# Communications Messages



The primary purpose of military communication is to serve the needs of command. Communications permit command to exert personal influence in the exercise of command and control over a larger force and a larger area. Another purpose of military communications is to simplify and hasten the transfer of information between individuals and groups of individuals. In this sense, communications support operations, intelligence, logistics, and administration—all are necessary to the exercise of command.

Modern military communications depend on progressive signal development and its effect upon military science. As these fields become more complex, the interdependence increases proportionately. Margins of error and efficiency become more critical. Throughout the history of military communications, the common doctrine of reliability, speed, and security has never changed. These unaltered goals has never been completely achieved, in spite of the significant technological advances in recent years. Experienced operators are the key factor in the achievement of these goals. This volume is designed to provide the communications-computer systems operator with the knowledge needed so the goals of communications may someday be complete.

## Communications Systems

In this section we'll look at how the development of past military communications has evolved into today's Communications-Systems career field.

## Developments in military communications

Progress in the field of military communications can be divided into several overlapping periods. Each period has been preceded by a change in a military operational concept resulting from the creation of new weapons systems and amplified international political interests. We'll now discuss these periods and see how our modern communications systems have evolved:

*a.* Before 1860.

*b.* 1860 to 1900.

*c.* 1900 through World War II.

*d.* End of World War II to 1960.

*f.* 1960 to the present.

### Before 1860

In this period the principle means of communications were messengers, visual signals (like smoke, hand, and semaphore flag), and sound (like drums or gunfire). It was in this era that the often over-burdened pigeon provided the first comparatively rapid "long distance" communications capability. The stimulus for transition from this period was the requirement for more effective command control as military forces increased in size and the lines of communication lengthened.

### 1860 to 1900

In this period, the telegraph became the first electrical means of communication. Army ground forces installed and operated comparatively extensive and rapid systems, using wire circuits between terminals. It's interesting to note that the "dot-dash" method of the early days has its place in modern communications systems, mainly as a reliable backup for more advanced means.

### 1900 through World War II

The introduction of radio marks the beginning of the next period. Shortly after 1900, navies installed wireless radio aboard ships to maintain intership communications and contact with strategically placed shore stations. With this advanced communication capability, fleet control was extended over an ever greater area. Simultaneously, armies using radio to link land line communications complexes, established limited global systems. It was in this period that oceanic submarine telegraph cables were installed for military use. These provided an alternative means for the new "long-haul" radio capability.

Other innovations of the period due to World War II included vehicular mounted radio and airborne radio used as an aid to navigation Military operations relied more on military communications. With the development of high-

speed and mobile radio techniques, the need for communications security measures that would deny the enemy access to transmitted information became critical and urgent.

Roughly from 1920 to 1945 many improvements were realized. By 1939 history proved that the greatest advances in the field of communications and electronics were made due to war. In World War II the “Global Concept” of military communications reached its peak. This, of course, was essential to successful coordination and control of a global war. To solve the problem of volume and speed necessary to support fluid military situations that were worldwide in scope, the teletypewriter became the backbone of military communications systems. Although advances in semiautomatic techniques of message transmission and relay further increased speed, they also showed the need for both machine and procedural compatibility among allied forces.

**End of World War II to 1960**

A revolution of changes in weapons systems and concepts of operations marked the period from the end of World War II to the 1960s. But, in this period of development the military communications structure was altered very little. Global teletypewriter networks continued to carry the bulk of military traffic with only evolutionary refinements, and it became increasingly obvious that these facilities were falling behind the requirements of the user. While online cryptography, tape automatic relay equipment stations, and multichannel techniques improved system capabilities. Inherent limitations of the prevalent HF long-distance communications circuits, and the fundamental philosophy of human-operated networks between communications complexes could not cope with the speeds necessary in command and control of current military assets.

**1960 to the present**

The emphasis in communications development since the 1960s has been towards systems featuring multimode operation and improved transmission media. Efforts in research and development have produced systems which submit to six basic features:

(1)Writer- to- reader service, in addition to conventional message switching.

(2) Multi-mode operation (voice, data, facsimile, and even television) over a common circuit.

(3) More sophisticated transmission means, such as satellite communications techniques.

(4) Integral transmission security.

(5) Improved resistance to natural or human disruption.

(6) Integration of communications subsystems into the operational systems they support.

## Types of communication systems

Have you ever wondered how the crew on a refueling tanker knows when and where to meet the aircraft it is to refuel? Have you also ever wondered how the Air Force tasks commands for personnel needed to complete it's missions around the world? Well, without the use of the Automatic Digital Network (AUTODIN), the backbone of the Department of Defense's (DoD) communications network, many tasking and refueling orders would take a whole lot longer to get to the individuals who need them. In this lesson, you are introduced to the Automatic Digital Network and the work centers that utilize it, from the fixed Telecommunications Centers (TCCs) and finally the Mobile Communications Systems that can establish communications from anywhere in the world at anytime. Let's begin with the Automatic Digital Network or AUTODIN.

### Automatic Digital Network (AUTODIN)

TCCs are able to provide worldwide communications because of the Automatic Digital Network (AUTODIN). This highly computerized store and forward network is both reliable and secure. The authorized users of AUTODIN are limited to transmitting official business that is best sent by electronic transmission. AUTODIN Switching Centers (ASCs) are the backbone of this network. ASCs are commonly referred to as Major Relay Stations and generally support large volumes of message traffic over large geographic regions. Another type of relay station on AUTODIN is the Minor Relay Station. They function similar to the ASCs; however, Minor Relay Stations also act as TCCs for the installations they are located on. Minor Relay Stations have far less tributaries connected to them and handle smaller geographic regions.

TCCs are tributaries or terminal stations in reference to the ASC or relay it is connected to. Communication links connect the TCC to it's ASC or relay station. The type of communication link may vary from installation to installation, but is usually one of the following five: telephone lines, coaxial cable, microwave links, satellite links, or fiber optic lines. In most instances TCCs are connected to only one ASC, but some Dual Tributary Stations do exist.

A message is transmitted from a TCC and received at an ASC or Minor Relay Station via the communication link. This is where the store and forward process occurs. A complete copy of the message is received at the ASC or Minor Relay

Station, stored on disk, then queued and forwarded on to it's destination. This happens at every relay station the message passes through, giving a traceable route traveled in case the message must be tracked down for some reason.
At each location the message is relayed through, it must also be encrypted or decrypted to ensure the security of the message. There are two types of cryptographic devices that may be used to complete this mission. The first is the KG-84A which encrypts and decrypts message traffic on-line. On-line means that the actual device is placed in the path the message must travel and the encrypting or decrypting takes place automatically. The second device is the KL-51. It encrypts and decrypts message traffic off-line or manually. The operators at stations utilizing KL-51s have to type the message in the device and then transmit the encrypted message over the lines. The receiving station then has to reverse the process, typing the encrypted message into a KL-51 and getting the decrypted text of the message back.
For example, this is how a message transmitted from Keesler AFBs TCC would arrive at the TCC of Sembach AB, Germany.

1. The message would be transmitted from Keesler's TCC after being certified and encrypted.
2. The ASC in Albany, Georgia receives the message via a communication link that connects with Keesler. The message is decrypted, and stored in the ASC's computer.
3. The message is then encrypted and forwarded via a communication link to the ASC in the United Kingdom. There it is decrypted, stored, encrypted, and forwarded to the next relay station.
4. The message is then received via another communication link at the ASC in mainland Europe. It is decrypted, stored, encrypted, and forwarded to the next relay station.
5. The message is received at the MINOR RELAY STATION at Ramstein AB, Germany by another communication link. Once again it goes through the decryption and encryption process, along with the store and forward process before going back onto a communication link headed for it's final destination.
6. Finally, the message reaches Sembach AB, Germany where it is decrypted and made ready for receipt by the TCC operators.

TCC personnel prepares the message for pick up by the customer to whom it is addressed. The speed at which the

message is processed will be discussed later, but the precedence and traffic conditions in AUTODIN determines how quickly the message reaches it's final destination. That could be in minutes or possibly a few hours. Nevertheless, AUTODIN stands by secure and reliable processing.

***Roles***

TCCs, based on how they operate and the types of messages they deal with, have two roles. The first is what is referred to as a *common user/general purpose activity*. This means the TCC is able to process a variety of messages, such as administrative, logistical, statistical, and operational. It also means the TCC can support a variety of different users. In today's Air Force you may find more than one Command at an installation. TCCs are able to support processing message traffic for all the Commands, or any unit which may come to that installation. The second role of a TCC is referred to as a *dedicated user/specific purpose activity*. This means that a TCC is able to process a variety of messages for a single, or specific user only. An example would be an Intelligence Center. This would be a TCC that only receives messages dealing with intelligence gathering and reports. The only authorized users of this type of TCC would be those individuals who work in the intelligence field.

***Types of Messages***

In both roles of the TCC, we will process messages. Those message may be administrative, logistical, statistical, and/or operational. All of the messages fall into two categories or two types of message patterns: *Narrative* or *Data*. A narrative pattern message is one where the text of the message is read like a narrative book. A data pattern message is a message that is incorporated into a computer system to update existing records.

**Fixed Communications Systems**

All military installations around the world have a need for communications, or to send information from one location to another. At most installations, there is a fixed Telecommunications Center (TCC). A fixed TCC is a work center where all of the equipment used in the communications process between other installations is inside a non-moving permanent structure. Information is sent over existing communication links, such as telephone lines. The idea is to have one central location on an installation where squadrons can bring messages to be transmitted to other installations, or receive messages that were transmitted from other installations. TCCs are responsible for providing secure and reliable electronic

record communications processing worldwide. This includes transmitting and receiving messages for most of the activities at an installation.

**Deployable Communications Systems**

Fortunately, the United States has not had to fight a war in the continental United States since the Civil War. This means U.S. military troops have had to travel around the world to protect interests of the U.S. Government. How do we provide communications in those far off reaches of the globe? That is what we are going to discuss at this time: Deployable Communications Systems. The idea is to have the equipment, personnel, and supplies available to be transported anywhere on earth within the shortest amount of time to establish communication support for an operation. The facilities may be in tents, in the backs of vehicles, or in airplanes. Commanders in the field are able to communicate with personnel back at headquarters on the situation, prepare strategies, and receive or send reports without having to wait days for the next airplane or helicopter to deliver messages. There are two types of deployable communications support that Air Force communicators provide to commanders in the field: *Initial Communications Support* and *Sustained Communications Support*.

***Initial Communications Support***

Initial Communications Support means communications equipment is available to support wartime and contingency taskings within 24 hours. Equipment utilized in this instance is the Quick Reaction Package (QRP) and the Wing Initial Communications Package (WICP). The QRP setup uses a UGC-129 teletypewriter set and the WICP, a UYK-83 communications terminal. The operators who provide the initial communications support usually stays in the area of the tasking for 30 to 90 days or until sustained communications support can be established.

***Sustained Communications Support***

Sustained Communications Support means communications equipment is available to support wartime and contingency taskings within 72 hours after initial response throughout the duration of the contingency. Equipment utilized in sustained communications support range from automated computers to the manual teletypewriters utilized in initial communications support. Here is a list of the available equipment:

Communications Gateway System-100 (CGS-100), a multi-function communications terminal with a windows operating system; UYK-83, a Zenith 248 communications terminal with the DOS operating system; the UGC-144, a menu driven

communications terminal; and the UGC-129, a manual teletypewriter.
Sustained communications support, when in place, provides commanders in the field with the ability to communicate with installations around the world, within a short amount of time.

## Contingency Processing

You have all heard the motto for the Pony Express; “The mail must get through!” Well, the same goes for all messages processed in TCCs. Equipment malfunctions, link problems, natural disasters, and/or manmade mishaps can disrupt the flow of message traffic. How do we get the messages through, then? This is where *Contingency Processing* comes in. We will discuss the various ways that TCCs are going to ensure that messages get to their final destinations, starting with the Worldwide AUTODIN Restoral Plan (WARP).

### WARP (Worldwide AUTODIN Restoral Plan)

The purpose of the Worldwide AUTODIN Restoral Plan (WARP) is to establish procedures for restoring message traffic to AUTODIN stations in the event an AUTODIN facility is unable to receive message traffic. This plan applies to all government agencies serviced by AUTODIN. Warp is an “on-paper plan” only, ASCs have an on-line program that allows WARP to be implemented. WARP uses alternate routing (altroute), or back up plans to ensure messages get through AUTODIN to their final destination. It is capable of restoring AUTODIN service in three altroute phases:

- Phase I: Traffic for a downed tributary is forwarded to an alternate station connected to the same ASC.
- Phase II: Traffic for a downed tributary is forwarded to an alternate station connected to a different ASC.
- Phase III: Restores traffic to AUTODIN stations in the event that an ASC becomes inoperable. One ASC is going to take responsibility for another, this is known as rehoming.

It may become necessary for your station to serve as an altroute site for another station. In this event you are to ensure message traffic for the downed site is processed just as if it were message traffic for your station. In the event your station is the one having problems, you may be required to perform alternate site (altsite) processing. Installations have alternate, or back-up TCCs for just such an occasion. An altsite is another building on the installation that has equipment capable of

performing the TCC's mission while the TCC is inoperable, giving us another way to ensure messages get to their final destination.

**EAPs (Emergency Action Plans)**

Besides actions that would warrant us to have to utilize WARP, there are other emergencies that can occur in the everyday workings of a TCC or any other facility. To ensure TCC personnel are prepared for any emergency they utilize *Emergency Action Plans* (EAPs). EAPs are step-by-step instructions that tell you exactly what you are to do in an emergency situation; for example, a fire, natural disaster, or bomb threat. These plans are written in an orderly, clear, and concise manner so anyone in the TCC is able to perform the instructions on them. The goal is to eliminate problems caused by anxiety or nervousness in operators performing the plan. Directives require practicing the EAPs once every 90 days. Don't take these practices lightly, your life or a co-worker's life may depend on your ability to perform the EAP.

**MINIMIZE**

This is a condition imposed by commanders to reduce and control the flow of both record and telephone communications to essential traffic only. It can be implemented in the case of an actual or simulated emergency. Actual emergencies could range from civil disturbance to natural disasters or war. Simulated emergencies are the exercises and other training scenarios enacted at installations to test wartime readiness. No matter what the reason, MINIMIZE serves to limit the volume of message traffic in TCCs and the telephone traffic at the installation. Restrictions are applied to routine traffic to ensure the flow of essential traffic. Customers who have essential traffic that must travel through AUTODIN during a MINIMIZE imposed time period must acknowledge "MINIMIZE CONSIDERED" on the message. This serves to alert AUTODIN work stations that the message is essential and must travel through AUTODIN.

**SUSTEL**

When imposed, SUSTEL is a condition that suspends all telecommunication actions at an installation. The Commander at the installation implements SUSTEL procedures. When in place, SUSTEL ***stops*** all message traffic from coming to the TCC. An installation that has been taken over by an enemy during war would be an example of where SUSTEL would be implemented.

Military communications systems are divided into two general classes—tactical and strategic. Tactical systems are self-contained within a command or a system supporting a homogeneous purpose or activity. An example of this

would be the communications used for control of a weapons system, an early warning system, specific aircraft movements, or local command networks.
Strategic communications systems are generally global in nature and are operated on either a common user or special purpose basis. While a strategic system may be confined within a specified area or limited to a particular type traffic, the configuration is such that inter-operation with other strategic systems is possible when desired or required. As you might well imagine, equipment and procedural compatibility between strategic systems is essential to facilitate efficient traffic interchange. For example, a Worldwide Routing Plan is a prerequisite to allied strategic signal operations.

### Changes affecting AUTODIN

This lesson deals specifically with ongoing changes in Automatic Digital Network (AUTODIN) and telecommunication center (TCC) methodology for messages. DoD has mandated that organizational message traffic migrate from AUTODIN to electronic mail (E-mail) on the Defense Data Network (DDN). The DoD program to implement the move to DDN is the Defense Message System (DMS). The DMS architecture is designed to provide writer-to-reader message service for organizational (i.e., AUTODIN messages) and individual (i.e., personal E-mail) using a secure mature E-mail system. DMS is an evolutionary program that is implemented in three phases.

| | |
|---|---|
| **Phase I** (Began in FY 1994) | Automates TCCs and migrates UNCLASSIFIED message traffic from AUTODIN to DDN. |
| **Phase II** (FY 1995 - FY 2000) | Fields security protocols with X.400 message and X.500 directory services, which allows writer-to-reader message service and closure of TCCs. |
| **Phase III** (FY 2001 -FY 2008) | Continues the implementation of a mature writer-to-reader message service on a secure data network system. |

To begin the migration from AUTODIN, official routine and priority precedence messages are sent by E-mail whenever feasible.

## Messages

You, the communications-computer system operator, are the primary focal point for information on the preparation of messages because no one knows better the needs of the workcenter and the capabilities of the communications equipment used for your location. Users look to you for guidance and help in every aspect of message preparation. This section isn’t designed to give you a complete knowledge of procedures; instead, it’s designed to

introduce you to the major areas of message preparation and perhaps give some insight to problems that are easily correctable by making you aware of possible problem areas.

## Communications administrative responsibilities

Modern developments in command and control systems are progressively at an ever increasing pace. Previously, messages were manually prepared using DD Form 173. This entailed having customers in offices throughout the base draft their own messages. These forms would be formally inspected by a "releaser" to ensure they complied with proper directives. Acting on behalf of the commander, who was ultimately responsible for official messages sent from his/her command, the releaser would then submit the message to a Telecommunications center. The TCC personnel were now responsible for processing and transmitting these official messages.

Regardless, the communications-computer systems operator must be up to the task of forwarding communications properly and in a timely manner. In this lesson, we will discuss user responsibilities and administrative control in dealing with communication messages.

### User responsibilities

The effectiveness of any communications system is directly influenced by those it serves. This is true whether the user actually operates the terminal facility (as in a radio telephone system) or simply provides traffic input (as in most strategic communications systems). To realize maximum benefits from available services, it is essential that the user be familiar with the mission and capabilities of the communications system, as well as with the rules governing its use. Later, we will discuss information pertinent to all message originators and the operators that handle message traffic.

Communications requiring expeditious delivery are normally prepared for transmission in the form of brief and concise messages. The originator (the office of primary responsibility, OPR) of a message is the authority in whose name a message is sent, or is the command or agency under direct control of the authority approving a message for transmission. The originator is responsible for the functions of the drafter and releasing officer. Several people may be involved in the transmission of a message. These include the drafter, the releaser, and the originator.

#### *Drafter*

A drafter actually composes a message for release by the originator. The drafter is the person who composes or

writes official messages. Some of the responsibilities of the drafter are:

- Addressing messages properly
- Composing the text in a clear and concise manner
- Applying the appropriate security classification
- Determining the precedence
- Determining the method of transmittal

***Releaser***

A releaser may authorize transmission of a message for and in the name of the originator. The releaser is the person who officially represents the commander and is responsible for correct message preparation. There may be several message releasers who are responsible for making sure a message is technically accurate and in keeping with command policy. The releaser ensures that messages:

- Comply with directives
- Are released to the TCC with speed and efficiency
- Are provided a Date Time Group (**DTG**) - the *official releasing time* of a message

Releasers are required to enter their names, titles, office symbols, and phone numbers on diskettes as well as on paper DD Form 173s. Drafter entries are optional. All messages, whether manually prepared on a DD Form 173 or floppy diskette, must comply with Air Force regulations that govern communications. Drafters, releasers, and commanders must carefully exercise their responsibilities to ensure messages are properly processed.

***Originator's Responsibilities***

The originator is the command or authority in whose name a message is sent. The originator of a message is not a person, it is the organization the message is coming from. Various organizations throughout a base are responsible for sending messages to support their mission. Each organization is considered the originator of messages sent from their particular command. The commander of that organization is ultimately responsible for all official messages sent from their command. Of course, this responsibility is usually delegated to subordinates.

The originator is also responsible for following the policy and procedures for preparing and releasing the message. The originator may request the TCC to confirm when an electrically transmitted message has reached the message addressee(s) or their servicing TCC. Normally, you will limit such requests to nondelivery messages having a

severe military, political, or loss-of-life impact. Confirmation of delivery on general messages and messages having wide distribution may not be requested. Originators will contact their servicing TCC for special instructions to annotate confirmation of delivery on their messages.
The originator of a message has certain definite responsibilities such as determining whether the message is necessary. For example, a message is not to be used when a letter or other form of communication will suffice. The originator determines the addresses and the type of message to be sent and also ensures the proper use of the prescribed message forms. In addition, the originator ensures that the message text is drafted appropriately and determines the security classification and message precedence. Lastly, it’s the originator’s responsibility to ensure that the releasing document is signed by the releasing official and that the message is forwarded to the appropriate agency for transmission.

**Administrative control**

Certain administrative requirements must be met in order to ensure that military communications systems fulfill the demand for satisfactory service. In this regard, administrative control should do the following:

a. Provide a continuous and energetic program to review and achieve efficient use of communication services at each level of command. Periodic inspections should be made within each communication workcenter to determine that existing instructions governing the use of service are being followed. Any oversights or deficiencies by originators should be directed to the originating activities for suitable review and corrective action.

b. Implement continuous training and educational programs designed to familiarize personnel with the availability and effective use of communications services, systems, and communications security material.

c. Monitor each workcenter daily or weekly in order to maintain proper standards of efficiency or make improvements whenever conditions dictate.

d. Ensure prompt release and delivery of messages so the workload may be distributed as evenly as possible throughout the business day. Allowing accumulation and delivery of messages for transmission at the close of the day should be avoided because such action defeats precedence assignment and places an unnecessary burden upon communications personnel and facilities.

e. Develop emergency action plans that indicate actions to be implemented automatically when emergencies arise.

f. Brief staff and other personnel concerning MINIMIZE requirements in order to preclude misunderstanding and confusion when application is necessary. This should include proper liaison with users, the local distribution agency, and the communications workcenter so as to control origination and transmission of messages in accordance with restrictions imposed during MINIMIZE periods.

## Electronic Mail (E-Mail)

As the use of electronic mail (E-mail) expands worldwide, we, the communications-computers system operators, must ensure that only properly reviewed and cleared information is placed on today's modern communications-computer systems. Remember, if you can send an electronic message around the world, other people, other than the intended recipient, may be reading it as well.

### Types of E-Mail

There are several types of E-Mail in use in the Air Force today. They include, both for "*Official Use*", and "*Authorized Use*". Let's take a look at both.

#### *Official Use*

This type includes, routine Air Force communications, emergency communications and communications that the Air Force determines are necessary in the interest of the Federal Government. Official use may include communications approved by commanders in the interest of morale and welfare, employee professional development, or communications by military members and other Air Force employees who are deployed for extended periods away from home on official Air Force business.

#### *Authorized Use*

Authorized use includes incidental uses that are authorized by the Air Force. They include brief communications made by Air Force employees while they are traveling on Government business to notify family members of official transportation or schedule changes. Personal communications from the Air Force employee's usual work place that are made required to be made during working hours such as scheduling doctor, auto or home repair appointments are also considered authorized use of electronic mail.

**Organizational E-Mail**

E-mail that is originated from an organization's mailbox (office account) and transmitted via E-mail to another organization's mailbox (office account). Organizational E-mail includes official communications such as letters, messages, memorandums, reports, etc. Organizational E-mail should be coordinated through the appropriate offices prior to release. It must be released by a designated releasing official. You should address organizational E-mail to an organization's mailbox (office account).

**Individual E-Mail**

These messages include communications between individual DoD personnel within administrative channels, both internal and external to the specific organizational element. Formats do not necessarily follow any specific structure; however, if the information is official, the same policies apply as for organizational E-mail. Such messages do not generally commit or direct an organization to perform a task. Individual messages and those requiring only basic transmission service will be treated as part of this type message.

**Rules regarding E-Mail**

Below are just a few of the rules to consider when using an e-mail system. The components we will be concerned with are: mailboxes, authentication of messages, and when and when not to use E-Mail.

***Mailboxes***

Each organization or office, where the capability exists, has an organizational E-mail account. Organizational accounts use the standard organizational abbreviation (found in AFDIR 37-135, *Air Force Address Directory*), and the functional address symbols (FAS) (as listed in AFMAN 37-127, *Air Force Standard Functional Address System*), as the account identification. An example would be: 333TRS/CC. 333 TRS is considered to be the organizational part and “CC” as the functional address symbol. A message addressed to 333TRS/CC would be sent to the commander of the 333 TRS.

**NOTE: The entire 37 series of publications, (AFPD, AFMAN, AFIs) are currently slated to be come 33 series publications as part of the SC/IM merger. The 37 series listed throughout the text may be changed before printing of this publication.**

Each office should designate an individual to monitor the account's mailbox regularly to ensure messages requiring action are acted upon promptly. In addition, this also decreases a potential system problem by having a mailbox full of unread mail. This problem usually manifests itself

when the system runs out of available disk storage space. Usually, individuals will have individual E-mail accounts.

***Authentication***

Organizational E-mail should contain a complete signature element clearly indicating who sent the communication, the term **"signed,"** and the authority line, if appropriate.

Within the chain of command, recipients will consider correspondence and documents received via E-mail as authoritative when a signature is indicated. Indicate the signature by the word **"signed"** or the letter **"s."** For example:

signed or s

WAYNE A. SMITH, Captain, USAF
Chief, Information Systems Branch

Individual E-mail should identify the sender, but may use a less formal signature element. You may omit the close if the computer automatically generates sender identification.

***When can E-Mail be used?***

You may use E-mail instead of the telephone for unclassified organizational and individual messaging. E-mail is used ahead of the Base Information Transfer System (BITS), US Postal Service, facsimile (FAX), or the Telecommunications Center (TCC), whenever possible.

***Can Classified Information be sent via E-Mail?***

Classified information ***will not be entered*** into or transmitted via E-mail systems unless transmitted over an approved secure network (i.e., DSNET 1, 2, 3) from a secure workstation to a secure workstation.

***Can I send Unclassified Information?***

You may transmit unclassified information using e-mail. However, ***DO NOT*** transmit information requiring any special handling instructions; i.e., Exclusive For, Personal For, Limited Distribution, etc., on E-mail systems that are not accredited or certified for that purpose. Discretion must be exercised in transmitting the following types of unclassified information via E-mail:

- ***Privacy Act*** - A Privacy Act system of records is a group of records containing personal information

retrieved by name or personal identifier. An example of a system subject to the Air Force Privacy Act Program is a data base that retrieves or cross indexes by personal identifiers (e.g., social security number).

- ***Trade Secrets and Commercial or Financial information -*** Trade secrets and commercial or financial information given in confidence.

- ***For Official Use Only (FOUO) -*** Ensure adequate protection is afforded FOUO material being transmitted via E-mail to prevent unauthorized disclosure. Include paragraphs and page markings, along with an FOUO statement if appropriate. See AFI 37-131, *Freedom of Information Act Program,* if you frequently handle FOUO material.

**Official Information**

Use E-mail for the movement of official information. This includes organizational and individual communications.

**Monitoring E-Mail**

In accordance with applicable laws and publications, use of Federal Government communications systems may be monitored. Employees should use Federal Government communications systems with the understanding that such use may serve as consent to monitoring of any type of use, including incidental and personal uses. In addition, E-mail is recorded at several locations during transmission and may be reviewed at a later date. The originator has no control over this recorded information.

**E-Mail Etiquette**

When using electronic mail, check your e-mail inbox for messages on a regular basis. Follow the usual chain of command when sending messages up the line as you would when using paper correspondence. You should send courtesy copies as necessary. Respect the privacy of others by asking permission to forward the original author's e-mail message, unless the message is part of a chain of command communication.

Avoid overburdening the e-mail system resources by frequently sending e-mail to mass addressees such as the entire base population or your whole unit. This can be wasteful of others time, and of the computer resources to deliver it. Only send messages to a very large mailing distribution list when it is essential. Make sure that you

are sending the message to the intended audience or reader(s). You should try to exercise good judgment in deciding whether to reply to very large mailing list. You may create and make use of a mailing list to expedite a work project.

Place critical incoming or outgoing messages in system file folders and organize them by categories to aid in future searches/retrievals.

Exit from the e-mail program whenever you finish using e-mail. Never leave an active terminal unattended. This helps prevent unauthorized use of your system. Would you want a disgruntled co-worker to send a derogatory note to your supervisor, using your terminal, and name? Probably not.

In addition, you should delete outdated or unwanted incoming and outgoing messages. These messages take up needed system resources and are wasting space. Archive messages of long term value or save them to a floppy diskette for future reference.

*Additional rules to follow when using e-mail:*

1. Remember the basic elements of effective writing: clarity, brevity, and courtesy.
2. Be discreet and professional.
3. Use a tone of address that is appropriate to your recipient.
4. Lead the message with the most important information.
5. Make your main point in the first paragraph. Cite all quotes, references, and sources.
6. Respect copyright and license agreements.
7. Watch your language.
8. Avoid emotion-laden terms, sarcasm, joking, or discriminatory terms.
9. Use the more common abbreviations such as: FYI (for your information), FWIW (for what it's worth), BTW (by the way), FAQ (frequently asked questions), and et al (and others) as appropriate.
10. Send the original back with the reply or just enough text to indicate what you are responding to. This serves as a quick reminder to the sender and saves time.

## Message Preparation and Standard Automated Remote to AUTODIN Host (SARAH)

Beginning in January 1993, TCCs stopped accepting DD Form 173 or plain bond paper to transmit messages. Today, messages are created on either 3.5″ or 5.25″ floppy

diskettes using SARAH-Lite or other SARAH-Communications compatible message preparation software (e.g., Joint Automated Message Preparation System (JAMPS), the Army's DINAH-Mite, MTF Editor, etc.).

**General Message Preparation**

SARAH-Lite or other SARAH-Communications compatible message preparation software packages allow customers to compose messages using a DD Form 173 template. Customers using SARAH LITE are not able to transmit messages directly from their offices; they must bring their diskettes to a SARAH COMM workstation (another software package) or to a TCC which is equipped with a Message Distribution Terminal (MDT). Both of these programs allow for transmission of messages. Commanders' offices and command posts that deal with heavy message traffic are usually equipped with SARAH COMM workstations. The Message Distribution Terminal is connected directly into AUTODIN and is located in the TCC.

**U.S. Message Text Format (USMTF) Messages**

The USMTF program objective enhances joint and combat effectiveness through standardization of message formats, data elements, and information exchange procedures. USMTFs result in the services using the same messages with the same information content. USMTFs thus provide commanders a common message format and common language--both indispensable to successful joint operations.

All messages (USMTF and General Service) have a heading, text, and ending. The body of the message is the only portion covered by USMTF rules. Use of software preparation aids, such as the Joint Automated Message Preparation System (JAMPS) is recommended for complex USMTFs. JAMPS is an Air Force developed standard software package with various output capabilities to produce an error-free USMTF. This includes the capability to create a message on a Standard Automated Remote to AUTODIN Host (SARAH) disk.

**General message requirements**

These general requirements apply to the preparation of all message templates of the DD Form 173. Many of these requirements are done automatically by the communications software package.

*a.* Only upper-case type for alpha characters are used.

*b.* The text is single spaced and cannot be underlined.

*c.* Twenty lines of addresses or text (not including the blocks at the top and bottom of the form) is the maximum for each page of the message—the last page may have less than 20 lines.

*d.* There must be no more than 69 characters, including spaces, on any one line. Addresses are limited to 55 characters per line, including spaces. This standard is to control overprinting at communications stations with older equipment that does not automatically wrap text.

*e.* If the plain language address (PLA) and office symbol exceeds 55 characters and spaces, the rest of the address must continue on the next line. Second and successive lines of an address must be indented five spaces from the first character of the address, and cannot begin with a slant (/).

*f.* Only the slant(/) and double slant (//) punctuations are authorized in the address element.

**The top part of a DD Form 173 template**

Originators must fill in the appropriate blocks on the top part of the form (Fig 1-1) as follows. Some of these blocks are automatically filled in by the message preparation software.

Example:

MESSAGE PREPARATION – DD-173 Input 08:29:10

TOF:1840856

| JOINT MESSAGE FORM | | | | | | UNCLASSIFIED | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| PAGE OF | DTG 160856 | MON JUN | YR 92 | ACT R | INFO | CLASS U | SPECAT | LMF TT | CIC ZYVW | MSG/IDENT |
| BOOK | MESSAGE HANDLING INSTRUCTIONS | | | | | | | | | |

CDC3C051B01-9405-004

**Figure 1-1. Top part of DD Form 173 template.**

***SECURITY CLASSIFICATION***

Ensure that the correct security classification is entered within this block.

***PAGE OF***

In this block a two-digit number is automatically filled in by the software. The actual page number appears on each page of the message.

***DTG/RELEASER***

This block is automatically filled in by the software. The blocks are:

(1)**DATE-TIME**. This depicts the time the message was released by the proper authenticating authority. The first two digits represent the day of the current month, and the next four digits represent the Universal Time Coordinate (UTC), or ZULU time the message was released followed by the prosign "**Z**".

(2)**MONTH**. The first three letters of the month are entered two spaces after the date-time element.

(3)**YR**. The last two digits of the calendar year are entered two spaces after the month.

***PRECEDENCES***

The precedence prosigns that go in this block are:

- **Y** for EMERGENCY COMMAND PRECEDENCE
- **Z** for FLASH
- **O** for IMMEDIATE
- **P** for PRIORITY
- **R** for ROUTINE

**NOTE: This list is not all-inclusive, local conditions may allow unique situations**

(1)*ACT*. The precedence for the action addressees. For example, for a routine message, "R."

(2)*INFO*. The precedence for the information addressees. The precedence assigned to information addressees cannot be higher than that assigned to the action addressees. If this precedence is the same as the action addressee(s), this block should remain blank.

***CLASS***

A letter that represents the security classification goes in this block. The letter groups are:

(1)**U** for Unclassified and Unclassified FOUO.

(2)**E** for Unclassified EFTO and Unclassified EFTO FOUO.

(3)**R** for Restricted

(4)**C** for Confidential.

(5)**S** for Secret.

(6)**T** for Top Secret.

***SPECAT***

If the message is SPECAT insert the correct letter. If the message is not SPECAT, the block is blank. The identifying letters are:

(1)**A**—for SPECAT SIOP-ESI.

(2)**B**—for other types of SPECAT.

**(3)F**—by special agreement, certain Top Secret US-originated national message traffic addressed to activities of the United Kingdom, or other classified messages that contain special handling designators, such as **COSMIC, US-UK EYES ONLY, CRYPTO-SECURITY, EXCLUSIVE FOR, DISCRETE,** and **LIVE OAK.**

(4)**L**—for messages containing the special designator, **ATOMAL**, addressed to certain NATO commands. ATOMAL is defined as atomic or critical weapon designation.

***LMF***

The Language and Media Format (**LMF**) block is left blank when the originator desires that the recipient receive the message narrative, which can be read like a book. If the recipient is to get the message in a data format, a LMF code must be used. The LMF consists of two alphabetical characters. The first character represents how the originator will send the message. The second character pertains to the preferred output device for the addressee. Only when the message format is to be changed from narrative to data will the drafter fill in the LMF (i.e. "TC" for narrative to data). The following list identifies the three LMF codes used:

- **A & T** - Narrative messages
- **C** - Data messages

***CIC/CAI***

The appropriate Content Indicator Code (CIC)/Communications Action Identifier (CAI) is automatically entered when message type is selected (i.e. ZYUW for narrative message). The communications action identifier consists of four characters that indicate the *"status of the message."* ZYUW informs the operator that the message is narrative while ZYVW is used on service wires. There are also other CICs/CAIs that may be used.

***ORIG/MSG IDENT***

The ORIG/MSG IDENT is a unique sequence of characters assigned by message originators for positive originator/message identification. This usually consists of alphanumeric characters that represent a specific office followed by the local time the message was prepared (i.e. **TTCCT 0730).** The originating office's Functional Address Symbol (FAS) (not more than five letters) is placed in this block. For example: TTCCT; FAS for the office is TTCCT. This identifier must be exactly the same on all pages of the message.

***BOOK***

If a "NO" or blank is present, then all addressees will see all adresses to which the message is sent. If a "YES"

is present, the message is still sent to all adressees, but the communication equipment strips away all other adresses so that each recipient only sees their address.

***MESSAGE HANDLING INSTRUCTIONS***

This block is usually blank, but special cases allow for special consideration—consult your local operating instructions.

**General addressing elements**

***FROM***

The PLA of the **ORIGINATOR** is entered here. The originator's address includes the PLA followed by a **FAS** (**F**unctional **A**ddress **S**ymbol) or office symbol (i.e. 333TRS KEESLER AFB MS//TTCCT//). If there are two or more FASs, a single slash separates the offices (i.e. **//**CC**/**TTCCT**//)**. The first FAS represents the office that is primarily responsible for acting on a message.

***TO***

The plain language addresses of the addressees that a message is destined for are entered here. All addressees listed after the prosign TO are considered ACTION addressees. Action addressees are responsible for taking action on a message. An AIG (Address Indicating Group), if listed, must be listed as an action addressee.

ZTTUZYUW RUVKAAA2890 1971500-UUUU--RUCLERA.

ZNR UUUUU

Z 161455Z JUL 96

FM 403 WRS KELLY AFB TX//ACF//

TO AIG 4544

INFO RHWRATC/HQ AFMPC RANDOLPH AFB TX//ACF//

XMT 2146CS RAF MILDENHALL UK//ACF//

BT

UNCLAS

MSGID/GENADMIN/HQ AETC//

SUBJ/COLLECTION PROCEDURES//

RMKS/DUE TO THE IMPROPER HANDLING OF RED TICKET ITEMS, THERE HAS BEEN A CHANGE TO THE HANDLING DISPOSITION OF THESE ITEMS.//

BT

#2890

NNNN

**Figure 1-2. Message Addressed to an AIG.**

***AIGs (Address Indicating Groups)***

AIGs are a form of military address designators. They represent a predetermined list of specific and frequently reoccurring combinations of action and/or information addressees. The receiving TCC has a listing of addressees to which the AIG is assigned. Distribution is accomplished using the addressee listing. Figure 1-2 shows an incoming message for Keesler's TCC that's addressed to an AIG.

***INFO (INFORMATION)***

The PLAs of the **INFORMATION** addressees are entered following this prosign. These addressees are receiving the message for information purposes only; they are not required to take action on the message.

***BT***

The prosign **BT** indicates a break in text.

**Note: There is a BT before and after the text.**

***TEXT***

The first line of text on every message is the classification followed by any special project identifiers such as EXCLUSIVE FOR or NOFORN (no foreign nationals). The main purpose of the text is to convey the thoughts and ideas of the originator.

All classified messages should have downgrading instructions as the last entry of text. At the time of the original classification of a message, a decision is made by the originator to declassify information based on the amount of time the information requires protection in the interest of national security. President Clinton signed Executive Order 12958, titled "Classified National Security Information", in 1995 making it law. Executive Order 12958 prescribes a uniform system for classifying and declassifying classified national security information.

Most classified messages have a declassification date of 10 years or less from the initial classification decision. The date for declassification will not exceed 10 years unless it falls into an exemption category, such as permanent historical value (PHV) information. An example of historical would be information that would assist in the development or use of weapons of mass destruction. PHV information is automatically defaulted to declassify 25 years from the initial classification date. Decisions to extend the classification of information beyond 25 years must be concurred by the President or the Interagency Security Classification Appeals Panel.

Also downgrading instructions are different from declassification instructions. To declassify is to convert

classified information into unclassified information. To downgrade is to lower the classification to a less restrictive one, such as TOP SECRET to CONFIDENTIAL.
The most commonly used downgrading instruction is **DECL/OADR//**. DECL is short for declassify and OADR is an acronym for **o**riginating **a**gency's **d**etermination **r**equired.

***DISTR*** *(Distribution)*

If the drafter of a message wants copies of the message to be sent to internal offices within their unit, their offices are listed here. (Ex. Commander's Read File)

***Drafter***

Drafter entries are optional. When used, the drafter includes name, title, office symbol, and phone number. If the drafter also happens to be the releaser, the statement "SAME AS RELEASER" may be used.

***Releaser***

The typed name, title, office symbol, and phone number of the releaser is entered in the releaser block. Remember, the releaser is the official representative of the commander who has been given the authority to release official messages. This information is mandatory.
All address elements must contain the organization, geographical location, state, or country. The address is followed by two slants, the FAS, and closed by two slants. When the message is addressed to two or more FASs in the same organization, they are separated by a single slant. No punctuation is to be used in the address elements. The elements should be completed as follows:

***FROM***

The originator's PLA and FAS.
*Examples:*

(1)FROM: HQ AETC RANDOLPH AFB TX//SCM//

(2)FROM: HQ AETC RANDOLPH AFB TX//DO/LG//

***TO***

The PLA and FAS for the action activity or activities.
*Examples:*

(1)TO: HQ ACC LANGLEY AFB VA//SCM//

(2)TO: HQ ACC LANGLEY AFB VA//DO/LG//

***Information addresses***

These are activities that need the message for information purposes (people who need to be informed of the text but have no need to do any action on the text) only. "INFO" followed by the activity's PLA and FAS will appear if

used. No colon is used after “INFO.” “INFO” appears only once; all addressees appearing on successive lines after INFO are considered information addressees.

*Example:*

FROM: HQ AMC SCOTT AFB IL//DO//
TO: HQ ACC LANGLEY AFB VA//DCO//
INFO HQ AFCA SCOTT AFB IL//LG//
HQ PACAF HICKAM AFB HI//LG//

***Nonelectrical delivery***

Addressees that will receive the message by a means other than electrical (such as by mail or by messenger) are indicated by “ZEN.” The message originator, not the communications workcenter, is responsible for delivery of “ZEN” messages.

*Examples:*

(1) FROM: HQ AMC SCOTT AFB IL//DO//
TO: HQ ACC LANGLEY AFB VA/DCO//
ZEN HQ AMC SCOTT AFB IL//DOK//

(2) FROM: HQ AMC SCOTT AFB IL//DO//
TO: HQ ACC LANGLEY AFB IL//DCO//
INFO ZEN HQ AMC SCOTT AFB IL//DOK//

***AIG use***

Address Indicating Groups (AIGs) must be indicated as action addressees. Also, additional addressees may be included in the address format. An individual AIG addressee can be exempted from receiving the message by using “XMT.” All addressees who are exempted must have XMT appearing before the addressee.

Example:

TO: AIG 179
HQ AETC RANDOLPH AFB TX//DO/DA//
INFO HQ AFSPACECOM PETERSON AFB CO//DO/DA//
XMT HQ ACC LANGLEY AFB VA

**The text of a DD Form 173 template**

The need for brevity in message preparation is stressed in all cases. To avoid misinterpretation and further explanatory messages, the message must state exactly what is meant and must not be vague or ambiguous. While maintaining consistency with this rule, all unnecessary words are to be eliminated. Commonly used conjunctions, prepositions, and articles (and, but, for, in, on, & the) are to be eliminated unless essential to the meaning of the message. Abbreviations and short titles are used in messages in order to shorten the text, thereby saving transmission time. It’s important to remember that inappropriate use of abbreviations can result in a loss of

intelligibility and exactness. Therefore, only abbreviations and short titles agreed upon for use between the originator and all addressees of a particular message are generally used. Words of five letters or less are not normally abbreviated. Also, after initially spelling out a word, term, or organization along with its abbreviation or short title, the acronym may then be used alone in the same message (like Defense Data Network, DDN).

Punctuation in a message is also limited and the use of many of the symbols and punctuation marks may not be allowed in messages due to the limits of the systems in use. Early systems used the International Telegraph Alphabet, Number two (**ITA2**) but today's systems are moving more toward the American Standard Code for Information Interchange (**ASCII**).

Phonetics are still used in many situations of communications where it is necessary to include isolated letters in messages. Other uses for phonetics would be in expressing lettered map coordinates or ordering equipment by letter and numbers. Just as a refresher, here is the phonetic alphabet:

ALFA; BRAVO; CHARLIE; DELTA; ECHO; FOXTROT; GOLF; HOTEL; INDIA; JULIET; KILO; LIMA; MIKE; NOVEMBER; OSCAR; PAPA; QUEBEC; ROMEO; SIERRA; TANGO; UNIFORM; VICTOR; WHISKEY; XRAY; YANKEE; ZULU.

Numbers may be written as digits or spelled out. When they are spelled out, they are expressed in words for each digit except when the numerals 10 through 20 may be expressed as one word (like sixteen) or as exact hundreds or thousands. For example: 123.4 is written ONE TWO THREE POINT FOUR. 546 is unmistakable as FIVE FOUR SIX. But, FIVE FORTY SIX could be interpreted to mean 546 or 5406. 500 is written as FIVE HUNDRED and 20,000 as TWENTY THOUSAND. With these thoughts in mind, let's turn our attention to the lines of the text.

**UNCLAS**
**MSGID/GENADMIN/HQ ACC//**
**SUBJ/EXERCISE SAFETY//**
**REF/A/MSG/HQ ACC DOY/291500ZNOV95//**
**POC/NAME/RANK/ORGANIZATION/LOC: BASE/TEL:DSN XXX-XXXX//**
**RMKS/EXERCISE PLAY SHOULD BE AS REALISTIC, BUT AS SAFE AS POSSIBLE. THIS MESSAGE FOR TRAINING PURPOSES ONLY.//**

**Figure 1-3. USMTF Message.**

The text of every TCC message should be in USMTF (**U**nited **S**tates **M**essage **T**ext **F**ormat) as shown figure 1-3. USMTF was

created to have a message template so that all message text, no matter which office is the originator, it is in the same format. The first line of USMTF contains the message identifier, then the originator of the message. The subject line follows and then at a minimum the remarks section is identified on the next line. USMTF can be created automatically using the software program called JAMPS (**J**oint **A**utomated **M**essage **P**reparation **S**ystem).

**MSGID/** (MeSsaGe ID) **-** It tells the reader which format to expect for the message and conveys information about the subject of the message. It also identifies the type of message.

**SUBJ/** - The subject line identifies the content of the message.

**REF/** - (REFerence). Identifies to the reader any previous communications or correspondence that affect the message. If no material is being referenced, REF is not used.

**POC/** - Identifies a point of contact for a message.

**RMKS/** - The actual idea or thought the originator wants to get across.

***First line of text***

The first line of text begins two lines below the last address element. The first letter of each line of text is flush with the left margin. On the first line and in this order you'll find: the security classification, special handling designators, flagwords, codewords, and exercise name. This order is adjusted accordingly if not all elements are used. Other indicators that concern security should be placed as near the classification as possible within the above order. One space is between each letter of the classification, except for unclassified.

*Example:*

UNCLAS
UNCLAS E F T O FOUO
S E C R E T SPECAT SIOP-ESI

***Second line***

The second line of text must include the message subject. It may also contain delivery instructions, action suspense, message division into parts, and reference. If necessary, these may be continued on subsequent lines of text. Delivery instructions identify the specific addressee to whom the message is to be delivered.

*Example:*

UNCLAS
FOR MAJ CARL JONES

***Subject line***

The subject line identifies the content of the message. All messages have a subject line containing the following:

the letters SUBJ: followed by a message subject. If the message is classified, identity of the subject's classification is shown by the appropriate classification symbol.

*Example:*

C O N F I D E N T I A L
FOR MAJ CARL JONES
SUBJ: OPERATION CLEAN SWEEP (U)

***Action/Suspense***

The action/suspense indicates when the required action needs to be completed. Example: "SUSPENSE:" followed by the required date. A message may be divided into parts when portions of the message do not apply to all addressees.

*Example:*

UNCLAS
FOR (if needed)
SUBJ:
SUSPENSE: (if needed)
THIS MESSAGE IN THREE PARTS
PART ONE FOR ACC
PART TWO FOR AMC
PART THREE FOR ALL

When references are used, their identification is on the second or subsequent line of text.

*Example:*

UNCLAS
SUBJ: CLEAN SWEEP
REF: AF/SIM 071830Z NOV 96

***Main body***

The body of the message begins just below the second line of text. The main body should be brief because the length of a message directly burdens the handling time within communications channels. All lines must begin flush with the left margin. For classified messages, all paragraphs and subparagraphs must be marked with their classification. The last line of classified messages must include declassification or downgrading instructions. For exercise messages, the last words of the text will always be "EXERCISE," followed by the exercise identification.

## Date and time

As you probably already know, military date and time is represented differently than civilian time. In this lesson we'll explore military date and time so you, the communications specialist, are able to communicate effectively with both your peers and the customers using your communications systems. We have already discussed how

the DTG is entered on the DD Form 173 template, so now let’s take a closer look at how the military date and time is developed.

The date-time group (DTG) is the date and time a message was officially released for transmission.

At this point it may be a good idea to refresh your memory about the 12-hour/24-hour clock system and the date-time group rules. As you may recall, from your previous training, the 12-hour clock system is the most common method of telling time used by civilians. In contrast, the 24-hour clock system used by the military is based on the principle that a day consists of 24 different hours (0000-2300). The 24-hour clock is always expressed in four digits that eliminates the need for punctuation and suffixes. The first two digits show the hour of the day and the last two digits, the minutes after the hour. In military communications there is no such time as 2400. Instead, we use the minute before (2359) or the minute after (0001).

In communications use, the day of the month is indicated before the time of day. For example, the 23rd of the month, at 1450, is written 231450. In some cases, you also indicate the month of the year; for example, 231450 SEP. When expressing the month, use the three-letter abbreviation (JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC). The combination of the day, time, zone indicator, month, and year is a complete date-time group (231450Z SEP 91).

**Time zones**

A unique item used by the military in its expression of time is the time zone indicator. With the use of time zone indicators, someone in one part of world is able to communicate with someone in another part of the world about the time of an event’s occurrence without confusion

The most common time zone indicator used is the “Z” which is Greenwich Mean Time (GMT) and begins at Greenwich, England. This time is also referred to as “Zulu” time. In addition to GMT, there are 24 other time zones as indicated in the time zone figure. When expressing time midway between zones, both letters are used.

**Coordinates**

The 24 equidistant divisions of the earth’s surface are divided based on coordinates of Longitude East and/or West. Coordinate divisions are straight lines from pole to pole and will not, in most cases, conform to time zone delineations over land areas. Each hour of time is thus related to approximately 15 degrees of distance.

**Lettering the zones**

The 25 time zone areas are identified by use of letters. Beginning with the letter “A” which is just east of Greenwich, England, the letters extend eastward through “M.” The letters “M” and “Y” share the international date line zone. The letter system from “Z” going west begins with “N” and extends westward through “Y,” again ending with the international date line and sharing the zone with “M.” The letter “J” is omitted (history suggests that J was not used when the time zone chart was first agreed upon by international navigators because the Spanish alphabet had no J).

**The plus and minus way to calculate a zone**

The plus and minus system is probably the most commonly used calculation. It begins at the zone through which the zero meridian passes (bisecting Greenwich, England, thus “Greenwich Civil Time, or Greenwich Mean Time”). Minus zones begin with -1 and extend eastward through -12. The plus zones, begin with +1 and extend westward through +12. Thus -12 and +12 are the same zone.

**Determining “Z” time**

If the time involved is given in AM-PM hours and you wish to know the corresponding Z time, first convert the AM-PM time to military time. To do this, start your calculation from the time zone of the original AM-PM time. Then, count the time zones between the start zone to the “Z” zone. If you are counting East, add your count to your original time to get the Z time. If you are counting West, subtract your count from your original time. For example, if it is 2:40 PM in Washington D.C., it is 1940Z time all over the world. Times in messages is expressed as four figures followed by a time zone letter.

Most military dates are expressed by one or two figures indicating the date of the month followed by the first three letters of the name of the month and the last two figures of the year. For example, 9 Oct 91. A night is described by the two dates over which it extends. Example; night 29/30 Sep 91.

When indicating date and time together, the date-time is expressed as six figures followed by the time zone letter. The first pair of digits indicates the date, the second pair indicates the hour (on a 24-hour clock) and the third pair indicates the minutes past the hour. For example, 061530Z (or any other appropriate time zone letter). The time zone letter may be omitted in the texts of messages that involve a large number of times and/or date-time groups when a covering expression such as “all times Victor” is used.

## How are Precedences assigned?

A message must not be assigned a precedence higher than that required to ensure that all addressees receive it within reasonable time objectives. The precedence assigned to a message indicates the speed with which the message must arrive at the designated address. Speed-of-service is based on the total time taken to process the message from the time the message is delivered to the originating TCC, to the time the message is available for pickup at the addressee's TCC. Messages are processed in order of precedence. There are 5 prosigns (**pro**cedure **signs**) used to represent these precedences. A prosign is a letter, or group of letters, assigned a definite meaning.
The precedences and the associated prosigns we'll be discussing in this lesson are:

- **Y** for EMERGENCY COMMAND PRECEDENCE
- **Z** for FLASH
- **O** for IMMEDIATE
- **P** for PRIORITY
- **R** for ROUTINE

The appropriate use of the these precedence categories is to be determined by careful consideration of the following definitions:

**Y - Emergency (handled as fast as humanly possible with a goal of less than 5 minutes)**

The letter "Y" indicates that a message has a FLASH preemption capability designated Emergency Command Precedence (ECP). This precedence is reserved for the National Command Authority (NCA) and certain designated commanders of Unified and Specified Commands are authorized to use the ECP capability of the AUTODIN system and then, only for certain designated emergency action command and control messages.

**Z - Flash (handled as fast as humanly possible with a goal of less than 10 minutes)**

This precedence is reserved for initial enemy contact messages or operational combat messages of extreme urgency. Brevity is mandatory. Flash messages are handled ahead of all other messages of lower precedence.
Examples of Flash message traffic include:

*a.* Initial enemy contact reports.

*b.* Messages recalling or diverting friendly aircraft that are about to bomb targets unexpectedly occupied by friendly forces.

*c.* Messages taking emergency action to prevent conflict between friendly forces.

*d.* Warnings of imminent large scale attacks.

*e.* Extremely urgent intelligence messages.

*f.* Messages containing major strategic decisions of great urgency.

Messages of lower precedence are interrupted on all circuits involved until handling of the FLASH messages is completed. In automatic systems where automatic interruption of lower precedence messages is not provided, adequate procedures are to be prescribed to ensure that FLASH messages are not delayed.

**O - Immediate (handled in 30 minutes or less)**

The original title was Operational Immediate, thus the precedence Immediate was assigned the prosign O. This precedence is reserved for very urgent messages relating to situations that gravely affect the security of national/allied forces or the populace. Immediate messages are handled ahead of all other messages of lower precedence.

Examples of Immediate message traffic:

*a.* The amplifying of reports of initial enemy contact.

*b.* Reports of unusual major movements of the military forces of foreign powers in times of peace or strained relations.

*c.* Messages that report enemy counterattack or that request or cancel additional support.

*d.* Attack orders to commit a force in reserve without delay.

*e.* Messages concerning logistical support of special weapons when they are essential to sustain operations.

*f.* Reports of widespread civil disturbance.

*g.* Reports of warning of grave natural disaster (earthquake, flood, storm, etc.).

*h.* Requests for or direction concerning distress assistance.

*i.* Urgent intelligence messages.

*j.* Aircraft movement reports (e.g., flight plans).

*k.* Cancellation messages to prevent unnecessary search/rescue actions.

Communications personnel will process, handle, transmit and deliver IMMEDIATE messages in the order received and ahead of all messages of lower precedence.

***P - Priority*** **(handled in 3 hours or less)**

This precedence is reserved for messages concerning the conduct of operations in progress and for other important and urgent matters when the precedence Routine will not suffice. Under normal circumstances, this is the highest precedence that may be assigned to an administrative message. Priority messages are handled ahead of all messages assigned the precedence of Routine.

Examples of Priority message traffic:

1. Situation reports where an attack is impending or where fire or air support will soon be placed.
2. Orders to aircraft formations or units to coincide with ground or naval operations.
3. Messages concerning immediate movement of naval, air, and ground forces.

Communications personnel should process, transmit, handle, and deliver PRIORITY messages in the order received and ahead of all messages of ROUTINE precedence. ROUTINE messages being transmitted should not be interrupted unless they are very long and a very substantial portion remains to be transmitted. PRIORITY messages should be delivered immediately upon receipt at the addressee destination.

***R - Routine*** **(handled in 6 hours or less)**

This precedence is for all types of messages that justify transmission by rapid means but are not of sufficient urgency and importance to require a higher precedence. Routine messages are handled in the order received and after all messages of higher precedence.

Examples of Routine message traffic:

1. Messages concerning normal peace time military operations, programs, and projects.
2. Messages concerning normal stabilized tactical operations.
3. Administrative, logistical, and personnel matters.

Communications personnel process, transmit and deliver ROUTINE messages in the order received and after all messages of a higher precedence. ROUTINE messages received during nonduty hours at the addressee destination may be held for morning delivery unless specifically prohibited by the command concerned.

Normally, the highest precedence assigned to an administrative message is PRIORITY. When two different precedences are used, the procedure is termed “dual precedence.” If the message is of dual precedence, the

precedence to the information addressees will be of a lower precedence. Remember, the precedence designation indicates both the relative order in which the communications workcenter transmits a message and the urgency of the subject matter to the addressee. The drafter selects the proper precedence, based upon the urgency of the subject matter and the speed of delivery which is considered necessary. Messages are processed by precedence; first in, first out.