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AUTHORITY

AGO ltr 29 Apr 1980

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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
 WASHINGTON, D.C. 20310

IN REPLY REFER TO

AGDA (M) (20 Mar 70)

FOR OT UT 694149

25 March 1970

SUBJECT: Operational Report - Lessons Learned, Headquarters, 361st Signal Battalion, Period Ending 31 October 1969

SEE DISTRIBUTION

1. Subject report is forwarded for review and evaluation in accordance with paragraph 4b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT UT, Operational Reports Branch, within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
 Major General, USA
 The Adjutant General

1 Incl
 as

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DEPARTMENT OF THE ARMY
Headquarters 361st Signal Battalion
APO San Francisco 96392

RGCRN-CO

13 November 1969

SUBJECT: Operational Report - Lessons Learned, 361st Signal Battalion,
Period Ending 31 October 1969, RCS CSFOR-65 (R2)

Commander in Chief, United States Army Pacific, ATTN: GPOP-OT, APO 96588
Commanding General, United States Army Vietnam, ATTN: AVHGC-DH, APO 96375
Commanding General, USASTRATCOM-PAC, Schofield Barracks, Hawaii, APO 96557
Commanding General, 1st Signal Brigade, (USASTRATCOM), ATTN: SCCVOP,
APO 96384
Commanding Officer, USA Regional Communications Group (Vietnam), ATTN:
ACCPV-RG-MO, APO 96243

1. Section 1, Operations: Significant Activities.

a. The nature of the 361st Signal Battalion as the operator of a long haul communications network precludes engagement of this unit in the typical training and operational activities found in combat oriented units. The 361st Signal Battalion conducts training on a regular systematized basis at all of its sites and operational functions are carried out on a 24 hour, 7 day a week basis at all 361st Signal Battalion installations. Within this framework the 361st Signal Battalion has carried out 92 days of operations during the last reporting period.

b. The consolidation of Phu Bai Company Provisional and B Company 361st Signal Battalion was effected on 7 August 1969 thereby implementing a reduction of the administrative and overhead burden on the Battalion in this area. Personnel and equipment were formerly supplied by the B Company TDA and represented a severe drain on the Company's resources. The Phu Bai SYSCON was inactivated on 16 August 1969 and its manning distributed throughout the B Company area in support of the consolidation. A specially activated circuit was established between Phu Bai and Da Nang to carry SYSCON information to support daily activities on the 12 Signal Group and other Headquarters in the Phu Bai area.

c. In early August improvements in the defense posture of Sector IV, North Cam Ranh Bay in which the 361st Signal Battalion Headquarters is located were initiated as the result of increased enemy activity in that area. Battalion Headquarters assisted in the implementation of the following improvements in conjunction with the other defending units of

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13 November 1969

SUBJECT: Operational Report - Lessons Learned, 361st Signal Battalion,
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the IV Sector. Area improvements include a 100 meter clear area extending the length of the peninsula passing in front of the headquarters defensive perimeter, the erection of 45 foot guard towers along the sector perimeter, concertina wire fencing adjacent to the peninsula clear area, increased lighting and perimeter barriers and increased movement control in and out of the sector. The Battalion Headquarters itself has effected extensive improvements in its own unit defensive structure to include the renovation of existing bunkers and towers, adding concertina wire fencing and improved perimeter lighting, extending the clear fire areas and placing the crew served weapons in new positions to insure optimum utilization of their fire power.

d. In a joint effort between the 361st Signal Battalion and the 12th Signal Group the last 30 circuits representing the final stage of the Dong Ha TCM (non-IWCS) inactivation were routed and reterminated through the Dong Ha IWCS on 6 September 1969. The Dong Ha TCM was an AN/MSQ-73 technical control van operated by the 588th Company, 63rd Signal Battalion, and its removal represents the increasing number of subscribers that are inactivating their facilities in preparation for unit movement. It is anticipated that the permanent IWCS facilities presently at Dong Ha will be replaced with transportable tactical equipment to facilitate immediate transportation of this equipment if it is required.

e. In early September this Battalion completed plans for the impending arrival of the first major influx of ARVN personnel into the 361st Signal Battalion. The ability of the 361st Signal Battalion to mess, house and provide security was established. These ARVN personnel represent the first large group of Vietnamese assigned to this Battalion for the purpose of on-the-job training in the operation and maintenance (O&M) of the IWCS equipment with the eventual goal of assuming O&M of the entire system. These personnel have been arriving at the sites throughout late September and early October. The quantity assigned is still insignificant, and if the current rate continues, it will take sixteen years to staff the system with Vietnamese.

f. The Vung Chua Mountain tandem switch was officially activated on the 29th of October 1969. Testing was completed 11 October 1969 in preparation for the switch cutover. The final circuit of the 141 circuit switch was cutover at 0250Z 25 October 1969, three days ahead of schedule. Scheduling and preparation is presently underway for the activation of the two remaining tandem switches. The Warin tandem switch will be activated in November, while the Pleiku switch will be activated in December.

g. In preparation for the final inactivation of the Da Nang old

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control the 1st Signal Brigade has forwarded an engineering packet to D Company of the 40th Signal Battalion, 160th Signal Group which has been tasked with the implementation of the necessary projects to effect the inactivation. The Da Nang old control presently constitutes a sub-standard facility by DCA-IWCS specifications. Its inactivation will upgrade the IWCS network in this area and will affect 108 VF and 35 DC circuits presently on its boards.

h. The Nha Trang old control has been partially inactivated and is awaiting further action pending the arrival and installation of an AN/MSQ-73 technical control van at the Nha Trang microwave site to replace the present SB-675 control van. The Nha Trang old control is a part of the original Wetwash system and does not meet DCA-IWCS standards. The AN/MSQ-73 van will be a more flexible and higher quality facility and will also eliminate the need to man the TCL with technical control personnel from the 361st Signal Battalion for which we are not staffed. At present only the five DC tone packs (VFTG's) have been moved or inactivated and inactivation of the VF circuits is awaiting the arrival of the AN/MSQ-73 van. The delay in relocating and activating the AN/MSQ-73 van cannot be explained at this level.

i. This Battalion is continuing the upgrading of its AN/MRC-85 links. An AN/GRC-170 van for the Pleiku - Warin AN/MRC-85 link arrived in Pleiku on 28 September 1969. The anticipated shipping date for the other terminal vans is 15 December 1969 for Qui Nhon and Da Nang. Page Communications Engineers, Inc. have been tasked with the installation and testing of these vans. The AN/GRC-170 vans replace the REL 2500 low level tube type equipment in AN/MRC-85 vans thereby providing a reduction in maintenance and a more stable communication system.

j. Throughout the last quarter, consolidation of the Communications/Electronics prescribed Load List has been in progress. A critical shortage of trained supply personnel and duplication of effort caused the re-evaluation and subsequent renovation of the supply/maintenance organization in the Battalion. Company A has completed consolidation of its two supply facilities at Nha Trang and Cam Ranh Bay into one function located at Nha Trang. Company B is still in the process of consolidating its three supply facilities at Da Nang, Monkey Mountain and Phu Bai to one facility at Da Nang. Company C has been operating two supply/maintenance sites at Vung Chua Mountain and Fleiku. Both of these sites are located away from the company headquarters due to insufficient space at Qui Nhon headquarters. Consolidation is presently taking place at Vung Chua Mountain with the eventuality that final consolidation will be done in Qui Nhon when space is located for the facility.

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2. Section 2, Lessons Learned: Commanders Observations, Evaluations,
and Recommendations.

- a. Personnel. None
- b. Intelligence. None
- c. Operations. None
- d. Organization. None
- e. Training. None
- f. Logistics. None
- g. Communications.

(1) Engineering Changes - Tandem Switch Cutover.

(a) OBSERVATION. At several DTEs and TCGs, engineering changes were initiated after the Tandem Cutover had begun. The changes were authorized and recommended by the Cutover Director and DCA-SAM WECO personnel. The changes consisted of reducing what was considered to be an excess amount of conditioning equipment between DTEs and TCGs. This was accomplished by strapping out the pads and amps at the DTEs and re-strapping the pads in the TCGs to give the correct levels at the DTE.

(b) EVALUATION. These changes directed during the middle of the cutover produced considerable confusion and resulted in re-aligning the circuits, which could have been avoided if DCA-SAM had engineered circuits properly before issuance of TSO/CEO's.

(c) RECOMMENDATION. That in future tandem switch activations, the above be accomplished prior to the actual cutover.

(2) E&M Leads - Tandem Switch Cutover.

(a) OBSERVATION. At several DTEs it was discovered during the actual cutover that the E&M leads were reversed.

(b) EVALUATION. Prior to the cutover, the E&M leads had been checked out only for continuity at DTEs.

(c) RECOMMENDATION. Check out all E&M leads for both continuity and polarity to preclude reversal.

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(3) Multiplexer Drawer.

(a) OBSERVATION. A serious outage occurred while equipment was being cleaned and dusted in the anticipation of a site inspection at Fleiku.

(b) EVALUATION. On 2 September 1969 an outage was caused on the Vung Tau groups 1-3, 1-4, 1-5 from 0306 to 0340Z. Numerous mux drawers were open at the time and fuses F17 and F18, which are paralleled, were found blown. These were replaced without clearing the trouble. After considerable checking of equipment, fuses F3, F4, and F5 were found blown on the group multiplexer shelf. These are cartridge type fuses, mounted underneath the group multiplexer shelf, and are not alarmed. These fuses have very little clearance between them and the next shelf below. Since the upper group drawers sag more than the lower shelf when they are both extended, the fuse holders in the upper shelf may ground to the lower.

(c) RECOMMENDATION. Recommend that all sites be alerted to the fuse location underneath the multiplexer drawer and cautioned that when this drawer is opened, the drawer underneath should not be opened.

(4) Signal Receiver Relay Panel.

(a) OBSERVATION. On 3 September 1969 An Khe system was out from 1925Z to 1932Z and the Pr'Line system from 1925Z to 1931Z.

(b) EVALUATION. While a technician was dusting the Minor Alarm Panel, a signal receiver relay panel Farin Electric Co. SD 13125, located in row 6, bay 13 of the EE building, he noticed that relay K-10 was not securely bolted to the panel. When tightening the screws, an alarm went off causing him to jerk the screwdriver and causing a ground to the mounting panel of the 120 volt AC supply on this panel to the alternate buss. The panel does not switch fast enough to prohibit the TWT Power Supply from going into a time delay condition before re-applying power to the TWT amplifier. The Signal Receiver Relay Panel is protected with a one (1) ampere panel mounted fuse in the 120 volt AC input wiring to the two (2) relay panels in row 6, bay 13 and one (1) relay in row 6, bay 12 that were turned over; i.e. the fuse was in the neutral supply lead rather than the hot lead.

(c) RECOMMENDATION. This wiring turnover should be brought to the attention of other IWCS sites to insure that this hazard, both to personnel and services, does not exist throughout the system.

(5) REL 2600 Front End Noise.

(a) OBSERVATION. Recently An Khe detachment experienced difficulties

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13 November 1969

SUBJECT: Operational Report - Lessons Learned, 361st Signal Battalion,
Period Ending 31 October 1969, RCS CSFOR-65 (R2)

with their receiver front end being noisy.

(b) EVALUATION. Upon checking the equipment, it was found that some of the inter-cabinet connections were loose on the inside of the housing.

(c) RECOMMENDATION. Advise all sites of the possible cause of the trouble and that an easy maintenance check can prevent the development of this problem.

(6) Waveguide Dehydrators.

(a) OBSERVATION. Waveguide dehydrators must be checked periodically for effective operation, although many personnel are not familiar with a proper method of checking them.

(b) EVALUATION. An easy method of checking the waveguide dehydrator systems is by releasing air pressure from the compressor until the compressor motor starts, then closing the dehydrator system valves and noting any abrupt changes in the meter indications.

(c) RECOMMENDATION. Advise all sites on the above checking method.

(7) Heat Ducting.

(a) OBSERVATION. Heat ducts from the 1KW power amplifiers located in the EE buildings empty heated air directly into the RF section of the building.

(b) EVALUATION. The location of power amplifier blower ducts dumps hot air directly into the RF section of the EE building which dissipates much of the cooling effect provided by the air conditioner units and places an additional strain on the air conditioning equipment.

(c) RECOMMENDATION. By providing continuous ducting from the finals to the exterior of the building, maximum benefit may be derived from the air conditioning equipment.

(8) Corrosive Battery Gases.

(a) OBSERVATION. Pitting and discoloration was observed to occur on equipment stored near a battery room door.

(b) EVALUATION. Gases from the batteries utilized by IWCS sites can be of a corrosive nature. Although ventilation is provided for battery storage rooms, the volume movement of air throughout the EE building by

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Period Ending 31 October 1969, RCS CSFOR-65 (R2)

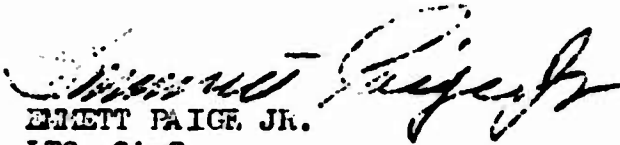
the air conditioners is sufficient to draw the air with the reactive gases out of the battery room.

(c) RECOMMENDATION. Care should be exercised to insure that battery room doors are kept closed at all times. Equipment should not be stored in close proximity to battery room doors.

h. Material. None

i. Other. None

~~1 Incl~~
~~Ltr RGCRCN OI O 5 Nov 69~~
Incl wd HQ, DA


EMMETT PAIGE JR.
LTC, SigC
Commanding

SCCPV-RG-MO (13 Nov 69) 1st Ind
SUBJECT: Operational Report - Lessons Learned, 361st Signal Battalion
Period Ending 31 October 1969, RCS CSFOK-65 (R2)

30 November 1969

Headquarters, USASTRATCOM Regional Communications Group (Vietnam), APO 96243

TO: Assistant Chief of Staff for Force Development, Department of the Army
Washington D.C. 20310
Commanding General, 1st Sig Bde (USASTRATCOM), ATTN: SCCPV-PO-CK,
APO 96384

1. Subject report is forwarded in accordance with 1st Sig Bde Reg 1-19.
2. This headquarters has reviewed the report and basically concurs with it.
3. Following are corrections and/or comments concerning referenced paragraphs:

a. Paragraph 1e, Page 2: Comment on 16 years to staff the system: Really not realistic since we wouldn't expect the men at the beginning of the staffing to be on-the-job 16 years later.

b. Paragraph 1h, Page 3: "Persent" should be "present".

c. Commander should state the number of days during the reporting period that the unit engaged in trainings, troop movements, and operations.

d. Comments on Section 2, Lessons Learned, Page 4:

(1) Para 2g (1), Page 4. Engineering Changes - Tandem Switch: Do not concur in EVALUATION. Concur in recommendation. It is to be noted that these circuits were, in fact, properly engineered by DCA-SAM and were checked out prior to the cutover. The changes in equipment were made by personnel unfamiliar with the concept and operation of standard level circuit jacks.

(2) Para 2g (2), Page 4. E&M Leads - Tandem Switch Cutover: In addition, E&M Leads will be checked by the Group Tech Assistance Team as a portion of the site assistance visits.

(3) Para 2g (3), Page 5. Multiplexer Drawer: Concur. ICG Tech Assistance Team will alert site personnel on fuse locations and maintenance problems.

(4) Para 2g (4), Page 5. Signal Receiver Relay Panel: Concur. Site personnel will be alerted to these findings.

(5) Para 2g (5), Page 5. REL-2600 Front End Noise: Concur. Procedure will be incorporated into RCG Tech Assistance Program.

SCCPV-RG-MO (13 Nov 69) 1st Ind

SUBJECT: Operational Report - Lessons Learned, 361st Signal Battalion
Period Ending 31 October 1969, RCS CSFOR-65 (R2)

(6) Para 2g (6), Page 6. Wave Guide Dehydrators: Concur. Incorporated into Tech Assistance Program.

(7) Para 2g (7), Page 6. Heat Ducting: Essentially concur. This appears to be working, but modification is being studied to insure that the additional pressure head on the blowers will not affect the volume of air flowing through the unit. Additional studies are being conducted to insure that the original A/C plans for external air venting are not being upset by this modification.

(8) Para 2g (8), Page 6. Corrosive Battery Gases: Concur. Sites have been instructed to keep battery room doors closed for safety reasons. As a portion of tech assistance visits, sites will be instructed not to store equipment there.

Edward B. Howard
EDWARD B. HOWARD
LTC, SigC
Acting Commander

SCCPV-OP-AD (13 Nov 69) 2d Ind
SUBJECT: Operational Report - Lessons Learned, 361st Signal Battalion for
Period Ending 31 October 1969, RCS CSFOR-65 (R2)

DA, HQ, 1st Signal Brigade (USASTRATCOM), APO 96384 6 December 1969

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

1. Subject report is forwarded in accordance with AR 525-15.
2. The following comment is made: Reference para 1i, there are presently six AN/GRC-170s installed and operating in RVN on the VTU-PKU, PLM-NHA, and WRN-PKU links. At STRATCOM-PAC direction negotiations have been suspended regarding installation of the remaining 8 vans, pending a final decision by STRATCOM on their disposition. STRATCOM-PAC has recommended the remaining 8 vans not be installed in RVN.

FOR THE COMMANDER:



T. E. MULLENNIEX
LTC, AGC
Adjutant General

CF:
Commanding General, United States Army Strategic Communications Command,
ATTN: SCC-OPS-RT, Fort Huachuca, Arizona 85613
Commanding Officer, USA Regional Communications Group, APO 96243
Commanding Officer, 361st Signal Battalion, APO 96392

AVHGC-DST (13 Nov 69) 3d Ind

SUBJECT: Operational Report-Lessons Learned, 361st Signal Battalion
Period Ending 31 October 1969, RCS CSFOR-65 (R2)


HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 31 DEC 1969

THRU: Commanding General, United States Army Strategic Communications
Command-Pacific, APO 96557

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 October 1969 from Headquarters, 361st Signal Battalion and concurs with the report as indorsed.

FOR THE COMMANDER:


B. A. GOODWIN
MAJ, AGC
Assistant Adjutant General

Cy furn:
361st Sig Bn
1st Sig Bde

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SCCP-OP3 (13 Nov 69) 4th Ind
SUBJECT: Operational Report - Lessons Learned, 361st Signal
Battalion, Period Ending 31 October 1969, RCS
CSFOR-65 (R2)

Headquarters, United States Army Strategic Communications
Command-Pacific, APO San Francisco 96557

TO: Commander in Chief, U. S. Army, Pacific, ATTN: GPOP-DT,
APO 96558

1. Subject report is forwarded in accordance with AR 525-15.
2. This headquarters has reviewed subject report and offers the following comments:
 - a. Reference paragraph 2, 2d Indorsement. The eight remaining Ail/GRC-170 vans have been diverted by HQ USASTRATCOM and are currently held in reserve in CONUS. Shipment to SEA is considered to be cancelled.
 - b. Concur with the remainder of the report as indorsed.
3. The For Official Use Only protective marking may be removed on 1 January 1971.

FOR THE COMMANDER:

Frank C. Mahin
FRANK C. MAHIN
COL, GS
Chief of Staff

CF: wo Incl
CG, USARV, APO 96375
CG, 1st Sig Bde (USASTRATCOM), APO 96384
CO, USA Regional Comm Gp (USASTRATCOM), APO 96243
CO, 361st Sig Bn (USASTRATCOM), APO 96392

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GPOP-DT (13 Nov 69) 5th Ind

SUBJECT: Operational Report of HQ, 361st Signal Battalion for Period
Ending 31 October 1969, RCS CSFOR-65 (R2)

HQ, US Army, Pacific, APO San Francisco 96558 14 FEB 70

THRU: Commanding General, US Army Strategic Communications Command,
Fort Huachuca, Arizona 85613

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

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:



C. L. SHORTT
CPT, AGC
Asst AG

CF:
DA, ACSFOR
CG, USASTRATCOM-PAC

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SCC-PO (13 Nov 69) 6th Ind

SUBJECT: Operational Report of HQ, 361st Signal Battalion for Period
Ending 31 October 1969, RCS CSFOR-65 (R2)

Headquarters, United States Army Strategic Communications Command, Fort
Huachuca, Arizona 85613

1 2 MAR 1970

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

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER:

M. G. Alderman

for
W. O. POLSTON
Maj, AGC
Asst Adj Gen

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