

SUBJ: FLIGHT SERVICES

- 1. PURPOSE.** This change transmits revised pages to Order JO 7110.10T, Flight Services, and a Briefing Guide.
- 2. DISTRIBUTION.** This change is distributed to select offices in Washington headquarters, regional offices, the William J. Hughes Technical Center, and the Mike Monroney Aeronautical Center; to all air traffic field facilities and international aviation field offices; and to interested aviation public.
- 3. EFFECTIVE DATE.** March 12, 2009.
- 4. EXPLANATION OF CHANGES.** See the Explanation of Changes attachment which has editorial corrections and changes submitted through normal procedures. The Briefing Guide lists only new or modified material, along with background information.
- 5. DISPOSITION OF TRANSMITTAL.** Retain this transmittal until superseded by a new basic order.
- 6. PAGE CONTROL CHART.** See the Page Control Chart attachment.

Nancy B. Kalinowski
Vice President, System Operations Services

Date:

Flight Services Explanation of Changes

**Direct questions through appropriate facility/service center office staff
to the Office of Primary Interest (OPI)**

**a. 6-2-3. FLIGHT PLANS WITH AREA
NAVIGATION (RNAV) ROUTES IN DOMESTIC
U.S. AIRSPACE**

This change adds new paragraph 6-2-3, Flight Plans with Area Navigation (RNAV) Routes in Domestic U.S. Airspace. This proposal cancels and incorporates N JO 7110.488, Flight Plans with Area Navigation (RNAV) Routes in Domestic U.S. Airspace, effective July 11, 2008.

b. Editorial/format changes were made where necessary. Revision bars were not used because of the insignificant nature of these changes.

PAGE CONTROL CHART

REMOVE PAGES	DATED	INSERT PAGES	DATED
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PCG A-12 through A-16	7/31/08	PCG A-12 through A-17	3/12/09
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PCG F-3	2/14/08	PCG F-3	2/14/08
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PCG N-1 through N-4	2/14/08	PCG N-1 through N-4	3/12/09
PCG O-1	2/14/08	PCG O-1	2/14/08
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Chapter 1. Introduction

Section 1. General

1-1-1. PURPOSE

This order prescribes procedures and phraseology for use by air traffic personnel providing flight services. Flight service specialists are required to be familiar with the provisions of this order that pertain to their operational responsibilities and to exercise their best judgment if they encounter situations that are not covered.

1-1-2. DISTRIBUTION

This order is distributed to selected offices in Washington headquarters, regional offices, service area offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, all air traffic field facilities, international aviation field offices, and interested aviation public.

1-1-3. CANCELLATION

FAA Order 7110.10S, Flight Services, dated February 16, 2006, and all changes to it are canceled.

1-1-4. EXPLANATION OF CHANGES

Changes incorporated into this basic order as well as changes submitted in the future are found in the explanation of changes page(s). It is advisable to retain these page(s) throughout the duration of the basic order. If further information is desired, direct questions through the appropriate facility/service area office staff to Flight Services Safety and Operations Support, Operational Procedures.

1-1-5. EFFECTIVE DATE

- a. This order is effective February 14, 2008.
- b. This order and its changes are scheduled to be published to coincide with AIRAC dates. The effective dates will be:

Publication Schedule		
Basic or Change	Cutoff Date for Submission	Effective Date of Publication
JO 7110.10T	8/30/07	2/14/08
Change 1	2/14/08	7/31/08
Change 2	7/31/08	3/12/09
Change 3	3/12/09	8/27/09
JO 7110.10U	8/27/09	2/11/10

- c. Facilities shall notify service area office distribution officers if orders or changes are not received at least 30 days prior to effective dates.

1-1-6. RECOMMENDATION FOR PROCEDURAL CHANGES

- a. Submit recommended changes directly to the facility management.
- b. Procedural changes will not be made to this order until software for Model 1 Full Capacity (M1FC), AISR and the Operational and Supportability Implementation System (OASIS) has been adapted to accomplish the revised procedures.

1-1-7. SUBSCRIPTION INFORMATION

This publication may be purchased from the U.S. Government Printing Office. Address subscription inquiries to:

Superintendent of Documents
U.S. Government Printing Office
P.O. Box 979050
Online: <http://bookstore.gpo.gov>

FAA air traffic publications are also available on the FAA's web site at:
http://www.faa.gov/airports_airtraffic/air_traffic/publications/

FB:0330 AA: PD:JOE PILOT
 HB:DSM NB: CR:R/W TL:
 OP:
 CP:KFODYFYX
 TA:2100

NOTE–

1. MIFC will autoaddress the CP field, automatically extract the required items from the flight plan mask and transmit a flight proposal to the departure tie-in AFSS/FSS.

MIFC will automatically fill in the originator of the flight plan in the RM field when the flight plan is transmitted.

2. For civil flight movement messages with remarks, precede the remarks with a dollar symbol (\$).

3. OASIS will autoaddress the Closure Points field, automatically extract the required items from the flight plan, insert the originator of the flight plan into the Remarks field, and transmit a flight proposal to the departure tie-in AFSS/FSS at a time determined by the facility parameter.

6–2–3. FLIGHT PLANS WITH AREA NAVIGATION (RNAV) ROUTES IN DOMESTIC U.S. AIRSPACE

Use FAA Form 7233–4, International Flight Plan, for pilots filing flight plans in domestic U.S. airspace if automatic assignment of any of the following RNAV routes are desired: RNAV Standard Instrument Departure (SID); RNAV Standard Terminal Arrival Route (STAR); and/or RNAV Point-to-Point (PTP). For these flight plans, adhere to the following guidelines:

a. Item 10, Equipment. Enter “Z” in the equipment field in addition to other entries pertaining to radio communication, navigation and approach aids.

EXAMPLE–
SDGIWZ/S

b. Item 18, Other Information.

1. If the aircraft is RNAV 1 or RNAV 2 capable, enter “NAV/RNV” followed by the appropriate RNAV accuracy value:

- (a) RNAV 1 SID, enter “D1”.
- (b) RNAV 1 STAR, enter “A1”.
- (c) En route RNAV, enter “E2”.

EXAMPLE–
 NAV/RNVDI
 NAV/RNVAI
 NAV/RNVE2
 NAV/RNVDIAI
 NAV/RNVDIE2AI

NOTE–

The “D,” “E,” and “A” characters may appear in any order following “NAV/RNV.”

2. If the aircraft is RNAV PTP capable but not RNAV 1 and/or RNAV 2 capable, enter “RMK/PTP” and “NAV/RNVE99”.

EXAMPLE–
 RMK/PTP NAV/RNVE99

NOTE–

Procedures contained in paragraph 6–2–3 do not apply to flights whose route remains entirely within Alaska domestic airspace.

6–2–4. ENTRY OF MILITARY IFR MULTILEG STOPOVER FLIGHT PLAN

a. Complete all FP fields down through time en route or remarks for the first leg. Use MI in the flight rules field. This will hold the flight plan on the proposed list for flight notification.

b. All subsequent legs shall be preceded by a slant and recorded in the route field after the first leg: DESTINATION, ETE, AIRSPEED, P–TIME, ALTITUDE, ROUTE, and remarks for each leg.

c. After all legs have been recorded properly, the FP should autoaddress the ARTCC of the first leg departure point in the OP: field and all destination BASOPS stations in the CP: field. GI will send the first leg to the appropriate ARTCC and place the flight plan on the proposed list.

EXAMPLE–

MIFC
 FR:MI AI:BAT21 AT:F16/R TS:450 DD:DBQ TM:P1700
 AE:280
 RT:DBQ..TNU..OFF/FOE 0+15 450 P1800 270
 OFF.FOE
 AD:OFF TE:0030 RM:*REMARKS SVT012115
 FB:0230 AA: PD:ON FILE BASOPS
 HB:DBQ NB:1 CR:OD TL: OP:ZCG
 CP:KOFFYXYX KFOEYXYX
 TA:1730

d. To send the second leg of the flight plan to the appropriate ARTCC, the original flight plan needs to be altered.

1. Display the flight plan (FPC).

2. Change the MI to I. It is not necessary to hold this leg for flight notification.

3. Make the necessary changes to indicate the next leg of the flight plan.

EXAMPLE–

MIFC

FR:I AI:BAT21 AT:F16/R TS:450 DD:OFF TM:P1800
AE:270

RT:OFF..FOE

AD:FOE TE:0015 RM:*REMARKS

FB: AA: PD:ON FILE BASOPS

HB:DBQ NB:1 CR:OD TL: OP:ZCP

CP:

TA:1815

NOTE–

If there is an additional leg, it must be taken from the original flight plan.

e. After all legs have been sent to their appropriate ARTCC, construct a flight notification message.

1. Retrieve the original flight plan from the proposal list.

2. Edit each leg preceded by a slant to indicate the destination, ETE and pertinent remarks.

3. Delete all other information and restore to the proposal list (STPM) and await activation.

EXAMPLE–

MIFC

FR:MI AI:BAT21 AT:F16/R TS:450 DD:DBQ TM:P1700
AE:280

RT:DBQ..TNU..OFF/FOE 0+15

AD:OFF TE:0030 RM:*REMARKS \$VTO12115

FB:0230 AA: PD:ON FILE BASOPS

HB:DBQ NB:1 CR:OD TL:

OP:ZCG

CP:KOFFYXYX KFOEYXYX

TA:

NOTE–

OASIS. Transmit only the applicable inbound and outbound flight notification information to intermediate tie-in facilities. Remarks common to all flight segments shall be entered in the Remarks text box for transmission. These remarks shall include: departure point, all stops and destination.

EXAMPLE–

DEPD TCM LNDG EDW DMA JAX ADW

NOTE–

OASIS. Detailed instructions for the processing of Military IFR Multi-Leg Stopover Flight Plans are contained in the WINGS online help and the WINGS System Users Guide.

6–2–5. ENTRY OF MILITARY VFR STOPOVER FLIGHT PLAN

a. File a military VFR stopover flight plan in the same format as a military IFR stopover.

b. After the flight plan is filed on the proposal list, display the flight plan (FP ACID). Use the CX keyword to cancel the flight plan. The complete flight plan is then on file for search and rescue.

EXAMPLE–

MIFC

FR:MV AI:G2034 AT:UHI/U TS:90 DD:FOD TM:P1800
AE:055RT:FOD..DSM..OFF/MLC 3+10 90 P2100 045
OFF..MLC/SZL

2+10 90 P0100 055 MLC..SZL

AD:OFF TE:0200 RM:\$VTO10600

FB:0400 AA: PD:ON FILE BASOPS

HB:DBQ NB:1 CR:O/D TL:

OP:

CP:KOFFYXYX KMLCYFYX KSZLYXYX

TA:2000

c. After the flight plan is cancelled, use the FPC keyword to display the flight plan on the screen. Change the RT field to show only the destination, ETE, and any pertinent remarks for all remaining legs. File the revised version onto the proposal list to await activation.

EXAMPLE–

MIFC

FR:MV AI:G2034 AT:UHI/U TS:90 DD:FOD TM:P1800
AE:055

RT:FOD..DSM..OFF/MLC 3+10/SZL 2+10

AD:OFF TE:0200 RM:\$VTO10600

FB:0400 AA: PD:ON FILE BASOPS

HB:DBQ NB:1 CR:OD TL:

OP:

CP:KOFFYXYX KMLCYFYX KSZLYXYX

TA:2000

NOTE–

OASIS. Transmit only the applicable inbound and outbound flight notification information to intermediate tie-in facilities. Remarks common to all flight segments shall be entered in the Remarks text box for transmission. These remarks shall include: departure point, all stops and destination.

EXAMPLE–

DEPD TCM LNDG EDW DMA JAX ADW

NOTE–

OASIS. Detailed instructions for the processing of Military VFR Stopover Flight Plans are contained in the WINGS online help and the WINGS System Users Guide.

PILOT/CONTROLLER GLOSSARY

PURPOSE

a. This Glossary was compiled to promote a common understanding of the terms used in the Air Traffic Control system. It includes those terms which are intended for pilot/controller communications. Those terms most frequently used in pilot/controller communications are printed in *bold italics*. The definitions are primarily defined in an operational sense applicable to both users and operators of the National Airspace System. Use of the Glossary will preclude any misunderstandings concerning the system's design, function, and purpose.

b. Because of the international nature of flying, terms used in the Lexicon, published by the International Civil Aviation Organization (ICAO), are included when they differ from FAA definitions. These terms are followed by "[ICAO]." For the reader's convenience, there are also cross references to related terms in other parts of the Glossary and to other documents, such as the Code of Federal Regulations (CFR) and the Aeronautical Information Manual (AIM).

c. This Glossary will be revised, as necessary, to maintain a common understanding of the system.

EXPLANATION OF CHANGES

a. Terms Added:

ATC SECURITY SERVICES
ATC SECURITY SERVICES POSITION
ATC SECURITY TRACKING
NAVIGATION SPECIFICATION [ICAO]
OPERATIONS SPECIFICATIONS
PERFORMANCE-BASED NAVIGATION (PBN) [ICAO]
SECURITY SERVICES AIRSPACE
TRANSPONDER OBSERVED

b. Terms Modified:

AREA NAVIGATION (RNAV) [ICAO]
DELAY ASSIGNMENT (DAS)
FLIGHT SERVICE STATION
MONITOR ALERT (MA)
MONITOR ALERT PARAMETER (MAP)

c. Editorial/format changes were made where necessary. Revision bars were not used due to the insignificant nature of the changes.

APD–

(See AUTOMATED PROBLEM DETECTION.)

APDIA–

(See AUTOMATED PROBLEM DETECTION INHIBITED AREA.)

APPROACH CLEARANCE– Authorization by ATC for a pilot to conduct an instrument approach. The type of instrument approach for which a clearance and other pertinent information is provided in the approach clearance when required.

(See CLEARED APPROACH.)

(See INSTRUMENT APPROACH PROCEDURE.)

(Refer to AIM.)

(Refer to 14 CFR Part 91.)

APPROACH CONTROL FACILITY– A terminal ATC facility that provides approach control service in a terminal area.

(See APPROACH CONTROL SERVICE.)

(See RADAR APPROACH CONTROL FACILITY.)

APPROACH CONTROL SERVICE– Air traffic control service provided by an approach control facility for arriving and departing VFR/IFR aircraft and, on occasion, en route aircraft. At some airports not served by an approach control facility, the ARTCC provides limited approach control service.

(See ICAO term APPROACH CONTROL SERVICE.)

(Refer to AIM.)

APPROACH CONTROL SERVICE [ICAO]– Air traffic control service for arriving or departing controlled flights.

APPROACH GATE– An imaginary point used within ATC as a basis for vectoring aircraft to the final approach course. The gate will be established along the final approach course 1 mile from the final approach fix on the side away from the airport and will be no closer than 5 miles from the landing threshold.

APPROACH LIGHT SYSTEM–

(See AIRPORT LIGHTING.)

APPROACH SEQUENCE– The order in which aircraft are positioned while on approach or awaiting approach clearance.

(See LANDING SEQUENCE.)

(See ICAO term APPROACH SEQUENCE.)

APPROACH SEQUENCE [ICAO]– The order in which two or more aircraft are cleared to approach to land at the aerodrome.

APPROACH SPEED– The recommended speed contained in aircraft manuals used by pilots when making an approach to landing. This speed will vary for different segments of an approach as well as for aircraft weight and configuration.

APPROPRIATE ATS AUTHORITY [ICAO]– The relevant authority designated by the State responsible for providing air traffic services in the airspace concerned. In the United States, the “appropriate ATS authority” is the Program Director for Air Traffic Planning and Procedures, ATP-1.

APPROPRIATE AUTHORITY–

a. Regarding flight over the high seas: the relevant authority is the State of Registry.

b. Regarding flight over other than the high seas: the relevant authority is the State having sovereignty over the territory being overflown.

APPROPRIATE OBSTACLE CLEARANCE MINIMUM ALTITUDE– Any of the following:

(See MINIMUM EN ROUTE IFR ALTITUDE.)

(See MINIMUM IFR ALTITUDE.)

(See MINIMUM OBSTRUCTION CLEARANCE ALTITUDE.)

(See MINIMUM VECTORING ALTITUDE.)

APPROPRIATE TERRAIN CLEARANCE MINIMUM ALTITUDE– Any of the following:

(See MINIMUM EN ROUTE IFR ALTITUDE.)

(See MINIMUM IFR ALTITUDE.)

(See MINIMUM OBSTRUCTION CLEARANCE ALTITUDE.)

(See MINIMUM VECTORING ALTITUDE.)

APRON– A defined area on an airport or heliport intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance. With regard to seaplanes, a ramp is used for access to the apron from the water.

(See ICAO term APRON.)

APRON [ICAO]– A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, refueling, parking or maintenance.

ARC– The track over the ground of an aircraft flying at a constant distance from a navigational aid by reference to distance measuring equipment (DME).

AREA CONTROL CENTER [ICAO]– An air traffic control facility primarily responsible for ATC services being provided IFR aircraft during the en route phase of flight. The U.S. equivalent facility is an air route traffic control center (ARTCC).

AREA NAVIGATION (RNAV) – RNAV provides enhanced navigational capability to the pilot. RNAV equipment can compute the airplane position, actual track and ground speed and then provide meaningful information relative to a route of flight selected by the pilot. Typical equipment will provide the pilot with distance, time, bearing and crosstrack error relative to the selected “TO” or “active” waypoint and the selected route. Several distinctly different navigational systems with different navigational performance characteristics are capable of providing area navigational functions. Present day RNAV includes INS, LORAN, VOR/DME, and GPS systems. Modern multi-sensor systems can integrate one or more of the above systems to provide a more accurate and reliable navigational system. Due to the different levels of performance, area navigational capabilities can satisfy different levels of required navigational performance (RNP). The major types of equipment are:

a. VORTAC referenced or Course Line Computer (CLC) systems, which account for the greatest number of RNAV units in use. To function, the CLC must be within the service range of a VORTAC.

b. OMEGA/VLF, although two separate systems, can be considered as one operationally. A long-range navigation system based upon Very Low Frequency radio signals transmitted from a total of 17 stations worldwide.

c. Inertial (INS) systems, which are totally self-contained and require no information from external references. They provide aircraft position and navigation information in response to signals resulting from inertial effects on components within the system.

d. MLS Area Navigation (MLS/RNAV), which provides area navigation with reference to an MLS ground facility.

e. LORAN-C is a long-range radio navigation system that uses ground waves transmitted at low frequency to provide user position information at ranges of up to 600 to 1,200 nautical miles at both en route and approach altitudes. The usable signal coverage areas are determined by the signal-to-noise

ratio, the envelope-to-cycle difference, and the geometric relationship between the positions of the user and the transmitting stations.

f. GPS is a space-base radio positioning, navigation, and time-transfer system. The system provides highly accurate position and velocity information, and precise time, on a continuous global basis, to an unlimited number of properly equipped users. The system is unaffected by weather, and provides a worldwide common grid reference system.

(See ICAO term AREA NAVIGATION.)

AREA NAVIGATION (RNAV) [ICAO]– A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground– or space–based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

Note: Area navigation includes performance–based navigation as well as other operations that do not meet the definition of performance–based navigation.

AREA NAVIGATION (RNAV) APPROACH CONFIGURATION:

a. STANDARD T– An RNAV approach whose design allows direct flight to any one of three initial approach fixes (IAF) and eliminates the need for procedure turns. The standard design is to align the procedure on the extended centerline with the missed approach point (MAP) at the runway threshold, the final approach fix (FAF), and the initial approach/intermediate fix (IAF/IF). The other two IAFs will be established perpendicular to the IF.

b. MODIFIED T– An RNAV approach design for single or multiple runways where terrain or operational constraints do not allow for the standard T. The “T” may be modified by increasing or decreasing the angle from the corner IAF(s) to the IF or by eliminating one or both corner IAFs.

c. STANDARD I– An RNAV approach design for a single runway with both corner IAFs eliminated. Course reversal or radar vectoring may be required at busy terminals with multiple runways.

d. TERMINAL ARRIVAL AREA (TAA)– The TAA is controlled airspace established in conjunction with the Standard or Modified T and I RNAV approach configurations. In the standard TAA, there are three areas: straight-in, left base, and right base. The arc boundaries of the three areas of the TAA are

published portions of the approach and allow aircraft to transition from the en route structure direct to the nearest IAF. TAAs will also eliminate or reduce feeder routes, departure extensions, and procedure turns or course reversal.

1. STRAIGHT-IN AREA– A 30NM arc centered on the IF bounded by a straight line extending through the IF perpendicular to the intermediate course.

2. LEFT BASE AREA– A 30NM arc centered on the right corner IAF. The area shares a boundary with the straight-in area except that it extends out for 30NM from the IAF and is bounded on the other side by a line extending from the IF through the FAF to the arc.

3. RIGHT BASE AREA– A 30NM arc centered on the left corner IAF. The area shares a boundary with the straight-in area except that it extends out for 30NM from the IAF and is bounded on the other side by a line extending from the IF through the FAF to the arc.

ARINC– An acronym for Aeronautical Radio, Inc., a corporation largely owned by a group of airlines. ARINC is licensed by the FCC as an aeronautical station and contracted by the FAA to provide communications support for air traffic control and meteorological services in portions of international airspace.

ARMY AVIATION FLIGHT INFORMATION BULLETIN– A bulletin that provides air operation data covering Army, National Guard, and Army Reserve aviation activities.

ARO–
(See AIRPORT RESERVATION OFFICE.)

ARRESTING SYSTEM– A safety device consisting of two major components, namely, engaging or catching devices and energy absorption devices for the purpose of arresting both tailhook and/or nontailhook-equipped aircraft. It is used to prevent aircraft from overrunning runways when the aircraft cannot be stopped after landing or during aborted takeoff. Arresting systems have various names; e.g., arresting gear, hook device, wire barrier cable.

(See ABORT.)

(Refer to AIM.)

ARRIVAL AIRCRAFT INTERVAL– An internally generated program in hundredths of minutes based upon the AAR. AAI is the desired optimum interval between successive arrival aircraft over the vertex.

ARRIVAL CENTER– The ARTCC having jurisdiction for the impacted airport.

ARRIVAL DELAY– A parameter which specifies a period of time in which no aircraft will be metered for arrival at the specified airport.

ARRIVAL SECTOR– An operational control sector containing one or more meter fixes.

ARRIVAL SECTOR ADVISORY LIST– An ordered list of data on arrivals displayed at the PVD/MDM of the sector which controls the meter fix.

ARRIVAL SEQUENCING PROGRAM– The automated program designed to assist in sequencing aircraft destined for the same airport.

ARRIVAL TIME– The time an aircraft touches down on arrival.

ARSR–
(See AIR ROUTE SURVEILLANCE RADAR.)

ARTCC–
(See AIR ROUTE TRAFFIC CONTROL CENTER.)

ARTS–
(See AUTOMATED RADAR TERMINAL SYSTEMS.)

ASDA–
(See ACCELERATE-STOP DISTANCE AVAILABLE.)

ASDA [ICAO]–
(See ICAO Term ACCELERATE-STOP DISTANCE AVAILABLE.)

ASDE–
(See AIRPORT SURFACE DETECTION EQUIPMENT.)

ASF–
(See AIRPORT STREAM FILTER.)

ASLAR–
(See AIRCRAFT SURGE LAUNCH AND RECOVERY.)

ASP–
(See ARRIVAL SEQUENCING PROGRAM.)

ASR–
(See AIRPORT SURVEILLANCE RADAR.)

ASR APPROACH–

(See SURVEILLANCE APPROACH.)

ASSOCIATED– A radar target displaying a data block with flight identification and altitude information.

(See UNASSOCIATED.)

ATC–

(See AIR TRAFFIC CONTROL.)

ATC ADVISES– Used to prefix a message of noncontrol information when it is relayed to an aircraft by other than an air traffic controller.

(See ADVISORY.)

ATC ASSIGNED AIRSPACE– Airspace of defined vertical/lateral limits, assigned by ATC, for the purpose of providing air traffic segregation between the specified activities being conducted within the assigned airspace and other IFR air traffic.

(See SPECIAL USE AIRSPACE.)

ATC CLEARANCE–

(See AIR TRAFFIC CLEARANCE.)

ATC CLEARS– Used to prefix an ATC clearance when it is relayed to an aircraft by other than an air traffic controller.

ATC INSTRUCTIONS– Directives issued by air traffic control for the purpose of requiring a pilot to take specific actions; e.g., “Turn left heading two five zero,” “Go around,” “Clear the runway.”

(Refer to 14 CFR Part 91.)

ATC PREFERRED ROUTE NOTIFICATION– URET notification to the appropriate controller of the need to determine if an ATC preferred route needs to be applied, based on destination airport.

(See ROUTE ACTION NOTIFICATION.)

(See USER REQUEST EVALUATION TOOL.)

ATC PREFERRED ROUTES– Preferred routes that are not automatically applied by Host.

ATC REQUESTS– Used to prefix an ATC request when it is relayed to an aircraft by other than an air traffic controller.

ATC SECURITY SERVICES – Communications and security tracking provided by an ATC facility in support of the DHS, the DOD, or other Federal security elements in the interest of national security. Such security services are only applicable within

designated areas. ATC security services do not include ATC basic radar services or flight following.

ATC SECURITY SERVICES POSITION – The position responsible for providing ATC security services as defined. This position does not provide ATC, IFR separation, or VFR flight following services, but is responsible for providing security services in an area comprising airspace assigned to one or more ATC operating sectors. This position may be combined with control positions.

ATC SECURITY TRACKING – The continuous tracking of aircraft movement by an ATC facility in support of the DHS, the DOD, or other security elements for national security using radar (i.e., radar tracking) or other means (e.g., manual tracking) without providing basic radar services (including traffic advisories) or other ATC services not defined in this section.

ATCAA–

(See ATC ASSIGNED AIRSPACE.)

ATCRBS–

(See RADAR.)

ATCSCC–

(See AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER.)

ATCT–

(See TOWER.)

ATD–

(See ALONG–TRACK DISTANCE.)

ATIS–

(See AUTOMATIC TERMINAL INFORMATION SERVICE.)

ATIS [ICAO]–

(See ICAO Term AUTOMATIC TERMINAL INFORMATION SERVICE.)

ATS ROUTE [ICAO]– A specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services.

Note: The term “ATS Route” is used to mean variously, airway, advisory route, controlled or uncontrolled route, arrival or departure, etc.

AUTOLAND APPROACH– An autoland approach is a precision instrument approach to touchdown and, in some cases, through the landing rollout. An autoland approach is performed by the aircraft autopilot which is receiving position information

and/or steering commands from onboard navigation equipment.

Note: Autoland and coupled approaches are flown in VFR and IFR. It is common for carriers to require their crews to fly coupled approaches and autoland approaches (if certified) when the weather conditions are less than approximately 4,000 RVR.

(See COUPLED APPROACH.)

AUTOMATED INFORMATION TRANSFER— A precoordinated process, specifically defined in facility directives, during which a transfer of altitude control and/or radar identification is accomplished without verbal coordination between controllers using information communicated in a full data block.

AUTOMATED MUTUAL-ASSISTANCE VESSEL RESCUE SYSTEM— A facility which can deliver, in a matter of minutes, a surface picture (SURPIC) of vessels in the area of a potential or actual search and rescue incident, including their predicted positions and their characteristics.

(See FAAO JO 7110.65, Para 10–6–4, INFLIGHT CONTINGENCIES.)

AUTOMATED PROBLEM DETECTION (APD)— An Automation Processing capability that compares trajectories in order to predict conflicts.

AUTOMATED PROBLEM DETECTION BOUNDARY (APB)— The adapted distance beyond a facilities boundary defining the airspace within which URET performs conflict detection.

(See USER REQUEST EVALUATION TOOL.)

AUTOMATED PROBLEM DETECTION INHIBITED AREA (APDIA)— Airspace surrounding a terminal area within which APD is inhibited for all flights within that airspace.

AUTOMATED RADAR TERMINAL SYSTEMS (ARTS)— A generic term for several tracking systems included in the Terminal Automation Systems (TAS). ARTS plus a suffix roman numeral denotes a major modification to that system.

a. **ARTS IIIA**. The Radar Tracking and Beacon Tracking Level (RT&BTL) of the modular, programmable automated radar terminal system. ARTS IIIA detects, tracks, and predicts primary as well as secondary radar-derived aircraft targets. This more sophisticated computer-driven system upgrades the existing ARTS III system by providing improved tracking, continuous data recording, and fail-soft capabilities.

b. **Common ARTS**. Includes ARTS IIE, ARTS IIIIE; and ARTS IIIIE with ACD (see DTAS) which combines functionalities of the previous ARTS systems.

c. **Programmable Indicator Data Processor (PIDP)**. The PIDP is a modification to the AN/TPX–42 interrogator system currently installed in fixed RAPCONs. The PIDP detects, tracks, and predicts secondary radar aircraft targets. These are displayed by means of computer-generated symbols and alphanumeric characters depicting flight identification, aircraft altitude, ground speed, and flight plan data. Although primary radar targets are not tracked, they are displayed coincident with the secondary radar targets as well as with the other symbols and alphanumerics. The system has the capability of interfacing with ARTCCs.

AUTOMATED WEATHER SYSTEM— Any of the automated weather sensor platforms that collect weather data at airports and disseminate the weather information via radio and/or landline. The systems currently consist of the Automated Surface Observing System (ASOS), Automated Weather Sensor System (AWSS) and Automated Weather Observation System (AWOS).

AUTOMATED UNICOM— Provides completely automated weather, radio check capability and airport advisory information on an Automated UNICOM system. These systems offer a variety of features, typically selectable by microphone clicks, on the UNICOM frequency. Availability will be published in the Airport/Facility Directory and approach charts.

AUTOMATIC ALTITUDE REPORT—
(See ALTITUDE READOUT.)

AUTOMATIC ALTITUDE REPORTING— That function of a transponder which responds to Mode C interrogations by transmitting the aircraft's altitude in 100-foot increments.

AUTOMATIC CARRIER LANDING SYSTEM— U.S. Navy final approach equipment consisting of precision tracking radar coupled to a computer data link to provide continuous information to the aircraft, monitoring capability to the pilot, and a backup approach system.

AUTOMATIC DEPENDENT SURVEILLANCE (ADS) [ICAO]— A surveillance technique in which aircraft automatically provide, via a data link, data derived from on-board navigation and position

fixing systems, including aircraft identification, four dimensional position and additional data as appropriate.

AUTOMATIC DEPENDENT SURVEILLANCE–BROADCAST (ADS-B)– A surveillance system in which an aircraft or vehicle to be detected is fitted with cooperative equipment in the form of a data link transmitter. The aircraft or vehicle periodically broadcasts its GPS–derived position and other information such as velocity over the data link, which is received by a ground–based transmitter/receiver (transceiver) for processing and display at an air traffic control facility.

(See GLOBAL POSITIONING SYSTEM.)

(See GROUND–BASED TRANSCEIVER.)

AUTOMATIC DEPENDENT SURVEILLANCE–CONTRACT (ADS-C)– A data link position reporting system, controlled by a ground station, that establishes contracts with an aircraft’s avionics that occur automatically whenever specific events occur, or specific time intervals are reached.

AUTOMATIC DIRECTION FINDER– An aircraft radio navigation system which senses and indicates the direction to a L/MF nondirectional radio beacon (NDB) ground transmitter. Direction is indicated to the pilot as a magnetic bearing or as a relative bearing to the longitudinal axis of the aircraft depending on the type of indicator installed in the aircraft. In certain applications, such as military, ADF operations may be based on airborne and ground transmitters in the VHF/UHF frequency spectrum.

(See BEARING.)

(See NONDIRECTIONAL BEACON.)

AUTOMATIC FLIGHT INFORMATION SERVICE (AFIS) – ALASKA FSSs ONLY– The continuous broadcast of recorded non–control information at airports in Alaska where a FSS provides local airport advisory service. The AFIS broadcast automates the repetitive transmission of essential but routine information such as weather, wind, altimeter, favored runway, breaking action, airport NOTAMs, and other applicable information. The information is continuously broadcast over a discrete VHF radio frequency (usually the ASOS frequency.)

AUTOMATIC TERMINAL INFORMATION SERVICE– The continuous broadcast of recorded noncontrol information in selected terminal areas. Its purpose is to improve controller effectiveness and to relieve frequency congestion by automating the repetitive transmission of essential but routine information; e.g., “Los Angeles information Alfa. One three zero zero Coordinated Universal Time. Weather, measured ceiling two thousand overcast, visibility three, haze, smoke, temperature seven one, dew point five seven, wind two five zero at five, altimeter two niner niner six. I-L-S Runway Two Five Left approach in use, Runway Two Five Right closed, advise you have Alfa.”

(See ICAO term AUTOMATIC TERMINAL INFORMATION SERVICE.)

(Refer to AIM.)

AUTOMATIC TERMINAL INFORMATION SERVICE [ICAO]– The provision of current, routine information to arriving and departing aircraft by means of continuous and repetitive broadcasts throughout the day or a specified portion of the day.

AUTOROTATION– A rotorcraft flight condition in which the lifting rotor is driven entirely by action of the air when the rotorcraft is in motion.

a. Autorotative Landing/Touchdown Autorotation. Used by a pilot to indicate that the landing will be made without applying power to the rotor.

b. Low Level Autorotation. Commences at an altitude well below the traffic pattern, usually below 100 feet AGL and is used primarily for tactical military training.

c. 180 degrees Autorotation. Initiated from a downwind heading and is commenced well inside the normal traffic pattern. “Go around” may not be possible during the latter part of this maneuver.

AVAILABLE LANDING DISTANCE (ALD)– The portion of a runway available for landing and roll-out for aircraft cleared for LAHSO. This distance is measured from the landing threshold to the hold-short point.

AVIATION WEATHER SERVICE– A service provided by the National Weather Service (NWS) and FAA which collects and disseminates pertinent weather information for pilots, aircraft operators, and ATC. Available aviation weather reports and

forecasts are displayed at each NWS office and FAA FSS.

(See EN ROUTE FLIGHT ADVISORY SERVICE.)

(See TRANSCRIBED WEATHER BROADCAST.)

(See WEATHER ADVISORY.)

(Refer to AIM.)

AWW–

(See SEVERE WEATHER FORECAST ALERTS.)

AZIMUTH (MLS)– A magnetic bearing extending from an MLS navigation facility.

Note: Azimuth bearings are described as magnetic and are referred to as “azimuth” in radio telephone communications.

D

D-ATIS–

(See DIGITAL-AUTOMATIC TERMINAL INFORMATION SERVICE.)

DA [ICAO]–

(See ICAO Term DECISION ALTITUDE/DECISION HEIGHT.)

DAIR–

(See DIRECT ALTITUDE AND IDENTITY READOUT.)

DANGER AREA [ICAO]– An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

Note: The term “Danger Area” is not used in reference to areas within the United States or any of its possessions or territories.

DAS–

(See DELAY ASSIGNMENT.)

DATA BLOCK–

(See ALPHANUMERIC DISPLAY.)

DEAD RECKONING– Dead reckoning, as applied to flying, is the navigation of an airplane solely by means of computations based on airspeed, course, heading, wind direction, and speed, groundspeed, and elapsed time.

DECISION ALTITUDE/DECISION HEIGHT [ICAO]– A specified altitude or height (A/H) in the precision approach at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Note 1: Decision altitude [DA] is referenced to mean sea level [MSL] and decision height [DH] is referenced to the threshold elevation.

Note 2: The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path.

DECISION HEIGHT– With respect to the operation of aircraft, means the height at which a decision must be made during an ILS, MLS, or PAR instrument

approach to either continue the approach or to execute a missed approach.

(See ICAO term DECISION ALTITUDE/DECISION HEIGHT.)

DECODER– The device used to decipher signals received from ATCRBS transponders to effect their display as select codes.

(See CODES.)

(See RADAR.)

DEFENSE VISUAL FLIGHT RULES– Rules applicable to flights within an ADIZ conducted under the visual flight rules in 14 CFR Part 91.

(See AIR DEFENSE IDENTIFICATION ZONE.)

(Refer to 14 CFR Part 91.)

(Refer to 14 CFR Part 99.)

DELAY ASSIGNMENT (DAS)– Delays are distributed to aircraft based on the traffic management program parameters. The delay assignment is calculated in 15–minute increments and appears as a table in Traffic Flow Management System (TFMS).

DELAY INDEFINITE (REASON IF KNOWN) EXPECT FURTHER CLEARANCE (TIME)– Used by ATC to inform a pilot when an accurate estimate of the delay time and the reason for the delay cannot immediately be determined; e.g., a disabled aircraft on the runway, terminal or center area saturation, weather below landing minimums, etc.

(See EXPECT FURTHER CLEARANCE (TIME).)

DELAY TIME– The amount of time that the arrival must lose to cross the meter fix at the assigned meter fix time. This is the difference between ACLT and VTA.

DEPARTURE CENTER– The ARTCC having jurisdiction for the airspace that generates a flight to the impacted airport.

DEPARTURE CONTROL– A function of an approach control facility providing air traffic control service for departing IFR and, under certain conditions, VFR aircraft.

(See APPROACH CONTROL FACILITY.)

(Refer to AIM.)

DEPARTURE SEQUENCING PROGRAM– A program designed to assist in achieving a specified interval over a common point for departures.

DEPARTURE TIME– The time an aircraft becomes airborne.

DESCENT SPEED ADJUSTMENTS– Speed deceleration calculations made to determine an accurate VTA. These calculations start at the transition point and use arrival speed segments to the vertex.

DESIRED COURSE–

a. True– A predetermined desired course direction to be followed (measured in degrees from true north).

b. Magnetic– A predetermined desired course direction to be followed (measured in degrees from local magnetic north).

DESIRED TRACK– The planned or intended track between two waypoints. It is measured in degrees from either magnetic or true north. The instantaneous angle may change from point to point along the great circle track between waypoints.

DETRESFA (DISTRESS PHASE) [ICAO]– The code word used to designate an emergency phase wherein there is reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger or require immediate assistance.

DEVIATIONS–

a. A departure from a current clearance, such as an off course maneuver to avoid weather or turbulence.

b. Where specifically authorized in the CFRs and requested by the pilot, ATC may permit pilots to deviate from certain regulations.

(Refer to AIM.)

DF–

(See DIRECTION FINDER.)

DF APPROACH PROCEDURE– Used under emergency conditions where another instrument approach procedure cannot be executed. DF guidance for an instrument approach is given by ATC facilities with DF capability.

(See DF GUIDANCE.)

(See DIRECTION FINDER.)

(Refer to AIM.)

DF FIX– The geographical location of an aircraft obtained by one or more direction finders.

(See DIRECTION FINDER.)

DF GUIDANCE– Headings provided to aircraft by facilities equipped with direction finding equipment. These headings, if followed, will lead the aircraft to

a predetermined point such as the DF station or an airport. DF guidance is given to aircraft in distress or to other aircraft which request the service. Practice DF guidance is provided when workload permits.

(See DIRECTION FINDER.)

(See DF FIX.)

(Refer to AIM.)

DF STEER–

(See DF GUIDANCE.)

DH–

(See DECISION HEIGHT.)

DH [ICAO]–

(See ICAO Term DECISION ALTITUDE/
DECISION HEIGHT.)

DIGITAL-AUTOMATIC TERMINAL INFORMATION SERVICE (D-ATIS)– The service provides text messages to aircraft, airlines, and other users outside the standard reception range of conventional ATIS via landline and data link communications to the cockpit. Also, the service provides a computer-synthesized voice message that can be transmitted to all aircraft within range of existing transmitters. The Terminal Data Link System (TDLS) D-ATIS application uses weather inputs from local automated weather sources or manually entered meteorological data together with preprogrammed menus to provide standard information to users. Airports with D-ATIS capability are listed in the Airport/Facility Directory.

DIGITAL TARGET– A computer-generated symbol representing an aircraft's position, based on a primary return or radar beacon reply, shown on a digital display.

DIGITAL TERMINAL AUTOMATION SYSTEM (DTAS)– A system where digital radar and beacon data is presented on digital displays and the operational program monitors the system performance on a real-time basis.

DIGITIZED TARGET– A computer-generated indication shown on an analog radar display resulting from a primary radar return or a radar beacon reply.

DIRECT– Straight line flight between two navigational aids, fixes, points, or any combination thereof. When used by pilots in describing off-airway routes, points defining direct route segments become compulsory reporting points unless the aircraft is under radar contact.

DIRECT ALTITUDE AND IDENTITY READ-OUT– The DAIR System is a modification to the

power or control. The standard overhead approach starts at a relatively high altitude over a runway (“high key”) followed by a continuous 180 degree turn to a high, wide position (“low key”) followed by a continuous 180 degree turn final. The standard straight-in pattern starts at a point that results in a straight-in approach with a high rate of descent to the runway. Flameout approaches terminate in the type approach requested by the pilot (normally fullstop).

FLIGHT CHECK– A call-sign prefix used by FAA aircraft engaged in flight inspection/certification of navigational aids and flight procedures. The word “recorded” may be added as a suffix; e.g., “Flight Check 320 recorded” to indicate that an automated flight inspection is in progress in terminal areas.

(See **FLIGHT INSPECTION**.)

(Refer to **AIM**.)

FLIGHT FOLLOWING–

(See **TRAFFIC ADVISORIES**.)

FLIGHT INFORMATION REGION– An airspace of defined dimensions within which Flight Information Service and Alerting Service are provided.

a. Flight Information Service. A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

b. Alerting Service. A service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid and to assist such organizations as required.

FLIGHT INFORMATION SERVICE– A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

FLIGHT INSPECTION– Inflight investigation and evaluation of a navigational aid to determine whether it meets established tolerances.

(See **FLIGHT CHECK**.)

(See **NAVIGATIONAL AID**.)

FLIGHT LEVEL– A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represent hundreds of feet. For example, flight level (FL) 250 represents a barometric altimeter indication of 25,000 feet; FL 255, an indication of 25,500 feet.

(See ICAO term **FLIGHT LEVEL**.)

FLIGHT LEVEL [ICAO]– A surface of constant atmospheric pressure which is related to a specific

pressure datum, 1013.2 hPa (1013.2 mb), and is separated from other such surfaces by specific pressure intervals.

Note 1: A pressure type altimeter calibrated in accordance with the standard atmosphere:

- a.** When set to a QNH altimeter setting, will indicate altitude;
- b.** When set to a QFE altimeter setting, will indicate height above the QFE reference datum; and
- c.** When set to a pressure of 1013.2 hPa (1013.2 mb), may be used to indicate flight levels.

Note 2: The terms ‘height’ and ‘altitude,’ used in Note 1 above, indicate altimetric rather than geometric heights and altitudes.

FLIGHT LINE– A term used to describe the precise movement of a civil photogrammetric aircraft along a predetermined course(s) at a predetermined altitude during the actual photographic run.

FLIGHT MANAGEMENT SYSTEMS– A computer system that uses a large data base to allow routes to be preprogrammed and fed into the system by means of a data loader. The system is constantly updated with respect to position accuracy by reference to conventional navigation aids. The sophisticated program and its associated data base insures that the most appropriate aids are automatically selected during the information update cycle.

FLIGHT MANAGEMENT SYSTEM PROCEDURE– An arrival, departure, or approach procedure developed for use by aircraft with a slant (/) E or slant (/) F equipment suffix.

FLIGHT PATH– A line, course, or track along which an aircraft is flying or intended to be flown.

(See **COURSE**.)

(See **TRACK**.)

FLIGHT PLAN– Specified information relating to the intended flight of an aircraft that is filed orally or in writing with an FSS or an ATC facility.

(See **FAST FILE**.)

(See **FILED**.)

(Refer to **AIM**.)

FLIGHT PLAN AREA– The geographical area assigned by regional air traffic divisions to a flight service station for the purpose of search and rescue for VFR aircraft, issuance of NOTAMs, pilot briefing, in-flight services, broadcast, emergency services, flight data processing, international operations, and aviation weather services. Three letter

identifiers are assigned to every flight service station and are annotated in AFDs and FAAO JO 7350.8, LOCATION IDENTIFIERS, as tie-in facilities.

(See FAST FILE.)

(See FILED.)

(Refer to AIM.)

FLIGHT RECORDER– A general term applied to any instrument or device that records information about the performance of an aircraft in flight or about conditions encountered in flight. Flight recorders may make records of airspeed, outside air temperature, vertical acceleration, engine RPM, manifold pressure, and other pertinent variables for a given flight.

(See ICAO term FLIGHT RECORDER.)

FLIGHT RECORDER [ICAO]– Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

Note: See Annex 6 Part I, for specifications relating to flight recorders.

FLIGHT SERVICE STATION (FSS) – An air traffic facility which provides pilot briefings, flight plan processing, en route radio communications, search and rescue services, and assistance to lost aircraft and aircraft in emergency situations. FSSs also relay ATC clearances, process Notices to Airmen, broadcast aviation weather and aeronautical information, and notify Customs and Border Protection of transborder flights. In addition, at selected locations, FSSs provide En Route Flight Advisory Service (Flight Watch) and Airport Advisory Service (AAS). In Alaska, designated FSSs also provide TWEB recordings and take weather observations.

FLIGHT STANDARDS DISTRICT OFFICE– An FAA field office serving an assigned geographical area and staffed with Flight Standards personnel who serve the aviation industry and the general public on matters relating to the certification and operation of air carrier and general aviation aircraft. Activities include general surveillance of operational safety, certification of airmen and aircraft, accident prevention, investigation, enforcement, etc.

FLIGHT TEST– A flight for the purpose of:

a. Investigating the operation/flight characteristics of an aircraft or aircraft component.

b. Evaluating an applicant for a pilot certificate or rating.

FLIGHT VISIBILITY–

(See VISIBILITY.)

FLIGHT WATCH– A shortened term for use in air-ground contacts to identify the flight service station providing En Route Flight Advisory Service; e.g., “Oakland Flight Watch.”

(See EN ROUTE FLIGHT ADVISORY SERVICE.)

FLIP–

(See DOD FLIP.)

FLY HEADING (DEGREES)– Informs the pilot of the heading he/she should fly. The pilot may have to turn to, or continue on, a specific compass direction in order to comply with the instructions. The pilot is expected to turn in the shorter direction to the heading unless otherwise instructed by ATC.

FLY-BY WAYPOINT– A fly-by waypoint requires the use of turn anticipation to avoid overshoot of the next flight segment.

FLY-OVER WAYPOINT– A fly-over waypoint precludes any turn until the waypoint is overflown and is followed by an intercept maneuver of the next flight segment.

FMA–

(See FINAL MONITOR AID.)

FMS–

(See FLIGHT MANAGEMENT SYSTEM.)

FMSP–

(See FLIGHT MANAGEMENT SYSTEM PROCEDURE.)

FORMATION FLIGHT– More than one aircraft which, by prior arrangement between the pilots, operate as a single aircraft with regard to navigation and position reporting. Separation between aircraft within the formation is the responsibility of the flight leader and the pilots of the other aircraft in the flight. This includes transition periods when aircraft within the formation are maneuvering to attain separation from each other to effect individual control and during join-up and breakaway.

a. A standard formation is one in which a proximity of no more than 1 mile laterally or longitudinally and within 100 feet vertically from the flight leader is maintained by each wingman.

b. Nonstandard formations are those operating under any of the following conditions:

operation; e.g., IFR takeoff or landing, alternate airport for IFR flight plans, VFR flight, etc.

(See IFR CONDITIONS.)

(See IFR TAKEOFF MINIMUMS AND DEPARTURE PROCEDURES.)

(See LANDING MINIMUMS.)

(See VFR CONDITIONS.)

(Refer to 14 CFR Part 91.)

(Refer to AIM.)

MINIMUM VECTORING ALTITUDE (MVA)– The lowest MSL altitude at which an IFR aircraft will be vectored by a radar controller, except as otherwise authorized for radar approaches, departures, and missed approaches. The altitude meets IFR obstacle clearance criteria. It may be lower than the published MEA along an airway or J-route segment. It may be utilized for radar vectoring only upon the controller's determination that an adequate radar return is being received from the aircraft being controlled. Charts depicting minimum vectoring altitudes are normally available only to the controllers and not to pilots.

(Refer to AIM.)

MINUTES-IN-TRAIL– A specified interval between aircraft expressed in time. This method would more likely be utilized regardless of altitude.

MIS–

(See METEOROLOGICAL IMPACT STATEMENT.)

MISSED APPROACH–

a. A maneuver conducted by a pilot when an instrument approach cannot be completed to a landing. The route of flight and altitude are shown on instrument approach procedure charts. A pilot executing a missed approach prior to the Missed Approach Point (MAP) must continue along the final approach to the MAP.

b. A term used by the pilot to inform ATC that he/she is executing the missed approach.

c. At locations where ATC radar service is provided, the pilot should conform to radar vectors when provided by ATC in lieu of the published missed approach procedure.

(See MISSED APPROACH POINT.)

(Refer to AIM.)

MISSED APPROACH POINT– A point prescribed in each instrument approach procedure at which a missed approach procedure shall be executed if the required visual reference does not exist.

(See MISSED APPROACH.)

(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE.)

MISSED APPROACH PROCEDURE [ICAO]– The procedure to be followed if the approach cannot be continued.

MISSED APPROACH SEGMENT–

(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE.)

MLDI–

(See METER LIST DISPLAY INTERVAL.)

MLS–

(See MICROWAVE LANDING SYSTEM.)

MLS CATEGORIES–

a. MLS Category I. An MLS approach procedure which provides for an approach to a height above touchdown of not less than 200 feet and a runway visual range of not less than 1,800 feet.

b. MLS Category II. Undefined until data gathering/analysis completion.

c. MLS Category III. Undefined until data gathering/analysis completion.

MM–

(See MIDDLE MARKER.)

MNPS–

(See MINIMUM NAVIGATION PERFORMANCE SPECIFICATION.)

MNPSA–

(See MINIMUM NAVIGATION PERFORMANCE–SPECIFICATION AIRSPACE.)

MOA–

(See MILITARY OPERATIONS AREA.)

MOCA–

(See MINIMUM OBSTRUCTION CLEARANCE ALTITUDE.)

MODE– The letter or number assigned to a specific pulse spacing of radio signals transmitted or received by ground interrogator or airborne transponder components of the Air Traffic Control Radar Beacon

System (ATCRBS). Mode A (military Mode 3) and Mode C (altitude reporting) are used in air traffic control.

(See INTERROGATOR.)

(See RADAR.)

(See TRANSPONDER.)

(See ICAO term MODE.)

(Refer to AIM.)

MODE (SSR MODE) [ICAO]– The letter or number assigned to a specific pulse spacing of the interrogation signals transmitted by an interrogator. There are 4 modes, A, B, C and D specified in Annex 10, corresponding to four different interrogation pulse spacings.

MODE C INTRUDER ALERT– A function of certain air traffic control automated systems designed to alert radar controllers to existing or pending situations between a tracked target (known IFR or VFR aircraft) and an untracked target (unknown IFR or VFR aircraft) that requires immediate attention/action.

(See CONFLICT ALERT.)

MONITOR– (When used with communication transfer) listen on a specific frequency and stand by for instructions. Under normal circumstances do not establish communications.

■ MONITOR ALERT (MA)– A function of the TFMS that provides traffic management personnel with a tool for predicting potential capacity problems in individual operational sectors. The MA is an indication that traffic management personnel need to analyze a particular sector for actual activity and to determine the required action(s), if any, needed to control the demand.

■ MONITOR ALERT PARAMETER (MAP)– The number designated for use in monitor alert processing by the TFMS. The MAP is designated for each operational sector for increments of 15 minutes.

MOSAIC/MULTI-SENSOR MODE– Accepts positional data from multiple radar or ADS-B sites. Targets are displayed from a single source within a

radar sort box according to the hierarchy of the sources assigned.

MOVEMENT AREA– The runways, taxiways, and other areas of an airport/heliport which are utilized for taxiing/hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports/heliports with a tower, specific approval for entry onto the movement area must be obtained from ATC.

(See ICAO term MOVEMENT AREA.)

MOVEMENT AREA [ICAO]– That part of an aerodrome to be used for the takeoff, landing and taxiing of aircraft, consisting of the maneuvering area and the apron(s).

MOVING TARGET INDICATOR– An electronic device which will permit radar scope presentation only from targets which are in motion. A partial remedy for ground clutter.

MRA–

(See MINIMUM RECEPTION ALTITUDE.)

MSA–

(See MINIMUM SAFE ALTITUDE.)

MSAW–

(See MINIMUM SAFE ALTITUDE WARNING.)

MTI–

(See MOVING TARGET INDICATOR.)

MTR–

(See MILITARY TRAINING ROUTES.)

MULTICOM– A mobile service not open to public correspondence used to provide communications essential to conduct the activities being performed by or directed from private aircraft.

MULTIPLE RUNWAYS– The utilization of a dedicated arrival runway(s) for departures and a dedicated departure runway(s) for arrivals when feasible to reduce delays and enhance capacity.

MVA–

(See MINIMUM VECTORING ALTITUDE.)

N

NAS–

(See NATIONAL AIRSPACE SYSTEM.)

NATIONAL AIRSPACE SYSTEM– The common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. Included are system components shared jointly with the military.

NATIONAL BEACON CODE ALLOCATION PLAN AIRSPACE– Airspace over United States territory located within the North American continent between Canada and Mexico, including adjacent territorial waters outward to about boundaries of oceanic control areas (CTA)/Flight Information Regions (FIR).

(See FLIGHT INFORMATION REGION.)

NATIONAL FLIGHT DATA CENTER– A facility in Washington D.C., established by FAA to operate a central aeronautical information service for the collection, validation, and dissemination of aeronautical data in support of the activities of government, industry, and the aviation community. The information is published in the National Flight Data Digest.

(See NATIONAL FLIGHT DATA DIGEST.)

NATIONAL FLIGHT DATA DIGEST– A daily (except weekends and Federal holidays) publication of flight information appropriate to aeronautical charts, aeronautical publications, Notices to Airmen, or other media serving the purpose of providing operational flight data essential to safe and efficient aircraft operations.

NATIONAL SEARCH AND RESCUE PLAN– An interagency agreement which provides for the effective utilization of all available facilities in all types of search and rescue missions.

NAVAID–

(See NAVIGATIONAL AID.)

NAVAID CLASSES– VOR, VORTAC, and TACAN aids are classed according to their operational use. The three classes of NAVAIDs are:

- a. T– Terminal.
- b. L– Low altitude.

c. H– High altitude.

Note: The normal service range for T, L, and H class aids is found in the AIM. Certain operational requirements make it necessary to use some of these aids at greater service ranges than specified. Extended range is made possible through flight inspection determinations. Some aids also have lesser service range due to location, terrain, frequency protection, etc. Restrictions to service range are listed in Airport/Facility Directory.

NAVIGABLE AIRSPACE– Airspace at and above the minimum flight altitudes prescribed in the CFRs including airspace needed for safe takeoff and landing.

(Refer to 14 CFR Part 91.)

NAVIGATION REFERENCE SYSTEM (NRS)– The NRS is a system of waypoints developed for use within the United States for flight planning and navigation without reference to ground based navigational aids. The NRS waypoints are located in a grid pattern along defined latitude and longitude lines. The initial use of the NRS will be in the high altitude environment in conjunction with the High Altitude Redesign initiative. The NRS waypoints are intended for use by aircraft capable of point-to-point navigation.

NAVIGATION SPECIFICATION [ICAO]– A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

a. RNP specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP; e.g., RNP 4, RNP APCH.

b. RNAV specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV; e.g., RNAV 5, RNAV 1.

Note: The Performance-based Navigation Manual (Doc 9613), Volume II contains detailed guidance on navigation specifications.

NAVIGATIONAL AID– Any visual or electronic device airborne or on the surface which provides point-to-point guidance information or position data to aircraft in flight.

(See AIR NAVIGATION FACILITY.)

NBCAP AIRSPACE–

(See NATIONAL BEACON CODE ALLOCATION PLAN AIRSPACE.)

NDB–

(See NONDIRECTIONAL BEACON.)

NEGATIVE– “No,” or “permission not granted,” or “that is not correct.”

NEGATIVE CONTACT– Used by pilots to inform ATC that:

a. Previously issued traffic is not in sight. It may be followed by the pilot’s request for the controller to provide assistance in avoiding the traffic.

b. They were unable to contact ATC on a particular frequency.

NFDC–

(See NATIONAL FLIGHT DATA CENTER.)

NFDD–

(See NATIONAL FLIGHT DATA DIGEST.)

NIGHT– The time between the end of evening civil twilight and the beginning of morning civil twilight, as published in the American Air Almanac, converted to local time.

(See ICAO term NIGHT.)

NIGHT [ICAO]– The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise as may be specified by the appropriate authority.

Note: Civil twilight ends in the evening when the center of the sun’s disk is 6 degrees below the horizon and begins in the morning when the center of the sun’s disk is 6 degrees below the horizon.

NO GYRO APPROACH– A radar approach/vector provided in case of a malfunctioning gyro-compass or directional gyro. Instead of providing the pilot with headings to be flown, the controller observes the radar track and issues control instructions “turn right/left” or “stop turn” as appropriate.

(Refer to AIM.)

NO GYRO VECTOR–

(See NO GYRO APPROACH.)

NO TRANSGRESSION ZONE (NTZ)– The NTZ is a 2,000 foot wide zone, located equidistant between parallel runway final approach courses in which flight is not allowed.

NONAPPROACH CONTROL TOWER– Authorizes aircraft to land or takeoff at the airport controlled by the tower or to transit the Class D airspace. The primary function of a nonapproach control tower is the sequencing of aircraft in the traffic pattern and on the landing area. Nonapproach control towers also separate aircraft operating under instrument flight rules clearances from approach controls and centers. They provide ground control services to aircraft, vehicles, personnel, and equipment on the airport movement area.

NONCOMMON ROUTE/PORTION– That segment of a North American Route between the inland navigation facility and a designated North American terminal.

NONCOMPOSITE SEPARATION– Separation in accordance with minima other than the composite separation minimum specified for the area concerned.

NONDIRECTIONAL BEACON– An L/MF or UHF radio beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his/her bearing to or from the radio beacon and “home” on or track to or from the station. When the radio beacon is installed in conjunction with the Instrument Landing System marker, it is normally called a Compass Locator.

(See AUTOMATIC DIRECTION FINDER.)

(See COMPASS LOCATOR.)

NONMOVEMENT AREAS– Taxiways and apron (ramp) areas not under the control of air traffic.

NONPRECISION APPROACH–

(See NONPRECISION APPROACH PROCEDURE.)

NONPRECISION APPROACH PROCEDURE– A standard instrument approach procedure in which no electronic glideslope is provided; e.g., VOR, TACAN, NDB, LOC, ASR, LDA, or SDF approaches.

NONRADAR– Precedes other terms and generally means without the use of radar, such as:

a. Nonradar Approach. Used to describe instrument approaches for which course guidance on final

approach is not provided by ground-based precision or surveillance radar. Radar vectors to the final approach course may or may not be provided by ATC. Examples of nonradar approaches are VOR, NDB, TACAN, and ILS/MLS approaches.

(See FINAL APPROACH COURSE.)

(See FINAL APPROACH-IFR.)

(See INSTRUMENT APPROACH PROCEDURE.)

(See RADAR APPROACH.)

b. Nonradar Approach Control. An ATC facility providing approach control service without the use of radar.

(See APPROACH CONTROL FACILITY.)

(See APPROACH CONTROL SERVICE.)

c. Nonradar Arrival. An aircraft arriving at an airport without radar service or at an airport served by a radar facility and radar contact has not been established or has been terminated due to a lack of radar service to the airport.

(See RADAR ARRIVAL.)

(See RADAR SERVICE.)

d. Nonradar Route. A flight path or route over which the pilot is performing his/her own navigation. The pilot may be receiving radar separation, radar monitoring, or other ATC services while on a nonradar route.

(See RADAR ROUTE.)

e. Nonradar Separation. The spacing of aircraft in accordance with established minima without the use of radar; e.g., vertical, lateral, or longitudinal separation.

(See RADAR SEPARATION.)

(See ICAO term NONRADAR SEPARATION.)

NONRADAR SEPARATION [ICAO]– The separation used when aircraft position information is derived from sources other than radar.

NON-RESTRICTIVE ROUTING (NRR)– Portions of a proposed route of flight where a user can flight plan the most advantageous flight path with no requirement to make reference to ground-based NAVAIDs.

NOPAC–

(See NORTH PACIFIC.)

NORDO–

(See LOST COMMUNICATIONS.)

NORMAL OPERATING ZONE (NOZ)– The NOZ is the operating zone within which aircraft flight remains during normal independent simultaneous parallel ILS approaches.

NORTH AMERICAN ROUTE– A numerically coded route preplanned over existing airway and route systems to and from specific coastal fixes serving the North Atlantic. North American Routes consist of the following:

a. Common Route/Portion. That segment of a North American Route between the inland navigation facility and the coastal fix.

b. Noncommon Route/Portion. That segment of a North American Route between the inland navigation facility and a designated North American terminal.

c. Inland Navigation Facility. A navigation aid on a North American Route at which the common route and/or the noncommon route begins or ends.

d. Coastal Fix. A navigation aid or intersection where an aircraft transitions between the domestic route structure and the oceanic route structure.

NORTH AMERICAN ROUTE PROGRAM (NRP)– The NRP is a set of rules and procedures which are designed to increase the flexibility of user flight planning within published guidelines.

NORTH MARK– A beacon data block sent by the host computer to be displayed by the ARTS on a 360 degree bearing at a locally selected radar azimuth and distance. The North Mark is used to ensure correct range/azimuth orientation during periods of CENRAP.

NORTH PACIFIC– An organized route system between the Alaskan west coast and Japan.

NOTAM–

(See NOTICE TO AIRMEN.)

NOTAM [ICAO]– A notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

a. I Distribution– Distribution by means of telecommunication.

b. II Distribution– Distribution by means other than telecommunications.

NOTICE TO AIRMEN– A notice containing information (not known sufficiently in advance to publicize by other means) concerning the

establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations.

a. NOTAM(D)– A NOTAM given (in addition to local dissemination) distant dissemination beyond the area of responsibility of the Flight Service Station. These NOTAMs will be stored and available until canceled.

b. NOTAM(L)– A NOTAM given local dissemination by voice and other means, such as telautograph and telephone, to satisfy local user requirements.

c. FDC NOTAM– A NOTAM regulatory in nature, transmitted by USNOF and given system wide dissemination.

(See ICAO term NOTAM.)

NOTICES TO AIRMEN PUBLICATION– A publication issued every 28 days, designed primarily for the pilot, which contains current NOTAM information considered essential to the safety of flight as well as supplemental data to other aeronautical publications. The contraction NTAP is used in NOTAM text.

(See NOTICE TO AIRMEN.)

NRR–

(See NON–RESTRICTIVE ROUTING.)

NRS–

(See NAVIGATION REFERENCE SYSTEM.)

NTAP–

(See NOTICES TO AIRMEN PUBLICATION.)

NUMEROUS TARGETS VICINITY (LOCATION)– A traffic advisory issued by ATC to advise pilots that targets on the radar scope are too numerous to issue individually.

(See TRAFFIC ADVISORIES.)

O

OBSTACLE— An existing object, object of natural growth, or terrain at a fixed geographical location or which may be expected at a fixed location within a prescribed area with reference to which vertical clearance is or must be provided during flight operation.

OBSTACLE DEPARTURE PROCEDURE (ODP)— A preplanned instrument flight rule (IFR) departure procedure printed for pilot use in textual or graphic form to provide obstruction clearance via the least onerous route from the terminal area to the appropriate en route structure. ODPs are recommended for obstruction clearance and may be flown without ATC clearance unless an alternate departure procedure (SID or radar vector) has been specifically assigned by ATC.

(See IFR TAKEOFF MINIMUMS AND DEPARTURE PROCEDURES.)

(See STANDARD INSTRUMENT DEPARTURES.)

(Refer to AIM.)

OBSTACLE FREE ZONE— The OFZ is a three dimensional volume of airspace which protects for the transition of aircraft to and from the runway. The OFZ clearing standard precludes taxiing and parked airplanes and object penetrations, except for frangible NAVAID locations that are fixed by function. Additionally, vehicles, equipment, and personnel may be authorized by air traffic control to enter the area using the provisions of FAAO JO 7110.65, Para 3–1–5, VEHICLES/EQUIPMENT/PERSONNEL ON RUNWAYS. The runway OFZ and when applicable, the inner-approach OFZ, and the inner-transitional OFZ, comprise the OFZ.

a. Runway OFZ. The runway OFZ is a defined volume of airspace centered above the runway. The runway OFZ is the airspace above a surface whose elevation at any point is the same as the elevation of the nearest point on the runway centerline. The runway OFZ extends 200 feet beyond each end of the runway. The width is as follows:

1. For runways serving large airplanes, the greater of:

(a) 400 feet, or

(b) 180 feet, plus the wingspan of the most demanding airplane, plus 20 feet per 1,000 feet of airport elevation.

2. For runways serving only small airplanes:

(a) 300 feet for precision instrument runways.

(b) 250 feet for other runways serving small airplanes with approach speeds of 50 knots, or more.

(c) 120 feet for other runways serving small airplanes with approach speeds of less than 50 knots.

b. Inner-approach OFZ. The inner-approach OFZ is a defined volume of airspace centered on the approach area. The inner-approach OFZ applies only to runways with an approach lighting system. The inner-approach OFZ begins 200 feet from the runway threshold at the same elevation as the runway threshold and extends 200 feet beyond the last light unit in the approach lighting system. The width of the inner-approach OFZ is the same as the runway OFZ and rises at a slope of 50 (horizontal) to 1 (vertical) from the beginning.

c. Inner-transitional OFZ. The inner transitional surface OFZ is a defined volume of airspace along the sides of the runway and inner-approach OFZ and applies only to precision instrument runways. The inner-transitional surface OFZ slopes 3 (horizontal) to 1 (vertical) out from the edges of the runway OFZ and inner-approach OFZ to a height of 150 feet above the established airport elevation.

(Refer to AC 150/5300-13, Chapter 3.)

(Refer to FAAO JO 7110.65, Para 3–1–5, VEHICLES/EQUIPMENT/PERSONNEL ON RUNWAYS.)

OBSTRUCTION— Any object/obstacle exceeding the obstruction standards specified by 14 CFR Part 77, Subpart C.

OBSTRUCTION LIGHT— A light or one of a group of lights, usually red or white, frequently mounted on a surface structure or natural terrain to warn pilots of the presence of an obstruction.

OCEANIC AIRSPACE— Airspace over the oceans of the world, considered international airspace, where oceanic separation and procedures per the International Civil Aviation Organization are applied. Responsibility for the provisions of air traffic control

service in this airspace is delegated to various countries, based generally upon geographic proximity and the availability of the required resources.

OCEANIC DISPLAY AND PLANNING SYSTEM– An automated digital display system which provides flight data processing, conflict probe, and situation display for oceanic air traffic control.

OCEANIC NAVIGATIONAL ERROR REPORT– A report filed when an aircraft exiting oceanic airspace has been observed by radar to be off course. ONER reporting parameters and procedures are contained in FAAO 7110.82, Monitoring of Navigational Performance In Oceanic Areas.

OCEANIC PUBLISHED ROUTE– A route established in international airspace and charted or described in flight information publications, such as Route Charts, DOD Enroute Charts, Chart Supplements, NOTAMs, and Track Messages.

OCEANIC TRANSITION ROUTE– An ATS route established for the purpose of transitioning aircraft to/from an organized track system.

ODAPS–

(See OCEANIC DISPLAY AND PLANNING SYSTEM.)

ODP–

(See OBSTACLE DEPARTURE PROCEDURE.)

OFF COURSE– A term used to describe a situation where an aircraft has reported a position fix or is observed on radar at a point not on the ATC-approved route of flight.

OFF-ROUTE VECTOR– A vector by ATC which takes an aircraft off a previously assigned route. Altitudes assigned by ATC during such vectors provide required obstacle clearance.

OFFSET PARALLEL RUNWAYS– Staggered runways having centerlines which are parallel.

OFFSHORE/CONTROL AIRSPACE AREA– That portion of airspace between the U.S. 12 NM limit and the oceanic CTA/FIR boundary within which air traffic control is exercised. These areas are established to provide air traffic control services. Offshore/Control Airspace Areas may be classified as either Class A airspace or Class E airspace.

OFT–

(See OUTER FIX TIME.)

OM–

(See OUTER MARKER.)

OMEGA– An RNAV system designed for long-range navigation based upon ground-based electronic navigational aid signals.

ON COURSE–

a. Used to indicate that an aircraft is established on the route centerline.

b. Used by ATC to advise a pilot making a radar approach that his/her aircraft is lined up on the final approach course.

(See ON-COURSE INDICATION.)

ON-COURSE INDICATION– An indication on an instrument, which provides the pilot a visual means of determining that the aircraft is located on the centerline of a given navigational track, or an indication on a radar scope that an aircraft is on a given track.

ONE-MINUTE WEATHER– The most recent one minute updated weather broadcast received by a pilot from an uncontrolled airport ASOS/AWOS.

ONER–

(See OCEANIC NAVIGATIONAL ERROR REPORT.)

OPERATIONAL–

(See DUE REGARD.)

OPERATIONS SPECIFICATIONS [ICAO]– The authorizations, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.

OPPOSITE DIRECTION AIRCRAFT– Aircraft are operating in opposite directions when:

a. They are following the same track in reciprocal directions; or

b. Their tracks are parallel and the aircraft are flying in reciprocal directions; or

c. Their tracks intersect at an angle of more than 135°.

OPTION APPROACH– An approach requested and conducted by a pilot which will result in either a touch-and-go, missed approach, low approach, stop-and-go, or full stop landing.

(See CLEARED FOR THE OPTION.)

(Refer to AIM.)

ORGANIZED TRACK SYSTEM– A series of ATS routes which are fixed and charted; i.e., CEP,

NOPAC, or flexible and described by NOTAM; i.e., NAT TRACK MESSAGE.

OROCA— An off-route altitude which provides obstruction clearance with a 1,000 foot buffer in nonmountainous terrain areas and a 2,000 foot buffer in designated mountainous areas within the United States. This altitude may not provide signal coverage from ground-based navigational aids, air traffic control radar, or communications coverage.

OTR—

(See OCEANIC TRANSITION ROUTE.)

OTS—

(See ORGANIZED TRACK SYSTEM.)

OUT— The conversation is ended and no response is expected.

OUTER AREA (associated with Class C airspace)— Nonregulatory airspace surrounding designated Class C airspace airports wherein ATC provides radar vectoring and sequencing on a full-time basis for all IFR and participating VFR aircraft. The service provided in the outer area is called Class C service which includes: IFR/IFR—standard IFR separation; IFR/VFR—traffic advisories and conflict resolution; and VFR/VFR—traffic advisories and, as appropriate, safety alerts. The normal radius will be 20 nautical miles with some variations based on site-specific requirements. The outer area extends outward from the primary Class C airspace airport and extends from the lower limits of radar/radio coverage up to the ceiling of the approach control's delegated airspace excluding the Class C charted area and other airspace as appropriate.

(See CONFLICT RESOLUTION.)

(See CONTROLLED AIRSPACE.)

OUTER COMPASS LOCATOR—

(See COMPASS LOCATOR.)

OUTER FIX— A general term used within ATC to describe fixes in the terminal area, other than the final approach fix. Aircraft are normally cleared to these fixes by an Air Route Traffic Control Center or an Approach Control Facility. Aircraft are normally cleared from these fixes to the final approach fix or final approach course.

OR

OUTER FIX— An adapted fix along the converted route of flight, prior to the meter fix, for which crossing times are calculated and displayed in the metering position list.

OUTER FIX ARC— A semicircle, usually about a 50–70 mile radius from a meter fix, usually in high altitude, which is used by CTAS/HOST to calculate outer fix times and determine appropriate sector meter list assignments for aircraft on an established arrival route that will traverse the arc.

OUTER FIX TIME— A calculated time to depart the outer fix in order to cross the vertex at the ACLT. The time reflects descent speed adjustments and any applicable delay time that must be absorbed prior to crossing the meter fix.

OUTER MARKER— A marker beacon at or near the glideslope intercept altitude of an ILS approach. It is keyed to transmit two dashes per second on a 400 Hz tone, which is received aurally and visually by compatible airborne equipment. The OM is normally located four to seven miles from the runway threshold on the extended centerline of the runway.

(See INSTRUMENT LANDING SYSTEM.)

(See MARKER BEACON.)

(Refer to AIM.)

OVER— My transmission is ended; I expect a response.

OVERHEAD MANEUVER— A series of predetermined maneuvers prescribed for aircraft (often in formation) for entry into the visual flight rules (VFR) traffic pattern and to proceed to a landing. An overhead maneuver is not an instrument flight rules (IFR) approach procedure. An aircraft executing an overhead maneuver is considered VFR and the IFR flight plan is cancelled when the aircraft reaches the "initial point" on the initial approach portion of the maneuver. The pattern usually specifies the following:

- a. The radio contact required of the pilot.
- b. The speed to be maintained.
- c. An initial approach 3 to 5 miles in length.
- d. An elliptical pattern consisting of two 180 degree turns.
- e. A break point at which the first 180 degree turn is started.
- f. The direction of turns.
- g. Altitude (at least 500 feet above the conventional pattern).

h. A “Roll-out” on final approach not less than 1/4 mile from the landing threshold and not less than 300 feet above the ground.

OVERLYING CENTER– The ARTCC facility that is responsible for arrival/departure operations at a specific terminal.

P

P TIME–

(See PROPOSED DEPARTURE TIME.)

P-ACP–

(See PREARRANGED COORDINATION PROCEDURES.)

PAN-PAN– The international radio-telephony urgency signal. When repeated three times, indicates uncertainty or alert followed by the nature of the urgency.

(See MAYDAY.)

(Refer to AIM.)

PAR–

(See PRECISION APPROACH RADAR.)

PAR [ICAO]–

(See ICAO Term PRECISION APPROACH RADAR.)

PARALLEL ILS APPROACHES– Approaches to parallel runways by IFR aircraft which, when established inbound toward the airport on the adjacent final approach courses, are radar-separated by at least 2 miles.

(See FINAL APPROACH COURSE.)

(See SIMULTANEOUS ILS APPROACHES.)

PARALLEL MLS APPROACHES–

(See PARALLEL ILS APPROACHES.)

PARALLEL OFFSET ROUTE– A parallel track to the left or right of the designated or established airway/route. Normally associated with Area Navigation (RNAV) operations.

(See AREA NAVIGATION.)

PARALLEL RUNWAYS– Two or more runways at the same airport whose centerlines are parallel. In addition to runway number, parallel runways are designated as L (left) and R (right) or, if three parallel runways exist, L (left), C (center), and R (right).

PBCT–

(See PROPOSED BOUNDARY CROSSING TIME.)

PBN

(See ICAO Term PERFORMANCE–BASED NAVIGATION.)

PDC–

(See PRE–DEPARTURE CLEARANCE.)

PERFORMANCE–BASED NAVIGATION (PBN) [ICAO]– Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note: Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability, and functionality needed for the proposed operation in the context of a particular airspace concept.

PERMANENT ECHO– Radar signals reflected from fixed objects on the earth’s surface; e.g., buildings, towers, terrain. Permanent echoes are distinguished from “ground clutter” by being definable locations rather than large areas. Under certain conditions they may be used to check radar alignment.

PHOTO RECONNAISSANCE– Military activity that requires locating individual photo targets and navigating to the targets at a preplanned angle and altitude. The activity normally requires a lateral route width of 16 NM and altitude range of 1,500 feet to 10,000 feet AGL.

PILOT BRIEFING– A service provided by the FSS to assist pilots in flight planning. Briefing items may include weather information, NOTAMS, military activities, flow control information, and other items as requested.

(Refer to AIM.)

PILOT IN COMMAND– The pilot responsible for the operation and safety of an aircraft during flight time.

(Refer to 14 CFR Part 91.)

PILOT WEATHER REPORT– A report of meteorological phenomena encountered by aircraft in flight.

(Refer to AIM.)

PILOT’S DISCRETION– When used in conjunction with altitude assignments, means that ATC has offered the pilot the option of starting climb or descent whenever he/she wishes and conducting the climb or descent at any rate he/she wishes. He/she may temporarily level off at any intermediate

altitude. However, once he/she has vacated an altitude, he/she may not return to that altitude.

PIREP–

(See PILOT WEATHER REPORT.)

PITCH POINT– A fix/waypoint that serves as a transition point from a departure procedure or the low altitude ground-based navigation structure into the high altitude waypoint system.

PLANS DISPLAY– A display available in URET that provides detailed flight plan and predicted conflict information in textual format for requested Current Plans and all Trial Plans.

(See USER REQUEST EVALUATION TOOL.)

POFZ–

(See PRECISION OBSTACLE FREE ZONE.)

POINT OUT–

(See RADAR POINT OUT.)

POINT-TO-POINT (PTP)– A level of NRR service for aircraft that is based on traditional waypoints in their FMSs or RNAV equipment.

POLAR TRACK STRUCTURE– A system of organized routes between Iceland and Alaska which overlie Canadian MNPS Airspace.

***POSITION AND HOLD*–** Used by ATC to inform a pilot to taxi onto the departure runway in takeoff position and hold. It is not authorization for takeoff. It is used when takeoff clearance cannot immediately be issued because of traffic or other reasons.

(See CLEARED FOR TAKEOFF.)

POSITION REPORT– A report over a known location as transmitted by an aircraft to ATC.

(Refer to AIM.)

POSITION SYMBOL– A computer-generated indication shown on a radar display to indicate the mode of tracking.

POSITIVE CONTROL– The separation of all air traffic within designated airspace by air traffic control.

PRACTICE INSTRUMENT APPROACH– An instrument approach procedure conducted by a VFR or an IFR aircraft for the purpose of pilot training or proficiency demonstrations.

PRE-DEPARTURE CLEARANCE– An application with the Terminal Data Link System (TDLS) that

provides clearance information to subscribers, through a service provider, in text to the cockpit or gate printer.

PREARRANGED COORDINATION– A standardized procedure which permits an air traffic controller to enter the airspace assigned to another air traffic controller without verbal coordination. The procedures are defined in a facility directive which ensures standard separation between aircraft.

PREARRANGED COORDINATION PROCEDURES– A facility's standardized procedure that describes the process by which one controller shall allow an aircraft to penetrate or transit another controller's airspace in a manner that assures standard separation without individual coordination for each aircraft.

PRECIPITATION– Any or all forms of water particles (rain, sleet, hail, or snow) that fall from the atmosphere and reach the surface.

PRECIPITATION RADAR WEATHER DESCRIPTIONS – Existing radar systems cannot detect turbulence. However, there is a direct correlation between the degree of turbulence and other weather features associated with thunderstorms and the weather radar precipitation intensity. Controllers will issue (where capable) precipitation intensity as observed by radar when using weather and radar processor (WARP) or NAS ground based digital radars with weather capabilities. When precipitation intensity information is not available, the intensity will be described as UNKNOWN. When intensity levels can be determined, they shall be described as:

- a. LIGHT (< 30 dBZ)
- b. MODERATE (30 to 40 dBZ)
- c. HEAVY (> 40 to 50 dBZ)
- d. EXTREME (> 50 dBZ)

(Refer to AC 00-45, Aviation Weather Services.)

PRECISION APPROACH–

(See PRECISION APPROACH PROCEDURE.)

PRECISION APPROACH PROCEDURE– A standard instrument approach procedure in which an electronic glideslope/glidepath is provided; e.g., ILS, MLS, and PAR.

(See INSTRUMENT LANDING SYSTEM.)

(See MICROWAVE LANDING SYSTEM.)

(See PRECISION APPROACH RADAR.)

PRECISION APPROACH RADAR– Radar equipment in some ATC facilities operated by the FAA and/or the military services at joint-use civil/military locations and separate military installations to detect and display azimuth, elevation, and range of aircraft on the final approach course to a runway. This equipment may be used to monitor certain nonradar approaches, but is primarily used to conduct a precision instrument approach (PAR) wherein the controller issues guidance instructions to the pilot based on the aircraft's position in relation to the final approach course (azimuth), the glidepath (elevation), and the distance (range) from the touchdown point on the runway as displayed on the radar scope.

Note: The abbreviation "PAR" is also used to denote preferential arrival routes in ARTCC computers.

(See GLIDEPATH.)

(See PAR.)

(See PREFERENTIAL ROUTES.)

(See ICAO term PRECISION APPROACH RADAR.)

(Refer to AIM.)

PRECISION APPROACH RADAR [ICAO]– Primary radar equipment used to determine the position of an aircraft during final approach, in terms of lateral and vertical deviations relative to a nominal approach path, and in range relative to touchdown.

Note: Precision approach radars are designed to enable pilots of aircraft to be given guidance by radio communication during the final stages of the approach to land.

PRECISION OBSTACLE FREE ZONE (POFZ)– An 800 foot wide by 200 foot long area centered on the runway centerline adjacent to the threshold designed to protect aircraft flying precision approaches from ground vehicles and other aircraft when ceiling is less than 250 feet or visibility is less than 3/4 statute mile (or runway visual range below 4,000 feet.)

PRECISION RUNWAY MONITOR (PRM)– Provides air traffic controllers with high precision secondary surveillance data for aircraft on final approach to parallel runways that have extended centerlines separated by less than 4,300 feet. High resolution color monitoring displays (FMA) are required to present surveillance track data to controllers along with detailed maps depicting approaches and no transgression zone.

PREFERENTIAL ROUTES– Preferential routes (PDRs, PARs, and PDARs) are adapted in ARTCC computers to accomplish inter/intrafacility controller coordination and to assure that flight data is posted at the proper control positions. Locations having a need for these specific inbound and outbound routes normally publish such routes in local facility bulletins, and their use by pilots minimizes flight plan route amendments. When the workload or traffic situation permits, controllers normally provide radar vectors or assign requested routes to minimize circuitous routing. Preferential routes are usually confined to one ARTCC's area and are referred to by the following names or acronyms:

a. Preferential Departure Route (PDR). A specific departure route from an airport or terminal area to an en route point where there is no further need for flow control. It may be included in an Instrument Departure Procedure (DP) or a Preferred IFR Route.

b. Preferential Arrival Route (PAR). A specific arrival route from an appropriate en route point to an airport or terminal area. It may be included in a Standard Terminal Arrival (STAR) or a Preferred IFR Route. The abbreviation "PAR" is used primarily within the ARTCC and should not be confused with the abbreviation for Precision Approach Radar.

c. Preferential Departure and Arrival Route (PDAR). A route between two terminals which are within or immediately adjacent to one ARTCC's area. PDARs are not synonymous with Preferred IFR Routes but may be listed as such as they do accomplish essentially the same purpose.

(See PREFERRED IFR ROUTES.)

PREFERRED IFR ROUTES– Routes established between busier airports to increase system efficiency and capacity. They normally extend through one or more ARTCC areas and are designed to achieve balanced traffic flows among high density terminals. IFR clearances are issued on the basis of these routes except when severe weather avoidance procedures or other factors dictate otherwise. Preferred IFR Routes are listed in the Airport/Facility Directory. If a flight is planned to or from an area having such routes but the departure or arrival point is not listed in the Airport/Facility Directory, pilots may use that part of a Preferred IFR Route which is appropriate for the departure or arrival point that is listed. Preferred IFR Routes are correlated with DPs and STARs and may be defined by airways, jet routes, direct routes

between NAVAIDs, Waypoints, NAVAID radials/DME, or any combinations thereof.

(See CENTER'S AREA.)

(See INSTRUMENT DEPARTURE PROCEDURE.)

(See PREFERENTIAL ROUTES.)

(See STANDARD TERMINAL ARRIVAL.)

(Refer to AIRPORT/FACILITY DIRECTORY.)

(Refer to NOTICES TO AIRMEN PUBLICATION.)

PRE-FLIGHT PILOT BRIEFING–

(See PILOT BRIEFING.)

PREVAILING VISIBILITY–

(See VISIBILITY.)

PRIMARY RADAR TARGET– An analog or digital target, exclusive of a secondary radar target, presented on a radar display.

PRM–

(See ILS PRM APPROACH and PRECISION RUNWAY MONITOR.)

PROCEDURE TURN– The maneuver prescribed when it is necessary to reverse direction to establish an aircraft on the intermediate approach segment or final approach course. The outbound course, direction of turn, distance within which the turn must be completed, and minimum altitude are specified in the procedure. However, unless otherwise restricted, the point at which the turn may be commenced and the type and rate of turn are left to the discretion of the pilot.

(See ICAO term PROCEDURE TURN.)

PROCEDURE TURN [ICAO]– A maneuver in which a turn is made away from a designated track followed by a turn in the opposite direction to permit the aircraft to intercept and proceed along the reciprocal of the designated track.

Note 1: Procedure turns are designated “left” or “right” according to the direction of the initial turn.

Note 2: Procedure turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual approach procedure.

PROCEDURE TURN INBOUND– That point of a procedure turn maneuver where course reversal has been completed and an aircraft is established inbound on the intermediate approach segment or final approach course. A report of “procedure turn

inbound” is normally used by ATC as a position report for separation purposes.

(See FINAL APPROACH COURSE.)

(See PROCEDURE TURN.)

(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE.)

PROFILE DESCENT– An uninterrupted descent (except where level flight is required for speed adjustment; e.g., 250 knots at 10,000 feet MSL) from cruising altitude/level to interception of a glideslope or to a minimum altitude specified for the initial or intermediate approach segment of a nonprecision instrument approach. The profile descent normally terminates at the approach gate or where the glideslope or other appropriate minimum altitude is intercepted.

PROGRESS REPORT–

(See POSITION REPORT.)

PROGRESSIVE TAXI– Precise taxi instructions given to a pilot unfamiliar with the airport or issued in stages as the aircraft proceeds along the taxi route.

PROHIBITED AREA–

(See SPECIAL USE AIRSPACE.)

(See ICAO term PROHIBITED AREA.)

PROHIBITED AREA [ICAO]– An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.

PROPOSED BOUNDARY CROSSING TIME–

Each center has a PBCT parameter for each internal airport. Proposed internal flight plans are transmitted to the adjacent center if the flight time along the proposed route from the departure airport to the center boundary is less than or equal to the value of PBCT or if airport adaptation specifies transmission regardless of PBCT.

PROPOSED DEPARTURE TIME– The time that the aircraft expects to become airborne.

PROTECTED AIRSPACE– The airspace on either side of an oceanic route/track that is equal to one-half the lateral separation minimum except where reduction of protected airspace has been authorized.

PT–

(See PROCEDURE TURN.)

PTP–

(See POINT-TO-POINT.)

PTS–
(See POLAR TRACK STRUCTURE.)

PUBLISHED ROUTE– A route for which an IFR altitude has been established and published; e.g., Federal Airways, Jet Routes, Area Navigation Routes, Specified Direct Routes.

REPORT– Used to instruct pilots to advise ATC of specified information; e.g., “Report passing Hamilton VOR.”

REPORTING POINT– A geographical location in relation to which the position of an aircraft is reported.

(See **COMPULSORY REPORTING POINTS**.)

(See ICAO term **REPORTING POINT**.)

(Refer to AIM.)

REPORTING POINT [ICAO]– A specified geographical location in relation to which the position of an aircraft can be reported.

REQUEST FULL ROUTE CLEARANCE– Used by pilots to request that the entire route of flight be read verbatim in an ATC clearance. Such request should be made to preclude receiving an ATC clearance based on the original filed flight plan when a filed IFR flight plan has been revised by the pilot, company, or operations prior to departure.

REQUIRED NAVIGATION PERFORMANCE (RNP)– A statement of the navigational performance necessary for operation within a defined airspace. The following terms are commonly associated with RNP:

a. Required Navigation Performance Level or Type (RNP-X). A value, in nautical miles (NM), from the intended horizontal position within which an aircraft would be at least 95-percent of the total flying time.

b. Required Navigation Performance (RNP) Airspace. A generic term designating airspace, route (s), leg (s), operation (s), or procedure (s) where minimum required navigational performance (RNP) have been established.

c. Actual Navigation Performance (ANP). A measure of the current estimated navigational performance. Also referred to as Estimated Position Error (EPE).

d. Estimated Position Error (EPE). A measure of the current estimated navigational performance. Also referred to as Actual Navigation Performance (ANP).

e. Lateral Navigation (LNAV). A function of area navigation (RNAV) equipment which calculates, displays, and provides lateral guidance to a profile or path.

f. Vertical Navigation (VNAV). A function of area navigation (RNAV) equipment which calculates, displays, and provides vertical guidance to a profile or path.

RESCUE COORDINATION CENTER– A search and rescue (SAR) facility equipped and manned to coordinate and control SAR operations in an area designated by the SAR plan. The U.S. Coast Guard and the U.S. Air Force have responsibility for the operation of RCCs.

(See ICAO term **RESCUE CO-ORDINATION CENTRE**.)

RESCUE CO-ORDINATION CENTRE [ICAO]– A unit responsible for promoting efficient organization of search and rescue service and for coordinating the conduct of search and rescue operations within a search and rescue region.

RESOLUTION ADVISORY–A display indication given to the pilot by the traffic alert and collision avoidance systems (TCAS II) recommending a maneuver to increase vertical separation relative to an intruding aircraft. Positive, negative, and vertical speed limit (VSL) advisories constitute the resolution advisories. A resolution advisory is also classified as corrective or preventive

RESTRICTED AREA–

(See **SPECIAL USE AIRSPACE**.)

(See ICAO term **RESTRICTED AREA**.)

RESTRICTED AREA [ICAO]– An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

RESUME NORMAL SPEED– Used by ATC to advise a pilot that previously issued speed control restrictions are deleted. An instruction to “resume normal speed” does not delete speed restrictions that are applicable to published procedures of upcoming segments of flight, unless specifically stated by ATC. This does not relieve the pilot of those speed restrictions which are applicable to 14 CFR Section 91.117.

RESUME OWN NAVIGATION– Used by ATC to advise a pilot to resume his/her own navigational responsibility. It is issued after completion of a radar

vector or when radar contact is lost while the aircraft is being radar vectored.

(See RADAR CONTACT LOST.)

(See RADAR SERVICE TERMINATED.)

RMI–

(See RADIO MAGNETIC INDICATOR.)

RNAV–

(See AREA NAVIGATION (RNAV).)

(See ICAO Term AREA NAVIGATION (RNAV).)

RNAV APPROACH– An instrument approach procedure which relies on aircraft area navigation equipment for navigational guidance.

(See AREA NAVIGATION (RNAV).)

(See INSTRUMENT APPROACH PROCEDURE.)

ROAD RECONNAISSANCE– Military activity requiring navigation along roads, railroads, and rivers. Reconnaissance route/route segments are seldom along a straight line and normally require a lateral route width of 10 NM to 30 NM and an altitude range of 500 feet to 10,000 feet AGL.

ROGER– I have received all of your last transmission. It should not be used to answer a question requiring a yes or a no answer.

(See AFFIRMATIVE.)

(See NEGATIVE.)

ROLLOUT RVR–

(See VISIBILITY.)

ROUTE– A defined path, consisting of one or more courses in a horizontal plane, which aircraft traverse over the surface of the earth.

(See AIRWAY.)

(See JET ROUTE.)

(See PUBLISHED ROUTE.)

(See UNPUBLISHED ROUTE.)

ROUTE ACTION NOTIFICATION– URET notification that a PAR/PDR/PDAR has been applied to the flight plan.

(See ATC PREFERRED ROUTE NOTIFICATION.)

(See USER REQUEST EVALUATION TOOL.)

ROUTE SEGMENT– As used in Air Traffic Control, a part of a route that can be defined by two

navigational fixes, two NAVAIDs, or a fix and a NAVAID.

(See FIX.)

(See ROUTE.)

(See ICAO term ROUTE SEGMENT.)

ROUTE SEGMENT [ICAO]– A portion of a route to be flown, as defined by two consecutive significant points specified in a flight plan.

RSA–

(See RUNWAY SAFETY AREA.)

RTR–

(See REMOTE TRANSMITTER/RECEIVER.)

RUNWAY– A defined rectangular area on a land airport prepared for the landing and takeoff run of aircraft along its length. Runways are normally numbered in relation to their magnetic direction rounded off to the nearest 10 degrees; e.g., Runway 1, Runway 25.

(See PARALLEL RUNWAYS.)

(See ICAO term RUNWAY.)

RUNWAY [ICAO]– A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

RUNWAY CENTERLINE LIGHTING–

(See AIRPORT LIGHTING.)

RUNWAY CONDITION READING– Numerical decelerometer readings relayed by air traffic controllers at USAF and certain civil bases for use by the pilot in determining runway braking action. These readings are routinely relayed only to USAF and Air National Guard Aircraft.

(See BRAKING ACTION.)

RUNWAY END IDENTIFIER LIGHTS–

(See AIRPORT LIGHTING.)

RUNWAY GRADIENT– The average slope, measured in percent, between two ends or points on a runway. Runway gradient is depicted on Government aerodrome sketches when total runway gradient exceeds 0.3%.

RUNWAY HEADING– The magnetic direction that corresponds with the runway centerline extended, not the painted runway number. When cleared to “fly or maintain runway heading,” pilots are expected to fly or maintain the heading that corresponds with the extended centerline of the departure runway. Drift correction shall not be applied; e.g., Runway 4, actual

S

SAA–

(See SPECIAL ACTIVITY AIRSPACE.)

SAFETY ALERT– A safety alert issued by ATC to aircraft under their control if ATC is aware the aircraft is at an altitude which, in the controller’s judgment, places the aircraft in unsafe proximity to terrain, obstructions, or other aircraft. The controller may discontinue the issuance of further alerts if the pilot advises he/she is taking action to correct the situation or has the other aircraft in sight.

a. Terrain/Obstruction Alert– A safety alert issued by ATC to aircraft under their control if ATC is aware the aircraft is at an altitude which, in the controller’s judgment, places the aircraft in unsafe proximity to terrain/obstructions; e.g., “Low Altitude Alert, check your altitude immediately.”

b. Aircraft Conflict Alert– A safety alert issued by ATC to aircraft under their control if ATC is aware of an aircraft that is not under their control at an altitude which, in the controller’s judgment, places both aircraft in unsafe proximity to each other. With the alert, ATC will offer the pilot an alternate course of action when feasible; e.g., “Traffic Alert, advise you turn right heading zero niner zero or climb to eight thousand immediately.”

Note: The issuance of a safety alert is contingent upon the capability of the controller to have an awareness of an unsafe condition. The course of action provided will be predicated on other traffic under ATC control. Once the alert is issued, it is solely the pilot’s prerogative to determine what course of action, if any, he/she will take.

SAFETY LOGIC SYSTEM– A software enhancement to ASDE–3, ASDE–X, and ASDE–3X, that predicts the path of aircraft landing and/or departing, and/or vehicular movements on runways. Visual and aural alarms are activated when the safety logic projects a potential collision. The Airport Movement Area Safety System (AMASS) is a safety logic system enhancement to the ASDE–3. The Safety Logic System for ASDE–X and ASDE–3X is an integral part of the software program.

SAFETY LOGIC SYSTEM ALERTS–

a. ALERT– An actual situation involving two real safety logic tracks (aircraft/aircraft, aircraft/vehicle,

or aircraft/other tangible object) that safety logic has predicted will result in an imminent collision, based upon the current set of Safety Logic parameters.

b. FALSE ALERT–

1. Alerts generated by one or more false surface–radar targets that the system has interpreted as real tracks and placed into safety logic.

2. Alerts in which the safety logic software did not perform correctly, based upon the design specifications and the current set of Safety Logic parameters.

c. NUISANCE ALERT– An alert in which one or more of the following is true:

1. The alert is generated by a known situation that is not considered an unsafe operation, such as LAHSO or other approved operations.

2. The alert is generated by inaccurate secondary radar data received by the Safety Logic System.

3. The alert is generated by surface radar targets caused by moderate or greater precipitation.

4. One or more of the aircraft involved in the alert is not intending to use a runway (i.e., helicopter, pipeline patrol, non–Mode C overflight, etc.).

d. VALID NON–ALERT– A situation in which the safety logic software correctly determines that an alert is not required, based upon the design specifications and the current set of Safety Logic parameters.

e. INVALID NON–ALERT– A situation in which the safety logic software did not issue an alert when an alert was required, based upon the design specifications.

SAIL BACK– A maneuver during high wind conditions (usually with power off) where float plane movement is controlled by water rudders/opening and closing cabin doors.

SAME DIRECTION AIRCRAFT– Aircraft are operating in the same direction when:

a. They are following the same track in the same direction; or

b. Their tracks are parallel and the aircraft are flying in the same direction; or

c. Their tracks intersect at an angle of less than 45 degrees.

SAR–

(See SEARCH AND RESCUE.)

SAY AGAIN– Used to request a repeat of the last transmission. Usually specifies transmission or portion thereof not understood or received; e.g., “Say again all after ABRAM VOR.”

SAY ALTITUDE– Used by ATC to ascertain an aircraft’s specific altitude/flight level. When the aircraft is climbing or descending, the pilot should state the indicated altitude rounded to the nearest 100 feet.

SAY HEADING– Used by ATC to request an aircraft heading. The pilot should state the actual heading of the aircraft.

SCHEDULED TIME OF ARRIVAL (STA)– A STA is the desired time that an aircraft should cross a certain point (landing or metering fix). It takes other traffic and airspace configuration into account. A STA time shows the results of the TMA scheduler that has calculated an arrival time according to parameters such as optimized spacing, aircraft performance, and weather.

SDF–

(See SIMPLIFIED DIRECTIONAL FACILITY.)

SEA LANE– A designated portion of water outlined by visual surface markers for and intended to be used by aircraft designed to operate on water.

SEARCH AND RESCUE– A service which seeks missing aircraft and assists those found to be in need of assistance. It is a cooperative effort using the facilities and services of available Federal, state and local agencies. The U.S. Coast Guard is responsible for coordination of search and rescue for the Maritime Region, and the U.S. Air Force is responsible for search and rescue for the Inland Region. Information pertinent to search and rescue should be passed through any air traffic facility or be transmitted directly to the Rescue Coordination Center by telephone.

(See FLIGHT SERVICE STATION.)

(See RESCUE COORDINATION CENTER.)

(Refer to AIM.)

SEARCH AND RESCUE FACILITY– A facility responsible for maintaining and operating a search and rescue (SAR) service to render aid to persons and property in distress. It is any SAR unit, station, NET, or other operational activity which can be usefully

employed during an SAR Mission; e.g., a Civil Air Patrol Wing, or a Coast Guard Station.

(See SEARCH AND RESCUE.)

SECONDARY RADAR TARGET– A target derived from a transponder return presented on a radar display.

SECTIONAL AERONAUTICAL CHARTS–

(See AERONAUTICAL CHART.)

SECTOR LIST DROP INTERVAL– A parameter number of minutes after the meter fix time when arrival aircraft will be deleted from the arrival sector list.

SECURITY SERVICES AIRSPACE – Areas established through the regulatory process or by NOTAM, issued by the Administrator under title 14, CFR, sections 99.7, 91.141, and 91.139, which specify that ATC security services are required; i.e., ADIZ or temporary flight rules areas.

SEE AND AVOID– When weather conditions permit, pilots operating IFR or VFR are required to observe and maneuver to avoid other aircraft. Right-of-way rules are contained in 14 CFR Part 91.

SEGMENTED CIRCLE– A system of visual indicators designed to provide traffic pattern information at airports without operating control towers.

(Refer to AIM.)

SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE– An instrument approach procedure may have as many as four separate segments depending on how the approach procedure is structured.

a. Initial Approach– The segment between the initial approach fix and the intermediate fix or the point where the aircraft is established on the intermediate course or final approach course.

(See ICAO term INITIAL APPROACH SEGMENT.)

b. Intermediate Approach– The segment between the intermediate fix or point and the final approach fix.

(See ICAO term INTERMEDIATE APPROACH SEGMENT.)

c. Final Approach– The segment between the final approach fix or point and the runway, airport, or missed approach point.

(See ICAO term FINAL APPROACH SEGMENT.)

d. Missed Approach– The segment between the missed approach point or the point of arrival at

TRANSPONDER OBSERVED – Phraseology used to inform a VFR pilot the aircraft’s assigned beacon code and position have been observed. Specifically, this term conveys to a VFR pilot the transponder reply has been observed and its position correlated for transit through the designated area.

TRIAL PLAN– A proposed amendment which utilizes automation to analyze and display potential conflicts along the predicted trajectory of the selected aircraft.

TRSA–
(See **TERMINAL RADAR SERVICE AREA**.)

TSD–
(See **TRAFFIC SITUATION DISPLAY**.)

TURBOJET AIRCRAFT– An aircraft having a jet engine in which the energy of the jet operates a turbine which in turn operates the air compressor.

TURBOPROP AIRCRAFT– An aircraft having a jet engine in which the energy of the jet operates a turbine which drives the propeller.

TURN ANTICIPATION– (maneuver anticipation).

TVOR–
(See **TERMINAL-VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE STATION**.)

TWEB–
(See **TRANSCRIBED WEATHER BROADCAST**.)

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(See **LOST COMMUNICATIONS**.)

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U.S. Department
of Transportation
**Federal Aviation
Administration**

JO 7110.10T CHG 2
3/12/09

BRIEFING GUIDE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Distribution: ZAT-712, ZAT-423 (External)

Initiated By: AJR-0
Vice President, System Operations Services

Table of Contents

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1. PARAGRAPH NUMBER AND TITLE: 6-2-3. FLIGHT PLANS WITH AREA NAVIGATION (RNAV) ROUTES IN DOMESTIC U.S. AIRSPACE

2. BACKGROUND: Over the next several years, the Federal Aviation Administration (FAA) will be implementing an equipment replacement program called En Route Automation Modernization (ERAM), replacing legacy Host computer processing systems at 20 Air Route Traffic Control Centers (ARTCC).

In support of this modernization, on June 29, 2008 all FAA ARTCC Host computer systems will switch from Domestic Flight Plan (FAA Form 7233-1) processing to International Flight Plan (FAA Form 7233-4) processing for those pilots wishing to receive automated assignment of RNAV SID, RNAV STAR, and/or RNAV PTP routes. After June 29, 2008, all ARTCC Host systems will automatically assign preferential routes based on the equipment capability filed in International Flight Plan Item 10 (Equipment) and the RNAV value specified by the user in Item 18 (Other Information). Once the change is implemented, users who file a Domestic Flight Plan will be eligible for the assignment of conventional procedures only.

Since Anchorage ARTCC is not part of the ERAM project, the procedures contained in new paragraph 6-2-3 do not apply to flights whose route remains entirely within Alaska domestic airspace.

3. CHANGE:

<u>OLD</u>	<u>NEW</u>
Add	<u>6-2-3. FLIGHT PLANS WITH AREA NAVIGATION (RNAV) ROUTES IN DOMESTIC U.S. AIRSPACE</u>
Add	<u>Use FAA Form 7233-4, International Flight Plan, for pilots filing flight plans in domestic U.S. airspace if automatic assignment of any of the following RNAV routes are desired: RNAV Standard Instrument Departure (SID); RNAV Standard Terminal Arrival Route (STAR); and/or RNAV Point-to-Point (PTP). For these flight plans, adhere to the following guidelines:</u>
Add	<u>a. Item 10, Equipment. Enter “Z” in the equipment field in addition to other entries pertaining to radio communication, navigation and approach aids.</u>
Add	<u>EXAMPLE- SDGIWZ/S</u>
Add	<u>b. Item 18, Other Information.</u>
Add	<u>1. If the aircraft is RNAV 1 or RNAV 2 capable, enter “NAV/RNV” followed by the appropriate RNAV accuracy value:</u>
Add	<u>(a) RNAV 1 SID, enter “D1”.</u>
Add	<u>(b) RNAV 1 STAR, enter “A1”.</u>
Add	<u>(c) En route RNAV, enter “E2”.</u>
Add	<u>EXAMPLE- NAV/RNVD1 NAV/RNVA1 NAV/RNVE2 NAV/RNVDIA1 NAV/RNVDIE2A1</u>
Add	<u>NOTE- The “D,” “E,” and “A” characters may appear in any order following “NAV/RNV.”</u>

Add **2. If the aircraft is RNAV PTP capable but not RNAV 1 and/or RNAV 2 capable, enter “RMK/PTP” and “NAV/RNVE99”.**

Add **EXAMPLE–
RMK/PTP NAV/RNVE99**

Add **NOTE–
Procedures contained in paragraph 6–2–3 do not apply to flights whose route remains entirely within Alaska domestic airspace.**
