

ALLIED TELECOMMUNICATIONS RECORD SYSTEM (ALTERS) OPERATING PROCEDURES

ACP128 (A)



May 2005

FOREWORD

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**THE COMBINED COMMUNICATION-ELECTRONICS BOARD
LETTER OF PROMULGATION
FOR ACP128 (A)**

1. The purpose of this Combined Communication Electronics Board (CCEB) Letter of Promulgation is to implement ACP128 (A) within the Armed Forces of the CCEB Nations. ACP128 (A) ALLIED TELECOMMUNICATIONS RECORD SYSTEM (ALTERS) OPERATING PROCEDURES, is an UNCLASSIFIED publication developed for Allied use and, under the direction of the CCEB Principals. It is promulgated for guidance, information, and use by the Armed Forces and other users of military communications facilities.
2. ACP128 (A) is effective on receipt for CCEB Nations and when by the NATO Military Committee (NAMILCOM) for NATO nations and Strategic Commands.

EFFECTIVE STATUS

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3. All proposed amendments to the publication are to be forwarded to the national coordinating authorities of the CCEB or NAMILCOM.

For the CCEB Principals

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CHAPTER 1

GENERAL

SECTION I

INTRODUCTION

101. PURPOSE

This publication prescribes the operating procedures and practices applicable to the ALLIED TELECOMMUNICATIONS RECORD SYSTEM (ALTERS) and to other record communications networks as specifically authorized by respective controlling authorities.

102. POLICY

These instructions shall be used by personnel of all nations and agencies in the preparation, transmission, and handling of record communications exchanged among communications facilities served directly by the ALTERS. If conflict exists between this publication and other instructions, the procedures prescribed herein will apply. Routine queries or suggestions regarding these procedures shall be directed through National channels.

103. NETWORK DEFINITION

The ALTERS is a world-wide common user telecommunications system which provides for the transmission of narrative traffic on a store-and-forward basis. The world-wide system is composed of national/regional defense force organization telecommunications systems interconnected for the exchange of information of mutual interest.

104. OBJECTIVE

The objective of ALTERS is to provide a reliable, secure and efficient common user communications system which incorporates error detection techniques.

105. REQUIRED LEAD TIME TO EFFECT PROCEDURAL CHANGES

a. Minor procedural changes requiring computer program alterations only at the nodes will normally be accomplished within 30 days after approval. Major procedural changes may require longer lead time depending on the magnitude of the change. Changes of an emergency nature will be made as fast as possible. Some may require an emergency programming change at the node as an interim measure until a more permanent change can be programmed.

b. Procedural changes requiring computer reprogramming at terminal stations of the ALTERS will become effective not less than 21 days after promulgation. Subscribers unable to

meet the effective date must notify their national cognizant agency not more than 14 days after promulgation.

- c. Routing indicator changes normally require 19 days to promulgate and implement.

106. EXAMPLES

a. The examples shown herein are for illustration purposes only and do not necessarily reflect actual routing indicator, call sign, address group, operating signal or transmission identification assignments, or the appropriate use of abbreviations in the message address. The format of the examples, however, shows the proper sequence of the message elements to be used. In addition, examples of service messages illustrate appropriate textual composition.

b. In some examples the letters TI, standing for Transmission Identification, have been used in lieu of the true transmission identification. Wherever TI appears, it infers appearance of the Start of Transmission Function, the Start of Message Indicator (when used) and the Channel Number, in that order, as would be the case in actual practice. (See paragraph 403.)

c. Abbreviated originator and addressee designators are considered to be plain language addresses and are used to achieve brevity in accordance with appropriate administrative instructions.

107. OPERATING PRECAUTIONS

a. The attainment of reliability, speed and security depends, to a large extent, upon the operating personnel. It is essential that they be well trained, maintain circuit discipline and understand their responsibilities. The care with which operators scrutinize and prepare messages has an important bearing on the overall speed of traffic handling.

b. Adherence to prescribed procedures is mandatory. Unauthorized departures from prescribed procedures invariably creates confusion, reduces reliability and speed of service and could result in security infractions.

c. No classified message shall be transmitted in plain language over a non-approved channel except as authorized in paragraph 313.

- d. No transmission shall be made which has not been authorized by proper authority.

e. The following practices are specifically forbidden:

- (1) Unofficial conversations between operators.
- (2) Transmission of operator's personal sign.

- (3) Use of other than authorized prosigns.
- (4) Unauthorized use of plain language in place of applicable prosigns or operating signals.
- (5) Linkage or compromise of classified call signs and address groups by plain language disclosure or association with unclassified call signs.
- (6) Profane, indecent or obscene language.
- (7) Use of terminal equipment to produce additional copies of messages unless physically disconnected from the signal line, circuit, or channel.

108. MINIMIZE

MINIMIZE information and instructions are contained in ACP 121.

109. REFERENCES

The following publications apply to the operation of the ALTERS:

- a. ACP 117 Series, - Allied Routing Indicator Books.
- b. ACP 121, Communications Instructions - General.
- c. ACP 122, Communications Instructions - Security.
- d. ACP 131, Communications Instructions - Operating Signals.
- e. ACP 167, Glossary of Communications-Electronics Terms.

110. SPEED OF SERVICE

The speed of service objectives for traffic transmitted over the ALTERS are contained in ACP 121.

111 - 113. Reserved

SECTION II

DEFINITIONS OF TERMS

114. DEFINITIONS OF COMMUNICATIONS-ELECTRONICS TERMS

Definitions of the communications-electronics terms most frequently used in this publication and vital to understanding record communications handling procedures are contained in the following subparagraphs. For definition of other terms, see ACP 167.

- a. Accounting Symbol. A combination of letters used in the message heading to identify the agency, service, or activity which is financially accountable for the message.
- b. Address Designator. A plain language name (full or abbreviated), routing indicator, call sign or address group of a unit, activity or other authority used to indicate the originator and/or addressee(s).
- c. Automatic Numbering Equipment. A type of equipment which automatically transmits a transmission identification.
- d. Called Station. The station to which a message is routed or a transmission is directed.
- e. Calling Station. The station preparing the record communication for transmission.
- f. Channel Number. A combination of letters and figures used to identify a specific transmission on a channel between two stations. It consists of the following components in sequence.
 - (1) Station and Channel Designator. Three letters which identify one or both of the stations and a specific channel between the two stations.
 - (2) Channel Sequence Number. A three-digit number to indicate the sequential number of the transmission. These numbers shall commence with 001 and continue consecutively through 000 (1000).
- g. Date-Time Group. The date and time the message was either officially released by the releasing officer or the date and time when the message was handed into a communications facility for transmission. The date-time group is expressed as six digits followed by a zone suffix, the month expressed by the first three letters of the month, and the last two digits of the year of origin. The first pair of digits of the date-time group indicates the day of

the month, the second pair the hour using a 24-hour clock, and the third pair the minutes past the hour. The zone suffix letter "Z" (Greenwich Mean Time) will be used for all date-time groups except for local tactical situations.

h. End of Line/New Line Function. The sequence of ITA-5 code combinations that equate to ITA-2 machine functions of two carriage returns and one line feed (2CRLF).

i. End-of-Message Format. The end-of-message (EOM) format will consist of two carriage returns, eight line feeds, four Ns, and twelve letters (ITA-2 code), twelve delete functions (ITA-5 code), or ETX (ITA-5 control character).

j. End of Message Validation Number. The four digit station serial number preceded by the number sign (upper case H of ITA-2, 3, 5 punch) placed in message format line 15 for the purpose of validating a complete message.

k. End of Transmission Sequence. The end of transmission sequence comprises the end-of-message validation and end-of-message format in that order prepared in uninterrupted sequence, figures (upshift), number symbol, four-digit station serial number, letters (downshift), 2CR, 8LFs, and 4Ns.

l. Language and Media Format. A two-character sequence in the message header, the first character indicating the method used by the originator in preparing the message and the second indicating the preferred form of delivery.

m. Message Identification. A combination of letters and figures used to identify a message between communications centers. It will normally consist of the routing indicator, station serial number and the filing time.

Example: RUEBDFA1235 2241718.

n. Misrouted Message. A message bearing an incorrect routing indicator.

o. Missent Message. A message which bears the correct routing information but has been transmitted to a station other than the one represented by the routing indicator.

p. Node. A junction point in a network, commonly referred to as a switching center, relay center or relay facility.

q. Open Number. A channel sequence number for which a transmission bearing a corresponding number has not been received.

r. Pilot. A procedural component used to modify, amplify and/or supersede previous transmission and/or handling instructions relative to a message. The new instruction will immediately precede the former transmission and/or handling instructions.

s. Refile. The reprocessing of messages into an appropriate procedure for transfer to another system. This involves alteration of message format.

t. Retransmission. A repetition of a previously transmitted message.

u. Routing Indicator. A group of letters assigned to identify a station within the ALTERS to facilitate routing of traffic. It indicates the status of the station and may indicate its geographical area. Routing indicators will be composed in accordance with the Routing Indicator Plan described in ACPs 117 and 121.

v. Security Warning Signal. An operating signal used to permit the transmission of unclassified record communications over a non-approved circuit and/or to prevent the transmission of classified record communications in plain language over non-approved circuits. ZNR is the operating signal for non-approved circuits and ZNY is used to prevent transmission over a non-approved circuit.

w. Service Message. A brief, concise message between operating or supervisory personnel at telecommunications centers or nodes pertaining to any phase of traffic handling, status of communications facilities, circuit conditions, or other matters affecting communications operations.

x. SPECAT Designations. Special Category (SPECAT) designations are applied to messages requiring special handling procedures, supplemental to the security classification, to ensure controlled handling and viewing by individuals with the proper clearance and access authorization. The designation SPECAT will always precede the type of special handling required, e.g., SPECAT EXCLUSIVE; SPECAT PROJECT HOT HOUSE.

y. Special Handling Designator (SHD). A special handling designator is a letter designator repeated five times in format line four to inhibit delivery of a special category designated message on an unauthorized circuit.

z. Station Serial Number. A four-position number beginning with 0001 and continuing consecutively through 9999. The number in combination with the originating station's routing indicator provides positive identification for each transmission.

aa. Straggler. A record communication which has inadvertently passed through one or more nodes trailing or attached to a preceding message without picking up a channel number or without being detected prior to delivery to a terminal station.

bb. Times. The following times are used throughout the publication:

(1) Filing Time/Time Handed In. The date and time a message is received from an originator by the communications center for transmission. The filing time is shown as a three digit Julian date immediately followed by the hour and minutes in digits, expressed in Greenwich Mean Time. A zone suffix is not used. The filing time for refile messages from a

commercial system into the ALTERS is the date and time the message is received by a communications center for processing.

(2) Message Processing Time. The total time interval required to provide for delivery of a message from the originator (writer) to the addressee (reader). The time interval is divided as follows:

(a) Writer - From the originator (releaser time) to the filing time at his serving communications center.

(b) Communicator - From filing time at the originating communications center to time available for delivery at the addressee's communications center. This includes the in-station handling time at both the originating and terminating communications facilities in addition to the total transmission time.

(c) Reader - From the time available for delivery at the receiving communications center to receipt by the designated addressee.

(3) Time Available for Delivery. The time that a message is ready for delivery to the user at the destination terminal.

(4) Time of Receipt. The date and time at which a communications agency completes reception of a message transmitted to it by another communications agency.

(5) Time of Transmission. The date and time at which a communications agency completes transmission of a message to another communications agency.

cc. Tracer Action. The process by which an investigation is conducted to determine the reason for inordinate delay or non-delivery of a record communication.

dd. Transfer Circuits and Transfer Stations. The various independently operated networks are interconnected at strategic points to permit onward relay of authorized messages via the facilities of a network other than that in which the message originated. Such interconnected circuits are called transfer circuits and the stations which are connected by such circuits are called transfer stations. Transfer circuits and stations are agreed between network authorities and are identified in ACP 117 and/or the supplements thereto. Interchange of record communications between networks shall be effected only through transfer stations.

ee. Transmission Identification (TI) Line. A means of maintaining traffic continuity between teletypewriter terminals and nodes. See paragraph 403 for preparation of the transmission identification line.

ff. Transmission Release Code (TRC). A two-letter element which is inserted in the heading format lines two and four in conjunction with the redundant security character group to indicate authorization for the transmission of a message to a regional defense organization or another nation. Note: TRC is a US procedure, but is required on all Allied/NATO circuits that directly interface US AUTODIN using ACP128 format.

115. ABBREVIATIONS AND ACRONYMS

The following abbreviations and acronyms for common and key terms are used in this publication:

a.	ACC	Accept
b.	ACP	Allied Communications Publication
c.	AIG	Address Indicating Group
d.	ALTERS	Allied Telecommunications Record System
e.	ATOMAL	NATO Special Handling Designation
f.	CAD	Collective Address Designator
g.	CAI	Communications Action Identifier
h.	CANTRAN	Cancel Transmission
i.	CCEB	Combined Communications-Electronics Board
j.	CIC	Content Indicator Code
k.	COSIR	Cite our Service in Reply
l.	CR	Carriage Return
m.	CRI	Collective Routing Indicator
n.	CSD	Channel Sequence Designator
o.	CSN	Channel Sequence Number
p.	DUPED	Duplicated
q.	EOM	End of Message

r.	EOR	End of Routing
s.	EOT	End of Transmission
t.	EOTS	End of Transmission Signal
u.	FIGS	Figures (Shift Out, Upshift)
v.	FOL	Following
w.	GMT	Greenwich Mean Time
x.	INT	Interrogative (Question)
y.	INV	Invalid
z.	ITA-2	International Teletypewriter Alphabet Number 2
aa.	ITA-5	International Teletypewriter Alphabet Number 5
bb.	LF	Line Feed
cc.	LMF	Language and Media Format
dd.	LTRS	Letters (Shift In, Downshift)
ee.	NATO	North Atlantic Treaty Organization
ff.	OSSN	Originating Station Serial Number
gg.	OSRI	Originating Station Routing Indicator
hh.	PRE	Previous
ii.	REJ	Reject
jj.	RI	Routing Indicator
kk.	SEC	Security Error Code
ll.	SHD	Special Handling Designator
mm.	SOM	Start of Message
nn.	SPECAT	Special Category

oo.	SSN	Station Serial Number
pp.	SRC	Security Reject Code
qq.	SVC	Service
rr.	TAD	Time Available for Delivery
ss.	TI	Transmission Identification
tt.	TOF	Time of File
uu.	TOR	Time of Receipt
vv.	TOT	Time of Transmission
ww.	TRC	Transmission Release Code
xx.	VOL CCN	Voluntary Correction
yy	ZCZC	Start of Message Sequence

SECTION III

OPERATING SIGNALS AND PUNCTUATION

116. OPERATING SIGNALS

Operating signals are groups of three letters, sometimes followed by a numeral, beginning with the letter Q or Z. They are used as a brevity code to express various stereotyped phrases required in the conduct of communications. The authorized operating signals and their meanings are contained in ACP 131 series. Any of the signals in the series QAA to QNZ and QRA to QUZ and the series ZAA to ZXZ may be used in service messages required in record communications relay operation provided their stated meaning leaves no doubt in the mind of the recipient as to what is intended or desired. Because they perform essential triggering functions in automatic equipment, only Z operating signals shall be used in pilots or format line 2 of service messages. With the exception of the above restrictions, operating signals may be used in other format lines of a message as necessary.

117. PUNCTUATION

Punctuation symbols which appear below will normally be used in narrative messages. If however an originator has used one of the authorized abbreviations identified in ACP 121 series instead of a symbol, the abbreviation will not be changed by the telecommunications center. Approved punctuation symbols are: hyphen (-), question mark (?), colon (:), period (.), comma (,), slant/oblique stroke (/), open parenthesis (()), and closed parenthesis()).

CHAPTER 2

SYSTEM OPERATING MODES

201. SYSTEM OPERATING MODES

Five methods of channel operation are available in ALTERS.

a. MODE I. A duplex operation with automatic error and channel controls allowing independent and simultaneous two-way operation. This is accomplished by means of control characters which are used to acknowledge receipt of valid line blocks and messages or to return error information. The terminal (or node) responds automatically to these characters by continuing or stopping transmission and/or displaying action information to the operator.

b. MODE II. A duplex operation, normally associated with teletypewriter equipment's allowing independent and simultaneous two-way operation. There are no automatic error and channel controls; message accountability is maintained through channel sequence numbers and service message actions.

c. MODE III. A duplex operation with automatic error and channel controls, but utilizing only one-way transmission. The return direction is used exclusively for error control and channel coordination responses. The Mode III channel is reversible on a message basis. Control characters are used in the same manner as described in Mode I above.

d. MODE IV. Unidirectional operation (send only or receive only) without error control and channel coordination. The Mode IV channel is non-reversible, and is equivalent to half duplex operation of Mode II.

e. MODE V. A duplex operation, normally associated with teletypewriter equipment's, allowing independent and simultaneous two-way transmission. Control characters are used to acknowledge receipt of messages and to display limited information to the operator. Message accountability is maintained through the use of channel sequence numbers with automatic response through use of control characters by the distant terminal/node.

CHAPTER 3
GENERAL OPERATOR INSTRUCTIONS
SECTION I
MESSAGE TYPES AND ELEMENTS

301. TYPES OF MESSAGES

Two types of messages are authorized for preparation and transmission via the ALTERS.

- a. Single Address Messages. A single address message is one destined for only one addressee.
- b. Multiple Address Messages. A multiple address message is one destined for two or more addressees. Addressees may be indicated as ACTION or INFORMATION. Multiple address messages routing indicator limitations are directed by the national/regional defense organization system. A multiple address message includes a message prepared as a book message.

302. MESSAGE ELEMENTS AND FORMATS

Messages will be prepared in one of three formats for transmission via the ALLIED TELECOMMUNICATIONS RECORD SYSTEM.

- a. PLAINDRESS.
 - (1) A PLAINDRESS message contains the originator and addressee designations in plain language external to the text.
 - (2) PLAINDRESS messages shall be composed of the format lines shown in Annex C. Format lines 2, 4, 5, 6, 7 (and/or 8), 11, 12, 13, 15 and 16 are mandatory in PLAINDRESS messages. Other format lines may be used when required.

Example:

Format Line	Contents	End of Line Function
2	RTTUZHSW RUEBABA1234 1081400-UUUU-- RUKKLAA.	(2CR)(1LF)
4	ZNR UUUUU	(2CR)(1LF)
5	R 181230Z JUL 96	(2CR)(1LF)

6	FM AFSC ANDREWS AFB MD	(2CR)(1LF)
7	TO ELMENDORF AFB ALASKA	(2CR)(1LF)
11	BT	(2CR)(1LF)
12	UNCLAS (TEXT)	(2CR)(1LF)
13	BT	(2CR)(1LF)
15	#1234	
16	(2CR) (8LF) NNNN	(12LTRS)

b. ABBREVIATED PLAINDRESS.

(1) An ABBREVIATED PLAINDRESS message omits certain format lines for message brevity.

(2) ABBREVIATED PLAINDRESS messages shall be composed of the format lines shown in Annex C. Format lines 2, 4, 11, 12, 13, 15 and 16 are mandatory in ABBREVIATED PLAINDRESS messages.

Example:

Format Line	Contents	End of Line Function
2	PTTCZHSW RUCLDBA0123 1081400-CCCC-- RUHHLFA..	(2CR)(1LF)
4	ZNY CCCCC	(2CR)(1LF)
11	BT	(2CR)(1LF)
12	C O N F I D E N T I A L (TEXT)	(2CR)(1LF)
13	BT	(2CR)(1LF)
15	#0123	
16	(2CR 8LF) NNNN	(12LTRS)

c. CODRESS

(1) A CODRESS message discloses the originator and all action/information addressee designations only within the encrypted text. Format lines 6, 7, 8 and 9 are never used in a CODRESS message.

(2) The heading of a CODRESS message contains only the information essential for routing the message to the receiving station.

(3) Plain language transmission instructions are prohibited.

(4) The classification designator "U" (UNCLASSIFIED) will be used in format lines 2 and 4 for all CODRESS messages.

Example of a CODRESS message:

Format Line	Contents	End of Line Functions
2	RTTUZHSW RUEOLGA0025 1081400-UUUU-- RUCIABA.	(2CR)(1LF)
4	ZNR UUUUU	(2CR)(1LF)
5	R 181320Z APR 95	(2CR)(1LF)
10	GR55	(2CR)(1LF)
11	BT	(2CR)(1LF)
12	XXXXX XXXXX XXXXX XXXXX (TEXT)	(2CR)(1LF)
13	BT	(2CR)(1LF)
15	#0025	
16	(2CR 8LF) NNNN	(12LTRS)

303. - 304. Reserved

SECTION II

ROUTING

305. GENERAL INSTRUCTIONS AND POLICY

- a. General. The originating communications facility is responsible for selecting the correct routing indicator for the communications facility serving the addressee.
- b. Policy. All messages will be routed in accordance with the appropriate ACP 117 series publications and national or regional defense organization supplements thereto.
- c. Collective Routing Indicator.
 - (1) Collective routing indicators may be used in conjunction with general messages. Addressee limitation is at the discretion of the national communications authority. Collective as well as single call routing indicators may appear in the same message heading.
 - (2) Collective routing indicators may be changed as they are processed by the node. If more than one routing indicator is used in the header, the receiving stations will receive only the collective and/or single routing indicator(s) for which they are responsible.
 - (3) Tributary stations receiving a message containing a collective routing indicator shall interpret the message as being addressed directly to them and for distribution as required.
 - (4) Tributary stations will not reintroduce messages bearing collective routing indicators into the network. The reintroduction of such messages will cause duplication to the stations having already received the message, and could cause a significant system backlog.
 - (5) Tributary stations will not assign collective routing indicators to originated messages unless specifically authorized.
 - (6) The inclusion of more than one national and/or regional defense organization routing indicator in the composition of a collective routing indicator is authorized provided mutual national agreement is obtained.
- d. Self-addressed messages. Tributary stations will not transmit self-addressed messages into the ALTERS for any purpose other than quality control testing.

306. REQUESTS FOR ROUTING INDICATOR ASSIGNMENTS, CHANGES OR DELETIONS

Requests for routing indicator assignments, changes, or deletions will be submitted through appropriate national or regional defense organization channels as outlined in General Instructions of ACP 117-Series or the appropriate national or regional defense organization procedures. Responsible activities will ensure requests are properly coordinated and submitted sufficiently in advance for approval and necessary implementation action.

307. ROUTING DOCTRINE

Established primary and alternative routes for transmission of record traffic within each national or regional defense organization is contained in its respective supplement to ACP 117. Routing of record traffic between elements of the ALTERS are by mutual agreement.

308. ALTERNATIVE ROUTING

The ALTERS may be used to alternatively route traffic between inter-connected networks.

309. Reserved

SECTION III

SECURITY

310. OPERATING RULES

- a. Required security protection will be afforded all classified traffic transmitted through the ALTERS.
- b. As each message is transmitted by an originating station, the node automatically checks and compares the security classification stated in the header of the message against the authorized security level of the incoming circuit. Transmission of a message with higher security level than authorized will result in the message being rejected by the node. In addition, an automatically generated service message will be transmitted by the node to the routing indicator contained in the originating station routing indicator (OSRI) field of the violating incoming message, to advise the originating station of the possible security compromise.
- c. The node automatically checks and compares the security classification contained in the header of each message against the security classification of each destination. A security mismatch occurs for each destination that does not possess the necessary security level and the node takes the following action:
 - (1) If a security mismatch is detected by the originating station's node, two methods are employed to request reprotection of the undelivered destination.
 - (a) If the message is a single address or a multiple address with no deliverable destination, the node will reject the message due to security mismatch. Alarm conditions will appear at the originating terminal indicating reprotect the message. Modes II and IV terminals receive a service message.
 - (b) If the message is multiple address with at least one deliverable destination, the node accepts the message and delivers to all deliverable destinations. An automatically generated service message is transmitted to the routing indicator contained in the OSRI field of the message to advise the need to reprotect the RIs that have not been accepted because of security mismatch.
 - (2) If a security mismatch is detected by a distant node, an automatic system generated service is transmitted to the routing indicator contained in the OSRI field of the message advising to reprotect for the routing indicator(s) unacceptable due to security mismatch. This method of protection is employed for both single and multiple address messages.

d. The node will automatically check and compare those messages containing a TRC in the redundant security fields of the message header with the routing line information of messages being transferred into the networks of regional defense organizations or other nations. A mismatch of the TRC and the allied routing indicators will cause the node to reject the message and automatically initiate service action to the routing indicator shown in the OSRI field of the message. In the case of a multiple address message, the node will accept and deliver the message to valid regional defense organizations or national routing indicators with a matching TRC. Note: See para 114ff.

311. SECURITY RULES

a. Classified narrative messages will contain the security classification as the first word of text. Each letter of the security classification shall be separated by a space; e.g., S E C R E T. If an error is made in the preparation of the classification, it will be lettered out/deleted and re-prepared without error.

b. In-station operating procedures will be carefully composed and rigidly enforced to preclude inadvertent transmission of classified messages to stations or agencies not connected by properly secured circuits or not approved for the security classification and any special category or special handling designations of the message involved.

c. Adequate precautions will be provided for the protection, destruction and disposition of classified messages in accordance with existing national or regional defense organization instructions.

312. IMPROPER TRANSMISSION OF CLASSIFIED MESSAGES

a. A classified message received in the clear over a non-approved or non-secure circuit is considered to have been subjected to possible compromise.

b. Unless paragraph 313 applies, the originating station will be immediately notified by an unclassified priority service message that the classified message was received in the clear over a non-approved or non-secure circuit, and will take necessary action in accordance with national or regional defense organization instructions.

Example of a service message to originating station:

```
PTTUZHUUW RBDIDCA1278 0831130-UUUU--RBDIQXT.
ZNR UUUUU
BT
UNCLAS SVC ZUI RBDIQXT1421 0831100 241045Z.
PROVISIONS OF PARA 312B ACP 128 APPLIES. DELIVERY
TO ADDRESSEES EFFECTED
BT
```

#1278
NNNN

NOTE: In those instances when the involved message is not addressed to the receiving station, the originating station will be advised to reprotect the message.

c. An originating station that attempts to transmit a message with a higher than authorized security level must determine if the message has been subject to compromise (see para 310.b). National or regional defense organization instructions provide the guidelines for in-station security compromise procedures.

313. CLASSIFIED MESSAGES TRANSMITTED IN PLAIN LANGUAGE

a. When a requirement exists to transmit a classified message in plain language over a non-secured circuit under the provisions of paragraph 326, ACP 121 the following procedures apply:

(1) The designator "U" will be used in format lines 2 and 4 as applicable in lieu of the appropriate classification designator letter. The designator "U" used in format line 4 will be preceded by the operating signal ZNR, i.e., ZNR UUUUU. If the message is addressed and routed to a regional defense organization or another nation, a TRC will appear in format lines 2 and 4 (see Chapter 5).

(2) In messages prepared in PLAINDRESS or ABBREVIATED PLAINDRESS format, the word CLEAR will be the first word in format line 12. TRC rules as defined in Chapter 5 apply to messages addressed and routed to regional defense organizations or other nations. ACP 128. Note: See para 114ff.

314. STRAGGLER MESSAGE

A straggler message is one which either trails or is attached to a preceding message. Straggler messages may be caused by: Garbles during transmission; equipment malfunctions; incorrectly prepared, improperly positioned or omitted end-of-message signal for the first message, etc. Straggler messages will not necessarily be addressed to the receiving station; therefore, message protection is required. If a station receives a transmission where the lead message is the trailing message will not be processed in accordance with straggler procedures listed below. Instead the transmission and message identification (format lines 2 through 6) of the incorrect transmission will be forwarded to the communications headquarters of the receiving station for corrective action as appropriate. The originating or input station will be advised by service message, citing specific details of the operator discrepancy. When a straggler message is received, the following procedures will apply:

a. If the first message addressed to and received by the called station is incomplete, it will be serviced as prescribed in paragraph 435.a.

- b. The straggler message will be handled in the following manner:
- (1) If it is a single address message, and bears only the routing indicator of the station at which it arrived, and if the message involved is otherwise correct, it shall be released for refile or delivery.
 - (2) When it is received, except as specified in (1) above, the originating station shall be informed by service message and requested to protect the message as a suspected duplicate. If the station which received the straggler is one of the addressees, it also shall be released for refile or delivery.
 - (3) Forward a routine precedence service message to the connected node citing format lines 2 and 15 of both messages involved. Include the time of receipt of the transmission.
- c. A node receiving notification of a straggler message transmission will perform a search to determine whether or not an actual straggler message condition exists so that corrective action can be initiated.
- d. If an actual straggler message transmission condition exists, e.g., lead and straggler messages are different, the node will attempt to determine the cause and forward by message, using appropriate precedence, pertinent message identification and all available details concerning the identified straggler message to the recipient's appropriate national communications command authority for evaluation and corrective action. The appropriate communications headquarters will be included as an information addressee.
- e. Nodes detecting a suspected straggler message will notify the input station by service message, citing the OSRI and SSN of the lead message. Stations receiving such a service message will be responsible for separating, providing the prescribed EOM, and retransmitting all messages involved to the called station(s).
- f. FLASH messages received by nodes with a suspected straggler attached are accepted and processed to the called station(s). The station inputting the FLASH message into ALTERS will be notified by service message from the node to reprotect the suspected straggler message to the called station(s). In those instances when the input station determines that the FLASH message contained a good EOM but had an improper EOM validation sequence, no further action will be taken other than to file the service message for record purpose.

315. END-OF-MESSAGE (EOM) VALIDATION

To inhibit straggler messages, the node automatically checks and compares, on input, the SSN appearing in format line 2 of each message against the corresponding EOM validation number appearing in format line 15. Messages containing unlike numbers, or missing in either line, will be rejected by the node and the input station will be advised by an automatically

generated service message of a possible straggler message condition. See paragraph 314 and 404.

316. CODRESS MESSAGE RULES

The header of all CODRESS messages will be in the clear. CODRESS messages routed to regional defense organizations or other nations must contain a transmission release code in format line 2 and 4. (See Chapter 5.)

a. Some CODRESS messages may require more than one transmission, depending upon the communication facilities available for routing the message to the addressee(s). In such cases, the originating station will prepare a separate header for each transmission required. Each header will bear a separate SSN to positively identify individual transmissions. The message header of each transmission shall contain only those routing indicators, call signs or address groups necessary to effect delivery to the addressee(s) required to receive the particular transmission.

b. Transmission instructions (format line 4) shall be used in CODRESS messages when the called station is required to delivery or refile the message without decrypting it. When the called station(s) are also required to decrypt, refile, and/or deliver the message, the called station routing indicator will also appear following the Prosign T in format line 4.

317. SPECIAL HANDLING DESIGNATION MESSAGE RULES

a. Within the ALTERS, Special Handling Designation messages will be identified by an oblique signal (/) and use of the appropriate assigned designator, repeated five times, immediately following the five repeated security characters appearing in format line 4.

Example:

```
PTTTZHSW RUEJDCA1579 2691430-TTTT--RUFTABA.  
ZNY TTTT/BBBBB
```

b. See Chapter 5 for additional information regarding the use of SHDs.

318. SECURITY PROVISIONS

a. Physical security measures for the protection of cryptographic equipment and keying material will be in accordance with national security directives.

b. Paper tapes, messages, and files will be treated in accordance with the highest security classification contained therein.

- c. Classified residue resulting from on-line operation, including clear text message tapes, clear text message paper copies, etc., will be disposed of as classified waste in accordance with the applicable national security directives.

319 - 324 Reserved

SECTION IV

TRIBUTARY STATION OPERATING HOURS

325. GENERAL

Expeditious delivery of messages to addressees require that tributary stations maintain continuous communications with their respective nodes. Tributary stations will not arbitrarily reduce operating hours or assume unattended status.

326. REQUESTS FOR REDUCTION OR CHANGE OF OPERATING HOURS

a. When local conditions necessitate reduction in operating hours of a tributary station to less than 24 hours a day, seven days a week or to change the present operating hours, the requesting agency will forward requests to their connected node and appropriate national communications command authority and obtain approval before any reduction in operating hours is undertaken.

b. Requests for curtailment or change of operating hours will contain all necessary information required by the national communications command authority.

327. TRIBUTARY STATION RESPONSIBILITIES

Tributary stations operating as a part-time terminal will be responsible for:

a. Establishing procedures with the alternate delivery station for receipt of high precedence traffic. If no alternate is specified, or when the alternate station is unable to receive traffic, respond to a request by the node to open for operation when traffic is received that meets time criteria specified by the national communications command authority. Representative designated by the Commander or Officer in Charge of the closed tributary station must decide whether the station will be opened to receive traffic or whether traffic will be held at the node until the next scheduled hours of operation. The identify of the tributary station representative electing to open or to hold the traffic will be recorded at the node. Node personnel will not be held responsible for examination of the message text to determine its importance.

b. Remaining open each day until all PRIORITY or higher precedence traffic in the node for the tributary is cleared.

c. Provided the node the name and telephone number of the individual or designated representative who will be available 24 hours a day to open the tributary or make the decision to hold traffic at the node.

d. Opening and closing procedures and transmitting opening and closing notices to the connected node as prescribed below:

(1) Opening Procedures/Notice.

(a) The tributary will be made ready to pass traffic at the scheduled time.

(b) Tributary equipment will be checked.

(c) Circuit will be activated and tested.

(d) Equipment will be started at the direction of the node. Prior to transmission of traffic, an opening notice of IMMEDIATE precedence will be routed to the connected node service position and to the calling station.

Example:

```
OTTUZHAW RUCLFBA1214 0990830-UUUU--RUCLCSA RUCLFBA.
ZNR UUUUU
BT
UNCLAS SVC 1025. QRV 0990830
BT
#1214
NNNN
```

(2) Closing Procedures/Notice.

(a) All PRIORITY precedence or higher traffic must be cleared prior to closing.

(b) Fifteen minutes before closing, terminal stations employing channel sequence numbers (CSNs) will send a closing notice of Priority precedence to the connected node service position and to the calling station.

Example:

```
PTTUZHAW RUCLBIA1017 1000145-UUUU--RUCLCSA RUCLBIA.
ZNR UUUUU
BT
UNCLAS SVC ZKJ2 1001000Z ZID IBA124
BT
#1017
NNNN
```

(c) Verify the CSN of the last good message received against the number of the returning closing notice. If the CSN of the closing notice is in sequence with the last good message received, the terminal will close. If a disparity exists, the terminal will immediately take service action in accordance with paragraph 433 and then close.

(d) Fifteen minutes before closing, terminal stations not employing CSNs will send a closing notice of Priority precedence to the node service position without waiting for a reply.

Example:

```
PTTUZHUW RBDWKAA2340 1201945-UUUU--RBDWCSA.  
ZNR UUUUU  
BT  
UNCLAS SVC ZKJ2 1210400Z  
BT  
#2340  
NNNN
```

SECTION V

ACP128 PROCEDURES

328. AUTOMATICALLY GENERATED PILOTS

a. The node is programmed to automatically generate a format line 1 pilot for all message formats prescribed in paragraph 302 when:

- (1) A suspected duplicate transmission is generated (ZFDY).
- (2) A collectively routed message is alternatively routed to another station (ZHZW).
- (3) A combination of the conditions listed above occur (ZHYY).

b. The appropriate content indicator code/communication action identifier from Annex B will be inserted, as required, in positions 5 through 8 of the line 1 pilot.

c. The routing indicator of the node generating the pilot is inserted between the filing time and security redundancy warning sentinel of the line 1 pilot.

d. Except as specified in b and c above, all other elements of the pilot through the start-of-routing signal are identical to those contained in format line 2 of the original message.

Examples of node Automatically Generated Pilots:

- (1) Suspected Duplicate (ZFDY).

Format Line	Contents
1	(TI) (AS REQUIRED)
1	RTTUZFDY RUCIABA1234 1741430 RUWT-UUUU--RUWTPPA.
2	RTTUZHZW RUCIABA1234 1741430-UUUU--RUWTPPA.
5	R 231400Z JUL 95
	Remaining format lines

- (2) Collectively Routed Message.

Format Line	Contents
1	RTTCZHYY RUEOABA1234 1741715 RUEO-CCCC--RUEOLFA.

2 RTTCDAAA RUEOABA1234 1741715 CCCC--RUCRCEO.
 12 TEXT
 16 RTTCDAAA RUEOABA1234 1741715 CCCC NNNN

e. Node generated line 1 pilots must be removed prior to reintroduction of the message.

329. AUTOMATICALLY GENERATED SERVICE MESSAGES

a. The node, upon detection of certain header and EOM format errors, will advise the violating station by means of an automatically generated service message. Stations charged with onward relay of traffic may receive automatically generated service messages from a node. These stations will interpret such service messages as being addressed to them and, when required, are responsible for reprocessing these messages in a format suitable for delivery to the station having originated the message being serviced.

b. All node automatically generated service messages are identified by use of the letters "CSD" appearing as the 5th, 6th, and 7th letters of the OSRI, i.e., RUCICSD or RXFKCSD.

c. Node automatically generated service messages destined for Modes II and V stations will, when appropriate, cite the transmission identification number of the message being serviced in addition to the OSRI, SSN and the Julian date and time filed.

d. The appearance of "REJ" or "ACC" at the end of service message text indicates that the message being serviced was either "rejected" or "accepted" by the node. Stations in receipt of service messages which indicate "REJ" are responsible for re-protection of the involved message to the appropriate addressee(s).

e. Listed below are examples of node automatically generated service messages along with the reason(s) for its generation and action to be taken upon receipt:

(1) INVALID CHANNEL DESIGNATOR.

VZCZCBAA233
 PTTUZHUU RUEDCSD0001 2721400-UUUU--RUEDABA.
 ZNR UUUUU
 UNCLAS SVC RUEDABC1234 2721359
 INVALID CD EXPECTED ABA130 RCVD BBA130 REJ
 #0001
 NNNN

REASON:

- (a) Generated when the three-letter station/channel designator is received invalid..
- (b) FLASH traffic will be accepted for processing.
- (c) Precedence of service message will equal that of rejected message.
- (d) Applicable to Modes I, II and V.

ACTION REQUIRED:

- (e) Check for possible equipment malfunction.
- (f) Correct the channel designator letters and reprotect the identified message to all addressees.
- (g) Suspected duplicate procedures are not required.

(2) INVALID CHANNEL SEQUENCE NUMBER.

VZCZCEDA233
 PTTUZHUV RUEBCSD0002 2721405-UUUU--RUEBDEA.
 ZNR UUUUU
 UNCLAS SVC RUEBDEA1234 2721400
 INVALID CSN EXPECTED DEA125 RCVD DEA129 ACC
 #0002
 NNNN

REASON:

- (a) Generated when the received CSN is either non-numeric or out of sequence.
- (b) Traffic will be accepted for processing.
- (c) Precedence of service message will equal that of rejected message.
- (d) Applicable to Modes I, II, and V.

ACTION REQUIRED:

- (e) Check for possible equipment malfunction.
- (3) OPEN CHANNEL SEQUENCE NUMBER.

VZCZCEDA234

OTTUZHUV RUWJCSD0003 0411201-UUUU--RUWJDEA.
 ZNR UUUUU
 UNCLAS SVC
 ZFX DEA015 THRU DEA023
 #0003
 NNNN

REASON:

- (a) Generated when an open number is detected, i.e., a sequential number for which no transmission was received.
- (b) Precedence of service message will always be IMMEDIATE precedence.
- (c) Applicable to Modes II and V.

ACTION REQUIRED:

- (d) Determine if a transmission(s) was involved. If a transmission(s) was involved, the message(s) will be retransmitted as a suspected duplicate.

(4) INVALID ROUTING FIELD.

(TI) (as required)

PTTUZYVW RUWMCS0006 2721630-UUUU--RUWMABA.
 ZNR UUUUU
 UNCLAS SVC ABA006 RUWMABC1234 2721622
 INVALID ROUTING FIELD REJ
 #0006
 NNNN

REASON:

- (a) Generated when invalid separators (spaces) or end-of-line functions are found, any RI is found which is more than seven alphabetic characters; a non-alphabetic character or small ITA-5 alphabetic character appears in the routing field.
- (b) Precedence of service message will equal that of rejected message.
- (c) Applicable to Modes I, II and V.

ACTION REQUIRED:

- (d) Check for possible equipment malfunction.

- (e) Check tape for possible error within routing field.
- (f) Correct and reprotect the identified message to all addressees.
- (g) Suspected duplicate procedures are not required.

(5) EXCESSIVE ROUTING FIELD.

(TI) (AS REQUIRED)

PTTUZHUV RUEOCSD0007 0401204-UUUU--RUEODEA.

ZNR UUUUU

UNCLAS SVC DEA007 RUEODEA0119 0401200

EXCESSIVE ROUTING FIELD REJ

#0007

NNNN

REASON:

- (a) Generated when the EOR signal does not appear within the specified limitations dictated by the national system limitations.
- (b) Precedence of service message will equal that of rejected message.
- (c) Applicable to Modes I, II and V.

ACTION REQUIRED:

- (d) Message contains over 500 routing indicators. Two separate transmissions will have to be made, limiting each to a maximum of 500 routing indicators.
- (e) Suspected duplicate procedures are not required.

(6) INVALID SECURITY FIELD.

(TI) (AS REQUIRED)

OTTUZHUV RUDOCSD0008 2721919-UUUU--RUDOABA.

ZNR UUUUU

UNCLAS SVC ABC008 RUDOABC1234 2721911 INVALID SECURITY
FIELD REJ

#0008

NNNN

REASON:

(a) INVALID SECURITY FIELD - REJ. Generated when an error occurs with the operating signals ZNR or ZNY in format line 4, such as extraneous, illegal or non-alphabetic characters, or the field is mis-positioned.

(b) INVALID SECURITY FIELD - SEC. Generated if an error occurs in positions 4, or 30-31 of format line 2, or if an error occurs within the first three characters of the security redundancy field of format line 4. Also generated if the classification characters in format lines 2 and 4 do not match or if the message classification exceeds the security level of the circuit.

NOTE: Errors in positions 32-33 in format line 2 or errors in the last two characters of the security redundancy field of format line four will be treated as TRC rejects (see (c) below).

(c) INVALID SECURITY FIELD - TRC. Generated if the message is addressed and routed to a regional defense organization or another nation and the TRC in format line 2 and 4 do not match. Also generated if errors occur in positions 32-33 of format line 2 or the last two characters of the security redundancy field of format line 4. Note See para 114ff

(d) INVALID SECURITY FIELD - SRC. Generated if the message is a SHD and entry is attempted beyond the SHD level authorized for the input terminal. Also generated if errors occur in the SHD field, such as extraneous, illegal, or non-alphabetic characters, or the field is mis-positioned.

(e) Precedence of service message will equal that of the rejected message.

(f) Applicable to Modes I, II, and V.

ACTION REQUIRED:

(g) Check for possible equipment malfunction.

(h) Check tape for possible error within security field.

(i) Correct and reprotect identified message to all addressees.

(j) If rejection was due to improper classification for the input channel, reprotect the identified message by authorized means. A determination will be made as to whether the message was subject to compromise. National Communications Command Authority directives provide guidance for security compromise procedures.

(7) INVALID HEADER.

(TI) (AS REQUIRED)
 RTTUZHUV RUCLCSD0004 2721628-UUUU--RUCLABA.
 ZNR UUUUU
 UNCLAS SVC ABC004 RUCLABC1234 2721622
 INVALID HEADER REJ
 #0004
 NNNN

REASON:

- (a) Generated for invalid header fields up through the start-of-routing (--). This includes the precedence, LMF, CIC, OSRI, OSSN, TOF, start-of-routing signal, and all separator fields including the hyphen preceding the repeated classification characters.
- (b) FLASH traffic will be accepted with errors in LMF, CIC, OSSN and TOF for processing.
- (c) Precedence of service message will equal that of rejected message.
- (d) Applicable to Modes I, II, and V.

ACTION REQUIRED:

- (e) Check for possible equipment malfunction.
 - (f) Check tape for possible error within header fields.
 - (g) Correct and reprotect the identified message to all addressees.
 - (h) Suspected duplicate procedures are not required.
- (8) INVALID ROUTING.

(TI) (AS REQUIRED)
 OTTUZHUV RUWTCSD0005 1231234-UUUU--RUWTABA.
 ZNR UUUUU
 UNCLAS SVC ABC005 RUWTABC0072 1231230
 INVALID ROUTING REPROTECT TO:
 RUWTAAA-INV RUWTBBB-SEC RUWTCCC-LMF
 RUWTDDD-TRC RUWTEEE-SRC
 #0005
 NNNN

REASON:

(a) Generated for invalid routing indicators, TRC or SHD. Routing indicators are invalid because:

1. INV - The RI does not appear in local node routing tables. First character must be "R".
 2. SEC - Message security classification exceeds the level authorized for the addressee destination.
 3. LMF - The addressee destination does not have the capability to receive the message with stated medium.
 4. TRC - The routing indicator in the message does not match the transmission release code in format lines 2 and 4.
 5. SRC - The SHD contained in format line 4 exceeds that of the output line.
- (b) Precedence of service message will equal that of the rejected message.
- (c) Applicable to Modes I, II, and V.

ACTION REQUIRED:

- (d) Determine the correct routing indicator and the identified message will be re-protected only to the correct routing indicator.
- (e) Suspected duplicate procedures are not required.

(9) HIGH PRECEDENCE MESSAGE ACCEPT.

VZCZCBAA224
 OTTUZHUW RUFTCSD0009 2721921-UUUU--RUFTABA.
 ZNR UUUUU
 UNCLAS SVC R Z ABC009 RUFTABC 2012 2721920
 #0009
 NNNN

REASON:

- (a) Generated when a FLASH message has been accepted from a Mode II station.
- (b) Service message will always be assigned IMMEDIATE precedence.
- (c) Applicable to Mode II.

ACTION REQUIRED:

(d) Upon receipt, file for record purposes.

(10) SUSPECTED STRAGGLER.

(TI) (AS REQUIRED)

OTTUZHUV RUADCSD0012 2722001-UUUU--RUADABA.

ZNR UUUUU

UNCLAS SVC ABC010 RUADABC1234 2721234

SUSPECTED STRAGGLER REJ

#0012

NNNN

REASON:

(a) Generated when messages, except FLASH fail EOM straggler validation check (i.e., absence of a # or the four numerics do not agree with the SSN in the header).

(b) Service message will always be assigned IMMEDIATE precedence.

(c) Applicable to Modes I, II, and V.

ACTION REQUIRED:

(d) Determine if a straggler did exist.

(e) If straggler did exist, action should be taken to separate messages involved and provide proper EOM sequence for both messages. Reprotection to all addressees is required.

(f) If straggler did not exist, action should be taken to ensure proper EOM validation sequence exists and retransmit identified message to all addressees.

(11) HIGH PRECEDENCE STRAGGLER.

(TI) (AS REQUIRED)

OTTUZHUV RUHHCSD0012 2722009-UUUU--RUHHABA.

ZNR UUUUU

UNCLAS SVC ABC011 RUHHABC1234 2722007

HI PREC MESSAGE ACCEPTED

REPROTECT SUSPECTED STRAGGLER

#0012

NNNN

REASON:

- (a) Generated when FLASH messages fail EOM straggler validation check (i.e., absence of a # or the four numerics do not agree with the SSN in the header).
- (b) Service message will always be assigned IMMEDIATE precedence.
- (c) Applicable to Modes I, II, and V.

ACTION REQUIRED:

- (d) Determine if a straggler did exist.
- (e) Straggler messages will be protected as suspected duplicates.
- (f) In those instances where the identified FLASH messages contained a good EOM, but had an improper EOM validation sequence, no further action is required.

(12) INVALID EOM SEQUENCE.

(TI) (AS REQUIRED)

OTTUZHUV RUMMCSD0013 2731205-UUUU--RUMMABA.

ZNR UUUUU

UNCLAS SVC ABC012 RUMMABC1234 2731200

INVALID EOM REJ

#0013

NNNN

REASON:

- (a) Generated when a valid EOM sequence is not found.
 1. A "LFNNNN" is not found on a Mode I teletype message.
 2. Under certain node internal error conditions, this message may be generated on Mode II and V input.
- (b) Precedence of service message will equal that of rejected message.
- (c) Applicable to Modes I, II, and V.

ACTION REQUIRED:

- (d) Check for possible equipment malfunction.
- (e) Check for proper EOM sequence and correct any errors found.
- (f) Retransmit identified message to all addressees.
- (g) Suspected duplicate procedures are not required.

(13) INPUT MESSAGE TIMEOUT.

(TI) (AS REQUIRED)

RTTUZHUV RUMLCSD0014 2731313-UUUU--RUMLDEA.

ZNR UUUUU

UNCLAS SVC DEA013 RUMLDEA0130 2731310

NO EOM RCVD REJ

#0014

NNNN

REASON:

- (a) Generated when an input transmission has been interrupted in excess of approximately three minutes without the receipt of the EOM function.
- (b) Precedence of service message will equal that of rejected message.
- (c) Applicable to Modes I, II, and V.

ACTION REQUIRED:

- (d) Reprotect identified message to all addressees.
- (e) Suspected duplicate procedures are not required.

(14) EXCESSIVE MESSAGE LENGTH.

(TI) (AS REQUIRED)

RTTUZHUV RUCICSD0015 2731344-UUUU--RUCIDEA.

ZNR UUUUU

UNCLAS SVC DEA014 RUCIDEA0149 2731314

EXCESS MSG LENGTH REJ

#0015

NNNN

REASON:

- (a) Generated when a message exceeds the allowable limit as follows:
 1. Mode I and Mode V message exceeded 550 line blocks or 44,000 characters.
 2. Mode II message exceeded 125 line blocks or 10,000 characters.
- (b) Precedence of service message will equal that of rejected message.

ACTION REQUIRED:

(c) Separate the identified message into transmission sections and reprotect to all addressees.

(d) Suspected duplicate procedures are not required.

(15) TWO CONSECUTIVE SOM'S.

(TI) (AS REQUIRED)

PTTUZHUW RUFLCSD0016 2731351-UUUU--RUFLABA.

ZNR UUUUU

UNCLAS SVC ABA015 RUFLABA2314 2731347

TWO CONSEC SOMS REJ

#0016

NNNN

REASON:

- (a) Generated when two consecutive SOMs are received and detected by the node without an intervening EOM sequence.
- (b) Precedence of service message will equal that of rejected message.
- (c) Applicable to Modes I, II, and V.

ACTION REQUIRED:

- (d) Check for possible equipment malfunction.
- (e) Check identified message for extraneous "ZCZC".
- (f) Reprotect identified message to all addressees.
- (g) Suspected duplicate procedures are not required.

(16) CHANNEL CONTINUITY VERIFICATION.

(TI) (AS REQUIRED)

PTTUZHUV RUFTCSD0017 2731411-UUUU--RUFTABA.

ZNR UUUUU

UNCLAS SVC ZID ABA012

#0017

NNNN

REASON:

(a) Generated when 30 minutes have elapsed with no receipt of traffic by the node.

(b) Service message is always assigned PRIORITY precedence.

(c) Applicable to Mode II.

ACTION REQUIRED:

(d) Determine that the CSN reported as the last received is correct.

(e) If station records agree with reported CSN, the following service message will be transmitted:

(TI) (AS REQUIRED)

PTTUZHUV RUFTABA1254 2731516-UUUU--RUFTCSA.

ZNR UUUUU

UNCLAS SVC RUFTCSD0017 2731411

ZIC ABA012

#1254

NNNN

(f) If stations records do not agree with reported CSN, the terminal station will take whatever action is necessary to establish contact with the node and ascertain the status of traffic.

(17) REPROTECT ALL ADDRESSEES.

(TI) (AS REQUIRED)

OTTUZHUV RUEDCSD0022 0421754-UUUU--RUEDNXA.

ZNR UUUUU

UNCLAS SVC NXA189 RUEDNXA0789 0421753

REPROTECT TO ALL ADDRESSEES

#0022

NNNN

REASON:

- (a) Generated when the node experiences an internal error during receipt of an incoming message.
- (b) Service message will always be assigned IMMEDIATE precedence.
- (c) Applicable to Modes I, II, and V.

ACTION REQUIRED:

- (d) Reprotect identified message to all addressees.
- (e) Suspected duplicate procedures are not required.

(18) CONTROL CHARACTER SEQUENCE.

(TI) (AS REQUIRED)

PTTUZHUUW RUFLCSD0863 1641701-UUUU--RUFLFSA.

ZNR UUUUU

UNCLAS SVC RUFLFSA1818

INVALID CONTROL CHARACTER SEQUENCE RECEIVED

REPROTECT TO ALL ADDRESSEES.

#0863

NNNN

REASON:

Generated when node program encounters an invalid sequence of control characters.

ACTION REQUIRED:

- (a) Upon receipt, retransmit the identified message.
- (b) If further attempts to input the message are unsuccessful, notify maintenance personnel.
- (c) Reprotect identified message to all addressees.

(19) UNAUTHORIZED USE OF A COLLECTIVE ROUTING INDICATOR (CRI).

(TI) (AS REQUIRED)

OTTUZHUUW RUFTCSD1625 1821803-UUUU--RUFTBDA.

ZNR UUUUU
 UNCLAS SVC RUFTBDA0462 1821801
 UNAUTHORIZED USE OF CRI-REJ
 #1625
 NNNN

REASON:

(a) Generated when an unauthorized introduction of a collective routing indicator is attempted.

ACTION REQUIRED:

(b) See para 305.c.

(20) DUPLICATE CHANNEL SEQUENCE NUMBER.

(TI) (AS REQUIRED)

PTTUZHUV RUFTCSD0014 0621453-UUUU--RUFTOWA.
 ZNR UUUUU
 UNCLAS SVC RUFTOWA0647 0621422
 DUPE CSN EXPECTED OWA011 REC OWA010 REJ
 #0014
 NNNN

REASON:

(a) Generated when a CSN is duplicated.

(b) FLASH traffic will be accepted for processing and CSN counter will be incremented by one.

(c) Precedence of service message will equal that of the rejected message.

(d) Suspected duplicate procedures not applicable.

(e) Applicable for Modes I, II, and V.

ACTION REQUIRED.

(f) Check for possible equipment malfunction.

(g) Reprotect the identified message to all addressees.

330. CANCELLING TRANSMISSIONS

- a. When a message has not been completely transmitted and prior to any further transmission, the node will generate a cancel transmission (CANTRAN) notice to Modes II, IV, and V terminals.
- b. The node CANTRAN notice will consist of (2CR)(1LF), four-letter routing indicator of the involved node, three station/channel designator letters, three digit channel sequence number, the prosigns E E E E E E E AR, followed by (2CR)(8LF)(4Ns)(25LTRS).

Example:

(2CR)(1LF) RUCI ABC123 E E E E E E E AR (2CR)(8LF)(4Ns)(25LTRS)

- c. Terminal stations receiving CANTRAN notices will file them as a communications record. Delivery to the addressee will not be accomplished.

331. INVALID ROUTING INDICATORS

- a. Messages assigned invalid routing indicators cannot be accepted by the node. It is the responsibility of the originating station to ensure that all message routing indicators are valid.
- b. Node invalid routing indicator rejection procedures are as follows:
 - (1) Single Call Messages.
 - (a) A single call message with an invalid routing indicator and addressed to a tributary connected to the same node as the originating station will be rejected by the node. Correction and reintroduction of the message into the network is the responsibility of the originating station.
 - (b) A single call message with an invalid routing indicator and addressed to a tributary connected to another node will be accepted by the parent node. However, the node assigned delivery responsibility will automatically generate a service message notifying the originating station of the invalid routing indicator. The originating station will correct the routing indicator and reintroduce the message into the network.
 - (2) Multiple Call Messages.
 - (a) Multiple call messages containing at least one valid routing indicator will be accepted by the node. The node will protect the message to any valid routing indicator(s) and automatically generate a service message notifying the originating station of the invalid routing indicator(s). The

originating station will correct the invalid routing indicator(s) and reintroduce the message into the network. The message will not be reprotected to the valid routing indicator(s).

(b) If all routing indicators are invalid, the message will be rejected by the node. This condition will only occur if all addressees and the transmitting station are connected to the same node. The originating station must correct the invalid routing indicators and reintroduce the message into the network.

(c) The transmitting tributary station may receive more than one service message notifying them of invalid routing indicators contained in the same message, e.g., a message addressed to tributaries of two or more relays invalid routing indicators. The originating station must correct all invalid routing indicators and reintroduce the message into the network.

- c. The node does not validate the seventh letter of routing indicators, with the exception of collective routings; therefore, it is possible for a tributary station to receive a message with the seventh letter of the routing indicator invalid. The receiving station will notify the originating station by service message of the invalid routing indicator. The service message will contain the OSRI, SSN, date and time filed, the invalid routing indicator, and the action taken by the receiving station. If delivery by the receiving station Cannot be effected, the originating station must correct the invalid routing indicator and reintroduce the message into the network addressed only to the corrected routing indicator.

332. TRANSMISSION IDENTIFICATION VALIDATION

- a. Nodes are programmed to automatically validate the transmission identification (TI) assigned to Modes I, II, IV, and V teletypewriter originated messages as prescribed in paragraph 403.
- b. The start of message will be verified to be ZCZC. The station/channel identification will be validated to be the unique three alphabetical characters assigned to the channel. A message containing an error in the station/channel identification will be rejected or accepted when message is high precedence and an automatic service message generated.
- c. The channel sequence number (CSN) will be validated to be three numeric characters. Any CSN that does not contain the numerics required to maintain an unbroken numbering sequence or contains alphabetical characters will be considered as out of sequence and an automatic service message generated.

CHAPTER 4
TELETYPEWRITER MESSAGES
SECTION I
RULES

401. GENERAL RULES

The following rules apply to the preparation of teletypewriter messages:

- a. Teletypewriter messages will be prepared in either PLAINDRESS, ABBREVIATED PLAINDRESS, or CODRESS formats as specified in paragraph 302 and Annex C.
- b. The text of messages will be prepared for transmission as written. No changes are authorized without first obtaining approval of the releasing authority.
- c. The message header must be accurately prepared. Back spacing, lettering out, double spacing, or the use of two or more FIGURES and LETTERS functions in sequence will cause the node to reject the message during attempted transmission from the originating station.
- d. Each line of a teletypewriter message, including format line 2, is limited to 69 characters and shall end with two carriage returns and one line feed (2CR)(1LF).
- e. To ensure acceptance and transmission of the first character of the message header, it will be preceded by at least six blanks and six letters functions with five level ITA-2 code (LMF T) or at least six NULLS and six delete functions with ITA-5 code (LMF A).
- f. Except in the message header the FIGURES (upshift-shift out) key will always be depressed after the space separating groups of figures or uppercase characters in a series. The LETTERS (downshift/shift in) key will also be depressed after the last digit of the EOM validation number in format line 15 prior to end-of-message function.
- g. The bell signal will not be inserted on originated FLASH messages. The node will generate the bell signal on FLASH messages transmitted to Modes II, IV and V tributary stations. Those stations operating in Modes I and III will receive a high precedence alarm. Mode V terminals may receive both the high precedence alarm and bell signal.
- h. Only those punctuation marks and symbols listed in paragraph 117 are authorized. If an originator has used one of the authorized abbreviations identified in the ACP 121 series instead of the symbol, the abbreviation will not be changed by the communications center.

i. Messages assigned a dual precedence will indicate the higher precedence in format line 2 and both precedences in format line 5. When a dual precedence of FLASH and a lower precedence is assigned, the originating station will make separate transmissions, i.e., one transmission to the station(s) serving the ACTION addressee(s) with FLASH precedence in format line 2, and the other to the station(s) serving the INFORMATION addressee(s) with the lower precedence in format line 2. Only one transmission will be made to a station serving both ACTION and INFO addressees.

j. Identical date-time groups (format line 5) will not be assigned to two or more messages by the same originator unless the message can be further identified by office symbol or cite, reference numbers in the text.

k. Tributary station operating procedures will ensure that a record is made of the time-of-file (TOF) and the time available for delivery (TAD). These times will be used when determining message processing times; the TOF may or may not correspond to the message header file time depending upon whether the message was prepared by automatic or manual means.

402. MESSAGE LENGTH RULES

a. To facilitate reproduction of incoming messages by distribution centers, all messages exceeding a total of 20 lines of heading and text, beginning with format line 5, will be divided into pages for transmission.

(1) Each page will consist of not more than 20 lines.

(2) Line count for the first page shall begin with format line 5 of the message heading and continue for a total of 20 lines including succeeding lines of the heading.

(3) Second and succeeding pages shall be identified by the page number, the routing indicator of the station of origin and the station serial number. The number sign (#) will not be used preceding the station serial number. When message text is transmitted in plain language, the security classification, special handling designation, or abbreviation UNCLAS shall be included as part of the page identification of second and succeeding pages. One space shall be inserted following each letter of the security classification. Page identification shall appear on a separate line, and shall not be included in the line count as in (1) above.

Example:

PAGE 2 RUEDABA0123 C O N F I D E N T I A L 2CR 1LF.

(4) Machine functions used between pages shall be 2CR and 4LF.

(5) The number of pages of message text in any transmission shall not exceed five; a page consisting of part heading and part text shall not count as a textual page. Message which exceeds five pages of message text shall be divided into transmission sections.

(a) At a convenient point on the last permissible page of a transmission section, the originator's text shall be separated. This normally will be at the end of sentence or cryptopart.

(b) Each section shall be numbered. The section identification shall be inserted in plain language at the beginning of the text following the classification or abbreviation UNCLAS (and special handling designation if used by the ORIGINATOR). For example, when a message is divided into two sections, the first section shall be identified as Section 1 of 2, and the second as Final Section of 2.

(c) In long encrypted messages, when a transmission section commences with a new cryptopart, the designation of the cryptopart shall follow the designation of the transmission section.

(6) Each section shall be assigned a separate station serial number, but the same date-time group and filing time shall be used on all sections. In addition, each section shall include appropriate address elements. (See Annex C.)

(7) When a numerical group count is associated with an off-line encrypted message and indicated in format line 10, it shall indicate the number of groups in the section being transmitted, not the number in the complete message. Transmission section and page identification shall not be included in the group count. The cryptopart identification shall be included.

b. Some message originators have unique or special requirements for repeated preparation and transmission of messages longer than one section, e.g., intelligence summaries, press releases, operations plans or orders, etc. These originators may prepare messages containing a maximum of 40,000 characters including header provided the following conditions are met:

(1) Prior coordination is effected with each addressee terminal for acceptance of these messages.

(2) Transfer to another network will not occur.

(3) Paging is accomplished as specified in paragraphs 402.a.(1), (2) and (3) above.

c. One hundred lines of text without paging is permitted in statistical and meteorological (weather) messages where inclusion of paging information would disrupt

processing by the user. Such messages, however, shall be divided into transmission sections if they exceed 100 lines of text.

403. TRANSMISSION IDENTIFICATION (TI) RULES

a. As a means of maintaining traffic continuity, teletypewriter terminals (Modes II, IV, and V, as described in paragraph 201) will prefix each message header with a message transmission identification constructed as outlined below. The transmission identification is constructed without intervening spaces and must be accurately prepared without corrections. For example, a correctly prepared transmission identification might appear as:

VZCZCJTA(FIGS)123(LTRS) (2CR 1LF); the elements of the transmission identification are as follows:

- (1) The letter V ensures that the first character of following intelligence is not lost or garbled.
- (2) The letters ZCZC indicate the start of message.
- (3) Three station, channel designator letters.
- (4) One FIGURES shift.
- (5) A three-digit number to indicate the sequential number of transmission. These numbers shall commence with number 001 and continue consecutively through 000 (999).
- (6) One letter shift, two carriage returns and one line feed.

b. Station and channel designators will vary for each channel and will be constructed as follows:

(1) Minor relay or tributary station to a major relay station: The first two alphabetic characters will consist of the fifth and sixth letter of the station routing indicator and the third alphabetic character will identify the specific channel. Channel designators will commence with the letter A, progressing alphabetically, and will be assigned to all connected channels. For example, a tributary station having routing indicator RUWTABA will use station and channel designator ABA for the first outgoing channel and ABB, ABC, etc., for each additional outgoing channel.

(2) Major relay station to minor relay or tributary station: The first two alphabetic characters will consist of an inversion of the fifth and sixth characters of the minor relay or tributary station's routing indicator and the third alphabetic character will identify the specific channel. Channel designators will commence with the letter A, progressing alphabetically, and will be assigned to all connected channels. For example, a tributary station with routing indicator RUWTABA will receive station and channel designator BAA for the first incoming channel, and BAB, BAC, etc., for each additional incoming channel.

c. Transmission identification is optional for Mode I and III terminals. Most Mode II, IV, or V terminals are equipped so that the message transmission identification will be transmitted immediately preceding the paper tape header format. When these terminals do not have automatic message transmission identification devices, a paper tape tab may be prepared containing transmission identification as prescribed above and transmitted ahead of the standard paper tape header. Caution must be exercised to ensure no extraneous characters exist between the TI line and format line 2.

d. All Modes II, IV, and V terminal stations having relay or refile responsibilities will ensure that only one transmission identification precedes each message transmitted.

e. Node validation procedures of the transmission identification line are described in paragraph 332.

404. END-OF-MESSAGE VALIDATION RULES

a. End-of-message validation (para 315) used to inhibit suspected straggler messages will be provided by repeating in format line 15 the four-digit SSN appearing in the message header. The four-digit number used in format line 15 must be preceded by the number sign (#). Example: #0123.

b. The EOM validation appearing in format line 15 and the EOM functions (2CR, 8LF, 4Ns, 12LTRS) in format line 16 must be prepared in uninterrupted sequence, i.e., figures (upshift, shift out), number symbol, 4 digits, letters (downshift, shift in), 2 CRs, 8 LFs, and 4Ns. The lettering out correction method will not be used within this sequence.

Example:

TEXT	(2CR)(1LF)
BT	(2CR)(1LF)
(1FIGS)#1234(1 LTRS)	
(2CR)(8LF)NNNN	(12LTRS)

c. Special attention must be given to applying the EOM validation when performing such actions as message header changes and message readdressals. The SSN used in the heading of these messages must agree with the EOM validation number in format line 15, (paragraphs 419 and 441 refer).

405. SECURITY WARNING RULES

a. Security warning will be provided by use of the operating signals ZNR or ZNY as the first component of format line 4.

b. The appropriate operating signal will always be followed by a classification character repeated five times except in those cases where a TRC is employed (see Chapter 5). The operating signal and classification characters are:

- (1) ZNR UUUUU for unclassified, off-line encrypted messages, and classified messages transmitted in the clear in accordance with paragraph 326, ACP 121.
- (2) ZNY followed by RRRRR, CCCCC, SSSSS, or TTTTT for restricted, confidential, secret, or top secret messages.

c. Format line 4 must be prepared correctly. The equipment must be downshifted immediately after the end-of-routing signal in format line 2 followed by 2CR, 1LF, ZNR or ZNY and repeated classification designators if the message is routed only to national routing indicators, or three repeated security characters and two position TRC if addressed and routed to a regional defense organization or another nation. If the message is SPECAT or contains a special handling designation, the five redundant security characters followed by an oblique (/) and the proper special handling designator will appear. No extraneous functions, such as a downshift, shall be inserted between the 2CR 1LF end-of-line functions of format line 2 and the security warning operating signal (ZNR or ZNY) in format line 4.

406. RULES FOR INDICATING DELIVERY RESPONSIBILITY

a. In multiple address or book message, delivery responsibility of the stations called in format line 2 shall be determined by:

- (1) Inclusion of the routing indicator of the station responsible for delivery preceding each address designation in format lines 7 and/or 8. (This rule is not applicable when a collective address designator is used.)
- (2) Predetermined delivery responsibility.
- (3) Specific transmission instructions in format line 4. In these instances, any station responsible for transmission and/or delivery as indicated in format line 4 is also responsible for any delivery required under the provisions of paragraphs (1) and (2) above.

b. When delivery to an addressee of a multiple address message has been accomplished prior to introducing the message into the communications network, the station preparing the message for original transmission shall indicate such delivery by inserting the operating signal ZEN, preceding the designation of that addressee. Routing indicator delivery responsibility will not precede an addressee if the remainder of addressees of a multiple address message are ZEN, ZEN1 or ZEN2.

c. Book messages will be processed in the same manner as multiple address messages except that:

(1) Addressees of book messages to whom delivery has been effected prior to introducing the message into the communications networks, or who have been protected by separate transmissions, need not be included in the message heading.

(2) The operating signal ZEX shall be inserted in format line 5 following the date-time group.

d. In single address messages, the routing indicator of the station responsible for delivery will not be included in format line 7 or 8. The station called in format line 2 is automatically responsible for delivery.

407. TRANSMISSION INSTRUCTIONS RULES

a. Transmission instructions consist of the Prosign T included in format line 4 as a separate component following the security redundancy.

b. Transmission instructions are normally required on messages which contain a collective address designator or Address Indicating Group (AIG). In other instances, a message may be routed to another network station who is not included in the node routing table, thereby requiring refile action by the called station. In this case, the routing indicator of the addressee will be inserted in format line 4 immediately following the Prosign T.

Example:

```
(TI) (AS REQUIRED)
RTTUZHSW RUCIBDA1234 2621400-UUUU--RUFLFDA.
ZNR UUUUU T RXFEC
Remaining format lines
```

c. The message header (format line 2) may be removed or altered as appropriate, by the refiling station and a new heading prepared as required.

d. When transmission instructions are essential in multiple call messages, the routing indicator of the station having transmission responsibility will immediately precede the Prosign T, separated by one space, and followed by the identification of the addressee. If more than one called station has transmission responsibility, separate line listings composed as above will be included.

408. MESSAGE ROUTING RULES

a. Routing of messages will be accomplished by use of authorized routing indicators and in accordance with the instructions contained in the appropriate routing indicator publication (ACP 117 series).

b. When two or more addressees of a message are to be served by a single station, the routing indicator of that station will appear only once in format line 2 irrespective of the number of times it appears in format lines 7 and/or 8.

Example:

```
(TI) (AS REQUIRED)
RTTUZHSW RUCLFEA1234 2801330-UUUU--RUCLBEA RUWTKBA.
ZNR UUUUU
R 071300Z JUL 95
FM NAVAL AIR STA MAYPORT FL
TO RUCLBEA/NAVAL SHIPYARD CHARLESTON SC
RUCLBEA/NAVY REGIONAL FINANCE CEN CHARLESTON SC
INFO RUWTKBA/NAVAL AIR STA KINGSVILLE TX
BT
TEXT
BT
#1234
NNNN
```

409. ADDRESS DESIGNATIONS USE RULES

a. Plain language address designations, routing indicators, call signs or address groups may be used in message headings to indicate originators and addressees. However, for any given addressee, plain language address designations shall not be used in conjunction with call signs or address groups in the address component of any message. Tactical call signs, with the exception of task organization call signs, shall not be used in message headings.

b. "Collective address designators" other than AIGs, shall be treated as follows:

(1) In PLAINDRESS messages, the designation of the originator shall appear in format line 6, the collective address designator(s) in format line 7 and/or 8, and exempted addressees, if any, in format line 9. ACTION or INFORMATION addressees not included in the collective address designator shall be in format line 7 or 8 as appropriate.

(2) In CODRESS messages, the address component (see Annex C) is encrypted in the text. The collective address designator(s) and exempted addressee(s), if any, may appear in the external heading (format line 4), but to avoid defeating the purpose of CODRESS, they should not be placed in format line 4 unless essential.

c. Address Indicating Groups shall be treated as follows:

(1) In PLAINDRESS messages:

(a) Format line 6 shall be used even though the AIG composition includes an originator.

(b) The plain language or address group designator for an AIG shall be used in format line 7.

(c) When a message is addressed to an authority(ies) not included in the AIG selected, the additional addressee(s) shall be included in format lines 7 and/or 8 as appropriate.

(d) When an AIG is used by other than the permanently listed originator, and the permanently listed originator is an addressee of the message in question, the permanently listed originator shall be listed as an additional addressee in format line 7 or 8 as appropriate.

(e) Addressees exempted from an AIG shall be included in format line 9.

(2) IN CODRESS messages::

(a) The address group representing the AIG, additional addressee(s) and/or exempted addressees shall appear in format line 4 only when one or more of the stations called in format line 2 is required to relay or pass the message.

(b) The address designator used in the encrypted text shall be the AIG number rather than the address group representing the AIG. Additional and/or exempted addressees, if any, shall be indicated in the text by use of plain language designators.

d. Where non-national addressees are included in the address composition of the message (a through c above) and the message is routed to another nation's routing indicator, an appropriate TRC is required. Note: See para 114ff.

410. TRANSMITTED MESSAGE CORRECTION RULES

a. When an originating station subsequently detects an error after transmission of a message has been completed, a voluntary correction message will be prepared and sent to the addressee station(s).

b. Voluntary correction messages will only be used to correct those errors determined by competent authority to be significant enough to affect the substance of the original message.

c. Voluntary corrections may be in the form of a brief service message, or a re-punched and retransmitted message, dependent upon message length, whether tabulated or off-line encrypted, etc.

d. All voluntary correction messages will be distinctly identified by use of either the abbreviation "VOL CCN" or the Prosign "C".

Examples:

```
(TI) (AS REQUIRED)
RTTUZHUV RUADAF A1234 2621245-UUUU--RUWJFAA.
ZNR UUUUU
BT
UNCLAS SVC VOL CCN RUADAF A1229 2621200
191145Z SEP 95 FIFTH GR NOT IMI NOT
```

BT
#1234
NNNN

(TI) (AS REQUIRED)
RTTUZHUV RUADAF1234 2621245-UUUU--RUWJFAA.
ZNR UUUUU
BT
UNCLAS SVC VOL CCN RUADAF1229 2621200
191145Z SEP 95
"(REPUNCHED MESSAGE OR PORTION OF TEXT)"
BT
#1234
NNNN

or

(TI) (AS REQUIRED)
RTTUZHUV RUHHAFB1549 2621115-UUUU--RUEDGFA.
ZNR UUUUU
R 191015Z SEP 95
BT
UNCLAS SVC RUHHAFB1540 2621100
191030Z SEP 95 IN TEXT LINE 7 CHANGE DURING TO HOURS
TO READ DURING THE EVENING HOURS
BT
#1549
NNNN

411. MESSAGE HEADER CHANGE RULES - TRIBUTARY STATION

- a. Message header changes are applied to PLAINDRESS, ABBREVIATED PLAINDRESS, and CODRESS messages for the purpose of providing special handling and transmission instructions.
- b. Message header changes are normally performed by substituting the appropriate communication action identifier (Table III, Annex B) in the content indicator code field format line 2 and adding the appropriate communication operating signal (ACP 131) to format line 4 of the original message.
- c. Message header change procedures and format examples are contained in appropriate paragraphs throughout this chapter.

SECTION II

HEADER AND EOM FORMAT

412. GENERAL

a. The rapid and accurate exchange of traffic via ALTERS requires that message headings and endings be prepared in standard format to ensure uninterrupted transmission between originating and addressee stations.

b. The basic teletypewriter header format is described in detail in paragraphs 413 through 425. Each separate element of the header is described in the sequence in which it appears in the header. The field used is identified in parentheses in each paragraph heading. Example of the prescribed header format and location of positions is shown in paragraph 426.

413. PRECEDENCE (POSITION 1)

Four categories of precedence as prescribed in ACP 121 are authorized for use. Precedence is assigned by the originator, and shall not be altered by communications operating personnel. The following prosigns are used in Position 1:

Z FLASH
O IMMEDIATE
P PRIORITY
R ROUTINE

414. LANGUAGE MEDIA AND FORMAT (POSITIONS 2 AND 3)

a. The language media and format (LMF) consists of two alphabetical characters. The LMF of the originating station is placed in Position 2, and the LMF of the preferred output device of the addressee is placed in Position 3.

b. The LMF character A (ITA-5) or T (ITA-2) will be placed in Position 2 on all teletypewriter messages. See Annex A for authorized LMF pairings.

415. CLASSIFICATION (POSITION 4)

The classification to be afforded a message is indicated by the appropriate letter designator from the list below:

T TOP SECRET
S SECRET
C CONFIDENTIAL
R RESTRICTED

U UNCLASSIFIED

416. CONTENT INDICATOR CODE/COMMUNICATION ACTION IDENTIFIER
(POSITIONS 5 THROUGH 8)

The content indicator code/communication action identifier consists of four alphabetical characters or three alphabetical characters and one numerical character. The appropriate content indicator code/communication action identifier will be selected from Annex B.

417. SEPARATOR (POSITION 9)

A separator (space) will be placed in this position.

418. ORIGINATOR (POSITIONS 10 THROUGH 16)

The appropriate routing indicator of the originating station will be placed in these positions. This field must contain only alphabetic symbols. Routing indicators will start in position 10 with the unused right positions filled with spaces.

419. STATION SERIAL NUMBER (POSITIONS 17 THROUGH 20)

a. Station serial numbers (SSNs) are used for two purposes: (1) In combination with the originating station's routing indicator they provide positive identification for each transmission, and (2) as the EOM validation number appearing in format line 15 they provide a means by which the node can check for the existence of straggler messages.

b. The SSN is expressed in four numeric characters beginning with 0001 and continuing consecutively through 9999. On completion of each series of 9999 numbers, a new series begins.

c. Originating stations may identify local activities, channels, or positions within a station by assigning blocks of numbers to the activities concerned. Blocks of SSNs must contain sufficient numbers to preclude their reuse within one week of normal message activity. SSNs assigned in blocks will be consecutive; when the entire block has been used, the numbers will be repeated beginning with the first SSN of the block.

420. SEPARATOR (POSITION 21)

A separator (space) will be placed in this position.

421. DATE (POSITIONS 22 THROUGH 24)

The Julian date is the date on which the message was received from an originator by the communications center for transmission. The Julian date is derived by numbering the days of the calendar year on a one-up basis from 1 January (day 001) through 31 December (day 365 or 366 in the case of a leap year).

422. FILING TIME (POSITIONS 25 THROUGH 28)

The filing time is the time (GMT) the message was received from an originator by the communications center for transmission. Each filing time must contain four numerical characters.

423. CLASSIFICATION REDUNDANCY (POSITIONS 29 THROUGH 33)

For security reasons, the classification designator used in Position 4 (para 415) will be repeated in these positions. Position 29 will be filled with a hyphen as a sentinel, and the classification designator in Position 4 will be repeated in Positions 30 through 33, except when TRC's are required. When TRC's are required, the security field will be split to show the security classification and the TRC, i.e., CCBB (Confidential message addressed to the United Kingdom). Rules regarding the use of TRC's are outlined in Chapter 5.

424. ROUTING.(POSITONS 34 THROUGH AS REQUIRED)

The positions reserved for routing are comprised of two sections, the start-of-routing signal, and the addressee routing indicators.

a. The start-of-routing signal consists of two consecutive hyphens and will always precede the first addressee's routing indicator.

b. Addressee routing indicators are listed immediately following the start-of-routing signal. The maximum number of routing indicators that can be listed in these positions is limited by the national/regional defense organization system. Each routing indicator must be separated by a space. If a message contains more routing indicators than that imposed by the system two separate transmissions are required. All routing indicators pertaining to a given four-letter routing indicator will be on one transmission. Routing indicators will not be split between lines, i.e. RUFT, 2CR, 1LF, ABC.

425. END-OF-ROUTING SIGNAL (POSITIONS AS REQUIRED)

The end-of-routing signal consists of a period (.) and is inserted in the position immediately following the last addressee's routing indicator.

NOTE: The use of a format line 4 is required on all narrative messages. Format line 4 must be accurately prepared. If not, the transmission will be rejected on input by the connected node. The LETTERS (downshift) key must be depressed immediately following the end-of-routing signal (.) in format line 2 and preceding the end-of-line functions, 2CR and 1LF. The insertion of extraneous machine functions, such as a downshift or space, between the 2CR 1LF end-of-line function and the security warning, operating signal characters (ZNR or ZNY), and the TRC/SHD characters, is prohibited. Format line 4 commences with a security

warning operating signal (ZNR or ZNY) followed by five redundant security characters, e.g., SSSSS if the message is routed only to a national routing indicators, other operating signals, procedure signal "T" and address designators or routing indicators. When a message is addressed and routed to a regional defense organization or another nation, the redundant security designator composition is modified to reflect a two-letter TRC in the fourth and fifth position, e.g., SSSBB. SPECAT messages will include an oblique (/) and five repeated SHD's immediately following the five redundant security designators, e.g., ZNY SSSSS/AAAAA. Rules regarding the use of TRC's and SHD's are outlined in Chapter 5.

426. TELETYPEWRITER HEADER FORMAT

Leader (Para. 401.g)		
Precedence	R	1
Language Media Format	T	2
Classification, as appropriate	T	3
Content Indicator Code/Communication Action	U	4
Identifier	Z	5
	H	6
	S	7
	W	8
Separator		9
	R	10
	U	11
Originator (OSRI)	W	12
	T	13
	A	14
	A	15
	A	16
Station Serial Number	1	17
	2	18
	3	19
	4	20
Separator		21
	2	22
Julian Date	2	23
	0	24
	1	25
	9	26
Filing Time	1	27
	5	28
	-	29
	U	30
Classification Redundancy	U	31

	U	32
	U	33
Start of Routing Signal	-	34
	-	35
	R	36
	U	37
	W	38
Addressee	J	39
	A	40
	A	41
	A	42
End of Routing Signal	.	43

427. END-OF-MESSAGE FORMAT

The end-of-message (EOM) format (format line 16) will consist of two carriage returns, eight line feeds, four Ns, and twelve letters (ITA-2 code) or twelve delete functions (ITA-5 code), or ETX (ITA-5 control character). See paragraph 404.b.

SECTION III

MISROUTED AND MISSENT MESSAGES

428. MISROUTED MESSAGES

A misrouted message is one which contains an incorrect routing instruction.

a. A misrouted condition will occur when the originating communications center assigns incorrect routing indicators during message header preparation.

b. A misrouted message will be processed until it reaches the communications center of the called routing indicator. A tributary station in receipt of a misrouted message will:

(1) If possible, obtain the correct routing indicator from the applicable ACP 117 series publication.

(2) Apply a header change to the misrouted message and retransmit to the correct routing indicator. See subparagraphs 428.d, e, and h.

(3) Transmit a service message to the originating station advising of the reroute action and correct routing indicator. The service message will also contain the actual time-of-transmission (TOT) of the rerouted message with any reason for delay, which should satisfy any tracer actions for excessive delay. The operating signal ZEQ3 will be used in the text.

c. If the correct routing indicator cannot be determined due to insufficient address information or lack of station delivery responsibility (paragraph 406) in format line 7 or 8, or reroute action cannot be effected due to receipt of garbled or incomplete copy or the receiving station does not have a receive tape capability, the originating station will be notified by service message. The operating signal ZEQ4 or ZEQ5, as appropriate, will be used in the text. On receipt by the originating station of a ZEQ4 service message the entire message will be retransmitted, adding the operating signal ZEQ6 to format line 4 to indicate that the delay was the result of misrouting the message.

d. When applying a header change to a misrouted message, substitute the following in format line 2 of the original message:

(1) Own first position LMF designator, if necessary.

(2) The communications action identifier ZO VW.

(3) Own OSRI.

(4) SSN of message being rerouted.

- (5) Own Julian date and time filed.
- (6) Correct routing indicator of the station to effect delivery or refile.
- (7) If the message requires rerouting to a non-national routing indicator, the redundant security characters in format lines 2 and 4 will be changed to reflect the appropriate TRC (see Chapter 5).

e. In addition to the action required in subparagraph 6 above, the following will be added to format line 4 of the original message:

- (1) Operating signal ZOV.
- (2) Routing indicator of the station preparing the header change.
- (3) SSN of the station preparing the header change.
- (4) The words "reroute of" followed by the OSRI, SSN and Julian date and time filed as appearing in format line 2 of the original message.
- (5) In the case of multiple address messages, the Prosign T preceded by routing indicator(s) (when required) and followed by the addressee(s) address designator(s).

f. A station receiving a multiple address message bearing a header change containing transmission instructions, shall effect delivery to only the addressee(s) whose designator(s) appears following the Prosign T in the message header change. Delivery responsibility appearing in the message address shall be ignored.

g. When messages involving mobile units require rerouting for delivery or further relay, they shall be treated as misrouted messages except that the originating station need not be advised.

h. EXAMPLES:

- (1) Example of a single call message received as a misroute:

```
RTTUZJSW RCEVBGA6725 1831330-UUUU--RCEVEMA.
ZNR UUUUU
R 021315Z JUL 95
Remaining format lines
```

Example of above message after header change performed:

```
RTTUZO VW RCEVEMA6725 1831410-UUUU--RCESJNA.
```

ZNR UUUUU ZOV RCEVEMA1294 REROUTE OF RCEVBGA6725 1831330
 R 021315Z JUL 95
 Remaining format lines

Example of service message to originating station advising of reroute action taken above:

RTTUZHUU RCEVEMAS6803 1831430-UUUU--RCEVBGA.
 ZNR UUUUU
 BT
 UNCLAS SVC ZE3 RCEVBGA6725 1831330
 021315Z JUL 95 RCESJNA 021415Z.
 BT
 #6803
 NNNN

(2) Example of a multiple address message received as a misroute:

PTTCZHSW RUENAAA5432 1831625-CCCC--RUEDBDA.
 ZNY CCCCC
 P 021605Z JUL 95
 FM CNO WASHINGTON DC
 TO RUEDBDA/35ADIV HANCOCK FIELD NY
 INFO RUEDBDA/DCASO GENELCO SYRACUSE NY
 RUEFHQA/CSAF WASHINGTON DC
 Remaining format lines

Example of above message after header change performed:

PTTCZOVW RUEDBDA5432 1831640-CCCC--RUEDGAA RUEDGJA.
 ZNY CCCCC ZOV RUEDBDA1234 REROUTE OF RUENAAA5432 1831625
 RUEDGAA T 35ADIV HANCOCK FIELD NY
 RUEDGJA T DCASO GENELCO SYRACUSE NY
 P 021605Z JUL 95
 FM CNO WASHINGTON DC
 TO RUEDBDA/35ADIV HANCOCK FIELD NY
 INFO RUEDBDA/DCASO GENELCO SYRACUSE NY
 RUEFHQA/CSAF WASHINGTON DC
 Remaining format lines

Example of service message to originating station advising of reroute action taken above:

RTTUZHUU RUEDBDA2341 1831700-UUUU--RUENAAA.
 ZNR UUUUU
 BT
 UNCLAS SVC ZE3 RUENAAA5432 1831625 021605Z JUL 95 RUEDGAA/35ADIV

HANCOCK FIELD NY AND RUEDGJA/DCASO GENELCO SYRACUSE NY
021650Z.

BT
#2341
NNNN

(3) Example of service message to originating station advising to protect delivery of misrouted message:

RTTUZHUV RAYWGNA3249 1830825-UUUU--RAYWNNA.
ZNR UUUUU
BT
UNCLAS SVC ZE4 RAYWNNA2419 1830750
020730Z JUL 95 GARBLED.
BT
#3249
NNNN

(4) Example of a misrouted message requiring application of a TRC.

RTTUZHSW RUFTABA1647 0131749-UUUU--RUFLFDA.
ZNR UUUUU
R 131745Z JAN 95
Remaining format lines

Example of above message after TRC application:

RTTUZO VW RUFLFDA1647 0131802-UUXX--RGFAB.
ZNR UUXX ZOV RUFLFDA0872 REROUTE OF RUFTABA1647 0131749
R 131745Z JAN 95
Remaining format lines

429. MISSENT MESSAGES

A missent message is one which contains a correct routing indicator but is transmitted to a station other than the one represented by the routing indicator.

a. Missent messages may be caused by:

- (1) Equipment malfunction.
- (2) Incorrect switching.
- (3) Operator error.

b. A tributary station in receipt of a missent message will:

(1) Reintroduce the message as a suspected duplicate. A message header change (para 411) will be applied to a missent message.

(2) Forward a service message to the originating station if the message is received incomplete or garbled. The operating signal ZEQ2 will be used in the text.

(3) Forward a routine service message to the connected node citing the complete header, time of receipt and advise that the message has been protected. The operating signal ZEQ1 will be used in the text.

c. EXAMPLES:

(1) Examples of missent message as received at RXQHFDA from relay station RXQH:

RTTUZHSW RXFEAAAS1349 1841545-UUUU--RXFGTBA.
ZNR UUUUU
R 031520Z JUL 95
Remaining format lines

(2) Example of above message after header change performed:

RTTUZFDY RXFEAAA1349 1841545-UUUU--RXFGTBA.
ZNR UUUUU ZFD RXQHFDA
R 031520Z JUL 95
Remaining format lines

(3) Example of service message as sent by RXQHFDA to relay station RXQH:

RTTUZHUW RXQHFDA0123 1841555-UUUU--RXQHCSA.
ZNR UUUUU
BT
UNCLAS SVC ZEQ1 RXFEAAA1349 1841545 031520Z JUL 95 1841550.
Remaining format lines

(4) Example of service message sent by RXQHFDA to RXFEAAA:

RTTUZHUW RXFHFDA0124 1841556-UUUU--RXFEAAA.
ZNR UUUUU
BT
UNCLAS SVC ZEQ2 RXFEAAA1349 1841545 031520Z JUL 95 INCOMPLETE
TEXT.

d. A node receiving a service message missent notification will perform a search to determine the cause of the missent message. If the cause is due to equipment malfunction or program deficiency, all details will be documented and forwarded by message to the appropriate national communications command authority for evaluation and necessary corrective action.

SECTION IV

SUSPECTED DUPLICATES

430. SUSPECTED DUPLICATE PROCEDURE

a. When a station has cause to suspect that a message may have been previously transmitted, but definite proof of prior transmission cannot be readily determined the message shall be forwarded as a "suspected duplicate" by applying a header change.

(1) Example of message presumed to have been previously transmitted by an originating station:

PTTSZHSW RZYXUTA1275 1911820-SSSS--RZYXUWA.
 ZNY SSSSS
 P 101810Z JUL 95
 Remaining format lines

(2) Example of above message after suspected duplicate header change applied:

PTTSZFDY RZYXUTA1275 1911820-SSSS--RZYXUWA.
 ZNY SSSSS ZFD RZYXUTA
 P 101810Z JUL 95
 Remaining format lines

b. Messages will not be reintroduced as "suspected duplicates" at the request of the originator because the addressee(s) failed to reply or take action on the message. In those instances, a new message must be generated by the originator.

c. Messages recovered by a node as the result of a retransmission request or when an acknowledgment for an EOM is not received will contain a suspected duplicate pilot (para 328.d.(1)).

(1) Example of message as originally transmitted by a node to a tributary station:

RTTUZHSW RUCIABA2405 1911345-UUUU--RUHHBFA.
 ZNR UUUUU
 R 101330Z JUL 95
 Remaining format lines

(2) Example of above message recovered by a node and transmitted as suspected duplicate:

RTTUZFDY RUCIABA2405 1911345 RUHH-UUUU--RUHHBFA.

RTTUZHSW RUCIABA2405 1911345-UUUU--RUHHBFA.
 ZNR UUUUU
 R 101330Z JUL 95
 Remaining format lines

d. When a station receives a message marked as a suspected duplicate, that station will:

- (1) File the message if it was previously received and delivered to the addressee.
- (2) Forward the message, marked as a "SUSPECTED DUPLICATE", to the addressee if there is no indication that it was previously received and delivered.

431. RECEIPT OF UNMARKED DUPLICATE MESSAGES

a. Duplicate messages received without the appropriate marking (ZFDY, ZFGY, ZFD, ZFG) are primarily caused by operator error and in some cases by equipment/program malfunctions. Stations receiving unmarked duplicate transmissions will:

- (1) Immediately forward a routine precedence service message to the originating station (OSRI in format line 2) citing the complete header format of the duplicated message including the time of receipt of the original and duplicate transmissions.

Example: Service message to originating station:

RTTUZHUV RUHHABA1234 1881130-UUUU--RUMLDFA.
 ZNR UUUUU
 BT
 UNCLAS SVC ZUI RUMLDFA3124 1881010 DUPED TOR 1881035 AND 1881120
 HEADER
 FOLLOWS RTTUZHSW RUMLDFA3124 1881010-UUUU--RUHHABA.
 BT
 #1234
 NNNN

- (2) File the message if initial copy was delivered to the addressee.
- b. The originating station upon receipt of the service message will:
- (1) Check transmit records to determine the validity of the duplication report.
 - (2) Ensure in-station procedures are adequate to guide operating personnel in retransmission of messages for which confirmed transmission is in doubt.

(3) Have maintenance accomplish equipment checks if equipment malfunction is suspected to be cause of duplication.

(4) Advise connected node by a routine service message if only one transmission can be accounted for. The service message to the node will cite the complete header, time of transmission, and the routing indicator of the station reporting the receipt of duplicate transmission, and the times of receipt of both transmissions.

Example: Service message to the node:

RTTUZHUV RUMLDFA1263 1881215-UUUU--RUMLCSA.

ZNR UUUUU

BT

UNCLAS SVC ZUI RUMLDFA3124 1881010 TOT 1881015 UNMARKED DUPE TO RUHHABA TOR 1881035 AND 1881120. HEADER FOLLOWS RTTUZHUV RUMLDFA3124 1881010-UUUU--RUHHABA RUMMFDA.

BT

#1263

NNNN

c. A node receiving notification of duplicate transmission will:

(1) Search records to determine if message was received in duplicate.

(2) If a duplicate message was received, investigate further to determine why node records indicate duplication and the connected station's records indicate one transmission.

(3) If the message was not received in duplicate, it will be traced on a station-to-station basis to determine point of duplication.

d. If the investigation reveals the duplicate transmission was caused by equipment malfunction or program deficiency at the relay center, all details will be documented and forwarded by message to the appropriate national communications command authority for evaluation and necessary corrective action.

e. If the investigation reveals the duplication was caused by addressee terminal malfunction, the station will:

(1) Coordinate with applicable activity, i.e., maintenance, programming, etc., to determine if deficiency can be corrected locally.

(2) Request assistance if problem cannot be resolved locally from the appropriate national communications command authority.

SECTION V

RETRANSMISSION

432. REQUESTING RETRANSMISSION

a. Requests for retransmission of messages received at a station either incomplete, garbled or mutilated will be forwarded to the originating station by service message as prescribed in paragraphs 434 and 435.

b. Requests for retransmission of messages wherein the originating station is unidentifiable will be forwarded to the connected node using the same precedence as the garbled messages. Each request for a retransmission will include, as accurately as possible, the approximate time of receipt of garbled message.

Example: (Terminal using TI line)

PTTUZHUV RUEDBDA1237 2121330-UUUU--RUEDCSA.
 ZNR UUUUU
 BT
 UNCLAS SVC DBA560 IMI DBA560 ZES2 APPROX TOR 2121315 UNABLE TO
 IDENTIFY
 ORIGINATING STATION
 BT
 #1237
 NNNN

Example: (Terminal not using TI line)

PTTUZHUV RUMODA1274 2171300-UUUU--RUMOCSA.
 ZNR UUUUU
 BT
 UNCLAS SVC REQUEST RETRANSMISSION OF TRAFFIC BETWEEN
 FOLLOWING
 MESSAGES ON CIRCUIT _____.
 LAST GOOD MSG RUWTLGA1786 2171235 TOR 2171238
 NEXT GOOD MSG RUMOFDA1276 2171240 TOR 2171244
 REASON: GARBLED MSG
 REMARKS: ONLY TELETYPE TRAFFIC REQUIRED
 BT
 #1274
 NNNN

NOTE: Terminals not using TI lines will not cite test or quality control messages containing all zero's as the station serial number as the last good - next good message received. The last good - next good message cited must be actual messages.

c. Messages recovered at the node as the result of a retransmission request will contain suspected duplicate pilots.

d. An originating station, upon receipt of a retransmission request, will retransmit the message involved by applying a message header change. See paragraph 435 for examples of service messages.

e. Each station is responsible for the establishment of in-station procedures and safeguards to determine that all requests are promptly and correctly handled.

f. Replies to request for retransmission's from a regional defense organization or another nation's communication center or terminal must employ TRC's (see Chapter 5).

433. OPEN CHANNEL SEQUENCE NUMBERS

a. The responsibility for the continuity of received channel sequence numbers rests with the station receiving the traffic. It is the responsibility of the receiving operator to ensure that a transmission is received under each number and that numbers are not duplicated or omitted. If so, the transmission shall be retransmitted with a suspected duplicate pilot affixed.

Example: RXFPDBA reports on open number to RXFPCSA.

```
OTTUZHUUW RXFPDBA1249 2201520-UUUU--RXFPCSA.
ZNR UUUUU
BT
UNCLAS SVC ZFX BDA124 IMI BDA124. TOR PRE AND FOL MSG 2201510
2201520.
BT
#1249
NNNN
```

RXFPCSA after ascertaining that a transmission was made under BDA124, retransmits:

```
PTTUZFDY RUHHABA1279 2201430 RXFP-UUXX--RXFPDBA.
PTTUZHSW RUHHABA1279 2201430-UUXX--RXFPDBA.
ZNR UUUX
P 081400Z AUG 95
Remaining format lines
```

SECTION VI

SERVICE MESSAGES

434. GENERAL

a. Service messages are short concise messages used by communications personnel to exchange information and instructions concerning conduct of communications, e.g., to expedite traffic, corrections, retransmission's, verifications, acknowledgments, tracer actions and other matters relative to network management and operation.

b. Service messages will normally be assigned the same precedence of the message being serviced and will normally be prepared in abbreviated plaindress format (para 302.b). Authorized operating signals will be used to the greatest extent possible. However, clarity will not be sacrificed for brevity.

c. Service messages may be assigned sequential reference numbers. The service message number will immediately follow the abbreviation SVC in the message text. If used, sequential service reference numbers may continue throughout the calendar year.

d. When replying to a service message received with a reference number, the text of the reply shall make reference to the number. For example: UNCLAS SVC ZUI SVC 0245 RUEDCSA1234 1921600.

e. The abbreviation COSIR (cite our service in reply) may be used as the last word after the service message text.

f. The text of all service messages will begin with an indication of security as first word of text followed by the abbreviation SVC unless the service message is one requiring special handling. In this case, the abbreviation SVC will follow the special handling designation, e.g., UNCLAS SVC or S E C R E T ATOMAL SVC.

g. If a service message quotes the textual content of a classified message or refers to the classified message in a manner which reveals text content, the service message must be assigned the same classification as the classified message being serviced.

h. Off-line encrypted service messages will be identified as a service message only within the encrypted text. The communication action identifier of ZHSW will be used for these messages.

i. Service messages which reference messages for reasons other than tracer actions will include the following items extracted from the message referenced:

- (1) OSRI, SSN, Julian date and time filed (format line 2).

(2) OSRI and SSN when appearing immediately after the operating signal ZOV (format line 4).

(3) Message date-time group (format line 5).

j. Service messages addressed to a routing indicator of a regional defense organization or another nation must contain a TRC in format lines 2 and 4 (see Chapter 5).

k. When it is necessary to show action and information status in multiple address service messages, the routing indicators of the called stations shall be used in format lines 7 and 8, however, format line 6 shall not be used.

l. Each station is responsible for the establishment of in-station procedures and safeguards to ensure that all service message requests and replies are promptly and correctly handled.

m. Examples and the action to be taken upon receipt of a node automatically generated service message are prescribed in paragraph 329.

435. EXAMPLES OF SERVICE MESSAGES

a. Tributary Station - A tributary station receiving a transmission which is incomplete, or in a garbled or mutilated condition will transmit the following service message to the originating station:

```
RTTUZHUW RUMOAF1234 2691115-UUUU--RUEBFDA.
ZNR UUUUU
BT
UNCLAS SVC 147 RUEBFDA1569 2690930 260915Z SEP 95 ZES2
BT
#1234
NNNN
```

b. Originating Station - An originating station in receipt of above service message will respond by performing a header change as follows:

```
RTTCZDKW RUEBFDA1569 2691130-CCCC--RUMOAF1.
ZNY CCCCC RUEBFDA1725 ZUI SVC 147 RUMOAF1234
2691115 ZDK
R 260915Z SEP 95
Remaining format lines
```

c. Tributary Station - A tributary station requesting retransmission of a specific portion of a message:

PTTUZHUV RUWJADA1234 2731330-UUUU--RUDOLTA.

ZNR UUUUU

BT

UNCLAS SVC INT ZDK RUDOLTA0249 2731115 301100Z SEP 95 PAGE 1 LINES 3

AND 4

BT

#1234

NNNN

d. Originating Station - An originating station in receipt of above service message will respond as follows:

PTTUZDKW RUDOLTA1426 2731420-UUUU--RUWJADA.

ZNR UUUUU

BT

UNCLAS SVC ZUI RUWJADA1234 2731330 ZDK RUDOLTA0249

2731115 301100Z SEP 95 PAGE 1 LINES 3 AND 4

(TEXT OF PAGE 1 LINES 3 AND 4)

436. TRIBUTARY STATIONS FOLLOW-UP ACTION

a. The responsibility of providing a retransmission promptly is placed upon the station to which the retransmission request is routed. Elapsed time allowed between the first and succeeding requests is determined by such factors as: precedence of the message involved, indication of previous delay, nature of the request, speed of service between originating and terminating station, operative hours of the station to which the service is destined if known and any indication of abnormal traffic/circuit conditions which may exist. When no reply is received to a service request within times prescribed below, as influenced by factors stated above, another request will be originated.

IMMEDIATE:	2 hours
PRIORITY:	8 hours
ROUTINE:	16 hours

b. When a reply to a service request for a retransmission is not received within time criteria specified in paragraph 436a above, a second request will be sent to the originating station. This request will be identified by the use of the operating signal ZAR2.

Example:

PTTUZHUV RBDIDWA2341 2732130-UUUU--RBDNKDA.

ZNR UUUUU

BT

UNCLAS SVC ZAR2 INT ZDK RBDNKDA0249 2731115 301100Z SEP 79 PAGE 1
LINES 3
AND 4
BT
#2341
NNNN

c. When no reply is received to a second request within the time criteria specified in paragraph 436a above, an official message will be sent to the terminal operating organization/activity requesting a response to the previous service message transactions.

437-439. Reserved.

SECTION VII

READDRESSING MESSAGES

440. GENERAL

a. Circumstances may arise in which it becomes necessary to readdress a message to additional authorities not originally included in the address.

b. Readdressed messages are new messages and are processed accordingly. Readdressal requests are prepared and submitted to the communications center in accordance with appropriate national communications command authority directives.

441. MESSAGE READDRESSING RULES

a. If the message being readdressed is held in the files of the communications centers serving the additional addressees, the readdressal may be accomplished by a service message containing appropriate operating signals.

b. If the message being readdressed is not held in the files of the communications centers serving the additional addressees, it will be processed as follows:

(1) A supplementary heading will be prepared including format lines 1 through 10, as appropriate and inserted in front of the original header. All format lines before line 5 will be removed from the original heading.

(2) Under no circumstances will the original date-time group be deleted or altered.

(3) The precedence indicated by the readdressing authority shall be used in the supplementary heading.

(4) The originating station routing indicator and station serial number in the supplementary heading will be used for identification by the receiving terminal station(s) if retransmission or corrections are required.

(5) The filing time (format line 2) appearing on the readdressed message will be the time of receipt of the readdressal request in the communications center.

(6) A new date-time group will be assigned by the readdressing authority and will appear in format line 5 of the supplementary heading.

(7) The designator of the readdressing authority (new originator) will appear in format line 6 of the supplementary heading.

(8) The addressee to whom the message is readdressed will appear in format lines 7 and/or 8 as appropriate.

c. Special attention must be given to applying the EOM validation procedure when performing a readdressal action. The station serial number appearing in the header must always correspond to the EOM validation number appearing in format line 15. This may be accomplished by changing the EOM validation number (format line 15) in the original message to agree with the SSN used in the readdressal heading, or using the incoming original SSN in the readdressal header.

d. The following rules apply when readdressing multiple page messages:

(1) The page identification will normally be changed to be in agreement with the originating station routing indicator and station serial number appearing in the header (format line 2) of the supplementary heading. However, when time or equipment capability does not permit, such messages may be relayed with the page identifications as they were originally received.

(2) If the message being readdressed does not contain page identification information, the appropriate page identification information associated with the readdressal will be inserted if a new tape must be prepared. However, if a tape copy of the original transmission is available, the page identification information need not be inserted.

e. When preparing readdressal of multiple address or book messages, the routing indicators or operating signal ZEN preceding the original address designators will not be inserted if a new tape must be prepared. However, if a tape copy of the original transmission is available, the routing indicators or ZEN need not be deleted.

f. Off-line encrypted messages shall not be readdressed without prior reference to the cryptocenter.

g. When preparing readdressals of multiple address messages originated in the theater networks the routing indicators contained in the address component of the original heading will be deleted.

h. When a readdressed message is to be processed as a book message, all addressees except the readdressing authority may be deleted from the original heading.

i. In some cases, the readdressal authority may include the originator or other addressees of the original message as addressees in his readdressal request to the communications center. Notification of readdressal action may be accomplished by service message and use of operating signal ZFH or by inclusion of addressees in the supplementary heading. Use of latter procedure to inform an originating station of a misroute is prohibited.

j. Messages readdressed and routed to a regional defense organization or other nation addressee must contain the proper TRC in format lines 2 and 4.

442. EXAMPLES OF READDRESSED MESSAGES

a. As received by original addressee:

PTTUZHSW RUADLKA1275 2271430-UUUU--RUEOFMA.
ZNR UUUUU
P 151400Z AUG 95
FM US ARMY JAPAN CAMP ZAMA JAPAN
TO RUEOFMA/LETTERKENNY ARMY DEPOT CHAMBERSBURG PA
INFO RUEDEIA/CDR FORT MONROE VA
BT
TEXT
#1275
NNNN

b. As readdressed to a new addressee served by a communications center which holds the original message in its file:

RTTUZHUV RUEOFMA2480 2281330-UUUU--RUEOEIA.
ZNR UUUUU
R 161320Z AUG 95
BT
UNCLAS SVC ZOG2 RUADLKA1275 2271430 151400Z AUG 95 CGUSCONARC
FROM LETTERKENNY ARMY DEPOT CHAMBERSBURG PA
BT
#2480
NNNN

c. As readdressed by an original addressee to a new addressee served by a communications center which did not receive the original transmission:

RTTUZHSW RUEOFMA1149 2291130-UUUU--RUWJSHA.
ZNR UUUUU
R 161100Z AUG 95
FM LETTERKENNY ARMY DEPOT CHAMBERSBURG PA
TO DEFENSE DEPOT TRACY CA
P 151400Z AUG 95
FM US ARMY JAPAN CAMP ZAMA JAPAN
TO RUEOFMA/LETTERKENNY ARMY DEPOT CHAMBERSBURG PA
INFO RUEDEIA/CDR FORT MONROE VA
BT
TEXT

BT
#1149
NNNN

d. As readdressed and routed to a regional defense organization or another nation which did not receive the original transmission.

RTTUZHSW RUEOFMA1616 3511825-UUXX--RGFAB.
ZNR UUXX
R 171800Z DEC 96
FM LETTERKENNY ARMY DEPOT CHAMBERSBURG PA
TO MOD GERMANY
R 031420Z DEC 96
FM DA WASHINGTON DC
TO LETTERKENNY ARMY DEPOT CHAMBERSBURG PA
BT
TEXT
BT
#1616
NNNN

SECTION VIII

TRACER ACTION

443. DEFINITION

Tracer action is the process by which an investigation is conducted to determine the reason for inordinate delay or non-delivery of a message.

444. TRACER ACTION RULES

- a. Normally, requests for tracer action will be initiated by a message originator or addressee. However, should circumstances so dictate, tracer actions may be initiated by an originating communications station, relay station, or addressee communications station.
- b. Tracer action requests will be initiated as soon as the discrepancy is discovered, but no later than 30 days from the original time of transmission.
- c. Separate tracer action logs and individual case files will be maintained at all communications facilities involved. Case files will be retained for at least six months.
- d. Tracer actions shall maintain continuity throughout the system beginning with the originating station. The originating station will be advised of all transactions as the tracer action progresses through the system.
- e. The originating station will formulate a final report, composed in non-technical language and summarizing the investigation and the remedial actions taken or required to prevent recurrence. The final report will be submitted through command channels to the originator of the tracer action request and the appropriate national communications command authority for final disposition.
- f. Tracer actions concerning FLASH messages will be handled as expeditiously as possible.
- g. Delay tracer actions will be discontinued as soon as station-to-station reporting has accounted for the excessive delay claimed.
- h. Delay or non-delivery tracer actions which were caused by equipment malfunction or software deficiency at the node will be completely documented and forwarded by message to the appropriate national communications command authority for evaluation and corrective action.

445. TRACER ACTION PROCEDURE

a. Delayed Message.

(1) Prior to initiating tracer action, the communications center serving the addressee will carefully examine records, logs and the message heading to determine if the cause of delay can be ascertained and adequately explained prior to advising the originator to commence tracer action. Consideration must be given to any adverse circuit conditions, in-house backlog conditions, terminal outage (demand or preventive maintenance), node outage, or a message header change which could be pertinent to the reason for delay. After all efforts have been exhausted, the addressee's communications center will advise the originator of the delay message including the exact amount of delay claimed (hours and minutes).

(2) Upon receipt of a tracer action request for excessive delay, the communications center serving the originator will carefully examine their logs and records to determine if the cause of delay can be ascertained and adequately explained. Special emphasis will be placed on in-house backlog conditions, elapsed time between the releaser's time and the TOF, the elapsed time between the TOF and the actual time of transmission, circuit or equipment outage, node outage, or service action taken on the message being traced, such as ZDK furnished, invalid TI. (NOTE: Use of the releaser's time and the TOF will compensate for the loss of accuracy resulting from variations in the means used by manual and automated tributary stations in message header preparation.)

(3) If the cause of delay cannot be established locally, delay tracer action will normally be initiated by routine message to the directly connected relay station, citing the exact amount of delay being claimed.

Example: Delay tracer to the first relay by originating station:

```
RTTUZHUV RUEDABA1481 0751630-UUUU--RUEDCSA.
ZNR UUUUU
BT
UNCLAS SVC T-104 ZUI RUEDABA1127 0711835 121747Z MAR 95 TOR
RUDOALA
0720722 12 HRS 47 MINS DELAY TOT TO RUED 0711925. 50 MIN DELAY FOR
NORMAL MESSAGE PROCESSING. INT ZDN
BT
#1481
NNNN
```

(4) Upon receipt of an excessive delay tracer, each station will examine its records for time of receipt and time of transmission or delivery of the message being traced. This information will be compiled and transmitted to the next station in the transmission path. The originator will be included as an INFORMATION addressee on all service messages pertaining to the message being traced. Any station responsible for any portion of the delay will include the reason for the delay and the corrective action taken to prevent a recurrence.

Example: Relay station's report on an excessive delay tracer:

RTTUZHUV RUEDCSA9423 0751845-UUUU--RUEDABA.

ZNR UUUUU

BT

UNCLAS SVC ZUI RUEDABA1127 0711835 121747Z MAR 95. TOR 0711925 TOT
RUDO 0720705. DELAYED 11 HRS 40 MINS THISTA DUE TO ON-LINE

PROGRAM

PROBLEM WHICH PROHIBITED A SYSTEM RECOVERY. PROBLEM HAS BEEN
DOCUMENTED AND FORWARDED IN ACCORDANCE WITH PARA 444H,
ACP 128(),

BT

#9423

NNNN

b. Non-delivered Message

(1) Upon notification of a non-delivery claim, the originator's communications center will retransmit the message as a duplicate to the addressee claiming non-receipt unless the originator prefers to cancel it. If a duplicate transmission is made, substitute the communications action identifier ZFGY for the content indicator code ZHSW in format line 2 of the original message and add the operating signal ZFG to format line 5. Any message bearing ZFG in format line 5 will be delivered to the addressee.

(2) The originator's communication center will carefully examine their in-station records to determine if the original transmission of the message was, in fact, properly transmitted to the addressee claiming non-receipt.

(3) If the message was properly transmitted, a service message of equal precedence will be forwarded to the communications center serving the addressee. The service message will properly identify that particular message, requesting verification of receipt or non-receipt. If the addressee's communications center advises the original transmission was not received, formal tracer action will be initiated by the communications center serving the originator.

(4) The communications center serving the originator will transmit a service message to the first relay station involved in the original transmission. The service message will contain appropriate header information, channel sequence number (if applicable), routing indicator of station claiming non-receipt and time of transmission.

Example: Non-delivery tracer to the first relay by originating station:

RTTUZHUV RUEDBDA1234 0771830-UUUU--RUEDCSA.

ZNR UUUUU

BT
UNCLAS SVC T-0197
RUDOALA CLAIMS NONRECEIPT OF RUEDBDA0990 0751315 R 161236Z MAR
95. ZDQ RUED CSN BDA143 AT 0751445Z. INT ZDN
BT
#1234
NNNN

(5) The tracer action shall maintain continuity throughout the system, progressing from relay to relay, until the point of loss or non-delivery of the message occurred. If a non-delivery has occurred, the responsible station will conduct an investigation to determine the cause and corrective actions taken to prevent a recurrence and notify the originating station accordingly.

(6) In-station records, files, logs and tapes will be retained beyond the thirty (30) day limit if a tracer action is in progress prior to the expiration date.

c. Tracer actions involving notification or requesting action from communications centers of a regional defense organization or another nation must contain the proper TRC in format lines 2 and 4 of the service message (see Chapter 5).

446-453. Reserved.

SECTION IX

MODE II OPERATING PROCEDURES

454. GENERAL

The operating procedures prescribed in this section are applicable between a node and its Mode II tributary stations. These procedures augment applicable Mode II procedures contained in Chapter 4.

455. RECEIPTING FOR FLASH MESSAGES

a. Tributary station. Service message receipting for received FLASH messages will be assigned an IMMEDIATE precedence and routed to the node service position within 10 minutes of receipt. The service message will cite the three station/channel designator letters, three digit channel sequence number, originating station routing indicator, station serial number, and Julian date-time filed.

Example:

```
OTTUZHUV RUCLENA8137 0971143-UUUU--RUCLESA.
ZNR UUUUU
BT
UNCLAS SVC RZ NEA101 RUEBEMA0315 0971130
BT
#8137
NNNN
```

The condition of the FLASH message does not relieve the receiving station of its responsibility to acknowledge receipt.

b. Node. The node will provide an automatic receipt for FLASH messages, indicating "HI PREC ACC". If the node receipt is not received within 10 minutes, the message will be retransmitted by the tributary station as a suspected duplicate over the same circuit or any alternate route. The node will be contacted by any means available to determine the cause for non-receipting of the original transmission.

456. TRANSMISSION IDENTIFICATION (TI)

A transmission identification will be assigned each message in accordance with paragraph 403.

457. ENSURING CONTINUITY OF TRAFFIC

a. Responsibility for continuity of received channel numbers rests with the station receiving the traffic. Open channel numbers will be reported as they occur direct to the node

service position. Service messages reporting open numbers will be assigned an IMMEDIATE precedence and handled in accordance with paragraph 433.

b. The node will automatically transmit a channel check to tributary stations when traffic is not received for 30 minutes.

c. Tributary stations will transmit a PRIORITY precedence self-addressed (routed) service message, also calling the node service position, providing a channel check when traffic has not been received from the node for 30 minutes. Immediate follow-up action will be taken if the channel check is not returned by the node within 10 minutes.

d. Tributary stations will contact the node operations section to determine status of their traffic.

e. Immediate notification will be made to the node, by alternative means, if necessary, when equipment or transmission line failures occur at the Mode II terminal.

458. STOP AND GO AHEAD NOTICES

a. When required, the tributary station operator will stop the sending node by transmitting an IMMEDIATE precedence service message to the service position, citing operating signals and identity of last good message received, e.g., text to read: "UNCLAS QRT (reason) ZID ATA142 PTTUZYUW RUKKDBA1234 1191230-UUUU--RUKKAAA, TOR 1191250."

b. A subsequent start notice (GO AHEAD) will be transmitted (by telephone or other alternative means) to the node service position by the station originating the stop notice, e.g., text reading: "UNCLAS QRV ZID (last good message identification)" as in subparagraph a above.

459. RETRANSMISSION REQUESTS

Retransmission requests will be handled in accordance with paragraph 432.

460. TRIBUTARY STATION MESSAGES REJECTED AND SERVICED BY THE NODE

Messages will be rejected and serviced automatically by the node to the connected tributary station, when header format or EOM validation errors occur. Paragraph 329 contains examples

of automatic system generated service message error notifications and corresponding actions required by the receiving station. The word reject is abbreviated "REJ" in such services. "Reprotect" as used in examples means "Correct identified error and retransmit message."

461. MESSAGE QUALITY CONTROL TESTS

Tributary stations will periodically transmit a self-addressed (routed) test message to the connected node to check transmission and equipment integrity in accordance with paragraph 341.

462. MONITORING CHECK OF CHANNELS

The patch and test facility of a node having Mode II channels should provide a monitoring check to determine operational status as frequently as working conditions permit. When operational status is found to be questionable, corrective action should be taken.

CHAPTER 5

TRANSMISSION RELEASE CODE AND SPECIAL HANDLING
DESIGNATORS PROCEDURES

501. GENERAL

a. The Transmission Release Code (TRC) is a two-letter element which is inserted in the message heading format in conjunction with the redundant security character group, to indicate authorization for the transmission of a message to a regional defense organization or other nation (international traffic). This is a US procedure only. However, any Allied/NATO circuit that is directly connected to the US AUTODIN using ACP128 format must use the 'U' TRC for any US routing indicators (U and H in second position), and their own TRC if self-addressed through the US AUTODIN. TRC's are not required on national traffic.

b. A Special Handling Designator (SHD) is used to control messages during the electrical transmission process. This will be accomplished by class marking the communications channels over which the message will pass. The class marking inhibits the delivery of a message containing a SHD to an unauthorized addressee by means of a comparative validation check of the SHD symbol shown in the message with the SHD authorized for the channel. A discrepancy results in message rejection.

502. TRANSMISSION RELEASE CODE (TRC) RULES

a. The TRC consists of two redundant letters which are the same as the second letter of the assigned addressee message routing indicator, except as noted in subparagraph c below.

b. The TRC will be assigned by the message originator's telecommunications facility. Assignments will be based on the relationship of the routing indicators to the regional defense organization or another nation's activities contained in the address portion of the message. (See para 502d)

c. TRC designators must be listed in alphabetical sequence to preclude rejection by the connected US AUTODIN node on input. Three or more TRC's in one message requires two separate transmissions; i.e. two TRC's in the first transmission and one in the second transmission. Paragraph 503 contains examples of how TRC's are applied to messages.

d. TRC's assigned for regional defense organizations and national networks exchanging message traffic within the ALTERS and interfacing the US AUTODIN are as follows:

- (1) A Australia
- (2) B British Commonwealth (less Canada, Australia and New Zealand)
- (3) C Canada
- (4) U United States
- (5) X NATO (any NATO nation except Canada, UK and the US)
- (6) Z New Zealand

503. Examples of Use of TRC

a. Example of an unclassified, single address, US originated message destined for Canada:

```
PTTUZHSW RUEAUSA0123 2791744-UUCC—RCCFCAA.  
ZNR UUUCC  
P 061730Z OCT 95  
FM DA WASHINGTON DC  
TO CANFORCECOM OTTAWA CANADA  
BT  
TEXT  
BT  
#0123  
NNNN
```

b. Example of a classified, multiple address, US originated message destined for the UK and NATO:

```
PTTCZHSW RUEJDCA0012 2801800-CCBX—RBDIC RXFPA.  
ZNY CCCBX  
P 071759Z OCT 95  
FM DISA WASHINGTON DC  
TO RBDIC/MOD UK  
RZFPA/SHAPE  
BT  
TEST  
BT  
#0012  
NNNN
```

c. Example of a classified, multiple address, US originated message destined for more than two regional defense organizations or foreign nations (NATO, UK, CAN) which requires two separate transmissions:

(1)

RTTSZHSW RUEFHQA9871 2801754-SSBX—RXFAC RBDIC.
ZNY SSSBX
R 071750Z OCT 95
FM CSAF WASH DC
TO RXFAC/SACEUR
RBDIC/MOD UK
RCCPC/CANFORCECOM OTTAWA CAN
BT
TEXT
BT
#9871
NNNN

(2)

RTTSZHSW RUEFHQA9872 2801754-SSCC—RCCPC.
ZNY SSSCC
R 071750Z OCT 95
FM CSAF WASH DC
TO RXFAC/SACEUR
RBDIC/MOD UK
RCCPC/CANFORCECOM OTTAWA CAN
BT
TEXT
BT
#9872
NNNN

d. Example of a classified, multiple address, US originated message destined for Denmark and Germany:

PTTCZHSW RUEAUSA6768 3351800-CCXX—RDFAB RGFGA.
ZNY CCCXX
P 011746Z DEC 95
FM DA WASHINGTON DC
TO RDFAB/MOD DE
RGFGA/MOD GE
BT
TEXT

BT
#6768
NNNN

e. Example of an unclassified, US originated message destined for a US activity served by a communications center of a regional defense organization or other nation:

RTTUZHSW RUWJHRA1616 2820420-UUXX—RGFDKJA.
ZNR UUXXX
R 090415Z OCT 95
FM CDRUSACC FT HUACHUCA AZ
TO CDR 552 ARTY GP SOEGEL GERMANY
BT
TEXT
BT
#1616
NNNN

f. Example of a SECRET, US originated message destined for a Canadian addressee:

RTTSZHSW RUEAUSA1842 2811925-SSCC—RCCPC.
ZNY SSSCC
R 081924Z OCT 95
FM DA WASHINGTON DC
TO CANFORCECOM OTTAWA CANADA
BT
TEXT
BT
#1842
NNNN

g. In ALTERS, validation of the TRC against the addressee routing indicator will be made both at the input node, (if US), and the node serving the designated transfer point to/from the US AUTODIN. If a mismatch exists, the message would be rejected and the originating station notified (see paragraph 329).

504. Special Handling Designator (SHD) Rules

a. Messages will indicate the true security classification in format line 2 and 4. In addition, the appropriate Special Handling Designator (SHD) repeated five times preceded by an oblique (/) will immediately follow the security characters appearing in format line 4.

b. Special handling designators which are authorized for international traffic and regional defense organization traffic and their purposes are as follows:

- (1) DDDDD Data message
- (2) LLLLL ATOMAL
- (3) PPPPP Exclusive
- (4) YYYYY Cryptosecurity

c. National traffic may use any other special handling designators provided such designators remain within the confines of the national system.

LANGUAGE MEDIA FORMAT

1. The language media format codes authorized for use in the ALTERS are listed below. These codes can only be paired in certain ways, as prescribed below.

LMF CODES

LMF	SOURCE MEDIUM	FORMAT
A	Paper tape or magnetic cassette tape	7 level International Teletypewriter Alphabet Code (ITA5)
F	Paper tape (Teletypewriter)	Automatically generated in Position 2 by node when format conversion performed (ACP127 to ACP128).
R	Paper tape (Teletypewriter)	Off-Line encrypted text producing scrambled tape.
T	Paper tape (Teletypewriter)	Any teletypewriter message including 5-letter cipher group off-line encrypted messages (5 level ITA #2 Code).

a. The LMFs T and A apply only to teletypewriter plain text. The LMF R applies only to encrypted text (scrambled tape).

b. The LMF's A and T can be paired with either T or A depending on the preferred delivery device (AA, AT, TT or TA are authorized combinations). The LMF R can only be paired with T (RT).

CONTENT INDICATOR CODE/COMMUNICATION ACTION IDENTIFIER**1. USE OF CODE.**

The standard four-position Content Indicator Code in this Annex is prescribed for international use among all elements of the ALTERS.

2. POLICY.

a. The standard Content Indicator Code is based on and designed to fulfill the needs of ALTERS users in accordance with the following policy.

(1) The Content Indicator Code is designed primarily for use by the receiving communications terminal as an aid in determining distribution of messages.

(2) Content Indicator Codes for international use will be generalized in nature. Assignment of a separate code for a specific report should not be made unless it will enhance delivery at the receiving telecommunications center beyond that provided in the message text or heading information.

(3) No code letter combinations may be used on international messages unless it is published herein, or unless specific coordination has been effected and agreed to by all telecommunications centers handling the traffic and all addressees and/or originators concerned.

b. The Communication Action Identifiers listed in Table III are for use by communications terminals and nodes to identify certain actions related to traffic handling. These Communications Action Identifiers are based upon internationally agreed communications operating signals. prescribed in ACP 131.

3. REQUESTING CHANGES.

Changes to the existing code can be authorized only by the U. S. Military Communications-Electronics Board after coordination and approval by all appropriate international organizations/ agencies/boards. Changes shall be directed through national/regional defense organization channels.

4. STRUCTURE OF CODE.

The standard Content Indicator Code consists of four characters appearing in positions 5 through 8 of the message header (Format Line 2).

a. The first character is alphabetic and is primarily used to identify the activity within which the three-letter code is authorized for use. Alphabetic characters A through

J, M through O, S, and T are reserved for national use and are not to be used for international, regional defense organization traffic. However, national and regional defense organization systems should be capable of relaying any CIC received since its system may be used, in cases of emergency, for relaying other nation's traffic. The alphabetic character Z is used for Communication Action Identifiers.

b. The second, third and fourth letters of the code constitute the identification of the contents of the message. For use with the first letter Z, only those code combinations listed in Table III are authorized. They will be used by all stations using these procedures.

(1) The second position character is alphabetic and indicates the major category of traffic involved. The controlling authority for this position is as indicated in paragraph 3, above.

(2) The third position is alphabetic and indicates the prime sub-category of traffic involved. Under all major categories, the letter Z is reserved for use in the third position as a miscellaneous filler and may be used by the originator when sub-categorization is not desired or when several sub-categories are combined into one message or when the sub-category cannot be clearly determined.

(3) The fourth position character normally is alphabetic and may be used for minor sub-categorization as indicated in (a) below, or for communications information as described in (b) through (f) below. For exceptions to the alphabetic nature of this position see the note of Table III.

(a) The letters A through T in the fourth position are available for assignment under the various major categories listed herein. Normally, these minor sub-category letters will not be associated with specific third-letter assignment but will be applicable to all third-letter assignments under the major category in which they both appear.

(b) The letters U and V are reserved for possible future requirements as communications information code letters.

(c) The letter W in the fourth position indicated an exception code for machine recognition. It indicates that the message requires visual checking to determine its proper disposition. In this regard, the letter W will be used on all messages which should not be machine processed, including service messages, off-line encrypted traffic, and all narrative messages.

(d) The letter X in the fourth position indicates a corrected copy of a message previously transmitted. It may be sent in response to a specific request, or it may be generated to correct erroneous data originated in a prior transmission.

(e) The letter Y in the fourth position indicates a suspected duplicate message. This letter code is required for machine recognition of suspected duplicate traffic.

(f) The letter Z in the fourth position is used as a miscellaneous filler. It is used when no other letter is applicable or if two or more of these detailed categories are contained in the message text.

TABLE I - ACTIVITY IDENTIFIER
(FIRST POSITION OF CONTENT INDICATOR)

LETTER	ACTIVITY	REMARKS
A	National Use	
B	National Use	
C	National Use	
D	National Use	
E	National Use	
F	National Use	
G	National Use	
H	National Use	
I	National Use	
J	National Use	
K	Exercise Messages	
L		
M	National Use	
N	National Use	
O	National Use	
P		
Q		
R		
S	National Use	

T	Test Messages
U	
V	
W	
X	
Y	
Z	Communication Action Identifier

TABLE II - CONTENT INDICATOR CODES FOR INTERNATIONAL APPLICATION

Column 1		Column 2		Column 3		Column 4
Second Position		Third Position		Fourth Position		
Code Letter	Major Category	Code Letter	Prime Sub-Category	Code Letter	Minor Sub-Category	Remarks
A	Not Assigned					
B	Training					
C	Policy/Plans					
D	Not Assigned					
E	Political Public Affairs					
F	Research & Development					
G	Production					
H	Engineer & Maintenance					
I	Operations					
J	Not Assigned					
K	Not Assigned					

L	Not Assigned					
M	Not Assigned					
N	Logistics & Supply					
O	Not Assigned					
P	Not Assigned					
Q	Transportation					
R	Info Mgt Systems					
S	Communi- cations					
T	Budget/ Finance					
U	Intelligence					
V	Personnel (Civilian)					
W	Personnel (Military)					

X	Special Projects					
Y	Security					

TABLE III - COMMUNICATION ACTION IDENTIFIERS

CAI	MEANING
ZDGW	Accuracy of following message is doubtful. Correction or confirmation will be forthcoming.
ZDKW	Following repetition is made in accordance with your request.
ZELX	This message is a corrected copy (used in conjunction with ZDG).
ZEUW	This message is transmitted for test purposes only.
ZEXW	This message is a book message and may be delivered as a single address message to addressees for whom you are responsible.
ZFDY	This message is a suspected duplicate.
ZFGY	This message is an exact duplicate of a message previously transmitted
ZFH1	This message is being passed to you for action.
ZFH2	This message is being passed to you for information.
ZFH3	This message is being passed to you for comment.
ZHCZ	No major category of CAI has been assigned to cover the content of this message.
ZHSW	This is a narrative message.
ZHUW	This is a service message.
ZHVW	This is a composite message, formed by combining several short messages, all for the same addressee, under this single header.
ZHYY	This is a suspected duplicate transmission of an alternatively routed collective routed message.
ZHZW	This message is an alternatively routed collective message: deliver a copy to addressee(s) for whom you are responsible; to not reintroduce into the system as a collective
ZIAW	This message is being passed out of proper sequence of station serial number.
ZOJ1	This message is the first corrected copy of a previously transmitted message.

ZOJ2 This message is the second corrected copy of a previously transmitted message

ZOVW This message is being re-routed to your station.

Note: Where digits (numerics) appear in the fourth position of the code, each such digit must be used only in accordance with the explanation given in the meaning column. If none of the assigned meanings apply, then use the letter Z or W.

SCHEMATIC DIAGRAM OF MESSAGE FORMAT

Parts	Components	Format Line	Elements	Contents	Explanation
H E	Procedures	1	Handling Instructions	Transmission Identification and pilots	Contains start of message indicators and transmission identification, when necessary (para. 403); contains pilots as required (para. 328)
A D I		2	Header	Precedence, LMF, classification CAI, OSRI, SSN, Date-Time filed, Record Count (as required). Classification Redundancy, Called station (s), End-of-Routing Signal.	If message is dual precedence, only the higher precedence is shown in this line.
N G		4	Transmission Instructions	Security warning operating signal; classification designators; Prosign T; other operating signals special operating group (s) (SOGs); address designator (s) routing indicator (s).	Operating signals ZNR, ZNY, as appropriate and classification designators will be used. Indicates specific transmission responsibility not apparent in other components of the message handling. Plain language address designators are not permitted in CODRESS messages.

	Preamble	5	Precedence; date-time group; message instructions	Precedence Prosign, date, ZULU time, abbreviated month, and year plus operating signals	In the case of dual precedence, both prosigns are shown separated by a space, Operating Signals are used only when required to convey message handling instructions.
H E A D I N	Address	6	Originator	Prosign FM; originator's designation	Message originator is indicated by plain language, routing indicator, address group, or callsign.
		7	Action Addressee(s)	Prosign TO; routing indicator(s); operating signals, address designation(s)	Action addressee(s) is indicated by plain language, routing indicator(s), address group (s) or callsign (s). In the case of multiple address messages, when addressees are listed individually, each address designation shall be on a separate line and may be preceded either by the operating signal (ZEN) (meaning delivered by other means) or by the routing indicator of the station responsible for delivery
		8	Information addressee (s)	Prosign INFO: routing indicator (s); Operating signal (s); address designations	Same as for line 7, except that line 8 pertains to information addressee (s).

G		9	Exempt addressee (s)	Prosign XMT: address designator (s).	Used only when a collective address designation is used in line 7 or 8, or an AIG indication of the addressee (s) exempted from the collective address or AIG is required.
	Prefix	10	Accounting information Group count	Accounting symbol (when required); group count Prosign GR: Group count.	The group count Prosign and group count shall be used only when the text consists of countable encrypted groups.
	Separation	11		Prosign BT	
T E X T		12	Classification internal instructions; thought or idea expressed by originator (in that order)		See ACP121 series.
	Separation	13		Prosign BT	
E	Procedure	14			Not Used
N D I		15	Correction EOM	Prosign C: other prosigns; Operating Signals and plain language as required. Number sign (#)	

N G			validation number	4 digit number	
		16	End of message functions (EOM)`	2CR, 8LF, 4Ns, 12Ltrs	Used on all teletypewriter messages unless otherwise prescribed.

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