Amendment 1 to International Civil Aviation Organization (ICAO) Doc 4444:

Conversion of FPLs from NEW to PRESENT

Workshop on the ICAO 2012 Flight Plan Provisions (2012 FPL)
Nairobi, Kenya
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Federal Aviation
Administration

Overview

- Implementation of Guideline 6

- Determining if FPL is **PRESENT** or **NEW**

- "**PBN**/" Consistency Check

- Conversion Table

- Conversion: **NEW** to **PRESENT**

- FAA Use of "**PBN**/"

Implementation of Guideline 6

- During transition, ANSPs who accept **NEW** need to convert flight information to **PRESENT** for coordination with adjacent ANSPs that have not yet transitioned

- Strongly recommended ANSPs utilize same conversion table so airspace users & ANSPs have a common understanding of how **NEW** is converted to **PRESENT**

- No intent for **PRESENT** to be converted to **NEW** during or after transition

Determining if FPL is PRESENT or NEW

- Automation, or manual review of the FPL, must first determine whether **NEW** or **PRESENT** format FPL has been received

  - If **NEW**, conversion table is applied

- This determination is simple if FPL is filed prior to accepting **NEW** → assume **PRESENT**

- Equally simple after November 15, 2012 → assume **NEW**

Determination Once ANSP Accepts NEW

- Assume **PRESENT** if <u>any</u> of the following is filed:
  - Field 10a: "E", "J", "M", or "P"
  - Field 10b: "D"
  - Item 18: "STS/" entry used that is not on allowed list for **NEW**
  - Item 18: "PER/" entry that is
    - More than a single letter, or
    - A letter not allowed in ICAO DOC 8168, Volume 1

Determination Once ANSP Accepts NEW

- Assume **NEW** if <u>any</u> of the following filed:
  - Field 10a: Numeric character, "A" or "B"
  - Field 10b:
    - "E", "H" or "L"
    - Numeric character, or
    - More than 2 characters
  - Item 18: Indicators "**PBN**/", "**SUR**/", "**DLE**/" or "**TALT**/"

Determination Once ANSP Accepts NEW

- If filed data contains formats which are both **PRESENT** & **NEW**
    - FPL is inconsistent
    - FPL should be rejected or handled in accordance with current procedures

"PBN/" Consistency Check

- **NEW** "**PBN**/" contains information on navigational capability & equipment

- Possible to file inconsistent "**PBN**/" information in **NEW** Field 10a & Item 18

- Therefore a consistency check is recommended for **NEW** FPLs

"PBN/" Consistency Check

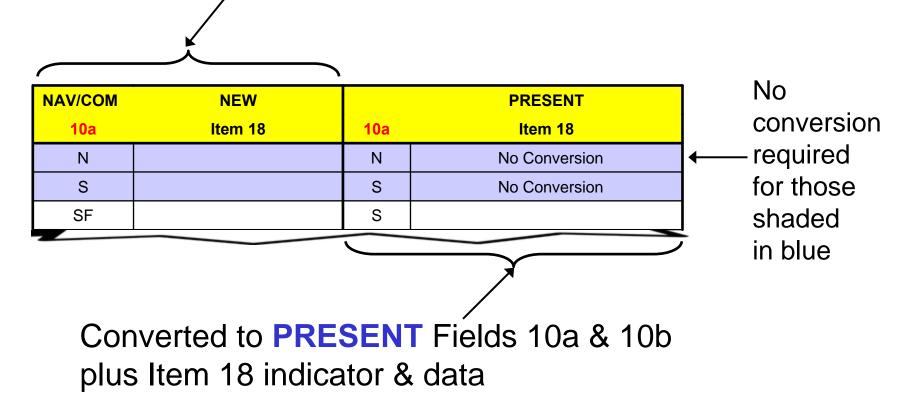| If **NEW** Item 18 contains	then	**NEW** Field 10a must contain
B1, B2, C1, C2, D1, D3, O1 or O2		**G**
B1, B3, C1, C3, D1, D3, O1 or O3		**D**
B1 or B4		**(O or S) & D** **("OD" or "SD")**
B1, B5, or C1		**I**
C1, C4, D1, D4, O1, or O4		**D & I**

Conversion Table

Objective: Develop common conversion approach which is consistent & acceptable to all affected ANSPs in order to harmonize global implementation

- Table developed through iterative work with multiple regional Task Forces
    - CAR/SAM, NAM, APAC, EUR/EUROCONTROL, MID
- If the table shows data in the "**PRESENT** Item 18" column, one or more ANSPs <u>need</u> this information for their operations
- Some variations will exist due to regional requirements
- It is <u>critical</u> to coordinate with your neighboring ANSPs

Conversion Table

Fields 10a & 10b Qualifiers & Item 18 Indicators filed in **NEW**

No conversion required for those shaded in blue

NAV/COM 10a	NEW Item 18	10a	PRESENT Item 18
N		N	No Conversion
S		S	No Conversion
SF		S	

Converted to **PRESENT** Fields 10a & 10b plus Item 18 indicator & data

Conversion Table

- Separate chart also provided
  - Details rationale for each conversion
  - Notes any additional comments

NEW Item		PRESENT Item		Rationale for translation	Comments
10 a	18	10a	18		
N		N		No Conversion	
S		S		No Conversion	**IF** <u>all</u> ANSPs direct filers to file "SF" beginning 1 April **OTHERWISE** <u>all</u> ANSPs must convert to VOL
A		Z	NAV/GBAS	There is no equivalent to GBAS in present. Add notation in Item 18.	
B		Z	NAV/LPV	There is no equivalent to LPB in present. Add notation in Item 18.	

Conversion: NEW to PRESENT

Field 10a - "S"

- **PRESENT** "S" (standard equipment): VHF RTF, **ADF**, VOR & ILS
- User must file **NEW** "F" to indicate ADF
- **ANSPs should advise users that definition of "S" will change on 1 April 2012** (i.e., "**S**" = "**VOL**")
  - **Otherwise, NEW "S" would translate to PRESENT "VOL"**

NAV/COM	NEW	PRESENT	
10a	Item 18	10a	Item 18
S		S	NO CONVERSION IF <u>all</u> ANSPs direct filers to file "**SF**" beginning 1 April OTHERWISE <u>all</u> ANSPs must convert to VOL

Conversion: NEW to PRESENT

Field 10a - "A" & "B"

- "A" & "B" are not allocated in **PRESENT**
- **NEW** "A" converts to **PRESENT** "Z" & "NAV/GBAS" in Item 18

(Ground Based Augmentation System)

- **NEW** "B" converts to **PRESENT** "Z" & "NAV/LPV" in Item 18

(Localizer Performance with Vertical Guidance)

NAV/COM	NEW		PRESENT	
10a	Item 18	10a	Item 18	
A		Z	NAV/GBAS	
B		Z	NAV/LPV	

Conversion: NEW to PRESENT

Field 10a - "E1" "E2" "E3"

- No letter for ACARS in **PRESENT**

- **NEW** "E1", "E2" & "E3" convert to **PRESENT** "Z" & "COM/" with appropriate text in Item 18

NAV/COM	NEW		PRESENT	
10a	Item 18		10a	Item 18
E1			Z	COM/FMC WPR ACARS E1
E2			Z	COM/DFIS ACARS E2
E3			Z	COM/PDC ACARS E3

Conversion: NEW to PRESENT

Field 10a - "J1" through "J7"

- Data link type not differentiated in **PRESENT** Field 10a
  - Filed as "DAT/" in **PRESENT** Item 18
- **NEW** "J1" – "J7" convert to **PRESENT** "J" & "DAT/" with "V", "H", or "S" in Item 18

NAV/COM	NEW	PRESENT	
10a	Item 18	10a	Item 18
J1		J	DAT/V J1
J2		J	DAT/H J2
J3		J	DAT/V J3
J4		J	DAT/V J4
J5		J	DAT/S J5
J6		J	DAT/S J6
J7		J	DAT/S J7

Conversion: NEW to PRESENT

Field 10a - "M1" "M2" "M3"

- "M" means Omega in **PRESENT**
- In **NEW**, "M1", "M2" & "M3" indicate satellite RTF communications capabilities
- **NEW** "M1" – "M3" convert to **PRESENT** "Z" & "COM/" with appropriate text in Item 18

NAV/COM	NEW	PRESENT	
10a	Item 18	10a	Item 18
M1		Z	COM/INMARSAT M1
M2		Z	COM/MTSAT M2
M3		Z	COM/IRIDIUM M3

Conversion: NEW to PRESENT

Field 10a - "P1" through "P9"

- "P" is not allocated in **PRESENT**

- In **NEW**, "P1" – "P9" are reserved for RCP
  (Required Communication Performance)

- **NEW** "P1" – "P9" should be removed & no conversion entry made in **PRESENT** Field 10a

NAV/COM	NEW		PRESENT	
10a	Item 18	10a	Item 18	
P1-P9	RESERVED for RCP			

Conversion: NEW to PRESENT

Field 10a - "R"

- Oceanic "RNP10" actually an RNAV standard
  - Some ANSPs also accept **PRESENT** "RNAV10"
- **NEW** "R" with "PBN/" converts to **PRESENT** "RZ" & "NAV/" with text in Item 18 as follows:

NAV/COM	NEW	PRESENT	
10a	Item 18	10a	Item 18
R	PBN/A1	RZ	NAV/RNAV10 RNP10 A1
R	PBN/B1	RZ	NAV/RNAV5 B1
R	PBN/B2	RZ	NAV/RNAV5 B2
R	PBN/B3	RZ	NAV/RNAV5 B3
R	PBN/B4	RZ	NAV/RNAV5 B4
R	PBN/B5	RZ	NAV/RNAV5 B5
R	PBN/B6	RZ	NAV/RNAV5 B6
R	PBN/C1	RZ	NAV/RNAV2 C1
R	PBN/C2	RZ	NAVRNAV2 C2
R	PBN/C3	RZ	NAV/RNAV2 C3
R	PBN/C4	RZ	NAV/RNAV2 C4

Conversion: NEW to PRESENT

Field 10a - "R"

- No letter for RNAV in **PRESENT**

- Although "P" is not allocated in **PRESENT**, EUROCONTROL uses "P" to indicate precision RNAV

- **NEW** "R" with "PBN/" converts to **PRESENT** "**P**RZ" & "NAV/" with text in Item 18 as follows:

NAV/COM	NEW	PRESENT	
10a	Item 18	10a	Item 18
R	PBN/D1	PRZ	NAV/RNAV1 D1
R	PBN/D2	PRZ	NAV/RNAV1 D2
R	PBN/D3	PRZ	NAV/RNAV1 D3
R	PBN/D4	PRZ	NAV/RNAV1 D4

Conversion: NEW to PRESENT

Field 10a - "R"

- EUROCONTROL uses "P" to indicate precision RNAV
- NEW "R" with "PBN/" converts to PRESENT "RZ" & "NAV/" –or– "PRZ" & "NAV/" with text in Item 18 as follows:

NAV/COM	NEW	PRESENT	
10a	Item 18	10a	Item 18
R	PBN/L1	RZ	NAV/RNP4 L1
R	PBN/O1	PRZ	NAV/RNP1 O1
R	PBN/O2	PRZ	NAV/RNP1 O2
R	PBN/O3	PRZ	NAV/RNP1 O3
R	PBN/O4	PRZ	NAV/RNP1 O4

Conversion: NEW to PRESENT

Field 10a - "R"

- **NEW** "R" with "PBN/" converts to **PRESENT** "RZ" & "NAV/" with text in Item 18 for approach capability as follows:

NAV/COM 10a	NEW Item 18	10a	PRESENT Item 18
R	PBN/S1	RZ	NAV/RNP APRCH S1
R	PBN/S2	RZ	NAV/RNP APRCH BARO VNAV S2
R	PBN/T1	RZ	NAV/RNP AR APRCH RF T1
R	PBN/T2	RZ	NAV/RNP AR APRCH T2

Conversion: NEW to PRESENT

Field 10a - "Z" with "DAT/"

- **PRESENT** Field 10a "Z" points to "COM/" &/or "NAV/"
- Data link capability filed as **PRESENT** "DAT/" with "S", "H", "V" &/or "M" in Item 18
- **NEW** Field 10a "Z" points to "COM/", "NAV/" &/or "DAT/"
- Data link capability filed as **NEW** "J1" – "J7" in Field 10a
  - "Z" & "DAT/" only filed for capability not in Field 10a
- **NEW** "Z" & "DAT/" converts to **PRESENT** "Z" & "COM/" with text

NAV/COM	NEW	PRESENT	
10a	Item 18	10a	Item 18
Z	DAT/nnnn	Z	COM/nnnn

Conversion: NEW to PRESENT

Field 10b - "E"

- **NEW** "E": Mode S, including aircraft identification, pressure-altitude & extended squitter (ADS-B) capability
- **PRESENT**:
  - "S": Mode S, including both pressure-altitude & aircraft identification transmission
  - "D": ADS capability
- **NEW** "E" converts to **PRESENT** "SD"

SUR	NEW	PRESENT	
10b	*Item 18*	*10b*	*Item 18*
E		SD	COM/E

NOTE: EUROCONTROL will convert NEW "E" to PRESENT "SD" plus "COM/E"

Conversion: NEW to PRESENT

Field 10b - "H"

- **NEW** "H" is equivalent to a **PRESENT** "S" plus capabilities not relevant in **PRESENT**
- **NEW** "H" converts to **PRESENT** "S"

SUR	NEW	PRESENT	
10b	*Item 18*	*10b*	*Item 18*
H		S	COM/H

NOTE: EUROCONTROL will convert NEW "H" to PRESENT "S" plus "COM/H"

Conversion: NEW to PRESENT

Field 10b - "L"

- **NEW** "L" is equivalent to a **PRESENT** "S" plus additional capabilities
- **NEW** "L" converts to **PRESENT** "SD"

SUR	NEW	PRESENT	
10b	*Item 18*	*10b*	*Item 18*
L		SD	COM/L

NOTE: EUROCONTROL will convert NEW "L" to PRESENT "SD" plus "COM/L"

Conversion: NEW to PRESENT

Field 10b - "B1" "B2" "U1" "U2" "V1" "V2"

- "B1"/"B2"/"U1"/"U2"/"V1"/"V2" represent various forms of ADS-B

- NEW "B1", "B2", "U1", "U2", "V1" & "V2" convert to PRESENT "D" in Item 10b

SUR	NEW	PRESENT	
10b	Item 18	10b	Item 18
B1		D	COM/B1
B2		D	COM/B2
U1		D	COM/U1
U2		D	COM/U2
V1		D	COM/V1
V2		D	COM/V2

NOTE: EUROCONTROL will convert NEW "B1", "B2", "U1", "U2", "V1" & "V2" to PRESENT "D" plus "COM/" with the respective qualifier

Conversion: NEW to PRESENT

Field 10b - "D1" & "G1"

- "D1" & "G1" both represent ADS-C
- **NEW** "D1" & "G1" convert to **PRESENT** "D" & "RMK/ADSC" in Item 18

SUR	NEW	PRESENT	
10b	*Item 18*	*10b*	*Item 18*
D1		D	COM/D1
G1		D	COM/G1

NOTE: EUROCONTROL will convert NEW "D1" & "G1" to PRESENT "D" plus "COM/" with the respective qualifier

Conversion: NEW to PRESENT

Item 18

- Several new indicators in **NEW**: "DOF/", "DLE/", & "TALT/"
- Data following these indicators & some others converts to "RMK/" to mitigate loss of information
- **NEW** Item 18 data converts to **PRESENT** data as follows:

NEW *Item 18*	PRESENT *Item 18*
STS/ STS/ATFMX	STS/ < text after STS/ > STS/ATFMEXEMPTAPPROVED
SUR/	RMK/ SUR < text after SUR/ >
DOF/	Maintain DOF/ data if possible, otherwise remove.
DAT/	COM/
DLE/	RMK/ DLE < text after DLE/ >
ORGN/	RMK/ORGN < text after ORGN/>
TALT/	RMK/TALT < text after TALT/>
PBN/	See table above

Note: Discuss the ordering of Item 18 data with neighboring ANSPs

FAA Use of "PBN/"

- FAA requires that users file RNAV capabilities on a per flight segment basis in **PRESENT** Item 18 "NAV/"
  - **NEW** Item 18 "PBN/" data entries do not support this paradigm
  - As a result, FAA will continue to require **NEW** Item 18 "NAV/" information in addition to "PBN/"
- FAA automation & operational procedures use "NAV/" data for processing & application of routes
  - Controllers, therefore, only update "NAV/" information
- Consequently
  - FAA will accept & forward **NEW** "PBN/" entries
  - FAA will not update or forward changes to "PBN/" made in flight

Questions?

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