

## MICROCOMPUTER USE IN SECURITY ASSISTANCE MANAGEMENT

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When was the last time you encountered a book or an article heralding the arrival of a computer and the telecommunications revolution? Some authors, such as Alvin Toffler in his books Future Shock and The Third Wave, tell of dramatic social changes to come. News media are filled with articles about alterations in lifestyles and work habits caused by this supposed revolution. More and more American industries are perceiving these changes and attempting to adapt accordingly. In one way or other, we are all affected by the wide spread use of computers. They are a fact of modern life!

A strong case can be argued that the communications needs of an expanding American industry, together with the needs of the space program, fueled today's significant technological changes. Industrial modernization and the U.S. export market expansion after World War II have resulted in the increasingly wide, global reach of U.S. industry and the concomitant strain on existing lines of communication. The expansion has coincided with an explosion of management information quantity, speed and sophistication in all fields. One of the American institutions with the earliest truly global information needs facing the same challenges is the U.S. military. It is a particularly difficult challenge for the military's far flung security assistance activities to meet their management needs; however, computers offer one method of meeting these needs.

### INITIAL MILITARY COMPUTER USE

Many technological advances throughout history have had both military and commercial applications. In some cases private enterprise usage, as with the teletype and telephone, preceded that of the military's. In another example, who would have thought a mechanized farm implement such as the Caterpillar tractor would have evolved into the scourge of land warfare as a tank. In one increasingly important field -- computer technology -- the military initially led the way for private industry and continues in the forefront of super computers (operating at a speed of 100 million operations per second). However, U.S. industry, management activities, and the academe are moving out more rapidly than the military in the smaller computer application.

The computer "genesis" began in the aftermath of World War II when the U.S. Army created a behemoth electro-mechanical creature of vacuum tubes and wires weighing 30 tons. This huge device was called ENIAC (Electronic Numerical Integrator and Computer) and occupied 15,000 square feet of space.

and had over 40,000 vacuum tubes. Each successive generation has become more sophisticated, faster and more compact although some still are of heroic proportions when compared with today's personal computers. Advances in computer technology, since the advent of ENIAC, have been remarkable. With present-day technology, a person purchasing a typical personal computer for under \$400, can perform simple arithmetical equations 18 times faster than ENIAC.

## TECHNOLOGY GAP

Although the majority of the U.S. military computers are not as archaic as the ENIAC generation equipment, some are still of the 50's, 60's and 70's design. However, the military is replacing these older models as rapidly as management needs dictate and the availability of money resources permit. While some of the current military computers may lack the speed and sophistication of their commercial counterparts, others are at the leading edge of the state of the art. It all depends on needs and priorities.

Much of the data gathering in the military still depends on the time tested, trusty key-punch card. This mode of data gathering and processing relies on large, main frame computers centrally located. Their sheer size makes it impractical to locate at field installations, and transferring data over long distances exposes it to all the vagaries of communications. In turn, the printed output is often bulky, non current and inappropriate. The fact that this information is not appropriate is not the fault of the computer but rather that of management which has failed to correctly determine it's true information needs. In the instance of security assistance management related activities, printouts in formats similar to the training detail listings provided by the Defense Security Assistance Agency (DSAA), the school allocations lists furnished by each military department (MILDEP), and the foreign military sales (FMS) customer billing statements prepared by the Security Assistance Accounting Center (SAAC), are provided for management use. This method of information collection, using a combination of letter, message, and telephone traffic, is inefficient. The system is cumbersome with its multitude of references and forms, difficult to adjust, and very time consuming. Subordinate commands, which provide (input) the basic information (data), receive a marginally useful return (output) for their efforts, while at the top the central computer facility becomes inundated.

When private industry has applied modern computer technology to these same problems, more symbiotic relationships have developed within the implementing organization. As a result of extensive computerization, more information is exchanged among head offices, support elements, and field sites rather than being directed through the head office alone. With a combination of sophisticated computers, word processors, and telecommunications, private corporations are doing things such as teleconferencing and the near elimination of hard copy (paper) printouts and records, resorting instead to some form of magnetic storage and transfer.

All of these changes require a more disciplined management of the information flow which is at once quantumly increased in volume and accuracy, as well as more lateral in nature. This puts more information in the hands of policy implementers at a level of precision never before possible, and reduces the burden at the center or top. Headquarters can, in turn, be better

informed, maintain a greater data-base, and avoid involvement with data exchanges which can be more efficiently handled at lower levels.

### OBSTACLES TO MODERNIZATION

A major problem faced by the military and industry alike in adjusting to a rapidly changing technology like computer science is the sheer cost of modernization. A phenomenal investment was involved in computerizing the various military personnel and logistical systems during the early phases of the computer era. Although new computers are incredibly inexpensive compared to their predecessors, the older computers still represent a sizable investment. In the face of that investment and the reluctance of management to invest in the newer models, some employees are purchasing small personal computers and using these to more effectively perform their daily work functions.

Software has become increasingly sophisticated, but is actually much simpler to use for the computer operator, and thereby has reduced, but not eliminated, the requirement for highly trained programmers. As the new software advantages become more apparent and resources are made available, it is hoped that the Department of Defense (DoD) will establish a coherent, centrally directed plan for implementing the new software technology. For the present, however, individual agencies within DoD are already taking up the challenge of adapting the new computer systems.

### UNIFIED COMMAND EFFORTS TO INCREASE COMPUTER USE

For those management personnel working in security assistance, information flow problems have become acute because of the myriad channels and the vast distances involved. However, hope is in sight. At the unified command level, several initiatives have been introduced. At the United States European Command (EUCOM), for example, computer printouts from the various MILDEPS and DoD, produced in various formats with redundant information, are reproduced in a more desirable form for subordinate security assistance offices (SAOs). Within the United States Pacific Command (PACOM) area, the J4 staff discussed microcomputer applications in the Phase IV Training Seminar conducted 11-15 October 1982 in Hawaii. [See the discussion of the Phase IV Training Seminar on pp. 96 of this Journal.] The same topic was examined in discussions at the November 1982 PACOM Security Assistance Conference, and is planned for further discussion at the upcoming 1983 PACOM Spring Training Workshop.

### STRONG PACOM SUPPORT

Certain security assistance computerization objectives within the PACOM area are beginning to take shape. First, self-sufficiency appears to be desirable so that each SAO can develop, receive and provide computer-formatted information in conjunction with other agencies. A basic self sufficiency goal is to reduce the amount of "stubby pencil" and hand calculator time which detracts from the available time to manage security assistance programs or interface with host-country counterparts. Another goal is to speed up the flow of crucial decision-making information by decentralizing information storage, e.g., school quotas.

A relatively simple method of information exchange is through connection with a peripheral device called a modem (modulator-demodulator). With this device, computers can exchange information over normal telephone lines at high speed. One use of the modem is the access to a program referred to as the "bulletin board", a favorite of private computer enthusiasts. This bulletin board is a method of designating a modem-equipped computer as a central information source. Other computer users can call that source over the phone and obtain information or place information in storage to be accessed by other users. With the proper software, modem-equipped computers can be left on in order to answer telephone calls on their own and exchange information with other computers. A bulletin board information exchange for security assistance could easily be established in the PACOM area today with minimal additional resources, considerably improving the flow of information to SAOs.

For the PACOM area, CINCPAC J4 plans on pursuing a two-pronged program. First, a continuing study will be made of equipment needs with an eye toward justifying additional computer purchases for SAOs lacking computer resources. Next, for SAOs already possessing computer hardware or those using personal microcomputers, the J4 staff hopes to provide computer support in the way of application knowhow and program sharing among subordinate SAOs. In both hardware and software areas, computer compatibility for information exchanges is crucial to any regional program.

#### LONG RANGE GOALS AND JUSTIFICATION

The PACOM staff envisions the day of unified command data communications links with military departments. For instance, individual service schools can provide school quota information which could be stored at the unified command level and made available as required for access by subordinate SAOs in different time zones. Eventually, at unified command workshops, changes to the DSAA detail listing could be done without hardcopy printouts in a mere few minutes by use of magnetic storage disks the size of 45 rpm records or through audio cassettes.

The potential for improved information management is inestimable. Today there are many areas which could be addressed in security assistance. For example: a frequently voiced complaint of other countries is that the U.S. Foreign Military Sales and International Military Education and Training programs are too slow and inflexible; letters of Offer and Acceptance, DD Forms 1513, can consume four to five weeks for mailing during the signature phase alone; turnaround time for requests and verification of school courses, under present procedures, can average 12 weeks; financial management of IMET programs can become a nightmare when determining actual budget expenditures in order to squeeze the maximum number of courses possible for a host country's allocation; and many others. These problems may have to be faced in times of declining SAO staff size and increasingly larger FMS/IMET allocations. Microcomputers can assist in overcoming the personnel shortage by making more efficient use of the time spent by security assistance personnel on such matters. Although the promise of computerization is great, its ultimate utility will depend on the rapidity by which management wishes to move and the quality of the personnel assigned to its use.

## COMPUTERS ARE EXECUTIVE TOOLS

The application of small computers in security assistance has already begun in the PACOM area. At the SAOs in Jakarta, Kuala Lumpur, and Bangkok, use of the computer's word processing capabilities has considerably reduced the effort necessary to reproduce and compile recurring records and reports. However, the use of only the word processing functions of a computer, or even the purchase of a word processor alone in order to save a few dollars, denies a tool of immense value to security assistance managers at the SAO.

Most of the detailed, time-consuming minor details of an IMET program manager's can be relegated to the computer. For instance, the training officer spends much time doing redundant calculations in maintaining the IMET budget changes. These changes, must in turn, be prepared in message form to be sent to the appropriate MILDEP and posted to the DSAA detail listing. This process can easily be computerized. Another excellent application for computers is in the preparation of recurring reports or briefing charts, which require detailed information and frequent updates and are often demanded by commanders on short notice.

### SOME SPECIFIC APPLICATION EXAMPLES

An executive need no longer fear long delays in obtaining a computer program to support the need for an application like one of those mentioned above. One variety of computer software for microcomputers, available off the shelf for approximately \$180, can fulfill most of the tasks discussed. Software with such brand names such as Supercalc, Magicalc, Calcstar, and Visicalc, generates an electronic calculation sheet on a television screen. The Visicalc program will be used to illustrate software application. With a quick familiarization of Visicalc's accompanying instructions, most people can begin creating their own applications such as those illustrated in Figure 1. A series of simple sign and key conversational words creates a financial "spreadsheet" format which can be coupled with pre-programmed formulae to execute mathematical requirements. All the numerical information can be made interrelated so changes in one sector automatically reflect in other affected areas.

The beginning Visicalc format is displayed like a financial "spreadsheet," or worksheet, and specific information is placed by means of coordinates similar to those used on a map. Vertical column headings are marked by a series of letters from A to BU (63 columns) and horizontal rows by numbers 1-254. Each column is nine characters wide, while the screen displays only 80 or 40 characters by 24 lines at a time. The example in Figure 1 illustrates a cross tabulated chart that has raw information identifying the students trained and IMET funding by years and individual country in the PACOM area. All totals in these columns are completed automatically by the computer as the initial data is typed in, or as an individual item is changed. In addition, related columns in the IMET Program Summary section are changed automatically in accordance with the above chart. All of Figure 1 can be put in the space of one Visicalc worksheet, and printed directly from a connected printer in total or in selected blocks of information, such as the summary chart alone.

A more frequent application of a Visicalc type program lies with IMET program changes to the DSAA detail listing. With Visicalc, each host country service program can be maintained on a separate worksheet and preformatted training changes created at the bottom of the worksheet. In this manner, functional charts, such as the addition, change, and deletion card formats on Figure 2, can draw from the detail listing or other functional charts like the Adjustment Formula Chart. In the latter chart, depending on the course of instruction, a Military Articles and Service List (MASL) or variable duration price is required. Whichever one of the aforementioned information items is inserted in the chart, the computer will calculate the Travel and Living Allowance (TLA), as with the two training additions of work Sheet Control Numbers (WSCNs) 0097B and 0605L. Although not programmed in the example, all these charts can be made interrelated and the changes themselves, already in the proper format as functional cards, can be singled out and printed directly on a message form by pressing only a few computer keys.

For an exchange of programming examples, Visicalc has an excellent option that prints out all information, including coordinates and formulas, as illustrated in Figures 3 and 4 which define the two previous examples. That data is printed from the bottom, right-hand corner of the worksheet, row by row. The worksheet information looks like a formidable typing task when first viewed, but once one becomes familiar with Visicalc, these charts can be rapidly reconstructed in any other computer using the Visicalc program.

One other important Visicalc function, which is a bonanza for executives, is storage flexibility. Once a chart is completed, it can be saved as an original copy in the magnetic file. Whenever desired, a "copy" of the original can be called to the terminal screen and adjusted without fear of damaging the original. This allows changes to be made to observe overall impact, as with line number additions to detail listing in order to observe the effects on the total budget. Afterwards, the new worksheet can become the new original, or a separate file, or eliminated completely at the touch of three keys.

#### ASSISTANCE FOR STARTING COMPUTER PROGRAMS

Computer applications are limited only by the imagination of the user. In order to assist PACOM SAOs in initiating the use of their computers, CINCPAC J4 has agreed to act as a clearing house for suggested computer programs in the security assistance field. Send your recommendations or requests to the attention of Major Charles Walters, USAF, CINCPAC J4, Honolulu, Hawaii 96861. In addition, the Defense Institute of Security Assistance Management is interested in keeping abreast of future developments in this field and would appreciate receiving examples of useful computer programs. Any such information should be sent to DISAM/DR, Wright-Patterson AFB OH 45433.

#### AN IDEA WHOSE TIME HAS COME

For all segments of American society, computer use is gaining irreversible momentum. Perhaps more than any other technology developed by man, the computer stands to make the most dramatic changes in the way we work and play. Industrial and commercial activities are already communicating worldwide on a real-time basis for routine information exchange. The military too, uses real time networks in certain applications, although other users are

handicapped by archaic communications. The technology already exists for eliminating tons of expensive, paper hard-copies and managing large quantities of textual and numerical information. Computer related equipment has already started arriving at some SAOs.

There are instances in which host countries have already forged ahead of their SAO counterparts because they are not handicapped by large investments in old computer equipment and can more readily take advantage of the relatively inexpensive microcomputers. However, if called upon to provide guidance, U.S. advisors, particularly in the logistic and personnel areas, must be cautious not to recommend to the host country equipment which might be based on U.S. systems which may not be appropriate for the intended use. The day of the key punch data cards is rapidly fading away.

In retrospect, let us hope that responsible agency planners of the Department of Defense are correctly anticipating future needs. Let us further hope that as different segments of DoD modernize their respective computer systems, considerable thought is given to what is required to insure compatibility between systems as well as within systems for more intimate organization needs of the future. Remember, also that the use of the computer is limited only by our imagination. However, the computer is not a panacea to all of our information difficulties. What is required here is the dedication of management to determine what is essential and to commit itself to the use of the computer to that end.

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FIGURE 1

ENDS K69

IMET PROGRAM SUMMARY  
-STUDENTS TRAINED & DOLLARS SPENT-

COUNTRY	STUDENTS TRAINED-FISCAL YEARS				1981	1982	TOTAL	83 PLAN
	1977	1978	1979	1980				
BG	12	23	21	14	17	23	110	
BURMA				3	6	25	34	
INDIA	13	21	31	26	0	9	100	
INDONESIA	198	240	189	172	199	201	1199	
KOREA	172	207	236	113	174	249	1151	
MALAYSIA	45	86	56	21	51	102	361	
NEPAL	3	5	3	2	8	13	34	
PAKISTAN	56	80	59			117	312	
PNG				2	2	6	10	
PHILIPPIN	126	134	106	98	268	278	1010	
SINGAPORE				3	3	14	20	
SRI LANKA	3	12	2	3	10	18	48	
THAILAND	230	165	163	119	180	253	1110	
-TOTAL-	858	973	866	576	918	1308	5499	

COUNTRY	IMET FUNDING (\$ IN THOUSANDS)				1981	1982	TOTAL	83 PLAN
	1977	1978	1979	1980				
BG	44	211	230	121	131	175	912	
BURMA				30	31	160	221	
INDIA	178	306	455	280	4	80	1303	
INDONESIA	2757	2778	1848	1858	1858	2200	13299	
KOREA	1578	1077	1628	1098	1212	1400	7993	
MALAYSIA	280	594	516	258	325	500	2473	
NEPAL	31	87	51	26	63	91	349	
PAKISTAN	310	547	463	0	0	600	1920	
PNG	0	0	0	13	8	20	41	
PHILIPPIN	622	676	819	540	595	1107	4359	
SINGAPORE	0	0	0	7	7	50	64	
SRI LANKA	6	61	28	24	80	102	301	
THAILAND	1332	1090	796	834	808	1540	6400	
-TOTAL-	7138	7427	6834	5089	5122	8025	39635	
-WORLD-	25499	29144	26750	25019	29764	42000	178176	

PACIFIC COMMAND (PACAF)  
IMET PROGRAM SUMMARY  
-STUDENTS TRAINED & DOLLARS SPENT-

FISCAL YR	1977	1978	1979	1980	1981	1982	TOTAL	83 PLAN
	STUDENTS TRAINED-FISCAL YEARS							
-TOTAL-	858	973	866	576	918	1308	5499	0
-WORLD-	4858	4429	3772	3545	4932	0	NA	
%/WORLD	18	22	23	16	19	0	0	0
	IMET FUNDING (\$ IN THOUSANDS)							
TOTAL-	7138	7427	6834	5089	5122	8025	39635	
-WORLD-	25499	29144	26750	25019	29764	42000		
%/WORLD	28	25	26	20	17	19		

INDEX 4 CARD -A8 ADJUSTMENT  
 Q CARD -A20 FORMULAE -A44  
 R CARD -A33 END N51

TRAINING CHANGES TO CURRENT  
 YEAR TRAINING PROGRAM-FY 83 - TOT \$ CHG FY = 3120

ADDITION (CARD 4) -DO NOT FORGET \$35/LINE HOSP COST  
 \*AS REQD  
 \*\*QTR TNG ENTERED

CARD-CC	IIN	DESCRIPTION	SC	QTY	PO	CTRY CODE	DUR	PY	* TLA	WSCN	** REQD DATE
4	D178088	DEF SEC ASST MGT/DISAM	O	1	B	BD	3	83	940	0097B	1
4	D177009	ENG LANG	O	1	P	BD	18	83	2180	0605L	2
-TOTAL-				2			21	166	3120		

change (card q) \*OPTIONAL

card-cc	rcn	sc*	qty*	po*	cc	dur*	unit \$*	py	tla*	wscn	rd*	rp*	tot cost*
Q	NA40				BD			83		0403a	4		
Q	NB02				BD			83		0403B	4		
Q	NA37				BD			83		0097A			
-total-			0					0					0

deletion (card r)

card-cc	rcn	cc	py	wscn	(NOT REQD FOR MSG) TOT COST
R	NA40	BD	83	100	
-total-					0

\*ADJUSTMENT FORMULAE

WSCN	MASL	\$ OR	WKLY\$ X	#WKS	=	VAR DUR	(INCL EXCESS BAG\$)	PER DIEM	CON TVL\$	#WKS TNG X	WKLY\$	=	LVG ALW	TLA	TOT COST
0097B	715					0							0	940	1655
0605L	0	110	18			1980		380	18	100			1800	2180	4160
-----															
-TOTAL-	715	110	18			1980	0	0	0	380	18	100	1800	3120	5815

FIGURE 3

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>F58:/FR"1981
>E58:/FR"1980
>D58:/FR"1979
>C58:/FR"1978
>B58:/FR"1977
>A58:"FISCAL YR
>E54:" SPENT-
>D54:"& DOLLARS
>C54:" TRAINED
>B54:"-STUDENTS
>E53:"RY
>D53:"RAM SUMMA
>C53:"IMET PROG
>E52:"ACAF)
>D52:"OMMAND (P
>C52:"PACIFIC C
>H46:@SUM(B46...G46)
>G46:42000
>F46:29764
>E46:25019
>D46:26750
>C46:29144
>B46:25499
>A46:"-WORLD-
>J45:/FL
>I45:/FL
>H45:/FR@SUM(H31...H43)
>G45:/FR@SUM(G31...G43)
>F45:/FR@SUM(F31...F43)
>E45:/FR@SUM(E31...E43)
>D45:/FR@SUM(D31...D43)
>C45:/FR@SUM(C31...C43)
>B45:/FR@SUM(B31...B43)
>A45:"-TOTAL-
>I44:/--
>H44:/--
>G44:/--
>F44:/--
>E44:/--
>D44:/--
>C44:/--
>B44:/--
>A44:/--
>H43:/FR@SUM(B43...G43)
>G43:/FR1540
>F43:/FR808
>E43:/FR834
>D43:/FR796
>C43:1090
>B43:1332
>A43:"THAILAND
>H42:/FR@SUM(B42...G42)
>G42:/FR102
>F42:/FR80
>E42:/FR24
>D42:/FR28
>C42:61
>B42:6
>A42:"SRI LANKA
>H41:/FR@SUM(B41...G41)
>G41:/FR50
>F41:/FR7
>E41:/FR7
>D41:/FR0
>C41:0
>B41:0
>G69:/FI+G45/G46*100
>F69:/FI+F45/F46*100
>E69:/FI+E45/E46*100
>D69:/FI+D45/D46*100
>C69:/FI+C45/C46*100
>B69:/FI+B45/B46*100
>A69:"%/WORLD
>G68:+G46
>F68:29764
>E68:25019
>D68:26750
>C68:29144
>B68:25499
>A68:"-WORLD-
>H67:@SUM(H31...H43)
>G67:@SUM(G31...G43)
>F67:@SUM(F31...F43)
>E67:@SUM(E31...E43)
>D67:@SUM(D31...D43)
>C67:@SUM(C31...C43)
>B67:@SUM(B31...B43)
>A67:"TOTAL-
>F66:"S)
>E66:" THOUSAND
>D66:"ING ($ IN
>C66:"IMET FUND
>A65:"OF TNG
>A64:"CATEGORY
>I63:/FI0
>H63:/FI0
>G63:/FI0
>F63:/FI+F61/F62*100
>E63:/FI+E61/E62*100
>D63:/FI+D61/D62*100
>C63:/FI+C61/C62*100
>B63:/FI+B61/B62*100
>A63:"%/WORLD
>H62:/FR"NA
>G62:/FR0
>F62:4932
>E62:3545
>D62:3772
>C62:4429
>B62:4858
>A62:"-WORLD-
>I61:@SUM(I9...I21)
>H61:@SUM(H9...H21)
>G61:@SUM(G9...G21)
>F61:@SUM(F9...F21)
>E61:@SUM(E9...E21)
>D61:@SUM(D9...D21)
>C61:@SUM(C9...C21)
>B61:@SUM(B9...B21)
>A61:"-TOTAL-
>F60:"RS
>E60:"ISCAL YEA
>D60:"TRAINED-F
>C60:"STUDENTS
>I58:/FR"83 PLAN
>H58:/FR"TOTAL
>G58:/FR"1982
>A41:"SINGAPORE
>H40:/FR@SUM(B40...G40)
>G40:/FR1107
>F40:/FR595
>E40:/FR540
>D40:/FR819
>C40:676
>B40:622
>A40:"PHILIPPINES
>H39:/FR@SUM(B39...G39)
>G39:/FR20
>F39:/FR8
>E39:/FR13
>D39:/FR0
>C39:0
>B39:0
>A39:"PNG
>H38:/FR@SUM(B38...G38)
>G38:/FR600
>F38:/FR0
>E38:/FR0
>D38:/FR463
>C38:547
>B38:310
>A38:"PAKISTAN
>H37:/FR@SUM(B37...G37)
>G37:/FR91
>F37:/FR63
>E37:/FR26
>D37:/FR51
>C37:87
>B37:31
>A37:"NEPAL
>H36:/FR@SUM(B36...G36)
>G36:/FR500
>F36:/FR325
>E36:/FR258
>D36:/FR516
>C36:594
>B36:280
>A36:"MALAYSIA
>H35:@SUM(B35...G35)
>G35:1400
>F35:1212
>E35:1098
>D35:1628
>C35:1077
>B35:1578
>A35:"KOREA
>H34:@SUM(B34...G34)
>G34:2200
>F34:1858
>E34:1858
>D34:1848
>C34:2778
>B34:2757
>A34:"INDONESIA
>H33:@SUM(B33...G33)
>G33:80
>F33:4
>E33:280
>D33:455
>C33:306
>B33:178
>A33:"INDIA
>H32:@SUM(B32...G32)

```

>G32:160	>F18:268	>D9:21
>F32:31	>E18:98	>C9:23
>E32:30	>D18:106	>B9:12
>A32:"BURMA	>C18:134	>A9:"BG
>H31:@SUM(B31...G31)	>B18:126	>I7:/FR"83 PLAN
>G31:175	>A18:"PHILIPPIN	>H7:/FR"TOTAL
>F31:131	>H17:/FR@SUM(B17...G17)	>G7:/FR"1982
>E31:121	>G17:6	>F7:/FR"1981
>D31:230	>F17:2	>E7:/FR"1980
>C31:211	>E17:2	>D7:/FR"1979
>B31:44	>A17:"PNG	>C7:/FR"1978
>A31:"BG	>H16:/FR@SUM(B16...G16)	>B7:/FR"1977
>I29:/FR"83 PLAN	>G16:117	>A7:"COUNTRY
>H29:/FR"TOTAL	>D16:59	>F6:"RS
>G29:/FR"1982	>C16:80	>E6:"ISCAL YEA
>F29:/FR"1981	>B16:56	>D6:"TRAINED-F
>E29:/FR"1980	>A16:"PAKISTAN	>C6:"STUDENTS
>D29:/FR"1979	>H15:/FR@SUM(B15...G15)	>E4:" SPENT-
>C29:/FR"1978	>G15:13	>D4:"& DOLLARS
>B29:/FR"1977	>F15:8	>C4:" TRAINED
>A29:"COUNTRY	>E15:2	>B4:"-STUDENTS
>H28:/FL	>D15:3	>E3:"RY
>F28:"S)	>C15:5	>D3:"RAM SUMMA
>E28:" THOUSAND	>B15:3	>C3:"IMET PROG
>D28:"ING (\$ IN	>A15:"NEPAL	>A1:"ENDS K69
>C28:"IMET FUND	>H14:/FR@SUM(B14...G14)	/W1
>H27:/FL	>G14:102	/GOC
>H26:/FL	>F14:51	/GRA
>H23:@SUM(H9...H21)	>E14:21	/GC9
>G23:@SUM(G9...G21)	>D14:56	/X1/X>A1:>A1:
>F23:@SUM(F9...F21)	>C14:86	
>E23:@SUM(E9...E21)	>B14:45	
>D23:@SUM(D9...D21)	>A14:"MALAYSIA	
>C23:@SUM(C9...C21)	>H13:/FR@SUM(B13...G13)	
>B23:@SUM(B9...B21)	>G13:249	
>A23:"-TOTAL-	>F13:174	
>H22:/--	>E13:113	
>G22:/--	>D13:236	
>F22:/--	>C13:207	
>E22:/--	>B13:172	
>D22:/--	>A13:"KOREA	
>C22:/--	>H12:/FR@SUM(B12...G12)	
>B22:/--	>G12:201	
>H21:/FR@SUM(B21...G21)	>F12:199	
>G21:253	>E12:172	
>F21:180	>D12:189	
>E21:119	>C12:240	
>D21:163	>B12:198	
>C21:165	>A12:"INDONESIA	
>B21:230	>H11:/FR@SUM(B11...G11)	
>A21:"THAILAND	>G11:9	
>H20:/FR@SUM(B20...G20)	>F11:0	
>G20:18	>E11:26	
>F20:10	>D11:31	
>E20:3	>C11:21	
>D20:2	>B11:13	
>C20:12	>A11:"INDIA	
>B20:3	>H10:/FR@SUM(B10...G10)	
>A20:"SRI LANKA	>G10:25	
>H19:/FR@SUM(B19...G19)	>F10:6	
>G19:14	>E10:3	
>F19:3	>A10:"BURMA	
>E19:3	>H9:/FR@SUM(B9...G9)	
>A19:"SINGAPORE	>G9:23	
>H18:/FR@SUM(B18...G18)	>F9:17	
>G18:278	>E9:14	

FIGURE 4

```

>N51:/FL@SUM(N48...N49)
>M51:/FL@SUM(M48...M49)
>L51:/FL@SUM(L48...L49)
>K51:/FL@SUM(K48...K49)
>J51:/FL@SUM(J48...J49)
>I51:/FL@SUM(I48...I49)
>H51:/FL@SUM(H48...H49)
>G51:/FL@SUM(G48...G49)
>F51:/FL@SUM(F48...F49)
>E51:/FL@SUM(E48...E49)
>D51:/FL@SUM(D48...D49)
>C51:/FL@SUM(C48...C49)
>B51:/FL@SUM(B48...B49)
>A51:"-TOTAL-
>N50:/--
>M50:/--
>L50:/--
>K50:/--
>J50:/--
>I50:/--
>H50:/--
>G50:/--
>F50:/--
>E50:/--
>D50:/--
>C50:/--
>B50:/--
>A50:/--
>N49:/FL@MAX(B49,E49)+M49
>M49:/FL@SUM(F49,H49,I49,L49)
>L49:/FL+J49*K49
>K49:/FL100
>J49:/FL18
>I49:/FL380
>H49:/FL
>E49:/FL+C49*D49
>D49:/FL18
>C49:/FL110
>B49:/FL0
>A49:"0605L
>N48:/FL@MAX(B48,E48)+M48
>M48:/FL940
>L48:/FL+J48*K48
>J48:/FL
>I48:/FL
>H48:/FL
>E48:/FL+C48*D48
>D48:/FL
>C48:/FL
>B48:/FL715
>A48:/FL"0097B
>I47:/FL
>H47:/FL
>N46:"TOT COST
>M46:" TLA
>L46:"= LVG ALW
>K46:" X WKLY$
>J46:/FL" #WKS TNG
>I46:" CON TVLS
>H46:" PER DIEM
>G46:"ESS BAG$)
>F46:"(INCL EXC
>E46:"VAR DUR
>D46:"#WKS =
>C46:" WKLY$ X
>B46:"MASL $ OR
>A46:"WSCN
>C44:"AE
>B44:"NT FORMULAE
>A44:"*ADJUSTME
>F40:/FL@SUM(F37...F39)
>A40:"-total-
>F39:/--
>E39:/--
>D39:/--
>C39:/--
>B39:/--
>A39:/--
>E38:/FL100
>D38:/FL83
>C38:"BD
>B38:"NA40
>A38:"R
>F37:/FL
>F36:"TOT COST
>E36:"wscn
>D36:"py
>C36:"cc
>B36:"rcn
>A36:"card-cc
>G35:" FOR MSG)
>F35:"(NOT REQD
>B33:"(card r)
>A33:"deletion
>N29:/FL@SUM(N24...N27)
>J29:/FL@SUM(J24...J27)
>H29:/FL@SUM(H24...H27)
>G29:/FL@SUM(G24...G27)
>D29:/FL@SUM(D24...D27)
>A29:"-total-
>N28:/--
>M28:/--
>L28:/--
>K28:/--
>J28:/--
>I28:/--
>H28:/--
>G28:/--
>F28:/--
>E28:/--
>D28:/--
>C28:/--
>B28:/--
>A28:/--
>N27:/FL
>L27:/FL
>K27:"0097A
>I27:/FL83
>F27:"BD
>B27:"NA37
>A27:"Q
>N26:/FL
>L26:/FL4
>K26:"0403B
>I26:/FL83
>F26:"BD
>B26:"NB02
>A26:"Q
>N25:/FL
>I25:/FL4
>K25:"0403A
>I25:/FL83
>F25:"BD
>B25:"NA40
>A25:"Q
>N23:"tot cost*
>M23:"rp*
>L23:"rd*
>K23:"wscn
>J23:"tla*
>I23:"py
>H23:"unit $*
>G23:"dur*
>F23:"cc
>E23:"po*
>D23:"qty*
>C23:"sc*
>B23:"rcn
>A23:"card-cc
>C20:"OPTIONAL
>B20:"ard q) *
>A20:"change (c
>P16:/FR@SUM(P12...P14)
>L16:/FL@SUM(L12...L14)
>K16:/FL@SUM(K12...K14)
>J16:/FL@SUM(J12...J14)
>G16:/FL@SUM(G12...G14)
>A16:"-TOTAL-
>P15:/FR/--
>O15:/--
>N15:/--
>M15:/--
>L15:/--
>K15:/--
>J15:/--
>I15:/--
>H15:/--
>G15:/--
>F15:/--
>E15:/--
>D15:/--
>C15:/--
>B15:/--
>A15:/--
>P14:/FR+L14
>O14:/FR"B
>N14:/FL2
>M14:"0605L
>L14:/FL2180
>K14:/FL83
>J14:/FL18
>I14:"BD
>H14:"P
>G14:/FL1
>F14:"O
>C14:"ENG LANG
>B14:"D177009
>A14:/FL4
>P13:/FR+L13
>O13:/FR" A
>N13:/FL1
>M13:"0097B
>L13:/FL940
>K13:/FL83
>J13:/FL3
>I13:"BD
>H13:"B
>G13:/FL1
>F13:"O
>E13:"ISAM
>D13:"SST MGT/D
>C13:"DEF SEC A
>B13:"D178088
>A13:/FL4
>P11:" COST
>O11:" REQ PRI
>N11:"REQD DATE
>M11:"WSCN
>L11:/FL"TLA
>K11:"PY
>J11:" DUR
>I11:"CTRY CODE
>H11:"PO
>G11:"QTY
>F11:"SC
>D11:"ON
>C11:"DESCRIPTI
>B11:"IIN
>A11:"CARD-CC
>N10:"**
>L10:"**
>D10:" ENTERED
>C10:"**QTR TNG
>C9:"**AS REQD
>F8:"P COST
>E8:"/LINE HOS
>D8:"ORGET $35
>C8:"-DO NOT F
>B8:"(CARD 4)
>A8:"ADDITION
>F6:/FL3120
>E6:"CHG FY =
>D6:" - TOT $ C
>C6:"RAM-FY 83
>B6:"NING PROG
>A6:"YEAR TRAI
>C5:"O CURRENT
>B5:"CHANGES T
>A5:"TRAINING
>D3:"1
>C3:" END N5
>B3:"CARD -A33
>A3:" R
>D2:"AE -A44
>C2:" FORMUL
>B2:"CARD -A20
>A2:" Q
>D1:"MENT
>C1:" ADJUST
>B1:"CARD -A8
>A1:"INDEX 4
/W1
/GOC
/GRA
/GC9
/X1/X>A1:>A1:

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### ABOUT THE AUTHOR

Major James D. Filgo is a U.S. Army foreign area officer. He was assigned to the security assistance training management office in Jakarta on completion of the Indonesian Army Command and Staff Course. Previous duty assignments include command and staff positions through division level in aviation, special forces, and mechanized infantry units in Vietnam, Thailand, Laos, and West Germany and in CONUS. Major Filgo holds a BGS in Political Science from the University of Nebraska and a Master of Arts in International Relations from the Monterey Institute of International Studies. He has recently completed the SAM-O (Overseas) Course at the Defense Institute of Security Assistance Management.