ANNEX ALFA

NAVY TWX DIRECTORY

TABLE OF ARTICLES

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ANNEX ALFA

NAVY TWX DIRECTORY

A-1. ASSIGNMENT OF TWX INDICATORS:

.1 Routing indicators assigned the activities listed in this annex are listed in JANAP 117, and were assigned according to the following plan:

(a) When the assigned indicator ends with the letter X it indicates that the activity is equipped only with Teletypewriter Exchange Service (TWX) facilities. The letters preceding the letters CX in each of these routing indicators is the basic indicator of the primary, major, minor relay station or tributary station that will effect transfer of traffic originated by and addressed to the TWX activity, when the Naval Teletypewriter Network (NTX) service is used for handling such traffic.

(b) When the indicator ends with other than the letters CX it indicates that the activities concerned are in the NTX service and in addition that those activities have TWX facilities available. The assigned indicator for those activities will be used on traffic handled by TWX as well as NTX.

(c) The information contained in this annex is listed in the following order:

(1) The city and name of the activity.

(2) The TWX number assigned the activity.

A-2. ROUTING OF TWX TRAFFIC:

.1 Routing of traffic via TWX facilities will be accomplished as follows:

(a) Activities employing Teletypewriter Exchange Service (TWX) for transmission of their traffic normally should route their messages via the nearest relay station of the Naval Teletypewriter Network (NTX) rather than transmit direct by TWX to the addressee. This results in considerable savings because the long-haul portion of such traffic is then handled over Navy-leased lines and the only cost is for the short-distance transmission to the nearest NTX relay station.

(b) A TWX user may transmit a message to another TWX user in the same Naval District provided that the call can be made as economically as a call to the nearest relay station for onward transmission via NTX to the addressee.

(c) Messages (including service messages) addressed to activities served by TWX must bear a complete address. The TWX routing indicator only routes the message tape to the TWX tape relay section of a relay station where the TWX tape relay operator must read the address portion of the tape to determine the destination.

A-3. CORRECTIONS TO TWX LISTINGS

.1 The Chief of Naval Operations (DNC) should be notified immediately concerning additions, deletions or changes to the listing in this annex. CNO will then promulgate the information.

A-4. ALPHABETICAL LISTINGS OF TWX FACILITIES

.1

Albany, N.Y.	
Navy Recruiting Station and Office of Naval Officer Procurement	AL 552
Albuquerque, N. Mex.	
Field Command, Armed Forces Special Weapons Project	AQ 89
Baltimore, Md.	
Bureau of Aeronautics Representative (Middle River)	ESSEX MD 89
Inspector of Naval Material (Accepts traffic for unlisted activities Baltimore and vicinity)	BA 562
Inspector of Navy Recruiting and Naval Officer Procurement Second Navy Recruiting Area	BA 365
Bath, Maine	
Supervisor of Shipbuilding and Inspector of Ordnance	BATH 293
Bay City, Michigan	
Resident Supervisor of Shipbuilding and Naval Inspector	BCY 77
Boston, Mass.	
Captain of the Port (COTP)	BS 313
Coast Guard Repair Base	BS 313
District Coast Guard Office	BS 313
District Headquarters, Message Center	BS 371
Office of Naval Intelligence	BS 513
Bremerton, Washington	
Harbor Defense Unit	PORT TOWNSEND 408
Butte, Mont.	
Navy Recruiting Station	BT 13
Camden, N.J.	
Supervisor of Shipbuilding and Inspector of Ordnance	CAMDEN 390
Cedar Rapids, Iowa	
Inspector of Naval Material	CR 27

A-4. (Continued)

Charleston, S.C.	
Commander Charleston Section, Seventh Coast Guard District	CS 293
District Headquarters, Message Center	CS 288
District Intelligence Officer	CS 287
Chicago, Illinois	
District Intelligence Officer, Ninth Naval District	CG 950
Representative, Ninth Coast Guard District	CG 1494
Clearfield, Utah	
Naval Supply Depot, Message Center	CLEARFIELD 8117
Cleveland, Ohio	
Commander Ninth Coast Guard District	CV 333
Columbus, Ohio	
Naval Air Station	COLS 41
Corona, California	
Naval Ordnance Lab	CORONA 9066
Denver, Colo.	
Airway Manual	DN 245
Assistant Inspector of Naval Material	DN 45
Marine Corps Air Reserve Detachment	AURORA, COLO 171
Marine Corps Recruiting Station	
Naval Air Station, Buckley Field	AURORA, COLO 171
Naval Airways Pilot	DN 245
Naval Recruiting Station and Office of Naval Officer Procurement	DN 45
Naval Reserve Training Center	DN 45
Navy Branch Public Information Office	DN 45
Denville, N.J.	
Bureau of Aeronautics Representative	DOVER N.J. 556
Des Moines, Iowa	
Navy Recruiting Station	DM 95
Marine Corps Recruiting Station	DM 95

A-4. (Continued)

Dover, N.J.	
Naval Air Rocket Test Station, Lake Denmark	DOVER, N.J. 556
Earle, N.J.	
Naval Ammunition Depot	FREEHOLD 1048
Elmhurst, N.J.	
Bureau of Aeronautics Representative	NY 4-200
Forest Park, Ill.	
Naval Ordnance Plant	FOREST PARK, ILL 652
Fort Miles, Lewes, Del.	
Harbor Defense Unit	LEWES, DEL 92
Fort Worden, Washington	
Harbor Entrance Control Post	PORT TOWNSEND 408
Galveston, Texas	
Coast Guard Radio Station	GALV 83
Great Lakes, Ill.	
District Headquarters, Message Center	WKN 1500
Grosse Ile, Mich.	
Naval Air Station	TRENT MICH 448
Hastings, Neb.	
Naval Ammunition Depot	HAST, NEBR 86
Hingham, Mass.	
Naval Ammunition Depot	HINGHAM 42
Hutchinson, Kansas	
Naval Air Station	HU 84
Indian Head, Maryland	
Naval Powder Factory	INDIAN HEAD, MD 754
Kalamazoo, Mich.	
Resident Supervisor of Shipbuilding	KZ 84

A-4. (Continued)

Kansas City, Mo.	
Inspector of Naval Material	KC 32
Bureau of Aeronautics Representative	KC 240
Navy Recruiting Station and Office of Naval Officer Procurement	KC 290
Little Rock, Ark.	
Naval Recruiting Station	LR 560
Long Beach, California	
Commander, Eleventh Coast Guard District	LB 8070
Naval Station Communication Center	LB 8024
Long Island City, N.Y.	
Naval Inspector of Ordnance	NY 4-1102
Louisville, Ky.	
Naval Ordnance Plant	LS 574
Navy Recruiting Station	LS 180
Marine Corps Recruiting Station	LS 180
Marietta, Wash.	
Naval Radio Station(s)	FERNDALE, WASH 09
McAlester, Okla.	
Naval Ammunition Depot	482
Miami, Fla.	
Commander, Seventh Coast Guard District	MM 595
Mishawaka, Ind.	
Inspector of Ordnance Bendix Products Division	MISH 8748
Morton, Penn.	
Bureau of Aeronautics Representative	SWARTHMORE 558
New Orleans, La.	
Commander, Eighth Coast Guard District	NO 367
District Headquarters, Message Center	NO 460

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New York, N.Y.	
Commander, Third Coast Guard District	NY 1-1745
District Headquarters, Message Center	NY 1-2869
Office of Naval Intelligence	NY 1-2210
Norman, Okla.	
Naval Air Technical Training Center	184
Norfolk, Va.	
District Coast Guard Office	NF 52
District Headquarters, Message Center	NF 82
Northbrook, Ill.	
Coast Guard Radio Station	NORTHBROOK 1280
Odenton, Maryland	
National Security Agency	WA 264
Oklahoma City, Okla.	
Navy Recruiting Station	OC 451
Olathe, Kans.	
Naval Air Station	OLATHE, KANS 40
Omaha, Neb.	
Inspector of Navy Recruiting, Sixth Recruiting Area	OM 68
Naval and Marine Corps Reserve Training Center	OM 68
Navy Recruiting Station and Office of Naval Officer Procurement	OM 68
Commander Naval Reserve Training Command	OM 190
Palo Alto, California	
Bureau of Aeronautics Representative	PALO ALTO 93
Philadelphia, Penn.	
District Headquarters, Message Center	PH 500
Naval Recruiting Station and Office of Naval Office Procurement	PH 519
Pocatello, Idaho	
Marine Barracks	PC 95
Naval Ordnance Plant	PC 95

A-4. (Continued)

Pomona, California	
Inspector of Ordnance, Consolidated Vultee Aircraft Corp.	POMONA 7326
Port Arthur, Tex.	
Military Sea Transportation Service Office	PTA 38
Portland, Me.	
Coast Guard Operating Base	PO 472
Quincy, Mass.	
Supervisor of Shipbuilding	QUINCY 960
Richmond, Va.	
U.S. Navy Area Provisions Supply Office	RH 845
Rockland, Maine	
Coast Guard Base	ROCKLAND, ME 297
St. Louis, Mo.	
Commander, Second Coast Guard District	SL 567
Salt Lake City, Utah	
Marine Corps Recruiting Station	SU 353
Naval Inspector of Recruiting and Office of Naval Officer Procurement, Area Eight	SU 353
Naval Reserve Training Center	SU 353
Navy Recruiting Station and Office of Naval Officer Procurement	SU 353
San Bruno, California	
District Public Works Officer, Twelfth Naval District	SSF 5980
San Diego, California	
Bureau of Aeronautics Representative, Consolidated Vultee Aircraft Corp.	SD 466
Bureau of Aeronautics Representative, Ryan Aeronautical Corp.	SD 466
Coast Guard Air Station	LB 8070
District Headquarters, Message Center	SD 473

A-4. (Continued)

San Francisco, California	
Commander, Twelfth Coast Guard District	SF 410
District Headquarters, Message Center	SF 184
Navy Control of Shipping Officer	SF 15
Resident Officer in Charge, Naval Construction Contracts, Pacific Ocean Areas	SF 15
Santa Monica, California	
Liaison Officer for Bureau of Aeronautics Representative	S MON 7454
Seattle, Wash.	
Major Relay Station, District Headquarters	SE 33
Office of Naval Intelligence	SE 292
Shumaker, Ark.	
Marine Barracks, Naval Ammunition Depot	CAMDEN 465
Naval Ammunition Depot	CAMDEN 465
Silver Spring, Md.	
Applied Physics Laboratory, The Johns Hopkins University	SILVER SPRING, MD. 126
South Charleston, W. Va.	
Naval Ordnance Plant	SCH 292
Spokane, Washington	
Marine Recruiting Service	SP 157
Naval and Marine Corps Reserve Training Center	SP 157
Navy Recruiting Station	SP 157
Trenton, N.J.	
Naval Communication Unit	EWING 8544
Washington, D. C.	
Coast Guard Headquarters	WA 161
National Security Agency	WA 264
Navy Department, Message Center	WA 268
Williamsburg, Va.	
Military Subsistence Supply Agency	WMSBG 854
Woods Hole, Mass.	
Coast Guard Operating Base	FALMOUTH, MASS. 877
York, Penn.	
Naval Ordnance Plant	YORK 94

ANNEX BRAVO

COMMERCIAL MESSAGE FORMS

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ANNEX BRAVO

COMMERCIAL MESSAGE FORMS

B-1. INTERNATIONAL COMMERCIAL PRESS

.1 The following is an example of an international commercial form press message for transmission to any commercial shore station. It is to be noted that international commercial form press messages are never sent with COLLECT indicator when the correspondent has elected to have the charges billed to the newspaper or news association to which he is accredited. (Articles 240, 301, 312, 317, 351, 372, 374 of DNC 26 refer).

.2 Example:

ZLB DE NMWW NR 1
USS GOODSHIP/NMWW CK 145 16 1430 BT
PAGE 1/50 BT
PRESSE BT
YOMIURI PRESS TOKYO JAPAN BT
(FIRST 45 WORDS OF PRESS TEXT, COUNTING 5 WORDS OF SERVICE INDICATOR AND ADDRESS) BT
NR 1 YOMIURI PRESS PAGE 2/50 BT
(NEXT 50 WORDS OF PRESS TEXT) BT
NR 1 YOMIURI PRESS PAGE 3/45 BT
(REMAINING 44 WORDS OF PRESS TEXT AND ONE WORD OF SIGNATURE) BT
TSUBOKAWA BT K

B-2. INTERNATIONAL COMMERCIAL PRESS (NAVAL HEADING)

.1 When a press message for an addressee outside the continental U.S. is transmitted to any U.S. Navy shore station, the press message shall be in international commercial form with a naval heading added for handling over naval circuits. (Article 301.2 of DNC 26 refers).

.2 Example:

NPM DE NMWW NR 3 -
T -
P - 162045Z
GRNC BT
USS GOODSHIP/NMWW CK 145 16 1435 BT
PAGE 1/50 BT
PRESSE BT
YOMIURI PRESS TOKYO JAPAN BT
(TEXT DIVIDED INTO PAGES IN ACCORDANCE WITH ARTICLE 317, DNC 26) BT
TSUBOKAWA BT K

B-3. DOMESTIC COMMERCIAL PRESS

.1 The following is an example of a domestic commercial form press message with naval heading for transmission to any continental U.S. Navy shore station for delivery by the Western Union Telegraph Company to an addressee in the continental U.S. (Articles 220, 301, 313, 372, 374 of DNC 26 refer).

B-3. (Continued)

.2 Example:

NSS DE NMWW NR 2 -
T -
P - 252130Z
GRNC BT
CK 95 DPR COLLECT USS GOODSHIP/NMWW JUL 25 1957 415P VIA WESTERN UNION BT
DPR COLLECT
NEW YORK JOURNAL AMERICAN
220 SOUTH STREET NEW YORK BT
(PRESS MESSAGE TEXT DIVIDED INTO TRANSMISSION SECTIONS IN ACCORDANCE WITH ARTICLE 9050, DNC 5(B) FOR LONG MESSAGES OF OVER 90 LINES OF TYPEWRITTEN TEXT) BT
BILL LOWE BT K

B-4. COMMERCIAL CLASS "E"

.1 The following is an example of a commercial (private) message entitled to the Class "E" privilege. (Articles 312, 360 of DNC 26 refer).

.2 Example:

NSS DE NMWW NR 4 -
T -
M - 271949Z
GRNC BT
USS GOODSHIP/NMWW CK 20 27 1520 BT
MRS J V KELLY
HOTEL HILTON PUERTO RICO BT
(TEXT WITH THE SYMBOL COMLE AS THE FIRST WORD IN THE TEXT) BT
JIM BT K

B-5. CLASS "E"

.1 The following is an example of a Class "E" message. (Articles 313, 430, 470 of DNC 26 refer).

.2 Example:

NSS DE NMWW NR 5 -
T -
M - 251430Z
GRNC BT
MSG CK 25 NL COMLE JIM DELANEY 1419 HALSTEAD ST CHICAGO
(ACTUAL CLASS "E" MESSAGE TEXT) BILL USS GOODSHIP BT K

B-6. GOVT NAVY

.1 The following is an example of the form for a GOVT NAVY message as transmitted from a ship.

.2 Example:

NSS DE NMWW NR 6 -
T -
M - 291646Z
FM - USS GOODSHIP
TO - GEORGE SCHWARTZ 309 LINCOLN ST STLOUIS MO
NAVY GR 12
BT
YOUR LEAVE EXPIRES ON BOARD AT NORFOLK VA 0745 6 AUG 58
BT K

B-6. (Continued)

.3 The above message would be refiled commercially in the following form:

Example:

MSG CK GOVT NAVY 12
GEORGE SCHWARTZ
309 LINCOLN ST STLOUIS MO
YOUR LEAVE EXPIRES ON BOARD AT NORFOLK VA 0745 6 AUG 58
COMMANDING OFFICER
USS GOODSHIP

ANNEX CHARLIE

USE OF ABBREVIATIONS

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ANNEX CHARLIE

USE OF ABBREVIATIONS

C-1. ABBREVIATIONS AND SHORT TITLES --- DEFINITION

.1 The word abbreviation, as used in this annex, means a shortened form of a word or phrase which will, in its condensed form, convey the same unmistakable meaning as though the word or phrase itself were used.

.2 The term short title, as used here, refers to the condensed form of those proper names which together make up the title of a command, document, or device. An example of a short title would be SECDEF, meaning Secretary of Defense.

C-2. THE USE OF ABBREVIATIONS AND SHORT TITLES

.1 Abbreviations and short titles are intended for use in correspondence and messages in order to shorten the text, thereby saving time and material. They provide an easy-to-read and easy-to-say symbol for oft-repeated phrases and long and cumbersome titles. Many abbreviations and short titles can be spoken as single words, and may carry over into oral use. It is much easier to say CINCNELM, for example, than Commander-in-Chief, U.S. Naval Forces, Eastern Atlantic and Mediterranean.

.2 Although abbreviations shorten messages and are intended to ease communications, indiscriminate, injudicious and excessive use results in loss of intelligibility. Over-usage of abbreviations places brevity above clarity with a resultant loss of exactness in communications. The brevity and economy being sought is more than offset by the error, delay and misunderstanding that stem from an excessively abbreviated message.

.3 Use of abbreviations must be limited and kept within the confines of assured intelligibility. The increase in preparation and transmitting time brought about by restricting the use of abbreviations is acceptable, since such restriction will eliminate the administrative effort and circuit time inevitably lost in sending service messages, requesting repetitions, and clearing garbles resulting from over-abbreviating.

C-3. NAVY POLICY

.1 The policy prescribed here will be followed by drafters and originators when drafting correspondence and messages addressed to activities and commands within the U.S. Navy and U.S. Marine Corps. Brevity in message texts will not be de-emphasized as a result of this policy. Rather, brevity will be achieved through the proper choice of words and good writing techniques.

.2 Well-recognized abbreviations which definitely fall into one of the following categories may be used in the preparation of correspondence and messages when they will serve a useful purpose.

(a) Abbreviations for medals, badges, or other marks of distinction.

(b) Abbreviations for points of the compass and map coordinates.

(c) Authorized model designations and symbols for common types of aircraft, ships, or vehicles.

(d) Abbreviations for titles, ranks, and grades.

C-3.2 (Continued)

(e) Abbreviations commonly used for geographical locations and standard English dictionary abbreviations.

(f) Other technical abbreviations customarily used by specialists and technicians when communicating with activities or persons in the same field as that of the originator, and to no others.

.3 Abbreviations other than those outlined above may be used in the text of correspondence or messages after they have been initially spelled out and identified in each item of correspondence or message. For example, the abbreviation ICAO could be used in a letter, but only if that letter's first reference to the organization read: International Civil Aviation Organization (ICAO).

.4 Abbreviations and short titles which have, through years of joint usage, become self-evident, unequivocal, and universally known, will be accepted for joint use within and among the Services. Even then, an abbreviation will not be used if there is any doubt that it will be easily and readily understood. Such abbreviations peculiar to the U.S. Navy and U.S. Marine Corps may be used under the same conditions, but only within the Navy Department.

.5 The usage of abbreviations will at all times be governed by the principle of immediate comprehension. Abbreviations will not be used in correspondence and messages unless the originator can reasonably assume that the meaning of the abbreviation will be immediately clear to the addressee.

C-4. JOINT POLICY

.1 The policy on the use of abbreviations prescribed for Joint use is identical to that prescribed for Navy and Marine Corps use. Drafters and originators of correspondence or messages will be guided by the principles laid down in Article C-3 of this annex when addressing material to the other U.S. Services.

C-5. ALLIED PROCEDURE

.1 Since there is no Allied Policy on the use of abbreviations and since the abbreviations concerned are normally taken from the English language, originators of correspondence or messages to other than U.S. Services must restrict themselves to abbreviations and short titles which are universally understood. Abbreviations will not be used in Allied communications unless the originator is certain that the abbreviations will be immediately clear to the addressee.

C-6. AUTHORIZED ABBREVIATIONS

.1 As noted in Article C-3, there are six categories of words which may be abbreviated in correspondence or messages if the abbreviation will serve a useful purpose. Here are some examples of such acceptable abbreviations:

(a) Medals and badges.

CMH -- Congressional Medal of Honor
PUC -- Presidential Unit Citation
DSC -- Distinguished Service Cross

C-6.1 (Continued)

(b) Compass and map directions.

N -- North
SE -- Southeast
WSW -- West-southwest
LAT -- Latitude
LONG -- Longitude

(c) Designations for the more common aircraft, ships, or vehicles.

DD -- Destroyer
CV -- Aircraft Carrier
AO -- Fuel Oil Tanker

(d) Titles, ranks, and grades.

VADM -- Vice Admiral
LTJG -- Lieutenant (junior grade)
YNC -- Chief Yeoman
XO -- Executive Officer
CINCPAC -- Commander-in-Chief, Pacific

(e) Well known geographical locations and standard dictionary abbreviations.

LANT -- Atlantic
CALIF -- California
ART -- Article
PAREN -- Parenthesis
GAL -- Gallon
JAN -- January

(f) Technical abbreviations, used within a special field. The following for example, would be permissible in the promulgation of personnel orders which will not be seen by persons unfamiliar with the terms.

ACDU -- Active duty
HELREC -- Health record
PROIMREP -- Proceed immediately to (ship or station) and upon arrival report for duty or purpose indicated.

Similarly, the following could appear in flight plan instructions or weather reports where personnel reading them worked in the same field and would find them easily recognizable.

OBSC -- Obscure
CAVU -- Ceiling and visibility unlimited
DFSTN -- Direction finding station
ABV -- Above

C-7. FORMATION OF SHORT TITLES

.1 The short title or compound abbreviation is normally formed by combining the appropriate abbreviations of several words of a proper title into one word or symbol.

C-7. (Continued)

.2 Rules for the formation of short titles are:

(a) A full word will be used if a satisfactory abbreviation does not exist.

(b) An abbreviation for every word in the proper title need not be included in the short title.

(c) The abbreviations for force (FOR), fleet (FLT or FLE), and United States (US) normally will be omitted when superfluous in compound abbreviations, e.g., Commander Service Force United States Pacific Fleet - COMSERVPAC.

(d) The abbreviation for command (COM) normally will be omitted when such omission will not lead to confusion between a command title and a collective title. For example, a command such as the Naval Communication Station at Washington, D.C., being a single unit in itself and not comprising a group of individual subordinate commands has no collective connotation -- therefore the abbreviation NAVCOMMSTA WASHDC is sufficient to denote the commander of that activity. In the case of Commander of the Sixth Fleet, the abbreviation must read COMSIXTHFLT to distinguish from the collective title SIXTHFLT.

(e) When double letters occur in the formation of a compound abbreviation, one letter is normally dropped.

(f) The word "fleet" is abbreviated as either FLT or FLE, depending on its position in the short title, to make the title pronounceable.

(g) Prior to combining two or more abbreviations into a short title, the originator should determine whether or not a separate abbreviation has already been formulated for the proper title in question. This information can be found in the Catalog of Naval Shore Activities (OPNAV P213-105) and the Standard Navy Distribution List (OPNAV P213-107).

.3 Some examples of short titles are:

SECNAV -- Secretary of the Navy
ACTSECDEF -- Acting Secretary of Defense
COMWESTSEAFRON -- Commander Western Sea Frontier
CGARMYTHREE -- Commanding General Third Army
COMINRON -- Commander Mine Squadron
COMSERVLANT -- Commander Service Force United States Atlantic Fleet
FLETRACEN -- Fleet Training Center
SACEUR -- Supreme Allied Commander Europe
COMSTS -- Commander Military Sea Transport Service

ANNEX DELTA

PRINCIPLES FOR JOINT COMMUNICATIONS

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ANNEX DELTA

PRINCIPLES FOR JOINT COMMUNICATIONS

D-1. BASIC PRINCIPLES

.1 The principle of economy of force demands that each commander make the most efficient use of personnel and material available to him. In the interest of this principle, communications are integrated among commands and services. For example, a part of the communication needs of a commander may be provided by allocation of communication channels in the communications system of a higher commander; or a commander may require a subordinate commander to provide certain communication channels for the use of the higher commander's communications system or for the use of another subordinate commander. Between the services, the principle of economy of force makes it advisable whenever practicable that only one service maintain over-all communication facilities, communication channels for the use of the other services. When a single facility has been agreed upon to serve more than one command, it should normally be under the operation, maintenance, and security control of a single command as determined by competent authority. This command will normally be that command having primary interest and responsibility in the use of the facility.

.2 Regardless of the command or service which constructs, maintains and operates communications circuits, channels within those circuits are normally utilized by allocation of individual channels on a permanent full-time basis to services or commanders. The reasons justifying such allocation of channels are:

(a) The need for speed of communication (tactical operational circuits, flash warning, aircraft warning, fire control circuits, and the like) which prohibits delays incident to the switching or sharing of common user channels.

(b) The existence of sufficient traffic volume between the two commands to occupy the channel for a minimum of 60 percent of proven average channel capacity.

.3 Terminals of channels allocated as described above should be manned by personnel of the headquarters of the command to which allocated. Control of the traffic passing over the allocated channels will be under the command to which allocated, subject to compliance with the established joint procedures and precedences. Justification for channels should be made to, and all allocation of channels should be made by, a commander senior to those vitally interested.

.4 Common use of communication channels by more than one command or service will be normal practice for all commands or services which cannot justify exclusive allocation of channels. Standards of service as established by the joint Communications-Electronics Committee must be maintained at such a facility. In lieu of common use of a channel, it may be allocated to interested commands or services on a part-time basis.

.5 The essential communication needs of each service must be adequately provided either by the service concerned or, whenever practicable, by joint use of facilities as described above.

.6 In locations where the disruption of a single consolidated facility would vitally impair exercise of command by any or all services, or commands, dispersal of communication facilities must be provided for on the most economical basis possible, taking full advantage of stand-by facilities in a maintenance status. To provide for national emergencies, equipment which would otherwise be removed as a result of joint use of facilities

D-1.6 (Continued)

may be installed, tested, and placed in a stand-by maintenance status. Appropriate communication facilities of commands and services must be interconnected so that, in an emergency, any command or service may use the facilities of other commands and services for operational traffic and, so far as possible, for administrative traffic.

.7 Joint operations depend upon efficient joint communications and these in turn are dependent upon the adoption and use of joint methods and procedures. In addition, the integration of communication facilities possible under operation of these principles will require that all services use the same methods and procedures. Therefore, joint communication policy, joint communication instructions, and joint methods and procedures must be worked out in peacetime, used on all joint circuits and facilities, and will, whenever possible, be the same as policies, instructions and methods and procedures which are used intraservice.

.8 A communication center is an intregal part of each command headquarters and should be located physically within the headquarters area. Communications channels allocated to the headquarters must be terminated therein. Joint communication centers are practicable and should normally be prescribed when serving a joint headquarters or whenever the location of the several headquarters permit.

.9 When it is impracticable to assign entire responsibility for operation of all communication facilities in a geographical location to one service and where separate facilities are not required, joint radio transmitter stations, joint radio receiver stations, and joint wire rooms or relay stations will be established to serve the several command headquarters in the area as necessary.

.10 Effective joint communication and the integration of communication facilities, in accordance with these principles, require that, so far as practicable, communication equipment be standardized. The allowances and requirements for communication equipment and the military characteristics of equipment and systems are determined by communications personnel subject to approval of competant authority. Within the limitation of meeting the essential military characteristics which may be necessary for different branches of each service, thus established, communications equipment used by the services must consist of a minimum number of types. Space and weight limitations may prevent equipment used by different services from taking the same form. In such case, the equipment must include a maximum possible number of components which are standard to all services and operational characteristics must be coordinated between services. Standardization of components and equipment is essential in order to achieve the maximum economy possible from cross-servicing and cross-procurement and to permit emergency supply assistance between services. The same operational characteristics are necessary to insure inter-communication between services and branches thereof.

.11 In the research, development, and procurement of communication equipment, unnecessary duplication must be avoided by the use of joint contracts, cross-servicing and cross-procurement. Normally, one service must be assigned primary responsibility and should lead in development and procurement of any specific item of equipment (such as VHF/UHF radio relay equipment) and other services should procure that item from the service which has developed it.

.12 The principle of cross-servicing should be extended as far as possible to the training of personnel so that, in many cases, one service can avail itself of the training facilities of another service.

.13 Efficient communications are largely dependent upon logistic support and trained personnel. Sound practice and experience dictate that the signal

D-1.13(Continued)

or communications officer upon whom the commander depends to provide his communications, must exercise technical control of communication logistics and personnel.

.14 Matters covered in the foregoing principles which are also under the cognizance of the Research and Development Board or the Munitions Board, or in which they have a direct interest, should be coordinated with these agencies as necessary.