A SURVEY OF ARMY TEAM OPERATIONS

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## A Survey of Army Team Operations

The effectiveness of the soldier performing as an individual, but performance of soldiers as teams has not been systematically addressed. This report details the construction of demographic survey instruments that were used to identify what types of teams exist and how these teams are distributed within and across Army branches. The survey provides a catalogue of teams and identifies their characteristics. Essentially, thirteen Army subject areas, all combat and combat support services, were surveyed. The average Army team was found to...
20. ABSTRACT (continued)
Consists of 6.7 members who fill 4.3 positions, has 2.5 ranks represented with members categorized under 2.0 MOSs. Each team has 0.5 members with skill level 40 or above, 0.6 with skill level 30, 1.9 with skill level 20, and 3.1 with skill level 10. The team uses 3.9 pieces of equipment while performing 4.9 activities of which 1.0 is performed by the team as a unit, 2.4 by individuals, and 1.6 by small groups other than the full team.
FOREWORD

This report is one of a series on the research support provided by the Mellonics Systems Development Division of Litton Systems, Inc., to the Army Research Institute for the Behavioral and Social Sciences (ARI) under Contract Number DAHC 19-77-C-0011. This report is part of the final report of the total contractual effort and will be incorporated into that report by reference.

As set forth in the Contract Statement of Work, the Mellonics effort includes support to the human factors studies presently being conducted by ARI. One of these studies involves the investigation of Army teams. This report details the construction of demographic survey instruments for identifying Army team types, and presents an analysis of how these teams are distributed within and across Army branches.
ABSTRACT

Over the past several years, considerable progress has been made in improving the effectiveness of the soldier performing as an individual, but performance of soldiers as teams has not been systematically addressed. This report details the construction of demographic survey instruments that were used to identify what types of teams exist and how these teams are distributed within and across Army branches. The survey provides a catalogue of teams and identifies their characteristics. Essentially, thirteen Army subject areas, all combat and combat support services, were surveyed. The average Army team was found to consist of 6.7 members who fill 4.3 positions, has 2.5 ranks represented with members categorized under 2.0 MOSs. Each team has 0.5 members with skill level 40 or above, 0.6 with skill level 30, 1.9 with skill level 20, and 3.1 with skill level 10. The team uses 3.9 pieces of equipment while performing 4.9 activities of which 1.0 is performed by the team as a unit, 2.4 by individuals, and 1.6 by small groups other than the full team.
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A SURVEY OF ARMY TEAM OPERATIONS

INTRODUCTION

BACKGROUND

General. Over the past several years, the all volunteer military has resulted in a reduction in manpower that has been offset by an intensive effort within the Army to improve the training of the individual soldier. Considerable progress has been made in improving the effectiveness of the soldier performing as an individual through such innovations as Training Extension Course (TEC) lessons and Skill Qualification Tests (SQTs). But there is another personnel training, selection, and management problem that is also very critical to the effectiveness of combat and combat support units that has not been systematically addressed - performance of soldiers as teams.

Although Boguslaw and Porter (Reference 1) describe a team as "...a collection of human individuals who work together to achieve a common goal," an Army team is more than a simple collective of soldiers. In the Army, a team is a relationship among individual soldiers who employ specific procedures in order to interact with weapons, machines, and other Army personnel during the pursuit of the Army system objectives.

The Army Research Institute for the Behavioral and Social Sciences (ARI) is currently in the position of knowing that there are team problems, but of not knowing the nature and extent of these problems and not having a viable base in order to select the correct methods for resolving the problems. An Army-wide survey of teams is the necessary first step in addressing these information needs. Being able to select teams for research that have specific organizational, task, and system characteristics assures research on a desired set of variables with applicable results.

In order to identify the basic structure of Army teams, ARI has defined a programmatic research effort in the areas of team training requirements, team assessment, and team performance prediction. A problem arises, however, when researchers attempt to describe the unique element that distinguishes team-machine interaction from a single man-machine interaction (cf. Reference 2). Therefore, the initial step in this research effort was a demographic survey of Army teams. Litton Helionics, within the guidance from the Contracting Officer Technical Representative (COTR), defined an Army team after
reviewing various sources on team research as:

- A small group, usually 2 to 11 men, who normally perform their tasks in an interactive and interdependent manner. Position or member assignments within a team must be formally defined. The team members may be dedicated (e.g., tank crews) or designated (e.g., a tank killer or antiarmor squad). This means that ad hoc or informal, temporary teams (e.g., "take four men and scout that ridge") are not to be included in the present study.

The construction of the demographic survey instruments and an initial analysis of the results, detailed in this report, are a part of the Mellonics research support to ARL.

Purpose. The purpose of the survey was to provide an estimate of the extent to which team performance, as distinct from individual performance, is a significant part of Army operations. In addition, the survey identifies what types of teams exist and how these teams are distributed within and across Army branches. The survey provides a catalogue of teams and identifies their characteristics. The catalogue can be used to select specific team types for future research.

APPROACH

As originally envisioned, the survey was to be designed to identify all team situations (team organizational structure, critical and non-critical tasks, team member relationships, and individual/team performance standards and criteria), their numbers, and distributions throughout the Army combat and combat support systems in both the active and reserve components. After the research team appraised the stated objective, however, the need for its delimitation to manageable proportions was apparent. The resultant objective was a survey of combat and combat support Army teams of active components that have service schools. One exception was necessary. Because of the classified nature of military intelligence, the Military Intelligence branch was excluded from the survey. Thus, the following 13 subject areas were surveyed:

- Air Defense Artillery
- Armor
- Aviation
Engineer
Field Artillery
Health Sciences
Infantry
Military Police
Missile and Munitions
Ordnance
Quartermaster
Signal
Transportation.

The survey was conducted in two phases. In phase one, a questionnaire was developed and distributed to the 13 service schools. Based on tables of organization and equipment (TOEs), a subject matter expert at each school identified formal and informal teams by battalion and/or company TOE numbers. The information supplied comprised the following:

- team name
- total number of soldiers on the team
- position title of each team member
- rank of each member
- MOS of each member
- major equipment items
- major activities
- a rating of how established or emergent the team was.

All the raw data were ordered and placed into seven loose-leaf binders, Appendix A of this report. In addition, raw data were analyzed to establish a data base and obtain general descriptions of Army teams.
The second phase of the survey required the development of a second questionnaires that was distributed to a sample of the U. S. Army Forces Command (FORSCOM), i.e., operational units in the Army. This questionnaire identified what types of team training are required as well as problems associated with that training. Reduction and analysis of these data are planned for a future ARI report.

METHODOLOGY

Phase I. The Litton Mellonics staff, with COTR approval, developed both a service school team identification worksheet and questionnaire and a FORSCOM questionnaire with input from ARI's Research and Development Coordinator, Major Alexander Nicolini, Infantry. The service school team identification worksheet was simply a blank sheet that was used to identify a particular TOE and the teams within that TOE. (See Appendix B for an example of the identification worksheet.) The service school questionnaire was a description of each team identified in the worksheet. (See Appendix B for an example of the service school questionnaire.)

In addition to the team demographics, one question was included with the service school questionnaire that required a subjective rating by the respondents. Mellonics, with COTR agreement, deemed it necessary to distinguish between two types of team job activities and situations, established and emergent. Established situations are routine and the job activities consist of completely specified procedures. On the other hand, emergent situations tend to present relatively unique problems and the team must decide what activities to perform and how to perform them in order to solve the problem.

For Army teams, the research team agreed that the definitions for established activities would be very proceduralized tasks such as loading, aiming, and firing a cannon. Emergent activities were defined to be those activities performed in response to changing knowledge of the enemy threat. For example, rifle squads continually modify their activities in response to enemy activity. The concepts of established and emergent represented extremes of a single continuum. Some activities and situations are established, some emergent, and some are somewhere in between the two extremes. The respondents were instructed to select a phrase that best describes the general nature of the majority of job activities performed by the team they were rating. Respondents were instructed to use one of the following phrases to rate each of them:

- established
- more established than emergent
• about equally established and emergent
• more emergent than established
• emergent.

The FORSCOM questionnaire was constructed according to the goals of the ARI research program in team training. These goals required information input by a comprehensive questionnaire structured to answer the questions in Table 1. (The final revised FORSCOM questionnaire also is given in Appendix B.)

The initial questionnaires, in particular the FORSCOM questionnaire, were then reviewed by, and discussed with the Design Division, Directorate of Training Development in the U. S. Army Infantry School. The questionnaire was subsequently revised and then reviewed further by the Organization Branch, Directorate of Combat Development in the U. S. Army Infantry School.

The next step in the process required mailing of the materials to the 13 schools. The FORSCOM questionnaire was included for review by each school.

Each school was required to identify all teams in TOEs for which the school is the proponent. Upon completion of the identification worksheets, the schools were required to complete a demographic questionnaire on each team listed on the worksheets. (A complete description of the materials sent to schools, as well as a list of those schools, is given in Appendix C.)

The completed information was reduced by employing Version 6.50 of the Statistical Package for the Social Sciences (SPSS). (See Appendix D for the exact way data were encoded for reduction.) Twenty-four variables, given in Table 2, were analyzed in terms of frequencies and their descriptive statistics. Additional analyses are anticipated in future ARI reports. To assist that effort, two-way contingency tables were computed for 18 combinations of 10 variables.

Phase II. Upon completion of Phase I which included the review of the FORSCOM questionnaire, final revisions to the questionnaire were made. It was then distributed to FORSCOM units.

Distribution required the establishment of a sampling plan. Information obtained at the Fort Benning Adjutant General's office provided an estimate of the FORSCOM units of interest. Approximately 310 different 10T units in the 15 areas of interest were identified. They comprise:
Table 1

QUESTIONS USED TO DEVELOP FORSCOM QUESTIONNAIRE

- Does the team perform as a single cohesive unit, as some combination of subteams and individuals, or as a collection of individuals?
- To what extent is training to perform as an individual important?
- To what extent is training to perform as a team important?
- To what extent do changes in team composition modify team performance capability?
- How frequently does team membership change?
- How critical is the performance of this team (or team objective or task) to the success of battalion operations?
- To what extent are the details of procedure standardized?
- What makes this a team (or, team objective or task):
  - working together as a group?
  - interdependence with respect to inputs and outputs?
  - coordination requirements?
- During evaluations, is performance of this team evaluated as a complete and separate unit?
- During evaluations (e.g., ARTEP), if the team is evaluated as a unit, what criteria are used:
  - speed?
  - timeliness?
  - accuracy?
  - procedural errors?
  - coordination?
- Is the nature of team tasks dictated by equipment or by personnel interactions?
Table 2
VARIABLES FROM PHASE I OF THE ARMY TEAM SURVEY

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRANCH</td>
<td>Subject Area of Team</td>
</tr>
<tr>
<td>BTNTOE</td>
<td>Battalio TOE Number</td>
</tr>
<tr>
<td>COTOE</td>
<td>Company TOE Number</td>
</tr>
<tr>
<td>SIZE</td>
<td>Size of Team</td>
</tr>
<tr>
<td>POSNUM</td>
<td>Number of Position Types</td>
</tr>
<tr>
<td>LDRRANK</td>
<td>Rank of Leader</td>
</tr>
<tr>
<td>RNKNUM</td>
<td>Number of Different Ranks (excluding the leader's)</td>
</tr>
<tr>
<td>LOWRANK</td>
<td>Lowest Rank</td>
</tr>
<tr>
<td>HIGHRANK</td>
<td>Highest Rank (excluding the leader's)</td>
</tr>
<tr>
<td>LDRMOS</td>
<td>Military Occupational Specialty (MOS) of Leader</td>
</tr>
<tr>
<td>MOSNUM</td>
<td>Number of MOS Types</td>
</tr>
<tr>
<td>DOMOS</td>
<td>Dominant MOS</td>
</tr>
<tr>
<td>DOMOS2</td>
<td>Second Dominant MOS (if bimodal)</td>
</tr>
<tr>
<td>SCNDLDR</td>
<td>Number of Secondary Leaders (if any)</td>
</tr>
<tr>
<td>SKL40</td>
<td>Number of Members with Skill Level 40 or Above</td>
</tr>
<tr>
<td>SKL30</td>
<td>Number of Members with Skill Level 30</td>
</tr>
<tr>
<td>SKL10</td>
<td>Number of Members with Skill Level 10</td>
</tr>
<tr>
<td>EQUIP</td>
<td>Number of Equipment Types</td>
</tr>
<tr>
<td>ACTIV</td>
<td>Number of Total Job Activities Performed</td>
</tr>
</tbody>
</table>

(continued)
Table 2. (concluded)

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMACT</td>
<td>Number of Job Activities Performed by Team Acting as a Unit</td>
</tr>
<tr>
<td>INDACT</td>
<td>Number of Job Activities Performed by Individuals</td>
</tr>
<tr>
<td>GRPACT</td>
<td>Number of Job Activities Performed by Small Groups within the Team</td>
</tr>
<tr>
<td>EMERESTB</td>
<td>Indication of the Emergent or Established Nature of the Team</td>
</tr>
</tbody>
</table>

All variables are those data points collected on each team.
approximately 200 different company types in approximately 40 different battalion types,

- approximately 100 different separate company types, and

- approximately 10 different detachment types.

These types were represented by approximately 1420 units (approximately 580 battalions, 450 separate companies, and 390 detachments).

Based on the information obtained from the service schools, 204 TOEs were identified as active. From these, 109 were chosen as candidates for the present study. Excluded TOEs were those not in the selected subject areas, those currently being phased out, or command and control units. (Command and control units did not fit the goals of the ARI research effort.) A total of 738 battalions and separate companies was identified as active under the 204 TOEs and 480 of the total were covered by the 109 selected TOEs.

The final number of units that were selected for inclusion in the FORSCOM sample was 148 (68 battalions and 80 separate companies). The number of battalions and separate companies selected per TOE was determined on a proportionate basis that incorporated a 20% sample. The total number of units under each TOE was determined. Then, 20% of the total, rounded to the nearest unit, were chosen. Specific units were randomly selected with the restriction that only one unit per TOE was allowed for a given installation (e.g., the five infantry battalions under TOE 07-015H were drawn from separate installations instead of from the same division or installation). Table 3 gives the revised sampling plan and lists the installations that were contacted.

DATA Requirements. As previously stated, Phase I was to produce a list of Army teams and demographic information on each team. Coordination with the U. S. Army Training and Doctrine Command (TRADOC) at Fort Monroe, Virginia established a point of contact at each of the 13 service schools. The point of contact had subject matter experts identify all teams in TOEs for which the school is the proponent. After that, each school was required to complete a questionnaire on each team that was identified. Mellonics compiled the data for computer reduction.

The word company is used to mean battery and troop, as well as company. Battalion is used to represent both battalion and squadron.
<table>
<thead>
<tr>
<th>Installation</th>
<th>Number of Battalions</th>
<th>Number of Separate Companies</th>
<th>Number of Total Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fort Hood</td>
<td>8</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Fort Bragg</td>
<td>10</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Fort Ord</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Fort Lewis</td>
<td>8</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Fort Stewart/Hunter</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Schofield Barracks</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Fort Carson</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Fort Riley</td>
<td>5</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Fort Polk</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Fort Campbell</td>
<td>10</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Fort Bliss</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Fort Benning</td>
<td>3</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Fort Knox</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Fort Richardson/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wainwright</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Fort Eustis</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>68</td>
<td>72*</td>
<td>140</td>
</tr>
</tbody>
</table>

*Eight separate companies were dropped from the sample because of logistics, i.e., each one was at a different installation from those listed above and their inclusion would have exceeded the time available to conduct the present survey.
Phase II required coordination with FORSCOM at Fort McPherson, Georgia. For this phase points of contact were established at 15 major installations. Each point of contact was required to complete questionnaires on teams that exist within units at his installation covered by TOE numbers supplied by Mellonics and ARI.

Collection. The focus of this report is the collection and analysis of school questionnaire data.

Of the 13 schools, 11 supplied the requested information. One school, the Military Police School, stated that according to the definition used, they had no teams and thus, completed no service school questionnaires. The other school, the Academy of Health Sciences, prepared extensive team identification worksheets, but failed to complete descriptive questionnaires for each of the listed teams.

In order to provide for an unbiased survey, the research team agreed to allow each school to interpret the definition of team that was provided. Phone contacts were established with all schools for the purpose of insuring that each school had received all materials that had been sent it. The schools were permitted to ask questions for clarification purposes. In sum, each school handled the survey response in a slightly different manner.

Several schools only identified teams that were specific to the school's subject area. These were the following:

- Air Defense Artillery
- Aviation
- Missile and Munitions
- Ordnance
- Quartermaster
- Signal
- Transportation.

In particular, the Air Defense Artillery School said that most of their soldiers trained and performed as "sections" and not as teams. Apparently, the school felt that the organization of TOEs for which it is the proponent does not lend itself to a breakdown by teams, at least, according to the definition used in this study.
The Infantry School provided a unique interpretation in three areas - the rifle squad, the antitank section, and the scout section. For example, the rifle squad was used as a referent for one team. The school also said the rifle squad was composed of fire teams and machine gun teams. In other words, it was possible for one team member to belong to more than one team. The justification given was that sometimes the rifle squad is the team while at other times, it is the fire team or machine gun team that is the operational unit. This anomaly was not detected in any of the other service school teams.

Visual inspection of the data revealed that the team referent may have been too global for some teams. For example, Infantry described one "team" as the "Communication Teams". This single "team" of approximately 20 individuals appeared to be composed of several smaller teams. Without specific follow-up on these inconsistencies, it is impossible to know what the true team referent should have been. Time and resource constraints prevented follow-up clarifications. Thus, all responses were treated as final.

In addition to the Military Police School and the Academy of Health Sciences, one other school, the Signal School, did not provide complete information. All the teams identified on the team identification worksheets did not have corresponding team questionnaires. This was true for approximately half of the identified teams in the Signal School. This was noticed to a smaller extent in several other schools, i.e., one to five teams may not have had corresponding team questionnaires.

A final problem was missing data on several of the variables. Table 4 lists the variables and number of missing data cases.
Table 4
MISSING DATA

<table>
<thead>
<tr>
<th>Variable Description</th>
<th>Missing Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Equipment Types</td>
<td>52</td>
</tr>
<tr>
<td>Number of Total Job Activities</td>
<td>339</td>
</tr>
<tr>
<td>Number of Activities Performed by Team</td>
<td>339*</td>
</tr>
<tr>
<td>Number of Activities Performed by Individuals</td>
<td>339*</td>
</tr>
<tr>
<td>Number of Activities Performed by Group</td>
<td>339*</td>
</tr>
<tr>
<td>Indication of Team as Either Emergent or Established</td>
<td>299</td>
</tr>
</tbody>
</table>

*Data for these variables were available only when data for the Total Job Activity variable were available.*
RESULTS AND DISCUSSION

RESULTS

Phase I produced team descriptions from 11 of the 13 schools that were contacted.

The service school questionnaires identified 1156 teams in 11 subject areas. These teams were then coded according to the 24 variables listed earlier and then summarized. Fourteen of the variables had ratio scales and are characterized by the descriptive statistics given in Table 5. (See Appendix E for the complete print-out of the 24 variables produced by the FREQUENCIES and CROSSTABS programs of SPSS.)

Service Subject Area. The four combat arms (Infantry, Armor, Air Defense Artillery, and Field Artillery) constituted 76% of the identified teams. The greatest number of teams was found in Field Artillery (374) while the least number was found in Missile and Munitions (12). Table 6 gives a summary of the service subject area data.

Battalion and Company TOEs. A total of 187 TOE numbers was delineated which was subsumed by 117 battalion or separate company TOE numbers. For both of these variables, the mode was an Armor TOE number. For the battalion TOE, two were found that had a total of 33 teams. In the company TOE, 17 teams were the greatest number found in any one of the identified TOEs.

Size. Including the one team with only one member, 85% of the teams were composed of 1-11 members. Table 7 presents a summary of the size variable. Teams were found to range in size from 1-61 members with the greatest number (253) being 3-man teams.

Position Types. Position types on teams ranged from 1-28, with 99% of the total number of teams having 15 or fewer position types. The most frequent (325 occurrences) was the 3-position team.

Rank Types. Rank types ranged from zero to seven when the leader was excluded, 393 teams were found to have two different ranks.

MOS Types. Over half of the teams, 59% (682), were homogeneous according to MOS type. In all, teams ranged in composition from all individuals having the same MOS to a maximum of 22 different MOS types.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mode*</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>3(253)</td>
<td>6.694</td>
<td>6.451</td>
<td>1-61</td>
</tr>
<tr>
<td>Position Types</td>
<td>3(325)</td>
<td>4.317</td>
<td>2.828</td>
<td>1-28</td>
</tr>
<tr>
<td>Rank Types</td>
<td>2(393)</td>
<td>2.526</td>
<td>1.229</td>
<td>0-7</td>
</tr>
<tr>
<td>MOS Types</td>
<td>1(682)</td>
<td>2.004</td>
<td>1.911</td>
<td>1-22</td>
</tr>
<tr>
<td>Secondary Leaders</td>
<td>0(781)</td>
<td>.477</td>
<td>.85</td>
<td>0-6</td>
</tr>
<tr>
<td>Number with Skill Level 40 or above</td>
<td>0(705)</td>
<td>.544</td>
<td>1.389</td>
<td>0-37</td>
</tr>
<tr>
<td>Number with Skill Level 30</td>
<td>0(651)</td>
<td>.614</td>
<td>1.011</td>
<td>0-15</td>
</tr>
<tr>
<td>Number with Skill Level 20</td>
<td>1(584)</td>
<td>1.902</td>
<td>2.522</td>
<td>0-22</td>
</tr>
<tr>
<td>Number with Skill Level 10</td>
<td>2(252)</td>
<td>3.177</td>
<td>4.083</td>
<td>0-40</td>
</tr>
<tr>
<td>Equipment Types**</td>
<td>1(302)</td>
<td>3.896</td>
<td>3.833</td>
<td>1-49</td>
</tr>
<tr>
<td>Job Activities (Total)**</td>
<td>1(393)</td>
<td>4.913</td>
<td>5.283</td>
<td>1-23</td>
</tr>
<tr>
<td>Job Activities (Team)**</td>
<td>1(445)</td>
<td>1.010</td>
<td>1.388</td>
<td>0-8</td>
</tr>
<tr>
<td>Job Activities (Individual)**</td>
<td>0(473)</td>
<td>2.416</td>
<td>4.696</td>
<td>0-50</td>
</tr>
<tr>
<td>Job Activities (Small Group)**</td>
<td>0(628)</td>
<td>1.565</td>
<td>3.588</td>
<td>0-18</td>
</tr>
<tr>
<td>Emergent-Established Scale**</td>
<td>1(424)</td>
<td>1.912</td>
<td>1.118</td>
<td>-----</td>
</tr>
</tbody>
</table>

Number in parentheses is the number of teams with that mode.

Data contain missing values.
Table 6

TEAM FREQUENCIES BY SERVICE SUBJECT AREA

<table>
<thead>
<tr>
<th>Service Subject Area</th>
<th>Number</th>
<th>Relative Frequency</th>
<th>Cumulative Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infantry</td>
<td>191</td>
<td>16.5%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Armor</td>
<td>289</td>
<td>25.0%</td>
<td>41.5%</td>
</tr>
<tr>
<td>Air Defense Artillery</td>
<td>24</td>
<td>2.1%</td>
<td>43.6%</td>
</tr>
<tr>
<td>Field Artillery</td>
<td>374</td>
<td>22.4%</td>
<td>76.0%</td>
</tr>
<tr>
<td>Engineer</td>
<td>58</td>
<td>5.0%</td>
<td>81.0%</td>
</tr>
<tr>
<td>Quartermaster</td>
<td>25</td>
<td>2.2%</td>
<td>83.2%</td>
</tr>
<tr>
<td>Missile and Munitions</td>
<td>12</td>
<td>1.0%</td>
<td>84.2%</td>
</tr>
<tr>
<td>Aviation</td>
<td>19</td>
<td>1.6%</td>
<td>85.8%</td>
</tr>
<tr>
<td>Ordnance</td>
<td>30</td>
<td>2.6%</td>
<td>88.4%</td>
</tr>
<tr>
<td>Transportation</td>
<td>15</td>
<td>1.3%</td>
<td>89.7%</td>
</tr>
<tr>
<td>Signal</td>
<td>119</td>
<td>10.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1156</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Number of Members</td>
<td>Absolute Frequency</td>
<td>Relative Frequency</td>
<td>Cumulative Frequency</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------</td>
<td>--------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>.1%</td>
<td>.1%</td>
</tr>
<tr>
<td>2</td>
<td>183</td>
<td>15.8%</td>
<td>15.9%</td>
</tr>
<tr>
<td>3</td>
<td>253</td>
<td>21.9%</td>
<td>37.8%</td>
</tr>
<tr>
<td>4</td>
<td>159</td>
<td>13.8%</td>
<td>51.6%</td>
</tr>
<tr>
<td>5</td>
<td>103</td>
<td>8.9%</td>
<td>60.5%</td>
</tr>
<tr>
<td>6</td>
<td>104</td>
<td>9.0%</td>
<td>69.5%</td>
</tr>
<tr>
<td>7</td>
<td>37</td>
<td>3.2%</td>
<td>72.7%</td>
</tr>
<tr>
<td>8</td>
<td>45</td>
<td>3.9%</td>
<td>76.6%</td>
</tr>
<tr>
<td>9</td>
<td>44</td>
<td>3.8%</td>
<td>80.4%</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>1.7%</td>
<td>82.1%</td>
</tr>
<tr>
<td>11</td>
<td>44</td>
<td>3.8%</td>
<td>85.9%</td>
</tr>
<tr>
<td>over 11</td>
<td>163</td>
<td>14.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1156</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>
Secondary Leaders. Sixty-seven percent (76%) of the 1156 teams did not have any secondary leaders.

Skill Level. Over half of the teams, 61% (705), had no member with a skill level 40 or above. In fact, 31.4% (363) have only a single member with a skill level 40 or above.

It was found that 56.3% (651) of Army teams have no members with a skill level 30 and 34.8% (402) have only one member at a 30 skill level. For skill level 20, there are 167 (14.4%) teams that have no members with the skill. There are, however, 50.5% (584) that have only one member with the skill level. In contrast, there are 924 (79.9%) teams with four or fewer members with skill level 10.

Equipment Types. Major pieces of equipment appear to be small in number for teams since 1070 (96.9%) teams use 10 or fewer.

Activities. Of the total number of activities reported, 54.5% of the teams perform one activity as a team unit, 57.9% have no activities performed by individuals, and 77.5% have no activities performed by groups smaller than the team.

Established-Emergent. With 857 teams of the 1156 reported, 76.1% were either established or more established than emergent (49.5%, the mode, were rated as established). The mean was 1.912, i.e., Army teams are more established than emergent.

Distribution of Rank. The rank of the team leader varied from E3 to O4, with most teams (32.4%, 374) having an E5 as a leader. The lowest rank on the team varied from E3 to WO, but was an E3 for most teams (70.0%, 809). Excluding the leader, the highest rank varied from E3 to O3 with E4 being the highest rank after the leader (37.5%, 434).

MOS Distribution. Leader MOSs were widely distributed throughout the 1156 teams. One hundred ninety-nine different MOSs (including skill level designation) were identified. Table 8 presents the top five leader MOSs and the top five dominant MOSs of the team. There were only 45 teams that had two dominant MOSs, i.e., these teams had two MOSs with the same number of members possessing one or the other.

Contingency Tables. The study team concluded that future analyses would require guidance in determining which combinations of variables would offer the best understanding of team structure. Thus, the CROSSTABS program of SPSS was used to develop 18 two-way contingency
### Table 8

#### MOS DISTRIBUTION

<table>
<thead>
<tr>
<th>Leader MOS</th>
<th>Absolute Frequency</th>
<th>Relative Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>13A00</td>
<td>47</td>
<td>4.1%</td>
</tr>
<tr>
<td>63B30</td>
<td>44</td>
<td>3.8</td>
</tr>
<tr>
<td>94B40</td>
<td>41</td>
<td>3.5%</td>
</tr>
<tr>
<td>94B30</td>
<td>40</td>
<td>3.5%</td>
</tr>
<tr>
<td>13Y5M</td>
<td>38</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dominant MOS</th>
<th>Absolute Frequency</th>
<th>Relative Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>948</td>
<td>87</td>
<td>7.5%</td>
</tr>
<tr>
<td>63B</td>
<td>69</td>
<td>6.0%</td>
</tr>
<tr>
<td>11B</td>
<td>66</td>
<td>5.7%</td>
</tr>
<tr>
<td>76Y</td>
<td>58</td>
<td>5.0%</td>
</tr>
<tr>
<td>13E</td>
<td>50</td>
<td>4.3%</td>
</tr>
</tbody>
</table>
tables of 10 variables. Table 9 provides a list of the 10 tables that were generated. These tables, given in Appendix E, will provide ARI with a preliminary overview, from which to formulate more extensive and comprehensive analyses. Because of the preliminary nature of these data, however, no report or discussion of these tables is given.

DISCUSSION

The demography of Army teams, as described in the Results section, is evident. The data document what was intuitive for quite some time. The average Army team has 6.7 members who fill 4.3 positions, has 2.5 ranks represented with members categorized under 2.0 MOSs. Each team has 0.5 members with skill level 40 or above, 0.6 with skill level 30, 1.9 with skill level 20, and 3.1 with skill level 10. The team uses 3.9 pieces of equipment while performing 4.9 activities of which 10 is performed by the team as a unit, 2.4 by individuals, and 1.6 by small groups other than the full team. The team tends to be more established than emergent.

Typically, the rank of the team leader is E5, but more often, he or she possesses an officer MOS - 13A00. Rank representation on the team ranges from E3 to E4, excluding the leader. Team homogeneity is represented by a 948 MOS in most cases.

It is apparent from the plethora of information gathered from the service school survey effort, many more analyses of the data will be possible. First, however, it would be useful if data inconsistencies were eliminated by follow-up communication with the respondents. Then when this survey information is correlated with the FORSCOM survey, the potential for full documentation of the structure and activities of Army teams will be enhanced.
Table 9

CONTINGENCY TABLES - COMBINATIONS OF VARIABLES

<table>
<thead>
<tr>
<th>Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE by RNKNUM</td>
</tr>
<tr>
<td>SIZE by SCNDLDR</td>
</tr>
<tr>
<td>SIZE by EMERESTB</td>
</tr>
<tr>
<td>SIZE by SKL40</td>
</tr>
<tr>
<td>SIZE by SKL30</td>
</tr>
<tr>
<td>POSNUM by RNKNUM</td>
</tr>
<tr>
<td>POSNUM by SCNDLDR</td>
</tr>
<tr>
<td>POSNUM by EMERESTB</td>
</tr>
<tr>
<td>POSNUM by ACTIV</td>
</tr>
<tr>
<td>SKL40 by ACTIV</td>
</tr>
<tr>
<td>SKL40 by EMERESTB</td>
</tr>
<tr>
<td>SKL30 by ACTIV</td>
</tr>
<tr>
<td>SKL30 by EMERESTB</td>
</tr>
<tr>
<td>SKL20 by ACTIV</td>
</tr>
<tr>
<td>SKL20 by EMERESTB</td>
</tr>
<tr>
<td>SKL10 by EMERESTB</td>
</tr>
<tr>
<td>SCNDLDR by ACTIV</td>
</tr>
<tr>
<td>EMERESTB by ACTIV</td>
</tr>
</tbody>
</table>
REFERENCES


APPENDIX A

RAW DATA

(Bound separately in seven volumes and was only issued with the original copy of the report.)
APPENDIX B

WORKSHEET AND QUESTIONNAIRES
Exhibit B-1. Team Identification Worksheet distributed to school personnel for purpose of obtaining a listing of teams by TOE number.
<table>
<thead>
<tr>
<th>Term Identification Worksheet</th>
<th>TOE number: ______</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Position or Section</th>
<th>First Name(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Enter plot or sec</td>
<td>(Enter all names</td>
</tr>
<tr>
<td>the term is found in)</td>
<td>formal and informal)</td>
</tr>
</tbody>
</table>

26
Exhibit B-2. Team Questionnaire For School Personnel.
Service school personnel were instructed to complete one questionnaire for each item listed on the Team Identification Worksheet.
TEAM QUESTIONNAIRE FOR SCHOOL PERSONNEL

(fill in one questionnaire for each team)

TEAM NAME: ________________________________

1. List each team member by position (title or function) and provide the information requested for each member.

<table>
<thead>
<tr>
<th>Position</th>
<th>Authorized Rank</th>
<th>Authorized MOS</th>
<th>Major Equipment</th>
</tr>
</thead>
</table>
2. Given the battalion is engaged in a defensive mission (for example, the defense mission in ARTP 7-15), describe the major job activities performed by the team to accomplish the team's part of the battalion mission. Identify, for each of these job activities, the team members (e.g., individual members or subteams) who usually perform the activity by entering their position(s) in the column on the right. If the entire team usually performs the task, enter "team" in this column.

<table>
<thead>
<tr>
<th>JOB ACTIVITIES</th>
<th>WHO PERFORMS THE ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Investigators involved in team research have found it useful to distinguish between two types of team job activities and situations:

a. **established**: the situations are routine and the job activities consist of completely specified procedures.

b. **emergent**: each situation tends to present a relatively unique problem; the team must decide what activities to perform and how to perform them in order to solve the problems.

For Army teams, established activities consist of very proceduralized tasks like loading, aiming and firing a cannon. Emergent activities are performed usually in response to changing knowledge of the enemy threat. For example, rifle squads continually modify their activities in response to enemy activity. The concepts of established and emergent actually represent extremes of a single continuum. Some activities and situations are established, some emergent, and some are somewhere in between two extremes.

Select the phrase listed below which best describes the general nature of the majority of job activities performed by this team.

- Established
- More established than emergent
- About equally established and emergent
- More emergent than established
- Emergent
4. Please list any source documents, field manuals, TMs, ARTEPs, studies or other publications which can be used to obtain information about this team.
Exhibit B-3. Army Team Operations Survey - Unit Questionnaire Package (Instruction Booklet). Each FORSCOM unit that was part of the sample was given one Instruction Booklet. There were four versions of pages three, one for each of the four types of organizational units in the Army. There were 13 versions of page four (a list of team types), one for each of the 13 service schools.
ARMY TEAM OPERATIONS SURVEY
UNIT QUESTIONNAIRE PACKAGE

This survey will provide the U.S. Army with information defining the characteristics, training/evaluation requirements, and problems of operational teams (crews, groups, squads, elements, etc.) in the basic branches.

This information will be used to develop methods of better meeting team training and evaluation requirements and resolving team problems to improve operational effectiveness.

Please answer the following questions about yourself. This information will be used for administrative and statistical control purposes.

- **Name:** ____________________________ 
  (Last, First, Middle)
- **What is your current position?** ____________________________
- **What is your rank?** ____________________________
- **What is your unit?** ____________________________ 
  (Full designation: e.g., G 3 1st 8th, 3rd Int.)
- **What is a telephone number at which you can be contacted if clarification of your answers is necessary?** ____________________________

Army research Institute for the behavioral and Social Sciences
Fort Bragg Field Unit
DATA REQUIRED BY THE PRIVACY ACT OF 1974

TITLE: Army Team Operations Survey

PRESCRIBING DIRECTIVE: AR 70-1

AUTHORITY: 10 USC Sec 4503

PURPOSE(S): The data collected with the attached forms are to be used for research purposes only.

This is a survey instrument developed by the U.S. Army Research Institute for the Behavioral and Social Sciences pursuant to its research mission as prescribed in AR 70-1.

Your participation in this research is voluntary and you are encouraged to provide complete and accurate information. Several of these questionnaire response items require judgments. Please make these judgments to the best of your ability.

POINT OF CONTACT FOR THE ARMY RESEARCH INSTITUTE: If you have any questions about this survey (interpretation of questions, etc.), please call or write:

Ms. Dorothy L. Finley
Army Research Institute
P.O. Box 2086
Fort Benning, GA 31905
Autovon 835-5589/3617

WHEN YOU ARE FINISHED WITH THESE QUESTIONNAIRES, RETURN THE ENTIRE PACKAGE TO THE INSTALLATION, DIVISION, OR OTHER LOCAL POINT OF CONTACT FOR THIS SURVEY.
Several copies of the team questionnaire are enclosed with this instruction booklet. Fill in one copy and attach it to the company in your battalion which is organized under the TOE under which the unit in your battalion is organized. If there is more than one company of this type in your battalion (for example, rifle companies in an infantry battalion), select only one of them (the most representative) for use in this survey.

- How many companies in your battalion are organized under this TOE? __________
- What is the current assigned strength for the company which you selected for this survey? __________

INSTRUCTIONS FOR IDENTIFYING TEAMS

To help you specify teams within this unit, a list of teams is provided on the next page. This list was generated by personnel in the TRADOC school which has proponency for the TOE under which the unit is organized. The list includes all the teams which they identified, on a preliminary basis, for selected units in your branch.

Select the teams from the list which can be found in the unit and fill in one of the attached questionnaires for each team. Be sure to list each team's name in the space provided in the upper right corner of each questionnaire. Answer the questions in terms of your experience with the teams in your unit.

After you have finished with the teams on the list, identify any additional teams in the unit which were not on the preliminary list and fill out a separate questionnaire for each of these teams. Again, be sure to insert the name of each team in the upper-right corner. Since the term "team" is used in many different ways in various branches of the Army, it is necessary to define "team" so that the use of the term will be consistent across branches:

(a) A "team" is a small group of individuals (smaller than platoon size) who interactively perform coordinated job activities.

(b) Positions or number assignments within a "team" must be formally defined on a relatively permanent basis. This means that ad hoc or informal, temporary teams (e.g., "take four men and scout that ridge") are to be included in the present study.

to be included in teams which mainly perform command and control and staff functions above platoon level.

Reproduced from best available copy.
General instructions for identifying teams are enclosed with this instruction booklet. Fill in one questionnaire for each team found in your battalion which is organized under the TOE number listed in the upper right corner on the first page of this booklet. If there is more than one battery of this type in your battalion (e.g., field artillery batteries in a field artillery battalion), select only one of them (the most representative) for use in this survey.

- How many batteries in your battalion are organized under this TOE? [ ]
- What is the current assigned strength for the battery which you selected for this survey? [ ]

INSTRUCTIONS FOR IDENTIFYING TEAMS

To help you specify teams within this unit, a list of teams is provided on the next page. This list was generated by personnel in the TRADOC school which has proponenty for the TOE under which the unit is organized. The list includes all the teams which they identified, on a preliminary basis, for selected units in your branch.

Select the teams from the list which can be found in the unit and fill in one of the attached questionnaires for each team. Be sure to list each team's name in the space provided in the upper right corner of each questionnaire. Answer the questions in terms of your experience with the teams in your unit.

After you have finished with the teams on the list, identify any additional teams in the unit which were not on the preliminary list and fill out a separate questionnaire for each of these teams. Again, be sure to list the name of each team in the upper right corner. Since the term "team" is used in so many different ways in various branches of the Army, it is necessary to define "team" so that the use of the term will be consistent across branches:

(a) A "team" is a small group of individuals (smaller than platoon size) who interactively perform coordinated job activities.

(b) Position or personnel assignments within a "team" must be normally defined on a relatively permanent basis. This means that all too often informal, temporary, or ad hoc "tasks, four men and a dog that are not to be included in the present study.

(c) We are not interested in teams which mainly perform support and control type tasks at the above-platoon level.
Several copies of the team questionnaire are included with this instruction booklet. Fill in one questionnaire for each team listed in the unit, or for each unit, which is organized under the TOE under which the unit is listed in the upper right corner of the questionnaire. If there is more than one troop of this type in your squadron (e.g., the tactical or operations troop in an armored cavalry squadron) select only one of them (the most representative) for use in this survey.

- How many troops in your squadron are organized under this TOE? [ ]
- What is the current assigned strength for the troop which you selected for this unit? [ ]

**INSTRUCTIONS FOR IDENTIFYING TEAMS**

To help you specify teams within this unit, a list of teams is provided on the next page. This list was generated by personnel in the TACOC of the TOE under which the unit is organized. The list includes all the teams which they identified, on a preliminary basis, for selected units in your branch.

Select the teams from the list which can be found in the unit and fill in one of the attached questionnaires for each team. Be sure to list each team's name in the space provided in the upper right corner of each questionnaire. Answer the questions in terms of your experience with the teams in your unit.

After you have finished with the teams on the list, identify any additional teams in the unit which were not on the preliminary list and fill out a separate questionnaire for each of these teams. Again, be sure to insert the name of each team in the upper right corner. Since the term "team" is used in many different ways in various branches of the Army, it is necessary to define "team" so that the use of the term will be consistent across branches:

(a) A "team" is a small group of individuals (smaller than platoon size) who interactively perform coordinated job activities.

(b) Position or member assignments within a "team" must be formally defined on a relatively permanent basis. This means that all face-to-face, temporary teams (e.g., "take four men and shoot that target") are to be included in the present study.

c) An individual is not considered a team which mainly performs administrative control or staff functions at the platoon level.
What is the current assigned strength for your unit? 15-17

**INSTRUCTIONS FOR IDENTIFYING TEAMS**

To help you specify teams within this unit, a list of teams is provided on the next page. This list was generated by personnel in the TADOC school which has proponents for the TOE under which the unit is organized. The list includes all the teams which they identified, on a preliminary basis, for selected units in your branch.

Select the terms from the list which can be found in the unit and fill in one of the attached questionnaires for each term. Be sure to list each team's name in the space provided in the upper right corner of each questionnaire. Answer the questions in terms of your experience with the teams in your unit.

After you have finished with the terms on the list, identify any additional teams in the unit which were not on the preliminary list and fill out a separate questionnaire for each of these terms. Again, be sure to insert the name of each team in the upper right corner. Since the term "team" is used in many different ways in various branches of the Army, it is necessary to define "team" so that the use of the term will be consistent across branches:

(a) A "team" is a small group of individuals (smaller than platoon size) who interactively perform coordinated job activities.

(b) Position or member assignments within a "team" must be formally defined on a relatively permanent basis. This means that all their internal temporary teams (e.g., "take four men and scout that ridge") are not to be included in the present study.

(c) We are not interested in teams which mainly perform command and control and staff functions above platoon level.
AIR DEFENSE

ACQUISITION RADAR SECTION
FIRE DISTRIBUTION SECTION
FIRE DISTRIBUTION SUPPORT SECTION
POWER - AIR CONDITIONER SUPPORT SECTION
IMPROVED HAWK MECHANICAL SUPPORT SECTION
ELECTRONICS AND RADAR SUPPORT SECTION
SUPPORT PLATOON HQS.
SECURITY SECTION
ELECTRONICS SECTION
COMMAND - ACQUISITION SECTION
FIRING SECTION
ASSEMBLY SERVICE MAINTENANCE SECTION
MISSILE GROUND HANDLING SUPPORT SECTION
GROUND GUIDANCE EQUIPMENT SUPPORT SECTION
RADAR SECTION
PLATOON SUPPORT SECTION,
FIRING SECTION - Towed
FIRE CONTROL SECTION
SYSTEM MAINTENANCE SECTION
VULCAN SQUAD
CHAPARRAL SQUAD
MISSILE GROUND HANDLING EQUIPMENT SUPPORT SECTION
ENGINEER SECTION

39
ARMOR

AMMUNITION TEAM
MEDICAL AIDMAN TEAM
CLINICAL SP TEAM
RATT TEAM
TRACK VEHICLE MECH TEAM
FOOD SERVICE OR NCO'S TEAM
AMMO HANDLER TEAM
RECOVERY TEAM
TANK TURRET MECH TEAM
WELDER TEAM
TANK CREW (M551)
RED EYE TEAM
GROUND SURVEILLANCE/RADAR CREW
SCOUT SQUAD
HEAVY MORTAR SQUAD
TANK CREW (M60A1)
COMM TEAM
AVLB TEAM
FIELD GEN EQUIPMENT MECH TEAM
ATTACK HELICOPTER CREW
OBSERVATION CREW
AIRFRAME REPAIRMAN TEAM
AH HELICOPTER REPAIRMAN TEAM
AIRCRAFT TURB ENGINE REPAIRMAN TEAM
TRANSPORT TEAM

UN-1 HELICOPTER REPAIRMAN TEAM
OH HELICOPTER REPAIRMAN TEAM
AEROSCIOUT CREW
RECONNAISSANCE (AEROKIFLE) SQUAD
AEROWEAPONS CREW
AVIONICS MECH TEAM
WHEELED VEHICLE MECH TEAM
AH-16 REPAIRMAN TEAM
AIRCRAFT ARMAMENT MECH TEAM
AIRCRAFT FUEL HANDLER'S TEAM
UN-1 HELICOPTER CREW
RADIO OPERATOR TEAM
RIFLE SQUAD
POWER GENERATOR OP/MECH TEAM
AH-1C MECH TEAM
UN-1 MECH TEAM
AIRCRAFT ROTOR REPAIRMAN TEAM
AIRMObILE SCOUT SQUAD
ANTITANK (TOW) TEAM
RADAR JPS TEAM
SCL TURB ENGINE REPAIRMAN TEAM
AIRCRAFT FIRE CONTROL REPAIRMAN TEAM
RCM SQUAD
RADIO OP TEAM
POWER TRJ+ REPAmAN TEAM
AVIATION

ATC TOWER
GCA
U-21 FLIGHT CREW
UH-1 CREW
AH-1G CREW
CH-47 CREW
CH-54 CREW
OV-1B CREW
OV-1C CREW
CONTROL TOWER
FIRE/CRA.SH RESCUE
FLIGHT OPERATIONS CENTER/FLIGHT COORDINATION CENTER TEAM
MAINTENANCE SECTION
MEDICAL SECTION
MESS SECTION
RADIO TELETYPE TEAM
ENGINEER SQUAD
MAINTENANCE TEAM
MESS TEAM
COMMO SECTION
PIPELINE CONSTRUCTION SQUAD
COMMO TEAM
BRIDGE SECTION
MAB CREW
CIV CREW
CONSTRUCTION SQUAD
HEAVY RAFT SECTION
AVLB CREW
FIRE FIGHTING TEAM
GEOGRAPHIC SURVEY TEAM
PIPELINE CUTTERHEAD TEAM
HOPPER OPERATION TEAM
FIELD ARTILLERY

HQ & SUPPORT SEC
MESS SEC
MAINTENANCE SEC
COMMUNICATIONS SEC
FORWARD OBSERVER SEC
FIRE DIRECTION CENTER
HOWitzer SEC
AMMUNITION SEC
COMMUNICATIONS-ELECTRONICS SEC
SURVEY SEC
FIRING SEC
ASSEMBLY-TRANSPORTATION SEC
BATTERY CONTROL CENTER SEC
SUPPORT PLATOON
WIRE SEC
RADIO SEC
SECURITY SEC
COUNTER MORTAR-KADAK SEC
AIR DEFENSE SEC
BATTALION SUPPLY SEC
BATTALION MAINTENANCE SEC
BATTERY HQ’S SEC
MEDICAL SEC
OPERATIONS/FIRE DIRECTION SEC

SURVEILLANCE SEC
NET SEC
HQ’S/SVC BATTERY MESS SEC
FIRING BATTERY MESS TEAM
SURVEY INFORMATION SEC
COMMUNICATIONS CENTER SEC
MICROWAVE SEC
BATTALION SUPPLY & MAINTENANCE SEC
BATTALION AMMUNITION SEC
BATTERY HQ’S SUPPORT SEC
BATTERY MAINTENANCE SEC
ELECTRONICS-MECHANIC SEC
ELECTRONICS-CONTROL SEC
TECHNICAL SUPPLY SEC
SUPPORT EQUIPMENT MAINTENANCE SEC
COMMUNICATION MAINTENANCE SEC
AMMUNITION SECURITY SEC
AVIATION SEC
AIRCRAFT MAINTENANCE SEC
RADIO/TELETYPE SEC
FLIGHT OPERATIONS SEC
DIRECT SUPPORT AIRCRAFT MAINTENANCE SEC
DIRECT SUPPORT SEC
GENERAL SUPPORT SEC
HEALTH SCIENCES

SUPPLY MAINTENANCE SECTION (AKA MOTOR POOL SECTION)
AIR AMBULANCE CREW FLIGHT OPERATIONS SECTION
AIRCRAFT MAINTENANCE SECTION DINING SECTION (AKA FOOD SERVICE SECTION)
AMBULANCE CREW (TEAM) OPERATING ROOM (OR) TEAM
(AKA SURGICAL TEAM) DENTAL TEAM
LITTER (REARER) TEAM EMERGENCY MEDICAL TEAM (EMT)
(AKA EMERGENCY RECEIVING/ DISPOSITION AREA, OUTPATIENT TREATMENT)
WARD (TEAM) COMMUNICATIONS SECTION
ADMINISTRATIVE AND DISPOSITION (AAD) SECTION (AKA PATIENT ADMINISTRATION DIVISION)
MEDICAL SUPPLY SECTION CENTRAL MATERIAL SUPPLY (CMS)
INTENSIVE CARE WARD (TEAM) INTERMEDIATE CARE WARD (TEAM)
MINIMAL CARE WARD (TEAM)
PHARMACY LABORATORY X-RAY
AIR TRAFFIC CONTROL APPROACH CONTROL
AIRFIELD SERVICE SECTION MOTOR MAINTENANCE SECTION
AVIATION MAINTENANCE SECTION JET AVIATION MAINTENANCE SECTION
AIRCRAFT MAINTENANCE SECTION STOCK CONTROL
QUALITY CONTROL RECEIVING/SHIPPING STORAGE/ISSUE
LOCATION AND DOCUMENT CONTROL MEDICAL MAINTENANCE
OPTICAL FABRICATION DIVISION HOSPITAL LAUNDRY
RADIOLOGY UNIF SUPPLY SECTION ORAL SURGERY
SURVEY TEAM

CLINICAL TEAM
DISPENSARY TEAM
MENTAL HYGIENE SECTION
CONVALESCENT CARE WARD(S)
INTENSIVE CARE WARD(S)
INTERMEDIATE CARE WARD(S)
MINIMAL CARE WARD(S)
WARDS (VARYING TYPES)
REMOVABLE PROSTHETICS
FIXED PROSTHETICS
TEAM BB - MEDSON SPET
TEAM BC - MED SUP (LG)
TEAM BD - INV CONTROL (SM)
TEAM RE - MED INV CONTROL (LG)
TEAM EA - MED EQUIP MAINT (SM)
TEAM EB - MED EQUIP MAINT (MED)
TEAM EC - MED EQUIP MAINT (LG)
TEAM GA - SPECTACLE FAB (SM)
TEAM GP - SPECTACLE FAB (LG)
TEAM FF - PATIENT IEC/REP
TEAM LB - ENVIRONMENTAL SANITATION
TEAM LC - ENVIRONMENTAL ENGR SVC
TEAM LD - EPIDEMIOLOGY
TEAM LE - ENTOMOLOGY LAB
TEAM LA - BLOOD PROCESSING
TEAM NB - BLOOD COLLECTING
TEAM QC - OUTPATIENT SVC
TEAM SF - INTENSIVE CARE WARD
TEAM SG - INTERMEDIATE CARE WARD
TEAM SN - MINIMAL CARE WARD
TEAM SI - CONVALESCENT CARE WARD
TEAM SJ - CMS
TEAM KA - SURG
TEAM KB - ORTHO
TEAM KC - SHOCK - INT CARE
TEAM KD - MAXILLOFACIAL
TEAM KE - NEURO SURG
TEAM KF - THORACIC
TEAM KG - ANESTHESIOLOGY
TEAM KH - OPTRAL
TEAM KI - ENT
TEAM LL - DERMATOLOGY
TEAM LM - MED TREAT (CHEM AG)
TEAM LN - RENAL-ELC NET
TEAM LH - CENTRAL DENTAL LAB
TEAM JA - VETERINARY SVC (SH)
TEAM JB - VETERINARY SVC (LG)
TEAM JC - VETERINARY SMALL ANIMAL DISP
TEAM JD - VETERINARY SMALL ANIMAL HOSP
RADIO TEAM
WIRE TEAM
MESSAGE CENTRE
TRANSPORTATION SD
SUPPLY SEC
MESS TEAM/SEC
MAINT PLAT
AID STAT SEC
EVAOS SEC
SUPPLY/TRANSD SEC
CONSOLIDATED MESS
AID STAT/EVAOS COMMD SD
BE EM REG SEC
MAINT SEC
RIFLE SQUAD
MACHINE GUN TEAM
RIFLE SQUAD
81m MORT SQUAD
81mm MORT SD HQ
ANTI TANK SQ AD (TAC)
CHARON II SD
SCOUT SQUAD
SNIPER TEAM
MAINT TEAM
SCOUT SQUAD
HVV MORT PLAT HQ
HVV MORT SQUAD
ANTI TANK SQUAD
REDEYE TEAM
FLIGHT OPERATIONS SEC
AIR TRAFFIC CONTR PLT HQ
FLIGHT COORDINATION CTR
AIRFIELD TERMINAL CONTROL SEC
PATHFINDER TEAM
AIRCRAFT ORG MAINT SEC
AIRCRAFT SVC SEC
AIRFIELD DS MAINT SEC
ARMED HELICOPTER SEC
AIRCRAFT ARM REPAIR SEC
UTILITY SUPPORT SEC
LIAISON SEC
SURVEILLANCE SEC
SUPPORT SEC

45
MILITARY POLICE

M2 .50 CAL. MACHINE GUN

90mm RECOILESS RIFLE

.50 CAL. MACHINE GUN
MISSILE AND MUNITIONS

SECURITY SQUAD
TEAM FB - EOD TEAM - CONVENTIONAL AUG
TEAM FC - EOD TEAM -NUCLEAR AUG
TEAM FD - EOD TEAM - TOXIC CHEM AUG
TEAM FE - EOD TEAM - VIP SUPPORT AUG
TEAM RA - TECHNICAL SUPPLY TEAM
TEAM RB - MSL MAINT HOY CONTROL TEAM
TEAM RC - LOSS TEST EQUIPMENT DS/GS TEAM
TEAM RD - Tom/Draco MSL MAINT DS/GS TEAM
TEAM RE - SHILLELAGH MSL MAINT DS/GS TEAM
TEAM RF - REDEYE MSL MAINT DS/GS TEAM
TEAM RG - LANCE MSL MAINT DS/GS TEAM
TEAM RK - CHAPARAL/VULCAN ELECT/FAAR MAINT DS/GS TEAM
| TEAM FB | DECONTAMINATION (BDE) |
| TEAM FA | DECONTAMINATION (CIV) |
| TEAM JA | CBR ELEMENT (ONE SHIFT) |
| TEAM JB | CBR ELEMENT (TWO SHIFTS) |
| TEAM KA | CBR SAMPLING AND ANALYSIS |
| TEAM LA | CBR RECONNAISSANCE |
| TEAM LR | CBR RECONNAISSANCE (SPECIAL) |
| TEAM NA | MECHANIZED FLAME (HM) |
| TEAM PA | MECHANIZED FLAME (HV) |
| TEAM QA | CBR STAFF |
| TEAM FA | CHEMICAL ORGANIC SUPPORT |
| TEAM FD | COMMUNICATIONS AND ELECTRONICS MAINTENANCE |
| TEAM DB | POWER GENERATION EQUIPMENT MAINTENANCE |
| TEAM EC | ENGINEER EQUIPMENT MAINTENANCE |
| TEAM DD | MATERIALS HANDLING EQUIPMENT MAINTENANCE |
| TEAM DE | MOTOR SERGEANT |
| TEAM DF | WHEEL VEHICLE MAINTENANCE |
| TEAM DH | TRACK VEHICLE MAINTENANCE |
| TEAM DI | AUTOMOTIVE MAINTENANCE (WHEEL) |
| TEAM BJ | AUTOMOTIVE MAINTENANCE (TRACK) |
| TEAM CK | AUTOMOTIVE MAINTENANCE (WHEEL) |
| TEAM CL | AUTOMOTIVE MAINTENANCE (TRACK) |
| TEAM D1 | M10 HEAVY EQUIPMENT MAINTENANCE |
| TEAM GA | FUEL/ELECTRICAL SYSTEMS REPAIR |
| TEAM ER | FIELD ARTILLERY REPAIR |
| TEAM EC | TURRET ARTILLERY REPAIR |
| TEAM ED | AUTOMOTIVE REPAIR TRACK/WHEEL |
| TEAM EF | FIRE CONTROL INSTRUMENT REPAIR |
| TEAM TG | MACHINERY SHOP SUPPORT |
| TEAM MG | AUTOMOTIVE REPAIR |
| TEAM EH | TURRET ARTILLERY REPAIR (CS) |
| TEAM FI | FIELD ARTILLERY REPAIR (CS) |
| TEAM EJ | MAINTENANCE SUPPORT |
| TEAM FY | MAINTENANCE SUPPORT |
| TEAM EL | CONSTRUCTION EQUIPMENT REPAIR |
| TEAM EM | SMALL ARMS REPAIR |
| TEAM EN | CHEMICAL EQUIPMENT REPAIR |
| TEAM FO | POWER GENERATION REPAIR |
| TEAM FP | FIRE REPAIR |
| TEAM HJ | REFRIGERATION REPAIR - MOBILE |
| TEAM ER | MECHANICAL AND METAL REPAIR |
| TEAM FN | METAL RING AND WELDING REPAIR |
| TEAM IT | AUTOMOTIVE REPAIR SUPERVISOR |
| TEAM EU | SMALL ARMS REPAIR |
| TEAM FV | AUTOMOTIVE REPAIR |
QUARTERMASTER

PARK TEAM
FSSP TEAM
LAUNDRY TEAM
DECONTAMINATION TEAM
BAKERY TEAM
BATH TEAM
TRANSPORTATION

HATCH GANG

CONTAINER HATCH GANG

BOAT CREW

AMPHIBIAN CREW

DIVING TEAM

TEAM FB - PICKET BOAT (46 ft.)

TEAM FD - HARBOUR TUG (45 ft.)

TEAM FE - PAX/CGO/PICKET BOAT (65 ft.)

TEAM FG - HARBOUR TUG (70 ft.)

TEAM FJ - HARBOUR TUG (100 ft.)

TEAM FK - OCEAN GOING TUG (126 ft.)

TEAM FL - LIQ/DRY CARGO BARGE, SP

TEAM FN - LIGHTER AMPHIBIAN, LARC, LK

TEAM FO - OCEAN GOING TUG (143 ft.)

TEAM IA - DIVER TEAM
Exhibit B-4. Army Team Operations Survey - Unit Questionnaire Package (Team Questionnaire). Each unit that was part of the FORSCOM sample was given from 1-40 Team Questionnaires. The exact number depended on the size of the unit. The unit was instructed to complete one questionnaire for each team type that exists under the TOE number supplied by the research group. The TOE numbers were identified from the service schools' Team Identification Worksheets.
**TEAM QUESTIONNAIRE**

(Fill in one questionnaire for each team)

1. How many of these teams are in your unit at present? □ □ □ □

2. What is the average number of members in this team in your unit at present? □ □ □ □

3. What percentage of these teams in your unit get up to full authorized strength for this team? □ □ □ □

4. How frequently are the following types of team training used to train this team in your unit? (Team training, as opposed to individual training, focuses on the development of team skills (such as coordination and communication) and the ability of the team to perform together as an effective unit.)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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<tbody>
<tr>
<td>Daily</td>
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<td>Several times a week</td>
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<td>Once a week</td>
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<td>Several times a month</td>
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<td>Once a month</td>
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<tr>
<td>Several times a year</td>
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<td>Once a year</td>
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<tr>
<td>Less than never</td>
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</tbody>
</table>

53
5. How frequently should the following types of team training be used for this team?

<table>
<thead>
<tr>
<th>Daily</th>
<th>Several times a week</th>
<th>Once a week</th>
<th>Once a month</th>
<th>Once a quarter</th>
<th>Once a year</th>
<th>Once a year or more</th>
<th>Never</th>
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</table>

- a. On-the-job team training
- b. Unit (bn, pl, plt, plq) maneuvers, exercises, tests (F2X, M2T, etc.)
- c. Field training exercises just for the team
- d. Classroom lectures and demonstrations which emphasize team skills
- e. Use of team training devices
- f. Special schools or courses for the team as a whole (outside the unit)
- g. Others (describe and give frequency):

6. To what extent are the leaders of your unit satisfied with the present level of team training (even if there is none) for this team?

<table>
<thead>
<tr>
<th>To no extent</th>
<th>A little</th>
<th>A moderate</th>
<th>To quite an extent</th>
<th>To a great extent</th>
<th>Completely satisfied</th>
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</table>

* If the leaders are completely satisfied, stop to question number 3.
In what extent do the factors listed below prevent your unit from conducting additional or better team training?

<table>
<thead>
<tr>
<th>Factor</th>
<th>To no extent</th>
<th>To a little extent</th>
<th>To a moderate extent</th>
<th>To quite an extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Lack of programs of instruction for team training.</td>
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<tr>
<td>b. Lack of realistic training for the team.</td>
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<tr>
<td>c. Lack of trainers to conduct team training.</td>
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<tr>
<td>d. Lack of time to conduct team training (team has to perform other peacetime duties).</td>
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<tr>
<td>e. Lack of facilities and support equipment.</td>
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<tr>
<td>f. Lack of team training devices, team training aids, etc.</td>
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<td>g. Difficulty of keeping the team together for a maintained training program.</td>
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<td>h. Individual training is more important.</td>
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<tr>
<td>i. Others (describe and indicate extent):</td>
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</tbody>
</table>

55
9. What extent do each of the following characteristics apply to this team?

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>To no extent</th>
<th>To a little extent</th>
<th>To quite a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Except for transfers, team members on a given team are usually the same individuals from hour to hour all week to day.</td>
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<tr>
<td>b. The team's tasks are mainly composed of the activities needed to operate one or more items of equipment.</td>
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<tr>
<td>c. Successful task/mission performance requires team members to obtain information about the work situation and to pass it on to other team members.</td>
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<tr>
<td>d. Successful task/mission performance is dependent on a leader to closely coordinate the activities of all team members.</td>
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<tr>
<td>e. Successful task/mission performance requires team members to coordinate their activities directly with each other.</td>
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<td>f. The tasks are such that if one member cannot perform adequately (e.g., fast enough), another member can &quot;make up for&quot; that performance.</td>
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<td>g. The team members need to express a &quot;team spirit&quot; in their work activities.</td>
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<td>h. Task performance by team members is dependent on timing, quality, and/or completeness of the performance of other team members.</td>
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<tr>
<td>i. Team member needs to know his mates and know how they will react in certain situations.</td>
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</table>

(Place check marks and indicate extent)
1. What extent do the factors listed below contribute to critical problems in your team (check one):

<table>
<thead>
<tr>
<th>Factor</th>
<th>In no extent</th>
<th>In a little extent</th>
<th>In a moderate extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. High turnover in team personnel (turnover)</td>
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<td>b. Team members are not qualified for their positions</td>
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<tr>
<td>c. Inadequate amount of team training</td>
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<tr>
<td>d. Training is not meaningful or realistic</td>
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<tr>
<td>e. Team is not given the opportunity to train with other teams</td>
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<tr>
<td>f. Lack of team spirit</td>
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<tr>
<td>g. Social problems (e.g., hostility between members)</td>
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<td>h. Lack of technically and tactically proficient leadership</td>
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<tr>
<td>i. Lack of discipline</td>
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<tr>
<td>j. Unavailable equipment that the team needs to practice</td>
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<tr>
<td>k. Lack of equipment that the team would normally use</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>l. Team is employing using inappropriate tactics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>m. Team is overloaded beyond its capabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n. Lack of motivation and cohesiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o. The current configuration of the team is inadequate for</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p. Too few or too few members are needed or different</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>q. Too many people who are under strength and thus lack</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>r. Not enough people to effectively perform team missions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s. Other (please specify and indicate extent)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

57
10. During external (AAR, ORR, etc.) evaluations, is the performance of this team evaluated as a complete and separate element of the unit?  

[ ] Yes  [ ] Sometimes *  [ ] No  

* Explain: ____________________________________________

11. a. How frequently is the performance of this team (as a separate element of the unit) internally evaluated within your unit (i.e., separate from parallel evaluations or independent evaluations of individual members)?

<table>
<thead>
<tr>
<th>Daily</th>
<th>Several times a week</th>
<th>Several times a month</th>
<th>Several times a year</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. If the team is internally evaluated by unit leaders, describe the methods you use to test the team. These methods might include procedures (e.g., does the team follow the correct procedures), quantitative standards checklists (e.g., number of hits, time it takes to perform a task), and overall ratings of mission accomplishment.

________________________________________________________________________
________________________________________________________________________

12. If this team is presently evaluated, to what extent are these evaluations a satisfactory estimate of the team's ability to perform its wartime missions.

Team is not evaluated  To no extent  To a little extent  To a moderate extent  To a great extent

[ ] [ ] [ ] [ ] [ ]

a. External evaluations:  

b. Internal evaluations:  

________________________________________________________________________
________________________________________________________________________

13. Please list any source documents, field manuals, TMs, ARTEPs, Training Circulars, studies, or publications which can be used to obtain information about this team.

________________________________________________________________________
________________________________________________________________________
APPENDIX C

SCHOOL LIST AND INSTRUCTIONS SENT TO SCHOOLS
Exhibit C-1. A list of the 13 service schools contacted during Phase I of the Army team survey.
Superintendent
Academy of Health Sciences
ATTN: HSA-TDC (LTC Richard J. Berchin)
Fort Sam Houston, Texas 78234

Commandant
U. S. Army Air Defense School
ATTN: ATSA-TD-CTD (Mr. A. P. Hendley)
Fort Bliss, Texas 79916

Commandant
U. S. Army Armor School
Directorate of Training Development
Collective Training Division
ATTN: Mr. J. W. Neely
Fort Knox, Kentucky 40121

Commander
U. S. Army Aviation Center
ATTN: ATZQ-TD-TAD (Mr. Ruben Harris)
Fort Rucker, Alabama 36362

Commandant
U. S. Army Engineer School
ATTN: ATSE-TDC (CPT D. E. Gulakowski)
Fort Belvoir, Virginia 22060

Commandant
U. S. Army Field Artillery School
ATTN: ATSF-TD-CT (CPT Sprengle)
Fort Sill, Oklahoma 73503

Commandant
U. S. Army Infantry School
ATTN: ATSH-CD-OE (Mr. R. O'Neil)
Fort Benning, Georgia 31905
Commandant
U. S. Army Military Police School
ATTN: AT7N-TDP-C (CPT G. Horton)
Fort McClellan, Alabama 36205

Commandant
U. S. Army Missile and Munitions Center and School
ATTN: ATSK-CD-OD (Mr. W. Schmidt)
Redstone Arsenal, Alabama 35809

Commandant
U. S. Army Ordnance Center and School
ATTN: ATSL-TD-TA (CPT R. Rose)
Aberdeen Proving Ground, Maryland 21005

Commandant
U. S. Army Quartermaster School
ATTN: J R. Buettner
Fort Lee, Virginia 23801

Commandant
U. S. Army Signal School
ATTN: ATSN-TD-CT (CPT E. L. Quinn)
Fort Gordon, Georgia 30905

Commandant
U. S. Army Transportation School
ATTN: ATSP-CD-OR (MAJ Larkins)
Fort Eustis, Virginia 23604
Exhibit C-2. Complete package (excluding worksheets and questionnaires) sent to the 13 service schools.
SUBJECT: ARI Team Operations Survey

THRU: H. C. Strousel, Chief P.O.'s

TO: (Address of Service School Typed Here)

1. Reference is made to the letter, dated 31 May 1977, ATMG-TDD-PM, HQ, United States Army Training and Doctrine Command, subject as above.

2. The Army Research Institute (ARI), Fort Benning Field Unit, and our resident contractor, Litton Mellonics, have begun a systematic study of team performance and training requirements. The initial step in the study is to conduct a survey to determine the frequency and extent of team training, evaluation, and other problems in the Army. Reference 1 reviews the need for this study, documents TRADOC's support for the effort, and states a requirement for TRADOC school support. The support requested from TRADOC schools is of utmost importance to the study. If it is properly provided, it will insure that future team research will be of use to the Army.

3. Your assistance is required in the development of the Army Team Operations Survey (ATOS) questionnaire and in the development of FORSCOM unit sampling procedures. You are asked to:

   a. provide a list of formal teams in your branch;

   b. complete a short questionnaire on each of these teams as initial information on the composition and characteristics of each team;

   c. provide information that will assist in developing the FORSCOM sampling plan and procedures; and
d. Evaluate the interpretability and meaningfulness of the items in the TOS questionnaire.

4. A set of instructions for performing these tasks is attached as inclusions 1-4. If there is any difficulty in interpreting these instructions or any questions concerning how to respond, please contact Dr. Jack B. Shelnutt of Litton Mellonics at AV 835-5589/3617/1414. If any other questions arise regarding the conduct of the study, please contact Ms. Dorothy L. Finley of ARI at the same AV number.

5. To reiterate, your inputs are very important to the success of this study. We appreciate your support and look forward to working with you.

DOROTHY L. FINLEY
Research Psychologist

as described
Contents:

Inclosure 1. A definition of "team" as it is to be used in this study.

2. Instructions for providing a list of teams.

3. Instructions for completing the team questionnaire for school personnel.

4. Instructions for reviewing the questions in the Team Survey which will be sent to FORSCOM units.

Appendix A. List of selected TOE

B. Team Identification Worksheets

C. Team Questionnaires for school personnel

D. A draft copy of the Team Survey which will be sent to FORSCOM units.
1. Definition of a "team"

Since the term "team" is used in many different ways in various branches of the Army, it is necessary to first define "team" so that the use of the term will be consistent across branches. For the purpose of the present study, the definition of "team" needs to be limited to the following:

(a) A "team" is a small group of usually 2 to 11 men who normally perform their tasks in an interactive and interdependent manner.

(b) Position or member assignments within a "team" must be formally defined. The team members may be dedicated (e.g., tank crews) or designated (e.g., a tank killer or anti-armor squad). This means that ad hoc or informal, temporary teams (e.g., "take four men and scout that ridge") are not to be included in the present study.

The scope of the present study is also limited to certain types of teams. At present, we are interested in the combat, combat support, combat service support and other types of teams which are formed at company and platoon level. We are not interested in teams which mainly perform command and control and staff functions above the platoon level.

The above definition of a "team" is not inviolate. You are asked to attempt to use this definition and inform Litton and ARI personnel of any need for revision or extension of the definition to make it usable for your branch.
2. Instructions for providing a list of teams

One of the primary objectives of this study is to identify the various teams that exist in different branches of the Army. The following procedures have been developed to help identify teams and to structure the identification process so that it will be done systematically and consistently across the different branches.

The following materials have also been provided to help you. Appendix A contains a list of selected TOE numbers and titles for companies and smaller units within your branch. If your school has proponenty for other TOE (units of company size or smaller), please add these TOE to the list.

Appendix B contains several copies of a Team Identification Worksheet which provides a place for you to write your list of teams.

The steps for filling in the Team Identification Worksheets using information in the TOE are as follows:

a. Obtain copies of the TOE listed in Appendix A.

b. Select the first TOE unit from the list.

c. Enter the TOE number of the unit in the upper right corner of a Team Identification Worksheet (Appendix B).

d. Using the organizational chart for that TOE unit, identify all of the teams in each platoon or section.

e. Enter the name of each team in the right column of the Team Identification Worksheet.

f. In the left column of the same worksheet, enter the platoon or section in which the teams are found.

g. After you have identified every team in every platoon or section in the company, select the next unit from the TOE list.
List in Appendix A and enter its number on the next Team Identification Worksheet. List all of the teams within the platoons or sections in this unit. Follow this procedure until all TOE units are covered.

To reduce the amount of work that you will need to perform, this procedure can be modified to eliminate redundant listing of teams by listing only additional or different teams for successive units. Each time you select a new unit (after the first unit), determine if it is similar to a unit previously covered (for example, teams found in rifle companies in airborne bn are similar to those found in rifle companies in airmobile bn). If so, simply enter the phrase "similar to TOE number (enter TOE number of the previous unit) except for the following teams" and then describe the following differences between the units:

a. Determine if there are any additional teams which can be found in platoons or sections in the unit which are not found in the previous units you have covered. If so, enter the team(s) and its section/platoon on the Team Identification Worksheet.

b. Determine also if there are any similar teams, found in the present unit and in the preceding unit, which have sufficiently different composition and training requirements to warrant their study as separate teams. If so, enter these teams on the worksheet.

c. Finally, determine if there are teams occurring in the previous unit and not in the present unit. If so, identify these teams
The above procedures are difficult, but a very important part of this study. The success of this project depends on your sincere efforts to carry them out. If you have any difficulty interpreting these instructions or any questions, please call the ARI/Litton POC.

After all the teams have been identified, please call the Litton/ARI POC and give us the list of teams that you have identified. Then proceed to the next section of work.
3. Instructions for completing the Team Questionnaire for school personnel.

Once teams have been identified (and the ARL/Litton POC has been given the list of teams) it is necessary to obtain some basic information about each team. Appendix C contains several copies of a Team Questionnaire which you will need to complete (one for each team that you have identified).

Use the Team Identification Worksheets to insure that all teams that you have identified are included as subjects for the questionnaires. Enter a team name on each questionnaire and supply the information requested for each team. If you have any questions, please call ARL/Litton POC.
4. Instructions for reviewing the questions in the team survey which will be sent to FORSCOM units:

Appendix D contains a draft copy of the Team Survey which will be sent to FORSCOM units. At present, personnel in the S3/G3 shops are expected to be the respondents for this survey. They will fill out one survey form for each team that you have identified.

The draft needs to be reviewed to determine the interpretability and meaningfulness of the questions. We want to know if the questions are clearly worded and unambiguous. We also want to know if the question can be meaningfully answered. If a question cannot be meaningfully answered, we need to know why (for example, it may be impossible to give a brief, simple answer, it is improbable that anyone will know the real answer, or there is too much variability within a certain type of team to use just one description to apply to all teams).

To review the survey, pick a team from the list of teams that you generated. Answer the questions in the survey with respect to this team. Write your comments concerning the interpretability of the questions and meaningfulness of possible answers in the margin of the draft copy or on the back of the survey forms.

If you have any questions, please call the ARI/Fitton POC. When you are finished with the questionnaires and survey, please return them to:

Dr. Jack B. Sheinutt
Fitton Mellonics
P.O. Box 2425
Fort Benning, Georgia 31905
Appendix B

Team Identification Worksheets

(One for each company covered in Appendix A)
Appendix C

Team Questionnaires for school personnel

(Fill 'n one for each team)
Appendix D

A draft copy of the Team Survey which will be sent to FORSCOM units (Review it to determine its interpretability and meaningfulness)
APPENDIX D

EXACT CODING SCHEME FOR SERVICE SCHOOL DATA
<table>
<thead>
<tr>
<th>Column(s)</th>
<th>Variable Name</th>
<th>Variable Label</th>
<th>Type</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>TEAM</td>
<td>TEAM ID NUMBER</td>
<td>N</td>
<td>Numeric identifier for team</td>
</tr>
<tr>
<td>5</td>
<td>CARD</td>
<td>CARD WITHIN A TEAM</td>
<td>N</td>
<td>Card sequence number within each team (i.e., data case)</td>
</tr>
<tr>
<td>6-7</td>
<td>BRANCH</td>
<td>(SAME)</td>
<td>N</td>
<td>Numeric identifier for subject school area</td>
</tr>
<tr>
<td>8-12</td>
<td>RNTOE</td>
<td>BATTALION TOE</td>
<td>N</td>
<td>Battalion TOE number</td>
</tr>
<tr>
<td>13-17</td>
<td>COTOE</td>
<td>COMPANY TOE</td>
<td>N</td>
<td>Company TOE number</td>
</tr>
<tr>
<td>18-19</td>
<td>SIZE</td>
<td>SIZE OF TEAM</td>
<td>N</td>
<td>Actual count of team members</td>
</tr>
<tr>
<td>20-21</td>
<td>POSNUM</td>
<td>NO. OF DIFF. POSITIONS</td>
<td>N</td>
<td>Number of position types represented</td>
</tr>
<tr>
<td>22-23</td>
<td>LDRRANK</td>
<td>RANK OF LEADER</td>
<td>A</td>
<td>Rank of team leader</td>
</tr>
<tr>
<td>24</td>
<td>Rnknum</td>
<td>NO. OF DIFF. RANKS (W-O LDR)</td>
<td>N</td>
<td>Number of rank types represented excluding the leader's</td>
</tr>
<tr>
<td>25-26</td>
<td>LOWRANK</td>
<td>LOWEST RANK</td>
<td>A</td>
<td>Lowest rank</td>
</tr>
<tr>
<td>27-28</td>
<td>HIGHRANK</td>
<td>HIGHEST RANK (W-O LDR)</td>
<td>A</td>
<td>Highest rank excluding the leader's</td>
</tr>
<tr>
<td>29-33</td>
<td>LDRMOS</td>
<td>MOS OF LEADER</td>
<td>A</td>
<td>MOS of leader (including skill level)</td>
</tr>
<tr>
<td>Columns</td>
<td>Variable Name</td>
<td>Variable Label</td>
<td>Type</td>
<td>Comments</td>
</tr>
<tr>
<td>---------</td>
<td>---------------</td>
<td>----------------</td>
<td>------</td>
<td>----------</td>
</tr>
<tr>
<td>34-38</td>
<td>MOSNUM</td>
<td>NO. OF DIFF. MOS</td>
<td>N</td>
<td>Number of MOS types represented</td>
</tr>
<tr>
<td>39-41</td>
<td>DOMOS</td>
<td>DOMINANT MOS</td>
<td>A</td>
<td>MOS appearing most often</td>
</tr>
<tr>
<td>42</td>
<td>DOMOS2</td>
<td>BIMODAL DOMINANT MOS</td>
<td>A</td>
<td>Used if DOMOS is bimodal</td>
</tr>
<tr>
<td>42-44</td>
<td>SCNDLDR</td>
<td>NO. OF SECONDARY LEADERS</td>
<td>N</td>
<td>Number of secondary leaders, if any</td>
</tr>
<tr>
<td>43-44</td>
<td>SKL40</td>
<td>NO. WITH SKILL LEVELS 40+</td>
<td>N</td>
<td>Number with skill levels 40 and above</td>
</tr>
<tr>
<td>45-46</td>
<td>SKL30</td>
<td>NO. WITH SKILL LEVEL 30</td>
<td>N</td>
<td>Number with skill level 30</td>
</tr>
<tr>
<td>47-48</td>
<td>SKL20</td>
<td>NO. WITH SKILL LEVEL 20</td>
<td>N</td>
<td>Number with skill level 20</td>
</tr>
<tr>
<td>49-50</td>
<td>SKL10</td>
<td>NO. WITH SKILL LEVEL 10</td>
<td>N</td>
<td>Number with skill level 10</td>
</tr>
<tr>
<td>51-52</td>
<td>EQUIP</td>
<td>NO. OF DIFF. EQUIPMENT TYPES</td>
<td>N</td>
<td>Number of pieces of equipment used by team</td>
</tr>
<tr>
<td>53-54</td>
<td>ACTIV</td>
<td>NO. OF JOB ACTIVITIES (TOTAL)</td>
<td>N</td>
<td>Number of total job activities performed</td>
</tr>
<tr>
<td>55-56</td>
<td>TMACT</td>
<td>NO. OF JOB ACTIVITIES PERFORMED BY TEAM</td>
<td>N</td>
<td>Number of job activities performed by team as a unit</td>
</tr>
<tr>
<td>57-58</td>
<td>INDACT</td>
<td>NO. OF JOB ACTIVITIES PERFORMED BY INDV.</td>
<td>N</td>
<td>Number of job activities performed by individuals alone</td>
</tr>
<tr>
<td>59</td>
<td>EMEREST</td>
<td>EMERGENT-ESTABLISHED SCALE</td>
<td>N</td>
<td>1=Established; 2=More Established Than Emergent; 3=About Equally Established and Emergent; 4=More Emergent Than Established; 5=Emergent</td>
</tr>
</tbody>
</table>
APPENDIX E

SPSS COMPUTER RUNS

(Bound separately in a single volume and was only issued with the original copy of the report.)
END

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