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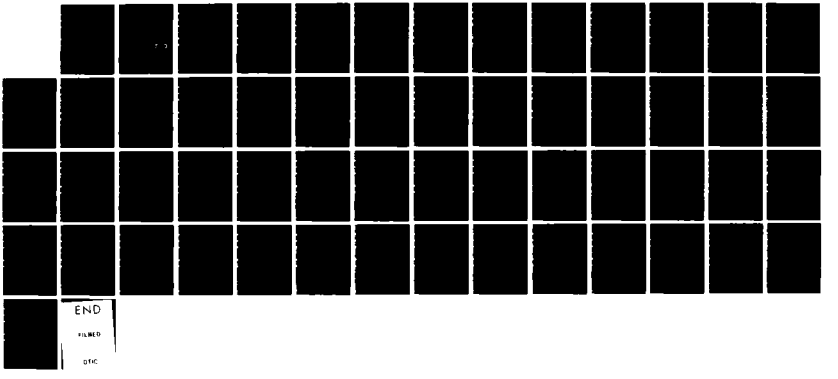

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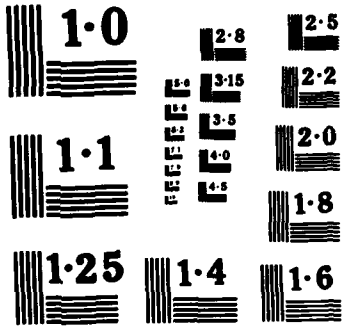
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AD-A144 999

AUTOMATED DECISION AIDS

FOR

THE BATTALION XO

ARMY COMMAND AND GENERAL STAFF COLLEGE
FORT LEAVENWORTH KS 66027

STUDENT STUDY PROJECT

CGSC AY 83-84

MAJOR ROBERT F. DEES

31 MAY 1984

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AUTOMATED DECISION AIDS

FOR

THE BATTALION EXECUTIVE OFFICER

I. INTRODUCTION

In anticipation of returning to Battalion Executive Officer(Bn XO) duties within an infantry or armor battalion, I embarked upon an investigation of microcomputer use at the battalion and company levels. Having become familiar with microcomputers in the past several years, I anticipated that there would be a great number of productive microcomputer applications to be discovered. This was in fact the case. The microcomputer technology which has emerged in the past decade can be a tremendous tool at the company and battalion level. The unit which does not avail itself of this powerful capability is at a distinct disadvantage. In terms of a popular television commercial promoting the IBM personal computer, those who use the computer to assist in their job can often "go to the ballgame" rather than "spend the night at the office." In practical military terms, the unit leader or staff officer who uses the microcomputer as a helpful tool is able to satisfy various management functions with greater efficiency, capability, and flexibility; thus freeing him to

exercise greater leadership through personal observation and contact with those whom he serves. Throughout this discussion a number of the benefits of microcomputer use at the small unit level (MUSUL, pronounced "muscle") will be mentioned. As a motivator for the skeptical or uninitiated, Figure 1 summarizes some key benefits of MUSUL. Figures 2 and 3 illustrate representative current and potential applications of microcomputers at the small unit level.

FIGURE 1

MUSUL BENEFITS

GARRISON

-FREE KEY PERSONNEL FOR GREATER PARTICIPATION IN TRAINING ACTIVITIES
-MANAGE RESOURCES BETTER/ENHANCE COMBAT READINESS
-GREATER ADMINISTRATIVE EFFICIENCY/DISCIPLINE/CAPABILITIES
-GREATER FLEXIBILITY/INCREASED INNOVATION
-TACTICAL WARGAMING
-COMPUTER LITERACY FOR FUTURE HIGH-LEVEL DECISIONMAKERS

FIELD

AREAS RELATED TO RESOURCE MANAGEMENT AND TACTICAL DECISIONMAKING INSIDE OF THE OPPONENT'S DECISIONMAKING CYCLE. THE FIELD USE OF MICROS AT THE SMALL UNIT LEVEL IS STILL IN QUESTION BECAUSE OF THE SURVIVABILITY ISSUE.

FIGURE 2

CURRENT AND POTENTIAL CAPABILITIES

S-1

BATTALION SUSPENSE FILE
PERSONNEL DATA(*)
LEGAL ACTIONS
DEPLOYMENT ROSTERS(*)
MONITOR KEY PERSONNEL
MEDICAL DATA(*)

S-2

SECURITY ROSTERS
INTELL TRAINING
"ENCOA"-ENEMY COURSE OF ACTION PREDICTOR(*)

S-3

AUTOMATE BTMS
TRAINING AMMUNITION TRACKER(*)
TMACS INPUT GENERATOR
RANGE/TRAINING AREA ALLOCATOR

S-4

POL EXPENDITURES/ FORECASTING
SSSC ACCOUNTING
INVENTORY CONTROL

(*) DENOTES CURRENT APPLICATIONS

FIGURE 3

CAPABILITIES(CONTINUED)

BMO	MESS
PLL TRACKING(*)	MENU PLANNING
VEHICLE STATUS(*)	FOOD REQUISITION
SERVICE SCHEDULING(*)	UTENSIL INVENTORY
TROUBLESHOOTING	MEAL CARD FILE(*)
DISPATCH CONTROL(*)	CASH COLLECTION RECORDS(*)
	RATION ACCOUNT TRACKER/ FORECASTER

COMPANIES	BN XO
KEY CONTROL(*)	STAFF ACTION SYSTEM
COMPANY MGMT SYSTEM(*)	IG PREPARATION PROGRAM
-PERSONNEL	BN FINANCIAL TRACKER
-LOGISTICS	UTILITY SOFTWARE(*)

(*) DENOTES CURRENT APPLICATIONS

****

IN ALL STAFF AREAS, UTILITY SOFTWARE IS NEEDED.

TEXT EDITOR
SPREAD SHEET
DATABASE MANAGER
GRAPHIC DISPLAY

AUTOMATED DECISION AIDS FOR THE BATTALION EXECUTIVE OFFICER consists of the three major sections noted below:

Description of the existing and proposed hardware and software status within companies and battalions,

Investigation of the functions normally performed by the Battalion Executive Officer, and

Recommendations, from a Bn XO's perspective, regarding microcomputer use in a battalion.

II. BENEFITS OF SMALL UNIT MICROS (ANNEX A)

The first of these sections (self-contained as Annex A) discusses the benefits of small unit (battalion and company) microcomputers ("micros"), the current small unit micro status, and recommendations to the Army regarding micro acquisition and use by small units. The section is summarized in Annex A as follows:

> "The Army needs more computers. These computers should be Army-issued microcomputers at Battalion level and below to take advantage of the significant garrison and potential field benefits offered by micros at those levels of command. The helpful software for these micros developed by Army personnel or obtained from outside sources must be properly managed by a designated proponent and distributed through command channels. Microcomputer Use at the Small Unit Level(MUSUL) can supply muscle to our modern Army. Only in this way can our "Army of the Future" take full advantage of the technology of today. Our soldiers and our Army's commitment to maximum combat readiness deserve no less."

Readers are encouraged to read Annex A in its entirety prior to proceeding further. Figure 4 recapitulates recommendations from Annex A regarding hardware acquisition and software development and management.

FIGURE 4

RECOMMENDATIONS

BOIP (BASIS OF ISSUE PLAN) FOR HARDWARE

1 MICRO WITH NECESSARY PERIPHERALS/SOFTWARE PER COMPANY

SIMILAR MICRO SET-UP FOR SPECIFIED BN STAFF MEMBERS

S-1 (USED JOINTLY WITH CDR/XO)

S-3 (USED JOINTLY WITH S-2)

S-4 (USED JOINTLY WITH BMO/MESS)

SOFTWARE DEVELOPMENT AND MANAGEMENT

MAJOR SOURCE SHOULD BE "IN-HOUSE"

MICRO SOFTWARE PROPONENT FOR ENTIRE ARMY NEEDED

PROPONENT SHOULD OPERATE A WORLD-WIDE MILITARY SOFTWARE USER'S GROUP

OVERALL,

STANDARDIZATION(TO A REASONABLE DEGREE) OF HARDWARE AND SOFTWARE WILL GREATLY ASSIST MICRO TRAINING, SOFTWARE USE, AND REDUNDANCY

COMMAND EMPHASIS, FROM THE HIGHEST LEVELS, IS NEEDED TO BRING ABOUT THE RECOMMENDED CHANGES.

III. BATTALION EXECUTIVE OFFICER FUNCTIONAL AREAS

Following the investigation of the MUSUL concept(Annex A), an investigation of the functions normally performed by the Battalion Executive Officer in a combat battalion was conducted. The methods used were comprehensive interviews with a small number of CGSC Class 83-84 students with previous Bn XO experience and general discussions with other experienced personnel within the college. Figure 4 depicts the personnel involved in this interview process. To assist the interviews, a Bn XO questionnaire was constructed. This questionnaire was extremely useful in focusing the interviews and allowing for comparison of the responses from different persons interviewed. The primary purpose of this analysis is not to reiterate the "nuts and bolts" answers to specific questions posed, but rather to identify trends among all the responses which assist in making recommendations(from a Bn XO's perspective) related to the use of a microcomputer to assist with the "care and feeding" of a battalion. It must be mentioned, however, that the interview process was extremely rewarding to this officer in terms of lessons and techniques learned by previous XOs. Annex B contains a copy of the questionnaire and an item-by-item summary of the trends noted for each topic on the questionnaire.

FIGURE 5

BATTALION XO INTERVIEWS

MAJOR TED SHADID	INF BN XO/IG INSPECTOR	6 HOI
MAJOR CHARLES COX	EN BN XO/G3 STAFF	2 HOUR
MAJOR RICH SMITH	AR BN XO/S3	2 HOURS
MAJOR(P) JAN BEER	IN(M2) BN XO/G3 STAFF	12 HOURS
MAJOR RON McBRIDE	CGSC DLOG/DIV FINANCIAL MANAGEMENT OFFICER(DFMO)	3 HOURS

*ADDITIONAL DISCUSSIONS WERE CONDUCTED WITH NUMEROUS CGSC INSTRUCTORS AND PEERS.

IV. MUSUL OBSERVATIONS AND RECOMMENDATIONS FOR BN XOs

Investigating the routine functions performed by a Bn XO revealed a number of observations and recommendations associated with microcomputer use at the company and battalion level. These remarks will remain focused upon the Bn XO and how he can use or influence the use of micros in his battalion.

First of all, the Bn XO must be careful not to upset the balance of responsibilities among the battalion staff members by introduction of automated techniques. The high speed environment at battalion level insures that staff officers will gladly allow someone else, including the Bn XO, to assume some of their responsibilities. The introduction and use of micros into such an environment must be carefully evaluated. An obvious question is who is going to get a micro and what will the particular staff officer use it for. These are pertinent questions because the control of information represents a form of authority or power and carries with it an implicit responsibility for the area which the information("data") pertains to.

Applying this principle, the Bn XO must be careful not to assume control of the information pertaining to a certain functional area so that he inappropriately relieves a subordinate staff officer of the responsibility to maintain and analyze that information. Because of

the capability of the microcomputer, the Bn XO could conceivably store all information of interest to him on his own micro. For example, desiring to track the history of his battalion's legal proceedings, the well-meaning XO could put all of the information regarding judicial, non-judicial, and discharge proceedings into a data file so that he can have immediate access to the information. Knowing a bit about the computer, this XO could also write a program which analyzes trends in non-judicial punishment with respect to time in service, unit of assignment, race, educational background, etc. Now, this hypothetical XO has probably built an excellent capability for tracking and analyzing legal information, but he should not use it. He should let the S-1 use it. Otherwise, he will undermine the authority of his S-1 and will implicitly, at least, assume a large amount of the responsibility for legal administration which is appropriately the S-1's function.

The scenario described above may seem intuitive, but the advent of the computer has created a new capability and a strong temptation for one to inappropriately control and manipulate voluminous amounts of data. The unit commander is probably the most subject to such a temptation. This inappropriate control of detailed information implicitly relieves the staff officer of responsibility which is rightly his. To describe this situation, a computer proverb might add "He who controls the data is often found holding the smoking gun." In most instances the Bn XO should avoid the "smoking gun" by insuring that subordinate battalion staff officers control the data. Thus, the Bn XO must carefully choose which areas he will personally track and

analyze and which areas he will require subordinate staff members to personally monitor.

It is recommended that the Bn XO retain primary oversight in the following areas:

*Staff Actions,

*IG Inspection Preparation, and

*Battalion Financial Status.

The BN XO Interview responses indicated that the XOs key responsibility in the battalion is to orchestrate the efforts of the battalion staff to accomplish what the commander wants done. Integral to this coordination function is the necessity to tailor the flow of communication in the battalion. Numerous channels of communication such as meetings, staff notes, battalion newsletters, videocassettes, and electronic mail can be used. The Bn XO would greatly profit from a program which manages dissemination of information and requirements to the battalion staff. Such a program, generically called the Staff Action System(SAS), would needs to perform several key tasks for the XO. First of all, the SAS should provide a calendar system that possesses numerous levels to allow the XO to "zoom" to larger or smaller time spans. For example, suppose the highest level is a year calendar showing the months and major activities. The zoom capability would allow the user to focus on a particular month for more detailed

information, then to a particular week, and even down to a given day with its associated time schedule and "to do" requirements. Associated with this calender system should be the ability to zoom on meetings to see agendas and participants and to obtain a daily listing of near-term suspenses for battalion staff actions. These outstanding assigned suspenses should also be obtainable in summary form to see all the suspenses a certain staff officer is dealing with at any given time. The SAS should also possess a compatible staff note system which allows the Bn XO to disseminate written information packets to battalion staff members on a weekly basis. These notes, distributed early in the week, would be the "songsheet" for battalion staff priorities and efforts during that week. The Battalion Commander may also desire to issue a similar set of notes to his subordinate commanders. In summary, this hypothesized Staff Action System would greatly facilitate the flow of communication in the battalion and would allow for consistent liaison with each member of the battalion staff.

The second area recommended for primary oversight by the Bn XO is IG inspection preparation. All of the XOs interviewed indicated that the XO is logically tasked with overall IG preparedness and that he must establish a systematic approach if he is perform this task successfully. Essentially, IG preparation must be approached with the same emphasis and frequency as battalion maintenance. Regardless of whether the installation uses announced or unannounced inspections, the battalion must clearly specify responsible persons in all areas and establish periodic staff checks and assistance visits. Aside from

the obvious benefit of computer-assisted storage and recall of IG pertinent information, an IG inspection preparation program could also analyze inspection results to identify trends, separate all information pertaining to a certain area(NBC, for instance), identify all the responsibilities assigned to a given individual, and prompt the XO prior to the departure of responsible individuals. This system might be of even greater usefulness at the company level, where the myriad of details become even more difficult to orchestrate. At present, no such IG Inspection Preparation software package has been developed. A utility package such as VISICALC or QUICK FILE IIE could be structured to reflect the appropriate information and could easily perform most of the requirements mentioned above.

The third area recommended for primary oversight by the XO is the battalion financial status. As mentioned previously, the XO does not want to preempt the Bn S-3's and Bn S-4's normal responsibilities regarding battalion financial matters. The financial area, however, is of such visibility and criticality that XO involvement is warranted. Apart from these considerations, it is also an area where lack of proper coordination among battalion staff members is frequent. The XO, as chairman of the Battalion Budget Advisory Council(BBAC), is logically the person to coordinate the efforts of the S-3, S-4, Battalion Motor Officer(BMO), and Company representatives regarding fund management in the areas of training, supply, and management. In particular, the XO must continually look ahead to identify trends, program unexpected funds, surface potential problem areas, wargame the upcoming budget submission, and keep the commander informed regarding

the battalion's overall financial status. At present there is no integrated software package which will perform these financial management functions for the XO. Development of such a software package should not be too complicated to develop and would contribute significantly to the efficient management of battalion funds.

A final area which lends itself to microcomputer use by the Bn XO pertains to his "fireman's" function. The interviews conducted indicated that the XO is often directed to troubleshoot various problem areas or to organize non-recurring activities. To efficiently discharge these responsibilities the XO should have access to and utilize a number of utility software packages. At a minimum, the Bn XO should have access to the following utility packages:

CAPABILITY	EXAMPLE
Spread Sheet Program	Visicalc or Multiplan
Word Processor	Applewriter IIE
Graphic Display Program	Visiplot, Visitrend
Information Briefing Program	Executive Briefing System

Depending upon the XO's quantitative background, a software package which provides statistical analysis and optimization techniques could also be extremely useful to the Bn XO. An example of such a program is "Computer Assisted Analysis for Military Managers", available from C2MUG(Command and Control Microcomputer User's Group) at Fort Leavenworth, Kansas. Requests for a C2MUG catalog or software such as this should be sent with an appropriate number of 5-1/4 inch diskettes

to:

CHIEF

CECOM, SDSD

ATTN:DRSEL-FL-SDSD (C2MUG)

FT LEAVENWORTH, KS 66027.

A second observation resulting from the XO interviews was the diversity of personalities, capabilities, and leadership techniques found among battalion commanders. Since all bosses vary, so must the XOs who work for them. An XO must adapt his demeanor and techniques to align with the battalion commander's desires. The XO must attempt to complement the commander by paying special attention to areas where the commander has blindspots or weaknesses. As applied to micro use in the battalion, the XO must evaluate his commander's openness to computers and adjust his approach accordingly. If the battalion commander is enthusiastic about computers and thinks they can do everything, the XO must channel this enthusiasm towards problems and situations that do, in fact, lend themselves to computer applications. Conversely, a commander who spurns the use of automated techniques or suffers from "computer anxiety" must be sold on the applicability of micros to his unit's operational requirements. The XO must be careful not to be a computer salesman; he must be a "capabilities" salesman. Once the boss gains an appreciation for potential capabilities, the fact that a computer is the means to that end is a minor detail.

As a further explanation of a term used above, computer anxiety

may be defined as a strong inhibition against computer interaction suffered by those who have never been forced or allowed to do so. Generally speaking, this computer anxiety is most often present in the over 35 age group which has not grown up with automation in the form of programmable calculators, video games, visually-oriented instructional techniques, automatic bank tellers, talking coke machines, and computers. This aversion to computers often results in a "generation gap" which separates the battalion commander, his senior NCOs, and possibly the XO from the younger officers, NCOs, and soldiers of the battalion who are far more open to and comfortable with the use of computers. This gap will disappear with the passage of time, but for the present both groups need to recognize the differences that exist and attempt to learn from one another.

A third observation regarding the use of micros in a battalion pertains to the XO's role as a staff motivator and educator. A number of persons who had observed attempts by battalions to employ micros noted that those units which succeeded possessed an XO who "kept things moving" and overcame the typical staff resistance to new ideas and techniques. Units where the XO was indifferent or opposed to the employment of micros quickly resorted to their older, more familiar techniques after a short period of time. Thus, in colloquial terms, the XO must be "a mover and a shaker" if his unit is to successfully implement and profit from the use of micros. Additionally, the XO must be willing to educate staff officers and commanders to allow them to fully utilize the computer's capabilities and, more importantly, to devise applications which meet needs only they can identify. Given the computer background possessed by some of today's soldiers,

lieutenants, and captains; the XO must also be open to learning from his subordinates in this area. In summary, the XO's functions of staff motivation and staff education are critical to the proper implementation of micros into a battalion.

Figure 6 reiterates the MUSUL Observations and Bn XO recommendations contained above.

FIGURE 6

MUSUL OBSERVATIONS/BN XO RECOMMENDATIONS

ALL BOSSES VARY; SO MUST XOs

"HE WHO CONTROLS THE DATA IS OFTEN FOUND HOLDING THE SMOKING GUN." (XOs MUST NOT PRE-EMPT NORMAL STAFF RESPONSIBILITIES.)

THE BN XO SHOULD RETAIN PRIMARY STAFF OVERSIGHT IN THREE AREAS. APPLICATION SOFTWARE SHOULD BE DEVELOPED TO ASSIST THE XO WITH THE FOLLOWING:

-STAFF COORDINATION

-IG INSPECTION PREPARATION

-BATTALION FINANCIAL STATUS

THE XO SERVES AS THE BN FIREMAN AND NEEDS VERSATILE UTILITY SOFTWARE PACKAGES ALSO.

COMPUTER ANXIETY IS A REAL PHENOMENON WHICH DETRACTS FROM INDIVIDUAL AND UNIT PERFORMANCE.

THE XO IS THE BN STAFF MOTIVATOR AND EDUCATOR. AS SUCH, THE XO MUST SET THE PACE REGARDING THE USE OF NEW AND INNOVATIVE TECHNIQUES (SUCH AS MICROS).

MICROCOMPUTER USE AT THE SMALL UNIT LEVEL(MUSUL) REPRESENTS A NEW COMBAT MULTIPLIER WHICH CAN ENHANCE COMBAT READINESS IN A NUMBER OF WAYS.

V. SUMMARY

Microcomputer software and hardware which can greatly assist the Army's efforts towards combat readiness are presently available. The Army should take rapid action to make the capabilities afforded by microcomputers available at the small unit level. The potential applications and resulting benefits of such an action appear limitless. The introduction of computers at the small unit level requires innovative staff officers and commanders who know the operational requirements of their position well and who are open to new and more efficient ways of meeting those requirements. Specifically, the Bn XO appears to be the key player at battalion level who must orchestrate inclusion of microcomputers into the battalion. In addition to coordinating the battalion's use of micros, the XO can profit greatly from using a micro to monitor certain key areas identified as requiring primary oversight by the Bn XO. An overwhelming consensus from all of the previous Bn XOs interviewed was that the XO "has his hands full." Looking back upon their duties as XOs, they unanimously agreed that the use of automated decision aids (a popular term for the many computer programs which can assist the commander or staff officer in making decisions and recommendations) would have considerably enhanced their value to their commander and to their unit. In his most recent address at the U.S. Command and General Staff College, General Paul F. Gorman stated "Mastery of computerization is an enormous advantage for military leaders to

have."[1] As the Army begins to provide the necessary microcomputer resources, battalions and companies must shift gears quickly to take advantage of this new combat multiplier. The Battalion Executive Officer is the person who can make that happen.

ANNEX A

MICROCOMPUTER USE

AT THE

SMALL UNIT LEVEL

(MUSUL)

MAJOR ROBERT F. DEES

ANNEX A

MICROCOMPUTER USE AT THE SMALL UNIT LEVEL

(MUSUL)

I. INTRODUCTION

At present the Army is allocating great amounts of time, personnel, and money to integrate computers into the Army. One must agree that we are in the computer revolution and that the Army, as with all professional sectors in our society at large, can profit greatly from the slave work and, in some cases, the decision assistance which computers can provide. Not disputing this point, I would submit that the Army's attempts to make best use of the computer technology available have fallen far short of potential gains. Specifically, the Army's one-sided emphasis upon employment of large computers at Division and higher levels of command has been inappropriate. Certainly, early decisions to develop basic data manipulation capabilities requiring large computers to run programs such as SIDPERS and DS4 were warranted. Unfortunately, the more recent focus upon developing increased command and control capabilities for Division level and higher indicates an imbalance in computer research, development, and acquisition priorities. Another

focus which would be at least as cost-effective is the integration of microcomputers(hereafter referred to as micros) at Battalion level and below. This automation initiative, micros at the small unit level, will be referred to as MUSUL(pronounced "muscle"). One has to question whether color graphics and automated briefing charts for the Corps Commander or efficient management of spare parts at the Battalion level can contribute the most to combat readiness. In fundamental terms, the Army does not necessarily need bigger or better computers; it needs more computers.

Several caveats are appropriate prior to continuing the discussion. First of all, with respect to computer useage the brigade level appears to be a transition zone where systems overlap and applications are less focused. This discussion refers primarily to Battalion and below and Division and above, realizing that Brigade can lie in either or both of the areas. A second point is that any criticism to be directed toward systems currently under development for Division and higher use is aimed at the priority given to development of those systems rather than at the management of those projects. Projects such as Manuever Control System(MCS), Automated Information Distribution System(AIDS), and Staff Planning and Distribution System(SPAADS) seem to be well managed and will enhance our Army's combat capability when they finally become operational. Of fundamental importance, however, is that past resource allocation decisions have overlooked large and immediate marginal gains to be accrued by simply "putting an APPLE in every orderly room"(as suggested by Major Hanselmann in ARMOR magazine, May-June 83). [2]

This article will address in general terms the benefits to be gained by the use of micros at the small unit level(battalion and below), followed by a description of the current computer situation in these units. Finally, recommendations regarding micro acquisition techniques and software development and management procedures will be provided.

II. BENEFITS OF SMALL UNIT MICROS.

A critic of expenditures for micros at battalion level and below might argue that "those folks are fighters" or "you can't shoot a computer." The implication of such comments is that a micro certainly can't increase the warfighting capability or combat readiness of a unit. The converse of this implication is true for several reasons. AR 350-1 states that training for the purpose of achieving combat readiness is the Army's number one priority. Micros certainly support this objective in that they can greatly reduce administrative time and free key company and battalion personnel from numerous distractors to training. In addition to providing more time for training, computers improve a unit's capability to manage resources which are directly related to combat readiness. Examples are PLL management and personnel deployability updates. Thus, even apart from a micro's potential use in a field environment, micros can make fundamental improvements to the process of preparing for war in garrison.

More specifically, the Infantry and Armor Centers have criticized the portability and survivability of micros for small units. 'Basically, these branches maintain that their units cannot carry all the equipment they have already and that the addition of micros at the small unit level would greatly worsen the problem. Secondly, these centers argue that micros cannot withstand the environmental and combat effects of the battlefield.' [3] 'In a similar fashion, the Combined Arms Center(CAC) position regarding

MUSUL is that micros are not essential at the small unit level(Bn and Co), are not survivable in their cheaper, unhardened configuration; and are not a worthwhile expenditure in light of the many other automation initiatives which are competing for the same funds.' [4]

These perceptions regarding MUSUL seem to miss the key point that, apart from potential field uses for micros, micros employed in a garrison environment can greatly enhance the unit's capability to conduct combat operations. These computers, carried as station property, would not detract from combat mobility and are extremely inexpensive, particularly if purchased in volume for a large number of units. The "mission essential" measure of effectiveness(MOE) is not a useful MOE. By this criteria, most of the Army's ongoing automation initiatives could be rejected and the MOE has still not differentiated among competing alternatives. A more significant measure is the degree to which alternative systems enhance a unit's warfighting capability. As will be noted throughout this discussion, the use of micros in small units can significantly enhance preparedness for combat and, thus, performance in combat.

General Patton recognized the necessity for administrative discipline. This concept of discipline translates to timely retrieval of critical information and orderliness, accuracy, and consistency in the administrative affairs of a unit. In Patton's words, "Administrative discipline is the index of combat discipline." The micro can provide access to information and administrative capabilities unattainable by manual methods. A prime example is the

"Company Management System"(to be discussed later) which virtually automates the administrative functions within a company and allows the company commander to manage resources(particularly personnel) better than ever before.

Another way in which micros improve the combat readiness of a unit is that it increases the flexibility and innovativeness of key personnel by allowing them to play "what if" games in many areas of logistics, tactics, and administration. For example, in the middle of the month the dining facility NCO can forecast his monthly dining account status under a number of speculated conditions. He can easily experiment to see if a battalion field day serving steaks is feasible within the current dining facility budget. Another example is in the area of tactical wargaming where micros can now accommodate useful wargames for unit use which several years ago could only be run on large mainframes. The BABBITS project(formerly called MACE) in the Combined Arms Combat Developments Activity(CACDA) at Ft. Leavenworth is a good example of this application. Another application of the small unit micro is for interactive training on subjects well suited to a computer. The "Think Red" program produced by the Jet Propulsion Laboratory for the U.S. Army Intelligence Center is an excellent Soviet threat training program designed for the Apple IIE. A distinctive characteristic of the American fighting man has always been his flexibility and creativity. The use of micros at battalion and below can nurture and capitalize upon that intangible, but critical quality. Given the computer expertise which many enlisted soldiers and officers are now bringing into the Army, the potential

applications which this talent can address are unlimited.

Most of the areas mentioned above involve garrison uses of micros. These garrison uses themselves will result in improved combat readiness, but there are numerous units who also attest to the large contribution which micros can make to warfighting capability in the field. Several MI units, for instance, have designed elaborate micro systems which are an integral part of their intelligence processing and data correlation procedures. A major concern is the survivability of these systems because of the elements, unavoidable rough handling, and enemy induced complications such as EMP. This survivability consideration is definitely a major issue which dictates that total dependence upon computers in combat is premature. The issue of survivability does, however, favor a number of hardened, dispersed micros or minicomputers rather than larger operating systems which constitute a greater potential loss when incapacitated. The Manuever Control System(MCS) with TCSs(Tactical Control Systems) and TCTs(Tactical Control Terminals) does capture this philosophy, but the terminals cannot be programmed for utilization beyond their intended function. This was a major mistake in the design of MCS. At a relatively small cost, the MCS terminals could have been made programmable by the unit(with the command and control software protected from user meddling) and able to serve many other field and garrison needs of the unit. The MCS fielding plan initially placed a TCT at battalion level, but a recent change makes brigade the lowest level scheduled to receive a TCT. Overall, the feasibility of using local area command and control computer networks in a field

environment is still in question.

A final benefit of the MUSUL alternative is that the frequent use of micros at the small unit level creates an environment where the future high-level decisionmakers(now lieutenants and captains) and future senior NCOs(now training sergeants, squad leaders, et.al.) can progress beyond today's widespread computer illiteracy and paranoia. The computer is not a threat or a hindrance; it is a valuable tool which gladly performs the most trivial slave labor, yet can provide timely advice for the most complex of decisions. Leaders at all levels in the Army can no longer afford to deny themselves of the use of such a tool.

III. CURRENT MICRO STATUS

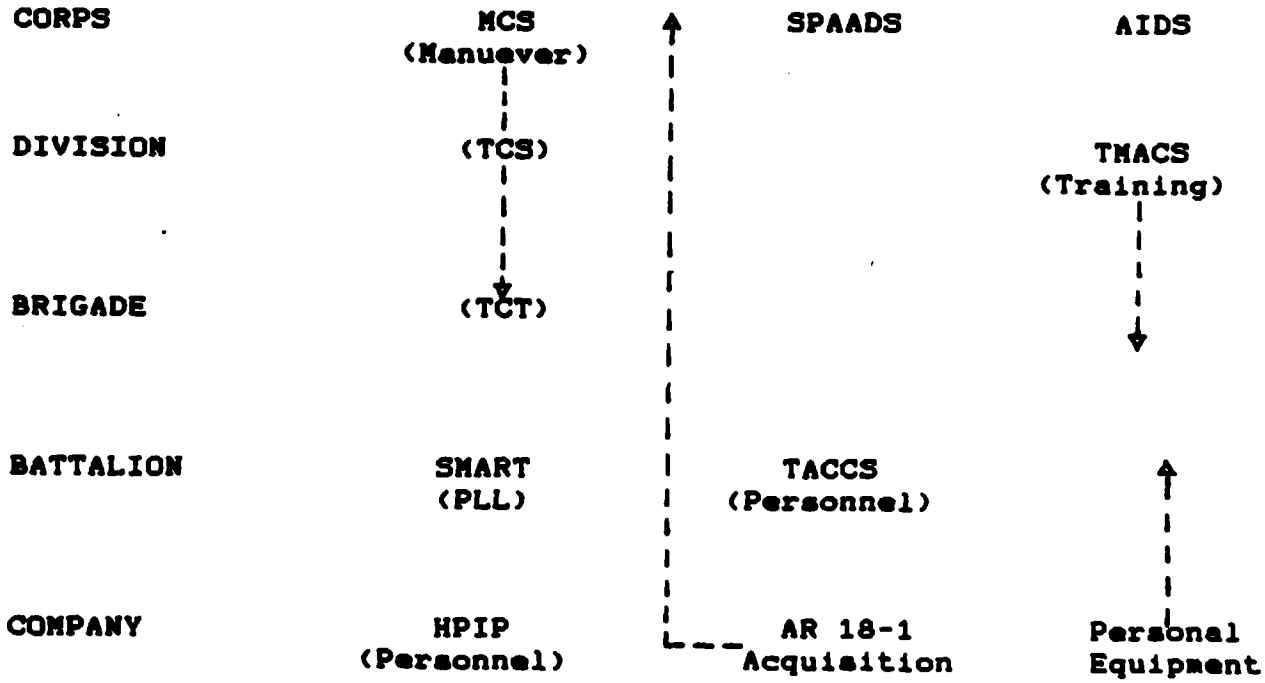
Having partially described what is to be gained by the MUSUL concept, let us describe the current status of hardware, unit applications, software distribution mechanisms(user's groups), and procurement of micros through Army channels. It must first be noted that many units have obtained commercial hardware "off the shelf" in order to meet short-term requirements for micros. This approach is sometimes useful(as noted by General Gorman,[5]), but it leads to a lack of standardization in the long run and does not provide the quality or quantity discounts available through an Army multi-unit contract arrangement. This is why an earlier recommendation specified that the Army "force feed" micros to small units.

There are a number of micros which the Army has already made available to units. Figure A-1 depicts most of the existing microcomputers from Corps to Company level. The TCT and TCS terminals have been previously discussed. In their present configuration, these terminals are not useful beyond their intended purpose of manuever control. The Training Management Control System(TMACS) supplies each brigade with a PULAU 2000 microcomputer system which is being programmed and used for a number of brigade applications. Interviews with several previous Division G3 and Brigade S3 officers indicate that unit personnel used these PULAU micros for many non-TMACS

applications. The ready acceptance and use of this micro for non-TMACS applications attests to the multitude of needs to be met by a micro at division and brigade levels.

FIGURE A-1

CURRENT MICRO STATUS



Similarly, the SMART program, currently in a pilot status at Fort Stewart, illustrates the high degree of micro utilization obtained by putting a microcomputer in each battalion motor pool. This program is a DA DCSLOG automation initiative which utilizes the TACOPS(Tactical Organization Paperless Service Support System) software to create a paperless prescribed load list(PLL) operation, handle all PLL requisitions, update records, keep track of deadlined equipment, handle vehicle dispatch, and greatly reduce the error rate in processing Class IX requisitions through the system. The Mission Element Need for a capability such as the SMART system is summarized as follows:

> "Surviving in tomorrow's fluid and dynamic battlefield requires an unprecedented level of performance and efficiency by support personnel at all levels. . . At the unit level, automation which simplifies tasks, reduces errors, integrates supply and maintenance functions, and provides timely equipment status information is especially needed to properly manage resources and maintain high readiness rates."[6]

One of the units involved in the SMART program is 2-9 Cav, 24th Infantry Division. LTC Doug Campbell, the squadron commander, reports in ARMOR magazine[7] that since its arrival the SMART APPLE has been used almost 16 hours per day. Unit-initiated applications include a customized squadron deadline which automatically updates vehicle

historical files, a daily and monthly percentage operational readiness report, automation of the squadron's immunization records and other key medical data, and automation of squadron deployment rosters. In this same squadron, one of the troop commanders has a portable OSBORNE micro(his personal property) which he uses for a vehicle control system which is used primarily by the troop dispatcher for pre- and post-dispatch procedures. This troop commander has also placed all section hand receipts on the micro, allowing for quick updates of all hand receipts. LTC Campbell concludes his comments by stating,

> "A portable computer is needed for each troop or company and staff sections at battalion, brigade, and division level that communicates operations orders and voluminous reports. It can provide the Army a great edge in peace or war and is an idea the Army needs to exploit."[8]

I wholeheartedly agree with this assessment and maintain that the Army can obtain a "big bang for their buck" by following LTC Campbell's suggestion. Certainly, one SMART motor pool APPLE can do a lot for a squadron or battalion, but additional micros are needed to address all of the beneficial applications. The recommended allocation of micros to a battalion-size unit will be addressed later.

A particularly comprehensive package of software entitled the Company Management System(CMS) has been written and utilized by a CPT Robert Brescia.[9] CPT Brescia, an ordnance officer with a computer

background, designed CMS as a set of computer programs designed to provide accurate and timely personnel and logistic data for company and battalion management of operations. The system was conceived, produced, and field-tested during a two-year period at the 517th Maintenance Company, 51st Maintenance Battalion, 21st Support Command(FRG). CMS is a Department of the Army "non-standard" system and augments standard systems, such as SIDPERS, already used by Army companies. In the area of logistics management CMS helps the commander manage the hand receipt process to include line item number(LIN) sequence listings of all equipment on hand receipts, overdue inventory listings, cyclic inventory listings, and storage of data contained on the unit MTOE. In the area of personnel management CMS maintains a company roster off of which it can program award recommendations, forecast critical personnel shortages, generate an informal unit manning report, creating promotion worksheets through grade E4, and create a graphic summary of enlisted soldiers in the unit(by grade and primary MOS). In summary, it is indisputable that the company commander and first sergeant who employ such a system are better informed regarding their unit, better equipped to make personnel and logistic decisions, and less hindered by the administrative requirements attendant to running a company. In a similar fashion, LTC Campbell and LTC Tom Graney(Cdr, 3-19 Infantry, 24th Infantry Division) strongly attest to the value of micro access for squadron and battalion staff members.

These examples of micro use at battalion level and below are only a small glimpse of the experimentation with micros currently

taking place in our Army. Unfortunately, this use of micros primarily lies in the domain of innovative officers, NCOs, and enlisted men who utilize their own equipment, who often write their unit's programs during personal time, and who are seldom able to distribute their programs or receive programs from the Army at-large. These individuals are to be commended for their efforts which save the Army untold amounts of time and money. This situtions is not desirable and technically violates the Anti-Deficiency Act(RS 3679) in that it creates an unauthorized governmental obligation for services rendered. Authorization and procurement of unit micros is presently a lengthy process which varies from command to command. Army funding, command emphasis, and transmittal of software products to potential users can produce quicker and even greater results.

Still addressing the current situation, there are some useful vehicles for the transmittal of software products such as those mentioned above. One of these is the Command and Control Microcomputer User's Group(C2MUG) whose proponent is the Communication and Electronics Command(CECOM) at Fort Leavenworth. This micro user's group for military users publishes an informative newsletter on monthly basis, acts as a clearing house for Army related software, and will send copies and documentation to units with a need for particular software. C2MUG has been in existence for about a year and has experienced limited success. The program is well managed, but the number of contributed programs is still relatively small compared to the large number of useful programs which have been written in the Army. Another military user's group, Automated Command and Training

Systems User's Group(ACTSUG) has similar problems. ACTSUG is administered by the Department of Automated Command and Training Systems(DACTS) in the Command and General Staff College at Ft. Leavenworth. Because of insufficient publicity and lack of command emphasis these user's groups are marginally effective because of their inability to communicate with micro users world-wide.

One other provision for software consolidation and distribution is contained in AR 18-22. This regulation "recommends" that each corps-level Automation Management Office(AMO) be a drop-off point for user-contributed programs. This recommendation might be producing the desired consolidation of programs within a corps, but there has been no effort to consolidate these programs at higher levels for distribution throughout the Army. Additionally, few of the programs developed in the field have made it to either of the micro software focal points at Fort Leavenworth(C2MUG or ACTSUG).

As stated earlier, authorization and procurement of a micro through Army channels is a complex and lengthy process. The December 1982 C2MUG Bulletin contains an excellent explanation of micro procurement procedures. In short, a unit must have a genuine need which can be addressed with available funds. Obviously, proper articulation of the need, probably citing many of the reasons previously discussed, and identification of available funds is key to the process. The regulation covering the procurement process is AR 18-1 with TB 18-100 and subordinate command supplements as supporting documents. The approving authority is the installation AMO. The

process consists of the following three phases: Mission Element Need Statement(MENS) approval(validates the need for additional resources), AR 18-1/TB 18-100 approval(approves the purchase), and the contracting process(buys and installs the equipment). The average time involved from initiation to equipment on hand is 12 to 18 months, although a well-stated need and available funding for a small purchase(less than 10 micros) could reduce the lead-time to 6-7 months.[10]

IV. RECOMMENDATIONS.

Now that the need for micros at battalion level and below has been addressed and the current status of micros in these units has been discussed, it is now appropriate to make certain key recommendations. The recommendations, shown in Figure A-1, will involve hardware acquisition and software production and distribution. First of all, the cumbersome micro acquisition procedures must be streamlined. In fact, an entirely different philosophy should be used. At present the system is "pull" oriented whereas the Army should "push" the equipment into the field. This new philosophy is justifiable in light of the verified and, hopefully, high priority need and in light of the relatively small amount of funds(to be discussed) required to positively(not experimentally) address the need. Specifically, one micro with the essential peripherals should be placed on company MTOEs or on company installation property records(depending upon field use and survivability questions still to be answered). Using similar issue procedures, each squadron and battalion headquarters should have a minimum of three micros. Primary users of these would be the S1, S3, and S4. The SMART terminal(if that concept is approved) could serve as the S4 terminal.

FIGURE A-1

RECOMMENDATIONS

BOIP (BASIS OF ISSUE PLAN) FOR HARDWARE,

1 MICRO WITH NECESSARY PERIPHERALS/SOFTWARE PER COMPANY

SIMILAR MICRO SET-UP FOR SPECIFIED BN STAFF MEMBERS

S-1 (USED JOINTLY WITH CDR/XO)

S-3 (USED JOINTLY WITH S-2)

S-4 (USED JOINTLY WITH BMO/MESS)

SOFTWARE DEVELOPMENT AND MANAGEMENT,

MAJOR SOURCE SHOULD BE "IN-HOUSE"

MICRO SOFTWARE PROPONENT FOR ENTIRE ARMY NEEDED

PROPONENT SHOULD OPERATE A WORLD-WIDE MILITARY SOFTWARE USER'S GROUP

OVERALL,

STANDARDIZATION(TO A REASONABLE DEGREE) OF HARDWARE AND SOFTWARE WILL GREATLY ASSIST MICRO TRAINING, SOFTWARE USE, AND REDUNDANCY

COMMAND EMPHASIS, FROM THE HIGHEST LEVELS, IS NEEDED TO BRING ABOUT THE RECOMMENDED CHANGES.

Some of the applications for these company and battalion micros are listed in Figures A-2 and A-3. Given these specifications, a J-series mechanized infantry battalion would be issued 8 micros(HHC(1), Companies(4), Bn Staff(3)), assuming that the smaller Anti-tank Company could satellite with one of the other companies. The cost of such an arrangement would be highly variable. Assuming some economies of scale, hardware acquisition expenditures for a division with this recommended micro configuration should definitely not exceed $100,000 and could possibly be considerably less. This amount of money seems large, but is actually relatively small when compared to the money currently being spent on the development of other computer-based systems such as MCS, SPAADS, and AIDS(Automated Information Distribution System). These systems, aspiring to far greater complexity, have taken years for their research, development, and acquisition. Unfortunately, their potential is yet to be realized. Conversely, issue of micros today on the basis prescribed would immediately provide positive results and greater combat effectiveness.

A second recommendation pertains to software procurement. It is essential that quality software be developed in-house by Army personnel, contracted to commercial vendors for the development of specific applications packages, or purchased directly in the form of commercially available non-specific application packages(spread sheets, database managers, etc.). In the first case, quality software is being developed in the field by talented Army personnel. CPT Brescia's Company Management System is an example of such quality software developed in-house.

The saying "necessity is the mother of invention" is certainly true in the case of unit-generated software.

FIGURE A-2

CURRENT AND POTENTIAL CAPABILITIES

S-1

BATTALION SUSPENSE FILE
PERSONNEL DATA(*)
LEGAL ACTIONS
DEPLOYMENT ROSTERS(*)
MONITOR KEY PERSONNEL
MEDICAL DATA(*)

S-2

SECURITY ROSTERS
INTELL TRAINING
"ENCOA"-ENEMY COURSE OF ACTION PREDICTOR(*)

S-3

AUTOMATE BTMS
TRAINING AMMUNITION TRACKER(*)
TMACS INPUT GENERATOR
RANGE/TRAINING AREA ALLOCATOR

S-4

POL EXPENDITURES/ FORECASTING
SSSC ACCOUNTING
INVENTORY CONTROL

(*) DENOTES CURRENT APPLICATIONS

FIGURE A-3

CAPABILITIES(CONTINUED)

BMO

PLL TRACKING(*)
VEHICLE STATUS(*)
SERVICE SCHEDULING(*)
TROUBLESHOOTING
DISPATCH CONTROL(*)

MESS

MENU PLANNING
FOOD REQUISITION
UTENSIL INVENTORY
MEAL CARD FILE(*)
CASH COLLECTION RECORDS(*)
RATION ACCOUNT TRACKER/
FORECASTER

COMPANIES

KEY CONTROL(*)
COMPANY MGMT SYSTEM(*)
-PERSONNEL
-LOGISTICS

BN XO

STAFF ACTION SYSTEM
IG PREPARATION PROGRAM
BN FINANCIAL TRACKER
UTILITY SOFTWARE(*)

(*) DENOTES CURRENT APPLICATIONS

Additionally, some software should be contracted out to a commercial vendor such as with "Think Red" produced for the U.S. Army Intelligence Center by the Jet Propulsion Laboratory.[11] The primary mode of software development, however, should continue to be "in-house" development. The cost to procure the appropriate software will very with the mix of sources and the number of receiving units over which the initial development and procurement costs can be spread. Regardless of the source of this software, there must be established conventions regarding documentation, distribution, and quality. This leads to a second essential regarding the development and management of Army micro software.

Current micro user's groups and Army regulations are not sufficient for regulation or propagation of Army software. Command emphasis must be placed upon comprehensive regulations regarding micros(yet to be written and published by the Army). This command emphasis must be accompanied by appropriate publicity transmitted through command channels regarding the production, collection, and Army-wide sharing of micro software. A third recommendation is that a proponent responsible for operating a central clearing house for microcomputer software should be designated. At present C2MUG and ACTSUG are too narrowly focused to act as Army-wide repositories for software. CECOM is a logical candidate for proponency and, with a broadened charter, C2MUG could provide the required service. The development of software in the Army represents a virtual explosion which must be organized quickly to take advantage of the applications

developed and to avoid manpower wastage through "reinvention of the wheel" by uncoordinated software developers.

In summation, the Army needs more computers(not necessarily more powerful computers). These computers should be Army-issued microcomputers at Battalion level and below to take advantage of the significant garrison and potential field benefits offered by micros at those levels of command. The helpful software developed by Army personnel for these micros and the software obtained from outside sources must be properly managed by a designated proponent and distributed through command channels. Microcomputer Use at the Small Unit Level(MUSUL) can supply muscle to our modern Army. Only in this way can our "Army of the Future" take full advantage of the technology of today. Our soldiers and our Army's commitment to maximum combat readiness deserve no less.

BN XO QUESTIONNAIRE

MESS OPERATIONS

MAINTENANCE

BATTALION TRAINS OPERATION

STAFF ACTIONS

SOCIAL ACTIVITIES

PLANNING

IG PREP/INSPECT

STAFF MEETINGS

FLOW OF INFO

Indiv. interface with key players
(S1-4,BMO, HHC Cdr,Co Cdrs,CSM, Bn Cdr, others?)

OE

TACTICAL OPNS

KEY PERSONNEL SELECTION

PARTNERSHIP PROGRAMS

TUFMIS(and other financial requirements)

SUPPLY ACTIVITIES

"STAY BEHIND" ACTIVITIES

MTA PROCEDURES

SUPPORT AGENCY INTERFACES

USE OF MICROCOMPUTERS/WORD PROCESSORS

INTERFACE WITH BRIGADE/DIV

OTHER AREAS WHICH SHOULD BE LISTED?

67-8-1 (COPY?)

TREND SUMMARY

BN XO QUESTIONNAIRE

[NOTE: A discussion of each functional area could easily be expanded into a lengthy essay. The comments below, however, constitute short statements to act as reminders or suggest areas for further thought. Omission of any given area does not imply insignificance.]

MESS OPERATIONS

Check the supper meal. Fewer officers eat this one. Mess often skimps at this meal.

Everyone gets involved in this area(CSM,S4,XO,CDR,Mess Officer). This sometimes causes misunderstandings.

Headcount prediction is always a difficulty. Statistical prediction techniques could be useful here.

MAINTENANCE

"Bonus babies", whether qualified or not, must work in their MOS.

Deadline report is a daily requirement. Different ways to handle.

XO should meet with BMO on a daily basis.

Tracking of scheduled services lends itself to automation.

Equipment exceeding 30 days on deadline should trigger a big flag.

BATTALION TRAINS OPERATION

None of the XOs discussed this in considerable detail. The organizational structure and the commander's preferences dictate this one.

STAFF ACTIONS

Important to maintain a suspense file of outstanding staff actions. An automated system to provide fool-proof tracking of all outstanding suspenses would be helpful.

SOCIAL ACTIVITIES

Use of different companies to be in charge of social events helps to spread the responsiblity. Variety is helpful(conventional socials, dining-ins, road rallies, camp outs, etc.).

Battalion social events, such as Family Night at the Dining Facility, are good ways to orient family members on upcoming events(ARTEP, NTC, REFORGER, etc.).

PLANNING

XO is the key person in the battalion to stretch out the time horizon and avoid the press of short-term crisis management. XO should spend much of his time thinking about future operations and requirements.

IG PREP/INSPECT

(Responses varied depending upon announced or unannounced IG system)

Establish a systematic procedure for inspecting all areas on a recurring basis. The inspections should be conducted as close as possible to the actual event.

Avoid too many outside experts. Have one person(probably the XO) act as a liaison to MAIT and the IG inspection team. Don't make knee-jerk reactions to each new rumor that enters the battalion. The liaison person should also be the official source for standards, SOPs for the inspection, etc.

Development of a Bn IG Inspection Team which conducts realistic inspections.

STAFF MEETINGS

Meetings can be a tremendous waste of time. Periodically the XO must scrub scheduled meetings and cut out those which are not necessary. Prior to a meeting, an agenda should be prepared and distributed.

Types of meetings? staff, legal, finances, mess, training, commander's, materiel readiness, et. al. How often? When? Who attends? Subject? Is it necessary? What will make the meeting a success?

The bottom line is that the battalion must have a well-coordinated system of recurring meetings which complement one another and are run properly. The Bn XO should insure such a

system exists and works. No two battalions do this exactly the same way.

FLOW OF INFO

Meetings(above) remain the primary means of disseminating information. Alternative techniques(staff notes, electronic mail, video cassettes) should be used when possible.

XO should insure that information flow in battalion is effective. Use of staff notes(issued on a weekly basis) assists with efficient exchange of information among staff officers.

Establishment of a garrison TOC which uses field comms procedures is a helpful way to train for actual missions. Many things which must be done in garrison can be done using field procedures and equipment.

XO should keep his ear to the ground. Frequent visits to division support and support units are helpful.

INTERFACE WITH KEY PLAYERS
(S1-4,BMO, HHC Cdr,Co Cdrs,CSM, Bn Cdr, others?)

Try not to cut out the HHC commander. A constant tension exists between battalion staff support functions and HHC support functions. The XO has to be the arbitrator and insure that a proper balance is maintained.

Play up the strengths and compensate for the weaknesses of your key players. For example, the SGM should be allowed to operate in his strong areas.

Battalion Motor Officer(BMO) is a key player who needs periodic "stroking."

Rating scheme for support platoons? The Bn XO has a vested interest in being the intermediate rater for the support platoons in HHC.

ORGANIZATIONAL EFFECTIVENESS

The staff has a problem when one of the units does.

Executive OE session, when performed by competent personnel, can be good for the unit and for the incoming commander.

Answer the mail; don't worry about perfection.

TACTICAL OPNS

Totally dependent upon the commander's techniques. Generally, XO operates from the company trains and back. XO has to be the "mover and shaker" in the BN rear.

XO checklist for return from field operations is helpful.

KEY PERSONNEL SELECTION

Bn XO should concentrate upon the selection of key personnel. It is important to match the right traits, temperament, and tenure with the right job. An automated system to track the departure of key personnel, to include those responsible for each IG area, would greatly assist transition of personnel.

PARTNERSHIP PROGRAMS

None of the persons interviewed were OCONUS XOs.

TUFMIS(and other financial requirements)

SSSC Expenditures are the only area of finances which are not automated. A SSSC tracking system which feeds into an overall financial framework for the battalion would be helpful.

Because of the criticality of accountability of funds at the battalion level, the XO should be the person to synthesize the staff's separate financial functions. While not pre-empting staff responsibilities in this area, the XO must keep track of the "big picture" on this one. As chairman of the Battalion Budget Advisory Council(BBAC), the XO is in a position to insure that the finances stay on track. He should get to know the DFMO well.

An automated system to display the battalion's financial condition and to forecast for future quarters would be very useful.

SUPPLY ACTIVITIES

No new insights except the XOs responsibility to insure that personnel turnover does not severely degrade the battalion's supply and support functions.

"STAY BEHIND" ACTIVITIES

The tendency is often to place an officer on profile or a less competent officer in charge of stay-behind activities. This is

usually a mistake. It is usually best to "bite the bullet", keep a good officer in the rear, and prevent small problems from getting out of control.

MTA PROCEDURES

Not discussed in detail.

SUPPORT AGENCY INTERFACES

XO should have close liaison with DFMO and other financial management players. In this way the XO can often become the first to know about problem areas and about available funds which the battalion can use.

Liaison with supporting personnel/units is extremely helpful and often results in your "getting the benefit of the doubt." Attempt to recognize these units when possible and include key personnel in officer call's, social activities, etc. The XO should be the one to make this happen.

USE OF MICROCOMPUTERS/WORD PROCESSORS

None of the XOs interviewed had used microcomputers extensively, although all had used word processors productively to maintain rosters, etc. Most did not initially understand the increased capability that a programmable microcomputer can provide. All recognized numerous areas where microcomputer could have assisted them in their responsibilities.

INTERFACE WITH BRIGADE/DIV

Don't "bad-mouth" brigade staff too much. Remember that each one of them would probably like to have your job. As much as possible, try to make the brigade staff look good in front of their boss. Try to discuss problems with them prior to "announcing" the shortcoming.

The XO's relationship with the Bde XO is important. Those interviewed suggested differing degrees of formality, but all agreed that it was critical to achieve a close working relationship with him.

OTHER AREAS WHICH SHOULD BE LISTED?

Summary Court Martials and Article 32s are considerable distractors from the XOs time. There were a variety of ways to delegate these tasks. CPTs can participate as well. Many XOs did it all themselves.

For CONUS units, Reserve and National Guard Evaluations are frequent. ARTEP evaluations of other units are also a time demand for the XO.

67-8-1 COPY

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