

Sam Buckwalter

From: DEKER Guy <guy.deker@fr.thalesgroup.com>
Sent: Thursday, June 4, 2020 9:04 AM
To: Sam Buckwalter
Subject: RE: NDB Subcommittee Meeting Postponed

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Hello Sam,

This is I hope our last update of question list (no new question, only detailed) for discussion

1. 4.1.24.1 Preferred Route Primary Records.

- Note 1: The Standard Enroute Airway Identifier is five characters. Some users envision the need for a sixth character. This field length will permit such coding; see Section 5.8.
- Thales comment: Preferred Route Ident is 10 characters and this note address Enroute Airway (which is 5 characters long). This note is inconsistent and should be removed.
- WG Action : remove note 1 for 4.1.24.1

1 Bis) 4.1.6.1/4.1.21.1/4.1.21A.1/4.1.21B.1/4.1.21C.1 Enroute Airways & restrictions Primary Records.

- All Enroute Airways & Restriction records (4.1.6.1, 4.1.21.1, 4.1.21A.1, 4.1.21B.1, 4.1.21C.1) have a note 1 allowing for a 6th character In a Jeppesen Database,
- Thales comment: Indeed, we observed that Airway Ident with 6th character sometime exists. However, actual length (see 5.8 definition) is still 5 characters. Last Seattle meeting expressed a need for change (in XML only) but only for Terminal procedures, for airways.
- WG Action:
 - Need to clarify Airway Ident length is now 6. In which case adjust length to 6 in 4.1.6.1 column 14-19, and 4.1.21.1/4.1.21A.1/4.1.21B.1/4.1.21C.1 column 7-12, and definition 5.8
 - AND IF 6th character is actually used for other than for Airway ident (for instance ATS service), define another record for this information.

2. 5.7 Route Type (RT TYPE) Table 5-6 – Airport and Heliport SID Record

- Note 4: The Qualifier F indicates that the departure is an RNP AR procedure. Implied GNSS required. Qualifier F used with SID route type 0 will designate an RNP AR Engine Out SID. Qualifier F can be used in conjunction with SID route type 1, 2 or 3, provided the corresponding SID transition is AR.
- Thales comment : Today the qualifier F is used for the whole procedure. But the note suggest that when there is an AR Engine out SID (type 0), we can have also other SID transition (type 1, 2 or 3) in conjunction with the EO SID.
- WG Action: Clarify note 4 use of qualifier F for all SID Route type or only for AR EO SID

Table 5-5 – Airport SID (PD) and Heliport SID (HD) Records

SID Route Type Description	Field Content
Engine Out SID	0
SID Runway Transition	1
SID or SID Common Route	2
SID Enroute Transition	3
Vector SID Runway Transition	T
Vector SID Enroute Transition	V

Table 5-6 – Airport and Heliport SID Record

Qualifier Description	Qualifier 1 Field Content	Qualifier 2 Field Content	Qualifier 3 Field Content
DME Required	D		
GNSS Required	G		
Radar Required	R		
Helicopter SID from Runway	H		
Point-in-Space (PinS) SID	P		
RNAV PBN Nav Spec		D (Note 2)	
RNP PBN Nav Spec		E (Note 1)	
FMS Required		F (Note 3)	
Conventional Departures		G	
PinS Departure - Proceed Visually		W (Note 5)	
PinS Departure - Proceed VFR		X (Note 5)	
RNAV 5 PBN Nav Spec			Z
RNAV 2 PBN Nav Spec			Y
RNAV 1 PBN Nav Spec			X
B RNAV			B
P RNAV			P
RNP 2 PBN Nav Spec			D
RNP 1 PBN Nav Spec			E
RNP AR PBN Nav Spec			F (Note 4)
A-RNP (Advanced RNP) PBN Nav Spec			A
RNP 0.3 PBN Nav Spec			G
RNP 1 or RNAV 1 PBN Nav Spec			M
PBN Nav Spec unspecified			U
VOR/DME RNAV			V

Note 4: The Qualifier F indicates that the departure is an RNP AR procedure. Implied GNSS required. Qualifier F used with SID route type 0 will designate an RNP AR Engine Out SID. Qualifier F can be used in conjunction with SID route type 1, 2 or 3, provided the corresponding SID transition is AR.

3. **5.80 ILS/MLS/GLS Category (CAT)**

- Thales comment : In the light of two AIP charts concerning the ILS/LOC and ILS SA CAT I (Special Authorization) procedures for runway RW04L at KEWR (Newark), there is only one coded procedure “I04L” in the A424 source file, meaning the two procedures are identical from an A424 point of view. Do we confirm there is no specific A424 coding of A424 value for ILS SA CAT I approach procedure? A crew would appreciate to make the distinction in order to proceed to the specific minima for SA CAT I, so, it seems that this information is missing and should be worth be indicated in a 424 record.
- Although this subject was included in the Attachment 8 from GARMIN, this was only for XML.
- WG Action: how to manage this specific need in the A424 ASCII file? For instance in §5.80 below with 4 for ILS SA Cat I, and 5 for ILS SA Cat II?

5.80 ILS/MLS/GLS Category (CAT)

Definition/Description: For ILS/MLS/GLS stations, this field defines the Facility Performance Category, defined as Category I, II, and III, up to which the station is operating as a minimum. The level of Facility Performance Category does neither imply that permission exists to use the facility for landing guidance to that level nor limit the minimal use to the designated classification.

This field is also used to define the classification for other than ILS/MLS/GLS installations such as LOC, IGS, LDA, or SDF.

Source/Content: The ILS/MLS/GLS Category/Classification will be derived from official government sources and will be indicated by a value from the table below.

Definition	Category/Classification
Localizer only, no Glideslope	0
ILS /MLS/GLS Category I	1
ILS /MLS/GLS Category II	2
ILS /MLS/GLS Category III	3
IGS Facility	I
LDA Facility with Glideslope	L
LDA Facility, no Glideslope	A
SDF Facility with Glideslope	S
SDF Facility, no Glideslope	F

Used On: Localizer, MLS and ILS Continuation Records, GLS Record.
Length: 1 character
Character Type: Alpha/numeric

4. Communication Records for UC/UR

- Thales comment: Today, all airspace have associated communication frequency. And A424 has a communication frequency record only for the Enroute Communications records for the FIR/UIR ((EV) 4.1.23.1) and for the special activity area ((ES) 4.1.33.1). For some applications, communication Frequency (7 characters see 5.103) is therefore missing for controlled and restricted airspaces (like EV records for FIR/UIR). It concerns:
 - UC – Controlled Airspace – 4.1.25
 - UR – Restrictive Airspace – 4.1.18
- Thales proposal:
 - For controlled airspace, add this 7 characters field for instance in column 45 to 51 within blank space 45 to 123 of UC Controlled Airspace Primary Extension Records (4.1.25.3).
 - For Restricted Airspace, no room seems available within UR Restricted Airspace Primary Record (4.1.18.2), as there is no extension record. SO **add** a new record **Restrictive Airspace Extension Records 4.1.18.4 ?**
 - **Or unless we could modify the EV (Enroute Communications Record) to also address UR and UC**
- WG action: add a record for communication frequency associated to controlled and restricted airspaces.

5. SBAS provider

- Thales comment: SBAS provider information is useful in order to manage LNAV/VNAV SBAS approaches especially for airports with no LP/LPV approach
- The SBAS Service Provider Identifier (SBAS ID) already exist (5.255)

Definition/Description: The SBAS Service Provider Identifier field is used to associate the SBAS approach procedure to a particular satellite-based approach system service provider. The SBAS Service Provider is carried in the GBAS Path Point Record only for the purpose of CRC calculations.

Source/Content: A number from 00 to 15. The current definitions are:

0	WAAS
1	EGNOS
2	MSAS
3	GAGAN
4	SDCM
5-13	(Spare)
14	Not intended for SBAS, used as the CRC default value for GBAS
15	Any Service provider may be used

Used On: Airport and Helicopter Operations SBAS Path Point Records,
GBAS Path Point Records

Length: 2 characters

Character Type: Numeric

- Thales proposal: Add 2 character "SBAS Service Provider Identifier"
 - in column 17-18 (instead of "reserved expansion) on Airport Primary Records (PA) (4.1.7.1) and on Heliport Primary Records (HA) (4.2.1.1)
 - Alternative position : column 91-92 on Airport Primary Records (PA) (4.1.7.1) and column 86-87 on Heliport Primary Records (HA) (4.2.1.1)

4.1.7.1 Airport Primary Records

Column	Field Name (Length)	Reference
1	Record Type (1)	5.2
2 thru 4	Customer/Area Code (3)	5.3
5	Section Code (1)	5.4
6	Blank (Spacing) (1)	
7 thru 10	Airport ICAO Identifier (4)	5.6
11 thru 12	ICAO Code (2)	5.14
13	Subsection Code (1)	5.5
14 thru 16	ATA/IATA Designator (3)	5.107
17 thru 18	SBAS Service Provider Identifier (2)	5.255
19 thru 21	Blank (Spacing) (3)	
22	Continuation Record Number (1)	5.16
23 thru 27	Speed Limit Altitude (5)	5.73
28 thru 30	Longest Runway (3)	5.54
31	IFR Capability (1)	5.108
32	Longest Runway Surface Code (1)	5.249
33 thru 41	Airport Reference Point Latitude (9)	5.36
42 thru 51	Airport Reference Point Longitude (10)	5.37
52 thru 56	Magnetic Variation (5)	5.39
57 thru 61	Airport Elevation (5)	5.55
62 thru 64	Speed Limit (3)	5.72
65 thru 68	Recommended Navaid (4)	5.23
69 thru 70	ICAO Code (2)	5.14
71 thru 75	Transitions Altitude (5)	5.53
76 thru 80	Transition Level (5)	5.53
81	Public/Military Indicator (1)	5.177
82 thru 84	Time Zone (3)	5.178
85	Daylight Indicator (1)	5.179
86	Magnetic/True Indicator (1)	5.165
87 thru 89	Datum Code (3)	5.197
90	VFR Checkpoint Flag (1)	5.158
91 thru 93	Reserved (Expansion) (3)	
94 thru 123	Airport Name (30)	5.71
124 thru 128	File Record Number (5)	5.31
129 thru 132	Cycle Date (4)	5.32

4.2.1.1 Heliport Primary Record

Column	Field Name (Length)	Reference
1	Record Type (1)	5.2
2 thru 4	Customer/Area Code (3)	5.3
5	Section Code (1)	5.4
6	Blank (Spacing) (1)	
7 thru 10	Heliport Identifier (4)	5.6
11 thru 12	ICAO Code (2)	5.14
13	Subsection Code (1)	5.5
14 thru 16	ATA/IATA Designator (3)	5.107
17 thru 18	SBAS Service Provider Identifier (2)	5.255
19 thru 21	Blank (Spacing) (3)	
22	Continuation Record No. (1)	5.16
23 thru 27	Speed Limit Altitude (5)	5.73
28 thru 30	Datum Code (3)	5.197
31	IFR Capability (1)	5.108
32	Heliport Type	5.305
33 thru 41	Heliport Reference Point Latitude (9)	5.36
42 thru 51	Heliport Reference Point Longitude (10)	5.37
52 thru 56	Magnetic Variation (5)	5.39
57 thru 61	Heliport Elevation (5)	5.55
62 thru 64	Speed Limit (3)	5.72
65 thru 68	Recommended Navaid (4)	5.23
69 thru 70	ICAO Code (2)	5.14
71 thru 75	Transition Altitude (5)	5.53
76 thru 80	Transition Level (5)	5.53
81	Public Military Indicator (1)	5.177
82 thru 84	Time Zone (3)	5.178
85	Daylight Indicator (1)	5.179
86 thru 91	Reserved Expansion (4)	
92	Magnetic/True Indicator (1)	5.165
93	Reserved (Expansion) (1)	
94 thru 123	Heliport Name (30)	5.71
124 thru 128	File Record No. (5)	5.31
129 thru 132	Cycle Date (4)	5.32

- Alternative proposal: Add 2 character “SBAS Service Provider Identifier”
 - in column 105-106 of Airport Procedure Data Continuation Record (4.1.9.5) and Heliport Procedure Data Continuation Record (4.2.3.5) (initially blank spacing on 105-118)
- WG action: add SBAS provider field in an A424 record

6. 4.1.36.1 Airport Helipad Primary Records and 4.2.9.1 Heliport Helipad Primary Records

- Thales comment: In order to define virtual FASDB for Helipad, the equivalent of Ellipsoid Height (5.225, 6 characters) as in the Runway table (PG) is missing for Helipads (HA, PH, HH)
- Possible proposal:
 - For Heliport Records (HA):
 - > Column 86 to 91 Heliport Primary Records (4.2.1.1)(86 to 91 currently reserved for expansion)
 - For Airport Helipad Record (PH):
 - > column 105 to 110 of Airport Helipad Primary Records (4.1.36.1) (105 to 123 are reserved for expansion)
 - For Heliport Helipad Record (HH):
 - > column 105 to 110 of Heliport Helipad Primary Records (4.2.9.1) (105 to 123 which are reserved for expansion)
- WG action: add Ellipsoidal Height (5.225) for such Helipads records

Best Regards

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