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REPUBLIC OF SEYCHELLES  
CIVIL AVIATION AUTHORITY  
AERONAUTICAL INFORMATION SERVICE  
P.O.BOX 181, VICTORIA SEYCHELLES

AIC  
01/2017  
09 AUG 2017

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## Mandatory Carriage of GNSS Navigation Equipment, ADS-B and Mode S Transponders in SEYCHELLES Airspace

### 1. Purpose of this AIC

- a. The purpose of this AIC is to propose amendments to existing regulatory requirements in Civil Aviation Regulation CAR Ops 1, Aircraft Operations, to establish mandatory avionics equipage in specified applicable categories of aircraft operating in particular classes of airspace. The aircraft avionics equipage is to provide for:
  - i. Satellite based navigation by aircraft operating under the IFR to replace navigation by reference to ground-based navigation aids; and
  - ii. Mode S and ADS-B based electronic surveillance of aircraft for the purposes of Air Traffic Management (ATM);

### 2. Background

- a. In-line with the AFI Regional PBN Implementation Plan, Seychelles Civil Aviation Authority (SCAA) has formulated and submitted to ICAO the Seychelles PBN Implementation plan.
- b. Seychelles has implemented a number of PBN procedures in the short term period and is now planning PBN initiative for the medium term phase. These will include new airspace design with RNP1 SIDs and STARs in the terminal airspace and RNP 10 in the en-route structure.
- c. As of 01st January 2015 no approach procedures based on SEY DVOR/DME will be available at the Seychelles international Airport. All approaches will be based on GNSS, except for ILS Runway 31 which will be available and accessible by RNP 1 STARs.
- d. Seychelles will mandate the requirement for all aircraft operating at or above FL290 in the Seychelles FIR to be approved for RNP10 with effect from 01st January 2015.
- e. The SCAA further proposes a regulatory and strategic plan to support airborne and ground-based infrastructure implementation by the aviation industry and Air Traffic Management (ATM) Organisations within the SEYCHELLES.

- f. The objective is to improve the safety, capacity and efficiency of Air Traffic Management (ATM). This is to be achieved by implementation of modern Communication, Navigation and Surveillance (CNS) infrastructure which utilizes interoperable satellite, aircraft and ground based electronic systems for the airborne and the ground based segments.
- g. The European Commission Implementing Regulation laying down requirements for European airspace has the same compliance dates as proposed here.

### 3. Applicability

- a. The requirement stipulated in this AIC shall apply to all civil registered aircraft, commercial air carriers and commercial aircraft operators operating to/from or overflying in the territory of SEYCHELLES and in the SEYCHELLES FIR as well as to SEYCHELLES transport type State aircraft defined as “an aircraft designed to carry persons or freight”, which requires access to controlled airspace or the published route structures.
- b. Aircraft Mode S and ADS-B equipment requirements shall be in accordance with the categorization of aircraft detailed in Table E1 below.
- c. The requirements stipulated in this AIC shall not apply to:
  - i. State aircraft as referred to in Article 3(b) of the Chicago Convention, other than those specified in paragraph 3.a and Mandate 9 (Paragraph 8.c) of this document;
  - ii. model aircraft;
  - iii. foot-launched flying machines (including powered paragliders and hang gliders);
  - iv. captive balloons; kites; parachutes (including parascending parachutes);
- d. The requirements stipulated in this AIC shall not be applicable in respect of aircraft, including gliders, with a MTOM of less than 500 kg, and microlights, used for noncommercial purposes, or that are used for local flight instruction in uncontrolled airspace.

### 4. Objective

- a. The objective is to have IFR capable aircraft fitted with avionics equipage which will provide for:
  - i. Satellite-based IFR aircraft navigation to replace navigation by reference to ground stations; and
  - ii. Improvement of the safety and efficiency of ATM by introduction of modern electronic surveillance technology.

- b. This AIC represents the first regulatory proposal issued under the SCAA's plan for transition to satellite based aircraft CNS technology in support of the future ATM system for the SEYCHELLES. Further communications proposing additional mandates may follow at a later stage.
- c. The Mandate 9 (Paragraph 8.c) includes a requirement for any State transport aircraft requiring access to the published route structures to be suitably equipped to be granted clearances in the airspace without infringing requirements or requiring additional separation requirements from civil traffic legitimately operating in the relevant airspace.

#### 5. The aircraft avionics mandates in this AIC

- a. The mandates in this AIC are summarized in **Annexes A to D** inclusive of this AIC, for ease of reference.
- b. Subject to review of the outcome of industry consultation invited by this AIC, it is possible that a further AIC will be issued.

#### 6. Equipment mandates for GNSS Navigation under the IFR

- a. **Mandate 1** – Existing commercial air transport aircraft (i.e. those placed on the SEYCHELLES Civil Aircraft Register before 08 January 2015) shall be equipped for GNSS navigation under the IFR before/on 08 January 2015.
- b. **Mandate 2** – New Commercial air transport aircraft (i.e. those first placed on the SEYCHELLES Civil Aircraft Register on/after 08 January 2015), shall be equipped for GNSS navigation.
- c. **Mandate 3** – Existing Private and Air Work category aircraft (i.e. those placed on the SEYCHELLES Civil Aircraft Register before 08 January 2015) undertaking any flight under the IFR, shall be equipped for GNSS navigation before/on 08 January 2015.
- d. **Mandate 4** – New Private and Air Work category aircraft (i.e. those first placed on the SEYCHELLES Civil Aircraft Register on/after 08 January 2015) undertaking any flight under the IFR, shall be equipped for GNSS navigation.

*Notes: GNSS equipage shall be in compliance with the SEYCHELLES Airspace PBN requirements as published in the SEYCHELLES AIP and in accordance with the Advanced RNP Navigation requirements of ICAO document 9613 Performance Based Navigation Manual, certified in accordance with SEYCHELLES PBN Operational Approval procedures.*

#### 7. Equipment mandates for Mode S transponder (with ADS-B OUT capability)

- a. **Mandate 5** – Aircraft placed on the SEYCHELLES Civil Aircraft Register on/after 08 January 2015 shall be Mode S transponder equipped for flight in controlled airspace.
- b. **Mandate 6** – Aircraft placed on the SEYCHELLES Civil Aircraft Register before 08 January 2015 shall be Mode S transponder equipped for flight in controlled airspace on/after 07 December 2017.

*Note: Standards for Mode S transponder equipment are in Attachment A to this document Mode S transponders required under Mandates 5 and 6 are also required to be ADS-B capable (i.e. capable of transmitting ADS-B OUT which involves the subsequent connection of a compatible GNSS receiver that complies with the ADS-B equipment standards in Attachment A to this document.*

## 8. Equipment mandates for ADS-B OUT transmission equipment

- a. **Mandate 7** – New aircraft (i.e. those first placed on the SEYCHELLES Civil Aircraft Register on/after 08 January 2015) undertaking any flight under the IFR shall be equipped to transmit ADS-B.
- b. **Mandate 8** –Existing aircraft (i.e. those placed on the SEYCHELLES Civil Aircraft Register before 08 January 2015) undertaking any flight under the IFR shall be equipped to transmit ADS-B on and after 07 December 2020.

*Note: Technical standards for ADS-B equipment are contained in Attachment A to this document. ADS-B transmission equipment comprises a Mode S transponder having ADS-B capability that is connected to a compatible GNSS receiver.*

- c. **Mandate 9**—Transport type State aircraft, as defined in the mandate, requiring to fly in controlled airspace shall be equipped with GNSS, Mode S and ADS-B by the dates specified in the Mandate.

**Details of the 9 mandates:** Please refer to Annexes A to D of this AIC for Tables summarising the above mandates

## 9. Reasons for change

- a. The advantages of modern CNS technology for navigation and ATM and the reasons for its adoption in the SEYCHELLES are contained in the following brief general summary of the reasons for requiring applicable aircraft to be fitted with the modern technology.
- b. ICAO AFI Region has developed a surveillance strategy for the implementation of ADS-B which includes a time line for implementation of 2020.

## 10. Justification for Mandating aircraft GNSS navigation under the IFR

- a. The basic justification for a mandate and the compliance timing is that GNSS is the only feasible navigation system meeting the RNP 1 criteria within the SEYCHELLES FIR. The use of GNSS complies with the SEYCHELLES PBN Implementation plan and the ICAO Concept of Operations. It also obviates the need for the SEYCHELLES air navigation service providers, to replace a number of the existing ground-based navigations aids mostly VHF Omni Range [VOR] equipment installations. In addition, advanced aircraft navigation applications such as Required Navigation Performance (RNP) navigation, User Preferred Routes, Flexi-Tracks and Area Navigation based Standard Instrument Departures and Standard Terminal Arrival Routes are available using the GNSS.

## 11. Justification for Mandating Mode S transponders (with ADS-B OUT capability)

- a. The technical advantages of Mode S in comparison with Mode A/C transponder and ground SSR and transponder technology are significant in both safety and efficiency terms.
- b. Aircraft Mode S transponder targets displayed on ATC screens provide improved resolution, less garbling, less erroneous data, less clutter, and the display of aircraft identification (call-signs) and other flight parameters on appropriately configured ATC screens. This greatly improved operation applies for terminal and en-route SSR radars operating in Mode S, and also at those major airports that have the Advanced Surface Movement Guidance and Control System (A-SMGCS) or Multilateration systems of electronic surveillance.
- c. The advantage in the operation of A-SMGCS or Multilateration systems at aerodromes is as follows: Mode S equipped aircraft transmit a 24 bit aircraft address and flight identification unique to every aircraft, practically eliminating identification errors by the surveillance system. The Multilateration system has difficulty discriminating Mode A responses because of the non-directional antennae necessary for its operation. Mode S transponders can be interrogated on the aerodrome surface without other aircraft replying and corrupting the received signal. In addition, unlike Mode A/C transponders, Mode S transponders operate on the aerodrome surface without creating ATC screen clutter and erroneous display of aircraft.
- d. In Europe, the fitment of Mode S transponders has already been mandated for all aircraft. This has resulted in the availability of relatively low cost Mode S transponders specifically designed for installation in General Aviation (GA) aircraft.
- e. Europe is also mandating the carriage of Mode S transponders on transport type State aircraft, with a 2 year extension from the civil requirements in their mandates.

## 12. Justification for Mandating aircraft to have ADS-B OUT capability

- a. ADS-B provides ATC with 'radar-like' surveillance without the cost or the technical limitations of SSR. A network of ADS-B/MLAT ground stations provide continuous surveillance coverage over an area larger than the SEYCHELLES TMA above altitude 2000 ft is planned for implementation in the short term. Area below this altitude, in the vicinity of airports, could be covered by aerodrome based Multilateration systems providing a dual approach and ground movement function. The ADS-B stations provide cooperative surveillance, i.e. they can only detect signals from ADS-B OUT equipped aircraft. ADS-B provides the opportunity for significantly improved efficiency and safety wherever it is deployed for electronic surveillance by ATC. SCAA strongly supports the move to ADS-B for ATM and for future air-to-air collision avoidance.
- b. Aircraft avionics equipment for ADS-B consists of a Mode S transponder with ADS-B OUT capability incorporated, with a connection to a compatible GNSS receiver to input the aircraft position source data (latitude and longitude of aircraft position, position accuracy and integrity parameters).

Additional information on the PBN requirements and approval is available from the following SEYCHELLES CIVIL AVIATION AUTHORITY offices.

- (a) **PBN requirements**  
Air Traffic Management Division  
Seychelles Civil Aviation Authority  
Seychelles international Airport  
Anse De Genets  
e-mail: [pbn@scaa.sc](mailto:pbn@scaa.sc)
  
- (b) **Operational/Airworthiness approval for Seychelles Registered Aircraft**  
Safety Regulation Division  
Seychelles Civil Aviation Authority  
Seychelles international Airport  
Anse de Genets  
e-mail: [SR@scaa.sc](mailto:SR@scaa.sc)

## Annex A: Proposed GNSS Navigation Equipment Mandates

Table A1: Summary of Proposed Regulatory Mandates for GNSS NAV Requirements for IFR Aircraft.

Mandate number	CLASS OF OPERATION	Mandatory Minimum NAV System	COMPLIANCE DATE
1	Existing aircraft used in public transport services (those placed on the SEYCHELLES Civil Aircraft Register before 08 January 2015)	Aircraft and air crew shall be capable of Advanced RNP Navigation in accordance with the requirements specified in ICAO 9613 PBN Manual, certified in accordance with SEYCHELLES PBN operational approval processes.	08 January 2015
2	New aircraft used in public transport services (those first placed on the SEYCHELLES Civil Aircraft Register on or after 08 January 2015),	Aircraft and air crew shall be capable of Advanced RNP Navigation in accordance with the requirements specified in ICAO 9613 PBN Manual, certified in accordance SEYCHELLES PBN operational approval processes.	08 January 2015
3	Existing Private and AWC aircraft (those placed on the SEYCHELLES Civil Aircraft Register before 08 January 2015	Aircraft and air crew shall be capable of Advanced RNP Navigation in accordance with the requirements specified in ICAO 9613 PBN Manual, certified in accordance with SEYCHELLES PBN operational approval processes.	08 January 2015

4	<b>New Private and AWC aircraft</b> (those placed on the SEYCHELLES Civil Aircraft Register on or after 08 January 2015)	Aircraft and air crew shall be capable of Advanced RNP Navigation in accordance with the requirements specified in ICAO 9613 PBN Manual, certified in accordance with SEYCHELLES PBN operational approval processes.	08 January 2015
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### Annex B: Proposed Mode S Transponder Equipment Mandates

Table B1: Summary of proposed Mode S Transponder Equipment Mandates by Airspace Classifications

Mandate Number	Airspace Classification or Location	Transponder Equipage Requirement*	Compliance Date
5	All controlled airspace.	Mode S transponder (with ADS-B OUT capability) required for all new aircraft placed on the SEYCHELLES aircraft register after 08 January 2015	From 08 January 2015
6	All controlled airspace.	Mode S transponder (with ADS-B OUT capability) for existing aircraft (those placed on the SEYCHELLES Civil Aircraft Register before 08 January 2015)	07 December 2020

Note: Standards for Mode S transponder equipment are Attachment 1. Mode S transponders required under these mandates are also required to be ADS-B capable (i.e. capable of transmitting ADS-B OUT which involves the subsequent connection to a compatible GNSS receiver that complies with the ADS-B equipment standards.

### Annex C: Proposed ADS-B Equipment Mandates

Table C1: Summary of proposed ADS-B Equipment Mandates by Airspace Classifications

Man date Number	Airspace Classification	ADS-B OUT Equipage Requirement*	Compliance Date
7	All controlled airspace.	New aircraft placed on the SEYCHELLES aircraft register after 08 January 2015	From 08 January 2015



8	All controlled airspace.	Existing aircraft placed on the SEYCHELLES aircraft register before 08 January 2015	07 December 2020
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Note: Technical standards for ADS-B equipment are contained in Attachment 1. ADS-B transmission equipment comprises a Mode S transponder having ADS-B capability that is connected to a compatible GNSS receiver.

**Annex D: Transport type State aircraft (fixed wing State aircraft designed for the purpose of transporting persons and/or cargo, and which require access to controlled airspace and the airways structure)**

Table D1: Summary of Transport type State Aircraft requirements for GNSS, Mode S and ADS-B

Man date Number	Airspace Classification	GNSS, Mode S and ADS-B OUT Equipage Requirement*	Compliance Date
9	All controlled airspace.	New transport type State aircraft delivered after 08 January 2015, or existing transport type State aircraft being fitted with GNSS, Mode S or ADS-B after 08 January 2015.  Existing Transport type State aircraft	From 08 January 2015  07 December 2020

Note 1: Technical standards for ADS-B and Mode S equipment are contained in Attachment 1. ADS-B transmission equipment comprises a Mode S transponder having ADS-B capability that is connected to a compatible GNSS receiver.

Note 2: Aircraft and air crew shall be capable of Advanced RNP Navigation in accordance with the requirements specified in ICAO 9613 PBN Manual.

Table E1: Mandate criteria by Aircraft Criteria

Category	Transponder
All IFR	Attachment A, Part 1
All IFR over 5700kg, excess 250kt	Attachment A, Part 1 and 2 Antenna diversity as per Annex 10, Vol IV, para 3.1.2.10.4
Fixed wing over 5700 kg, excess 250kt	Attachment A, Parts 1, 2 and 3. Antenna diversity as per Annex 10, Vol IV, para 3.1.2.10.4
State transport type, exceed 5700 kg or 250kt	Attachment A, Parts 1, 2 and 3. Antenna diversity as per Annex 10, Vol IV, para 3.1.2.10.4

## Attachment A

### Part 1: Secondary surveillance radar transponder capabilities

1. The minimum capability for the secondary surveillance transponder shall be Mode S Level 2 certified in accordance with paragraphs 2.1.5.1.2, 2.1.5.1.7 and 3.1.2.10 of Annex 10 to the Chicago Convention, Volume IV, Fourth Edition including all amendments up to No 85.
2. Each implemented transponder register shall be compliant with the corresponding section of ICAO document 9871 (2nd edition).
3. The following data items shall be made available to the transponder and be transmitted by the transponder via the Mode S protocol and in accordance with the formats specified in ICAO document 9871 (2nd edition):
  - (a) 24-bit ICAO aircraft address;
  - (b) Mode A code;
  - (c) pressure altitude;
  - (d) flight status (on the ground or airborne);
  - (e) data link capability report;
    - airborne collision avoidance system (ACAS) capability,
    - Mode S specific services capability,
    - aircraft identification capability,
    - squitter capability,
    - surveillance identifier capability,
    - common usage Ground Initiated Comms.-B (GICB) capability report (indication of change),
    - Mode S subnetwork version number;
  - (f) common usage GICB capability report;
  - (g) aircraft identification;
  - (h) special position indication (SPI);
  - (i) emergency status (general emergency, no communications, unlawful interference) including the use of specific Mode A codes to indicate different emergency states;
  - (j) ACAS active resolution advisories when the aircraft is equipped with Traffic alert and collision avoidance system II (TCAS II).
4. Other data items may be made available to the transponder.
5. The data items referred to in point 4 shall only be transmitted by the transponder via the Mode S protocol if the aircraft and equipment certification process covers the transmission of these data items via the Mode S protocol.
6. The continuity of transponder functionality supporting the Mode S protocol shall be equal to or less than  $2 \cdot 10^{-4}$  per flight hour (i.e. mean time between failure equal to or greater than 5 000 flight hours).

## Part 2: Secondary surveillance radar transponder capabilities

1. The minimum capability for the secondary surveillance transponder shall be Mode S Level 2 certified in accordance with paragraphs 2.1.5.1.2, 2.1.5.1.6, 2.1.5.1.7 and 3.1.2.10 of Annex 10 to the Chicago Convention, Volume IV, Fourth Edition including all amendments up to No 85.

2. Each implemented transponder register shall be compliant with the corresponding section of ICAO document 9871 (2nd edition).

3. The following data items shall be made available to the transponder and be transmitted by the transponder via Version 2 of the extended squitter (E5) ADS-B protocol in accordance with the formats specified in ICAO document 9871 (2nd edition):

- (a) 24-bit ICAO aircraft address;
- (b) aircraft identification;
- (c) Mode A code;
- (d) special position indication (SPI) using the same source as for the same parameter specified in Part A;
- (e) emergency status (general emergency, no communications, unlawful interference) using the same source as for the same parameter specified in Part A;
- (f) ADS-B version number (equal to 2);
- (g) ADS-B emitter category;
- (h) geodetic horizontal position in accordance with the world geodetic system revision 1984 (WGS84) latitude and longitude, both while airborne or on the ground;
- (i) geodetic horizontal position quality indicators (corresponding to the integrity containment bound (NIC), 95 % navigation accuracy category for position (NAC p ), source integrity level (SIL) and system design assurance level (SDA));
- (j) pressure altitude using the same source as for the same parameter specified in Part A;
- (k) geometric altitude in accordance with the world geodetic system revision 1984 (WGS84), provided in addition and encoded as a difference to pressure altitude;
- (l) geometric vertical accuracy (GVA);
- (m) velocity over ground, both while airborne (east/west and north/south airborne velocity over ground) or on the ground (surface heading/ground track and movement);
- (n) velocity quality indicator corresponding to navigation accuracy category for velocity (NAC v );
- (o) coded aircraft length and width;
- (p) global navigation satellite system (GNSS) antenna offset;
- (q) vertical rate: barometric vertical rate using the same source as for the same parameter specified in the data item in point 2 (g) of Part C when the aircraft is required and capable to transmit this data item via the Mode S protocol, or Global Navigation Satellite System (GNSS) vertical rate;
- (r) mode control panel/flight control unit (MCP/FCU) selected altitude using the same source as for the same parameter specified in Part C when the aircraft is required and capable to transmit this data item via the Mode S protocol;EN L 305/44 Official Journal of the European Union 23.11.2011
- (s) barometric pressure setting (minus 800 hectoPascals) using the same source as for the same parameter specified in Part C when the aircraft is required and capable to transmit this data item via the Mode S protocol;

(t) ACAS active resolution advisories when the aircraft is equipped with TCAS II using the same source as for the same parameter specified in Part A.

4. Surveillance data items (the data items in point 3(h), (k) and (m)) and their quality indicator data items (the data items in point 3(i), (l) and (n)) shall be provided to the transponders on the same physical interface.

5. The data source connected to the transponder and providing the data items in point 3(h) and (i) shall meet the following data integrity requirements:

(a) horizontal position (data item in point 3(h)) source integrity level (SIL, expressed with respect to NIC) shall be equal to or less than  $10^{-7}$  per flight-hour;

(b) horizontal position (data item in point 3(h)) integrity time to alert (leading to a change of the NIC quality indicator), if on-board monitoring is required to meet the horizontal position source integrity level, shall be equal to or less than 10 seconds.

6. The primary data source providing the data items in point 3(h) and (i) shall be at least compatible with GNSS receivers that perform receiver autonomous integrity monitoring (RAIM) and fault detection and exclusion (FDE), along with the output of corresponding measurement status information, as well as integrity containment bound and 95 % accuracy bound indications.

7. The system integrity level of the data sources providing the data items in point 3(f), (g), (k) to (p) shall be equal to or less than  $10^{-5}$  per flight-hour.

8. The quality indicator information (NIC, NACp, SIL, SDA, NACv and GVA) (the data items in point 3(i), (l) and (n)) shall express the actual performance of the selected data source as valid at the time of applicability of the measurement of the data items in point 3(h), (k) and (m)).

9. With respect to the processing of the data items in point 3(a) to (t), the transponder system integrity level for the extended squitter ADS-B protocol, including any interconnecting avionics to the transponder, shall be equal to or less than  $10^{-5}$  per flight-hour.

10. The total latency of the horizontal position data (the data items in point 3(h) and (i)) shall be equal to or less than 15 second in 95 % of all transmissions.

11. The uncompensated latency of the horizontal position data (data item in point 3(h)) shall be equal to or less than 0,6 second in 95 % of the cases and shall be equal to or less than 1,0 second in 99,9 % of all transmissions.

12. The total latency of the ground speed data items (the data items in point 3(m) and (n)) shall be equal to or less than 1,5 second in 95 % of all transmissions.

13. If the transponder is set to use a Mode A conspicuity code of 1000 then the broadcast of Mode A code information via the extended squitter ADS-B protocol shall be inhibited.

14. Other data items may be made available to the transponder.

15. Except for military reserved formats, the data items referred to in point 14 shall only be transmitted by the transponder via the extended squitter ADS-B protocol if the aircraft and equipment certification process covers the transmission of these data items via the extended squitter ADS-B protocol.

16. The continuity of transponder functionality supporting the ADS-B protocol shall be equal to or less than  $2 \cdot 10^{-4}$  per flight hour (i.e. mean time between failure equal to or greater than 5 000 flight hours).

### Part 3: Secondary surveillance radar transponder additional surveillance data capability

1. Each transponder register that is implemented shall be compliant with the corresponding section of ICAO document 9871 (2nd edition).

2. The following data items shall be made available to the transponder and be transmitted by the transponder as requested by the ground-based surveillance chain, via the Mode S protocol and in accordance with the formats specified in ICAO document 9871 (2nd edition):

- (a) MCP/FCU selected altitude;
- (b) roll angle;
- (c) true track angle;
- (d) ground speed;
- (e) magnetic heading;
- (f) indicated airspeed (IAS) or mach number;
- (g) vertical rate (barometric or baro-inertial);
- (h) barometric pressure setting (minus 800 hectoPascals);
- (i) track angle rate or true airspeed if track angle rate is not available.

3. Other data items may be made available to the transponder.

4. The data items referred to in point 3 shall only be transmitted by the transponder via the Mode S protocol if the aircraft and equipment certification process covers the transmission of these data items via the Mode S protocol.

This AIC replaces AIC 02/14.

A handwritten signature in blue ink that reads "C. Maria". The signature is written in a cursive style with a horizontal line underneath the name.

Mrs C. Maria (AISO)

For: *Chief Executive Officer*

**Seychelles Civil Aviation Authority**