce; and
- ◆ analyze the impact of revising elements of the acquisition career program.

The ACQDSS program discussed in this report meets all of these requirements and provides an easy-to-use tool for acquisition workforce managers.

REPORT STRUCTURE

This report has two main sections. The first section—chapters 2 through 4—provides a functional description, guidance, and information to the user, allowing acquisition managers to maximize their use of the program. The second section deals with the technical aspects of ACQDSS and provides software technical requirements and information for the developer to maintain the software and associated databases.

The general outline is as follows:

- ◆ Chapter 1: Introduction
- ◆ User's information
 - Chapter 2: Functional Description
 - Chapter 3: User's Guide
 - Chapter 4: Analytical Scenarios
- ◆ Technical information
 - Chapter 5: Data Specifications
 - Chapter 6: Process Specifications
- ◆ Chapter 7: Recommendations

Appendixes

Chapter 2

Functional Description

REQUIREMENTS OVERVIEW

Initial requirements for ACQDSS evolved from LMI research to review the designation of acquisition positions in DoD. This review of acquisition position designation practices demonstrated the feasibility of integrating information from several data systems in a relationship that can be manipulated to improve DoD's capability for assessment of acquisition workforce composition, member attributes, member activities, and career program (DAWIA) compliance.

During meetings with the Deputy Director of Acquisition Career Management, several functional requirements were identified and prioritized for ACQDSS development. In general, a user may

- ◆ define the workforce of interest, using various perspectives;
- ◆ obtain information on the defined workforce; and
- ◆ analyze the impact of revising elements of the acquisition career program.

Each of these primary functions has several variations associated with it, to allow the user maximum flexibility. For example, a user may take several perspectives when defining or selecting the workforce of interest:

- ◆ The user may use organizations, occupations, or some combination of both to define the workforce. The user also must specify whether military personnel, civilian personnel, or both should be included in the current definition.
- ◆ The user may use an accepted, predefined workforce such as the Components have designated as DAWIA. Using encumbered DAWIA positions as a basis, the user can further refine the workforce by selecting specific organizations or specific occupations within this defined workforce. The user also must specify whether military personnel, civilian personnel, or both should be included in the current definition.
- ◆ The user may use a predefined workforce such as the Acquisition and Technology Workforce (ATWF).¹ This approach can be further refined by selecting specific organizations or occupations from within that definition.

¹ This workforce sometimes is referred to as the Revised Packard workforce as of the end of FY97 (first count).

A final variation for selecting a workforce of interest allows the user to customize a Packard-type algorithm to define Category I and Category II occupations and Group II organizations. ACQDSS uses the term “CAT I/II algorithm” to describe this method. This method uses the following set of rules to establish the workforce:

- ◆ Positions with occupations that are designated as Category I will be in the workforce no matter what organization the position is in.
- ◆ Positions with occupations that are designated as Category II will be in the workforce only if they are assigned to Group II organizations.

ACQDSS provides the user with the flexibility to define Category I and Category II occupations, as well as Group II organizations. This methodology, which often is referred to as the revised Packard method, is based on the original “Packard Definition”—which was based on the recommendations of a Blue Ribbon Panel headed by David Packard, former Deputy Secretary of Defense and co-founder of Hewlett-Packard, in 1986.

Once a workforce is defined, a user may obtain information in three ways:

- ◆ View general information
- ◆ Create a report
- ◆ View certification statistics.

Each method provides a different level of detail and varying amounts of user control on the display. “View general information” provides an overview of as-sorted information on each encumbered position. “Create Reports” allows the greatest user control over the output and creates summary tables that are based on categories (variables) selected by the user in a ready-to-print format. “Analyze Certification Requirements” displays a set of preformatted tables and graphs relating to the career development program.

ACQDSS also can analyze the impact of revising the educational, experience, and training requirements of the career development program. This analytical function allows the user to change any or all of the requirements in these areas and view the ability of the workforce to obtain certification to the next-higher career level. The user also may analyze and report career program training requirements by course or by individual.

USERS

Users shall be primarily functional experts on the acquisition workforce. Terminology used within this system should be familiar to most users. However, the users will have a wide range of ability and comfort with computer software. As

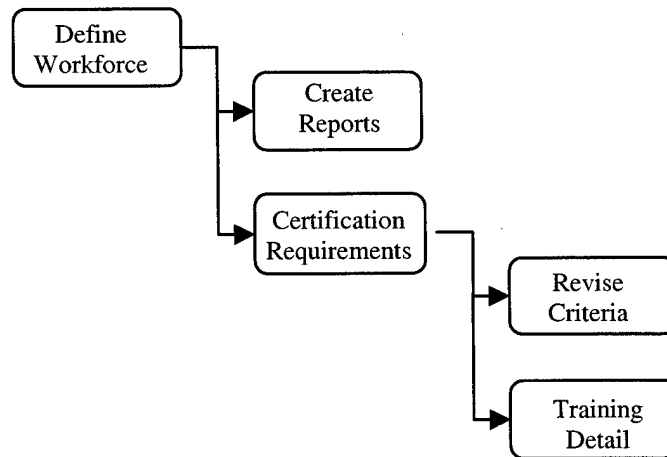
such, the system must be easy for a person without extensive computer skills to navigate through the screens. Error messages should be descriptive enough for the user to understand and correct errors.

HIGH-LEVEL FUNCTIONS

At the highest level of detail, ACQDSS consists of five functions, as shown in Figure 2-1.

- ◆ Defining the workforce
- ◆ Creating reports
- ◆ Analyzing certification requirements
 - Revising certification criteria
 - Analyzing acquisition training detail

Figure 2-1. High-Level Functions



Figures 2-2 through 2-7 show these functions in more detail. Specifically, the flow charts depict the various paths through the ACQDSS systems.

There are several ways to define the workforce. Figure 2-2 shows the general paths available for defining a workforce. Figure 2-3 through Figure 2-5 provide more details for each of the differing ways to define a workforce.

Figure 2-2. Define the Workforce

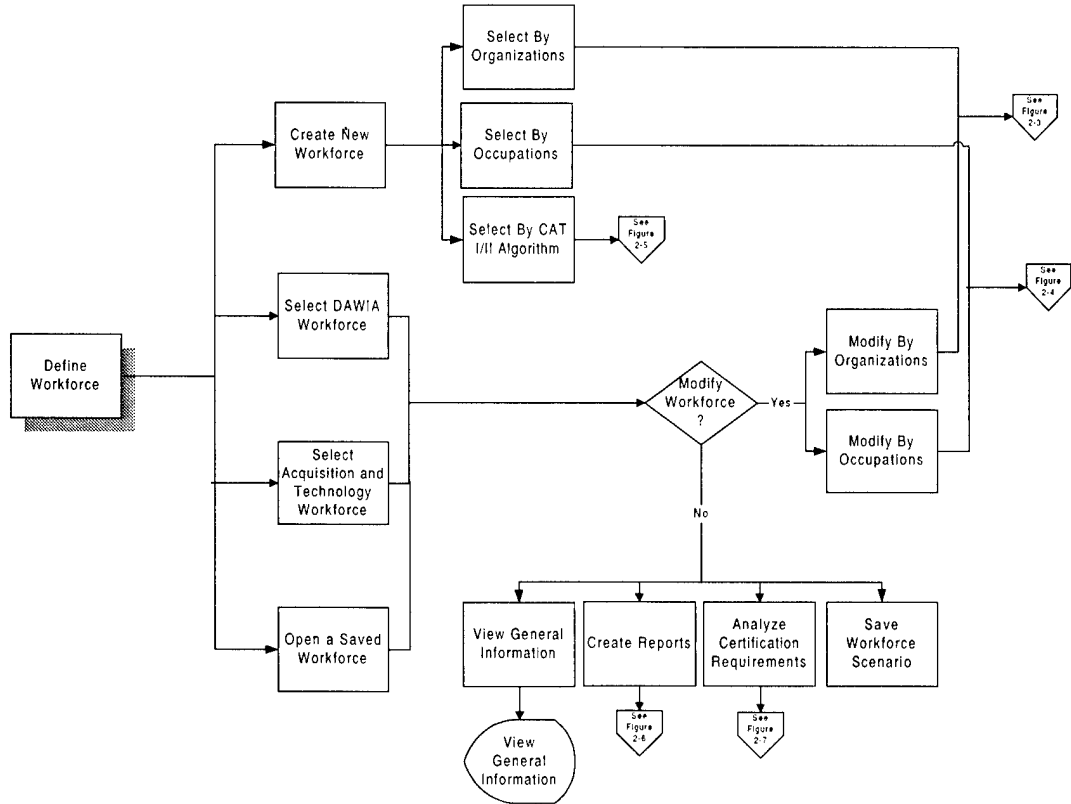


Figure 2-3 shows how to define the workforce by “selecting by organization.”

Figure 2-3. Define the Workforce by Organization

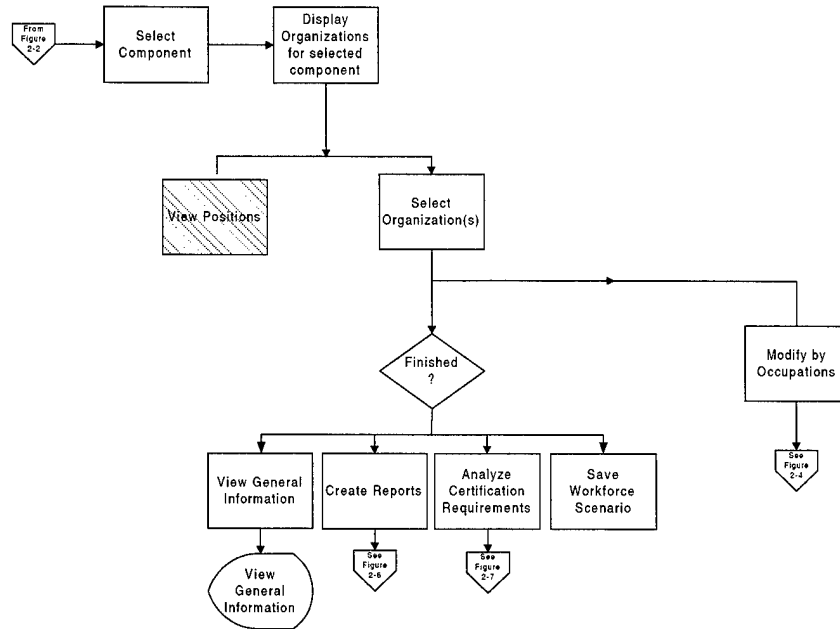


Figure 2-4 shows how to define the workforce by “selecting by occupation.”

Figure 2-4. Define the Workforce by Occupation

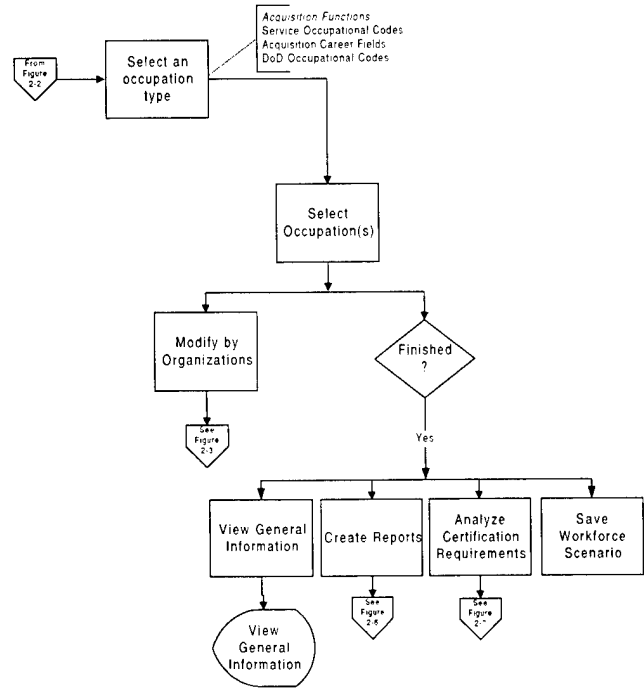


Figure 2-5 shows how to define the workforce by “selecting the CAT I/II algorithm.”

Figure 2-5. Define the Workforce by CAT I/II Algorithm

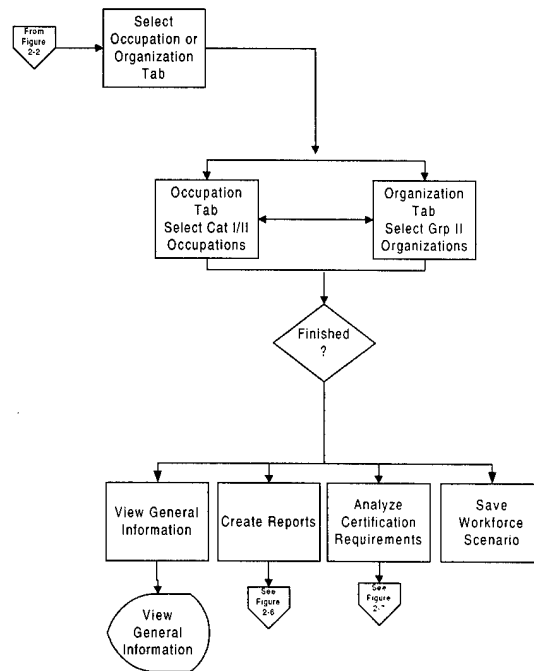


Figure 2-6 shows the process for creating reports.

Figure 2-6. Create Reports

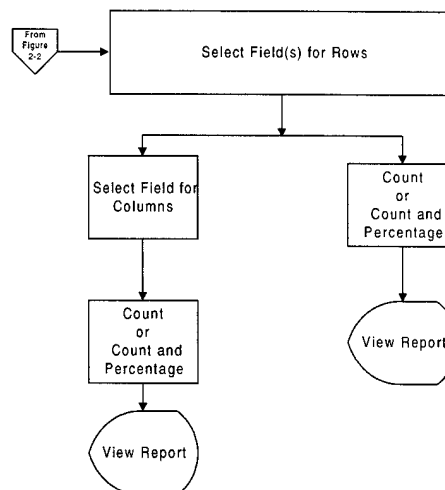
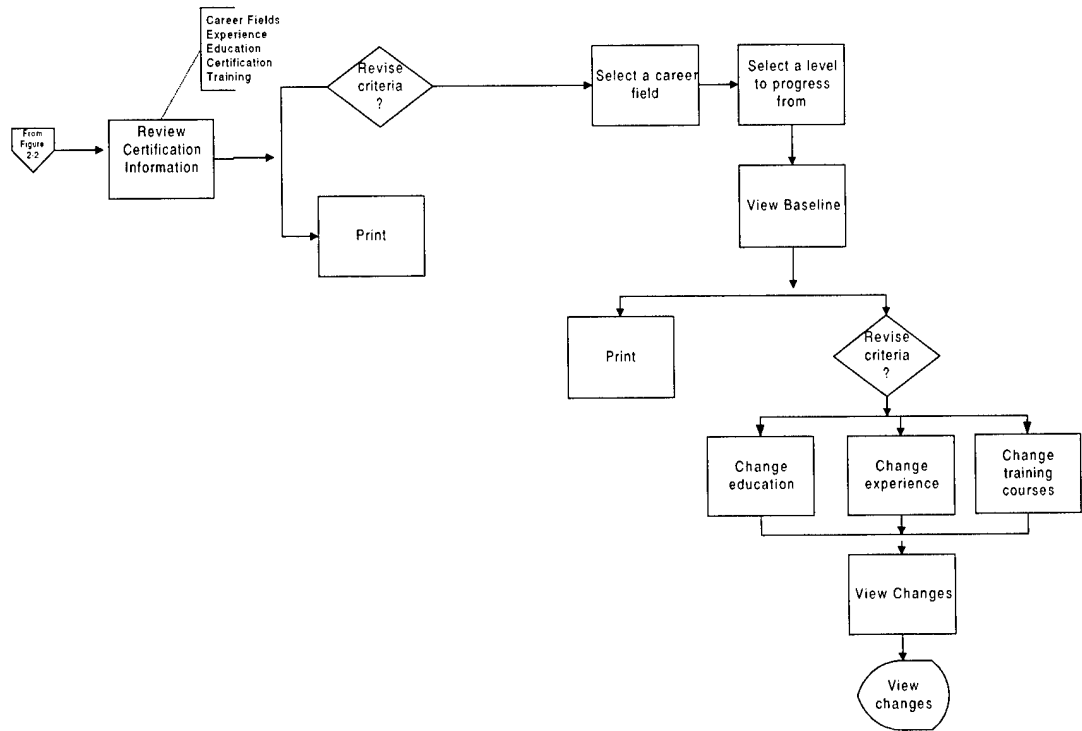


Figure 2-7 shows the process for analyzing certification requirements. Through this process, the user also may review certification information including detailed training information.

Figure 2-7. Analyze Certification Requirements



Chapter 3

User's Guide

OVERVIEW

ACQDSS is a tool that gives you the capability to

- ◆ access comprehensive information regarding personnel and positions in acquisition organizations,
- ◆ access integrated information on military and civilian personnel as well as positions in the acquisition workforce and acquisition organizations,
- ◆ ask “what-if” questions, and
- ◆ conduct problem solving.

This chapter explains how the program works, shows you examples of the screens, and gives you a working knowledge of ACQDSS. Chapter 4 provides examples of ways to maximize your use of this program.

Before we start, it is important to define some key terms and how they're used in ACQDSS.

KEY WORKFORCE TERMS

There have been many definitions of the DoD acquisition workforce since the early 1980s. DAWIA and its associated designation process resulted in yet (but important, statutory) another definition in 1991. The process continues, and the definition of the acquisition workforce is still being refined. Certain workforce sub-elements, such as logistics, present challenging definitional issues, which ACQDSS may help to analyze. The following explanations help clarify the terms as used in ACQDSS (additional definitions are in Appendix A):

- ◆ *DAWIA*: The designated workforce in accordance with DAWIA.
- ◆ *Packard*: A Blue Ribbon commission that developed a consistent definition of the acquisition workforce. The approach the commission advocated specifies a set of occupations that are always considered “acquisition,” independent of organization, and another set of occupations that are “acquisition” only if they are in an organization specified as acquisition. The Packard commission developed a list of organizations that are specified as acquisition. Although the Packard method was never adopted in full by

DoD, the concept was used by Jefferson Solutions in development of the Acquisition and Technology Workforce.

- ◆ *Acquisition and Technology Workforce (ATWF)*: Like the Packard definition, this workforce is also based on a set of occupations that are always acquisition, independent of organization, and another set of occupations that are acquisition only if they are in an acquisition organization. This definition also splits organizations between technology (research) and contracting (management). By-name additions and deletions to the workforce are possible.

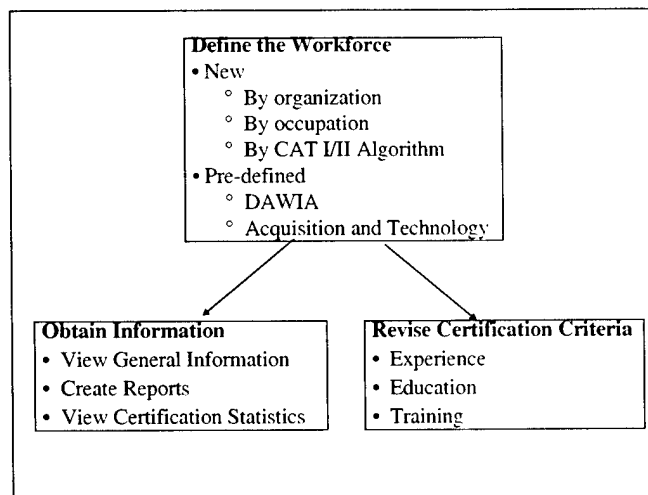
GETTING STARTED

As mentioned earlier, ACQDSS gives you considerable capability to review and analyze the workforce. With this program, you

- ◆ define the workforce to use,
- ◆ get information on that workforce, and
- ◆ analyze the impact of revising elements of the acquisition career program.

Figure 3-1 provides an overview of the program. The remainder of this chapter further explains these three major functions and provides a step-by-step view of each.

Figure 3-1. ACQDSS Functional Overview



DEFINING THE WORKFORCE

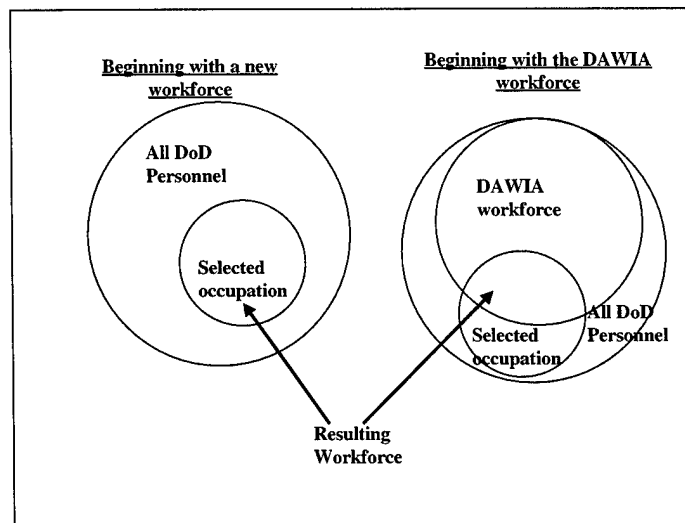
The first step in using ACQDSS is defining a workforce. All functions within ACQDSS depend on having a workforce selected.

You can create a new workforce based on occupation and/or organization or select from various predefined (e.g., DAWIA, Acquisition and Technology [A&T]) workforces. You also can select military, civilians, or both. At present, ACQDSS provides three to define the workforce:

- ◆ *New*: This method, in effect, starts from a blank sheet of paper.
- ◆ *DAWIA*: This method uses the DAWIA workforce as a starting point.
- ◆ *Acquisition and Technology (A&T)*: This method uses the workforce that meets the criteria established by the final revision to the Packard method and was designated acquisition by the Services.

Figure 3-2 graphically depicts the difference between creating a new workforce and beginning with a predefined workforce, using a selected occupation as an example.

Figure 3-2. Difference Between New and Predefined Workforces



The left side of the figure (creating a new workforce) shows how selecting an occupation will cause every individual with that occupation to be selected. On the right side (refining a DAWIA workforce), two points are depicted. First, DAWIA is a subset of the entire DoD personnel and immediately limits the user's workforce. Second, refining this workforce by an occupation displays only those individuals who are DAWIA members *and* have that occupation.

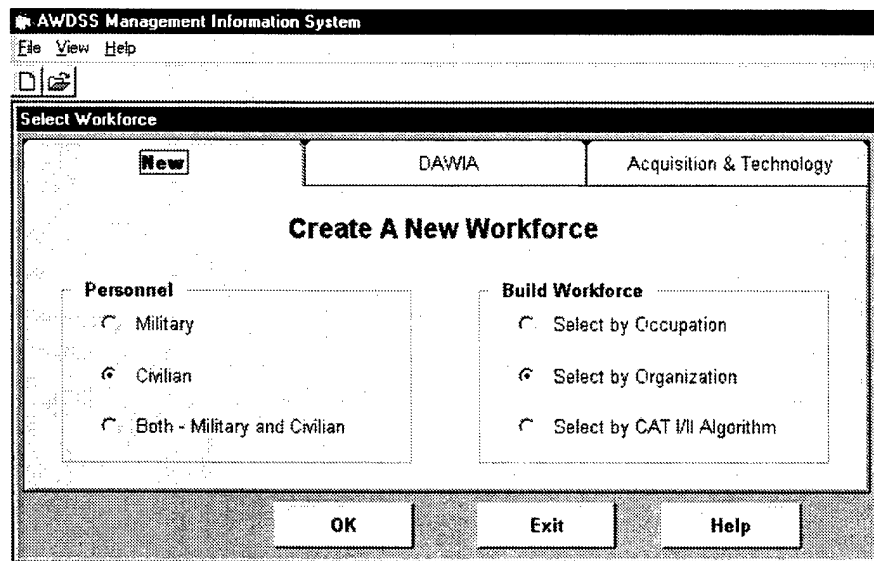
New Workforce Shaping Tools

The ACQDSS application opens with the screen shown in Figure 3-3. To create a new workforce, select the “New” tab as shown. On this screen, you specify whether military personnel, civilian personnel, or both are desired in the defined workforce. In developing a workforce from a “blank sheet,” select individuals by

- ◆ occupation,
- ◆ organization, or
- ◆ the “CAT I/II algorithm.”

When you are satisfied with your selections, click the “OK” button. (Clicking the “Exit” button will cause the application to end.)

Figure 3-3. Select Workforce Screen



SELECT BY OCCUPATIONS¹

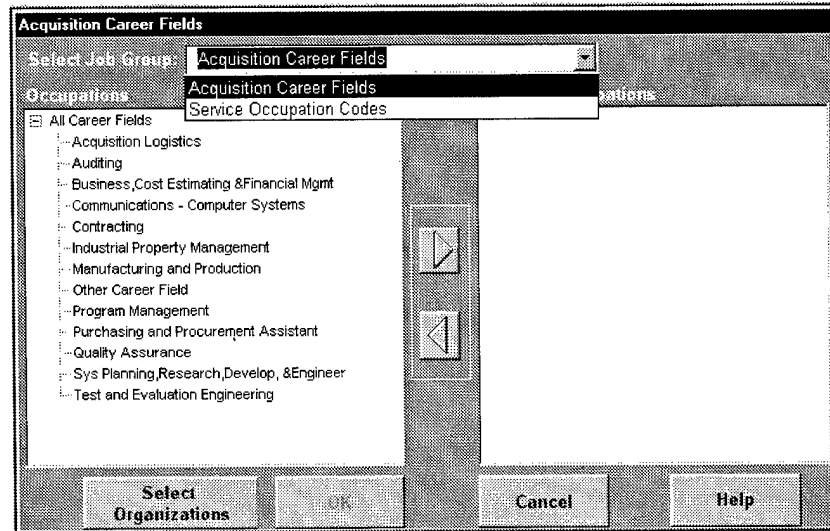
Choosing “Select by occupation” from the “Select Workforce” screen (Figure 3-3) and clicking “OK” presents the “Modify Workforce By Occupation” screen (Figure 3-4).

There are two ways to select by occupation:

- ◆ Service occupation codes
- ◆ Acquisition career field codes.

¹ These directions also apply to modifying a predefined workforce (DAWIA or A&T Workforces) by occupation.

Figure 3-4. Modify Workforce Acquisition Career Fields Screen



Service occupation codes are the civilian job series or military occupational specialties. Each service has a unique list and codes for military occupations. The civilian series are standard across the Services.

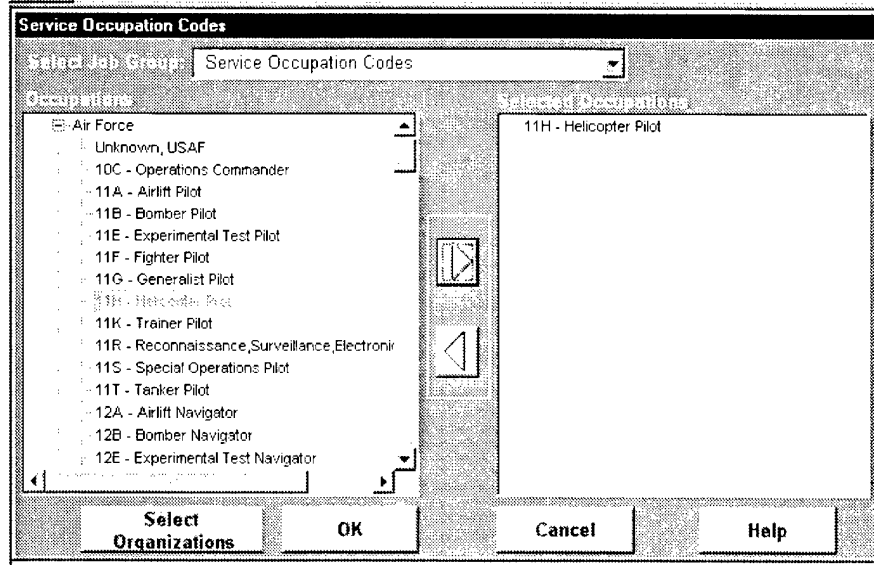
DoD Instruction DODI 5000.58 specifies career fields codes as Acquisition Management; Procurement and Contracting; Systems Planning, Research, Development, Engineering, and Testing; Production; Acquisition Logistics; Business, Cost Estimating, and Financial Management; and Auditing. DAWIA members are assigned to a career field. Non-DAWIA members do not have an acquisition career field. Selecting by career field will result in only DAWIA members in the workforce.

Make the selection using the pull-down list shown in Figure 3-4.

Select occupations by highlighting in the left screen and then moving them to the right screen by clicking on the right arrow. Occupations may be “put back” by selecting them in the right screen and clicking on the left arrow. You can simultaneously select multiple occupations, using the shift and control keys. Clicking one occupation and then clicking a second occupation while holding down the shift key will highlight all occupations between and including the two selected occupations. Repeating this procedure but holding down the control key instead of the shift key will highlight only, but both, of the two selected occupations. In this manner, you can shape, assess, or realign the resultant workforce, workforce sub-elements, and attributes.

Figure 3-5 shows the occupations selected. When you are satisfied with your selections, click the “OK” button. To modify your selections, click the “Change Selection” button, which appeared on the lower portion of the screen after you clicked the “OK” button.

Figure 3-5. Modify Workforce by Service Occupation Code Screen



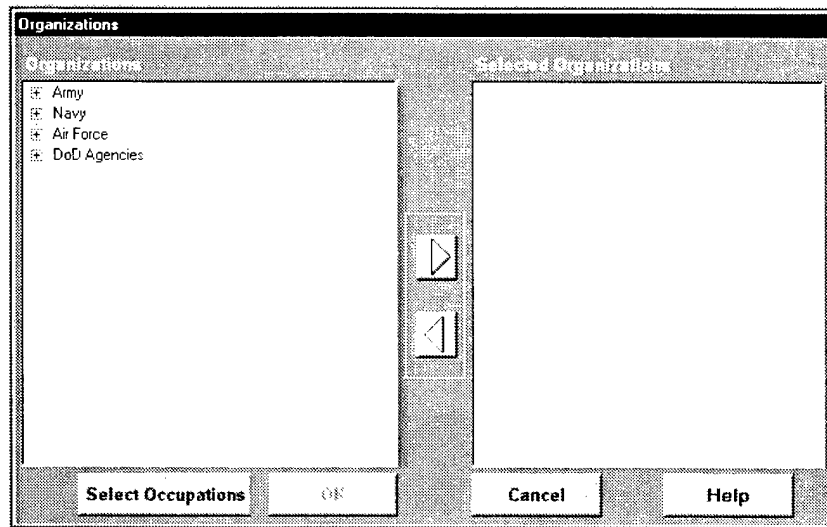
The “Cancel” button will bring you back to the opening screen.

SELECT BY ORGANIZATIONS²

Another way to define or shape the workforce is to select specific organizations.

If you select organizations as shown in Figure 3-3 and then click “OK,” the “Organizations” screen, Figure 3-6, appears.

Figure 3-6. Modify Workforce by Organization Screen



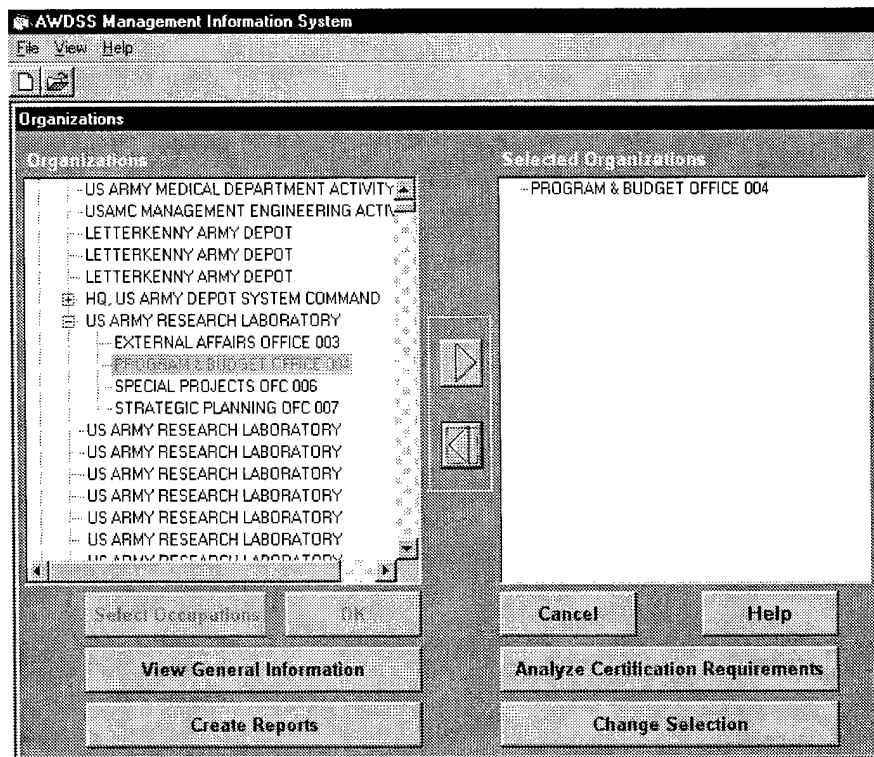
² These directions also apply to modifying a predefined workforce (DAWIA or A&T Workforces) by organization.

By clicking on the “+” symbols in the front of the organization name, the organizational hierarchy view will expand one level at a time. You may select organizations from any level in the hierarchy. Organizations selected will include all lower levels in the hierarchy. Select organizations by highlighting them in the left side of the screen and then moving them to the right side by clicking on the right arrow. Organizations may be “put back” by selecting them in the right side and clicking on the left arrow. You can simultaneously select multiple organizations by using the shift and control keys. Clicking one organization and then clicking a second organization while holding down the shift key will highlight all organizations between and including the two selected organizations. Repeating this procedure but holding down the control key instead of the shift key will highlight only the two selected organizations.

When you are satisfied with your selections, click the “OK” button. Figure 3-7 shows the screen after clicking the “OK” button. To modify your selections, click the “Change Selection” button, which will appear on the lower portion of the screen.

The “Cancel” button returns you to the opening screen.

Figure 3-7. Selecting Organizations



COMBINATION OF OCCUPATIONS AND ORGANIZATIONS

The previous two workforce shaping abilities—to choose by occupation and to choose by organization—may be combined. After defining the occupations, you may define the organizations using the “select organizations” button (Figure 3-5). You also may identify the organizations first and then the occupations, using the “select occupations” button in the lower left side of the screen (Figure 3-6). When you select a workforce by a combination of occupations and organizations, you specify that each member of the selected workforce must meet two criteria: be in one of the selected occupations *and* be assigned to one of the selected organizations.

After you select the desired combination of occupations and organizations, click the “OK” button. The “Cancel” button returns you to the opening screen.

CATEGORY I/II ALGORITHM

Another way to create a new workforce is with the CAT I/II algorithm. This method uses the following rules:

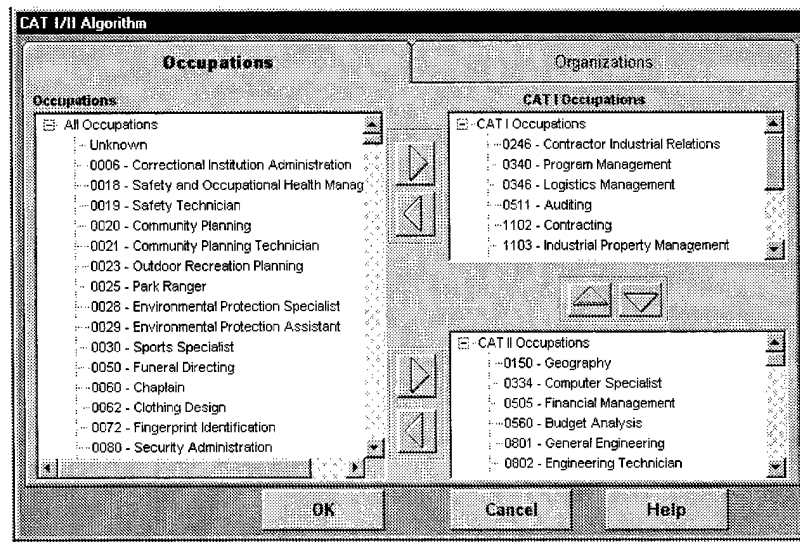
- ◆ Positions with occupations that are designated as CAT I will be in the workforce no matter what organization the position is in.
- ◆ Positions with occupations that are designated as CAT II will be in the workforce only if they are assigned to an organization on the Group II organization list.

This method often is referred to as the Packard method; it can be used only with the civilian workforce.

There are two tabs on the CAT I/II tab (Figure 3-8 and Figure 3-9). Figure 3-8 shows the Occupation tab; Figure 3-9 shows the Organization tab. You must define the CAT I and II occupations, as well as the Group II organizations.

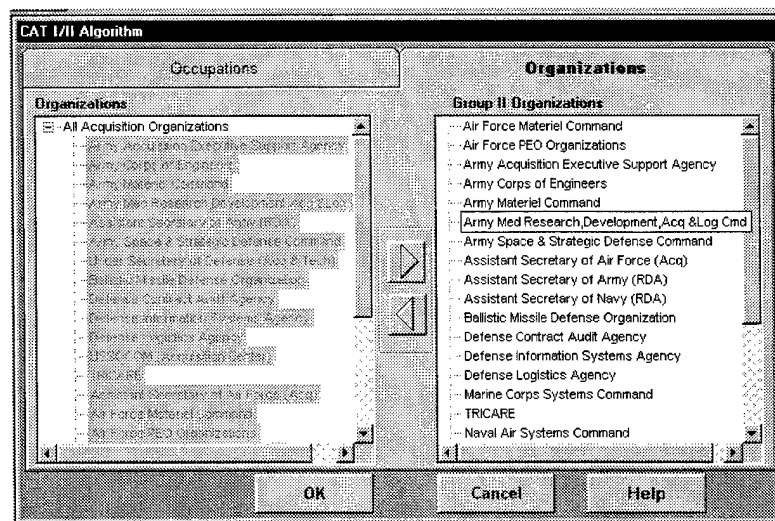
On the Occupation tab (Figure 3-8), occupations are categorized as CAT I, CAT II, or neither. You may move occupations from any grouping to any other grouping by highlighting the occupation you wish to move and using the appropriate arrow key to direct it to the category you desire.

Figure 3-8. Selecting Occupations for CAT I/II Algorithm



On the Organization tab (Figure 3-9), designate the organizations that should be Group II acquisition organizations. Appendix A lists the organizations that are designated as acquisition organizations by the Revised Packard workforce. Positions with occupations that are designated as CAT II will be in the workforce only if they are assigned to these organizations.

Figure 3-9. Selecting Organizations for CAT I/II Algorithm



You can simultaneously select multiple occupations or organizations by using the shift and control keys. Clicking one occupation (or organization) and then clicking a second occupation (or organization) while holding down the shift key will highlight all occupations between and including the two selected occupations (or organizations). Repeating this procedure but holding down the control key instead

of the shift key will highlight only the two selected occupations (or organizations).

When you are satisfied with your selections, click the “OK” button. To modify your selections, click the “Change Selection” button, which will appear after you click the “OK” button.

The “Cancel” button brings you back to the opening screen.

Predefined Workforce Shaping Tools

Instead of starting with a clean slate, you may begin with a predefined workforce. One predefined workforce includes all individuals identified as DAWIA. You can further refine the workforce by selecting specific organizations or occupations as a subset of the DAWIA-designated workforce. You must specify whether military personnel, civilian personnel, or both should be included.

ACQDSS also predefines the Acquisition and Technology Workforce. Using encumbered Acquisition and Technology positions as a basis, you can further refine the workforce by selecting specific organizations or occupations as a subset of the Acquisition and Technology Workforce positions. Again, military, civilian, or both types of positions must be specified for inclusion.

DAWIA and Acquisition and Technology Workforces

The DAWIA (Figure 3-10) and Acquisition and Technology (Figure 3-11) tabs work in the same manner. These tabs allow you to begin with a predefined workforce. You can modify the workforce by occupation or organization or choose not to modify the workforce. Click the “OK” button after making your selections.

Figure 3-10. DAWIA Workforce Tab

The screenshot shows a window titled "Select Workforce" with three tabs: "New", "DAWIA", and "Acquisition & Technology". The "DAWIA" tab is selected, and the main area is titled "DAWIA Defined Workforce".

Under the heading "Personnel", there are three radio button options:

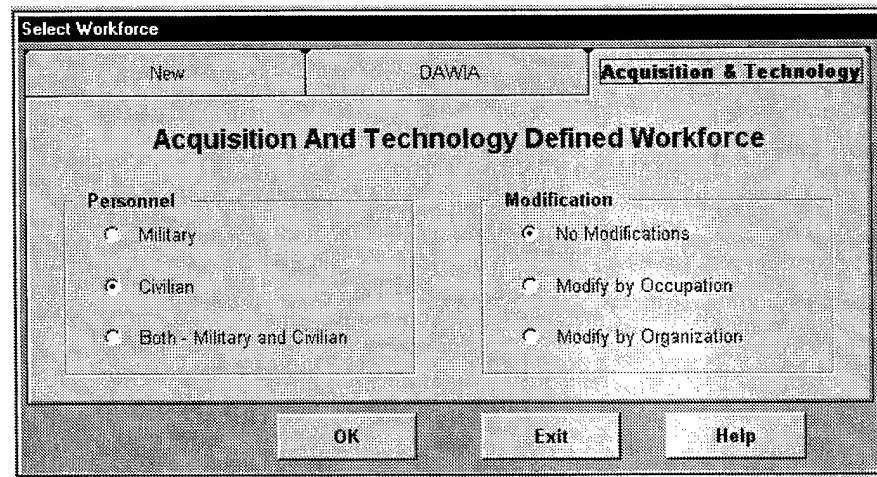
- Military
- Civilian
- Both - Military and Civilian

Under the heading "Modification", there are three radio button options:

- No Modifications
- Modify by Occupation
- Modify by Organization

At the bottom of the dialog, there are three buttons: "OK", "Exit", and "Help".

Figure 3-11. Acquisition and Technology Tab



Selecting the “Exit” button will close the ACQDSS application.

If you decide to modify the predefined workforce by organization or occupation, the appropriate organization or occupation selection screen appears. Modify the workforce in the same manner as discussed above. The only difference is that instead of starting with all personnel available for the workforce, you’re starting with one of the predefined workforces and limiting your shaping options to predefined sub-elements, i.e., the organizations and/or occupations selected.

OBTAINING INFORMATION

ACQDSS provides certain prototypical functionalities to demonstrate the utility of the system and suggest future applications. Currently, once you have defined the workforce, you may obtain information about it in three ways:

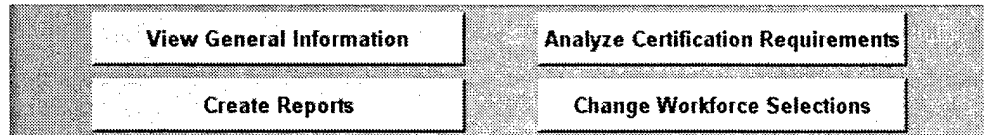
- ◆ View general information
- ◆ Generate reports
- ◆ View certification requirements.

Each method provides a different level of detail and varying amounts of control on the display. “View General Information” provides information on each person and can be downloaded for future use. “Create Reports” gives you the greatest control over the output and creates summary tables that are based on categories (variables) you select, in a ready-to-print format. “Analyze Certification Requirements” displays a set of preformatted tables and graphs relating to the career development program. In addition, this feature will analyze the impact of revising the educational, experience, and training requirements of the career development program on the ability of the workforce to obtain certification to the next-higher career level.

All options require a defined workforce; these capabilities will not operate if a workforce has not been defined or its definition led to no individuals in the workforce.

Each screen to create a workforce has an “OK” button that you click when satisfied with your selections. As shown in Figure 3-12, four buttons become available when the “OK” button is clicked.

Figure 3-12. Selections After Creating a Workforce



Each of these options are discussed in the following sections.

View General Information

“View General Information” provides an overview of typically needed information on each person. A sample is displayed in Figure 3-13. You may scroll vertically and horizontally to view additional information. You also may sort the columns by clicking on the column. You may widen or narrow the columns by aligning the cursor with the edge of a column and pressing on the left mouse button when the cursor changes into a double-headed arrow. While holding down the mouse button, slide the column edge left or right. Notice that the total number of records is displayed at the bottom left of the screen. Press the “Save as Spreadsheet” button to export this information into an Excel worksheet. Data in the Excel worksheet can then be rearranged, formatted, and printed. Press “Back” to exit this view.

Figure 3-13. General Information Screen

Name	Career	DAWIA	Position Title	Service	Malcom	Service Doc Series	Acquist	Years of	Acquisition	Career Field
	9		LOGISTICS MGMT SPEC	Army	US Army Soldier System	0346 - Logistics Manag	0.0	11-20	N/A	Acquisition Logistics
	9		QUALITY ASSURANCE S	DoD	Defense Logistics Agen	1910 - Quality Assuranc	0.0	21-30	N/A	Quality Assurance
	9		PROCUREMENT TECHN	DoD	Defense Logistics Agen	1106 - Procurement Clei	0.0	11-20	N/A	Purchasing and Proct
	2		OPS RESEARCH ANALY	Army	US Army Soldier System	1515 - Operations Rese	4.8	21-30	None	Sys Planning/Research
	2		ELECTRONICS ENGINEER	DoD	Defense Logistics Agen	0855 - Electronics Engir	15.1	30 +	N/A	Sys Planning/Research
	2		SUPV CONTRACT SPEC	USAF	Air Combat Command (A	1102 - Contracting	12.3	11-20	N/A	Contracting
	2		CONTRACT ADMINISRT	DoD	Defense Logistics Agen	1102 - Contracting	0.0	11-20	N/A	Contracting
	9		QUALITY ASSURANCE S	DoD	Defense Logistics Agen	1910 - Quality Assuranc	0.0	11-20	N/A	Quality Assurance
	3		ZOOLOGIST	Army	US Army Medical Comm	0410 - Zoology	0.2	30 +	None	Sys Planning/Research
	3			Navy	Naval Air Systems Com	1102 - Contracting	17.0	21-30	N/A	Contracting
	3		MATERIALS ENGINEER	Army	US Army Materiel Acqui	0806 - Materials Engine	10.3	21-30	None	Sys Planning/Research
	3		GENERAL ENGINEER	Army	US Army Communicatio	0801 - General Enginee	29.3	30 +	None	Sys Planning/Research
	9			Navy	Naval Air Systems Com	0318 - Secretary	0.0	11-20	N/A	Business/Cost Estim
	2		GENERAL ENGINEER	Army	Army Tank Automotive	0801 - General Enginee	2.6	30 +	None	Manufacturing and Pr
	9		QUALITY ASSURANCE S	DoD	Defense Logistics Agen	1910 - Quality Assuranc	0.0	0-10	N/A	Quality Assurance
	2		AUDITOR	DoD	Defense Contract Audit	0511 - Auditing	10.6	11-20	N/A	Auditing
	3		ACQUISITION MGR	USAF	Air Force Materiel Com	1101 - General Business	29.8	30 +	N/A	Program Management
	2		AUDITOR	DoD	Defense Contract Audit	0511 - Auditing	4.8	0-10	N/A	Auditing
	9			USAF	Air Force Materiel Com	0346 - Logistics Manag	0.0	11-20	N/A	Acquisition Logistics
	9		QUALITY ASSURANCE S	DoD	Defense Logistics Agen	1910 - Quality Assuranc	0.0	11-20	N/A	Quality Assurance
	9		SUPV COMPUTER SPEC	DoD	Defense Information Sys	0855 - Electronics Engir	0.0	30 +	N/A	Sys Planning/Research
	9			Navy	Naval Computer & Tele	0334 - Computer Specia	0.0	11-20	N/A	Communications - Cor
	9			Navy	Space and Naval Warfa	0855 - Electronics Engir	13.6	30 +	N/A	Sys Planning/Research
	2		CONTRACT SPECIALIST	USAF	Headquarters, Air Force	1102 - Contracting	14.9	21-30	N/A	Contracting

Total Number of Records: 32473

DAWIA: Civilian, No Modifications

Create Reports

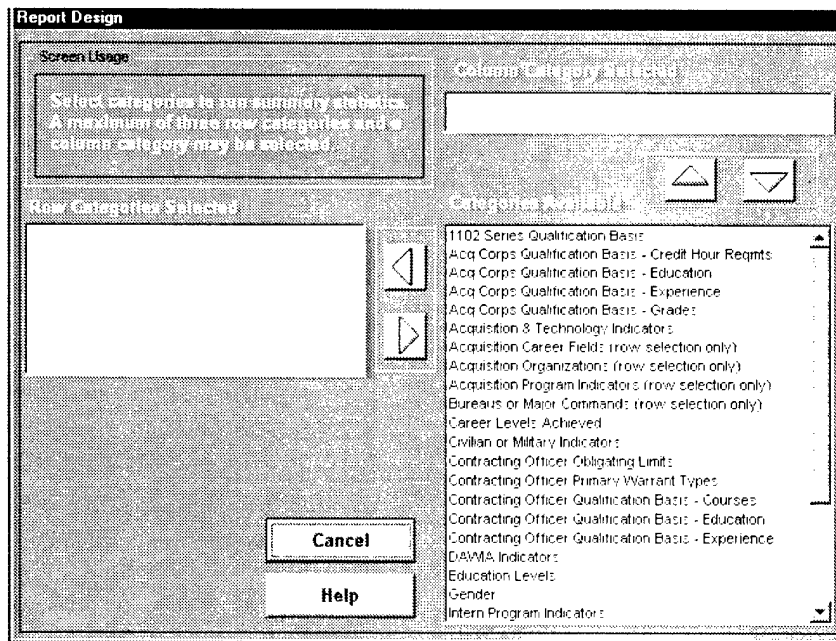
“Create Reports” gives you the most control over the output presentation and creates summary tables in a ready-to-print format. Select the “Create Reports” button shown in Figure 3-12.

In general, it is advisable to filter the data down as far as possible when defining the workforce and then choose as few categories as possible for the row and column dimensions of the report.

The first step in creating a report is selecting the row and, if desired, column categories. You may select a maximum of three row categories and one column category. Not all categories are available for column selection; those with more than 10 values will not fit horizontally on the page. These categories must be formatted as rows on the report. Figure 3-14 shows the screen that is used to format the report.

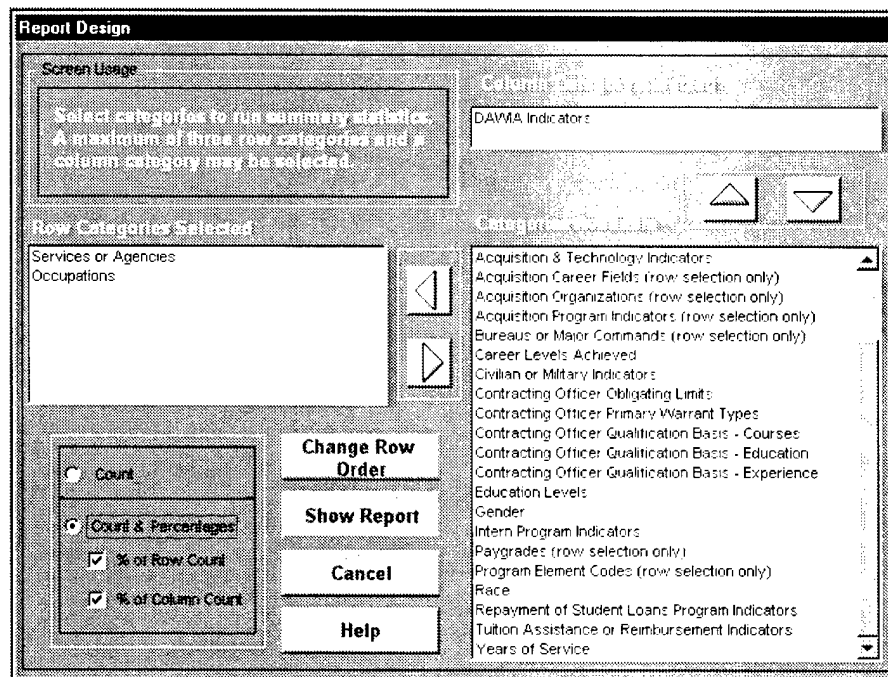
To select a category, highlight the desired category in the pick box (bottom right corner). Use the arrow buttons to move the category to either the row or column selection boxes. The category may be “put back” by using the other arrows. Repeat this procedure until you have chosen all categories you want displayed.

Figure 3-14. Create Report Screen



Once you have selected the categories, the ability to sort the categories, choose the type of report, and request the report appear, as seen in Figure 3-15. Click the "Change Row Order" button to reorder the categories. Multiple clicks may be needed to obtain the order you desire.

Figure 3-15. Report Options



You may request only numbers, or numbers and percentages by clicking on the preference in the bottom left corner of the screen. If selecting percentages, choose either row or column percentage statistics, or both. When satisfied with your selections, press "Show Report."

Figure 3-16 shows a sample report. This report used Service and occupation as the two row choices and DAWIA Indicator (whether the individuals are members of the DAWIA workforce) as the column.

Use the arrows at the bottom left of the screen to go from page to page. The scroll bars readjust the view of the current page. The zoom control in the tool bar at the top of the screen can adjust the amount of the report seen at one time.

Click the printer icon on the tool bar to print the report. The next icon, which resembles a notebook, is an export button. Press this icon to export the report to an HTML, text, or Excel file.

Figure 3-16. Report Output

Title	No	Yes	Total
Army			
0334 - Computer Specialist	6525	288	6813
Row %	95.8	4.2	100.0
Column %	15.1	2.8	12.8
0343 - Management and Program Analysis	1925	807	5732
Row %	85.9	14.1	100.0
Column %	11.4	7.9	10.7
0346 - Logistics Management	3134	1129	4263
Row %	73.5	26.5	100.0
Column %	7.3	11.1	8.0
0350 - Equipment Operator	84	0	84
Row %	100.0	0.0	100.0
Column %	0.2	0.0	0.2

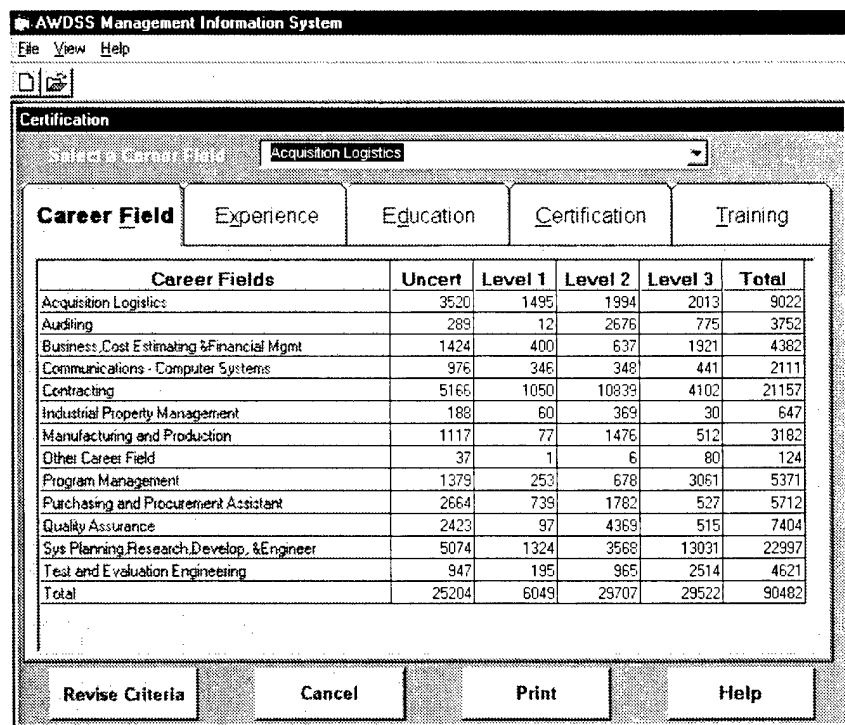
Analyze Certification Requirements

"Analyze Certification Requirements" displays a set of preformatted tables and graphs relating to the Acquisition Career Development Program. To view these statistics, press the "analyze certification requirements" button shown in Figure 3-12.

The certification statistics have a tabbed interface, as shown in Figure 3-17. Choose the display by selecting the appropriate tab. The upcoming figures show a sample for each tab. You can print any of the tabs to the Windows default printer by clicking the “Print” button.

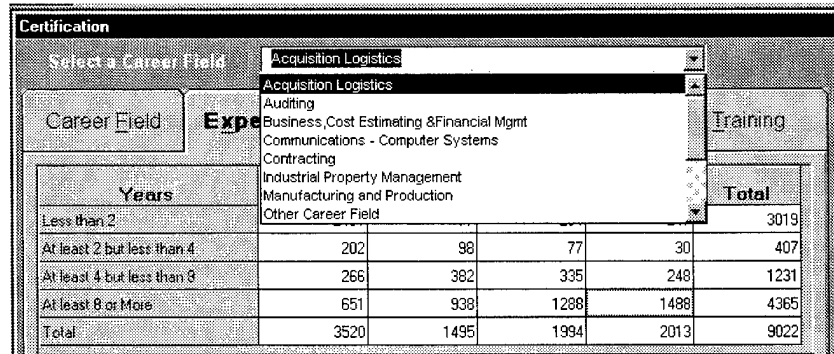
Figure 3-17 displays the Career Field tab. This tab shows the number of people, within the defined workforce, by career fields and career levels. The Career Field tab shows information on all career fields. The information includes only DAWIA members. Therefore, it may not include all positions defined in your workforce. (This information is not reported on non-DAWIA personnel.)

Figure 3-17. Career Field Tab



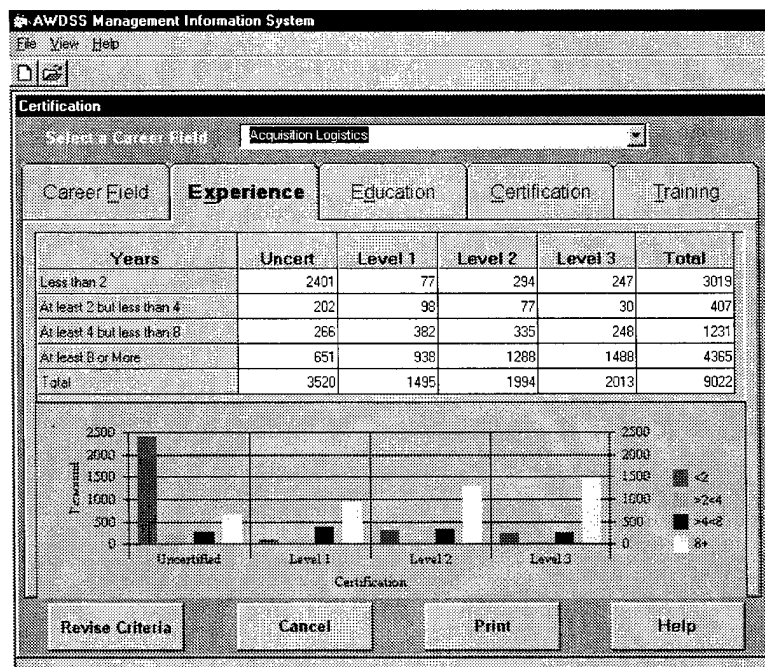
The tabs other than the Career Field tab display certification information for one specific acquisition career field. To select the desired career field, use the pull-down menu shown in Figure 3-18.

Figure 3-18. Career Field Drop-down Menu



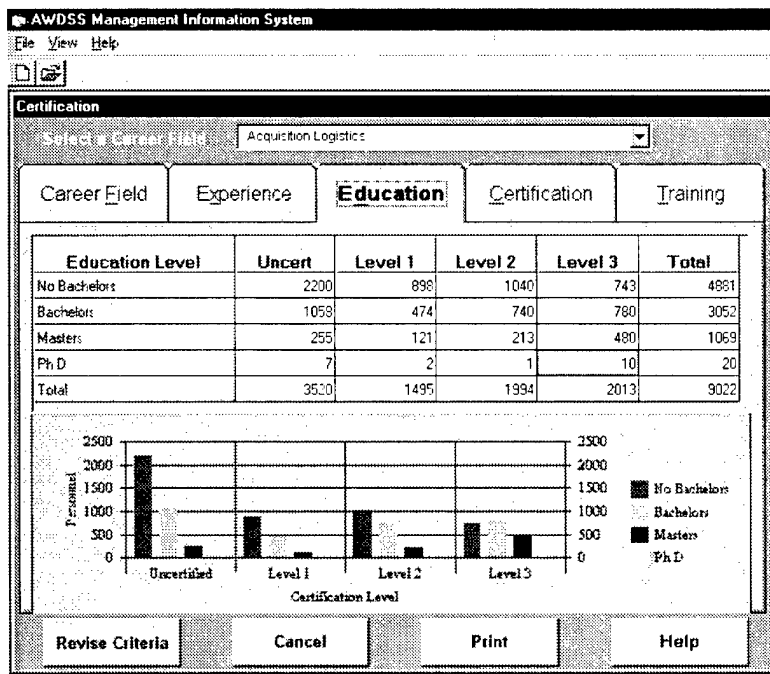
The Experience tab (Figure 3-19) shows the number of people by certification level and years of acquisition experience. The graph reflects this same information in the lower portion of the tab. The information includes only DAWIA members. Therefore, it may not include all positions defined in your workforce. (This information is not reported on non-DAWIA personnel.)

Figure 3-19. Experience Tab



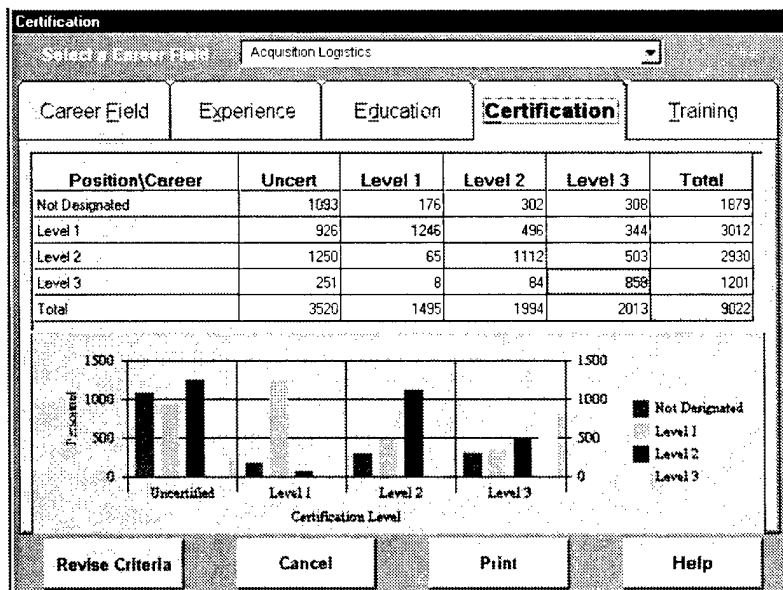
The Education tab (Figure 3-20) shows the number of people by certification level and education level. The graph reflects this same information in the lower portion of the tab. The information includes only DAWIA members. Therefore, it may not include all positions defined in your workforce. (This information is not reported on non-DAWIA personnel.)

Figure 3-20. Education Tab



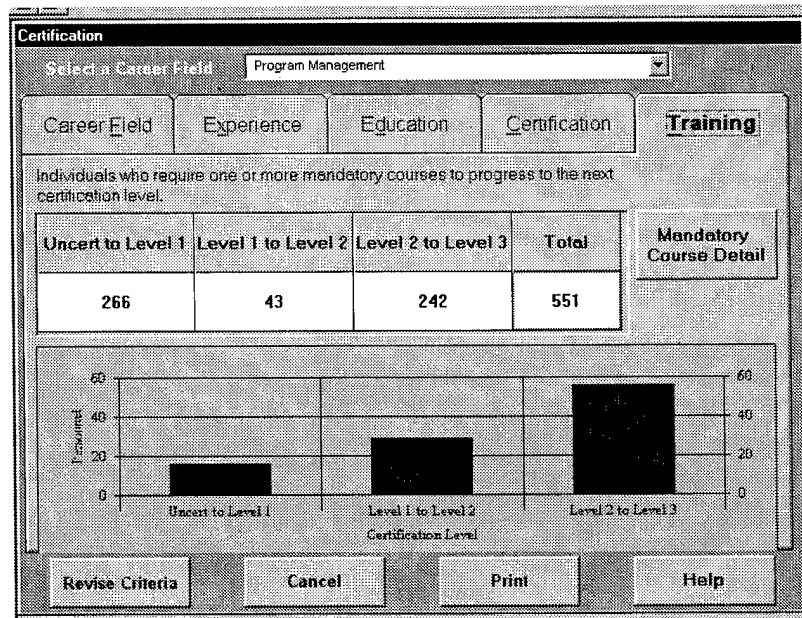
The Certification tab (Figure 3-21) shows the number of people certified at each level, compared to the required certification level of the position they hold. The career level of the person is across the top, and the required level of the position is down the side. The graph reflects this same information in the lower portion of the tab. The information includes only DAWIA members. Therefore, it may not include all positions defined in your workforce. (This information is not reported on non-DAWIA personnel.)

Figure 3-21. Certification Tab



The Training tab (Figure 3-22) shows the number of people by certification level who require one or more mandatory courses to progress to the next level. The graph reflects this same information in the lower portion of the tab. The information includes only DAWIA members. Therefore, it may not include all positions defined in your workforce. (This information is not reported on non-DAWIA personnel.)

Figure 3-22. Training Tab



Unlike the other tabs, the training tab allows you to access more detailed information.

MANDATORY COURSE DETAIL

To view the specific mandatory courses that these individuals are lacking, click the "Mandatory Course Detail" button on the training tab. Figure 3-23 will appear. This table displays the mandatory courses that individuals haven't completed. For each course, it shows the number of people, by current certification level, who require that course to proceed to the next level.

Pressing the print button will print this table. The back button will return you to the Training tab.

Figure 3-23. Mandatory Course Detail

Summary of Training Courses to Next Level (Program Management)				
Course	Uncert To Level 1	Level 1 to Level 2	Level 2 to Level 3	Total
AC0101	266	0	0	266
AC0201	0	43	0	43
FMT302	0	0	242	242

Individual Detail Back Print Help

This screen also allows you to see even more detailed information by pressing the “Individual Detail” button.

INDIVIDUAL DETAIL

“Individual Detail” shows, by course, individuals who require a mandatory course to progress to the next level. A sample “individual detail” is displayed in Figure 3-24. This screen includes general identifying information, along with some information on the individual’s progress in the acquisition career program. You may scroll vertically and horizontally to view additional information. You also may sort the columns by clicking on the column. To widen or narrow the columns, align the cursor with the edge of a column and press on the left mouse button when the cursor changes into a double-headed arrow. While holding down the mouse button, slide the column edge left or right. Notice that the total number of records is displayed at the bottom left of the screen.

Click “Back” to exit this view.

You may export this information into an Excel worksheet by pressing the “Save as Spreadsheet” button.

Figure 3-24. Individual Training Detail

Course	Name	Occupation	Major	Career Field	Career Acquis	Education	Last Training Date
ACQ101	2001 - General Supply	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	2010 - Inventory Manag	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	2/1/98
ACQ101	2003 - Supply Program	Naval Supply Systems	Acquisition Logistics	9	13.8	Masters	9/1/94
ACQ101	1670 - Equipment Spec	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	11/1/97
ACQ101	2010 - Inventory Manag	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	0830 - Mechanical Engi	Naval Sea Systems Com	Acquisition Logistics	9	9.8	Masters	8/1/94
ACQ101	0346 - Logistics Manag	Naval Air Systems Com	Acquisition Logistics	9	0.0	Bachelors	12/1/94
ACQ101	1670 - Equipment Spec	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	2003 - Supply Program	Naval Supply Systems	Acquisition Logistics	9	0.0	Bachelors	6/1/93
ACQ101	1670 - Equipment Spec	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	2001 - General Supply	Naval Supply Systems	Acquisition Logistics	9	10.0	No Bachelors	8/1/97
ACQ101	0802 - Engineering Tec	Naval Air Systems Com	Acquisition Logistics	9	0.0	Masters	
ACQ101	0346 - Logistics Manag	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	0346 - Logistics Manag	Naval Supply Systems	Acquisition Logistics	9	24.3	Masters	8/1/97
ACQ101	2001 - General Supply	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	2001 - General Supply	Naval Supply Systems	Acquisition Logistics	9	15.2	No Bachelors	
ACQ101	2001 - General Supply	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	2001 - General Supply	Naval Supply Systems	Acquisition Logistics	9	8.8	No Bachelors	3/1/98
ACQ101	2001 - General Supply	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	1670 - Equipment Spec	Air Force Materiel Com	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	1670 - Equipment Spec	Air Force Materiel Com	Acquisition Logistics	9	0.0	Bachelors	
ACQ101	0301 - Miscellaneous A	Naval Air Systems Com	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	2010 - Inventory Manag	Naval Supply Systems	Acquisition Logistics	9	0.0	Bachelors	8/1/97

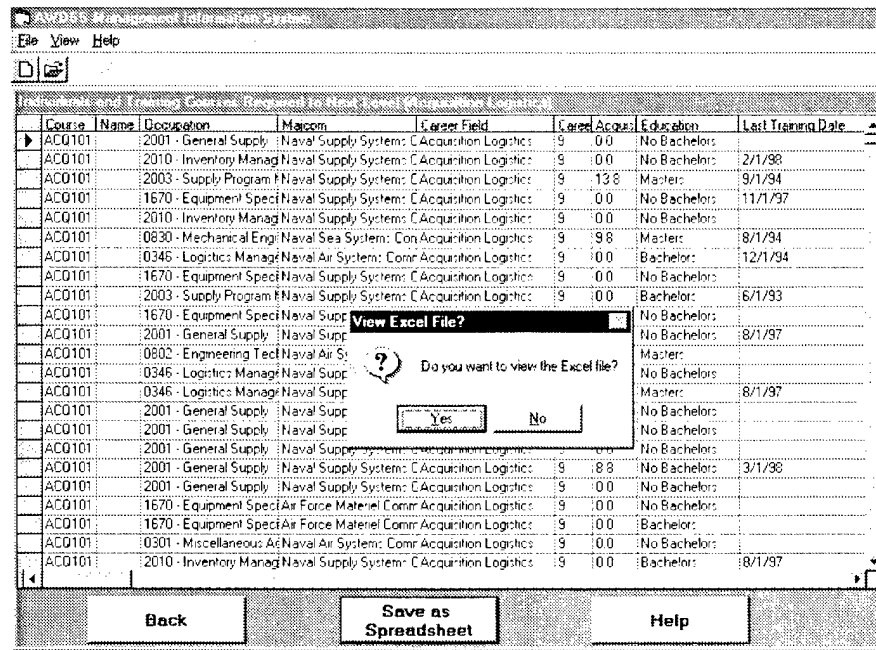
The “Save as Spreadsheet” button will display a window (Figure 3-25) asking for a file name for the spreadsheet. You may select the name and location for your file.

Figure 3-25. Export Training Detail

Course	Name	Occupation	Major	Career Field	Career Acquis	Education	Last Training Date
cs	5	0.0	No Bachelors				
cs	9	0.0	No Bachelors				2/1/98
cs	9	13.8	Masters				9/1/94
cs	9	0.0	No Bachelors				11/1/97
cs	5	0.0	No Bachelors				
cs	9	9.8	Masters				8/1/94
cs	9	0.0	Bachelors				12/1/94
cs	9	0.0	No Bachelors				
cs	9	0.0	Bachelors				6/1/93
cs	9	0.0	No Bachelors				
cs	9	10.0	No Bachelors				8/1/97
cs	9	0.0	Masters				
cs	9	0.0	No Bachelors				
cs	5	24.3	Masters				8/1/97
cs	9	0.0	No Bachelors				
cs	9	15.2	No Bachelors				
ACQ101	2001 - General Supply	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	2001 - General Supply	Naval Supply Systems	Acquisition Logistics	9	8.8	No Bachelors	3/1/98
ACQ101	2001 - General Supply	Naval Supply Systems	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	1670 - Equipment Spec	Air Force Materiel Com	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	1670 - Equipment Spec	Air Force Materiel Com	Acquisition Logistics	9	0.0	Bachelors	
ACQ101	0301 - Miscellaneous A	Naval Air Systems Com	Acquisition Logistics	9	0.0	No Bachelors	
ACQ101	2010 - Inventory Manag	Naval Supply Systems	Acquisition Logistics	9	0.0	Bachelors	8/1/97

ACQDSS will ask one additional question, shown in Figure 3-26. It will ask if you want to view the Excel file now. If you select “yes,” Excel will open with your file as the current worksheet. You can then rearrange, format, and print data in the Excel worksheet. If you select “no,” you will return to the “Individual Detail” table. You can open your file in Excel later and format and print the information.

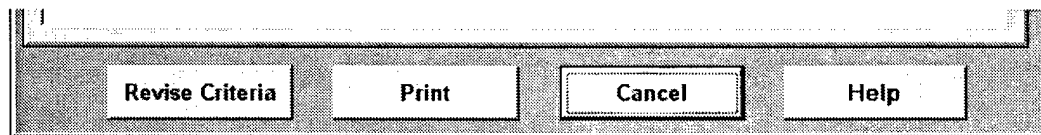
Figure 3-26. Export Confirmation



ANALYZE CERTIFICATION CHANGES

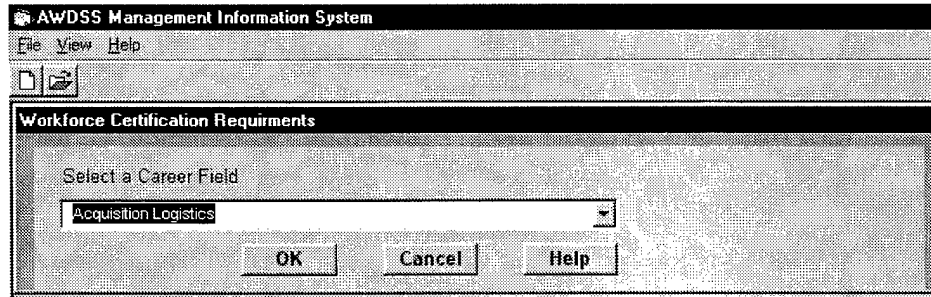
The Acquisition Career Program uses certification criteria in three areas: education, experience, and training. This analytical function lets you change any or all of the requirements in these areas and view the impact on the ability of the workforce to get higher certification. At the bottom of the tabs, there is a “Revise Criteria” button, shown in Figure 3-27. To analyze the impact of the certification criteria changes, press the Revise Criteria button.

Figure 3-27. Certification Module Options



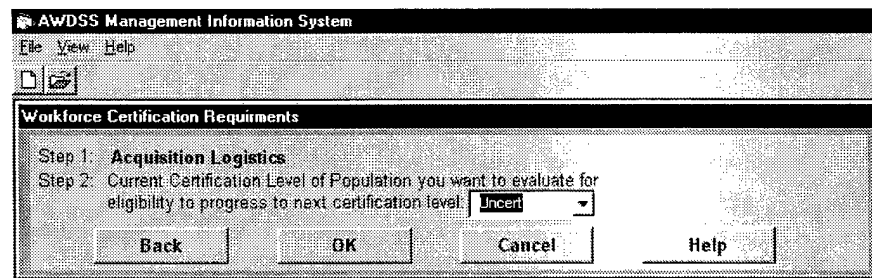
A three-step “wizard” guides you through this process. The first step is to select the career field, using the pull-down menu (see Figure 3-28). When done, click “OK.”

Figure 3-28. Step 1—Certification Wizard



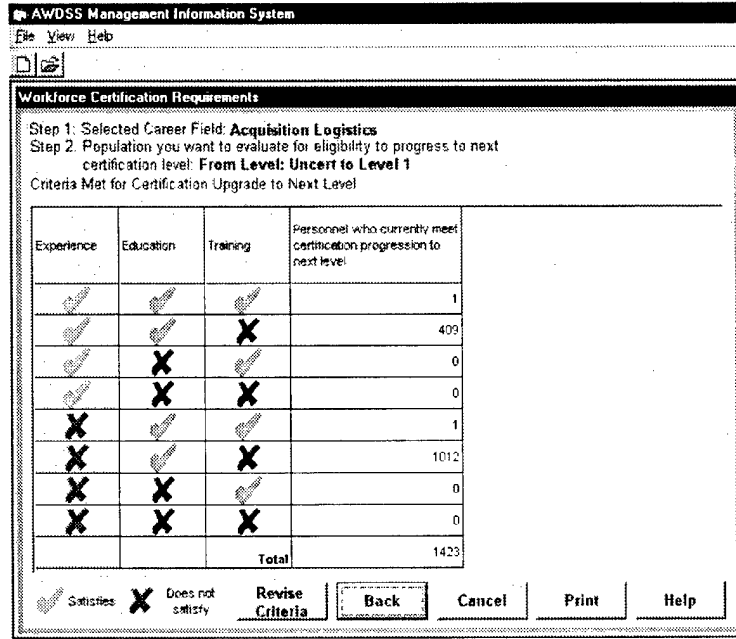
The second step (Figure 3-29) is to select the career level to evaluate. This is the individual's *current* career level. ACQDSS will evaluate the individual's ability to progress to the *next* level. When done, click "OK."

Figure 3-29. Step 2—Certification Wizard



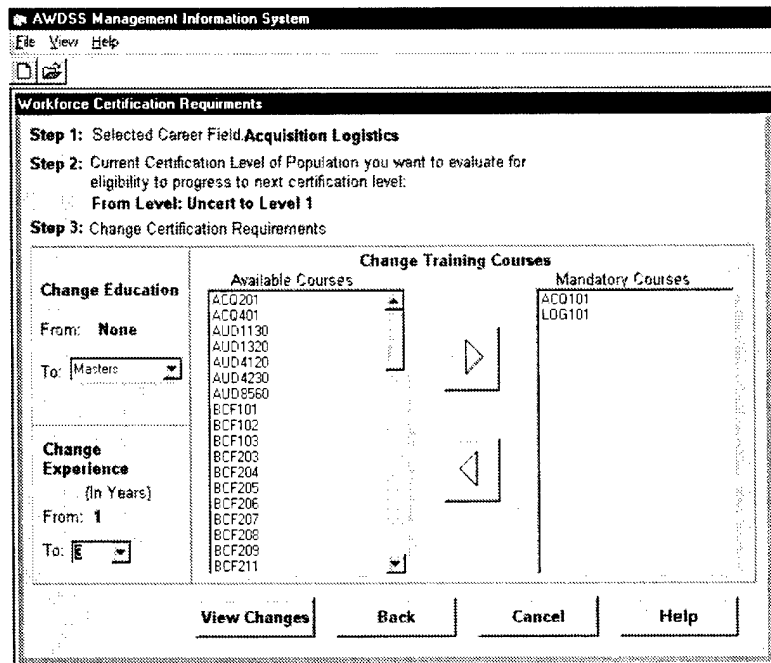
ACQDSS will produce a baseline evaluation (see Figure 3-30) of the selected workforce's ability to progress to the next certification level. It evaluates individuals against the criteria set for each area of experience, education, and training for that career field according to DoD 5000.52M. Green check marks designate "passed" areas; red Xs designate "not met" areas. For example, the first row of three green checks shows the number of individuals who are ready to proceed to the next level in all three areas (in our sample, 1 person). The second line, with two checks and one X, shows 409 people who have sufficient experience and education but have not completed the required training to progress to the next level.

Figure 3-30. Certification Baseline Results



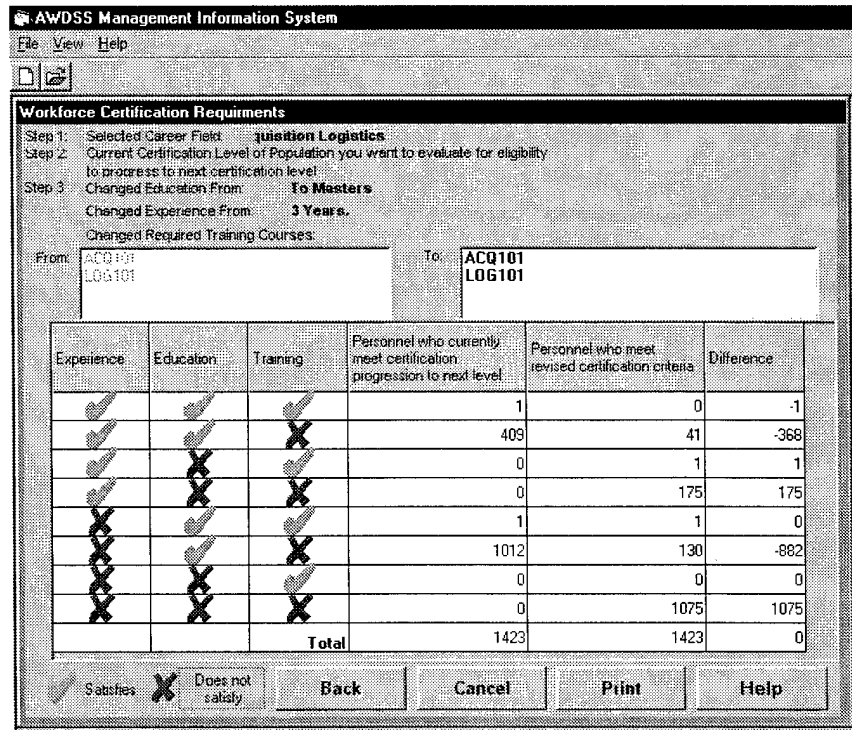
After reviewing the baseline, you can evaluate the impact of changing the certification criteria. For example, to decrease the training requirements or require a higher educational degree, click the “Revise Criteria” button. The screen shown in Figure 3-31 will appear. On this screen, adjust the education level, experience level, and/or courses required. You can change one or more factors at a time. When satisfied with your selections, click “View Changes.”

Figure 3-31. Adjust Certification Criteria



ACQDSS reevaluates the individuals against the revised certification criteria and presents this information as shown in Figure 3-32. This display shows the base-line information along with the results of changing the criteria for certification. It also shows a difference column to enable you to easily identify where the greatest effects occurred.

Figure 3-32. Results After Changing Criteria



Chapter 4

Functional Analyst Guide

OVERVIEW

In this chapter, we show how to fully use the capability of ACQDSS to assist in managing the acquisition workforce. We provide practical examples of questions that ACQDSS can easily answer. In addition, we look at various ways to use the “what if” capability by redefining requirements for certification.

The examples in this chapter are just the beginning of what you can do with the ACQDSS program. In the first example, we show how the program can help you define future acquisition training requirements to project course workload. Our second example shows how certification requirements for specific career fields differ among the Services. Our third example answers some “what if” questions regarding experience required for various certification levels. The fourth example examines the impact of changing the occupations that may be included in the Acquisition and Technology Workforce.

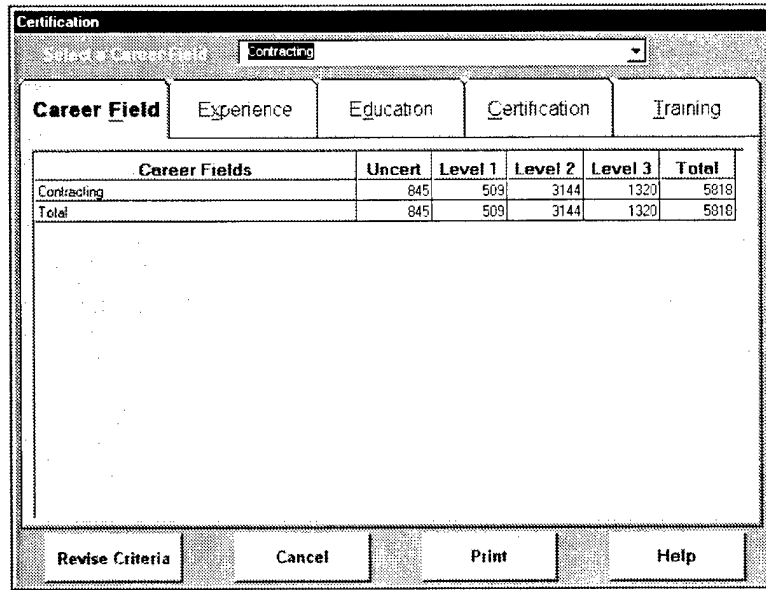
Example 1—Air Force Contracting Training Needs

For this example, you need to request the acquisition training slots for members of the Contracting career field across the Air Force. How can ACQDSS help you correctly identify your training needs? Let’s walk through some possible step—but keep in mind that several paths could lead you to the same information.

The first step for any analysis is always selecting the workforce in which you are interested. Therefore, select by a combination of occupation (CF=contracting) and organization (Air Force) for military and civilian members.

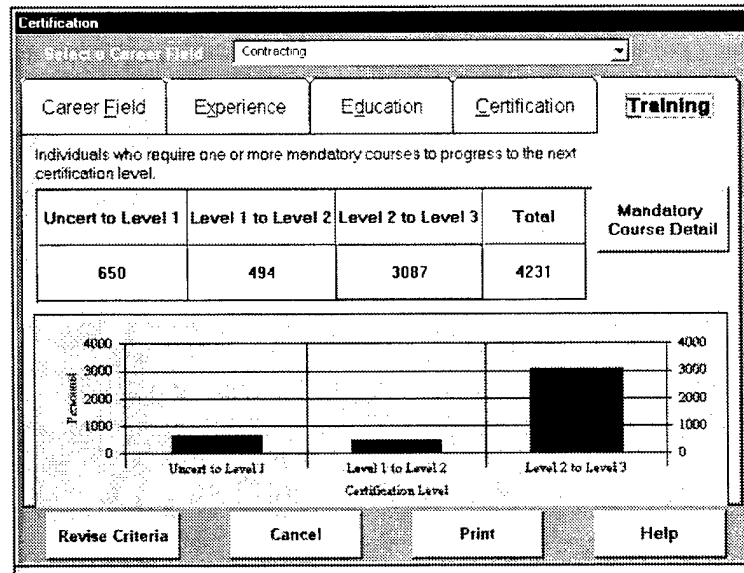
Then select “Analyze Certification Requirements.” You’ll get the screen shown in Figure 4-1.

Figure 4-1. Contracting Example



Select the Training tab and choose a career field (which defaults to contracting in this example). As you can see in Figure 4-2, 650 people need a mandatory course to become certified.

Figure 4-2. Contracting Example—Training



Clicking the “Mandatory Course Detail” button will take you to the screen shown in Figure 4-3. This screen will show you how many people need which training class before they can progress to the next level of certification. With this information, you can begin to develop your training plan and determine the number of slots to request.

Figure 4-3. Contracting Example—Mandatory Course Detail

Courses	Uncert To Level 1	Level 1 to Level 2	Level 2 to Level 3	Total
CON101	491			491
CON104	594			594
CON202		304		304
CON204		351		351
CON210		241		241
CON301			2963	2963
CON333			2837	2837

Buttons: Individual Detail, Back, Print, Help

After you have received your share of training slots, you will need to determine who should attend. By clicking the “Individual Detail” button you can identify the exact people who need the courses. The screen at Figure 4-4 appears; it shows the courses required, name, occupation, and career field, organization, certification level, years of acquisition experience, education level, and the date of the last training attended for individuals who require these courses.

Figure 4-4. Contracting Example—Individual Detail

Course	Name	Occupation	Major	Career Field	Career Level	Acq Exp	Education	Last Training Date
CON101		1101 - General Business	Air Force Elements, US Cent	Contracting	9	1.9	No Bachelors	11/1/92
CON101		1102 - Contracting	Headquarters, Air Force Spa	Contracting	9	12.7	No Bachelors	12/1/97
CON101		0301 - Miscellaneous Act	Air Force Manpower and Peri	Contracting	9	13.3	Bachelors	12/1/94
CON101		1106 - Procurement Cle	Headquarters, Air Force Res	Contracting	9	6.8	No Bachelors	8/1/91
CON101		1106 - Procurement Cle	Air Force Materiel Command	Contracting	9	9.5	Bachelors	
CON101		1101 - General Business	Air Force Materiel Command	Contracting	9	6.6	No Bachelors	
CON101		1105 - Purchasing	US Air Force Academy (USA)	Contracting	9	2.8	Bachelors	12/1/96
CON101		64P - Contracting	Air Combat Command (ACC)	Contracting	9	0.0	Masters	
CON101		64P - Contracting	Pacific Air Force	Contracting	9	0.7	Bachelors	
CON101		64P - Contracting	Air Force Materiel Command	Contracting	9	1.4	Bachelors	
CON101		1102 - Contracting	Air Force Operational Test ar	Contracting	9	0.0	No Bachelors	7/1/95
CON101		0318 - Secretary	Air Combat Command (ACC)	Contracting	9	0.5	Bachelors	
CON101		1102 - Contracting	Air Mobility Command (AMC)	Contracting	9	0.7	No Bachelors	
CON101		1106 - Procurement Cle	US Air Forces, Europe	Contracting	9	0.6	No Bachelors	
CON101		1102 - Contracting	Air Combat Command (ACC)	Contracting	9	5.9	Masters	2/1/98
CON101		0318 - Secretary	Air Education & Training Com	Contracting	9	0.2	No Bachelors	
CON101		1102 - Contracting	Air Force Materiel Command	Contracting	9	0.0	No Bachelors	
CON101		1102 - Contracting	Air Force Manpower and Peri	Contracting	9	0.8	Masters	
CON101		1102 - Contracting	Air Force Manpower and Peri	Contracting	9	6.8	Bachelors	12/1/92
CON101		1106 - Procurement Cle	Air Force Materiel Command	Contracting	9	6.2	No Bachelors	
CON101		1102 - Contracting	Air Force Materiel Command	Contracting	9	0.0	Bachelors	
CON101		0303 - Miscellaneous CE	USAF Elts Incl joint activities	Contracting	9	6.4	No Bachelors	3/1/96
CON101		1106 - Procurement Cle	Air Force Materiel Command	Contracting	9	20.5	No Bachelors	
CON101		1102 - Contracting	Headquarters, Air Force Res	Contracting	9	4.1	No Bachelors	

Buttons: Back, Save as Spreadsheet, Help

With this information, you can notify the correct individuals of available slots and begin scheduling attendance.

Example 2—Service Consistency in Certification

Consider the following questions: Are the Services consistent in certifying people? Can DoD civilian acquisition members move from one Service to another in the same career field and expect to hold the same certification?

For these questions, one option is to start with the civilian workforce and review a particular occupational series; this example uses the 1106 occupation series (procurement clerical). After you have identified the workforce (new, civilian, by occupation) and selected 1106 from under the service occupation codes, push the “show reports” button.

There are several ways to set up the report to display the information. A simple report that shows, by service, the number and percentage certified works well in this case. Make the selections as shown in Figure 4-5.

Figure 4-5. Service Consistency Example

The screenshot shows a 'Report Design' dialog box with several sections:

- Screen Usage:** A text box with a warning icon: "Select categories to be analyzed. A maximum of three row categories and a column category may be selected."
- Row Category Selected:** A list box containing "DAVMA Indicator" with a dropdown arrow.
- Column Category Selected:** A list box containing "DAVMA Indicator" with a dropdown arrow.
- Display Category Indicators:** A text box for "Services or Agencies" with a search icon.
- Display Field No.:** A list box with a scroll bar containing various indicators such as "Acquisition Career Field", "Acquisition Organizations", "Acquisition Program Indicators", "Bureau or Major Commands", "Career Level - Achieved", "Civilian or Military Indicators", "Contracting Officer Obligor Limit", "Contracting Officer Primary Warrant Type", "Contracting Officer Qualification Basis - Course", "Contracting Officer Qualification Basis - Education", "Contracting Officer Qualification Basis - Experience", "Education Level", "Grade", "Intern Program Indicators", "Occupations", "Paygrades", "Program Element Codes", "Race", "Repayment of Student Loans Program Indicators", "Tuition Assistance or Reimbursement Indicators", and "Years of Service".
- Options:** Radio buttons for "Count", "Count & Percentage" (selected), "% of Row Count", and "% of Column Count".
- Buttons:** "Show Report", "Cancel", and "Help".

In this case, you will see a distinct difference between the Sea Services and the rest of the Department (Figure 4-6). The Navy and Marines certify less than 5 percent of the 1106s, whereas the other Services certify almost all of the clerical procurement personnel.

Figure 4-6. Service Consistency Example—Report

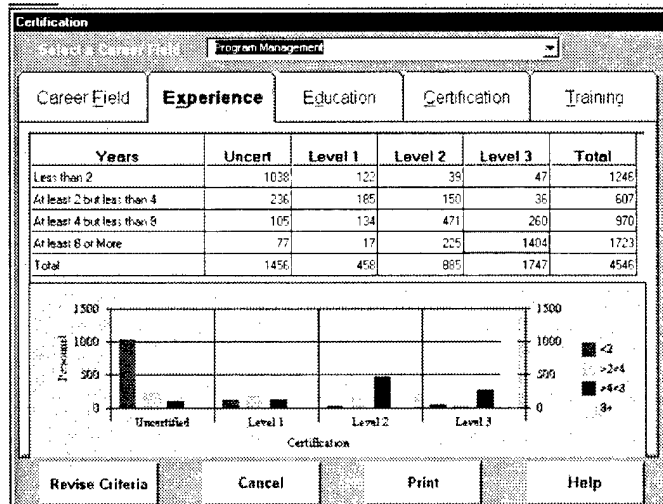
DAWIA Indicators						
Services or Affiliates						
Title	Army	DCD	Navy	HHS&F	HHS&AC	Total
No	44	207	982	42	55	1330
Column %	4.6	12.5	97.1	5.4	98.2	29.9
Yes	906	1444	29	743	1	3123
Column %	95.4	87.5	2.9	94.6	1.8	70.1
Grand Total	950	1651	1011	765	56	4453

Example 3—Experience Levels in Program Management

You're preparing your boss to testify to Congress tomorrow. One of the possible questions you've just received from the staffer relates to concerns that military members in the program management field are moving too quickly up the acquisition ladder and don't have enough experience. Your boss must be able to discuss the current requirements and the impact of lengthening the experience requirement.

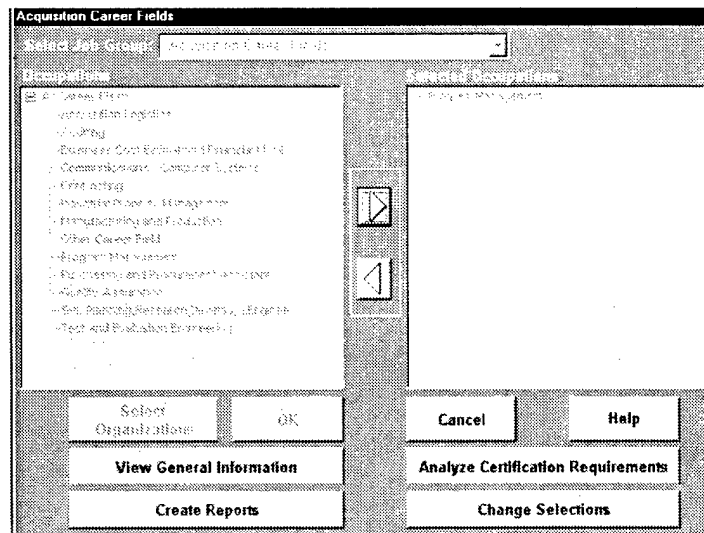
One option is to select all military personnel within the DAWIA workforce and modify the workforce by occupation. Choose the program management career field, click the "Analyze Certification Requirement" button, and view the Experience tab. You will see the screen shown in Figure 4-7.

Figure 4-7. Program Management Experience Example



You now know how many military program managers are at each certification level and have an idea of how experienced they are. This screen is very useful to answer the foregoing questions. Among the Level 3 individuals, most have more than 8 years of experience. (Therefore, if the criteria had been doubled to 8 instead of 4 years, 80 percent of Level 3s would have met this stringent requirement.) About 260 (15 percent) have between 4 and 8 years experience, which meets current standards. Those of concern and deserving of further examination are the approximately 80 individuals (barely 5 percent of Level 3s) who are at Level 3 with less than 4 years of experience. To find out who these individuals are, click "Cancel," which exits you from the certification tabs and returns you to the workforce selection screens (Figure 4-8).

Figure 4-8. Program Management Experience Example—Workforce Selection



Press the “View General Information” button to view the individuals within your workforce. Place your cursor on the heading title for career level and click to sort your workforce by career level. Scrolling through the list (Figure 4-9), we find an Army general, a Navy captain, and a Navy commander with less than 4 years of acquisition experience who are certified at Level 3. Knowing who they are, you could gather some information about the particular position and duties they have, whether they have an acquisition waiver, and so forth.

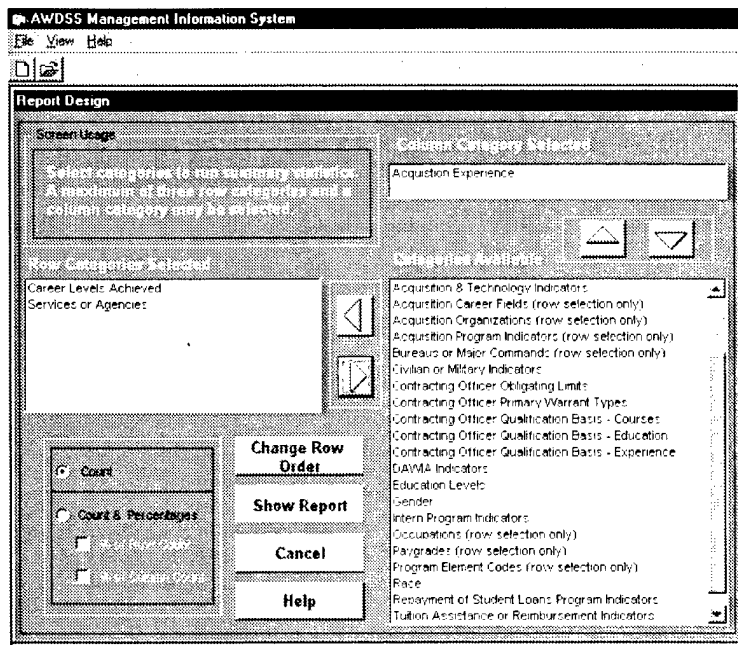
Figure 4-9. Program Management Experience Example—General Information

Name	Career	DA	Service	Maxcom	Service Desc	Series	Acq Exp	Years	Acquisition	Career Field	Special Acq	Pay Gr	Gender
	3		Navy	Space and Naval Warfare	2150 - Aircraft Organizat	0.0	11-20	N/A		Program Man	No Code	0-4	Male
	3		USAF	Air Force Materiel Commar	63A - Acquisition Manag	14.8	11-20	None		Program Man	No Code	0-5	Female
	3		USAF	Air Force Materiel Commar	60C - Program Director	18.8	21-30	None		Program Man	No Code	0-6	Male
	1		USAF	Air Force Materiel Commar	63A - Acquisition Manag	4.0	0-10	None		Program Man	No Code	0-2	Male
	3		USAF	USAF Elts Incl joint activiti	63A - Acquisition Manag	10.3	21-30	None		Program Man	No Code	0-5	Male
	9		Army	US Army Training and Doc	51A - Research and De	1.9	0-10	N/A		Program Man	No Code	0-3	Male
	3		USAF	Air Force Materiel Commar	63A - Acquisition Manag	9.8	11-20	None		Program Man	No Code	0-3	Male
	2		USAF	Air Force Materiel Commar	63A - Acquisition Manag	2.7	11-20	None		Program Man	No Code	0-4	Female
	2		USAF	Air Force Materiel Commar	63A - Acquisition Manag	3.3	0-10	None		Program Man	No Code	0-2	Male
	3		USAF	Air Force Materiel Commar	62E - Developmental Er	9.3	11-20	None		Program Man	No Code	0-4	Male
	3		Army	US Army Training and Doc	51A - Research and De	10.2	11-20	N/A		Program Man	No Code	0-5	Male
	3		Navy	Navy Elements - DLA	3265 - Advanced Commr	3.2	21-30	N/A		Program Man	No Code	0-5	Male
	1		Army	US Army Training and Doc	53A - Systems Automati	4.1	11-20	N/A		Program Man	No Code	0-4	Male
	3		USAF	Air Force Materiel Commar	63A - Acquisition Manag	12.8	11-20	None		Program Man	No Code	0-4	Male
	9		USAF	Air Mclbilty Command (AMI)	11A - Airlift Pilot	0.7	11-20	None		Program Man	No Code	0-3	Male
	9		USAF	Air Force Materiel Commar	63A - Acquisition Manag	0.0	0-10	N/A		Program Man	No Code	0-2	Female
	3		Navy	Special Projects Office	2161 - Major Project Ma	17.8	30 +	ACat I		Program Man	Program Man	0-8	Male
	3		Army	US Army Training and Doc	51A - Research and De	0.0	21-30	N/A		Program Man	No Code	0-5	Male
	3		USAF	Immediate Office, Secretar	63A - Acquisition Manag	18.9	21-30	None		Program Man	No Code	0-5	Male
	2		USAF	Air Force Materiel Commar	63A - Acquisition Manag	8.3	11-20	None		Program Man	No Code	0-4	Male
	3		USAF	Air Force Materiel Commar	63A - Acquisition Manag	9.0	21-30	None		Program Man	No Code	0-6	Male
	3		Army	Army Acquisition Executive	Unknwn, Army	8.6	21-30	N/A		Program Man	No Code	0-4	Male
	9		USMC	US Marine Corps (USMC)	15902 - Electronics Maint	1.6	21-30	N/A		Program Man	No Code	0-3	Male
	2		USAF	USAF Elts Incl joint activiti	62E - Developmental Er	9.8	11-20	None		Program Man	No Code	0-5	Female

You could save this information as an Excel spreadsheet (“save as spreadsheet”) to facilitate further sorting, extract only individuals of interest, or format and print.

At this stage, you may be curious about whether the 83 individuals have any commonalties. First investigate how many are in each Service by creating a report. Design a report with Acquisition Experience as the column category and Career Level and Service as the row categories, as shown in Figure 4-10.

Figure 4-10. Program Management Experience Example—Create Report



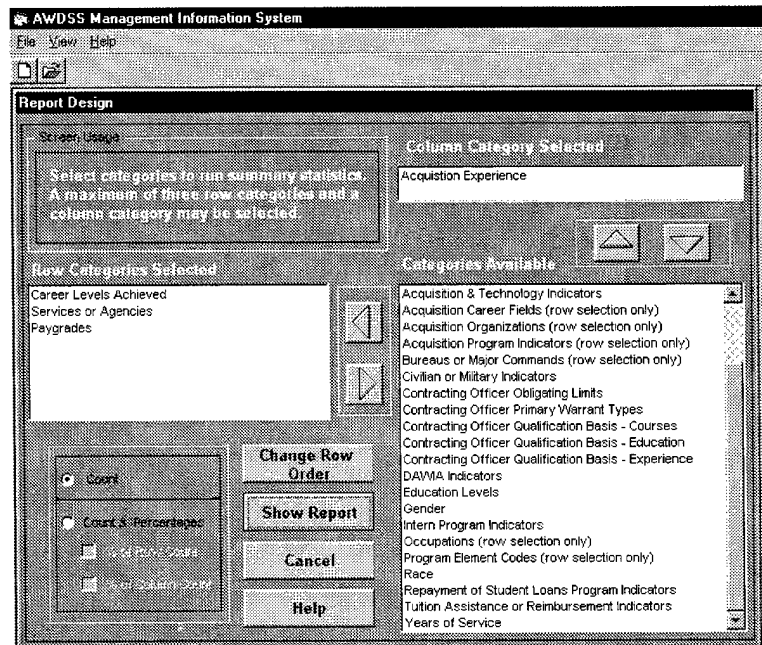
By running this report, you learn that the Navy has 64 of the 83 individuals, as shown in Figure 4-11.

Figure 4-11. Program Management Experience Example—Report Results

Career Levels Achieved							
Services or Agencies							
Acquisition Experience							
Title	0 to 2	> 2 to 3	> 3 to 6	> 6 to 12	> 12 to 20	20+	Total
Level 3							
Army	5	1	57	200	81	3	347
Navy	40	24	44	93	67	8	276
USAF	1	12	109	365	506	30	1023
USMC	1	7	53	30	9	1	101
Subtotal	47	44	263	688	661	42	1747

Examine the Navy individuals more closely by adding pay grades as a row category, as shown in Figure 4-12.

Figure 4-12. Program Management Experience Example—Create Report on Grades



In Figure 4-13, most are O-5s and O-6s.

Figure 4-13. Program Management Experience Example—Report Results for Grades

Navy							
O-4	6	4	3	6	0	0	19
O-5	13	8	24	41	12	0	98
O-6	19	12	16	43	48	4	142
O-7	2	0	1	3	0	3	9
O-8	0	0	0	0	5	1	6

You can obtain another set of insights about experience levels by examining the impact of changing the experience criteria for individuals at Level 2 to see how it would affect succession planning for Level 3 leadership positions. To see the impact of changing the experience level, click the “Revise Criteria” button. You’ll see the screen shown in Figure 4-14.

Figure 4-14. Program Management Experience Example—Revise Criteria

Workforce Certification Requirements			
Step 1: Selected Career Field: Program Management			
Step 2: Population you want to evaluate for eligibility to progress to next certification level: From Level: 2 to Level 3			
Criteria Met for Certification Upgrade to Next Level			
Experience	Education	Training	Personnel who currently meet certification progression to next level
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	121
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	575
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	19
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	170
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0
Total			885

Satisfies
 Does not satisfy

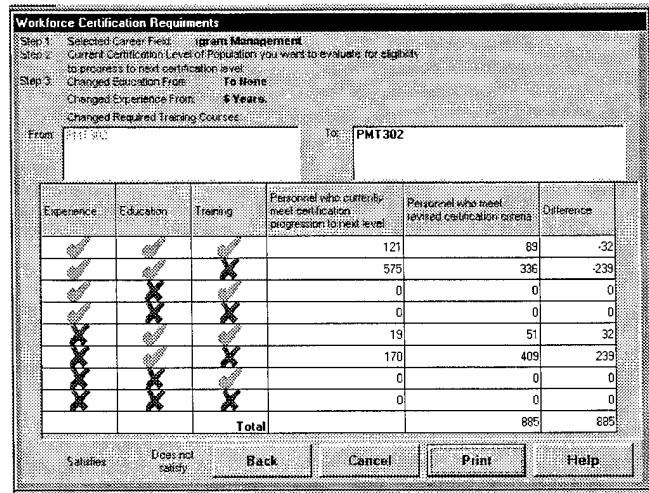
Click the “Revise Criteria” button to change the experience requirement for individuals currently certified at Level 2 and see the impact on how many would have enough experience to progress to Level 3 (see Figure 4-15).

Figure 4-15. Program Management Experience Example—Changing Criteria

Workforce Certification Requirements																																								
Step 1: Selected Career Field: Program Management																																								
Step 2: Current Certification Level of Population you want to evaluate for eligibility to progress to next certification level: From Level: 2 to Level 3																																								
Step 3: Change Certification Requirements																																								
Change Education From: None To: <input type="text"/> Change Experience (In Years) From: 4 To: <input type="text" value="6"/>	Change Training Courses <table border="1"> <thead> <tr> <th>Available Courses</th> <th>Mandatory Courses</th> </tr> </thead> <tbody> <tr> <td>AC0101</td> <td>PMT302</td> </tr> <tr> <td>AC0201</td> <td></td> </tr> <tr> <td>AC0401</td> <td></td> </tr> <tr> <td>AUD1130</td> <td></td> </tr> <tr> <td>AUD1320</td> <td></td> </tr> <tr> <td>AUG4120</td> <td></td> </tr> <tr> <td>AUD4230</td> <td></td> </tr> <tr> <td>AUD8560</td> <td></td> </tr> <tr> <td>BCF101</td> <td></td> </tr> <tr> <td>BCF102</td> <td></td> </tr> <tr> <td>BCF103</td> <td></td> </tr> <tr> <td>BCF203</td> <td></td> </tr> <tr> <td>BCF204</td> <td></td> </tr> <tr> <td>BCF205</td> <td></td> </tr> <tr> <td>BCF206</td> <td></td> </tr> <tr> <td>BCF207</td> <td></td> </tr> <tr> <td>BCF208</td> <td></td> </tr> <tr> <td>BCF209</td> <td></td> </tr> </tbody> </table>	Available Courses	Mandatory Courses	AC0101	PMT302	AC0201		AC0401		AUD1130		AUD1320		AUG4120		AUD4230		AUD8560		BCF101		BCF102		BCF103		BCF203		BCF204		BCF205		BCF206		BCF207		BCF208		BCF209		<input type="button" value="View Changes"/> <input type="button" value="Back"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>
Available Courses	Mandatory Courses																																							
AC0101	PMT302																																							
AC0201																																								
AC0401																																								
AUD1130																																								
AUD1320																																								
AUG4120																																								
AUD4230																																								
AUD8560																																								
BCF101																																								
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BCF207																																								
BCF208																																								
BCF209																																								

If you change the requirement from 4 years to 6, you'll get the screen shown in Figure 4-16.

Figure 4-16. Program Management Experience Example—Revised Criteria Results



As Figure 4-16 shows, changing the requirement reduces the number of people who meet the experience qualifications for certification to Level 3 by more than 200.

Example 4—Impact of Redefining Acquisition Members

The group determining the composition of the Acquisition and Technology Workforce has been meeting frequently. You are in charge of training at Naval Sea Systems Command (which is designated as an acquisition organization). At the group's most recent meeting, members discussed adding several civilian occupational series (0110—Economists; 0343—Management and Program Analysts, and 0391—Telecommunications) to the Category 2 list of occupations. Because your organization is an acquisition organization, anyone assigned to the Naval Sea Systems Commands who had these series could become part of the acquisition workforce. Adding members to the workforce would require that you 1) categorize them into an appropriate career field, 2) evaluate their education, experience and training against the certification criteria in order to establish their career level, and 3) train and educate them to achieve appropriate career levels. You wish to determine how many individuals in your organization would be affected.

In this case, select the workforce by using the CAT I/II algorithm. On the Organizations tab, shown in Figure 4-17, choose Naval Sea Systems Command as the Group II organization. On the Occupations tab, select the three new series as Category II occupations, as shown in Figure 4-18.

Figure 4-17. Redefining Acquisition Members Example

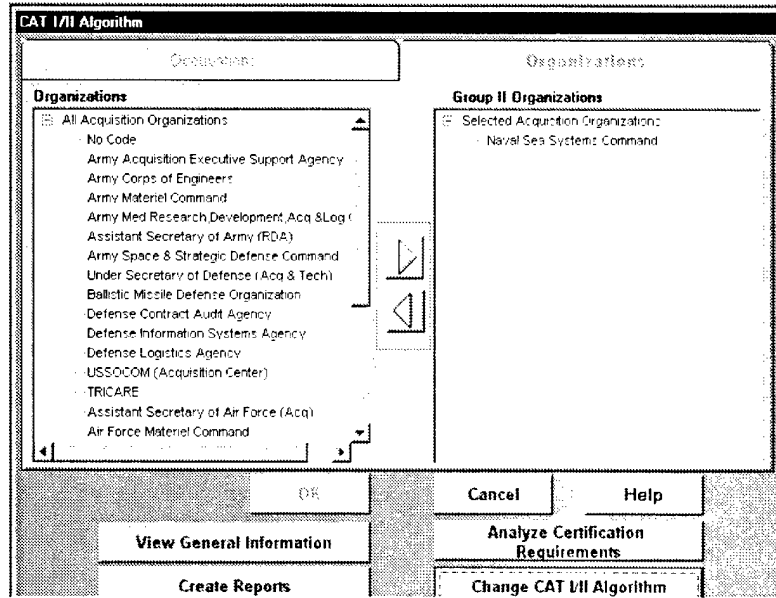
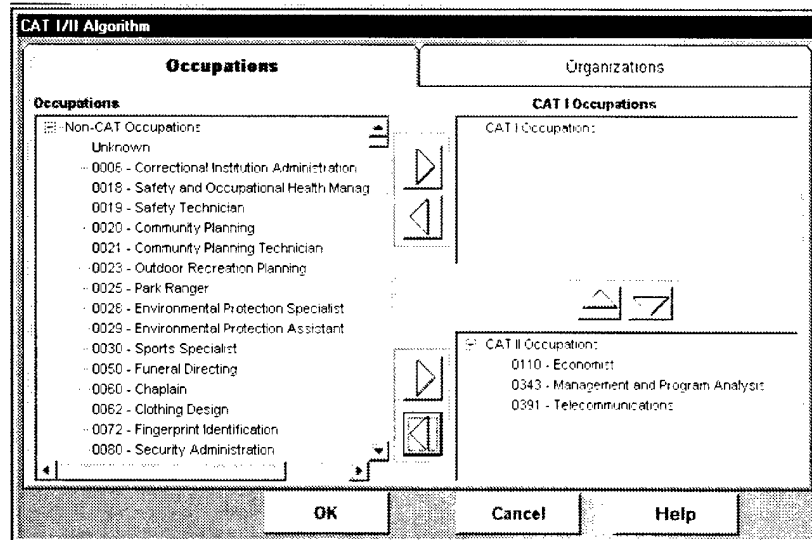
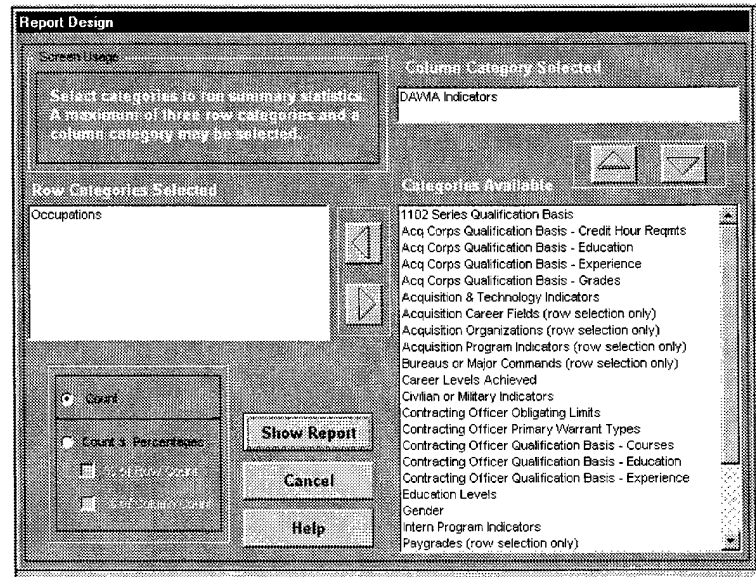


Figure 4-18. Redefining Acquisition Members Example—Occupations



Press “OK,” then “Create Reports” to generate the workforce and enter the report design screen (Figure 4-19). To see how many individuals are in each occupational series and whether any were certified as acquisition workforce members under the DAWIA definition, create a report with “Occupations” as the row category and “DAWIA Indicator” as the column category.

Figure 4-19. Redefining Acquisition Members Example—Create Report



The results are shown in Figure 4-20. Adding Economists and Telecommunications experts to the workforce will add 57 new members to Naval Sea Systems Command's acquisition workforce—which is fairly minimal, especially compared to the effect of adding Management and Program Analysts. There are more than 1,200 Management and Program Analysts in your organization. This could generate a significant amount of new training requirements. Fortunately, this situation is mitigated somewhat by the fact that about 350 individuals had previously obtained acquisition workforce status through DAWIA. These individuals may already have received needed training. You could create further reports and analysis and determine which levels and career fields these individuals are in and whether they require any additional training.

Figure 4-20. Redefining Acquisition Members Example—Report Results

Occupations

DAWPA Instructor

Title	No.	Yes	Total
0110 - Economist	1	1	2
0343 - Management and Program Analysis	850	351	1201
0391 - Telecommunications	54	1	55
Grand Total	905	353	1258

SUMMARY

These examples address only a few of the questions you can answer with ACQDSS. ACQDSS gives you the flexibility to limit your analysis to specific groups of individuals and then review statistics and create your own reports about those individuals. This capability allows you to design the output that addresses your specific interest.

Chapter 5

Data Specifications

TYPES OF DATA

Several types of data were obtained from the data sources specified below. Specific data elements are described in the data dictionary.

- ◆ Personnel data
- ◆ Position data
- ◆ Organizational data
- ◆ Training course data.

DATA SOURCES

The following types of data will be obtained from the data sources specified. This list is not all-inclusive; it only covers the primary types of data. Specific data elements are described in the data dictionary.

Personnel Data

Personnel data are available for all¹ (acquisition and non-acquisition) military and civilian personnel on active duty. The ACQDSS prototype contains end of FY97 data for all military officers and DoD civilians. Some enlisted members are in the acquisition workforce; future versions should add these individuals. Acquisition-specific information is included for acquisition (DAWIA) workforce members. Data come from several files; all are obtained from Defense Manpower Data Center (DMDC):

- ◆ Civilian master
- ◆ Active-duty master
- ◆ Personnel (DAWIA) file from AWMIS.

DMDC provides AWMIS data semi-annually and personnel data annually.

¹ The original intent was to include all members; 9709 data is ALL. However, DMDC is no longer denied the office of the USD(AT&L) more recent data on all members.

Position Data

Position data for all DAWIA positions are included. Position data for other non-acquisition positions are limited to data elements associated with the incumbent's personnel data. Data are from the position (DAWIA) file from AWMIS. DMDC provides AWMIS data semi-annually.

Organizational Data

Through the use of a *Constructed* data field called an *Orgcomp*, a hierarchy of organizations has been created. There are differences in the construction of the *Orgcomp*, depending on the service. Some services had more structured and standardized organizational codes than others. Development of this hierarchy allows analysis on the basis of organizational membership. Data are obtained from DMDC upon special request.

Training Course Data

Acquisition courses taken by DAWIA members are tracked and reported to AWMIS. A semi-annual file reports the past 13 acquisition training courses for DAWIA members. DMDC provides these data in conjunction with the personnel and position files.

LIMITS AND UNCERTAINTIES

The Acting Under Secretary of Defense (Acquisition and Technology) issued a data call in July 1998 for the purposes of obtaining data required in support of the Acquisition Career Program Metrics (task contracted to ANSER) and to obtain an update of the data used in the Position Designation Study (contracted to LMI). This broad, comprehensive data call requests data as of 30 September 1997. Much of the data required for ACQDSS was collected within the scope of the data call. Additional data were provided by DMDC from AWMIS.

Some information needs may not be satisfied because of the absence or unreliability of data.

DATA DICTIONARY

Table 5-1 shows the ACQDSS data dictionary. The database fields are shown with their description and format.

Table 5-1. ACQDSS Data Dictionary

Field	Type	Size	Acquisition-specific (DAWIA)	Field description	Translation table
SSN	Text	9		Social Security Number (DMDC scrambled for Privacy Act purposes)	
Name	Text	23		Name	
Source	Text	1		1=Civilian Master File 2=Active Duty Military File	lkpSource
SVC	Text	1		Service 1=Army 2=Navy 3=Marine 4=Air Force 5=DoD Agencies	lkpSVC
Service_Full	Text	4		Service clear text (eliminates translation for speed)	
Bureau	Text	2		Bureau code ("Bureau" is the term for civilians. It is similar to Major Command in the military.)	
ACQ_ORG	Text	3	X	Acquisition Organization AAE=Army Acquisition Executive Support Agency ACE=Army Corps of Engineers AMC=Army Materiel Command AMR=Army Medical Research, Development, Acquisition and Logistics Command ARD=Assistant Secretary of Army (RDA) ASC=Army Space & Strategic Defense Command DAT=Under Secretary of Defense (Acq & Tech) DBM=Ballistic Missile Defense Organization DCA=Defense Contract Audit Agency DIS=Defense Information Systems Agency DLA=Defense Logistics Agency DSO=USSOCOM (Acquisition Center) DTC=TRICARE FAQ=Assistant Secretary of Air Force (Acq) FMC=Air Force Materiel Command FPE=Air Force PEO Organizations MSC=Marine Corps Systems Command NAR=Naval Air Systems Command	lkpACQORG

Table 5-1. ACQDSS Data Dictionary (continued)

Field	Type	Size	Acquisition-specific (DAWIA)	Field description	Translation table
				NFE=Naval Facilities Engineering Command NPE=Navy PEOs and Direct Reporting PMs NRD=Assistant Secretary of Navy (RDA) NRE=Office of Naval Research NSE=Naval Sea Systems Command NSP=Naval Supply Systems Command NSS=Navy Strategic Systems Program Office NSW=Space & Naval Warfare Systems Command	
OrgComp	Text	18		Organizational Component; field to establish organizational hierarchy	
UIC	Text	8		Unit Identification Code	
PECODE	Text	1		Program Element Code (financial programming code) 0=Unknown 1=Strategic Forces 2=General Purpose Forces 3=Command, Control, Communications, Intelligence, and Space 4=Mobility Forces 5=Guard and Reserve Forces 6=Research and Development 7=Central Supply and Maintenance 8=Training, Medical, and Other General Personnel Activities 9=Administration and Associated Activities A=Support of Other Nations B=Special Operations Forces	lkpPecode
POSNUM	Text	12	X	Position Number	
DAWIA	Yes/No	1		DAWIA flag	
JEFF	Text	1		Denotes Jefferson Solutions (refined Packard) category	

Table 5-1. ACQDSS Data Dictionary (continued)

Field	Type	Size	Acquisition-specific (DAWIA)	Field description	Translation table
CF	Text	1	X	Career Field A=Program Management C=Contracting D=Industrial Property Management E=Purchasing and Procurement Assistant G=Manufacturing and Production H=Quality Assurance K=Business, Cost Estimating and Financial Management L=Acquisition Logistics R=Communications - Computer Systems S=Systems Planning, Research, Development, and Engineering T=Test and Evaluation Engineering U=Auditing Y=Other Career Field Z=Unknown	lkpcareerfields
OCC_ID	Text	6		Constructed code to distinguish combination of military or civilian and service and occupational code from each other	
Occupation	Text	5		Occupational code—for civilians, the occupational series, for military, the MOS, AFSC, etc.	
DODOC	Text	4		Department of Defense Occupational Code. This code "crosswalks" the different civilian and military occupational codes to a common set	
PayPlan	Text	2		Pay plan for civilians	
PayPlan_Full	Text	8		Pay plan clear text translation	
PayGrade	Text	2		Pay grade	
Ed	Text	2		Education Level. Military and Civilians have different coding schemes. Translation is done considering both code and if individual is military or civilian	
Ed_Full	Text	12		Education level in clear text and grouped in categories for reports and statistics	
DOB	Date	8		Date of Birth	
YOS	Text	2		Years of Service	
YOS_Full	Text	5		Grouped Years of Service (for report purposes)	

Table 5-1. ACQDSS Data Dictionary (continued)

Field	Type	Size	Acquisition-specific (DAWIA)	Field description	Translation table
Race	Text	1		Race. Military and Civilians have different coding schemes. Translation considers both code and if individual is military or civilian	
Race_Full	Text	13		Race clear text	
Sex	Text	1		Gender 1=Male 2=Female	lkpGender
Sex_Full	Text	7		Gender clear text	
Q_GR	Text	1	X	Acquisition Corps Qualification for Grade 1=Met requirement 2=Waiver	lkpQ_GR
Q_ED	Text	1	X	Acquisition Corps Qualification for Education 1=Baccalaurate degree 2=Certified by ACPB 3=10 yrs experience in 1991 4=Passed exam	lkpQ_ED
Q_HR	Text	1	X	Acquisition Corps Qualification for Semester Hours 1=24+ sem hrs in accounting, business, etc. 2=24+ sem hrs in career field 3=10 yrs experience in 1991 4=Passed exam 5=Received waiver	lkpQ_HR
Q_EXP	Text	1	X	Acquisition Corps Qualification for Experience 1=Met requirement 2=Received waiver	lkpQ_EXP
AP_DT	Text	4	X	Date (month and year) appointed to Acquisition Corps	
CN_CRS	Text	1	X	Contracting Officer Qualification for Training Courses 1=Met requirement 2=Received waiver 3=N/A—Grandfathered	lkpCN_CRS
CN_EXP	Text	1	X	Contracting Officer Qualification for Experience 1=Met requirement 2=Received waiver 3=N/A—Grandfathered	lkpCN_EXP

Table 5-1. ACQDSS Data Dictionary (continued)

Field	Type	Size	Acquisition-specific (DAWIA)	Field description	Translation table
CN_ED	Text	1	X	Contracting Officer Qualification for Education 1=Baccalaureate degree 2=24+ sem hrs in accounting, business, etc. 3=Passed exam 4=10 yrs experience in 1991 5=Received waiver 6=N/A—Grandfathered	lkpCN_ED
Q1102	Text	1	X	Series 1102 Qualification 1=Baccalaureate degree 2=24+ sem hrs in accounting, business, etc. 3=Passed exam 4=10 yrs experience in 1991 5=Received waiver 6=N/A—Grandfathered	lkpQ1102
CN_PW	Text	1	X	Contracting Officer Primary Warrant A=Procuring Contracting Officer B=Administrative Contracting Officer C=Terminating Contracting Officer D=Corporate Administrative Contracting Officer E=Principal Administrative Contracting Officer F=Provisional-Item-order Contracting Officer X=Warrant, other Z=No warrant granted	lkpCN_PW
CN_LMT	Text	1	X	Contracting Officer Contracting Limit 1=Amount not granted 2=<= \$25,000 3=\$25,000-\$500,000 4=\$500,000-\$2,000,000 5=\$2-10 million 6=Over \$10 million	lkpCN_LMT
INT	Yes/No	1	X	Intern Program	
CO_ED	Yes/No	1	X	Cooperative Education Program	lkpCO_ED
TUIT	Yes/No	1	X	Tuition Assistance	
LOAN	Yes/No	1	X	Loan Repayment	
API	Text	1	X	Acquisition Program Indicator 1=ACat I 2=ACat II 3=ACat I/II Spt 4=ACat III/IV 5=Non-major (AF) 9=None of above	lkpAPI
API_Full	Text	13	X	API clear text	
DT_ENT	Date	8	X	Date entered current position	

Table 5-1. ACQDSS Data Dictionary (continued)

Field	Type	Size	Acquisition-specific (DAWIA)	Field description	Translation table
A_EXP	Number	2	X	Acquisition Experience (raw data in months)	
SAA	Text	1	X	Special Acquisition Assignment A=Program Executive Officer B=Program Manager C=Deputy Program Manager D=Senior Contracting Official E=Education, Training, and Career Development Positions F=Contracting Officer G=Program Executive Officer and Contracting Officer H=Program Manager & Contracting Officer J=Deputy Program Manager and Contracting Officer K=Senior Contracting Official and Contracting Officer	lkpSAA
LVL	Text	1	X	Career Certification Level of the Individual	
POS_LVL	Text	1	X	Required Certification Level for the Position	
DT_ACH	Date	8	X	Date Achieved current certification level	
CAR_AUT	Text	10	X	Career Level Authority	

Chapter 6

Technical Requirements and Design Details

This chapter describes system operating characteristics and functional requirements for the proposed ACQDSS.

TECHNICAL REQUIREMENTS

Performance Requirements

Although current performance requirements envision no simultaneous users, future expansions are under consideration. The system should be designed to facilitate possible future expansion. The system will need to support the following:

- ◆ Users (estimated to number less than 20) will have the system resident upon their personal computer. These terminals may be linked to a network, but ACQDSS will be configured for their hard drives only.
- ◆ Each user will have an individual copy of the system. No one will simultaneously use the same database.
- ◆ The databases are quite large. There are more than 1 million records; the amount of hard drive space required is approximately 0.5 gigabytes.
- ◆ The user will make inquiries against the database during several functions, such as selecting the workforce or creating a report. The response time must be reasonable. Long wait periods will be unacceptable. Minor wait periods of less than 5 minutes will be acceptable but must have indicators (such as an hour glass) for the user.

Security

These data contain information that is covered by the Privacy Act. Social security numbers and names are included in the database. Sufficient restrictions are necessary to prevent access from those uninvolved in managing the acquisition workforce.

Relational Database

ACQDSS is not intended to be high-volume, transaction-based system. The technical approach is to use a low-cost, low-maintenance, relational database management system. For this reason, Microsoft Access Version 97 has been selected as the relational database platform. Access will store the component relationships and historical data required for ACQDSS. This approach will enable

users to build and explore relationships in an interactive setting. Maintenance Windows will be developed to provide the system's table update and maintenance capabilities. Run-time versions of the relational database management systems will be distributed along with the supporting data, using a Windows-based installation program.

Rapid Application Development

ACQDSS will operate in a Windows rapid application development software environment to program the necessary business logic and user interface to the system. For this reason, Visual Basic 6.0 has been selected as the Windows application development software. A run-time, compiled version of the software will be generated and incorporated into the Windows installation set. Users will not be required to have any previously installed software to operate ACQDSS.

DESIGN DETAILS

Operating Characteristics

The system is designed to operate on a stand-alone personal computer. ACQDSS is compatible with the Windows 95/98 operating system. The development software is Visual Basic 6, and the supporting database is Access 97. ACQDSS screens have been designed for 640 x 480 pixel resolution.

Assumptions and Dependencies

To provide the most utility for the acquisition manager, data contained within the system must be current. Regular data refreshes from DAWIA MIS, and other personnel and manpower databases are required.

Database Design Notes

There are two primary databases:

- ◆ *acq.mdb*
- ◆ *acqworking.mdb*.

These databases are linked to each other; the program accesses tables from both through *acq.mdb*. Two databases were created to eliminate problems with the large size of the databases. Access has size limitations and a tendency to "grow" under certain conditions. A single database would encounter these conditions and disrupt the program. *Acqworking.mdb* contains reference tables, such as code translation tables. This database is not written to by the program. *Acq.mdb* is the primary database. The program writes to it as the program creates the active workforce in the workforce table and reports in various report format tables, for example.

Chapter 7

Recommendations

OVERVIEW

DAWIA requires that positions in the DoD workforce that perform acquisition functions be designated as acquisition positions and that, to the maximum extent practicable, *the designation be implemented uniformly throughout DoD.*¹ LMI reviewed the uniformity between services for designating positions in 1995 and 1997. This research identified several instances where the Components were designating acquisition positions in an inconsistent manner.

During the course of this research, LMI assembled a unique capability to analyze positions within their organizational context, 'drilling' down to the lowest organizational level captured by each Component data system.

As the DoD 'operationalizes' the expanded definition of the new Acquisition and Technology Workforce, it must continue to fulfill its oversight role to ensure that positions are designated, to the maximum extent practicable, uniformly throughout DoD. ACQDSS provides OSD policy makers a tool for identifying inconsistencies, in position designation, workforce certification, education, and training levels.

INTEGRATING CAPABILITY WITH EXISTING CAREER MANAGEMENT SYSTEMS

The unique capabilities and features of ACQDSS should be considered where appropriate by Component Career Managers for inclusion in existing data systems. Likewise, features of existing Career Management systems that could easily be captured for use by the Acquisition Education, Training and Career Development (AET&CD) staff should be considered for inclusion.

This chapter recommends the following specific enhancements be incorporated into ACQDSS to provide OSD policy makers and career development planners an expanded data systems capability:

- ◆ Data Updating—Automation
 - Consider standardized interfaces with the modern Defense Civilian Personnel Data System (DCPDS) and the modern Military Personnel Data Systems.

¹ DAWIA, 10 United States Code, Chapter 87, Section 1721(a) and (b) and Section 1701(b).

- ▶ Consider integration with other planned approaches to accommodate DCPDS shortcomings in addressing data needs of the Acquisition Workforce community.
- ◆ Position Designation Reports
- ◆ Multi-year trend analysis
- ◆ Incorporate career program metrics
- ◆ Add standardized reporting
- ◆ Program Elements mode to select workforce
- ◆ Redefining Acquisition Organizations
- ◆ Save and retrieve workforce definitions
- ◆ Documentation.

DATA UPDATING—AUTOMATION

Personnel, position, training, and organizational data should be updated to the most current data available. ACQDSS requires many translations from coded values to clear text, for display purposes. The first data load was done in an iterative fashion to account for data translations or cleansing when data issues were determined during the development process. Building upon this knowledge, the next data refresh must be used to develop routines to automate data loading, translation, and checking. This task should include determining the interfaces required to load data directly from the DCPDS and corresponding modernized Defense Military Human Resources systems. This will streamline and automate this function so that it can be accomplished by a user without a database administrator's intervention. It is recommended that end FY 2000 workforce data be used to refresh the model. It is also recommended that AET&CD consider integration with other planned approaches to accommodate DCPDS shortcomings in addressing data needs of the Acquisition Workforce community.

POSITION DESIGNATION REPORTS

DAWIA requires that positions in the DoD workforce that perform acquisition functions be designated as acquisition positions and that, to the maximum extent practicable, the designation be implemented uniformly throughout DoD.² LMI reviewed the uniformity between services for designating positions in 1995 and 1997. The algorithms used to identify inconsistencies can be incorporated into

² DAWIA, 10 United States Code, Chapter 87, Section 1721(a) and (b) and Section 1701(b).

reporting features so that policy analysts can easily find instances of non-uniformity.

MULTI-YEAR TREND ANALYSIS

As data is refreshed, previous data should not totally be removed from the system. Selected summary information from old data sets should be created and maintained. In this way, after several data refreshes, a capability would be available to support multi-year trend analysis. The capability for trend reports and/or graphs should be added to ACQDSS. This would allow managers to determine effectiveness of their initiatives by tracking improvement of pre-determined metrics or to watch for any negative trends that are developing.

INCORPORATE CAREER PROGRAM METRICS

The effectiveness of the acquisition career program can be measured through various metrics that ACQDSS can support. Reports and algorithms should be developed to monitor these metrics using ACQDSS.

ADD STANDARDIZED REPORTING

ACQDSS has the capability to produce user-defined reports. This capability allows for user flexibility, but the reports are limited in complexity and require the user to redefine the report parameters for each report generated. Most users will find that particular reports are repeatedly used or that some reports they would like are beyond the capability of the report creation module. ACQDSS should have a series of standardized reports that would be useful for many users programmed into the design. The user would then only have to select the report desired instead of attempting to create one.

PROGRAM ELEMENTS MODE TO SELECT WORKFORCE

Program element codes (PEC) are used in the planning, programming, and budgeting system (PPBS). They also provide unique capability to align the acquisition workforce more functionally according to some of the acquisition life cycle functions. By defining the workforce according to how the positions are funded through the PPBS, additional insights can be gained. For example, how many acquisition workforce members are assigned to basic or applied research programs?

REDEFINING ACQUISITION ORGANIZATIONS

ACQDSS should allow the user the ability to update the list of acquisition organizations by deleting/modifying the definition of existing organizations, or defining new acquisition organizations as some function of major commands, unit

identification codes (UICs), or program element codes. Currently the user is limited selecting from the default acquisition organizations that were originally based on the Packard Commission approach. The default acquisition organizations currently cannot be modified, nor may additional organizations be added to the CAT I/II method of selecting a workforce.

SAVE AND RETRIEVE WORKFORCE DEFINITIONS

ACQDSS allows the user to define specific workforces of interest to the user. These definitions may be quite involved and tedious to develop. ACQDSS must have an additional capability to save these workforce definitions for the user to accomplish multiple analysis over a period of days or months, without having to recreate the workforce.

DOCUMENTATION

A maintenance manual with detailed developer notes should be developed. This manual should include the procedures for refreshing data, especially until this process is automated. Additionally, should any enhancements be added, the on-line help and user's guide should be updated.

Appendix A

Acquisition Organizations

Table A-1. Acquisition Organizations According to the Revised Packard Workforce as of End FY97 (First Count)

Army	
	Assistant Secretary Army, Research, Development, Acquisition (RDA)
	Army Material Command (AMC)
	Army Acquisition Executive Support Agency (AAE)
	Army Space and Missile Defense Command (SMDC)
	Army Medical Research and Materiel Command (MRMC)
	Army Corps of Engineers (COE)
Navy	
	Assistant Secretary Navy, Research, Development Acquisition (RDA)
	Office of Naval Research (ONR)
	Navy PEOs and Direct Reporting Program Managers (DRPMs)
	Naval Air Systems Command (NAVAIR)
	Naval Supply Systems Command (NAVSUP)
	Naval Sea Systems Command (NAVSEA)
	Naval Facilities Engineering Command (NAVFAC)
	Space and Naval Warfare Systems Command (SPAWAR)
	Strategic Systems Program Office
	Marine Corps Systems Command
Air Force	
	Air Force Materiel Command
	Assistant Secretary, Air Force Acquisition (SAF/AQ)
	Air Force PEO Organizations
Other DoD	
	Under Secretary of Defense, Acquisition & Technology (A&T)
	Defense Logistics Agency (DLA)
	Ballistic Missile Defense Organization (BMDO)
	Defense Contract Audit Agency (DCAA)
	Defense Information Systems Agency (DISA)
	U.S. Special Operations Command (Acquisition Center)
	TRICARE Support Agency

Appendix B

Definitions

There have been many definitions of the DoD acquisition workforce, and various configurations have been developed since the early 1980s. The following terms and acronyms are helpful in understanding the evolution of the acquisition workforce:

- ◆ *Organizations*: Acquisition organizations are listed in DoDI 5000.58. Jefferson Solutions, in response Section 912 of the FY98 National Defense Authorization Act, identified some additional acquisition organizations.
- ◆ *Occupations*: Acquisition occupations are defined in terms of job series (military occupational specialty for military) and can be further aggregated by acquisition functions, position categories, and career fields. A DoD occupation code has been developed to group similar occupations across the Services.
- ◆ *DAWIA*: The designated workforce in accordance with DAWIA. Guidance on which positions to designate is in DoDI 5000.58, *Defense Acquisition Workforce*, January 1992. Services have published guidance beyond that in the DoD guidance. By DAWIA terminology, positions are designated and people are certified. Many of the other approaches tend to determine if individuals are in or out of the workforce on the basis of the characteristics of the individual as opposed to the position they are filling.
- ◆ *Packard*: The Blue Ribbon commission headed by David Packard was directed to develop a consistent definition of the acquisition workforce. The approach that the commission advocated specifies a set of occupations that are always considered “acquisition,” independent of organization, and another set of occupations that are “acquisition” only if they are in an organization that is specified as acquisition. The Packard commission developed a list of organizations that are specified as acquisition. Although the Packard method was never adopted in full by DoD, the concept was used by follow-on efforts—specifically, the Jefferson Solutions and the Acquisition and Technology Workforce.
- ◆ *Program Element Codes*: Program element codes are used primarily for budgeting purposes; they also are useful for aligning workforce with budget information. Some major force programs—such as

research, development, test, and evaluation and Central Supply and Maintenance—align nicely with the systems acquisition life cycle.

- ◆ *Civilians, military, or both*: The DoD acquisition workforce consists of military and civilian members.
- ◆ *Acquisition and Technology Workforce*: A modified Packard definition that specifies a set of occupations that are always acquisition, independent of organization, and another set of occupations that are acquisition only if they are in an organization specified as acquisition. This effort was carried out post-Packard by Jefferson Solutions. Two major changes in the approach occurred:
 - The splitting of Category II (dependent on unit) into Category IIA and IIB, in which IIB isolated the technology (research) part of the workforce from the more contracting (management) side of acquisition.
 - The addition of a Category III to allow by-name additions and deletions to the workforce, based on Component uniqueness. Though the ATWF follows a methodology, it is like DAWIA in that its workforce eventually will be “tagged” in the personnel and/or position files.
- ◆ *ACQDSS (Acquisition Workforce Decision Support System)*: The decision support system that this guide describes.
- ◆ *AWMIS (Acquisition Workforce Management Information System)*: Fulfilling the legal requirement to track aspects of the acquisition workforce qualifications, this database is consolidated at the Defense Manpower Data Center and tracks acquisition workforce-specific information on individuals and acquisition positions.

Appendix C

Abbreviations

ACQDSS	Acquisition Workforce Decision Support System
AET&CD	Acquisition Education, Training and Career Development
A&T	Acquisition and Technology
ATWF	Acquisition and Technology Workforce
AWMIS	Acquisition Workforce Management Information System
DAWIA	Defense Acquisition Workforce Improvement Act
DCPDS	Defense Civilian Personnel Data System
DMDC	Defense Manpower Data Center
DODI	DoD Instruction
PEC	program element codes
PPBS	planning, programming, and budgeting system
UIC	unit identification code
USD (AT&L)	Under Secretary of Defense (Acquisition, Technology and Logistics)

