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ABSTRACT

This paper summarizes the contents, structure and possible uses of the Information System for Vocational Decisions (ISVD) data file on military jobs in the 3 major services. In all, 170 specific career fields for enlisted men and 34 for officers are included in the data file, which also provides for converting the inquirer's personal characteristics and preferences to a list of possibly suitable jobs within the military. In the appendices are included samples of the scripts used with the military datafile and a fairly extensive bibliography of materials which can be used in conjunction with the ISVD computer-assisted instruction program. (TL)

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INFORMATION SYSTEM FOR VOCATIONAL DECISIONS

Project Report No. 23

DESCRIPTION AND USE OF THE DATA FILES ON

MILITARY CAREERS

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Joanna Seltzer

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DESCRIPTION AND USE OF THE DATA FILES ON
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Summary

This paper summarizes the contents, structure, and possible uses of the ISVD data file on military jobs in the three major services. The data file and provisions for its use are designed in a highly structured form, so that revisions of the individual parts can take place more or less independently.

The data file described here lends itself to use in creating descriptions of 170 enlisted jobs, once the name of the desired job is specified. It also provides for converting the inquirer's personal characteristics and preferences to a list of possibly suitable enlisted jobs. Hence, entry through either job title or job characteristics is provided for.

The presentation of the information in coded lists facilitates sorting of the information. A degree of flexibility is thereby provided that renders the usage shown here suggestive only. Ample alternative uses should be possible using the same coded information and changing only the rules for its use.

Introduction

The military data file consists of career information about the Army, Navy, and Air Force, organized in such a way that additions and deletions can be made without altering its structure. What has been done for these

three service branches can be repeated for the Coast Guard and the Marine Corps at a later time.

There are 170 specific career fields described for enlisted men (60 in the Army, 65 in the Navy, 45 in the Air Force) and 34 for officers. Although the Army, Navy, and Air Force each have hundreds of specialized jobs, they are categorized here according to these broader career fields in order to simplify classification. The information presented for each career field covers the various specialized positions within it. Though all of the stated general information will therefore not apply for each specialty, an overview of the career field is thereby given. Also, there is a difference in level of detail between the enlisted and officer occupational descriptions since an officer's responsibilities encompass a considerably broader range of activities than do an enlisted man's.

The first materials consulted were official military manuals, which described classifications and specialties in minute detail. These manuals were then compared with recruiting pamphlets and brochures aimed at high school students. The latter are available at recruiting stations and from high school guidance offices. Military recruiting personnel and the staff of the Reserve Officers Training Corps were consulted when clarification and further explanations were required.

Structure

The military data file is organized in the following manner, to be explained subsequently:

1. Record Names
2. Information Categories, Lists, Information Matrix
3. Templates for Description
4. Military Preference Script

5. Operating Structure

6. Appendices

Record Names

Each of the 170 career fields for enlisted men is identified by its unique title and number. Army career fields are classified by numbers ranging from 100 - 199; Navy, 200 - 299; Air Force, 300 - 399. These record names and numbers are listed in Table 1.

Information Categories, List , Information Matrix

Categories of information were established for the enlisted career fields and identified by lists of coded items. Because of the nature of the reference materials, not all of the information categories were applicable for each service branch. Table 2 lists these information categories. The nonsequential numbering is the result of deletions and additions which were made as the work progressed.

For each information category and for each service, the following mechanical process was utilized for coding the data. Each service career field was first identified by its record number, and then each information category was treated separately. A single list was compiled after reviewing each career field description in recruiting and other documents. Multiple lists were made for the same category in instances where there were few identical items between one service list and another.

Table 1

Enlisted Career Field Record Names

CODE	RECORD NAME
100	SPECIAL ASSIGNMENT MAN
101	SPECIAL REQUIREMENTS MAN
102	BANDSMAN, ARMY
103	SPECIAL SERVICES MAN, ARMY
104	LINGUIST
105	RADIO CODE MAN
111	INFANTRY-ARMOR MAN
112	COMBAT ENGINEER
113	FIELD CANNON AND ROCKET ARTILLERY MAN
115	FIELD ARTILLERY MISSILES MAN
116	AIR DEFENSE MISSILES MAN
117	COMBAT SURVEILLANCE AND TARGET ACQUISITION MAN
121	BALLISTIC MISSILE ELECTRONIC MAINTENANCE MAN
122	GUIDED MISSILE ELECTRONIC MAINTENANCE MAN
123	MISSILE FIRE CONTROL ELECTRONIC MAINTENANCE MAN
125	FIRE DISTRIBUTION SYSTEMS REPAIRMAN
126	RADAR AND MICROWAVE MAINTENANCE MAN
131	FIELD COMMUNICATIONS EQUIPMENT MAINTENANCE MAN
132	FIXED PLANT COMMUNICATIONS EQUIPMENT MAINTENANCE MAN
133	INTERCEPT EQUIPMENT MAINTENANCE MAN
134	DATA PROCESSING EQUIPMENT MAINTENANCE MAN
135	ELECTRICAL/ELECTRONIC DEVICES MAINTENANCE MAN
136	WIRE MAINTENANCE MAN
141	PRECISION DEVICES MAN
142	PROSTHETIC APPLIANCES MAN
143	TEXTILE AND LEATHER REPAIRMAN
144	METALWORKER, ARMY
145	ARMAMENT MAINTENANCE MAN
146	MISSILE MECHANICAL MAINTENANCE MAN
151	CONSTRUCTION AND UTILITIES MAN
152	POWER PRODUCTION AND DISTRIBUTION MAN
153	INDUSTRIAL GAS PRODUCTION MAN
154	CHEMICAL MAN
155	AMMUNITION MAN
156	SUPPLY HANDLING MAN
157	GENERAL DUTY MAN
161	MARINE OPERATIONS MAN
162	ENGINEER HEAVY EQUIPMENT OPERATION AND MAINTENANCE MAN
163	AUTOMOTIVE MAINTENANCE MAN
164	MOTOR TRANSPORT MAN
165	RAILWAY MAINTENANCE MAN
166	RAILWAY OPERATIONS MAN
167	AIRCRAFT MAINTENANCE MAN, ARMY
168	AIRCRAFT COMPONENTS REPAIRMAN
170	CLERK

Enlisted Career Field Record Names

CODE	RECORD NAME
171	ADMINISTRATIVE MAN
172	COMMUNICATIONS CENTER OPERATIONS MAN
173	FINANCE MAN
174	DATA PROCESSING MAN
176	GENERAL SUPPLY MAN
181	DRAFTING CARTOGRAPHY MAN
182	SURVEYOR
183	PRINTER, ARMY
184	PICTORIAL MAN
191	MEDICAL CARE AND TREATMENT MAN
192	LABORATORY PROCEDURES MAN
193	TECHNICAL EQUIPMENT OPERATION MAN
194	FOOD SERVICE MAN, ARMY
195	LAW ENFORCEMENT MAN
196	GENERAL INTELLIGENCE MAN
201	BOATSWAIN'S MATE
202	QUARTERMASTER
203	SIGNALMAN
204	RADARMAN
205	SONAR TECHNICIAN
206	TORPEDOMAN'S MATE
207	MINEMAN
208	GUNNER'S MATE
209	MISSILE TECHNICIAN
210	FIRE CONTROL TECHNICIAN
211	ELECTRONICS TECHNICIAN
212	DATA SYSTEMS TECHNICIAN
213	INSTRUMENTMAN
214	OPTICALMAN
215	RADIOMAN
216	COMMUNICATIONS TECHNICIAN
217	YEOMAN
218	POSTAL CLERK
219	PERSONNELMAN, NAVY
220	JOURNALIST
221	MACHINE ACCOUNTANT
222	STOREKEEPER
223	COMMISSARYMAN
224	SHIP'S SERVICEMAN
225	DISBURSING CLERK
226	MACHINIST'S MATE
227	ENGINEMAN
228	MACHINERY REPAIRMAN
229	BOILERMAN
230	BOILERMAKER
231	ELECTRICIAN'S MATE
232	INTERIOR COMMUNICATIONS ELECTRICIAN
233	SHIPFITTER

Enlisted Career Field Record Names

CODE	RECORD NAME
234	PATTERNMAKER
235	MOLDER
236	DAMAGE CONTROLMAN
237	ENGINEERING AIDE
238	BUILDER
239	STEELWORKER
240	CONSTRUCTION ELECTRICIAN
241	UTILITIESMAN
242	CONSTRUCTION MECHANIC
243	EQUIPMENT OPERATOR
244	AVIATION MACHINIST'S MATE
245	AVIATION STRUCTURAL MECHANIC
246	AVIATION ELECTRICIAN'S MATE
247	TRADESMAN
248	AVIATION ELECTRONICS TECHNICIAN
249	AVIATION ORDNANCEMAN
250	AVIATION FIRE CONTROL TECHNICIAN
251	AIR CONTROLMAN
252	AVIATION BOATSWAIN'S MATE
253	PHOTOGRAPHIC INTELLIGENCEMAN
254	PARACHUTE RIGGER
255	AEROGRAPHER'S MATE
256	PHOTOGRAPHER'S MATE
257	AVIATION STOREKEEPER
258	AVIATION ANTISUBMARINE WARFARE TECHNICIAN
259	AVIATION MAINTENANCE ADMINISTRATION MAN
260	LITHOGRAPHER
261	ILLUSTRATOR-DRAFTSMAN
262	MUSICIAN
263	HOSPITAL CORPSMAN
264	DENTAL TECHNICIAN
265	STEWARD
320	INTELLIGENCE MAN
322	PHOTOMAPPER
323	PHOTOGRAPHER
324	SAFETY MAN
325	WEATHERMAN
327	AEROSPACE CONTROL SYSTEMS OPERATIONS AIRMAN
329	COMMUNICATIONS OPERATIONS AIRMAN
330	COMMUNICATIONS-ELECTRONICS SYSTEMS MAN
331	MISSILE ELECTRONIC MAINTENANCE MAN
332	ARMAMENT SYSTEMS MAINTENANCE AND OPERATOR AIRMAN
334	TRAINING DEVICES MAN
336	WIRE COMMUNICATIONS SYSTEMS MAINTENANCE MAN
340	INTRICATE EQUIPMENT MAINTENANCE MAN
342	AIRCRAFT ACCESSORY MAINTENANCE MAN
343	AIRCRAFT MAINTENANCE MAN, AIR FORCE

Enlisted Career Field Record Names

CODE	RECORD NAME
344	MISSILE MAINTENANCE MAN
346	MUNITIONS AND WEAPONS MAINTENANCE MAN
347	MOTOR VEHICLE MAINTENANCE MAN
353	METALWORKER, AIR FORCE
354	CIVIL ENGINEER -- MECHANICAL/ELECTRICAL AIRMAN
355	CIVIL ENGINEER - STRUCTURAL/PAVEMENTS AIRMAN
356	CIVIL ENGINEER - SANITATION AIRMAN
357	FIREMAN
358	FABRIC, LEATHER, AND RUBBER SPECIALIST
359	AIRMAN MARINE
360	TRANSPORTATION MAN
361	SUPPLY AND SERVICES MAN
362	FOOD SERVICE MAN, AIR FORCE
363	FUEL SERVICES MAN
364	SUPPLY MAN
365	PROCUREMENT AIRMAN
367	ACCOUNTING, FINANCE, AND AUDITING MAN
368	DATA SYSTEMS MAN
370	ADMINISTRATIVE AIRMAN
371	PRINTER, AIR FORCE
372	INFORMATION MAN
373	PERSONNEL MAN, AIR FORCE
374	SPECIAL SERVICES MAN, AIR FORCE
375	EDUCATION AND TRAINING MAN
376	BANDSMAN, AIR FORCE
377	AIR POLICEMAN
382	SPECIAL INVESTIGATIONS MAN
390	MEDICAL MAN
392	AIRCREW PROTECTION MAN
398	DENTAL MAN

Table 2

Categories of Military Information

- 1 Navy General Descriptions
- 2 Availability for Women
- 3 Chart Number for Navy List
- 5 Places of Work
- 6 High School Courses
- 7 Prior Experience
- 11 Abilities, Aptitudes, Traits - Navy, Air Force
- 12 Areas of Study - Navy
- 13 Navy Specialties
- 14 Service Schools - Navy
- 15 Related Civilian Jobs - Navy
- 16 Related Navy Jobs
- 17 Knowledge and Skills Gained - Air Force
- 18 Specialized Air Force Jobs
- 19 Related Civilian Jobs - Air Force
- 20 Air Force General Descriptions
- 21 Army General Descriptions
- 22 Related Civilian Jobs - Army
- 23 Mental Requirements - Army
- 24 Physical Requirements - Army
- 25 Knowledge and Skills Gained - Army
- 26 Specialized Army Jobs
- 27 Personnel Requirements - Army

Lists

The general description category (Lists 1, 20, 21) delineates the main functions or duties of military personnel in that field. Since technical terminology and exactness in detail characterize official military manual descriptions, recruiting booklets proved to be a valuable source of information. Following are two examples of Air Force General Descriptions.

An Intelligence Man collects, evaluates, and distributes information of a strategic, tactical, or technical nature. He translates and interprets written and visual materials. Knowledge of a foreign language is desirable.

A Photomapper acquires, compiles, and analyzes photographic data for the preparation of charts and maps. His work involves surveying, drafting, and illustrating.

List 5 (Places of Work) pertains primarily to the Navy as its occupational handbook specifies exact locations. Since the Army and Air Force sources did not specifically define work locations, career fields were categorized simply according to whether their functions occurred on land, in the air, or at sea. A few examples from List 5 are shown below.

List 5 Places of Work

- 01 on advanced bases
- 02 on aircraft carriers
- 03 in air crews
- 04 in all parts of the ship
- 05 on airfields
- .
- .
- .

The "prior experience" category (List 7) also relates mainly to the Navy. Here are some examples from the coded list.

List 7 Prior Experience

- 01 radio repair
- 02 ham radio
- 03 automobile repair
- 04 small parts assembly
- 05 electricity
- .
- .
- .

The "high school course" list pertains primarily to the Navy and Air Force. Listed below are some of the items.

List 6 High School Courses

- 01 algebra
- 02 arithmetic
- 03 accounting
- 04 auto shop
- 05 automobile engines
- .
- .
- .

For List 11 (abilities, aptitudes, traits) the Air Force information was merged with that of the Navy. However, as Army training manuals classify in chart form those specialties which require particular mental or physical traits, two additional lists were drawn up for the Army. Some sample items are listed below.

List 11 Abilities, Aptitudes, Traits - Navy, Air Force

- 01 a clear speaking voice
- 02 a long attention span
- 03 a high degree of clerical aptitude

- 04 a high degree of electrical aptitude
- 05 a high degree of accuracy, precision, and calmness under stress
- .
- .
- .

List 23 Mental Requirements - Army

- 01 verbal reasoning ability
- 02 arithmetic reasoning ability
- 03 pattern analysis ability
- 04 a good memory
- 05 emotional stability
- .
- .
- .

List 24 Physical Requirements - Army

- 01 color discrimination
- 02 good vision
- 03 good near and far vision
- 04 good near vision
- 05 good hearing
- .
- .
- .

The Air Force and Army lists (17, 25) pertaining to knowledges and skills gained from a particular career field due to schooling and on-the-job training proved to be most time consuming to catalog. As this information is not presented consistently in recruiting materials, official military manuals were used as the primary reference source. It was necessary to examine all specialized job descriptions that constitute a career field and to select common knowledge and skill areas. The Navy information (List 12)

was clearly outlined in the handbook. Here are a few items from each of the lists. If the items are numbered nonsequentially, it is because additions and deletions were made as the work progressed.

List 17 Knowledge and Skills Gained - Air Force

- 003 counseling techniques
- 005 mailroom operation
- 006 intelligence reporting procedures
- 007 radio communications procedures
- .
- .
- .

List 25 Knowledge and Skills Gained - Army

- 001 infantry tactics
- 002 the capabilities of infantry weapons
- 003 map and photograph reading
- 004 scouting and patrolling techniques
- 005 tank driving and gunnery operation
- .
- .
- .

List 12 Areas of Study - Navy

- 01 operation of powerboats
- 02 deck seamanship
- 03 gunnery
- 04 general ship maintenance and repair
- 05 piloting
- .
- .
- .

Relationships among service job fields were obtained from the
Occupational Conversion Table - Enlisted booklet published by the Department

of Defense. Information regarding civilian positions (Lists 15, 19, 22) and service specialties (Lists 13, 18, 26) was easily secured. A few examples from each list are given below.

List 15 Related Civilian Jobs - Navy

- 001 motorboat operator
- 002 tugboat captain
- 003 pier superintendent
- 004 boatswain
- 005 able seaman
- .
- .
- .

List 19 Related Civilian Jobs - Air Force

- 001 seaman
- 002 accountant
- 003 aeronautical engineer
- 005 aircraft log clerk
- 006 airplane mechanic
- .
- .
- .

List 22 Related Civilian Jobs - Army

- 002 amphibious vehicle operator
- 003 construction worker
- 004 blaster
- 005 construction equipment operator
- .
- .
- .

List 13 Navy Specialties

- 01 minesweeper
- 02 net rigger
- 03 stevedore
- 04 tugmaster
- 05 laboratory technician
- .
- .
- .

List 18 Specialized Air Force Jobs

- 001 radio intercept analyst
- 002 language specialist
- 003 intelligence operations specialist
- 004 photo interpretation specialist
- 005 photo cartographic analyst
- .
- .
- .

List 26 Specialized Army Positions

- 001 infantry indirect fire crewman
- 002 armor intelligence specialist
- 003 armor crewman
- 004 light weapons infantryman
- 005 infantry-direct fire crewman
- .
- .
- .

Unfortunately, the lists of related civilian jobs do not tie in well, as they stand, with the data files of the ISVD for civilian occupations. Such linkages have been planned in part, but have not been added to in the data files so far.

List 3 (Chart Number for Navy List) refers to specific pages in the Navy Occupational Handbook for additional career field information. Although the information for List 16 (Related Navy Jobs) does not appear in any context, it was included for possible future use. Sample items from these lists are shown below.

List 3 Chart Number for Navy List

01 1-1
02 1-2
03 1-3
04 1-4
.
.
.

List 16 Related Navy Jobs

1 Deck Group 01 - 05
2 Ordnance Group 06 - 10
3 Electronics and Precision Instrument Groups 11 - 14
4 Administrative and Clerical Group 15 - 25
5 Engineering and Hull Group 26 - 36
.
.
.

Lists 2 and 14 consist of substitution options. For example, on List 2, option 0 indicates that the career field is open to women and causes the statement, "This position may be held by a woman," to be inserted into the job description. If option 1 appears, the statement is omitted. The options on List 14 concern whether an enlisted Navy man attends service schools, studies training manuals, or acquires his knowledge from on-the-job experience.

List 2 Availability for Women

- 1 Occupation Not Open to Women - omit statement
- 0 Occupation Is Open to Women - put in statement

List 14 Service Schools - Navy

- 1 on-the-job training and individual study of manuals
- 0 on-the-job training and individual study of manuals, and attendance at a service school

List 27 pertains to manpower requirements in the Army. The list consists of the following four coded items.

List 27 Personnel Requirements - Army

- 1 a shortage of personnel in this career field
- 2 a slight shortage of personnel in this career field
- 3 a sufficient number of men in this career field to meet personnel requirements
- 4 an oversupply of personnel in this career field

Information Matrix

For each service, information, coded as described in the previous pages, was recorded in matrix form, with the list of career fields running vertically and the categories running horizontally, as illustrated below for the Navy.

Record Name			(High School)	(Prior)
Navy	2(Women)	5(Places of Work)	5(Courses)	7(Experience)
101	1	6473ç	01254246ç	ç
102	1	121570ç	41264625ç	ç
103	1	12ç	1926ç	ç
104	1	06636418ç	19335146ç	0102ç
105	1	65242527ç	01192546ç	02ç

The symbol ¢ indicates null or end of field. The numbers across the top identify which information list is being used. The coded numbers (two or three digit) contain the relevant information for each career field.

Templates for Description

For each service, there is a template which provides the structural framework for decoding and presenting the information. Once the specific career field has been determined, then the appropriate information is selected from the lists, as indicated by the numbers on the matrix, and substituted in the template. A schematic diagram of this process is given in Figure 1. The Navy, Army, and Air Force templates are shown below.

NAVY TEMPLATE

In the Navy, \$(Navy general descriptions). He serves \$(places of work).

A \$(record name) must have \$(abilities, aptitudes, traits - Navy, Air Force). School courses in \$(high school courses) are helpful. Experience involving \$(prior experience) is valuable.

He becomes a \$(record name) through \$(service schools - Navy), covering such topics as \$(areas of study - Navy).

\$(Navy specialties) are specialties within the Navy of a \$(record name).

Related areas of service in the Army are \$(record name); in the Air Force, \$(record name); and in civilian life, \$(related civilian jobs - Navy).

\$(availability for women).

Chart number \$(chart number for Navy list) in the U.S. Navy Enlisted Occupations Handbook has further information on this and other Navy occupations.

ARMY TEMPLATE

In the Army, #(Army general descriptions) .

A #(record name) must have #(mental requirements - Army) . He also must have #(physical requirements - Army) .

School courses in #(high school courses) are helpful. Experience involving #(prior experience) is valuable.

*Some specialized jobs for the #(record name) are the following:
 #(specialized Army jobs) .

At the present time, there is #(personnel requirements - Army) . However, this may not apply for a particular specialty.

From on-the-job training experience or attendance at a technical school, an Army man in one or more specialties may gain knowledge of #(knowledge and skills gained - Army) .

Related areas of service in the Navy are #(record name) ; in the Air Force, #(record name) ; and in civilian life, #(related civilian jobs - Army) .

#(availability for women) .

* If single item, substitute this statement

A #(record name) may hold the specialized job of a #(specialized Army jobs) .

AIR FORCE TEMPLATE

In the Air Force, #(Air Force general descriptions) . He serves #(places of work) .

A #(record name) must have #(abilities, aptitudes, traits - Navy, Air Force) . School courses in #(high school courses) are helpful.

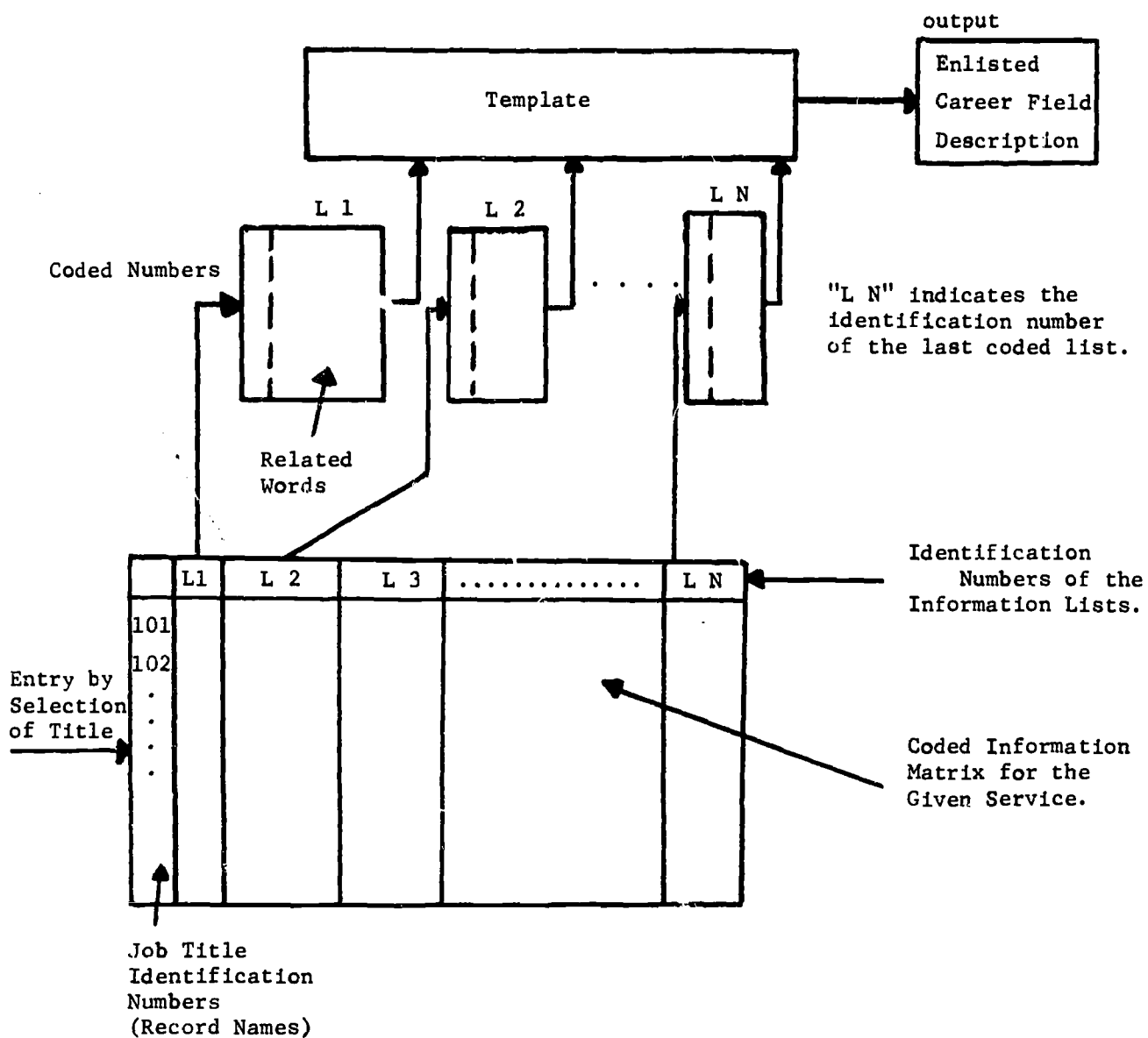
*Some specialized jobs for the #(record name) are the following:
 #(specialized Air Force jobs) .

From on-the-job training experience or attendance at a technical school, an airman in one or more specialties may gain knowledge of \$(knowledge and skills gained - Air Force).

Related areas of service in the Army are \$(record name); in the Navy, \$(record name); and in civilian life, \$(related civilian jobs - Air Force).
\$(availability for women).

* If single item, substitute this statement.

A \$(record name) may hold the specialized job of a \$(specialized Air Force jobs).



Flow arrows indicate sequence of activities.
See text for details.

FIGURE 1

Schematic Diagram for Creation of a Descriptive Statement from Coded Information

Using the Navy template, here is a sample job description for a Boatswain's Mate. The underlined information is variable for each job title.

"A Boatswain's Mate supervises the handling and storage of cargo. He trains and supervises deck crews in ship maintenance. He navigates and serves as gun crew captain. He serves at shore stations and on the deck and bridge of all types of ships.

A Boatswain's Mate must have leadership, average or above average learning ability, good hearing and vision, manual dexterity, and physical strength. School courses in algebra, geometry, practical mathematics, and physics are helpful.

He becomes a Boatswain's Mate through on-the-job training and individual study of manuals, covering such topics as operation of power boats, deck seamanship, gunnery, navigation, and meteorology.

Minesweeper, Net Rigger, Stevedore, and Tugmaster are specialties within the Navy of a Boatswain's Mate.

Related areas of service in the Army are Marine Operations Man; in the Air Force, Marine; and in civilian life, motorboat operator, tugboat captain, pier superintendent, boatswain, able seaman, canvas worker, rigger, and winchman.

Chart number 1-1 in the U.S. Navy Enlisted Occupations Handbook has further information on this and other Navy occupations."

Military Preference Script

The Military Preference Script, composed of a set of eight questions, enables a list of specific enlisted career fields to be sorted for the inquirer on the basis of his preferences and characteristics. The nature

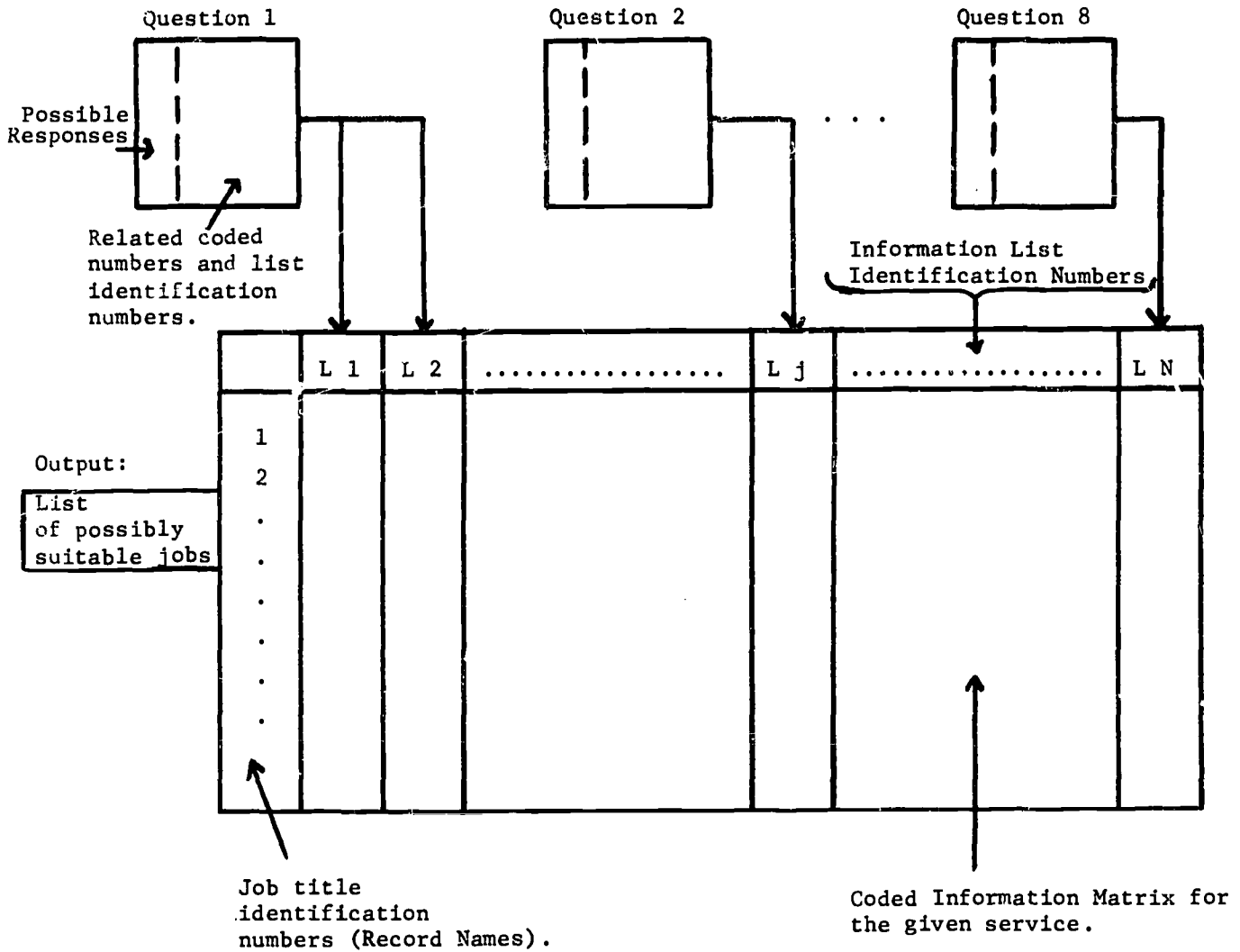
of the questions was determined by the coded information in the lists. A schematic diagram of the question and answer process used in the preference script is given in Figure 2. The first question concerns work location preference.

"Armed Forces jobs are performed in many locations. Indicate where you would prefer to work by selecting one or more of the choices from the following list.

1. on land
2. at sea
3. in the air
4. indoors
5. outdoors"

For the first three options of the above question, List 5 was applicable. For the indoors and outdoors categories, the Army, Navy, and Air Force job titles (record names) were classified accordingly. An item can be listed under more than one category, such as "on land" and "at sea", if appropriate.

SCRIPT PRESENTS QUESTIONS TO INQUIRER:



Arrows indicate sequence of activities.
For details, see the text.

FIGURE 2
Schematic Diagram for Converting Inquirer's Traits and Preferences
to Possibly Suitable Jobs as an Enlisted Man

Questions 2 through 8 classify career fields according to the following criteria:

	<u>Lists Used</u>
2. High school background (course work)	6
3. Work experience	7, 15, 19, 22
4. Physical attributes	11, 23, 24
5. Aptitudes	11, 23, 24
6. Personal traits	11, 23
7. Subjects of interest for further study	11, 12, 17, 25
8. Planned educational attainment	11, 23

Question 2 reads,

"Your high school background can be helpful in choosing a job area, since certain subjects are more valuable in some careers than in others. Below is a list of types of high school courses. Select those course fields in which you have had experience which you would wish to use.

1. art and photography
2. music
3. journalism
4. English and speech
5. social sciences (civics, geography)
6. mathematics (geometry, algebra, trigonometry, etc.)
7. shop courses (metal, wood, electrical, auto, drafting, printing, radio)
8. physical and biological sciences
9. psychology
10. home economics (health, foods, sewing, etc.)

11. business education (clerical subjects, practical English and math, sales, office machines, etc.)
12. vocational work (barbering, plumbing, shoe repair, tailoring)"

The work experience question utilizes the Roe classification of job categories. Six hundred sixty items from lists 7, 15, 19, and 22 are subsumed under eight headings, with multiple listings made for appropriate items. Question 3 reads as follows:

"Your work experiences during school vacations, after school hours, and on weekends are also valuable in determining suitable jobs for you. Here is a list of job categories.

1. service
2. business contact
3. organization
4. technology
5. outdoor
6. science
7. general culture
8. arts and entertainment

If you need a definition for any of these listings, type in the appropriate number. You may see as many definitions as you like. If you wish to go on, type the word no."

Here is an example of a job category description.

Service

"These jobs deal with people and their needs, tastes, or welfare. Barbers, waiters, and social workers are service people."

Physical Attributes - Question 4:

"A person's physical attributes are important since certain jobs require particular physical standards. To determine which positions may be more appropriate for you, indicate those physical attributes in which you feel particularly able and would wish to make use of in a job.

1. a clear speaking voice
2. good vision
3. good hearing
4. endurance
5. manual dexterity
6. no allergies
7. good memory
8. emotional stability
9. long attention span
10. coordination
11. physical strength."

Aptitudes - Question 5:

"Everyone has certain talents which enable him to do some things better than others. Here is a list of some of these talents or aptitudes. List those aptitudes in which you feel that you are better than most people your age. If you feel that you are about average, indicate nothing for that aptitude.

1. clerical
2. electrical
3. precision work
4. learning

5. mechanical
6. musical
7. mathematical
8. reading and writing
9. perceptual
10. instructional
11. artistic."

Personal Traits - Question 6:

"Each of us possesses different temperament and character traits. Certain of these traits are more suitable for one job than for another. To aid in selection of a suitable job, note which of the listed traits are ones in which you feel yourself strong (better than most people your age) and wish to use in a job. If you think that you are about average, indicate nothing for that trait.

1. good character
2. leadership
3. mental alertness
4. able to work with people easily
5. able to work well under stress
6. resourcefulness and initiative
7. good judgment."

For questions 4 through 6, the items regarding physical attributes, aptitudes, and personal traits were intermixed on lists 11, 23, and 24.

Question 7, pertaining to subjects of interest for further study, involved classifying 558 items from list 12 (Areas of Study - Navy), list 17 (Knowledge - Air Force), and list 25 (Knowledge - Army). These 558 items

were placed into 62 categories and then subsumed under 11 general subject headings. The classification proved to be a difficult task, as there was a strong tendency on the part of the writer to assign an item to a category on the basis of familiarity with the career field information rather than on its face value. Because many items were difficult to classify, it was continually necessary to revise the category headings for greater inclusiveness. Question 7 reads as follows:

"In your chosen Armed Forces job, you will require knowledge and skills in many areas. This experience and training will not only assist in your promotion to higher ranks within the service, but it will also qualify you for civilian positions. Indicate which areas you think would be of interest or value to you.

1. General Culture
2. Science
3. Technology
4. Medicine and Health
5. Administration and Protection
6. Sales and Clerical
7. Construction
8. Mechanics and Repair
9. Transportation and Utilities
10. Military Science
11. Miscellaneous"

Each general subject heading above is comprised of a number of sub-areas, as illustrated by the following three examples.

1. General Culture

art and photography

music

journalism

sports

recreation

entertainment

teaching

English

foreign language

2. Science

computers

biological sciences

mathematics

physical sciences

weather

.

.

.

11. Miscellaneous

dog training

cemetery work

food and meats

cargo handling

logging operations

Question 8 concerns the inquirer's planned educational attainment.

"Although there are no specific educational requirements for entrance in the Armed Services, there are a few positions which require a high school or a college diploma. Type the appropriate number to indicate your educational plans.

1. Will not complete high school
2. Will complete high school
3. Plan to obtain a college degree"

All of the information lists were related to at least one of the eight questions with the exception of lists 2, 3, 13, 14, 16, 18, 26, and 27, which contain information too specific to be applicable. The writer's personal judgment determined the classification of items into the category options of each question. Numerous other similar lists could be devised utilizing other criteria, thus allowing for the full range of use for the information and thereby providing the data file with flexibility. The individual parts of the file and procedures for its use can be revised more or less independently.

Operating Structure

The military data base information is presented in eight scripts, the titles of which are:

1. Master Military Script
2. Introduction to Military Script
3. Enlisted Category Script
4. Officers Script
5. Navy Cover Statement
6. Army Cover Statement

7. Air Force Cover Statement

8. Military Preference Script

The language employed throughout the scripts is of the same level as the information presented in recruiting and guidance pamphlets. Although the scripts were written with the objective of being readable and understandable to high school students, the scriptwriters were primarily concerned with developing a military data base and as such were sometimes not sufficiently involved with the form of its presentation.

The Master Military Script provides the structural framework for access to the military data files. The inquirer is first linked to the Introduction to Military Script, which consists of information that is identical for the Army, Navy, and Air Force. This information about pay scales, attainment of officer status, allowances, benefits, and enlistment requirements is not presented elsewhere. Separate information sections are also included for women.

Upon completing the Introduction to Military Script, the inquirer returns to the Master Script and is linked, depending upon his selection, to either the Officers or Enlisted Script. If the individual is interested in both categories, his is first exposed to the officers' information and then sent to the enlisted material.

In the Officers Script, the inquirer is first given a brief introduction, and then a chance to select a specific area of information. The script describes nine types of job areas for the Navy, ten for the Army, and fifteen for the Air Force. In addition, there is information about training programs to qualify for commissioning, promotion paths, pay scales, living conditions and benefits, and opportunities for women officers.

The Enlisted Script directs the inquirer to the Army, Navy, or Air Force Cover Statement which discusses pertinent information about enlistment procedures and regulations, basic training, promotion, specialized training, advancement to commissioned officer status, reserve programs, and special units. Due to variations which exist within the Armed Forces, not all of these topics were applicable to each service.

Following the presentation of the cover statement, the inquirer returns to the Enlisted Script and is allowed the option of reviewing other service statements. Upon completion of this phase, he is directed to the Military Preference Script.

A schematic diagram of the structural framework of the script system is given in Figure 3.

The scripts are written in MINORCA, an intermediate scriptwriting language. In this form, the text is segmented into sections and steps. Designations for student responses are indicated by the word "keyboard". The reader will hopefully be able to interpret most of it with a little effort. Where the inquirer has the option of selecting certain categories of information, the routing is programmed within the "ACTION" step. Examples of several scripts, in somewhat abbreviated form (for clarity in reading them), are shown in Appendices A and B.

Appendix C lists the bibliographic references. Complete copies of the full details of the military data file are kept in the archives of the Information System for Vocational Decisions.

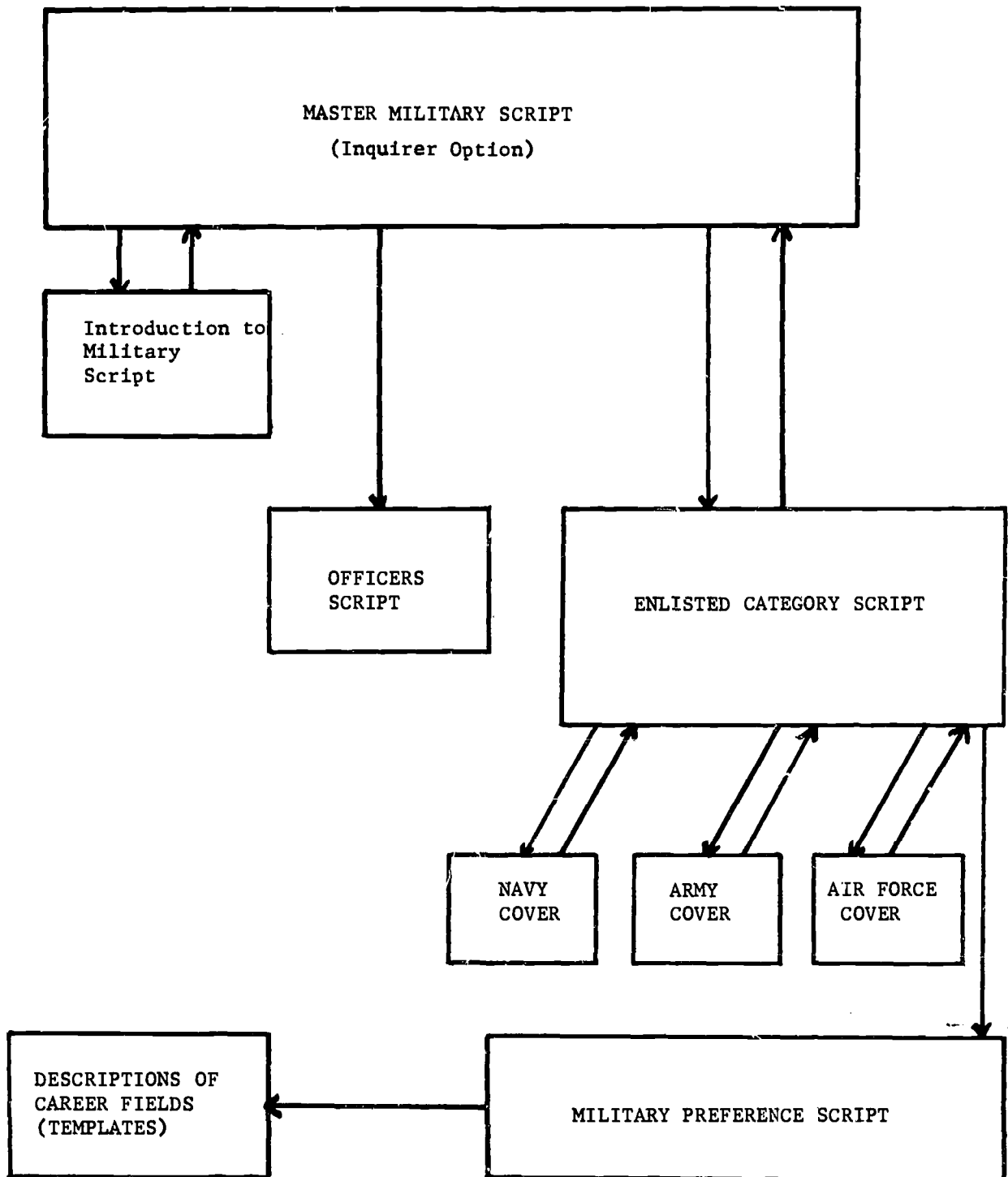


FIGURE 3

Schematic Diagram Showing the Structural Framework for Access to Military Data Files

Keeping the Information Current

As technology and the demands placed on the military will subject some career fields in the Armed Forces to change regularly, the data base information will need to be updated and revised, this being particularly more likely for the enlisted category since job descriptions are more specific. The more technical the career field, the more vulnerable it is to obsolescence or change. Recruiting manuals were utilized for reference. Since these are published annually, it would be wise to check these lists yearly against the information now given. There may be possibilities for adding new lists of categories. Pay scales should be checked, and particular attention should be given to careers in the weapons and missile defense fields as there is a high probability of change occurring. The lists of colleges offering ROTC programs should be checked each year also. The job descriptions for officers are sufficiently general so that changes over time will not render incorrect the basic information so rapidly. Revisions of officer information can therefore be less frequent.

APPENDIX A

Master Military Script

Introduction to Military Script

Enlisted Category Script

Navy Cover Statement

MASTER MILITARY SCRIPT

*1.00 Link to Introduction Script

1.00 \$(link, Introduction to Military, *2.00)

[Note: The inquirer links to the Introduction to Military Script.

Upon its completion, he returns to section *2.00 below.]

*2.00 Officer or Enlisted Category

1.50 If you wish further Armed Forces information, indicate your
choice by typing in the appropriate number.

1. enlisted category
2. commissioned officers
3. both
4. none

2.00 (KEYBOARD)

3.00 (ACTION)

1/We shall now proceed to find out more about the enlisted
category./\$(link, Enlisted Category)/

2/We shall now proceed to find out more about commissioned
officers./\$(link, Officers)/

3/Since you are interested in learning about both categories,
we shall begin first with commissioned officers./\$(link, Officers,
*50.00)/

4/Perhaps you will want to refer to this later./ /

*50.00 Link to Enlisted Script

1.00 \$(link, Enlisted Category, *100.00)

[Note: The inquirer is sent either to the Enlisted Category or the
Officers Script. If he requests option 3, he is first routed
to the Officers Script and then linked to the Enlisted Cate-
gory Script.]

INTRODUCTION TO MILITARY SCRIPT

This script has been written with separate introductory and allowances-pay sections for men and women. The introduction for men begins at *1.00 and then links to *2.00; women start at *1.01 and then branch to step 2.40 of *2.00. Following the pay scale question, the inquirer is routed to the appropriate allowances-pay section and then to information about benefits.

The script reads as follows:

*1.00 Introduction to Military - Men

1.00 Military service is a factor that you must consider when planning a job career or a college education. You may even wish to make one of the Armed Forces your career.

Because you are subject to the draft from age 18 1/2 to 26, and in some cases until age 35, it is wise for you now to look ahead and to make decisions about your military obligation so that your career or educational plans will not be disrupted.

1.50 Within the Army, Navy, and Air Force, there are many paths you may take to fulfill your military duty while still pursuing your personal goals. If you are undecided about your future goals and plan to enter the service now, your military service will provide you with skills and educational opportunities that will aid you in finding civilian employment.

2.00 \$(br, *2.00)

*1.01 Women in the Armed Forces

1.00 A career in the Armed Forces is one that many girls choose each year. Armed Forces information is available here for the Army, Navy, and Air Force. At this time, there is no information for the Coast Guard or the Marine Corps. If you are interested in either of these two services, visit a recruiting station or see your counselor for bulletins and pamphlets.

2.00 There are certain requirements that are the same for all three services.

1. If you are not a citizen at the time you enlist, you must declare intent to become a citizen.

2. You must be single.

3. If you are under twenty-one, you need parental consent.

Officer status is available through officer training school programs. A college degree is recommended for those who wish to become officers.

3.00 There are 9 ranks for enlisted personnel (E-1 to E-9) and 6 for officers (O-1 to O-6), with E-9 and O-6 signifying the highest positions.

Pay, retirement, and other benefits available to the male members of the Armed Forces are exactly the same for women. The pay scales for enlisted men and officers are the same for all services.

3.50 \$(br, *2.00, 2.40)

*2.00 General Cover - Men

0.50 Armed Forces information is available for the Army, Navy, and Air Force, the three main service branches. At this time, there is no information for the Coast Guard or the Marine Corps. If you are interested in either of these two services, visit a recruiting station or see your counselor for bulletins and pamphlets.

1.00 Naval and Air Force service is through enlistment only. Army service is through both induction and enlistment. If you are interested in the Navy, Air Force, or a particular Army Specialist Program, you must make a commitment prior to receiving your Army induction notice. A commitment may mean one of the following: direct enlistment in an Air Force or Army Reserve Program, membership in a university ROTC program, or service academy attendance.

1.50 Enlistment in the regular Army, Navy, or Air Force varies from three to six years depending upon service and specific program. There are certain requirements that are the same for all three services:

1. If you are not a citizen at the time you enlist, you must declare intent to become a citizen.
2. Seventeen year old enlistees need parental consent.
3. Although the services prefer high school graduates, only seventeen year old Air Force enlistees need to have diplomas.

1.70 The Air Force and Army Reserve Programs enable an individual to serve the shortest period of active duty (6 months), and with the least interruption of his career.

Commissioned officer status is conferred upon service academy graduates and college Reserve Officer Training Program graduates. Officer training schools and specific training programs are other avenues to officer status.

2.00 There are 9 ranks for enlisted men (E-1 to E-9) and 10 for officers (O-1 to O-10), with E-9 and O-10 signifying the highest positions.

2.40 The pay scales for enlisted men and officers are the same for all services. If you wish to see these charts, indicate the appropriate letter.

A enlisted men B officers C both D none

2.80 (KEYBOARD)

[Note: The pay and allowances information is based on 1967 figures.

The enlisted pay scale is shown here as an example. The officers' pay scale information is presented in the Officers Script.]

*2.10 Enlisted Pay Scale

1.00 Here is the pay scale for enlisted men. Enlistees qualify for pay grades E-1 through E-9.

Minimum Time in Grade for Advancement	Grade	Minimum Monthly Pay	Maximum Monthly Pay
E-1 to E-2: 4 months	E-1	\$ 90.60	\$129.00 a mo. after 2 yrs.*
E-2 to E-3: 6 months	E-2	100.50	141.00 a mo. after 2 yrs.*
E-3 to E-4: 6 months	E-3	121.80	193.80 a mo. after 4 yrs.*
E-4 to E-5: 1 year	E-4	168.60	252.60 a mo. after 6 yrs.*
E-5 to E-6: 2 years	E-5	200.40	328.80 a mo. after 14 yrs.*
E-6 to E-7: 3 years	E-6	232.20	387.60 a mo. after 18 yrs.*
E-7 to E-8: 3 years	E-7	269.40	528.60 a mo. after 30 yrs.*
E-8 to E-9: 2 years	E-8	428.40	587.10 a mo. after 26 yrs.*
	E-9	510.60	657.30 a mo. after 26 yrs.*

*total service

*2.40 Allowances for Men

1.00 An Armed Forces salary is composed of basic pay and several types of allowances: housing, hazardous duty, incentive pay, sea or foreign service, hostile combat duty, and family separation. Allowances increase with rank.

2.00 Between \$13 and \$22.50 is allotted to an enlisted man (E-4 to E-7) every month for sea or foreign duty. Combat service grants an additional \$55. Incentive pay allows the enlisted man \$55 a month and an officer, \$110. Hazardous assignment payments for submarine duty or aircrew service range between \$70 and \$105 for enlisted men ranked E-4 to E-7. Thirty dollars a month is allotted when an Armed Forces member with four years of service is separated from his family by a permanent change of station or by a temporary duty assignment. Married men with dependents receive housing allowances ranging from \$55.20 to \$114.90 a month.

3.00 To give you an idea of how allowances can add to the basic salary, let's consider an enlisted man (E-4 rank), married with dependents, and serving as an aircrew member on a carrier in a combat situation. He may earn an additional \$273 above his monthly base pay.

\$30 family separation

105 quarters allowance

55 combat duty

13 foreign duty

70 aircrew member

\$273

+240.60 base pay

\$513.60 total monthly salary

\$(br, *2.50)

*2.45 Allowances for Women

1.00 An Armed Forces salary is composed of basic pay and several types of allowances: housing, sea or foreign service, proficiency pay, hazardous duty, and family separation. Allowances increase with rank.

2.00 Between \$13 and \$22.50 is allocated to an enlisted woman (E-4 to E-7) every month for foreign duty or service aboard a hospital ship. An additional \$55 is granted for duty in a combat zone. Proficiency pay ranges between \$30 and \$100 a month for qualified enlistees. Where housing and commissary facilities are not available, payments range from \$55.20 to \$114.90 a month for housing and \$33.00 to \$77.10 for food. Under certain circumstances of family separation, a married woman with 4 years of service may be allotted an additional \$30 a month.

3.00 To give you an idea of how allowances can add to the basic salary, let's consider an enlisted woman (E-4 rank) serving as a medic on a hospital ship in a combat situation.

\$13 foreign duty
55 duty in a combat zone
30 proficiency pay as a medic

\$98

+240.60 base salary

\$338.60 total monthly salary

*2.50 Benefits

1.00 Armed Forces benefits include a 30 day paid vacation, free medical and dental care, a clothing and rations allowance, commissary privileges, travel, recreation, reduced rates at some civilian businesses, convalescent leaves, and educational opportunities. There is no loss of pay when personnel are unable to perform assigned duties because of injury or illness.

1.50 \$(return)

[Note: The inquirer now returns to step *2.00 of the Master Military Script.]

ENLISTED CATEGORY SCRIPT

*3.00 Enlisted Category

1.00 For each service branch, there is available information regarding specific enlistment requirements, promotion procedures, training programs, and individual career fields. Select the branch that most interests you. Later you will have an opportunity for other choices.

1. Army
2. Navy
3. Air Force

2.00 (KEYBOARD)

3.00 (ACTION)

- 1/ /\$(link, Army Cover Statement, *4.00)/
- 2/ /\$(link, Navy Cover Statement, *4.00)/
- 3/ /\$(link, Air Force Cover Statement, *4.00)/

[Note: The inquirer is linked to the appropriate cover statement script.

Upon its completion, he returns to *4.00 for the opportunity of making another selection.]

*4.00 Second Choice

1.00 If you are interested in information regarding another service branch, indicate your choice by typing in the appropriate number.

- 2.00
1. Army
 2. Navy
 3. Air Force
 4. No more

3.00 (KEYBOARD)

4.00 (ACTION)

4/ /\$(link, Military Preference)/

/ /*3.00, 3.00/

[Note: If the inquirer selects option 4, he is sent to the Military Preference Script. Otherwise, he is directed to step 3.00 of *3.00 which links him with the appropriate service cover statement.]

COVER STATEMENT

The Navy Cover Statement serves as an example of the cover statement scripts. It reads as follows:

*3.30 Navy

1.00 Enlistment is for a four or six year period. Applicants must pass a physical examination and take a test to show that they can read, write, and think clearly. Upon entering the Navy, an enlisted man is sent to a recruit training command for basic training, guidance, and classification. He may then move on to a technical school, to on-the-job training, or to individual study of Navy training courses. Promotion is determined by time in grade, quality of work, examination marks, and demonstrated ability. Non-college graduates are only eligible for enlisted ratings, including non-commissioned officer ratings (Petty Officer, Grades E-6 through E-9).

There is further information covering:

A. enlistment

B. promotion

If you wish to see either or both of these topics, indicate the appropriate letters. If you want to bypass this material and proceed to the next section, type no.

2.00 (KEYBOARD)

3.00 (ACTION)

No/ /*100.00/

3.20 (ACTION)

.IF. #(kw, A)/Male applicants aged 17 to 30 are eligible for enlistment. Women applicants must be between 18 and 25, have no

dependents, and have a high school diploma or equivalent.

A limited number of applicants enlist for three years. Seventeen year old boys may enlist in the 'minority cruise' program which terminates the day before their 21st birthday./ /

3.50 (ACTION)

.IF. #('kw,B)/Competition for advancement is service wide; a man may advance even though he is assigned to a ship or station which does not require another person in the next higher pay grade. Every man must complete a Navy training course or the equivalent school before he is eligible for promotion to petty officer. It generally takes 12 to 14 years to become a Master Chief Petty Officer (E-9), the highest enlisted grade. A petty officer is eligible for the Navy Enlisted Scientific Education Program, which provides a full four years of college and a bachelor's degree./ /

[Note: After the inquirer sees his selected information, he proceeds to step 4.00 and then returns to the Enlisted Category Script. If he responds by typing "No", he is directly routed to *100.00.]

4.00 Additional information regarding the Navy may be found in the United States Navy Occupational Handbook.

*100.00

1.00 \$(return)

APPENDIX B
Officers Script

OFFICERS SCRIPT

Because of the length of the Officers Script, some of the explanatory sections consist of example paragraphs rather than the text in its entirety.

*15.00 Introduction

1.00 If you are planning to go on to college, you may be qualified to become an officer in one of the Armed Forces. You may choose to become a professional officer, making your career in the military, or you may fulfill your obligation for military service in a reserve unit, and then go on to civilian work.

2.00 Fourteen categories of information are available to you here. Choose the category that most interests you by typing the appropriate number. You will have a chance to return to this later.

1. Types of jobs available to Army officers
2. Types of jobs available to Navy officers
3. Types of jobs available to Air Force officers
4. Training programs to become an Army officer
5. Training programs to become a Navy officer
6. Training programs to become an Air Force officer
7. Path of promotion as an Army officer
8. Path of promotion as a Navy officer
9. Path of promotion as an Air Force officer
10. Pay scales (same for each service)
11. Living conditions and benefits (same for each service)
12. Opportunities for women Army officers
13. Opportunities for women Navy officers
14. Opportunities for women Air Force officers

3.00 (KEYBOARD)
3.50 (ACTION)
4.00 .IF. #(kw, 1)/ /#(*16.00)/
5.00 .IF. #(kw, 2)/ /#(*23.00)/
6.00 .IF. #(kw, 3)/ /#(*29.00)/
7.00 .IF. #(kw, 4)/ /#(*17.00)/
8.00 .IF. #(kw, 5)/ /#(*24.00)/
9.00 .IF. #(kw, 6)/ /#(*30.00)/
10.00 .IF. #(kw, 7)/ /#(*18.00)/
11.00 .IF. #(kw, 8)/ /#(*25.00)/
12.00 .IF. #(kw, 9)/ /#(*31.00)/
13.00 .IF. #(kw, 10)/ /#(*19.00)/
14.00 .IF. #(kw, 11)/ /#(*20.00)/
15.00 .IF. #(kw, 12)/ /#(*20.80)/
16.00 .IF. #(kw, 13)/ /#(*26.00)/
17.00 .IF. #(kw, 14)/ /#(*32.00)/

[Note: The computer instructions are to be interpreted in this manner. The direction ".IF. #(kw, 1)/ /#(*16.00)/" means that if category 1 (Types of jobs available to Army officers) is selected by the inquirer, he is routed to information section *16.00.]

*16.00 Army - Types of Jobs Available

1.00 Army officers each serve in one of the career fields shown here. You may see brief descriptions of some or all of these fields. Type in the number or numbers of the fields that may interest you. If any of these titles are unclear to you, the brief description will help explain it.

1. Communication and Transportation
2. Command and Combat
3. Administrative, Executive, and Training Services
4. Medical, Dental, Veterinary, and Other Health Services
5. Procurement, Supply, Maintenance, and Repair Services
6. Welfare and Special Services
7. Fiscal, Accounting, and Budgeting Services
8. Professional Engineering and Related Technical Services
9. Professional, Subprofessional, and Scientific Services
10. Protective, Intelligence, and Investigative Services

2.00 (KEYBOARD)

[Note: An example description is shown below.]

*16.50 Command and Combat

1.00 Command and Combat officers are in charge of infantry and aviation units and weapons systems. They are responsible for the Army's air defense strategy. In their work, they may make use of field artillery, combat missiles, and nuclear weapons.

*17.00 Army - Training Programs to Become an Officer

1.00 There are several ways to become an Army Officer:

- A. Reserve Officer Training Corps
- B. United States Military Academy
- C. Officer Candidate School
- D. Direct commissioning

Type the letters corresponding to the information you would like to see.

2.00 (KEYBOARD)

[Note: Options A and C serve as examples of this category.]

*17.05 Reserve Officer Training Corps

1.00 The Army Reserve Officer Training Corps provides military leadership training for college men. Army ROTC is a four-year program. The Basic Course, normally taken in the freshman and sophomore years, provides training in basic military subjects, military history, weapons, equipment, and leadership techniques. Class time is three hours per week.

2.00 The Advanced Course is normally taken in the junior and senior years. Instruction includes military techniques, logistics, administration teaching methods, and exercise of command. Class time is about five hours per week. Students in this course are paid \$40 per month during the school year. A six-week summer training camp is held between the junior and senior years.

3.00 A special two-year program is available to junior college graduates and students at four-year colleges who were unable to

take ROTC during their first two years of college. These students must complete a six-week basic summer camp prior to their junior year of college. This summer training takes place of the Basic Course in the four-year program and qualifies the student to enter the Advanced Course.

4.00 Graduates of the ROTC program are commissioned as Second Lieutenants in the Army Reserve. Outstanding men are named Distinguished Military Graduates and commissioned in the Regular Army.

5.00 If you would like a list of the colleges and universities that offer the Army ROTC program, ask your ISVD supervisor for List 1.

*17.20 Officer Candidate School

1.00 College graduates who did not take the Reserve Officer Training Corps program may enlist for an Officer Candidate School course. Army warrant officers and enlisted men who qualify may also attend an Officer Candidate School. This course entails six months of academic and physical training. Graduates receive a commission in the Army Reserve. Outstanding students receive Regular Army Commissions.

*18.00 Army - Path of Promotion as an Officer

1.00 Army officer assignments are made within a career plan which leads a man from basic development through professional and advanced development to areas of major professional contribution.

2.00 During the first eight years of service, the officer receives schooling in his chosen branch. In addition, he may also receive special schooling in one of these areas:

3.00 combat arms
troop leadership
airborne troop leadership
aviation skills
ranger skills

4.00 Officers may attend advanced civilian schooling depending on Army requirements for specialized skills and education.

5.00 Intermediate professional development covers the ninth to fifteenth years of service. During this period, an officer has several staff assignments, alternating with troop command and schooling. Some officers will be selected to attend one or more of several schools:

6.00 Command and General Staff College
Armed Forces Staff College
graduate level civilian schooling

7.00 During Advanced development (16th to 23rd years), Army officers will be performing high level staff and command duty. Outstanding officers will have an opportunity to attend a Senior

Service College such as The Army War College, The National War College, The Industrial College of the Armed Forces, The Navy and Air Force War Colleges, or three foreign War Colleges.

8.00 Every year, officers of all grades are considered for promotion on a competitive basis. This ladder of development is typical:

8.00	<u>From Grade:</u>	<u>To Grade:</u>	<u>Total Commissioned Active Army Service Normal for Promotion:</u>
	Second Lieutenant	First Lieutenant	one and one half years
	First Lieutenant	Captain	four years
	Captain	Major	ten to eleven years
	Major	Lieutenant Colonel	sixteen to eighteen years
	Lieutenant Colonel	Colonel	twenty-two to twenty-three years

*19.00 Pay Scale - Army, Navy, Air Force

1.00 The Army, Navy, and Air Force maintain the same pay scales. An officer's salary is composed of basic pay and several kinds of allowances: quarters and subsistence allowances, incentive pay, and special pay for duty subject to hostile fire. Salary and allowances increase with rank.

2.00 This is an outline of the basic monthly pay of military officers. Army and Air Force ranks have identical names and meanings; the Navy ranks are listed next to their equivalents in the Army and Air Force.

<u>Air Force and Army</u>	<u>Navy</u>	<u>Normal Minimum Monthly Pay</u>	<u>Normal Maximum Monthly Pay</u>
Second Lieutenant	Ensign	\$303.90	\$336.30
First Lieutenant	Lieutenant Jr. Grade	420.30	504.60
Captain	Lieutenant	583.20	633.30
Major	Lt. Commander	700.50	807.30
Lt. Colonel	Commander	930.60	992.40
Colonel	Captain	1121.40	1216.50
Brigadier General	Rear Admiral (lower half)	1295.10	1384.80
Major General	Rear Admiral (upper half)	1530.60	1592.40
Lt. General	Vice Admiral	1648.20	1766.10
General	Admiral	1883.70	2002.60

3.00 To give you an example of how allowances figure in, let us consider a First Lieutenant (Army-Air Force) (or a Lieutenant Jr. Grade in the Navy). He would normally achieve this rank after a total of three years of service and receive the following:

Basic Pay	\$420.30
Quarters	120.00 (\$95.10 if single)
Subsistence	47.88
<hr/>	
\$588.18 per month	

4.00 Subsistence pay remains the same for all ranks, but quarters allowance rises, as does basic pay, as rank increases.

5.00 Officers receive a family separation allowance when they must live away from home in the course of a military assignment. Officers exposed to the threat of death or injury during peacetime may be awarded Hostile Fire Pay.

6.00 Medical and dental officers are entitled to special pay while serving on active duty. They receive \$100 per month extra during the second year of service, and their special pay reaches \$350 per month extra after ten years of service.

*20.00 Living Conditions and Benefits - Army, Navy, Air Force

1.00 A military officer is entitled to many special benefits while in the service.

2.00 Housing: On-post housing is provided for single men. A housing allowance is awarded to a married man and his family if they choose to live in a residential area. In many cases, housing for families is available within the post area.

3.00 Medical services: An officer and his family are entitled to complete medical and dental coverage, free of charge. The U.S. Government will bear most of the cost of any hospitalization for an officer's dependents, and will bear the full cost for an officer's hospitalization.

4.00 Post Exchanges and Commissaries provide special discounts to military personnel on food and household and personal goods.

5.00 Vacation: Every officer is entitled to thirty days vacation per year with full pay and allowances.

6.00 Travel Allowances: Special allotments are made to an officer and his family to cover the cost of travel in the course of business. Allowances for moving household belongings to a new post and assistance in the transportation are available.

7.00 Most posts provide motion picture entertainment, libraries, hobby craft shops, newspapers, dances, parties, band concerts, and shows at little or no cost. Officers' messes provide the facilities of a private club, with good food at modest cost. At some installations there are golf courses, swimming pools, gymnasiums, and athletic fields.

- 8.00 Dependent Schooling: Children are eligible to attend armed services schools at overseas stations and public schools in the United States. If no such schools are available, the U.S. Government will bear the bulk of expense of sending children to locally operated schools. Above the high school level, sons and daughters of officers are eligible for scholarship assistance at a number of colleges and universities in the United States.
- 9.00 Legal Assistance: Legal advice from attorneys is available to an officer and his family at no charge. This includes service concerning wills, powers of attorney, tax matters, and other personal legal matters.
- 10.00 Retirement: An officer may retire after twenty years of service and receive 50% of his base pay thereafter. If he chooses to retire after thirty years of service, he receives 75% of his base pay. Since all military personnel are covered by Social Security, an officer also qualifies for old age insurance payments after age 65. A retired officer is entitled to medical care and hospitalization and use of Commissary and Officer Mess facilities.

*20.80 Army Careers for Women

1.00 A woman may earn an officer's commission through the Women's Army Corps (WAC) or the Army Nurse Corps. There is information available for both of these programs. Indicate your preference by typing in the appropriate letter.

A. Women's Army Corps

B. Army Nurse Corps

C. both

2.00 (KEYBOARD)

[Note: Information about the Army Nurse Corps is given below.]

*21.01 Army Nurse Corps

1.00 To be accepted for the Corps, a woman must be a nursing school graduate with a state license, between 21 and 35, and a U.S. resident or accepted for permanent residence. Nurses are commissioned as Second Lieutenants and receive the same pay and benefits as male officers. The tour of duty is either for two or three years. There are Army nursing programs which enable high school graduates or college students to acquire nursing degrees and state licenses. Upon graduation, they are commissioned as officers.

*23.00 Navy - Types of Jobs Available

1.00 A Navy officer serves in one of the occupational fields shown here. You may choose to see brief descriptions of some or all of these career fields. Type in the appropriate numbers.

- 1.50
1. Medical and Dental
 2. Supply and Fiscal
 3. Personnel
 4. Shore Construction Engineering
 5. Sciences and Services
 6. Weapons Engineering
 7. Naval Engineering
 8. Aviation
 9. Naval Operations
- 2.00 (KEYBOARD)

[Note: Here is an example of a Navy career field description.]

*23.25 Shore Construction and Engineering

1.00 Shore Construction officers plan, construct, and maintain shore structural facilities, including electrical, mechanical, automotive, and construction equipment, floating drydocks, and mining reserves. They also acquire, manage, and dispose of real estate and real property.

*24.00 Navy - Training Programs to Become an Officer

1.00 There are several ways to become a Navy officer:

- A. Reserve Officer Training Corps
- B. United States Naval Academy
- C. Officers Candidate School
- D. Direct Commissioning
- E. Navy Enlisted Science Education Program
- F. Navy Aviation Cadet School
- G. Officers Candidate Airman Program

Type the letters corresponding to the information you would like to see.

2.00 (KEYBOARD)

[Note: Two examples are listed below.]

*24.50 Naval Academy

1.00 The United States Naval Academy is the undergraduate college of the Navy. Students there expect to make their careers in the Navy. Graduates are awarded the bachelor of science degree and are commissioned as Line, Supply Corps, or Shore Construction Engineering officers.

*24.70 Navy Aviation Cadet School

1.00 Men with only two years of college may apply for training as a Naval Aviation Cadet. They take eighteen months of flight training and receive a commission in the Navy Reserve.

*25.00 Navy - Path of Promotion as an Officer

1.00 Navy officers are either Line or Staff. A Line officer is qualified to assume command of a ship or boat; he is an administrator who must supervise the many kinds of specialized activities that take place under his command. The Staff officer is an expert in one field, for example, Civil Engineering or Supply; he may not assume command of a ship; he may hold the same rank as a Line officer, but the Line officer's authority is greater.

[Note: At this point, the inquirer has the option of requesting further information about a Line or Staff officer. The section about a Staff officer reads as follows.]

*25.20 Staff Officer

1.00 A Staff officer develops one specialized skill during his career. Medical, Dental, Supply, Fiscal, Service, and Engineering officers are generally Staff. As Ensign and Lieutenant, the Staff officer usually assists in the command of a department of men in his special field. For example, a Supply officer would be an officer assistant at a supply depot ashore or afloat.

2.00 As Lieutenant Commander and Commander, a Staff officer gradually assumes more responsibility. He takes charge of a major department at a shore installation or on a large ship. As a Captain, he would have authority over a major fleet staff or would teach his specialty at a service college.

*26.00 Naval Careers for Women

1.00 A woman may receive an officer's commission as a member of the Navy (WAVES) or the Navy Nurse Corps. Indicate which branch may interest you by typing in the letter A, B, or C.

A. WAVES

B. Navy Nurse Corps

C. both

2.00 (KEYBOARD)

[Note: Option A serves as an example.]

*27.00 WAVES

1.00 A female Navy officer serves in non-combat positions in the United States and overseas. She is obligated to serve a minimum of three years active duty. She is entitled to the same pay, allowances, and other benefits awarded to male officers.

2.00 The work she engages in is typically in one of the following areas: Hospital Corps, Dental Corps, Communications, Administration, Aviation, Electronics, Data Systems, Public Information, Intelligence, Law, Science, and Engineering.

3.00 The place of work is generally at shore installations. The only vessels which she might work in are hospital ships and transports. ships for dependents.

*29.00 Air Force - Types of Jobs Available

1.00 An Air Force officer serves in one of the fifteen career areas shown. You may choose to see brief descriptions of some or all of these fields.

- 1.50
1. Operations
 2. Audio Visual
 3. Scientific and Development Engineering
 4. System Program Management
 5. Electronics and Maintenance Engineering
 6. Civil Engineering
 7. Materiel
 8. Comptroller
 9. Personnel Resources Management
 10. Information
 11. Medical
 12. Intelligence
 13. Security
 14. Legal
 15. Chaplain

[Note: An example Air Force description is shown below.]

*29.15 Audio Visual

1.00 The Audio-Visual career area encompasses the direction of television and motion picture productions, optical instrumentation, and precision photography.

*30.00 Air Force - Training Programs to Become an Officer

1.00 There are several ways of becoming an Air Force officer:

- A. Reserve Officer Training Corps
- B. Air Force Academy
- C. Officer Training School

[Note: Choice A reads as follows.]

*30.10 Reserve Officer Training Corps

1.00 The Air Force Reserve Officers Training Corps provides military leadership training for college men. It is a four-year program divided into two-year units. For the first two years, the ROTC man participates in the General Military Course, devoting two hours a week to class work and one hour a week to drill.

2.00 During the second two years, called the Professional Officer Course, the ROTC man spends four hours a week in class, plus drill. He receives \$40 a month subsistence allowance. He must attend a four-week Field Training Course during the summer between his junior and senior years.

3.00 Some men may receive permission to enter the ROTC program in the junior year and go directly into the Professional Officer Course.

4.00 Graduates of the ROTC program become Air Force Reserve second lieutenants. They may enter flight training or other technical and non-technical fields. All ROTC men are obligated to serve four years on active duty.

5.00 If you would like a list of colleges and universities that offer the Air Force ROTC program, ask your supervisor for List 3.

*31.00 Air Force - Path of Promotion as an Officer

1.00 An Air Force officer progresses in his career from basic development through professional and advanced development to areas of major professional contribution.

2.00 He begins his career as a Second Lieutenant and begins training in a specialty. For example, if he were in the career area called Operations, he would specialize in one of these areas:

Piloting

Navigation and Observation

Aircraft Control

Weapons Systems

Missile Operations

Safety

Space Systems

3.00 After eighteen months of service, he is promoted to First Lieutenant. He alternates between active duty and additional training.

4.00 At the rank of Captain, he takes courses in many areas outside his original specialty. He gradually assumes command of larger and more diversified units.

5.00 After a total of nine to eleven years of service, he is eligible for promotion to the rank of Major. At this point, he is in a high executive capacity and commands a major Air Force unit.

6.00 After a total of fifteen to sixteen years of service, he may rise to the rank of Lieutenant Colonel.

APPENDIX C
Bibliography

REFERENCE MATERIALS
ENLISTED MEN AND OFFICERS

U.S. Army

1. Army ROTC Briefer, U.S. Army, 1965.
2. Army ROTC Scholarship Program, U.S. Army, January 1967.
3. Enlisted Military Occupational Specialties, AR 611-201, Department of the Army, January 1967.
4. Enlisted Personnel Management System, Department of the Army, March 1965.
5. Finance and Accounting for Installations Military Pay and Allowance Procedures, Department of the Army, February 1965.
6. Listing of Overstrength and Shortage Enlisted MOS for Use in Specific Personnel Actions, Department of the Army, March 1967.
7. Logical Decision - Army ROTC, U.S. Army, August 1966.
8. Manual of Commissioned Officer Military Occupational Specialties, Department of the Army, June 1960.
9. Manual of Warrant Officer Military Occupational Specialties, Department of the Army, June 1961.
10. The Officers Guide, Russel B. Reynolds, Stackpole Books, Harrisburg, Pennsylvania, 1967.
11. Promotion of Officers on Active Duty, Department of the Army, July 29, 1966.
12. The Secret of Getting Ahead, U.S. Army, July 1965.
13. Statistical and Accounting System, Department of the Army, July 12, 1962.
14. Today's Women's Army Corps - A New World of Opportunity, U.S. Army, July 1966.
15. U.S. Army Opportunities, Army Opportunities, United States Army Recruiting Command, Hampton, Virginia, 1966.
16. Welcome to Army ROTC, U.S. Army, January 1967.
17. Your Career as an Army Officer, U.S. Army, November 1965.

U.S. Navy

1. Alphabetized Listing of All General, Service, and Emergency Ratings of the U.S. Navy, Permanent Board for Control of the Enlisted Rating Structure (recorder), March 1967.
2. Career Counseling Guide, U.S. Naval Personnel Division, July 7, 1965.
3. Comparative Occupational Pay Briefs, Bureau of Naval Personnel, Department of the Navy, February 1965.
4. Facts for Figuring Your Future, Bureau of Naval Personnel, Department of the Navy, October 1, 1966.
5. Formal Schools Catalog, Bureau of Naval Personnel, Department of the Navy, 1966.
6. Junior Officers Guide to Enlisted Rights and Benefits, Career Counseling and Educational Opportunities, U.S. Naval Officer Candidate School, U.S. Naval Base, Newport, Rhode Island, March 1966.
7. The Line Officer - Navy, September 20, 1963.
8. Manual of Navy Enlisted Classifications, Bureau of Naval Personnel, Department of the Navy, February 1967.
9. Manual of Navy Officer Classifications, Bureau of Naval Personnel, Department of the Navy, 1966.
10. Manual of Qualification for Advancement in Rating, Bureau of Naval Personnel, Department of the Navy, June 1965.
11. Navy and Marine Corps Military Personnel Statistics, Bureau of Naval Personnel, Department of the Navy, February 28, 1967.
12. Navy Officer Career Handbook, Bureau of Naval Personnel, Department of the Navy, 1964.
13. NROTC, April 1967.
14. NROTC College Program, Two Year Contract, No Date.

15. NROTC Contract College Program, January 1, 1967.
16. Officer Opportunities in the Supply Corps, U.S. Navy, No Date.
17. Polaris University Extension Program, No Date.
18. Processing Procedures for Navy Enlistment /Reenlistments, Bureau of Naval Personnel, Department of the Navy, March 14, 1967.
19. U.S. Navy Recruiting Manual - Part D - Recruiting at Advanced Pay Grades, Bureau of Naval Personnel, Department of the Navy, 1966.
20. United States Navy Occupational Handbook, Bureau of Naval Personnel, Department of the Navy, 1966.
21. Wings for the Fleet, Naval Air Training Command, January 3, 1966.

U.S. Air Force

1. Air Force Military Personnel Testing Manual, AFM 35-8, Department of the Air Force, June 15, 1962.
2. Air Force Officer Classification Structure Chart, AFVA 36-1A, U.S. Air Force, November 1966.
3. Airman Classification Manual, AFM 39-1, Department of the Air Force, Volumes 1 and 2, April 15, 1963.
4. AQE Norms for High School Seniors and Air Force Training Groups, Ernest C. Tupes, Personnel Research Laboratory, Aerospace Medical Division, Air Force Systems Command, Lackland Air Force Base, Texas, May 1965.
5. Military Personnel Classification Policy Manual (Officers, Warrant Officers, Airmen), Department of the Air Force, August 18, 1966.
6. Officer and Airmen Classification Structure, Personnel Standards Division, Classification Structures Branch.
7. Officer Classification Manual, AFM 36-1, Officer Personnel, Department of the Air Force, April 15, 1966.

8. Officer's Pay Guide, Department of the Air Force, July 1966.
9. Pilots and Navigators Stand Tall, Department of the Air Force, 1966.
10. Pocket Guide to United States Air Force Opportunities, 1967, Advertising Division (AFPMRB), U.S. Air Force Recruiting Service, Randolph Air Force Base, Texas, 1966.
11. Scientific and Engineering Opportunities for Lieutenants, United States Air Force, April 1, 1967.
12. The United States Air Force Occupational Handbook for Airmen, 1966-67, 1966.
13. USAF Formal Schools Catalog, Department of the Air Force, July 1, 1966.
14. Women Officers in the U.S. Air Force, Advertising Division, Headquarters, U.S. Air Force, 1967.

All Services

1. Occupational Conversion Table - Enlisted, Office of the Assistant Secretary of Defense, Manpower, Department of Defense, October 1966.
2. Occupational Conversion Table - Officers, Office of the Assistant Secretary of Defense, Manpower, Department of Defense, March 1967.

General References

1. Dictionary of Occupational Titles - Volume 1, Bureau of Employment Security, U.S. Department of Labor, 1965.
2. Dictionary of Occupational Titles - Volume 2, Bureau of Employment Security, U.S. Department of Labor, 1965.
3. Guide to the Use of the General Aptitude Test Battery, Section 111 - Development, Bureau of Employment Security, U.S. Department of Labor, October, 1962.

4. Manual for the USES General Aptitude Test Battery - Section IV Norms, Bureau of Employment Security, U.S. Department of Labor, May, 1966.
5. Occupational Outlook Handbook, Bureau of Labor Statistics, U.S. Department of Labor, 1966.
6. World Almanac, Newspaper Enterprise Association, Inc., 1967.

REFERENCE SOURCES - ENLISTED MEN

1. Information Categories

Number	Title	Army	Navy	Air Force	All Services
1	Navy General Descriptions		1,20,8		1
2	Availability for Women	3,14,15	20	12	
3	Chart Number for Navy List		20		
5	Places of Work	3,15	20	3,12	
6	High School Courses	15	20	3,12	
7	Prior Experience	15	20		
11	Abilities, Aptitudes, Traits-Navy, Air Force		20	3,12	
12	Areas of Study-Navy		20		
13	Navy Specialties		8		
14	Service Schools-Navy		20		
15	Related Civilian Jobs-Navy		20		
16	Related Navy Jobs		20		
17	Knowledge and Skills Gained-Air Force			1,3,4,12	
18	Specialized Air Force Jobs			3	
19	Related Civilian Jobs- Air Force			3	
20	Air Force General Descriptions			3,12	1
21	Army General Descriptions	3,15			1
22	Related Civilian Jobs-Army	3			
23	Mental Requirements-Army	3			

1. Information categories, cont.

Number	Title	Army	Navy	Air Force	All Services
24	Physical Requirements-Army	3			
25	Knowledge and Skills Gained-Army	3,15			
26	Specialized Army Jobs	3			
27	Personnel Requirements-Army	6			

2. Scripts: Introduction to Military
and Individual Cover Statements

Army	Navy	Air Force	General Reference
12,14, 15	20,4	12,8,10	6