

HEADQUARTERS ISCOM OKINAWA

JOINT COMMUNICATION ACTIVITIES

ACTION REPORT

PHASE I NANSET SHOTO

REPORT OF OPERATION AGAINST OKINAWA GUNTO

(28 Jan 45 TO 30 JUNE 1945)

CHAPTER 1 - PURPOSE OF THE REPORT AND SYNOPSIS OF THE MISSION ASSIGNED

1. This Action Report is submitted in order that a complete record may be had of the participation of Joint Communication Activities, Island Command, Okinawa, in the operation involving the capture of OKINAWA and certain other islands of OKINAWA GUNTO.
2. The Commanding General, ISCom Okinawa had been given the initial mission of logistic support of the Tenth Army during the operation involving the capture of Okinawa and adjoining islands. Concurrent with the logistic mission and as soon as possible after the initial assault, the Commanding General, ISCom Okinawa was charged with initiating the installation of the Base Development Plan. The Signal Corps personnel assigned to AGF APO 331 began functioning in a dual capacity for the ISCom Signal Office and Headquarters Joint Communication Activities very shortly after activation. An attempt has been made in this report to separate the activities of Signal Officer ISCom and OIC Joint Communication Activities. In many cases this separation is impossible, and as a result, there are many duplications of this report in Chapter 8, Section XI, Headquarters Island Command APO 331, Action Report dated 1 July 1945.
3. The Joint Communication Activities, Okinawa was organized as a task unit under ISCom Okinawa with the mission of supporting ISCom Activities by installation, maintenance, and operation of the Joint Communication System for the Island Command to include all means of communication; to act as a coordinating headquarters for all communication agencies regardless of branch or service; and to carry out the policies as outlined in CinCPOM - CinCPAC confidential letter, 11CL - 45, dated 28 January 1945.

JOHN R. FOGH
Lt Col, Cav
Custodian

SEP 26 1945

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CHAPTER 2 - MAJOR UNITS AND ELEMENTS

COLONEL CHARLES M. BAER, Signal Corps, Commander Task Unit 99.3.7
and officer-in-charge, Joint Communication Activities.

81st Signal Heavy Construction Battalion (Less Company "A")
Lieutenant-Colonel John G. Nelson, Signal Corps, Commanding
Officer.

443d Signal Heavy Construction Battalion (Aviation) (Less Co B)
Lieutenant-Colonel Elliott A. Ferdon, Signal Corps, Com-
manding Officer

3345th Signal Service Company (attached)
Captain Joseph T. Bayer, Jr., Signal Corps, Commanding
Officer.

Detachment No. 2, 3181st Signal Service Battalion (attached)
Captain Alfred H. Meltzer, Signal Corps, Commanding
Officer.

3180th Signal Service Battalion
Major Sidney Shelley, Signal Corps, Commanding Officer.

3161st Signal Service Company (attached)
Captain Herbert G. Blumberg, Signal Corps,
Commanding Officer.

3181st Signal Service Battalion (less Detachment No. 2)
Major Robert E. Frey, Signal Corps, Commanding Officer.

241st Signal Operation Company (Attached)
Captain Perry K. Chandler, Signal Corps, Commanding
Officer.

3236th photo Detachment (attached)
1st Lt William A. Ransome, Signal Corps

Detachment No. 1, 1714th Signal Service Company (Aviation)
(Attached)
1st Lieutenant Anthony Petricone, Signal Corps,
Commanding Officer.

Naval Detachment A (attached)
Lieutenant Henry J. Coleman, USNR, Officer-in-Charge.

*57th Signal Repair Company

Captain Joseph Bernard, Signal Corps, Commanding Officer.

- 108th Radar Maintenance Unit (Type B)
- 110th Radar Maintenance Unit (Type B)
- 111th Radar Maintenance Unit (Type B)
- 224th Radar Maintenance Unit (Type C)
- 271st Radar Maintenance Unit (Type C)
- 272nd Radar Maintenance Unit (Type C)
- 273rd Radar Maintenance Unit (Type C)
- 274th Radar Maintenance Unit (Type C)
- 310th Radar Maintenance Unit (Type D)

213th Signal Depot Company

Captain Lloyd C. Blair, Signal Corps, Commanding Officer.

*585th Signal Depot Company

Major Clement E. Pritz, Signal Corps, Commanding Officer.

**Company "A", 3rd Signal Battalion

Captain C. F. Shutrump, Signal Corps, Commanding Officer.

*75th Joint Assault Signal Company (less Air Liaison and Shore Fire Control parties)

Major C. R. Whiting, Signal Corps, Commanding Officer.

*593rd Joint Assault Signal Company (less Air Liaison and Shore Fire Control parties)

Major F. L. Duggan, Signal Corps, Commanding Officer.

Naval Communication Personnel

Commander Jack S. Dorsey, USN, Commanding Officer and officer-in-Charge,
Joint Communication Center.

Joint Communication Center Personnel

Mobile Communication Unit 47B

Lieutenant-Commander A. N. Duggar, USNR, officer-in-Charge.

Mobile Communication Unit 43D

Lieutenant Milton S. Miller, USNR, officer-in-Charge.

Radio Installation Team No. 2

Lieutenant John P. Hixson, USN, officer-in-Charge.

Public Information Mobile Communication Unit No. 1

Lieutenant E. O. McCabe, USNR, officer-in-Charge.

*These units were attached to the 1st Engineer Special Brigade for the period
15 April 1945 to 31 May 1945.

**This unit was attached to the 1st Engineer Special Brigade upon arrival on the
target, through the period of this report.

CHAPTER 3 - PRELIMINARY PLANNING

1. General. The general planning for the installation of the semi-permanent and permanent communication system as outlined in the Base Development plan was completed, and the equipment and supplies had been ordered and echeloned by the respective headquarters of the various services involved, prior to the activation of Headquarters Joint Communication Activities in January 1945. Section 700 of the Base Development Plan was the only document available giving the communication plan as it pertained to all communications. Of necessity, this section was very incomplete in detail. It became the task of Headquarters Joint Communication Activities to contact the agencies responsible for the various portions of Section 700 to obtain information on such subjects as: the assumptions upon which their portion of the plan had been based; the communication requirements which the various organizations and activities had submitted; and the echeloning of personnel equipment and supplies. The acquisition of this necessary information and the subsequent formation of the plan of action for JCA required the full time of the limited staff which had been made available.

2. Personnel and Administration.

a. Organization and Echelonment.

(1) In order to utilize the signal troops allocated for accomplishment of the signal mission, it was necessary to organize various detachments and details to perform specific tasks, and to provide for their arrival at the proper time.

(2) The 3181st Signal Service Battalion was reduced by Detachment No. 1, consisting of radar maintenance, traffic analysis, and airways equipment teams, which was retained by CPBC for use on Oahu. Construction teams of the Battalion were formed into Detachment No. 2 which was attached to the 443d Signal Heavy Construction Battalion to facilitate duty assignments. Detachment No. 3, consisting of switchboard installation, teletypewriter installation, and submarine cable teams, was attached to the 3180th Signal Service Battalion for the same purpose. To carry out its mission of furnishing signal personnel for the command ship, USS Eldorado, and establishing joint communications through the Primary Mobile Communication Unit, the 3181st Signal Service Battalion was augmented by the following:

Detachment No. 1 - 3161st Signal Service Company (message center teams)

Detachment No. 1 - 1714th Signal Service Company (AAF Personnel)

Naval Detachment A.

To further carry out its mission of furnishing communications within the Island Command Headquarters, the battalion was further augmented by the 241st Signal Operation Company. The various components of the battalion

were divided and assigned to the assault and first echelons of shipping as their designated duties required.

(3) The 3180th Signal Service Battalion was designated to furnish personnel for the Army component of the Joint Communication Center, and to provide operating and maintenance personnel for the Island telephone system. Detachment No. 1, consisting of Radio and Teletype Teams, was transferred to CPBC for use on Oahu. A detachment of message center personnel was left temporarily at Oahu to serve the rear echelon of Headquarters, Tenth Army. The Battalion was augmented by attachment of the 3161st Signal Service Company (less Detachment No. 1) and Detachment No. 3, 3181st Signal Service Battalion. This Battalion was assigned to the third and sixth echelons of shipping.

(4) Other signal units, including signal supply and construction troops, and Navy mobile units and Joint Communication Center personnel, were echeloned to furnish requisite personnel at proper intervals, as the operation progressed.

b. Need for Augmentation.

(1) The first planning revealed the urgent need for augmentation both of Signal troops and of Staff Officers to include communication engineers to draft in detail the extensive communication system required. Requisitions were submitted and numerous requests were made for augmentation, but official recognition of the requirements was not obtained until the consolidation phase was well under way in June 1945, with consequent delay in planning.

(2) The Headquarters Army Garrison Force did not include a Headquarters Special Troops, which resulted in all signal units being administered directly by the Headquarters Army Garrison Force. This arrangement resulted in considerable confusion when placed into operation, although timely requests had been made by the Signal Officer for an augmentation to establish a Signal Corps administrative headquarters.

c. Supply.

(1) Early supply planning for the Base Development of Okinawa was performed by the Signal Officer, Tenth Army, together with the Signal Officer, HUSAFPOA and Central Pacific Base Command and the Commander, Service Force, Pacific. The bill of materials deemed necessary was submitted to the War Department for approval as Project CP-33. When approved, shipping tonnage allocations were secured from CinCPAC, and total material was divided into the tonnages available in each echelon, endeavoring to echelon material in the order required. All of this was done prior to the

activation of Headquarters Joint Communication Activities, AP 331. Some of this echeloned material, principally field Wire W-110, Spiral-4 Rubber Covered Cable, 4 x 4 lumber poles, Switchboard equipment TC-4 and TC-10, and 100 mile Radio Relay Systems, were shipped in the assault echelon from Oahu within tonnage allocations of two Signal Battalions. All other material was requisitioned from SFPE for shipment in later echelons.

d. Signal Intelligence.

(1) planning for the cryptographic part of Signal activities for the Ryukyus operation was composed of five major requirements.

(a) Establishment of allowances to units involved in the operation. Basis for determination of this requirement was the duties assigned the unit and the suggested allowances prescribed by Annex F, Centcom Two, CinCPOA. Units required to function through the assault phase into the garrison phase of the operation, however, required a supplementary allowance not provided by Centcom Two. Basis for selection of these allowances was Section V, RFS 6(B) - the JANAB Class II allowance.

(b) procurement of Material: The primary source of supply of cryptographic publications was the Registered Publications Issuing Office, Pearl Harbor, T. H. Devices, such as SIGABA and SIGIVI, were obtained from the Issuing Office, HUSAFPOA. The Army agency was selected for supply of SIGABA's because of the superiority of their machine, in small details, over the Navy E.C.M. In this regard, the Army machine is packed in a superior type of box; has additional attachments for convenience in operation; and is inclosed in a more secure type of safe than that provided by the Navy. Twelve (12) machines, twelve (12) CH 76, and a supply of publications equivalent to four issues of the JANAB Class II allowance, were carried as a surplus or working supply to bridge the period from inception of the operation until establishment of resupply facilities.

(c) Distribution: Initially, units were supplied effective editions of the material required for the 1st of April 1945 - the projected date of the commencement of the operation - and one month's reserve supply. Information, available at the time of the planning, indicated that the JCA crypto supply agency would be functioning on the island of Okinawa by 20 April 1945. However, to anticipate a possible delay en route, units were issued publications effective until after 1 May 1945. Distribution, in all but one case, was made by person to person contact. That exception utilized the facilities of the Officer Messenger Mail Service.

(d) Security: Physical security measures provided for the cryptographic material enroute to Okinawa, consisted of an eight-man guard and handling detail. Additionally, the material was stowed in chests CH76, under combination locks. Available for immediate use were eight safe-destroying thermite bombs. All unit commanders, possessing material obtained from the Island Commander, were instructed to acquaint themselves with the provisions for security as prescribed by RPS 4(B), and to apply these measures at all times.

(e) Resupply: HUSAFPOA was requested to reserve eighteen (18) SIGABA's to be brought to Okinawa by air transport when needed. Cryptonets were to be supplied by air when authorized for use in the operation. A like system of supply was arranged with RPIO, Pearl Harbor, T. H., and RPSIO, Guam.

e. Communications.

(1) Wire - The general plan for installation of wire facilities consisted of three phases: Tactical, consolidation, and garrison. The first phase included the tactical wire installed to support the Tenth Army combat units. As the situation moved forward these lines were to be reinforced and reconditioned with five pair rubber covered cable, spiral-4 cable, and W-143. As planned, these consolidated lines would serve the island activities until the permanent lead covered cable plant could be installed. Concurrent with the installation of the rubber covered cable certain of the permanent telephone exchanges were to be installed. These exchanges were to use the TC-30 switchboard as the basic switchboard and were to be installed in Quonset Huts. Certain requirements made it necessary to plan upon a limited use of AN/TRC and carrier equipment. As of April 1945, the proposed wire plan for the consolidation and garrison phase consisted of ample wire facilities for the facilities and organizations then proposed, and was confined principally to the lower half of the island of Okinawa. See Appendix 1 (Annex VII to Headquarters ISCom Operations Plan No. 1). The engineering for this final wire plan was based upon the principle of area switching which later proved to be a sound basis for the type of service required. If the tactical situation and the subsequent base development had proceeded according to the original plan, the proposed wire plant would have been adequate and could have been installed to give a maximum of service with a minimum of delay.

The echelonment of equipment and supplies was set up in such a manner that equipment would arrive in the same sequence as it was planned to be installed. The timing of the arrival of certain basic supplies such as cable, poles, hardware, switchboards, etc., was considered an important factor in the efficient installation of both the Consolidation

and Garrison Wire plants, and considerable time and effort was devoted to this factor. The complete sequence of the individual jobs in the complete wire installation had to be planned, in order that the timing of the arrival of supplies could be figured. Any difficulties attributed to non-availability of supplies can be explained as being due to one of two things, i.e. change in the general plan which consequently changed the sequence of installation of individual jobs, or the inability of shipping and supply organizations to load the equipment in the desired echelon.

(2) Radio - Planning of the Radio Operations part of Signal Activities for the Ryukyus operation was composed of three major requirements.

(a) Establishment of Mobile Base Radio Communication; Communication during the assault and consolidation phases was specified by Tenth Army operational directives to be provided by Mobile Communication Units (MCU's). The Army was to furnish the Primary MCU, and the Navy was to furnish two naval MCU's. These units were to function initially to provide all intra- and off-island radio communication for elements of the Tenth Army and the Island Command. Careful study of Tenth Army directives was necessary in order to insure the adequacy of personnel and equipment to be used with these units. In order to keep communication equipment of a mobile nature, all transmitting and receiving equipment of the Primary MCU was mounted in HO-17 shelters which were in turn mounted on two and one-half ton trucks. Communication equipment was chosen to give reliable performance yet be flexible on mounting and control; it consisted for the most part of BC 610 and 191 transmitters and BC 342 and 344 receivers. The Naval MCU's were equipped with standard Navy Mobile equipment. Careful and frequent reference to Pacific Communication Doctrine CENT COM TWO was necessary in order to determine the number of circuits, the operating frequencies, the call signs, and the priority of establishment after the landing of the MCU's. Field exercises were held by the Primary MCU at which time a careful check was made for personnel and equipment sufficiency. Operators worked under field conditions to insure thorough and reliable training.

(b) Establishment of Permanent Radio Communication; The Joint Communications Center; Preliminary planning for the permanent communications facilities to be incorporated in the Joint Communications Center was made by Service Force, Pacific. The initial planning by Joint Communication Activities consisted of a thorough study of and familiarization with the requirements of the activities projected for the base, and the use and limitations of all equipment to be installed during the garrison phase. This equipment was to provide all permanent external and internal radio communications. Where radio equipment necessary for permanent installation was to be shipped from the mainland, it was necessary to obtain copies of requisitions or bills of materials covering this equipment so that all possible assistance could be given in locating or replacing missing gear. A thorough study was made of the floor plan and plot plan for the JCC transmitter and receiver buildings and areas, as specified in the Base Development plan for the operation.

(c) Internal Radio Communications, of Concern in the initial phases of planning was the provision for radio communication between elements of the Island Command during the garrison phase. Estimates of frequency and call sign requirements were submitted to CinCPAC for consideration. From frequency allocations made to the Island Command, the frequency plan for garrison occupation was evolved. No commitments on call signs were available for planning purposes.

CHAPTER 4 - TRAINING PHASE AND REHEARSALS

In general, it was not possible to train task Unit 99.3.7 as a unit prior to arrival at Okinawa. The organizations that made up the task unit were obtained from various sources and were never assembled in one place. Several of the units, however, were mounted from Oahu, T. H., and it was possible to supervise to a limited extent their training and organization during the two months prior to embarkation. The Signal Construction Units were loaned to CPBC for use in actual construction work. Those Army and Navy units designated as operating personnel for the Joint Communication Center were placed on duty with Advanced Base Combat Communication Training Center at Iroquois Point, Oahu, for further joint training and organization. The Primary MCU was organized and equipped, but time permitted only two CPX's before embarkation.

In the majority of the cases, the technical training of the individuals was passable; however, there were many cases, particularly among the wire maintenance personnel, where the individuals were wholly untrained. It is evident that the system used to train newly activated units is not producing practical operating personnel.

CHAPTER 5 - DATES OF DEPARTURE AND POINTS OF EMBARKATION

<u>UNIT</u>	<u>ECHELON SCHEDULED</u>	<u>DATE OF DEPARTURE</u>	<u>POINT OF EMBARKATION</u>
81st Sig Hv Cons Bn (less Co A)	4th	12 April	Oahu
443d Sig Hv Cons Bn (Avn) (less Co B)	2d	8 April	Tinian
3345th Sig Sv Co	2d	27 March	Oahu
	5th	26 April	Oahu
Det #2, 3181st Sig Sv Bn	2d	27 March	Oahu
	5th	26 April	Oahu
3180th Sig Sv Bn	3d	7 April	Oahu
	6th	8 May	Oahu
3181st Sig Sv Bn (less Det #2)	Assault	5 March	Oahu
	1st	16 March	Oahu
3161st Sig Sv Co	Assault	1 March	Oahu
	3d	6 April	Oahu
	4th	16 April	Oahu
	6th	8 May	Oahu

<u>UNIT</u>	<u>BATTALION</u> <u>SCHEDULED</u>	<u>DATE OF</u> <u>DEPARTURE</u>	<u>POINT OF</u> <u>EMBARKATION</u>
241st Sig Opn Co	1st	21 February	Oahu
		4 March	Oahu
	2d	13 March	Oahu
3236th photo Det	Assault	19 February	Oahu
Det No. 1, 1714th Sig Sv Co (Avn)	Assault	5 March	Oahu
	1st	16 March	Oahu
Naval Det A	Assault	5 March	Oahu
	1st	16 March	Oahu
57th Sig Rep Co	Assault	12 February	Oahu
	2d	26 March	Oahu
213th Sig Dep Co	7th	12 May	Oahu
		23 May	Oahu
585th Sig Dep Co	Assault	21 February	Oahu
	1st	15 March	Oahu
	2d	26 March	Oahu
Co A 3d Sig Bn	Assault	18 January	Oahu
		24 January	Oahu
		11 February	Oahu
		21 February	Oahu
		1 March	Oahu
	1st	14 March	Oahu
JCC (Navy)	2d	26 May	Oahu
	3d	5 April	Oahu
	4th	15 April	Oahu
		25 April	Oahu
	5th	26 April	Oahu
	6th	23 May	Oahu
MCU 43D	Assault	28 February	Guadalcanal
MCU 47B	2d	28 March	Oahu
Radio Inst Tm #2	4th	15 April	Oahu
	5th	27 April	Oahu
PIMCU #1	4th	16 April	Oahu

CHAPTER 6 - TRAINING AND EVENTS EN ROUTE

1. ~~1.1~~ Training en route consisted of orientation on the target, instruction of each unit on its particular mission, and review training in personal and unit defense, care and use of weapons, and personal hygiene. Daily physical exercise was scheduled.

2. Movement to the objective area was in general, uneventful for all units. There were no battle casualties en route.

CHAPTER 7 ASSAULT PHASE

1. General. In general the mission of the Joint Communication Activities during the initial assault consisted of establishing a headquarters and initiating that portion of the Base Development Plan that was consistent with the personnel and equipment available. The responsibilities of the Signal personnel assigned to Headquarters Army Garrison Force, APO 331, during this period were initially those of the Signal Officer, IsCom with a gradual development into the joint responsibilities of Headquarters Joint Communication Activities.

2. Personnel and Administration.

a. Arrival on Target.

(1) On L-Day, 1 April 1945, the Headquarters Joint Communication Activities was aboard LSV 6, USS Montauk, about two miles off Okinawa opposite the village of Hagushi. On 9 April it moved ashore to a location within the Island Command Headquarters temporary area.

(2) Dates of debarkation of Signal units on the target and strength of echeloned complements are shown below. Units are listed in order in which first complement of each arrived.

<u>Unit</u>	<u>Date on Target</u>	<u>Strength</u>
		O FM
Co L, 3rd Sig Bn (attached to 1st Special Engineer Brigade)	1 April	4 58
	2 April	6
	4 April	2 95
	17 April	4 82
Mobile Communication Unit 43D	2 April	20 130
241st Sig Opn Co	4 April	7 129
	17 April	2 116
3236th Photo Det	4 April	1 5
3181st Sig Sv Bn (less Det 2)	5 April	10 179
	15 April	15 342
	5 April	3 98
585th Sig Dep Co	16 April	2 18
	27 April	3 16
	5 April	4 71
57th Sig Rep Co	27 April	3 81
3161st Sig Sv Co	5 April	9 36
	3 May	7 165
	7 May	3 43
	7 June	15
	5 April	3 20
Det 1, 1714th Sig Sv Co (Avn)	15 April	2 20

<u>Unit</u>	<u>Date on Target</u>	<u>Strength</u>	
		<u>O</u>	<u>EM</u>
Naval Det 4	5 April	9	40
	15 April	1	10
Radio Inst Tm #2	22 April	1	4
	25 May	1	2
	3 June	3	9
443rd Sig Hv Cons Bn (Avn) (less Co B)	25 April	13	186
3345th Sig Sv Co	26 April	9	313
	3 June	1	27
Det 2, 3181st Sig Sv Bn	26 April	4	152
	3 June		22
Joint Comm Center (Army and Navy personnel)	1 May	4	13
	3 May	4	68
	22 May	1	12
	29 May	6	67
	4 June	1	19
	23 June	9	58
3180th Sig Sv Bn	3 May	26	494
	7 June	12	110
Mobile Communication Unit 47B	3 May	20	132
Pub Inf Mob Com Unit #1	6 May	8	67
81st Sig Hv Cons Bn (Less Co 4)	10 May	13	211
213th Sig Dep Co	7 June	6	130
	14 June	1	4

b. Temporary Troop Locations.

(1) After an early reconnaissance by designated officers, Signal troops which landed during the early assault phase were moved directly to their bivouac areas, in most cases those originally planned. Operations were begun soon after arrival, with a minimum of time devoted to camp details. Camp facilities were improved as circumstances allowed.

(2) Bivouac areas for troops arriving in later echelons were selected before the expected arrival of each unit. After reconnaissance of suitable areas with reference to size and function of the unit and expansion necessary with the arrival of later complements, approval was obtained from the Island Command Area Assignment Board for a temporary camp area. Upon arrival each unit was conducted to its area. Units arriving without transportation were moved by transportation obtained from other units. Each unit was responsible for locating subsequent complements within its assigned area.

c. Duty Assignments.

(1) Although in general the reorganization of personnel effected in the planning phase proved adequate, some readjustments were necessary. Excess radio operators in the 3180th Signal Service Battalion

were attached to the 3181st Signal Service Battalion for training as switchboard operators, due to the unexpected increase in wire communication requirements. The consolidation of the mobile communication units into a temporary Joint Communication Center, 27 May 1945, necessitated further regrouping of personnel of the 3180th and 3181st Signal Service Battalion and the 3161st Signal Service Company.

(2) As the operation progressed and installations increased in number, numerous small detachments of the 3180th and 3181st Signal Service Battalions, the 241st Signal Operation Company, and the 3161st Signal Service Company were assigned to switchboards and test points over an extensive area. In some cases these personnel were attached to non-signal units for quarters and rations. In other cases transportation had to be provided, or separate camp facilities maintained by the parent unit, with considerable strain upon the personnel and equipment provided for such purpose.

(3) Teletype and switchboard operators, and wire installation and maintenance personnel were temporarily provided for such activities as the 53rd Medium Port and the Naval Operating Base. In some cases this was necessary to meet deficiencies in personnel of these units and, in others, to provide personnel until the personnel allotted to the organization arrived.

(4) Co A 3rd Signal Battalion was attached to the 1st Engineer Special Brigade throughout the assault and consolidation phase, and the 75th and 593rd Joint Assault Signal Companies (less Air Liaison and Shore Fire Control Parties) from 15 April through the remainder of the period, to provide communications within that unit.

(5) Mobile radio teams of the 3161st Signal Service Company were attached to the Garrison Forces at Kerama Retto, Tori Shima, Aguni Shima, Theya Shima, and Kumi Shima.

(6) The 213th and 585th Signal Depot Companies, and the 57th Signal Repair Company with assigned Radar Maintenance Units and attached Repair and Maintenance Sections of the 3rd and 82nd Signal Battalions, functioned as a temporary Signal Depot throughout the assault and consolidation phases.

3. Supply.

a. In the assault, considerable confusion during unloading operations caused many items of Signal equipment to be misdirected to the wrong dumps. This, plus pilferage, resulted in the loss of some vital items of equipment, such as Wire Testing Cabinets for large Switchboards TC-10 and Power Units for VHF radio relay systems. It was soon evident from shipping manifests for ships enroute to target that items were not being shipped from SFPE in the echelon requested. This was due

to the fact that the SFPE could not assemble all the items requested in time to be shipped in the proper echelon. In some cases less than half the tonnage allocated for the echelon could be used. Further tonnage allocations in later echelons were therefore required to take care of this missing tonnage.

b. Signal Supply Recommendation.

(1) Beach capacities for this operation were very limited and were further limited by weather and enemy air activity. This resulted in an all-out effort to unload sufficient rations, fuel and ammunition to support the tactical situation. However, tonnages involved in these supplies represented a large percent of beach capacity and other supplies, such as Signal, of necessity were considerably delayed. When the 8th and 9th echelon maintenance shipments were being unloaded, the 3rd garrison echelon shipment, which included B. D. Signal supplies, was being unloaded. It is recommended that high priority be given to calling up and unloading these smaller tonnage supplies, if communications, which are most vital to the success of any operation, are to be established and maintained. Limited Signal supplies and equipment insure limited and inadequate communications.

c. Certain items such as lead-covered cable, switchboards, test equipment, cable tools, and teletype equipment, all of which were requested to be echeloned in by the 7th echelon, had not been shipped in any quantity through the first 12 echelons. Delay in the receipt of these and other items received in reduced quantities postponed the construction of the permanent communications system for airfields and other operational activities. Therefore, the overloaded temporary plant, using field communication wire and equipment, had to be constantly maintained and rehabilitated. Field Wire W-143 and Rubber-covered Cable were lashed together to give ten to fifty pair circuits between switching centrals. Field terminal strips and switchboards had to be used in semi-permanent installations which resulted in a bulky and unwieldy system. To conserve material and personnel an effort was made to install the initial tactical circuits using the supplies, routes, and locations called for in the Consolidation Wire Plan. From the tactical standpoint this proved to be an excellent plan as large quantities of semi-permanent equipment and supplies could be made available for use of tactical troops and later the equipment could be incorporated in the Island telephone system.

d. The critical supply on the mainland of some items, particularly lead-covered cable, made it necessary for SFPE to make many substitutions, which presented many engineering difficulties, such as partial substitution of 27 quad #19 gauge for 51 pair #19 gauge Cable. (Quadded and unquadded cable cannot be spliced together on the same line.) Another example, subterranean tape-armored cable was substituted for plain lead-covered cable without an increase in suspension wire and rings to take care of the additional weight. No telephone poles were received until L plus 60.

e. To add to the difficulties of the Signal Supply situation, late in June, FEAF came into the picture with a large communication requirement and the desire to be in operation at an earlier date than was originally scheduled for any of the airforce units. Concurrent with this increase of combat air units based on Okinawa, the projected VLR (B-29) complement was increased three fold. However, additional equipment required to take care of additional VLR air groups was set up by POA to the War Department as Project CP-92. Also, to alleviate the situation, Project CP-83, covering Base Development materials for two other cancelled operations, was diverted to Okinawa. This latter however will arrive almost too late for the accelerated airfield communications schedule now desired.

f. Additional temporary communications above that planned for in original Base Development Plan was required before the permanent lead covered Cable plant could be installed. An urgent request was made for 7,000 miles each of Field Wire W-143, Spiral-4, and 400 miles of GI wire W-75 with accessories. To date none has arrived.

g. Organizations such as Military Government, Field Hospitals, Ordnance and Quartermaster group and Depot Headquarters created a further drain on temporary communication supplies by arriving with no communications equipment. Additional equipment had been requested in the original planning as a supplement to Project CP-33 but the request was never approved by the War Department. Similarly, communications had to be installed for Naval units due to the late echelonment of their supplies, and the early arrival of the units.

h. The supply situation with respect to the communication demands has been one of delays and substitutions, and has limited communications engineering and construction work to jobs for which supplies have been received. This necessitated a close supervision and allocation of the supplies received.

4. Signal Intelligence.

a. The crypto sub-section, composed of two officers and three enlisted men and twenty-four cases of cryptographic material, was landed 17 April 1945. Utilizing the twelve (12) double CH 76's as stowage space, this unit was set up for operation as an issuing office 18 April 1945. The first installation was composed of one pyramidal tent from which operations were conducted on a mobile basis. There were numerous calls for material in the first weeks of operation, and all units on the island of Okinawa and adjacent islands were supplied material that was requested.

b. Due to the extreme climatic conditions existing in the Ryukyus area, it became necessary early in the operation to provide a system of constant service and repair on some thirty (30) SIGABA's then in operation. A repair section, under qualified officer supervision, was established early in May.

c. Photographic activities during this phase of the operation consisted of the attachment of two photo teams (FA) to the Island Command. One team was reattached to the 27th Division for front-line photographic duty. The second team was employed by the Headquarters, Island Command, to record historical and public relation events for future planning and training.

5. Communication.

a. Wire.

(1) As the tactical situation progressed toward the southern portion of the island and the Tenth Army became established, certain areas of responsibility were turned over to IsCom. The areas of responsibility for communication, however, did not correspond to the areas of tactical responsibility due primarily to the fact that the Tenth Army CP and other tactical units of Tenth Army were located within the IsCom area of responsibility. The responsibility of JCA included the installation and maintenance of wire communication to the service troops and service installations. The responsibility for all tactical trunks was retained by Tenth Army.

(2) The actual initiation of the consolidation phase of the development of the communications plan for Okinawa began with the arrival of the 443rd Signal Heavy Construction Battalion (Avn), the 3345th Signal Service (Construction) Company and Detachment #2 of the 3181st Signal Service Battalion on 25 April 1945. These were the first of the construction troops assigned to JCA to arrive on the island. On the 10 May 1945, the 81st Signal Heavy Construction Battalion (less Co A) arrived. Prior to the 25th of April all communications both tactical and administrative were constructed by the Signal troops assigned to Tenth Army. With the troops available to JCA, a program of rehabilitation of the existing plant in the IsCom sector of responsibility was initiated, but due to the great demand for new service and the ever-present problem of maintaining the existing plant, this program was not fully completed by the time the island was declared secure.

(3) Some of the types of communications requirements and installations that were accomplished during the assault phase are enumerated below:

(a) It was necessary to make complete replacement of the local distribution system of field wire at the Yontan Airfield and the installation of buried rubber-covered cable, to provide communications free of trouble due to construction activities during the time the Marine Air Group 31 was operating at the field. Also, a TC-10 3-position switchboard was installed in a quonset hut, to replace the inadequate tactical switchboard (reinforced by an additional BD-96) operated by the Marine Air Group.

(b) Installation of a TC-10 3-position switchboard at the Kadena Air Field and the construction of a local distribution system was made.

(c) Communications including trunking facilities and locals, teletype, switchboards, telephones, and operating personnel, were installed for the Naval Operating Base installations on the east coast and the west coast during June.

(d) Trunking facilities between regional switchboards were expanded.

(e) Rehabilitation of the pole line to the northern half of the island and establishment of trunking facilities to the 27th Division during its "mopping up" campaign was made.

(f) Establishment of trunking facilities, locals and switchboard for the headquarters of the Military Government was provided.

(g) Communications to Ie Shima via AN/TRC to provide administrative telephone and teletype circuits and circuits for use of the Tactical Air Force were established.

(h) Rehabilitation of Existing pole lines, including cabling of field wire, rubber-covered cable and spiral-four and removal of dead field wire was made.

(i) Relocations and rebuilding of portions of existing pole lines, were made necessary by road and airfield construction activities not included in known plans. In some instances the Joint Communication Activities was notified of proposed road construction. Often poles and spans of wire and cable were taken out by bulldozers and other engineer construction equipment. Close liaison was maintained with Commander Construction Troops in an effort to reduce the "outages" caused by Construction Troops.

(4) The supply of temporary construction material fell short of the demands. Although field wire W-110 was plentiful, the supply of 5 pair rubber covered cable, W-143 and Spiral-4 was soon exhausted. This was often a source of embarrassment to the Signal Officer as many of the requests for service required lines whose lengths exceeded the talking range of rubber covered cable and W-110-B field wire. Carrier equipment on lines of both Spiral-4 and W-143 was used for the most important of the long trunk lines. Suitable wire for use as messenger for cabling Spiral-4, rubber covered cable, and W-143 was not available in quantities to meet the demand. Fortunately, Japanese iron wire in limited quantities and suitable size was found on existing pole lines which could be salvaged and used for messenger wire. The practice of suspending rubber covered cable on messenger is highly recommended from

the standpoint of future maintenance and useful life of cable. The use of messenger is also advisable for supporting any type of temporary communications plant over road crossings to provide the maximum clearance possible so as to avoid interference with road construction and hauling of bulky equipment. Open wire lines were not installed due to the lack of the wire and poles as well as the indecision as to the permanent locations of various units and activities and the constant demand for large quantities of temporary circuits over the same routes. Although the plan called for the installation of TC-10 switchboards in Quonset Huts as early as L plus 25, telephone equipment, engineer equipment and labor were not available until a much later date. Conduit material was not included in the early echeloning of material which made it impossible for the engineer construction units to install the proper size conduits under the airfield runways at the time the construction work was in progress. This necessitated extending communications around the end of the runways in some cases.

(5) Shortly after Joint Communication Activities began installation of the consolidation phase of the Base Development plan, it was learned that plans were under way for an increase in the number of airfields originally provided for in the Base Development plan. Upon receipt of definite information as to the number of airfields that would be constructed, their location, type and size of aircorps units that would be assigned to operate from them, a study was made to ascertain the communications requirements. A representative from AAFPOA supplied information as to the aircorps requirements for each field. Navy requirements for airfields were obtained from the Commander of Naval Air Bases. Circuit requirements were also obtained from AACS, weather, and the Anti-Aircraft. The matter of determining the additional material and equipment required to meet the new airfield requirements was coordinated with the Signal Officer, Tenth Army. A supplement to the Base Development plan for Okinawa was prepared by this headquarters and forwarded through channels to the War Department for approval.

(6) In planning the local distribution system for airfields and determining the location of the telephone exchanges, it was sometimes difficult to obtain definite information upon which to engineer the job, particularly due to the fact that no one person was able to make a decision that would be final as to the location of any activity. In one instance, the officer in charge of engineering the semi-permanent telephone distribution system at an airfield found it necessary to be present at the field with the signal construction troops in order that the necessary changes could be made in the distribution system to correspond with changes made in the field layout in order that the system could be made operational within the time allowed.

(7) Numerous requests were received from Hospitals, Engineer, Quartermaster, and Ordnance Groups, and the Military Government for small size switchboards, (BD 71, BD 72) field telephones, and field

wire to provide internal communications within their units. In the majority of cases the request was justified due to the fact that most of these units were located at some distance from a regional switching central and the scarcity of material and sufficient man power would not justify the installation of more than two lines from the switching central. The pass Development plan did not provide for furnishing the small temporary switchboards to these non-tactical units, to be used until the permanent plant could be installed. The only switchboards available at the Signal Depot of the type mentioned were in tactical stock and only under extreme urgency would this equipment be released by the Signal Officer, Tenth Army. When the Naval Operating Base was ordered to become operational, a request was made by their Communications Officer for switchboards, teletypewriters, field telephones, field wire, and personnel to operate their communications. This was necessary as their communications equipment and operating personnel were scheduled to arrive in a later echelon.

b. Radio.

(1) Two Mobile Communication Units were landed by 5 April 1945 and were in service prior to the time that the radio sub-section arrived ashore. This section, consisting of one officer and two enlisted men arrived 9 April 1945 to establish a Radio Operations Section ashore. Off-island communication to Saipan and Guam had been established by 11 April. During the assault phase, control and coordination of all off-island radio communication activities was maintained under control of the Island Commander. During the second month ashore this office was actively engaged in establishing and coordinating local radio frequency and call sign allocation. The Headquarters Joint Communication Activities was designated as the central coordinating agency for radio operation and for the assignment of call signs and frequencies to units located in the Ryukyus area.

(2) Some difficulty was experienced in establishing communications with several small islands adjacent to Okinawa. A small garrison force was assigned to each island and, in each case, the unit had no organic signal equipment with which communication could be established. Because the necessary equipment had not been procured for these operations, SCR 177's and SCR 299's were drawn from other units and reissued to these garrison forces. The operating personnel was detached from ISCom Signal Corps units.

CHAPTER VIII ENEMY TACTICS

1. The tactics employed by the enemy to reduce the effectiveness of our communication facilities were not revolutionary and consisted of the normal accepted practices used in other theaters. However, these tactics were being employed by the Japanese for the first time in this theater.

2. In remote areas, enemy guerrilla bands attacked wire construction gangs and surveying parties, and destroyed wire lines by cutting the lines or by destroying the poles with hand grenades or dynamite. All wire crews were reinforced with sufficient personnel to act as guards.

3. There was evidence, in some instances, of deliberate jamming of off-island radio circuits by the enemy; however, no extensive outages were experienced.

4. Enemy Equipment.

a. Little or no enemy communications equipment was recovered. No tactical or permanent telephone switching equipment was captured. A few decrepit telephones, a few excellent low powered radio transmitters and receivers, and little radar equipment was captured. All commercial telephone switching equipment and instruments were destroyed, removed, or looted. Little or no lead covered cable plant was found on the island. The bombardment and battle for Naha left little evidence of a telephone plant and fixed radio installations. An underground cable plant did exist in Naha only, but its destruction was complete enough not to warrant the effort to trace it out thru the rubble of the city. Few of the radio towers in the vicinity of Shuri and Naha were left structurally sound as a result of aerial and artillery bombardment.

b. Aside from Naha and Shuri little or no evidence of any civilian wire communications was noticed. Military telephone pole lines were in evidence the length of the island. These pole lines, in general, consisted of inferior hard ware and cross-arms but excellent poles. However, the poles in few cases were buried more than three feet and necessary guying was noticeable by its absence. Few long poles were in evidence and road clearances in general were insufficient. It was seen discovered that the original plan to use these existing pole lines for both consolidation and garrison phase cables and wire was not feasible since the poles could not carry the load of RC cable, spiral-4, and wire W-143 & 110 without considering the lead covered cable or open wire.

CHAPTER IX. ESTIMATED RESULTS OF OPERATION

1. Only thru outstanding efforts were results of the operation of Joint Communication Activities successfully accomplished. There were many cases where demands for service exceeded the availability of supplies and personnel, but at no time was any activity without any communications. This was to be expected after the overall plans were altered so many times with respect to location of the various facilities, increase in facilities to be built, changes in construction priorities, and late arrival of supplies and equipment.

2. The area to be served by the island wire plant was doubled and the number of air fields and air force activities to be served were nearly triple that which was proposed in the original Base Development Plan. The volume of traffic now handled by the temporary Joint Communication Center is considerably more than the volume anticipated for the permanent Joint Communication Center. When the additional personnel and supplies made available to augment the increased service demands arrive, the desired improvements in the present system can be made.

3. The result of the assault phase of the operation reveals that the cryptographic portion of Joint Communication Activities mission was successfully accomplished. The earlier sphere of responsibility, which included supply of material to all units of the Island Command and Tactical Air Force, was conducted with sufficient efficiency to have this responsibility extended to include supply to Tenth Army and subordinate tactical headquarters on 9 May 1945. As the garrison phase began, this section was furnishing crypto material to all shore based units on this island except AACCS detachments who were granted special permission to handle their own.

CHAPTER X. COMMENTS AND RECOMMENDATIONS.

1. General.

a. The same principles that apply to commercial utilities, apply to the military communication systems serving bases which support more than one service. Economy of equipment and forces dictates that there must be only one communication system serving all agencies. There are two means by which a joint system can be controlled. It may be controlled by joint boards and committees representing various independent installation and operation units or a joint command can be organized to install, operate, and coordinate all communication activities, regardless of branch or service. After three months of operation, a joint command for coordinating communication activities has proved to be sound and far superior to the "committee and board method." One person charged with the responsibility of installation and operation of the island communication system, and supported by an adequate staff, can exercise more

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impartial and efficient control than the usual quibbling and non-compromising board or committee can exercise. A joint command for coordinating all communication activities is highly recommended for all island bases where, due to terrain or tactical situation, large units of the Army and Navy must work and live side by side.

2. Administration and Personnel.

a. The staff required to operate a Joint Communication Activities for an operation of the magnitude of this one was greatly underestimated. The staff was inadequate from the standpoint of numbers as well as qualified officers and enlisted men. No provision was made for the administration of signal units, the number of officers available for the engineering of the permanent communication facilities was inadequate in numbers and quality, and personnel required to operate a signal intelligence section were not authorized. Without the assistance of four officers, four civilian engineers and eight enlisted men on temporary duty from ComGenPOA, since 15 June 1945, two officers and an enlisted man on temporary duty from Service Force, Pacific, and eight officers and 96 enlisted men from units of Joint Communication Activities, the installation of the communication facilities at Okinawa would have been materially delayed. The arrival of a battalion headquarters team (TO & E-11-500, AD) late in June, alleviated the administrative problem and completed the effectiveness of the Headquarters Joint Communication Activities.

3. Supply.

a. An emergency stock of small switchboards, telephones, terminal strips, and maintenance tools required at test stations, should be authorized and brought in early to take care of innumerable temporary communication requirements not planned for.

b. It would be desirable if more than one copy of shipping manifests and documents could be sent by air from the port to the Island Command as soon as ships leave port.

c. Substitutions of signal materials by the Signal Corps supply agencies should be carefully made from an engineering point of view.

d. Sufficient maintenance parts should be brought in by the repair organizations to insure sixty days of operation. Repairs necessary to maintain the desired continuous communication must be made regardless of shipping delays.

e. The plans for the communication system must be made in sufficient time for the supply agencies to obtain the material and deliver

it to the target by the time it is required. This is particularly true for operations requiring extensive communication systems and long shipping routes.

4. Signal Intelligence.

a. The principal deficiency noted in the early stages of this operation was the absence of any planning for operation of a Crypto, Photo, and Signal Security section. The T/O & E of Army Garrison Force APO 331 failed to provide the Signal Section with any officers or enlisted men whatsoever for this type of work. As late as 15 January 1945, no agency, Army or Navy, had been designated to perform this function for the Island Command. To further accentuate the importance of this planning failure, comparison can be made with the amount of personnel required to operate this section as of 1 June 1945. At that time, four officers, one Navy and three Army, and nine enlisted men were devoting full time to Signal Security Matters. A T/O & E augmentation request submitted at that time provided for four officers and eight enlisted men to operate the section.

b. Through the entire planning and operation phase, cryptographic matters seemed to be the last problems considered by the participating units. It was obvious that too little importance was attached to the necessity for planning a cryptographic supply system.

c. In this joint operation, the major part of the publications in use were of the Navy type. It is essential that the officer designated to be the Island Commander's custodian be thoroughly familiar with publications of both Army and Navy origin. And as an additional measure of security, if the custodian is an Army officer, he should have a Naval officer as an associate or assistant.

d. Using as a reference section V, RPS 6 (B), and paragraph 3675, PAC 70B, the custodian became the sole holder for Army and Navy publications in the Ryukyus area. On 10 May 1945, the tactical organizations participating in the Okinawan campaign, by direction from Tenth Army, also became subordinate holders from the Island Commander. With that augmentation, the Island Commander's installation became a combination issuing office and lending library for publications.

e. Army, Navy, and Marine air and ground forces found the facilities of this issuing office convenient and dependable. Too often custodians without knowledge of publications are appointed. As a result, they are dependent upon long range correspondence and questionable shipping facilities to get their supplies. By having a central agency experienced in handling publications in operation by L plus 20, all units were supplied with the required material on time.

f. Recommend for future planning that a joint central agency, controlling all publications for all forces, equipped with ample experienced personnel be provided; that advance consideration by competent planning agencies be made to adequately provide for the needs of all units participating in an operation.

5. Communication.

a. In an area where extensive base development is contemplated as in Okinawa, enough supplies should be echeloned in at an early date to allow the tactical wire to be put up in a more permanent manner. The tactical leads have developed into the administrative system and with the great weight of spiral four, rubber cable and field wire, the original poorly constructed pole line is continually falling down. The reconstruction of the pole line and the transfer of the present wire would entail about as much effort as to build a new plant. It is recommended that poles and other material be included in the assault echelons to build a mechanically strong lead that could be expected to furnish dependable service for at least six months or a year.

b. Materials to build the fixed system are not arriving fast enough to meet the development program as set forth. There has been provided adequate signal construction personnel but materials have not arrived in sufficient quantity and kind to make the most efficient use of the labor.

c. Okinawa presents a special problem in wire design since its size exceeds the talking range of coarse gauge cable without special loading and amplification. Open wire of either .080 or .104 copper would meet transmission requirements for the longer circuits, but the demands for a great quantity of circuits requires 51 and 101 pair cables even on the long leads. Suitable repeaters to make these circuits usable were not included in the original project. The only available material to get these long circuits consisted of "C" packaged carrier on W-143 wire suspended on an iron wire messenger. This wire was not designed for the above type of construction and an unusual amount of trouble is being experienced. Loading coils were provided in pots containing 51 - 101 and 152 coils. A quantity of these coils should have been in 16 and 26 coil pots to permit a more flexible design. Most of the cable being furnished is in 26 and 51 pair sizes which also does not match these large size pots.

d. The personnel provided on the staff to design, and supervise the construction and operation of the communication system was too few and in most cases the officers did not have the proper qualifications. To engineer a plant of this magnitude, professional communication engineers either civilians or in uniform should be provided. They should also be present during the latter part of the preparation of the operational

project in order to be fully conversant with the complete plans. They should land as soon after D Day as possible in order to study the ground for trunk routes, and have plans ready for construction on arrival of material and construction troops.

e. Two signal service battalions were sent to operate and maintain the signal installations. The composition of these organizations do not provide the personnel for the job to be done. A great deal of emphasis seems to have been placed on radio and radar operation and maintenance, and the majority of the people provided were trained in these activities. There is consequently a dearth of telephone operators and wire maintenance personnel. At the present time there is a shortage of about 400 trained telephone operators. Operators have been provided from every available source without regard to previous training with a resulting impairment of the service.

f. Although no plan can be offered, a need still exists for the development of a system of personnel supply which will eliminate the situation where an organization is forced to accept substitute organizations or receive none at all.

6. Joint Communication Activities.

a. The idea of a joint communication center for an island base to provide external communication for all services is practical from an operational as well as an economical standpoint. Regardless of how independent the services are required to operate, there still exists considerable duplication of requirements, particularly when the services are mutually supporting each other. The underlying principle involved is to obtain the maximum service with the minimum of personnel and equipment.

c. During the period of operation of the temporary Joint Communication Center, time was available to observe the capabilities of a joint center. In principal, the results were excellent and proved with practical demonstration that the principles upon which the Permanent Joint Communication Center was designed were sound. Army and Navy officer and enlisted personnel were indiscriminately used on all assignments required to make the center function.

d. The late arrival of necessary radio and teletype equipment retarded the establishment of the Permanent Joint Communication Center and thereby required the temporary Joint Communication Center to handle a considerably larger volume of traffic than the personnel or equipment were designed to handle for the permanent Joint Communication Center. This was an unfortunate situation because the service expected by the various commands as being commensurate with the average degree of development of other facilities was not to their expectations. With the installation of permanent and more adequate equipment, the Joint Communication Center will provide the efficient service now desired.

e. One facility used by the temporary JCC which caused delays by ineffective operation was the teletype system. Teletypewriters were installed at all major headquarters and when in operation, were used to deliver all traffic. Although both simplex and physical circuits were used and highest priority assigned to the maintenance of the circuits, the number of circuits available were never sufficient, the outage time was discouragingly high. This condition coupled with the volume of traffic handled produced situations where only urgent and operational priority traffic could be delivered by teletype, with motor messengers being used for the remainder.

f. The average precedence classification of traffic handled, in spite of official directives, was exceptionally high. This fact further affected the overall efficiency of the center. One day's tabulation of incoming traffic for units located on this base revealed that 17% was Urgent, 75% was Operational Priority, 6% was Priority and 2% was Routine. No deferred traffic was received. It is obvious that the resulting handling time could not be maintained at the standard normally expected.

g. The pooling of equipment and personnel in a joint communication center for this operation made it possible to utilize the limited equipment available to all services to the maximum possible advantage. The flexibility of a joint communication center lends itself more readily than separate centers to expansion necessary to meet unforeseen demands made by the Army and Navy components for communication service. Had not the communications facilities and personnel been organized on a joint basis, the many separate communications systems that would have been substituted would have broken under the abnormally large traffic loads and demands made upon the Joint Communication Center.

Charles M. Baer
CHARLES M BAER
Colonel Signal Corps
Commanding

~~4 Incls~~

- ~~1. Headquarters Island Command Annex No. VII Operation Plan No. 1~~
- ~~2. Headquarters Joint Communication Activities Basic Wire Plan~~
- ~~3. Photographs of Operation~~
- ~~4. Journal of Headquarters Joint Communication Activities~~

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