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AGO D/A ltr, 29 Apr 1980
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SUBJECT: Operational Report - Lessons Learned, Headquarters, 44th Signal Battalion, Period Ending 31 July 1968

1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT RD, Operational Reports Branch, within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure that the Army realizes current benefits from lessons learned during recent operations.

3. To insure that the information provided through the Lessons Learned Program is readily available on a continuous basis, a cumulative Lessons Learned Index containing alphabetical listings of items appearing in the reports is compiled and distributed periodically. Recipients of the attached report are encouraged to recommend items from it for inclusion in the Index by completing and returning the self-addressed form provided at the end of this report.

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KENNETH G. WICKHAM
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UNCLASSIFIED REPORT
DISTRIBUTION: NO FOREIGN WITHOUT APPROVAL OF ASSISTANT CHIEF OF STAFF FOR FORCE DEVELOPMENT (ARMY) ATTN OT RD, WASHINGTON, D.C. 20310
SUBJECT: Operational Report of Headquarters, 44th Signal Battalion for Period Ending 31 July 1968, (RCS GSIFOR-65) (R1)

1. Section 1. Operations: Significant Activities:

   a. During the reporting period many important visitors toured the communication facilities operated by the 44th Signal Battalion. These visitors included BG Harry A. French, CINPAC J-6; BG William M. Van Harlingen, CG, 1st Signal Brigade; BG Hugh F. Foster Jr., CG, USA Communications Systems Agency; COL Harry E. Tabor, Deputy Assistant Chief of Staff, USARV C-E; COL F. E. Sawyer, Director of Personnel, STRATCOM PAC; COL Clinton F. Mithows, Deputy Commander, 1st Signal Brigade; COL Richard W. Swanson, Commander, 160th Signal Group; COL Jack p. Archer, DCS Logistics, USSTRATCOM; and COL Houghton Lohn, Chief, Operations Directorate, Headquarters, 1st Signal Brigade.

   b. At the end of the reporting period, the battalion’s total assigned personnel strength was 940 men, an increase of 82 men from the last reporting period.

   c. The rotational losses and replacements during the reporting period created approximately a 55% turnover of personnel within the battalion. Skill levels were lowered for a short period until the training of replacements could be achieved. However, the primary mission effectiveness of the battalion was not seriously impaired.

   d. The critical shortage of communications center specialists (MOS 72B) was alleviated by the arrival of 114 replacements. Prior to the arrival of these replacements, all COMMCEN procedures were reviewed and in the case of the USARV COMMCEN where traffic volume was increasing significantly, streamlined procedures were incorporated which reduced message processing steps but which still ensured message processing accuracy. These revised procedures eliminated the redundant handling of messages within the terminal section and the reduction of unnecessary logging requirements.
e. On 1 May 1968, the battalion accepted a communications contingency mission in support of Headquarters, USARV. This mission required the deployment of telephone and teleprinter equipment as well as sufficient personnel to operate the equipment on a one hour quick reaction basis. Battalion plans have been implemented to test this contingency mission on a weekly basis.

f. On 4 May 1968, a 52½ hour course of instruction commenced on the operation and maintenance of the AN/MRC-69. Newly assigned MOS 31M personnel were trained into three-man MRC-69 teams to become part of the MACV Contingency Team which had been deployed in Saigon in April.

g. On 13 May 1968, the Univac 1004 Computer Autodin Terminal was officially activated at the USARV COMCEN which is operated by the battalion. The activation of this Autodin facility gave Headquarters, USARV, access into the World Wide Autodin system.

h. On 15 May 1968, the battalion completed its personnel and command bunker construction program. Four command bunkers and nineteen personnel bunkers were constructed and sandbagged within a period of 30 days. These bunkers provide all assigned personnel with maximum protection against enemy rocket/nearfield attacks.

i. The MACV Contingency Team which was committed in Saigon on 25 April 1968 was returned to this headquarters on 24 May 1968. All equipment was returned to the battalion area, cleaned, given a complete technical inspection, and prepared for future deployment.

j. An element of the MACV Contingency Team was alerted for deployment to Saigon on 1 June 1968. The team, consisting of nine personnel equipped to install two AN/GRC-10 VHF radio systems, arrived in Saigon and were assigned their mission. A four-channel voice communications system was established between MACV Headquarters and the 525th MI Group located in Newman Compound in Saigon. The system was installed and operational within ten hours from the time of deployment.

k. On 15 June, contract personnel from the Gustav Horsch Organization working at the Long Binh DTE began installation of the tandem switching equipment which, when completed, will enable Class 2 telephone subscribers to direct distance dial other tandem switch equipped DTE’s in Vietnam and Thailand.

l. On 1 July 1968, the Long Binh Area COMCEN, a responsibility of this battalion, activated its IBM 360/20 Autodin Terminal. Over 160 units in the Long Binh Post area who are served by this COMCEN are now provided rapid and direct access into the World Wide Autodin system.

m. A Battalion Contingency Team departed for Saigon on 15 July for the installation of a secure voice radio circuit. The equipment for this mission was taken from backup equipment at the Long Binh Signal Complex and installed into a vehicular mounted AN/TRC-110 shelter. Upon arrival
in Saigon, the team was placed under the operational control of the 69th Signal Battalion. The system became operational within six hours after deployment.

n. The battalion has experienced approximately an 8% deadline rate on communications equipment during the reporting period. Adequate repair parts have not been available through the electronics direct support maintenance activity. Close coordination is being effected with Electronics Command representatives and the direct support activity in an effort to locate the needed repair parts. The battalion Materiel Readiness NCO has in some instances secured releases for repair parts from Army supply depots outside the Long Binh area, e.g., Qui Nhon and Cam Ranh Bay. All repair parts received as a result of these efforts have been used to remove equipment from deadline and to fill PFL requirements. The lack of communications repair parts has caused an increased usage of float and backup equipment.

o. All training was conducted in accordance with Department of the Army and regulations of higher Headquarters and at no time were operations disrupted for the purpose of training. This unit did not conduct any major troop movements during the reporting period.

p. During the reporting period training inspections were conducted by Headquarters, 1st Signal Brigade, Headquarters, 160th Signal Group, and Headquarters, 44th Signal Battalion. Only minor irregularities were noted. Range firing for the battalion was satisfactorily completed for the quarter.

q. Personnel are continually sent to Southeast Asia Signal School courses and out-of-country schools for various training. This policy will be continued in the future as allocations become available. Schools are available in: Teletype Circuit Restoration, AN/TTC 110-117, Longhurst 260 Modem, Telephone Key Systems, Cable Splicer, and Artillery Observer Training.

r. Except for Headquarters and Headquarters Detachment, proposed MTOES are pending approval at Department of the Army for all the battalion's units.

s. A list of Commanders and Staff Officers as of the end of the reporting period is attached as Inclosure 1.

t. Attached as Inclosure 2 is the Battalion Organization Chart.
2. Section 2. Lessons Learned: Commander's Observations, Evaluations and Recommendations:

a. Personnel:

(1) Rotational Turnover of Personnel

(a) OBSERVATION: During the reporting period the battalion experienced a rotational turnover of 55% of its personnel.

(b) EVALUATION: Replacements arriving within the battalion all reported during the same month. This will create another significant turnover of personnel during the 4th quarter FY69. The varied missions and MOS structure within the battalion makes it impossible to utilize an infusion program within its own organization.

(c) RECOMMENDATIONS: A personnel infusion program initiated between this battalion and the 69th Signal Battalion would insure that neither battalion would suffer from a serious personnel turnover during any one month or in any critical MOS. MOS's which should be considered in such a program would be 360, 720, and 72B.

b. Operations:

(1) Message Handling Procedures

(a) OBSERVATION: The US/MV COMCEN suffered from a severe shortage of communication center specialists during the month of May and early June. Speed of teletype message processing increased materially as the COMCEN's originate volume of traffic increased over 40% in the Immediate precedence category alone. It became necessary to streamline the message handling procedures in order to increase the speed of service. A battalion task team was formed to review, in depth, the procedures in use with the view of eliminating redundant steps and unnecessary logging.

(b) EVALUATION: Revised procedures were put into effect which provided more manual teletype conversion time, shortened logging procedures and eliminated unnecessary physical moves by "pokers" thus giving them more time to type. The effect on message handling times was immediately evident even though traffic volume remained inordinately high.

(c) RECOMMENDATIONS: Any COMCEN experiencing a serious loss of operator personnel or an inordinate increase in traffic volume can reduce, through thorough analysis, redundant and time consuming steps in message processing and gain an increased production rate without a loss in the accuracy of message processing.
(2) **Autodin Rejected Message**

(a) **OBSERVATION:** The Univac 1004 computer Autodin terminal facility was activated at the US Army COMMGEN on 13 May, 1968. Although a thorough test of the computer was made prior to acceptance, the 1004 immediately began to reject an inordinately high number of transmit messages.

(b) **EVALUATION:** After a check and analysis of the teletype traffic which was being rejected and a thorough check of the Univac 1004 itself, the following noteworthy points were discovered:

1. The sensitivity and adjustment of the photoelectric tape reader on the 1004 is critical. Slight misalignment or adjustment outside of the critical tolerances set for the reader will cause a properly prepared message to be rejected.

2. The characteristics of the tape which is transmitted is a determining factor in rejected messages. Thickness of tape, oil content of the tape, as well as the color of the tape are variables which can and will affect the "read capability" of the photoelectric reader.

(c) **RECOMMENDATION:** A thorough study and analysis of the Univac 1004 tape reader should be made prior to installation in an Autodin facility to insure that the reader, and the tape being utilized are compatible and that rejects caused by the machine are less than 1%. This should be accomplished prior to the acceptance of the particular 1004 as an Autodin terminal.

(3) **Telephone Numbers and Cable Pair Assignments**

(a) **OBSERVATION:** The battalion, through the 580th Telphone Operations Company, operates the Long Binh 5000 line dial telephone exchange (DTE). Prior to 10 June, the assignment of telephone numbers and cable pairs for subscribers on Long Binh Post was made by higher headquarters. On 10 June this responsibility was assumed by the 580th Telephone Operations Company.

(b) **EVALUATION:** All cable and line record cards are centralised under the control of the DTE. Accuracy has been achieved in the assignment of telephone numbers and cable pairs with less multiplicity of effort, which, in effect reduced the number of agencies at higher headquarters involved in this work. Proper line load, cable fill and DTE equipment loading are now real possibilities within the jurisdiction and control of the battalion.

(c) **RECOMMENDATION:** Any large DTE should be given the responsibility for the areas stated in the evaluation above, thereby providing the working agency with the control necessary to maintain accurate telephone operations records.
(4) Use of the AN/MSQ-73 Van

(a) OBSERVATION: During the reporting period the AN/MSQ-73 control facility was earmarked for use in the control of critical voice and teletype circuits for which the battalion maintains responsibility.

(b) EVALUATION: The excellent results achieved in trouble shooting and testing circuitry has decreased outage time significantly for both voice and teletype circuits.

(c) RECOMMENDATIONS: All Army Area Signal battalions responsible for critical DCS or Army Area 1 and 2 priority voice and teletype circuits should insure that the AN/MSQ-73 is utilized fully for circuit control and restoration.

(5) Use of Mobile Air Conditioners

(a) OBSERVATION: The battalion experienced an inordinately high deadline rate in communications van mounted air conditioners. In particular those air conditioners organic to the IBM 360/20 vans were particularly noted for their high deadline rate. Van mounted communications equipment, in particular the Pulse Code Modulation equipment, AN/BCS-50 radio, and IBM 360/20 computer are particularly heat sensitive. Portable trailer mounted air conditioners were utilized to bring about a reduction in temperature and provide proper operating conditions for this equipment.

(b) EVALUATION: The use of portable trailer mounted air conditioners brought excellent results in maintaining proper operating conditions for the equipment cited above.

(c) RECOMMENDATIONS: Portable trailer mounted air conditioners should be authorized as primary or backup units for all van mounted computers, radios and PCM equipment where heat control is particularly critical.

d. Training:

(1) Procedures for Autodin Operations

(a) OBSERVATION: During the reporting period this battalion activated two Autodin terminals into the World Wide System. The 72E MOS personnel recently acquired from CONUS schools did not have the skill level required to operate the terminals without a comprehensive training program.

(b) EVALUATION: The utilization of IBM and University personnel to assist in an operator course of instruction on Autodin was sufficient to provide a skill level which did not impair the operation of the Autodin terminals.
(e) **RECOMMENDATIONS:** With the increased utilization of Autodin facilities especially in Vietnam, 72B MOS personnel should be trained in CONUS schools as operators. Increased emphasis must be placed on reading tape which is one area most 72B's are deficient and which is a required area in Autodin operations since the tape is only "holographed" and not printed. In addition, the conversion to J&NAP 126 procedures utilized in Autodin should be given particular emphasis especially for 72B personnel assigned in STRATCOM facilities in Vietnam.

(2) **PCM Equipment Trouble Shooting Techniques:**

(a) **OBSERVATION:** During recent PCM cable outages operators and cable installers, using "school book" trouble shooting techniques, were unable to correctly identify PCM equipment versus PCM cable troubles. ECOM technical representatives were consulted and with their knowledge of equipment peculiarities, trouble shooting techniques taking these peculiarities into account resulted in rapid identification and correction of the troubles found. Installers and operators were given specific instruction on the techniques by the ECOM representatives.

(b) **EVALUATION:** The additional training on special trouble shooting techniques for all PCM operators and cable installers has improved the capability of this unit to identify and restore PCM equipment and cable outages.

(c) **RECOMMENDATIONS:** CONUS schools should update POI's to include all PCM testing and troubleshooting techniques to insure operators can correctly and accurately identify and restore PCM outages.

d. **Intelligence:** None

e. **Logistics:**

(1) **Special Logistics Programs**

(a) **OBSERVATIONS:** During the reporting period the battalion began participation in two logistics and maintenance oriented programs. The "quick repair and return" program primarily is concerned with the replacement of Pulse Code Modulation panels and boards by the Sacramento Army Depot. The "closed loop program" provides for the direct exchange of teletype equipment within Vietnam.

(b) **EVALUATION:** Both programs have met with limited success. Approximately 40% of all PCM boards sent to Sacramento during the reporting period have been repaired and returned. In addition, this battalion has acquired the assistance of a Raytheon technical representative who insures that all PCM boards shipped are actually in need of repair at the depot. His assistance has resulted in a significant number of PCM boards being repaired within the capability of organic maintenance. The closed loop program has provided a limited amount of teletype equipment on a direct exchange basis.
(a) RECOMMENDATIONS: Units operating PCM equipment and experiencing panel board failures should utilize the "quick repair and return" program. In addition, it is recommended that the "closed loop program" of direct exchange in Vietnam be increased to include more types of equipment and that larger quantities of these equipments be made available within the program.

(2) Expendable Items Requisitioning

(a) OBSERVATIONS: During the reporting period the battalion made a study of the efficiency of expendable items requisitioning within each company. It was determined that the efficiency of the operation could be improved considerably by consolidating expendable document registers at battalion level under the direct supervision of the battalion property book officer.

(b) EVALUATION: The consolidation of the expendables register at the battalion has insured the timely and accurate submission of requisitions and follow ups. This has improved the procurement of expendables and the even distribution to all units within the battalion.

(c) RECOMMENDATIONS: Any unit experiencing an imbalance in the procurement of expendable supplies due to a lack of experienced personnel to perform these requisitioning functions can improve its system through consolidation. This is especially recommended where all property is consolidated under a battalion property book officer.

(3) Teletype Machine Lubrication

(a) OBSERVATIONS: The cleaning of teletype machine in a solvent bath is both an effective means of decreasing the failure rate of parts and insuring a longer life for the machine. However, it is often found that machines are not lubricated after cleaning.

(b) EVALUATION: When a teletype machine is not lubricated after cleaning, a period of five to seven days will cause felts to harden and all levers, gears, etc. will tend to stiffen and fail to function smoothly.

(c) RECOMMENDATIONS: All teletype machines must be lubricated properly after cleaning in a solvent bath.

(4) Relay K-601 in the Tektronix Oscilloscope

(a) OBSERVATION: It was noted that often there was intermittent operation of relay K-601 in the Tektronix Oscilloscope LN/USM-51. This relay is not adequately protected from dust due to exposed contacts and it is not hermetically sealed.

(b) EVALUATION: Dust forming on the exposed contacts is causing the relay to operate intermittently.
RECOMMENDATIONS: This item of equipment should be used in a dust free area. If this is not possible, special care must be taken to clean the relays. This procedure must be used as a daily requirement in an extremely dusty area.

f. ORGANIZATION: None

g. OTHER: None

2. Incld

Withdrawn, HQ, DA

STANLEY J. DUARTE
Lieutenant Colonel, SigC
Commanding

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1 - Commanding General, USASTRATCOM-PLC, Schofield Barracks, Hawaii, LPO 96557
2 - Commanding Officer, 160th Signal Group, LPO 96491
SUBJECT: Operational Report of Headquarters, 44th Signal Battalion for Period ending 31 July 1968, (RCS CSFOR-65) (R1)

DA, HQ, 160th Signal Group, APO 96491 28 August 1968

TO: SEE DISTRIBUTION

1. The following comments apply to information contained in paragraphs as indicated:

   a. Paragraph 2a(1) of Section 2. Fully concur with the recommendations for infusion of personnel between the 44th and 69th Signal Battalion; guidelines are being established by the Group Headquarters to preclude serious personnel turnover in any one unit.

   b. Paragraph 2a(1) of Section 2. Action has been taken by 160th Signal Group and Headquarters, 1st Signal Brigade to expand the "closed loop program" to include additional items of communication.

2. Concur in the commander's observations, evaluations, and recommendations, as amplified above.

RICHARD W. SWENSON
Colonel, SigC
Commanding

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3 - Commanding General, United States Army Vietnam, ATTN: AVHGC-DST, APO 96375
6 - Commanding General, 1st Signal Brigade (USASTRATCOM), ATTN: SCCPV-OP, APO 96384
1 - Commanding General, USASTRATCOM-PAC, APO 96557
SCCPV-OP-CP (15 Aug 60) 2nd Ind
SUBJECT: Operational Report of Headquarters, 8th Signal Battalion for
Period Ending 31 July 1968, RCS CSFCA-65 (II)

DA, HQ, 1st Signal Brigade (USA STRATCOM), APO 96384, 13 September 1968

TO: Commanding General, United States Army Vietnam, ATTN: AVLOG-DST,
APO 96375

1. Subject report is forwarded in accordance with USAV Regulation 525-15.

2. This headquarters has reviewed the report and concurs in it as indorsed
with the following comments and/or exceptions concerning referenced
paragraphs:

a. Paragraph 2c(1), p.6. Concur; it should be noted that 72 803
personnel are being trained at Fort Monmouth as operators for AUTODIN
facilities. The shortcoming mentioned in reference paragraph will be sub-
mitted by this headquarters in the next monthly letter to the Commanding
General, United States Army Signal Center and School, Fort Monmouth, N.J.

b. Paragraph 2c(2), p.7. Concur; however, as of 6 July, the 803 33#1
Radio Relay and Carrier Attendant Course at Fort Gordon, Georgia has been
increased from twelve to fourteen weeks in order to permit the incorpora-
tion of the new medium capacity PCM family of equipment.

FOR THE COMMANDER:

[Signature]

2 Ind
nc

Copy furnished:

Commanding General, United States Army Strategic Communications Command,
ATTN: SCCP, Fort Huachuca, Arizona 85613

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96375

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT, APO 96558

This headquarters has reviewed the Operational Report—Lessons Learned for the quarterly period ending 31 July 1968, from Headquarters, 44th Signal Battalion, and concurs with the report as modified by the preceding endorsements.

FOR THE COMMANDER:

[Signature]

2 Incl
no

Cy furr:
HQ 1st Sig Bde
HQ 44th Sig Bn
SUBJECT: Operational Report of HQ, 44th Sig Bn for Period Ending 31 July 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 5 OCT 1968

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorsements and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

2 Incl
nc

C. L. SHORT
CPT, AGC
Asst AG
Operational Report - Lessons Learned, HQ, 44th Signal Battalion (U)

Experiences of unit engaged in counterinsurgency operations, 1 May-31 Jul 68

CO, 44th Signal Battalion

REPORT DATE: 15 August 1968

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