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| AGO ltr, 29 Apr 1980                                                                                                                                                                                                         |

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IN REPLY REFER TO

AGAM-P (M) (28 Oct 68) FOR OT RD 683292

30 October 1968

SUBJECT: Operational Report - Lessons Learned, Headquarters, 160th  
Signal Group, Period Ending 31 July 1968

SEE DISTRIBUTION

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.

BY ORDER OF THE SECRETARY OF THE ARMY:

*Kenneth G. Wickham*

KENNETH G. WICKHAM  
Major General, USA  
The Adjutant General

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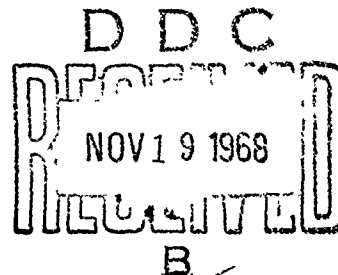
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AD 843195

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DEPARTMENT OF THE ARMY  
HEADQUARTERS, 160TH SIGNAL GROUP  
APO San Francisco 96491

SCCPV-UG-OP

13 August 1968

SUBJECT: Operational Report - Lessons Learned, of 160th Signal Group for  
Period Ending 31 July 1968, RCS CSFOR-65(R1).

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1. Section 1, Operation: Significant Activities.

a. General. This is the fifth report to be submitted by this Group since its arrival in the Republic of Vietnam (RVN) on 30 April 1967. The organization, mission, and functions of the Group remain unchanged except as outlined in paragraph 1g below.

b. Personnel. Shortages of personnel in key Military Occupational Specialties (MOS) continued during this reporting period. Diversion of personnel by the 1st Signal Brigade helped to alleviate this situation, particularly toward the end of the report period. The 2893 personnel presently assigned are 411 less than the MTOE level three authorization of 3304, which includes 51 spaces for the Southeast Asia Signal School (SEASS).

(1) During this reporting period, the Group processed 1206 incoming and 1104 outgoing enlisted personnel as follows:

| UNIT  | MAY  |      | JUN  |      | JUL  |      | TOTAL |      | NET QTR |      |
|-------|------|------|------|------|------|------|-------|------|---------|------|
|       | GAIN | LOSS | GAIN | LOSS | GAIN | LOSS | GAIN  | LOSS | GAIN    | LOSS |
| HQ    | 18   | 5    | 25   | 13   | 21   | 11   | 64    | 29   | 35      | —    |
| 40th  | 75   | 48   | 94   | 86   | 169  | 133  | 338   | 267  | 71      | —    |
| 44th  | 97   | 116  | 167  | 122  | 99   | 50   | 363   | 288  | 75      | —    |
| 69th  | 134  | 110  | 131  | 188  | 109  | 98   | 374   | 396  | —       | 22   |
| 221st | 11   | 24   | 5    | 55   | 12   | 11   | 28    | 90   | —       | 62   |

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| UNIT  | MAY  |      | JUN  |      | JUL  |      | TOTAL |      | NET GAIN | QTR LOSS |
|-------|------|------|------|------|------|------|-------|------|----------|----------|
|       | GAIN | LOSS | GAIN | LOSS | GAIN | LOSS | GAIN  | LOSS |          |          |
| 706th | 13   | 16   | 19   | 11   | 6    | 7    | 38    | 34   | 4        | —        |
| SEAPC | 0    | 0    | 0    | 0    | 1    | 0    | 1     | 0    | 1        | —        |

(2) The Group also processed 71 incoming and 65 outgoing officer personnel as follows:

| UNIT  | MAY  |      | JUN  |      | JUL  |      | TOTAL |      | NET GAIN | QTR LOSS |
|-------|------|------|------|------|------|------|-------|------|----------|----------|
|       | GAIN | LOSS | GAIN | LOSS | GAIN | LOSS | GAIN  | LOSS |          |          |
| HQ    | 5    | 3    | 7    | 4    | 5    | 11   | 17    | 18   | —        | 1        |
| 40th  | 0    | 1    | 2    | 1    | 8    | 9    | 10    | 11   | —        | 1        |
| 44th  | 4    | 6    | 2    | 3    | 7    | 3    | 13    | 12   | 1        | —        |
| 69th  | 5    | 3    | 5    | 7    | 2    | 3    | 12    | 13   | —        | 1        |
| 221st | 4    | 0    | 3    | 3    | 6    | 2    | 13    | 5    | 8        | —        |
| 706th | 2    | 2    | 2    | 2    | 1    | 2    | 5     | 6    | —        | 1        |
| SEAPC | 0    | 0    | 0    | 0    | 1    | 0    | 1     | 0    | 1        | —        |

(3) For the Quarter, enlisted promotion allocations were distributed as follows:

| UNIT  | E9 | E8 | E7 | E6 | E5  | E4  | TOTAL | LAST QTR |
|-------|----|----|----|----|-----|-----|-------|----------|
| HQ    | 0  | 0  | 0  | 6  | 6   | 16  | 28    | 25       |
| 40th  | 0  | 0  | 0  | 16 | 33  | 25  | 74    | 198      |
| 44th  | 0  | 0  | 1  | 25 | 61  | 123 | 210   | 282      |
| 69th  | 0  | 0  | 0  | 36 | 76  | 56  | 168   | 438      |
| 706th | 0  | 0  | 0  | 7  | 20  | 9   | 36    | 37       |
| 221st | 0  | 0  | 0  | 7  | 8   | 6   | 21    | 61       |
| TOTAL | 0  | 0  | 1  | 97 | 204 | 235 | 537   | 1041     |

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(4) During this period, the following awards were approved for personnel of this command:

|            | MAY | JUN | JUL | TOTAL | LAST QTR |
|------------|-----|-----|-----|-------|----------|
| LOM        | 0   | 1   | 4   | 5     | 4        |
| SOLD MEDAL | 0   | 0   | 0   | 0     | 0        |
| BSM "V"    | 1   | 0   | 3   | 4     | 25       |
| BS         | 15  | 25  | 19  | 59    | 42       |
| AIR MEDAL  | 0   | 0   | 0   | 0     | 0        |
| ACM "V"    | 1   | 0   | 3   | 4     | 8        |
| ACM        | 20  | 25  | 11  | 56    | 64       |
| PH         | 0   | 0   | 2   | 2     | 10       |
| TOTAL      | 37  | 51  | 42  | 130   | 153      |

(5) As of 31 Jul 68, the assigned strength for the Group Headquarters is as follows:

|    | OFF | WO | EM  | TOTAL | LAST QTR |
|----|-----|----|-----|-------|----------|
| HQ | 30  | 3  | 161 | 194   | 141      |

(6) The following information office (IO) program statistics are furnished:

(a) Fifteen IO releases were forwarded to 1st Signal Brigade: two in May, seven in June, and six in July.

(b) 892 hometown news releases were forwarded to 1st Signal Brigade: 376 in May, 172 in June and 334 in July.

(c) During the months of May and July the Group received the Brigade IO award.

(d) The Brigade goal for hometown news releases for 160th Signal Group was 687 releases. The Group released 892 during this period.

(7) Key personnel of the Group headquarters include:

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- (a) Commanding Officer - COL Richard W. Swenson
- (b) Executive Officer - LTC Donald R. Lasher
- (c) S-1/Adjutant - CPT Glon E. Butcher
- (d) S-2/3 - MAJ Arnold R. Du Pont
- (e) S-4 - MAJ Leonard J. Gilka
- (f) Signal Officer - LTC Howard R. Sage
- (g) Chief, Systems Engineering and Control Office - CPT James R. Holland
- (h) Chief, COMMCEN Engineering and Analysis Office - CPT Benny L. Lockett
- (i) Chief, Telephone Management Office - MAJ Jackie L. Manbeck

c. Operations. This section of the report is divided into areas of functional responsibility.

(1) Telephone Management.

(a) The following telephone communication facilities are operated by Group units at locations indicated:

| <u>FACILITY</u>                                   | <u>LOCATION</u>                                  |
|---------------------------------------------------|--------------------------------------------------|
| Long Binh DTE (5000 line capacity)                | Long Binh                                        |
| Plantation DTE (600 line capacity)                | Long Binh (II FFV Area)                          |
| MACV DTE (2000 line capacity)                     | Saigon (MACV HQS)                                |
| Tiger DTE (2000 line capacity)                    | Saigon (MACV I Compound)                         |
| Deer DTE (100 line capacity)                      | Saigon (Free World Military Assistance Compound) |
| Saigon LD Switchboard (660 line capacity)         | Saigon (Tan Son Nhut AB)                         |
| MACV Emergency Action Console (200 line capacity) | Saigon (MACV HQS)                                |

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FACILITY

LOCATION

USARV Emergency Action Console  
(100 line capacity)

Long Binh (USARV HQS)

(b) Telephone Systems completed projects.

1 Restriction of dial access for class "C" telephones in the Long Binh Dial Telephone Exchange (DTE) to other DTEs so as to reduce the burden on operators as well as inter-city trunking was accomplished on 15 May 1968, and resulted in significantly improved long distance and inter-city class "A" telephone service.

2 The Lynx Cross - connect "B" in Saigon was eliminated on 31 May 1968 to remove a potential source of trouble during the rainy season and to reduce vulnerability to hostile action. This project required rerouting of twelve major cables and the installation of a total of 8,550 feet of cable.

3 Transfer of all switchboard service provided Plantation DTE subscribers from a separate nine position AN/TTC-7 switchboard to the attendant's cabinet in the AN/TTC-28 Transportable Telephone System was completed on 19 June 1968. Previously the Plantation DTE subscribers utilized the AN/TTC-28 for dial service and the AN/TTC-7 for switchboard service.

4 Installation of conditioning equipment allowing interface with the Tandem Switching Centers was initiated at the Long Binh, MACV and Tiger DTEs in late June. Installation will be completed prior to the January 1969 target date for the Tandem Switch network's activation.

5 Two hundred and fifty-seven telephones and twelve special key systems were installed in the new 1st Signal Brigade Headquarters on 26 June.

6 Installation of a three position AN/TTC-7 switchboard and a complete internal wiring system in the Capital Military Assistance Command Headquarters in Saigon was completed on 26 June.

7 Expansion of the 2000 line MACV DTE to a 3000 line capacity began on 13 July 1968. This two month installation program will effectively reduce the main line fill from its present 95% level thereby improving subscriber service.

8 The combined percentage of class "A" telephones at MACV, Tiger, Long Binh, and Plantation DTEs was reduced from 45% to 36%.

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9 Outside subscriber access to local operators at all 160th Signal Group DTEs has been restricted in order to reduce inter-office trunk overloading.

10 216,850 feet of unserviceable, abandoned and unnecessary cable were removed in the Saigon area in order to facilitate new construction and cable maintenance. This removal program will continue for an indefinite period.

11 Installation of approximately 211,000 feet of multi-pair cable has been accomplished, as follows:

| <u>Location</u>                                                              | <u>(Pair)<br/>Size</u>               | <u>(Feet)<br/>Amount</u> |
|------------------------------------------------------------------------------|--------------------------------------|--------------------------|
| Tiger DTE-MCV II Compound                                                    | 200, 300, & 600                      | 19,500<br>(total)        |
| Hallmark Swbd-Hurricane Patch<br>(II FFV Communication Facilities)           | 200                                  | 1,600                    |
| Hq, 160th Sig Gp - 160th Sig Gp<br>Command Bunker (Long Binh)                | 50                                   | 1,246                    |
| MACV DTE-Manhole 7<br>(Saigon Distribution Cable)                            | 25, 50, 100, 200,<br>400, 600, & 900 | 15,500<br>(total)        |
| Plantation Carrier - 303rd Radio<br>Research Bn COMMCEN (Long Binh)          | 100                                  | 5,310                    |
| 321st Transportation Company<br>(Extension, Long Binh)                       | 25                                   | 4,500                    |
| Cross-connect A-cross-connect-B<br>(Saigon)                                  | 200                                  | 700                      |
| 506th Field Depot<br>(Extension, Long Binh)                                  | 12                                   | 1,500                    |
| 277th S&S Battalion<br>(Extension, Long Binh)                                | 12                                   | 2,500                    |
| Redcatcher/303rd RR Bn/12th Avn<br>Gp/79th Engr Bn<br>(Extension, Long Binh) | 25 & 50                              | 9,200<br>(total)         |

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| <u>Location</u>                                           | <u>(Pair)<br/>Size</u>          | <u>(Feet)<br/>Amount</u> |
|-----------------------------------------------------------|---------------------------------|--------------------------|
| Area 208<br>(Distribution, Long Binh)                     | 25 & 50                         | 8,300<br>(total)         |
| JUSPAO-PanAm Bldg<br>(Saigon)                             | 25                              | 2,000                    |
| 185th Maint Bn<br>(Extension, Long Binh)                  | 25 & 50                         | 3,500<br>(total)         |
| Long Binh Post TOC<br>(Extension, Long Binh)              | 50                              | 100                      |
| Saigon LD Switchboard<br>(Extension, Saigon)              | 100                             | 600                      |
| 1st Signal Brigade Headquarters<br>(Extension, Long Binh) | 50, 100, & 300                  | 850<br>(total)           |
| 253 Cach Mang St.<br>(Extension, Saigon)                  | 25                              | 1,500                    |
| New US Embassy<br>(Internal, Saigon)                      | 600                             | 500                      |
| Plantation DTE<br>(Internal, Long Binh)                   | 200                             | 650                      |
| Dong Nai Pumping Station<br>(Extension, Long Binh)        | 6                               | 7,600                    |
| AUTOSEVOCOM Facility<br>(Extension, Long Binh)            | 100                             | 500                      |
| Australian Task Force<br>(Extension, Long Binh)           | 25                              | 150                      |
| Da Nang Cantonment<br>(Distribution, Da Nang)             | 25, 50, 100, 200,<br>300, & 400 | 61,000<br>(total)        |
| VHF Bldg-7th Air Cav<br>(Vinh Long)                       | 100                             | 1,460                    |

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| <u>Location</u>                                  | (Pair)<br><u>Size</u>                | (Feet)<br><u>Amount</u> |
|--------------------------------------------------|--------------------------------------|-------------------------|
| 100th Log Gmd (ROK)<br>(Distribution, Nha Trang) | 100, 200, & 300                      | 39,400<br>(total)       |
| 25th Inf Div Base Camp<br>(Distribution, Cu Chi) | 25, 50, 100, 200,<br>300, 400, & 600 | 23,800<br>(total)       |

(2) Communication Center Engineering and Analysis.

(a) The quarter ending 31 July 1968 was characterized by establishment of new AUTODIN facilities, and increased emphasis was placed on personnel efficiency and handling times. During this period, the COMMOEN Evaluation Team continued its detailed inspection of operating procedures, service rates, and handling times. The Group reduced overall service rates from 3.8% the previous quarter to 1.9% for the past quarter.

(b) A comparison of traffic handling times are shown below.

Comparison of Originate Traffic Handling Times in Minutes

|              | <u>ZZ</u> | <u>OO</u> | <u>PP</u> | <u>RR</u> |
|--------------|-----------|-----------|-----------|-----------|
| Previous Qtr | 2.0       | 2.8       | 33.7      | 33.3      |
| Current Qtr  | 3.9       | 3.9       | 15.0      | 35.7      |

Comparison of Terminate Traffic Handling Times in Minutes

|              |     |     |      |      |
|--------------|-----|-----|------|------|
| Previous Qtr | .8  | 6.6 | 7.7  | 9.0  |
| Current Qtr  | 1.1 | 9.7 | 13.0 | 13.0 |

(c) The handling times for originated traffic increased in all precedence categories except for Priority which had a slight decrease. Handling time for terminated traffic increased in all precedence categories. Total traffic volume increased from 1,179,228 messages the previous quarter to 1,191,374 the past quarter. The increase in traffic volume, an acute shortage of operating and supervisory personnel and the receipt of ACP-127 type messages at USRV over the UNIVAC 1004 AUTODIN Terminal account for the increased handling times. Under ACP-127 messages are received on paper tape only, requiring separate handling to produce a page copy.

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(d) On 13 May 1968 the UNIVAC 1004 AUTODIN Terminal at the USARV COMMCEN became operational off the Phu Lam Automatic Switching Center. This AUTODIN terminal will provide higher speed and greater circuit reliability over conventional teletype. Although present terminate handling times are high, it is expected to be reduced appreciably with the change over to JANAP 128(A) thus providing page copy via the UNIVAC 1004 high speed printer. This is tentatively scheduled to take place on or about 1 September 1968.

(e) Reconfiguration of the U.S. Army Military Assistance Command Vietnam (MACV) Common User and Operations Center (COC) COMMCENs has been completed with termination on new equipment on 11 June 1968.

(3) Systems Engineering and Control.

(a) At the end of this reporting period, the VHF radio equipment and Pulse Code Modulation (PCM) carrier equipment consisted of seven Defense Communications Systems (DCS), and eight Army Area Communications System (AACS) multichannel radio links, as follows:

SYSTEM DESIGNATOR

TERMINAL LOCATIONS

|                              |                             |
|------------------------------|-----------------------------|
| 77UHF7                       | Long Binh-Long Thanh North  |
| 77UHM4                       | Long Binh-MACV I            |
| 77UHP1                       | MACV I-Nha Be               |
| 77UHP6                       | Octopus-Di An               |
| 77UH1G                       | Octopus-Cu Chi              |
| 77UH1R                       | Octopus-Plantation          |
| 77UH91                       | Octopus-Cu Chi              |
| ACW09                        | Plantation-Long Thanh North |
| CAW46                        | Long Binh-Bien Hoa          |
| CAW40                        | Long Binh-Phu Loi           |
| CAW67                        | Octopus-Di An               |
| CCA24 (AN/GRC-50 Radio only) | Octopus-Long Binh           |

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SYSTEM DESIGNATOR

TERMINAL LOCATIONS

CCA25 (AN/GRC-50 Radio only)

Octopus-Long Binh

CCW21

Long Binh-Plantation

CCA26 (AN/GRC-50 Radio only)

MACV-TMA

(b) The two AACCS cable carrier systems using PCM equipment were re-engineered by the Raytheon Field Engineer during this last period.

SYSTEM DESIGNATOR

TERMINAL LOCATIONS

CCR20

Long Binh-Plantation

CCR21

Long Binh-Plantation

(c) One DCS system remains in operation using AN/TCC-7 carrier equipment.

SYSTEM DESIGNATOR

TERMINAL LOCATION

77URA8

Cholon (DEER)-MACV I

(d) Eight AN/GRC-10 VHF radios were committed from the MACV contingency team package on order of 1st Signal Brigade Operations, to provide 4-channel systems for minimum essential communications as follows:

SYSTEM DESIGNATOR

TERMINAL LOCATIONS

GCH37

MACV I-SIGMA

GCH41

MACV-JGS

GCH44

MACV I-AMMC

GCH47

Long Binh-Cat Lai

(e) On 12 June 1968, the Group was tasked to install two radio carrier systems (AN/MRC-69) from the Free World Forces Compound (FWFC) in Cholon-Saigon to MACV Saigon as follows:

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SYSTEM DESIGNATOR

TERMINAL LOCATIONS

CCH45

FWFC-MaCV

CCH46

FWFC-MaCV

(f) During the past Tet and Second Offensive periods, and in spite of the many necessary contingency communication missions and reaction force operations, this Group continued to provide highly reliable communications. No systems outages were attributable to enemy action.

(g) The expansion of the Site Octopus Technical Control Facility on Tan Son Nhut AFB was completed during this period. This included the cut over of all tone packs from the Tan Son Nhut Technical Control Facility (Master Complex). The Site Octopus Technical Control should decrease restoration time, improve the quality of systems/circuits and result in more efficient alternate routes.

(h) The 132-foot AB-216 antenna tower was raised to 150 ft at Site Octopus, resulting in improved system performances and more tower space for additional antennae.

(i) During the period 1 May through 31 July 1968, Group closely scrutinized the performance of the MACV Command HF RATT NET. It was found that a large amount of "QRN" (natural interference) was being reported. Emphasis has been placed on minimizing the effects of "QRN" in order to obtain high quality transmissions. Net improvement recommendations were submitted during the 1st Signal Brigade HF Net Conference on 23 July 1968.

(4) Photographic Operations.

(a) On July 15, the Southeast Asia Pictorial Center occupied three fixed plant facilities at the Long Binh complex, placing the SEA Pictorial Center, Audio-Visual Support Center and the laboratory complex in the operational configuration originally planned. Personnel and equipment for the Audio-Visual Support Center were later relocated from Tan Son Nhut Air Base, Saigon to Long Binh on 30 July 1968.

(b) The projectionist training course operated by the Central Audio Visual Support Center became operational on 15 May. 160 Students have already been graduated from the course, while units unable to send men to Long Binh are being assisted by a newly created mobile instruction team.

(c) Color printing was begun on 15 June and is now fully operational. This is the only Army Pictorial color printing capability in Vietnam.

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(d) Ninety-nine special photographic assignments were completed for 1st Signal Brigade; COMUSMACV; CG, USARV; USARSTRATCOM PAC; DA; and DOD. Examples of these include:

1 Coverage of U.S. and enemy artillery and rocket fire by U.S. Forces to familiarize armed helicopter pilots with the different types of blasts and the B-40 and B-41 rocket test firing conducted by ARVN units.

2 An aerial photographic study of POL facilities and installations at Cam Ranh Bay, Qui Nhon and Saigon was conducted for the 1st Log Command.

3 Coverage of Free World Forces in RVN to include unit activities, training and living areas, of the Australian, Thailand, New Zealand, Korean and Philippine forces as requested by MACV IO.

4 Field coverage of seventeen specific items of signal equipment employed in Vietnam at division level and below was provided at the request of Department of the Army for use in the Department of the Army Information School, Ft Benning, Georgia.

5 Two sound motion picture teams have been provided on a full time basis for coverage of MACV activities as requested by Department of Defense, while two still teams have been tasked to cover COMUSMACV and General Staff activities at MACV.

6 The photo team in support of the Provisional Corps Vietnam was augmented with laboratory equipment and personnel, and redesignated the I CTZ Photo Support Unit (Phu Bai). An air-conditioned laboratory has been constructed at that facility, permitting all black and white still photography to be processed and printed locally. Motion picture and still color film processing remains at the Central Facility at Long Binh.

7 A 30 minute film entitled "The Action Army in Vietnam" was produced for Headquarters, USARV and shown on AFVN TV on 10 June 1968.

8 A photographic team from the I CTZ Photo Detachment (Phu Bai) photographed an arms and ammunition cache discovered in that area. All equipment and munitions were of foreign manufacture; and evidence was recorded of clandestine techniques employed to prevent discovery. A series of these photographs was forwarded through diplomatic channels to the U.S. Negotiating Team in Paris.

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d. Training.

(1) Fourteen training inspections of subordinate units were conducted by Group Headquarters personnel during this reporting period, in a continuing effort to maintain improved training programs throughout the Group.

(2) Personnel of this Group attended the following special training courses on new equipment:

(a) Six EM attended a special four week course on the maintenance of the TSEC/KY-38 conducted at Regional Communications Group, Saigon by a New Equipment Training team from the U.S. Army Electronics Command.

(b) In addition, personnel of this group attended the following courses conducted at the Southeast Asia Signal School: AN/TRC-110/117 Operators Course - 34; Key Telephone System Maintenance Course - 12; Teletype Restoral Course - 11; Cable Splicers Course - 20; Technical Facility Controller Course - 11; and, AN/GRC-50 Maintenance Course - 4.

(c) All Prescribed Load List (PLL) clerks of the 69th Signal Battalion attended a two day PLL course, while four clerks from the 44th Signal Battalion and five clerks from the 221st Signal Company were similarly trained.

(d) Training classes for Group officers and warrant officers with less than five years active commissioned/warrant service continued. Subjects presented included: Photo Processing Service; Reports of Survey; Effective Writing; Construction Practices; and, Military Justice.

(e) NCO Training classes centered on military instruction principles with emphasis on methods and preparation of instruction, proper speech and questioning techniques, and uses of training aids.

(f) Six EM received projectionist licenses after having completed a course of instruction on the 16mm projector conducted by the Southeast Asia Pictorial Center.

(g) An extensive on - the - job training program was continued throughout the reporting period to help overcome the shortage of qualified operator and maintenance personnel. The number of personnel indicated in parentheses were trained in the following MOS's: 05C, Radio Teletype Operator (38); 31E, Field Radio Repairman (2); 31M, Radio Relay and Carrier Attendant (19); 31L, Field Radio Relay Equipment Repairman (1); 31N, Tactical Circuit

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Controller (3); 31S, Field General COMSEC Repairman (4); 32D, Fixed Station Technical Controller (9); 36C, Lineman (124); 36E, Cable Splicer (41); 36G, Manual Central Office Repairman (5); 36H, Dial Central Office Repairman (11); 41F, Projector Repairman (1); 63B, Wheel Vehicle Repairman (10); 71B, Clerk Typist (1); 71D, Legal Clerk (1); 71H, Personnel Specialist (1); 72B, Communications Center Specialist (13); 72C, Telephone Switchboard Operator (94); 74A, Data Processing Equipment Operator (6); 74E, ADPS Console Operator (8); 76Y, Unit Supply Specialist (6). In spite of this extensive on - the - job training program, severe shortages remain in experienced Communications Center Specialists (MOS 72B), Dial Central Office Repairmen (MOS 36H) and Cable Splicers (MOS 36E).

(3) The lack of operator and maintenance training for nonstandard systems and equipment is a continuing major problem area in that functional training is either not always available (such as for the IBM 360/20) or not sufficiently extensive to cover present requirements (i.e. the General Dynamics Corporation Digital Subscriber Equipment - DSTE).

(4) Mandatory training, mission - essential training, and on the job training were conducted in accordance with applicable DA and local regulations; however, at no time were mission operations suspended in order to conduct training.

e. Intelligence. Seven members of the 69th Signal Battalion, serving with Task Force 35 in defense of Tan Son Nhut Air Base, were wounded on 7 May 1968, while sniper fire resulted in another battalion member being wounded in the Cholon area of Saigon in June. In addition, one fatality and three casualties were sustained by combat photo teams of the 221st Signal Company in the Capitol Military District.

f. Logistics.

(1) The Group efforts to develop, maintain, and improve cantonment and operational facilities continued. At Camp Gerry, Long Binh Post, construction of a 4000 square foot administrative Building began on 7 May, utilizing self help and Engineer Troop Unit assistance. Programmed for completion by 15 September, this facility, together with existing structures, will provide adequate space for the Group staff at one central location. Major rehabilitation of a recently acquired warehouse building at Tan Son Nhut Air Base began on 15 July. When completed, this facility will provide improved security and operational capability for the COMSEC Logistics Support Center and the Saigon Area COMSEC Logistics Support Unit. The Southeast Asia Signal School completed six twenty-four man bunkers, one 20'x50' Pasco building and five 20'x60' Adams huts during this period. One five hundred man mess hall was returned to installation control.

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(2) The Group took positive command action to assist subordinate elements in resolving problems. Particular attention was devoted to the turn-in of overage and high mileage vehicles and equipment, and the elimination of excess items. Significant improvement was made in the stockage of repair parts and reduction of vehicle and communication equipment deadline rates. For example, the average deadline rate for the quarter was 8.2% as opposed to 8.4% for the previous quarter. In addition overage/high mileage vehicles numbered twenty-nine, a decrease of fourteen from the last quarter. The Material Readiness Expeditor program continued to prove effective in relieving critical items shortages.

(3) Twenty-four 18,000 BTU trailer mounted air conditioners were received in the Group during the latter part of May. Upon failure of installed air conditioning systems, these units have effectively prevented serious systems outages.

(4) There was an increase of 63.7% in material tonnage processed in the USARV COMSEC Logistics Support System during the report period. More than 91 tons of COMSEC material were received and distributed as a result of receipt of new tactical voice security equipment TSEC/KY-28 and TSEC/KY-38 with associated keying material. Also, the maintenance workload increased approximately 25% in comparison to the last report period.

g. Organization. Assignment of Group units remains as outlined in 1st Signal Brigade General Orders (GO) 294, dated 12 August 1967, and 302, dated 16 August 1967; and 160th Signal Group OPORD 2-67, dated 15 August 1967. Advance Table of Organization and Equipment (ATOE) and Table of Distribution and Authorization (TDA), which are currently pending approval at Headquarters, Department of the Army, include a total proposed authorization of 3304 personnel for the Group. Following is a list of assigned and attached units:

- (1) Assigned
  - (a) 40th Signal Battalion (Construction)
  - (b) 44th Signal Battalion
  - (c) 69th Signal Battalion
  - (d) 221st Signal Company (Pictorial)
  - (e) 49th Signal Detachment (CLSU)

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- (f) 213th Signal Detachment (CLSU)
- (g) 446th Signal Detachment (CLSU)
- (h) 455th Signal Detachment (CLSU)
- (i) 706th Signal Detachment (CLSG-V)
- (j) Southeast Asia Signal School
- (k) Southeast Asia Pictorial Center
- (2) Attached

(a) Cryptologistics Section, 53d General Support Group (per paragraph 1, GO325, Headquarters, 1st Logistical Command, dated 13 April 1967, as amended by Paragraph 1, GO 199, Headquarters, 1st Logistical Command, dated 26 March 1968).

(b) Cryptologistics Section, 80th General Support Group (per paragraph 1, GO 202, Headquarters, 1st Logistical Command, dated 1 March 1967, as amended by Paragraph 1, GO 199, Headquarters, 1st Logistical Command, dated 26 March 1968).

2. Section II, Lessons Learned: Commander's Observation, Evaluation, and Recommendations.

a. Personnel. None

b. Operations.

(1) Improper Use of Scotchcast Sealing Compound.

(a) Observation: Improper use of Scotchcast sealing compound has hindered effective cable trouble-shooting.

(b) Evaluation: Scotchcast is a liquid compound injected into multi-pair cable on both sides of a splice point in order to limit water penetration of the cable. The liquid fills the air space between the wires, and then hardens to form a barrier which blocks the flow of water through the cable should leakage occur. Filling the splice, and not just the sides of the splice point as intended, hardens the splice thereby preventing testing and repair in the event troubles arise. Such troubles can only be resolved by replacing the section of cable in which they are found -

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a costly procedure in terms both of time and money.

(c) Recommendation: That cable construction and splicing personnel be instructed in the proper use of Scotchcast.

(2) Operation of UNIVAC 1004.

(a) Observation: The UNIVAC 1004 AUTODIN Terminal provides high speed and efficient service. Peak traffic periods, however, have resulted in an unavoidable backlog due to the system's present condition.

(b) Evaluation:

1 This AUTODIN Terminal transmits and receives traffic at 1500 words per minute. Operating in ACP 127 format, however, requires separate handling to produce a page copy. Traffic received over the 1004 for termination is then transmitted via five each 100 words per minute pony circuits to the communications center's terminal section. As this Terminal also functions as a relay station, operators must be proficient in reading the five level Baudot Code because no printing appears on that perforated tape. This operation precludes a speed relay of messages. Moreover, there is no automatic timing device to print out the time of transmission of each message, which must be performed by the UNIVAC 1004 operator. During peak traffic periods this condition, therefore, creates an unavoidable message backlog.

2 There have been fewer machine rejections of messages with darker colored tapes (Red and Green) than with buff colored tapes. This is attributed to the sensitivity of the photoelectric cell in the tape reader.

(c) Recommendations:

1 That JANAP 128 Procedure be implemented as expeditiously as possible to permit receipt of message page copies directly from the UNIVAC 1004, thus reducing handling times.

2 That an automatic timing device be considered for installation on the UNIVAC 1004 for recording time of transmission and time of receipt of messages.

3 That dark colored tapes (Red and Green) be used exclusively so as to reduce the number of machine rejections.

(3) Army Area Communications Systems (AACS) Circuit Layout Record Card (CLR).

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(a) Observation: It was observed that Army Area Communications Systems (AACS) do not issue Circuit Layout Record (CLR) cards as Defense Communications Agency - Southeast Asia Mainland (DCA-SAM) does for Defense Communications System (DCS) systems and circuits.

(b) Evaluation: DCA-SAM CLR cards have been found to be instrumental in the activation and trouble-shooting of circuits/systems. They were also found to be effective in assisting newly assigned personnel to understand the routing of a circuit/system.

(c) Recommendation: That a CLR card be designed at the Group level and distributed with the Communications Engineering Orders (CEO's) when activating a circuit/system. The CLR card should contain as a minimum, the CCSD, CEO number, due date, coordinating station and a block diagram of the circuit/system to be activated showing radio, cable paths (cable number) and subscribers.

(4) Communications Engineering Orders (CEO's).

(a) Observation: Circuit Engineering Orders (CEO's) require a more streamlined method of staffing.

(b) Evaluation: It was found that CEO's processed through the Group, (approximately 40 CEO's average per day), to be accomplished by Battalions, were being recorded by Group and then retransmitted to action headquarters. A staff of technically competent personnel were required to insure constant progress and to produce increased efficiency in circuit activations, deactivations and/or changes.

(c) Recommendation: In order to insure coordinated action and maximum effectiveness, it is necessary to designate a particular person or persons to handle CEO's as their primary duty. Individuals designated to assume this responsibility must have files and references immediately available in order to assist operators and installers when questions arise. A means should be provided to present visually, the status of pending CEO's by type (DCA, inter-group, or group). Further, the responsibility inherent in this duty requires dedicated, knowledgeable technicians specifically authorized for this operation.

c. Training.

(1) Engineer Equipment Maintenance Training.

(a) Observation: In many instances, unit engineer equipment maintenance personnel and operators are not adequately trained to perform their duties.

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(b) Evaluation: Although there is a shortage of school trained personnel in MOS 52B20, organization mechanics and operators must be able to assume each others duties. This is to include maintenance and operation of equipment, trouble-shooting equipment when a mechanical problem arises and proper procedures in repair parts exchange and requisition system in the engineer maintenance field.

(c) Recommendation: That engineer equipment maintenance personnel and operators receive more extensive cross training during their formal period of training.

(2) Combat Indoctrination Training.

(a) Observation: In all cases replacements for combat photographers have not had adequate Vietnam combat indoctrination training. Such training is essential for photographers before they can receive assignments with combat units.

(b) Evaluation: Combat indoctrination courses are given by each division and some brigades in Vietnam. These units have indicated a willingness to include photographers, officers and NCO's in their regular course. This course, supervised by Group, is now part of the formal training program within this unit, and has resulted in increased photographer confidence and combat unit willingness to allow photographic teams to accompany them on actual operations.

(c) Recommendation: That all photographers prior to combat assignments receive combat indoctrination training.

d. Intelligence. None.

e. Logistics.

(1) Use of Culvert Halves for Erosion Control.

(a) Observation: In base camps, erosion is a serious problem during the rainy season. Open drainage ditches are hazardous and do not control all surface water. Full culvert drains are difficult to install and consume expensive and scarce material.

(b) Evaluation: The use of one-half sections of corrugated galvanized steel culvert has proved effective in constructing sub-surface drainage passages. A shallow ditch approximately the width of the culvert to be used is dug to the depth of one and one-half the radius of the culvert; the base

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of the ditch is covered with peneprime and the culvert half-sections are then placed the length of the ditch with the open side down. The ditch is backfilled and sandbagged at the opening end. It was observed that after repeated rains, very little erosion or clogging occurred.

(c) Recommendation: That FM 5-34, Engineer Field Data, include instructions on the construction of drainage culverts using half-sections of culvert on a peneprimed earth base.

(2) Advance Notification of COMSEC Equipment Serial Numbers.

(a) Observation: During the report period, the COMSEC Logistics Support Center, Vietnam (CLSCV) received approximately 1700 TSEC/KY-8, TSEC/KY-28 and TSEC/KY-38's. Upon receipt of this equipment at CLSCV, approximately 4 to 5 days were required to process the necessary transfer documents for further shipment direct to using units or subordinate CLSU's.

(b) Evaluation: The CLSCV is not staffed to provide faster turn around time for shipment of incoming equipment to users. After an exhausting effort to get this equipment to the using unit in the minimum amount of time, a request was made to CG USASTRATCOM that the CLSCV be advised two weeks prior to shipment the serial number of each item of incoming equipment. This request was approved and when implemented will permit the CLSCV time to prepare transfer documents prior to arrival of equipment. Utilizing this advance notification procedure, it is estimated that turn around time of incoming equipment at the CLSCV will be approximately twenty-four hours. Advance notification is scheduled to start with shipment due in the CLSCV at the end of August 1968.

(c) Recommendation: It is recommended that the procedure which provides advance notification of incoming equipment serial numbers be established as standard practice whenever shipments of thirty or more items of COMSEC equipment of one type are programmed.

f. Organization. None.

g. Other. None.

  
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, USATRATCOM-PAC, APO 96557

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SCGPV-OP-CR (13 Aug 68)

1st Ind

SUBJECT: Operational Report of Headquarters, 160th Signal Group for  
Period Ending 31 July 1968, RCS CSFOR-65 (R1)

DA, HQ, 1st Signal Brigade (USASTRATCOM), APO 96384 14 September 1968

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

1. Subject report is forwarded in accordance with USARV Regulation 525-15.
2. This headquarters has reviewed and concurs in the report as submitted with the following comments and/or exceptions:
  - a. Paragraph 1c(3)(f) p. 11. No systems outages were attributable to enemy action during the past "May Offensive;" the outside plant did receive damage which was incurred from shrapnel.
  - b. Paragraph 1c (4) (d) 1, p. 12. Captured enemy weapons are fired by U.S. Forces to familiarize armed helicopter pilots.
  - c. Paragraph 1d (2) (a), p. 13. Delete "the U.S. Army Electronics Command" and add "USASTRATCOM, Fort Huachuca, Arizona."
  - d. Paragraph 1f (2), p. 15. The deadline rates quoted in this paragraph apply to all reportable equipment.
  - e. Paragraph 2b (1) (b), p. 16. Delete "leadage" and add "leakage."
  - f. Reference paragraph 2b (2)(c)1, p. 17. JANAP 128 procedures cannot be implemented RVN-wide until resolution of the AMARS incompatibility problem. This problem has been referred to the USMCEB for resolution. The UNIVAC 1004 terminal will be converted to JANAP 128 procedure in the near future in order to make page copies available directly.
  - g. Reference paragraph 2b (3), p. 17. The recommendation concerning the Circuit Layout Record Card is favorably considered and is presently being reviewed for adoption and implementation.
  - h. Paragraph 2c (2) (b), p. 19. Headquarters, 160th Signal Group makes arrangements with the 9th Infantry Division to have selected personnel attend the Division's Combat Indoctrination Course.
  - i. Reference paragraph 2e(1), p. 19. The use of culvert halves for erosion control as described in subject report is an excellent field expedient but cannot be considered a permanent solution to drainage problems. Penepime will not stabilize the soil such that its bearing capacity will be increased to support the narrow connection plate of

SCCPV-OP-CR (13 Aug 68) 1st Ind

14 September 1968

SUBJECT: Operational Report of Headquarters, 160th Signal Group for  
Period Ending 31 July 1968, RCS CSFOR-65 (R1)

Corrugated Metal Pipe (CMP) halves. Additionally, design flow volume would obviously require using a half-section twice the nominal diameter of a complete CMP. This headquarters recommends that the information in referenced paragraph be incorporated in current Field Expedient Handbooks rather than FM 5-34 .

FOR THE COMMANDER:

  
WILLIAM S. SKINNER  
Colonel, GS  
Chief of Staff

Copies furnished:

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

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

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AVHGC-DST (13 Aug 68) 2d Ind MAJ Klingman/ds/LBN 4433  
SUBJECT: Operational Report - Lessons Learned, of 160th Signal Group for  
Period Ending 31 July 1968, RCS CSFOR-65(R1)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 4 OCT 1968

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

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 July 1968 from Headquarters, 160th Signal Group.

2. Reference item concerning operation of UNIVAC 1004, page 17, paragraph 2b(2); and 1st Indorsement, paragraph 2f. JANAP 128 procedures will be implemented as expeditiously as possible. However, prior to implementation throughout RVN, the AMARS incompatibility problem noted in the 1st Indorsement must be resolved. The date of conversion will be established by Headquarters, MACV, in coordination with the component commands. The use of an automatic timing device will involve software changes as well as additional equipment rental charges. In view of the limited funds available, the limited saving in manpower which would result, and the fact that the UNIVAC 1004 transceivers are an interim terminal, no further action is recommended at this time. In view of the apparent success in the use of dark colored tapes, USARV will include this subject on the agenda of the next AUTODIN Subscriber Activation Working Group meeting for possible broadscale implementation.

FOR THE COMMANDER:

*A.R. Guenther*  
A.R. GUENTHER  
CPT. AGC  
ASST. ADJUTANT GENERAL

Cy furn:  
HQ 1st Sig Bde (USASTRATCOM)  
HQ 160th Sig Gp

GPOP-DT (13 Aug 68) 3d Ind

SUBJECT: Operational Report of HQ, 160th Sig Gp for Period Ending  
31 July 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 1 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 indorse-  
ments and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

  
C. L. SHORTT  
CPT, AGC  
Asst AG

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## DOCUMENT CONTROL DATA - R &amp; D

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|                                                                                |  |                                                                             |                 |
|--------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------|-----------------|
| 1. ORIGINATING ACTIVITY (Corporate author)                                     |  | 2a. REPORT SECURITY CLASSIFICATION                                          |                 |
| HQ, OACSFOR, DA, Washington, D.C. 20310                                        |  | Unclassified                                                                |                 |
|                                                                                |  | 2b. GROUP                                                                   |                 |
| 3. REPORT TITLE                                                                |  |                                                                             |                 |
| Operational Report - Lessons Learned, HQ, 160th Signal Group (U)               |  |                                                                             |                 |
| 4. DESCRIPTIVE NOTES (Type of report and inclusive dates)                      |  |                                                                             |                 |
| Experiences of unit engaged in counterinsurgency operations, 1 May - 31 Jul 68 |  |                                                                             |                 |
| 5. AUTHOR(S) (First name, middle initial, last name)                           |  |                                                                             |                 |
| CO, 160th Signal Group                                                         |  |                                                                             |                 |
| 3. REPORT DATE                                                                 |  | 7a. TOTAL NO. OF PAGES                                                      | 7b. NO. OF REFS |
| 13 August 1968                                                                 |  | 25                                                                          |                 |
| 6a. CONTRACT OR GRANT NO.                                                      |  | 6b. ORIGINATOR'S REPORT NUMBER(S)                                           |                 |
| b. PROJECT NO.                                                                 |  | 683292                                                                      |                 |
| c. N/A                                                                         |  | 9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report) |                 |
| d.                                                                             |  |                                                                             |                 |
| 10. DISTRIBUTION STATEMENT                                                     |  |                                                                             |                 |
|                                                                                |  |                                                                             |                 |
| 11. SUPPLEMENTARY NOTES                                                        |  | 12. SPONSORING MILITARY ACTIVITY                                            |                 |
| N/A                                                                            |  | OACSFOR, DA, Washington, D.C. 20310                                         |                 |
| 13. ABSTRACT                                                                   |  |                                                                             |                 |
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