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AERODROME FLIGHT INFORMATION SERVICE (AFIS)

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FOREWORD

Introduction

1. On 1 June 1982 the Air Navigation Commission (100-10) examined the results of a study by the Secretariat concerning the need for the introduction in ICAO documents of international specifications for aerodrome flight information service (AFIS) as an entity of the air traffic services.
2. Following an exchange of views, the Commission decided that international provisions and/or guidance material regarding AFIS should be formulated. It instructed the Secretary to develop detailed proposals on the subject for further review by the Commission, taking into account the comments made during the discussion.
3. The guidance material contained in this circular was finally developed by the Air Navigation Commission on the basis of proposals presented by the Secretariat.

Supporting reasons

4. The Statement of Basic Operational Requirements and Planning Criteria for Regional Air Navigation Meetings, as approved by the Air Navigation Commission, specifies that at aerodromes used by international general aviation where the type and density of traffic clearly do not justify the provision of aerodrome control service, the provision of aerodrome flight information service by a unit located at the aerodrome should be recommended. The aerodromes in question are those designated by the letters "RG" in ICAO air navigation plan publications.
5. The main comments made during the initial consideration by the Air Navigation Commission, as indicated in paragraph 1 above, may be summarized as follows:
 - a) Aerodrome flight information service was being provided on a growing scale. There was a definite need for a service between aerodrome control service and no service at all. Available information showed that there were different understandings among States as to what aerodrome flight information service was. The kind of questions which should be addressed were:
 - 1) What is aerodrome flight information service?
 - 2) What are its limitations?
 - 3) What is the difference between aerodrome control service and AFIS?
 - 4) At what aerodromes may AFIS be accepted in terms of amount of traffic, types of operation and meteorological conditions?
 - 5) What information should be provided?
 - 6) What should be the qualifications of AFIS officers?

7) What sort of facilities are required to provide AFIS?

- b) The widespread provision of AFIS demonstrated a need for guidance material on the subject but not necessarily for standardization of the service.
- c) If an international general aviation aerodrome might be used also as an alternate for international scheduled air transport, aerodrome control service should be provided at the aerodrome.

6. The guidance material on AFIS has been developed with the intent of answering the questions in 5 a) and reflecting the thoughts in 5 b) and c) above. It includes guidance concerning the designation of AFIS aerodromes, the basic elements of information to be provided, the requirements of AFIS units for information and communications, equipment and facilities, the training of personnel and the procedures to be used.

7. The guidance material is intended to facilitate the task of future regional air navigation (RAN) meetings or regional planning groups in recommending the air traffic services to be provided at international aerodromes designated for use by general aviation. It is also intended to facilitate the task of States in determining the nature and scope of the service to be provided at individual aerodromes and the information to be published in their aeronautical information publications (AIPs). It may also help to clarify in the minds of pilots the nature of the service to be expected at AFIS aerodromes.

8. It has been suggested that one of the primary motivations behind AFIS is cost/benefit and that this is not always compatible with safety. It is recalled in this context that regional air navigation plans shall satisfy the operational requirements and shall be economically justified (Assembly Resolutions A16-10 and A26-8, Appendix L, Associated Practice 5 refer). Although costs and the availability of qualified controllers are significant factors, it is expected that States, when determining whether aerodrome control service or aerodrome flight information service is required at a given aerodrome, will give the same weight to safety considerations as when they are planning other facilities and services.

9. It has also been suggested that the introduction of aerodrome flight information service is primarily an implementation problem. It may be noted in this regard that the Second Asia and Pacific Regional Air Navigation Meeting (Singapore, 1983) made provision for AFIS at various aerodromes in the regions (Doc 9404, Agenda Item 4, Appendix A refers) and that the European Air Navigation Plan also specifies a requirement for the provision of AFIS at a large number of aerodromes (Doc 7754, 23rd edition, Part III, Table AOP refers). The air navigation plans for the Africa-Indian Ocean, Caribbean, Middle East and South American Regions contain general recommendations on the subject.

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GUIDANCE MATERIAL ON AERODROME FLIGHT INFORMATION SERVICE (AFIS)

GENERAL

1. Aerodrome flight information service (AFIS) is the term used to describe the provision of information useful for the safe and efficient conduct of aerodrome traffic at those aerodromes designated for use by international general aviation (IGA) where the appropriate air traffic services (ATS) authority determines that the provision of aerodrome control service is not justified, or is not justified on a 24-hour basis. AFIS is not intended to be used at aerodromes designated as regular or alternate aerodromes for international commercial air transport operations.
2. In determining whether aerodrome control service or AFIS should be provided at a given IGA aerodrome, the appropriate ATS authority is expected to give due consideration to the type(s) of air traffic involved, the density of air traffic, the topographical and meteorological conditions, and such other factors as may be pertinent to safety and efficiency, including the language or languages to be used in air-ground communications.
3. Non-controlled aerodromes at which it is determined that AFIS will be provided should be identified as "AFIS aerodromes" in order to distinguish them from controlled aerodromes.
4. AFIS should be provided by a unit located at the aerodrome and identified as an "AFIS unit". An AFIS unit will provide flight information service and alerting service to aerodrome traffic.
5. The AFIS unit is not an air traffic control unit. It is therefore the responsibility of pilots using the service provided by this unit to maintain proper separation in conformity with the rules of the air.

Basic elements of information provided to aircraft

6. The basic elements of information to be provided to aircraft by an AFIS unit should include, as appropriate, the following:
 - a) meteorological information for aircraft about to take off or to land, including SIGMET information. Such information should, to the extent possible, be the same as that provided to aerodrome traffic by aerodrome control towers, i.e.:
 - the current surface wind direction and speed, including significant variations;

- the QNH altimeter setting and, either on a regular basis in accordance with local arrangements or if so requested by the aircraft, the QFE altimeter setting;
 - the air temperature for the runway to be used, in the case of take-off by turbine-engined aircraft;
 - the current visibility representative of the direction of take-off and initial climb, or in the approach and landing area, if less than 10 km, or, when available to the AFIS officer, the current runway visual range for the runway to be used;
 - significant meteorological conditions in the take-off and climb-out area, or in the approach and landing area. This includes the occurrence or expected occurrence of cumulonimbus or thunderstorm, moderate or severe turbulence, wind shear, hail, moderate or severe icing, severe line squall, freezing rain, marked mountain waves, sand storm, dust storm, blowing snow, tornado or waterspout;
 - the present weather and the amount and height of base of low cloud, in the case of aircraft making an approach in instrument meteorological conditions;
- b) information enabling the pilot to select the most suitable runway for use. Such information should include, in addition to the current surface wind direction and speed, the "preferred runway" and traffic pattern and, on request by the pilot, the length of the runway(s) and/or the distance between an intersection and the end of the runway;

Note.- The term "preferred runway" is used to indicate the most suitable runway at a particular time, taking into account the current surface wind direction and speed and other relevant factors such as the traffic pattern and the runway used by other aircraft, with the intention of establishing and maintaining an orderly flow of aerodrome traffic.

- c) information on known aircraft, vehicles or personnel on or near the manoeuvring area or aircraft operating in the vicinity of the aerodrome, which may constitute a hazard to the aircraft concerned;
- d) information on aerodrome conditions which is essential to the safe operation of aircraft. Such information should, to the extent possible, be the same as that provided to aerodrome traffic by aerodrome control towers, i.e. information relating to the following:
- construction or maintenance work on, or immediately adjacent to the manoeuvring area;

- rough or broken surfaces on a runway or a taxiway, whether marked or not;
 - snow, slush or ice on a runway or a taxiway;
 - water on a runway;
 - snow banks or drifts adjacent to a runway or a taxiway;
 - other temporary hazards, including parked aircraft and birds on the ground or in the air;
 - failure or irregular operation of part or all of the aerodrome lighting system;
 - any other pertinent information;
- e) information on changes in the operational status of non-visual navigation aids and visual aids essential for aerodrome traffic;
- f) radio bearings or direction-finding information, when equipment is available and when prescribed by the appropriate ATS authority;
- g) messages, including clearances, received from other ATS units for relay to aircraft (e.g. from the associated flight information centre (FIC) or area control centre (ACC)); and
- h) any other information contributing to safety.

AFIS REQUIREMENTS FOR INFORMATION

7. AFIS units should, to the extent possible, be supplied with the same information as that provided to aerodrome control towers, i.e.:

Meteorological information

8. AFIS units should be supplied with up-to-date information on existing and forecast meteorological conditions as necessary for the performance of their functions. The information should be supplied in such a form as to require a minimum of interpretation on the part of AFIS personnel, and with a frequency which satisfies the requirements of the AFIS units concerned.

9. AFIS units should be supplied with current meteorological reports and forecasts for the aerodrome with which they are concerned. Special reports and amendments to forecasts should be communicated to the AFIS units as soon as they are necessary in accordance with established criteria, without waiting for the next routine report or forecast.

10. AFIS units should be provided with current pressure data for setting altimeters for the aerodrome concerned.

11. AFIS units should be equipped with surface wind indicator(s). The indicator(s) should be related to the same location(s) of observation and be fed from the same anemometer(s) as the corresponding indicator(s) in the meteorological station, where such a station exists. Where multiple anemometers are used, the indicators to which they are related should be clearly marked to identify the runway and section of the runway monitored by each anemometer.

12. AFIS units should be provided with available current information on runway visual range as determined by instruments or by qualified observer. AFIS units at aerodromes where runway visual range values are measured by instrumental means should be equipped with indicator(s) permitting read-out of the current runway visual range value(s). The indicator(s) should be related to the same location(s) of observation and be fed from the same runway visual range measuring device(s) as the corresponding indicator(s) in the meteorological station, where such a station exists.

Information on aerodrome conditions and the operational status of associated facilities

13. AFIS units should be kept currently informed of the conditions of the manoeuvring area, including the existence of temporary hazards, and the operational status of any associated facilities at the aerodrome with which they are concerned.

Information on the operational status of navigation aids

14. AFIS units should be kept currently informed of the operational status of non-visual navigation aids, and those visual aids essential for surface movement, take-off, departure, approach and landing procedures within their area of responsibility.

Information on unmanned free balloons

15. AFIS units should be kept informed of details of flights of unmanned free balloons in accordance with the provisions contained in Annex 2.

AFIS REQUIREMENTS FOR COMMUNICATIONS

Aeronautical mobile service (air-ground communications)

16. Air-ground communication facilities should enable direct, rapid, continuous and static-free two-way communications to take place between an AFIS

unit and appropriately equipped aircraft operating at any distance within 45 km (25 NM) of the AFIS aerodrome concerned, or within a range as specified in the regional air navigation plan.

17. When direct two-way radiotelephony is used for the provision of aerodrome flight information service, recording facilities should be provided on all such air-ground communication channels.

18. Aircraft should, unless exempted by the appropriate ATS authority, be capable of two-way communication with the AFIS unit on the prescribed frequency or frequencies.

Aeronautical fixed service

19. An AFIS unit should be connected with the associated flight information centre (FIC) or area control centre (ACC) and, as appropriate, with the approach control office serving an adjacent or overlying terminal control area or with the aerodrome control tower at an adjacent aerodrome and with the following:

- a) aerodrome rescue and emergency services (including ambulance, fire, etc.);
- b) meteorological office serving the aerodrome; and
- c) aeronautical telecommunications station serving the aerodrome.

20. All facilities for direct-speech communication between an AFIS unit and air traffic services units indicated in paragraph 19 above should be provided with recording facilities.

AIRSPACE DESIGNATION

21. AFIS should be provided to all IGA traffic on the manoeuvring area and to all IGA aircraft flying in the vicinity of the aerodrome. The airspace within which AFIS will be provided should be designated as a flight information zone (FIZ) and its lateral and vertical limits specified. The dimensions of the flight information zone should coincide with those of the aerodrome traffic zone, where established, or they should be increased to provide added safeguards.

STATUS OF SERVICE AND RADIOTELEPHONY PHRASEOLOGY

22. In order that pilots may readily identify the status of the service they are receiving, the call sign "AERODROME INFORMATION" following the name of the aerodrome should be used in aeronautical mobile communications to identify a unit providing AFIS, e.g. AMSWELL AERODROME INFORMATION. This will avoid any possible confusion with a unit providing aerodrome control service which is

identified by the call sign "TOWER". The word "aerodrome" may be deleted after initial contact has been established. If at any time it is apparent that the pilot is not aware that aerodrome control service is not provided, the pilot should immediately be informed of this fact using the following phraseology: AERODROME CONTROL SERVICE NOT REPEAT NOT PROVIDED.

23. The existing phraseology in the PANS-RAC, Part IX, may be used by an AFIS unit, where appropriate, to pass information to an aircraft.

HOURS OF AVAILABILITY OF AFIS

24. Unless part-time availability is deemed adequate to meet the operational requirements, AFIS should be made available on a 24-hour basis. If aerodrome control service is provided on a part-time basis, e.g. during daylight hours, consideration may be given to providing AFIS outside those hours.

ACCOMMODATION AND EQUIPMENT

25. AFIS should be provided from a location which ensures the best possible view of the aerodrome, the surrounding area and, in particular, the manoeuvring area, e.g. a control tower, or a room facing the aerodrome and at least the approach ends of the runway, with large, unobstructed windows.

26. The equipment in the AFIS unit should, to the extent possible, be similar to the equipment required for the aerodrome control tower at an aerodrome with low traffic density.

QUALIFICATIONS AND TRAINING OF AFIS PERSONNEL

27. AFIS should be provided by suitably qualified and trained personnel, duly authorized by the appropriate ATS authority.

28. Age, knowledge, experience and skill required from AFIS personnel should be determined by the appropriate ATS authority. However, the following may be used as a general guide:

a) Age. Not less than 18 years of age.

b) Knowledge. Demonstrated knowledge of:

- the language or languages nationally designated for use in air traffic services and ability to speak such language or languages without accent or impediment which would adversely affect radiocommunication;

- rules of the air and air traffic procedures pertinent to aerodrome operations;
 - procedures and practices pertaining to flight information service and alerting service;
 - terms used in the aeronautical mobile service, procedure words and phrases, the spelling alphabet;
 - communication codes and abbreviations used;
 - radiotelephony phraseologies and operating procedures;
 - the general air traffic services and airspace organization within the State;
 - local aerodrome rules;
 - characteristics of local traffic;
 - local terrain and prominent landmarks;
 - local air navigation facilities;
 - procedures for co-ordination between the AFIS unit and the associated FIC or ACC;
 - pertinent data regarding meteorological reports and effect of significant local weather characteristics; and
 - local procedures for alerting of emergency services.
- c) Experience. Satisfactory:
- completion of an approved training course; and
 - service under a qualified AFIS officer for not less than two months.
- d) Skill. Demonstrated competency in:
- the manipulation and operation of typical transmit/receiver equipment and controls, including ancillary facilities, and radio direction-finding apparatus in use;
 - the visual inspection and daily operational check of the radio equipment in use;
 - the transmission of telephony messages, including correct microphone technique, enunciation and speech quality; and
 - the reception of telephony messages and the ability to relay messages correctly.

VISUAL GROUND SIGNALS

29. Visual ground signals listed in Annex 2, Appendix A, 4.2 may be displayed by an AFIS unit as specified by the appropriate ATS authority.

FLIGHT PLANS

30. Except when other arrangements have been made by the appropriate ATS authority, flight plans may be submitted, or closed by a report, to the AFIS unit at the aerodrome. The service provided by the AFIS unit in this case would be comparable to the service provided by an ATS reporting office.

CO-ORDINATION BETWEEN AN AFIS UNIT AND
THE ASSOCIATED FIC OR ACC

31. As prescribed by the appropriate ATS authority, AFIS units should ensure that the relevant FIC and/or ACC is informed regarding departures and arrivals at the AFIS aerodrome. Unless otherwise provided, information to be made available should comprise the identification of aircraft, the departure or destination aerodrome, the take-off or landing time, the expected time of communications transfer and, where necessary, request for en-route clearance.

32. The relevant FIC or ACC should ensure that an AFIS unit is informed regarding aircraft proceeding to the AFIS aerodrome. The information to be provided should consist of relevant items of the current flight plan, the estimated time of arrival and the expected time of communications transfer.

ALERTING SERVICE

33. Alerting service should be provided in accordance with the provisions of Annex 11, Chapter 5.

RESPONSIBILITIES OF, AND PROCEDURES FOR PILOTS

34. When operating on or in the vicinity of an aerodrome where AFIS is provided, pilots must, on the basis of the information received from the AFIS unit combined with their own knowledge and observations, decide on the course of action to be taken to ensure separation from other aircraft, ground vehicles and obstacles.

35. It is essential that pilots establish and maintain two-way radiocommunication with the AFIS unit and that they report their positions, levels and all significant manoeuvres and intentions to the AFIS unit, since the efficiency of the AFIS is dependent on the information received.

PROMULGATION OF INFORMATION

36. Information regarding the availability of AFIS and related procedures should be included in the relevant parts of the aeronautical information publication (AIP) in the same manner as in the case of aerodromes provided with air traffic control service. The information should include the following:

- a) identification of the aerodrome;
- b) location and identification of the AFIS unit;
- c) hours of operation of the AFIS unit;
- d) lateral and vertical limits of the flight information zone (FIZ);
- e) language(s) used;
- f) detailed description of the services provided, including alerting service and, if applicable, direction-finding service;
- g) special procedures for application by pilots;
- h) any other pertinent information.

- END -

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The following publications are prepared by authority of the Secretary General in accordance with the principles and policies approved by the Council.

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