



AFI Workshop on the improvement of NOTAM & the implementation of the new SNOWTAM format

Review of aeronautical information products - NOTAM

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Virtual

22 – 24 June 2021



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Introduction

- The object of the aeronautical information service (**AIS**) is to ensure the **flow** of aeronautical **data** and aeronautical **information necessary** for global air traffic management (ATM) system **safety, regularity, economy** and **efficiency** in an **environmentally sustainable** manner.
- **Corrupt, erroneous, late** or **missing** aeronautical data and aeronautical information can **potentially affect the safety** of air navigation. (*Annex 15, Chapter 1-Note 1*)



Introduction

- Aeronautical **data** and aeronautical **information necessary** for the **safety, regularity** and **efficiency** of air navigation shall be made **available** in a **form suitable** for the **operational requirements** of the ATM community, including:
 - a) those involved in **flight operations**, including **flight crews**, **flight planning** and **flight simulators**; and
 - b) the **ATS unit** responsible for **flight information service** and the **services** responsible for **pre-flight information**. (*Annex 15, §2.2.1*)



Introduction

- An AIS shall **receive, collate or assemble, edit, format, publish/store and distribute** aeronautical data and aeronautical information **concerning** the entire **territory** of the State as well as those **areas over the high seas** for which the **State is responsible** for the **provision of ATS**.
- Aeronautical data and aeronautical information shall be provided as **aeronautical information products**. (*Annex 15, §2.2.2*)



Introduction

- Aeronautical information **product refers** to aeronautical data and aeronautical information **provided** either as **digital data sets** or as a **standardized presentation** in paper or electronic media.
- Aeronautical information products include:
 - Aeronautical Information **Publication (AIP)**, including **Amendments** and **Supplements**;
 - Aeronautical Information **Circulars (AIC)**;
 - aeronautical **charts**;
 - **NOTAM**; and
 - **digital data sets**. (*Annex 15, 1.1 Definitions*)



Purpose of NOTAM

- **NOTAM:** a **notice** distributed by **means of telecommunication** 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**. (*Annex 15, 1.1 Definitions*)
- A NOTAM shall be originated and issued promptly when:
 - the information is of a **temporary nature** and of **short duration**,
 - operationally significant **permanent changes** or **temporary changes of long duration** are made at **short notice**, except for extensive text and/or graphics. (*Annex 15, §6.3.2.2*)



Purpose of NOTAM

- NOTAM are **intended** to **supplement AIP** and serve as a **fast medium** for distributing information **whenever** it is **necessary** to give **due warning** of any **change** or **occurrence**, at **short notice**.
- Information of **short duration** with **extensive text** and/or **graphics** must be **published** as an **AIP Supplement**.
- The NOTAM aims to **distribute** the information **in advance** of the **event** to which it relates, **except** in the case of **unserviceability** that cannot be foreseen. So, **NOTAM** must **be received** by the addressee in **sufficient time** for any **required action** to be taken. (*Doc 8128, §6.1*)



General specifications

- **NOTAM text** shall be composed of the **significations/uniform abbreviated phraseology** assigned to the **ICAO NOTAM Code** complemented by **ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, figures** and plain language.
- All NOTAM shall be **issued** in the **English** language.
- Each NOTAM shall **deal** with **only one subject** and **one condition** of the subject.
- Each NOTAM shall be **as brief as possible** and so compiled that its meaning is **clear without the need to refer** to another document.
(PANS-AIM, §5.2.5.1)



General specifications

- Each NOTAM shall be **transmitted** as a **single** telecommunication message (**No multi-part NOTAM**).
- A NOTAM containing **permanent** information or **temporary** information of **long duration** shall **carry** appropriate **AIP** or **AIP Supplement references**.
- **Location indicators** included in the text of a NOTAM shall be those contained in Location Indicators - **Doc 7910**.
- If no ICAO location indicator is assigned to the location, its **place name** shall be entered in **plain language**. (*PANS-AIM, §5.2.5.1*)



Numbering and series allocation

- NOTAM shall be divided in **series** based on **subject, traffic** and/or **location**, depending on **end-user needs**. NOTAM for aerodromes allowing **international air traffic** shall be in **international series**.
- If NOTAM are issued in both **English** and a **national language**, the NOTAM series shall be **organized** such that the **national language series** is **equivalent** to the **English series** in **terms of content**.
- Whenever possible, the **national language series** should have the **same numbering** as the **English series** to facilitate comparison.
- The **content** and geographical **coverage** of each NOTAM **series** shall be stated in detail in the **AIP**, section GEN 3 (*PANS-AIM, §5.2.5.2*)



Numbering and series allocation

- NOTAM may be classified as follows:
 - **A** for **international** distribution;
 - **B** for **international** distribution to **adjacent States** and **other States on request**;
 - **C** for **national** distribution only;
 - **S** NOTAM published in the **SNOWTAM** format;
 - **V** NOTAM published in the **ASHTAM** format. (*Doc 8126, §6.3.5*)



Notice and validity period

- NOTAM should be published with **sufficient lead time** for the affected parties to take any **required action**, except for events that cannot be foreseen.
- NOTAM notifying **unserviceability** of **aids** to air navigation, **facilities** or **services** shall give an **estimate of the period** of unserviceability or the **time** at which **restoration** of service is expected.
- At least **seven days'** advance **notice** shall be given of the **activation** of established **danger**, **restricted** or **prohibited** areas and of **activities** requiring **temporary airspace restrictions** other than for emergency operations. (*PANS-AIM, §6.1.4*)



Notice and validity period

- Within **three months** from the issuing of a **permanent NOTAM**, the **information** contained in the NOTAM **shall be included** in the aeronautical information **products affected**.
- Within **three months** from the issuing of a **temporary NOTAM** of **long duration**, the **information** contained in the NOTAM **shall be included** in the **AIP Supplement**.
- When a NOTAM with **estimated end of validity unexpectedly** exceeds the **three-month period**, a **replacement NOTAM shall be issued**, unless the condition is **expected** to last for a **further period of more than three months**; in this case, an **AIP Supplement** shall be **issued**. (*PANS-AIM, §6.1.4*)



Prescription of NOTAM

- A NOTAM shall be originated and issued concerning the following information (*Annex 15, §6.3.2.3*):
 - a) establishment, closure or significant changes in operation of aerodrome(s) or heliport(s) or runways;
 - b) establishment, withdrawal or significant changes in operation of aeronautical services (aerodromes, AIS, ATS, CNS, MET, SAR, etc.);
 - c) establishment, withdrawal or significant changes in operational capability of radio navigation and air-ground communication services;
 - d) unavailability of back-up and secondary systems, having a direct operational impact;



Prescription of NOTAM

- A NOTAM shall be originated and issued concerning the following information (*Annex 15, §6.3.2.3*):
 - e) establishment, withdrawal or significant changes to visual aids;
 - f) interruption of or return to operation of major components of aerodrome lighting systems;
 - g) establishment, withdrawal or significant changes to procedures for air navigation services;
 - h) occurrence or correction of major defects or impediments in the manoeuvring area;
 - i) changes to and limitations on availability of fuel, oil and oxygen;



Prescription of NOTAM

- A NOTAM shall be originated and issued concerning the following information (*Annex 15, §6.3.2.3*):
 - j) major changes to search and rescue facilities and services available;
 - k) establishment, withdrawal or return to operation of hazard beacons marking obstacles to air navigation;
 - l) changes in regulations requiring immediate action, e.g. prohibited areas for SAR action;
 - m) presence of hazards not otherwise promulgated, which affect air navigation (including obstacles, military exercises and operations, intentional and unintentional radio frequency interferences, rocket launches, displays, fireworks, sky lanterns, rocket debris, races and major parachuting events);



Prescription of NOTAM

- A NOTAM shall be originated and issued concerning the following information (*Annex 15, §6.3.2.3*):
 - n) conflict zones which affect air navigation;
 - o) planned laser emissions, laser displays and search lights if pilots' night vision is likely to be impaired;
 - p) erecting or removal of, or changes to, obstacles to air navigation in the take-off/climb, missed approach, approach areas and runway strip;
 - q) establishment or discontinuance (including activation or deactivation) as applicable, or changes in the status of prohibited, restricted or danger areas;



Prescription of NOTAM

- A NOTAM shall be originated and issued concerning the following information (*Annex 15, §6.3.2.3*):
 - r) establishment or discontinuance of areas or routes or portions thereof where the possibility of interception exists and where the maintenance of guard on the VHF emergency frequency 121.5 MHz is required;
 - s) allocation, cancellation or change of location indicators;
 - t) changes in aerodrome/heliport rescue and firefighting category provided;
 - u) presence or removal of, or significant changes in, hazardous conditions due to snow, slush, ice, radioactive material, toxic chemicals, volcanic ash deposition or water on the movement area;



Prescription of NOTAM

- A NOTAM shall be originated and issued concerning the following information (*Annex 15, §6.3.2.3*):
 - v) outbreaks of epidemics necessitating changes in notified requirements for inoculations and quarantine measures;
 - w) observations or forecasts of space weather phenomena, the date and time of their occurrence, the flight levels where provided and portions of the airspace which may be affected by the phenomena;
 - x) an operationally significant change in volcanic activity, the location, date and time of volcanic eruptions and/or horizontal and vertical extent of volcanic ash cloud, including direction of movement, flight levels and routes or portions of routes which could be affected;



Prescription of NOTAM

- A NOTAM shall be originated and issued concerning the following information (*Annex 15, §6.3.2.3*):
 - y) release into the atmosphere of radioactive materials or toxic chemicals following a nuclear or chemical incident, the location, date and time of the incident, the flight levels and routes or portions thereof which could be affected and the direction of movement;
 - z) establishment of operations of humanitarian relief missions, such as those undertaken under the auspices of the United Nations, together with procedures and/or limitations which affect air navigation; and;
 - aa) implementation of short-term contingency measures in cases of disruption, or partial disruption, of ATS and related supporting services.



Proscription of NOTAM

- The following information shall not be notified by NOTAM (*Annex 15, §6.3.2.4*) :
 - a) routine maintenance work on aprons and taxiways which does not affect the safe movement of aircraft;
 - b) runway marking work, when aircraft operations can safely be conducted on other available runways, or the equipment used can be removed when necessary;
 - c) temporary obstructions in the vicinity of aerodromes/heliports that do not affect the safe operation of aircraft;
 - d) partial failure of aerodrome/heliport lighting facilities where such failure does not directly affect aircraft operations;



Proscription of NOTAM

- The following information shall not be notified by NOTAM (*Annex 15, §6.3.2.4*) :
 - e) partial temporary failure of air-ground communications when suitable alternative frequencies are known to be available and are operative;
 - f) the lack of apron marshalling services and road traffic control;
 - g) the unserviceability of location, destination or other instruction signs on the aerodrome movement area;
 - h) parachuting when in uncontrolled airspace under VFR, when controlled, at promulgated sites or within danger or prohibited areas;
 - i) training activities by ground units;



Proscription of NOTAM

- The following information shall not be notified by NOTAM (*Annex 15, §6.3.2.4*) :
 - j) unavailability of back-up and secondary systems if these do not have an operational impact;
 - k) limitations to airport facilities or general services with no operational impact;
 - l) national regulations not affecting general aviation;
 - m) announcement or warnings about possible/potential limitations, without any operational impact;
 - n) general reminders on already published information;



Proscription of NOTAM

- The following information shall not be notified by NOTAM (*Annex 15, §6.3.2.4*) :
 - o) availability of equipment for ground units without containing information on the operational impact for airspace and facility users;
 - p) information about laser emissions without any operational impact and fireworks below minimum flying heights;
 - q) closure of movement area parts in connection with planned work locally coordinated of duration of less than one hour;
 - r) closure or unavailability of, or changes in, operation of aerodrome(s)/heliport(s) outside the aerodrome(s)/heliport(s) operational hours; and;
 - s) other non-operational information of a similar temporary nature.



Qualifiers (item Q) of the NOTAM

- Item Q) is divided into **eight fields**, each separated by a stroke. An entry shall be made in each field. The fields are as follows:
 - 1) FIR;
 - 2) NOTAM CODE (refer to PANS-ABC and Doc 8126);
 - 3) TRAFFIC [I, V, K];
 - 4) PURPOSE [N, B, O, M, K]
 - 5) SCOPE [A, E, W, K]
 - 6) and 7) LOWER/UPPER LIMITS, expressed in flight levels with 3 digits
 - 8) COORDINATES, RADIUS (e.g. 4700N01140E043)



Qualifiers (item Q) of the NOTAM

- The ICAO **NOTAM Code** is a comprehensive **description** of information contained in NOTAM. It serves as one of the **most important criteria** for **storage** and **retrieval** of information, as well as for :
 - **deciding** whether or not an **item** is of **operational significance**;
 - **establishing** the **relevance** of the NOTAM to the **various types** of flight **operations** and whether it must be **part** of a **PIB**;
 - **specifying** items that are to be **subject** to **immediate notification**.
- The NOTAM Code is the **basis** upon which **NOTAM qualifiers** are **determined** for **inclusion** in Item Q),
- It **defines** the **abbreviated plain-language text** which appears in **Item E**).



ICAO

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU