

**AERONAUTICAL CHARTING FORUM
Charting Group
ACF (11-01)
RECOMMENDATION DOCUMENT**

FAA Control # (11-01-243)

Subject:

Charting standard of RNP-1 STARS and DPs.

Background/Discussion:

RNP-1 STARS and DPs are expected to be developed and charted within the next 6 months to 2 years. Currently there is no charting standard developed for these charts. Prior to the publication of RNP-1 STARS and DPs a standard needs to be developed to prevent charts from being published and then having to be changed once the standard is developed.

There have been several working groups that have looked at the naming of SIDs and STAR charts to standardize them and harmonize them with ICAO. During these working groups the below proposal has been given.

Recommendations:

For Charting of the RNP-1 STARS and DPs are as follows:

Option 1: The Title would be the name of the procedure and an RNAV annotation. The equipment required would be located in the notes section. Example below:

Operation	Title	Note(s)
RNP 1	SIMPL SIX DEPARTURE (RNAV) SUUPR ONE ARRIVAL (RNAV)	RNP 1 DME/DME/IRU or GPS Required [or “GPS Required” alone]
RNP 1 with RF	GREAT TWO DEPARTURE (RNAV) SMART THREE ARRIVAL (RNAV)	RNP 1 DME/DME/IRU or GPS Required [or only GPS Required] RF REQUIRED [notes as appropriate- by transition or entire procedure]
RNP AR/SAAAR	CMPLX THREE DEPARTURE (RNAV) HAARD ONE ARRIVAL (RNAV)	RNP .XX [lowest RNP on procedure] GPS REQUIRED RF REQUIRED [notes as appropriate- by transition or entire procedure] AUTHORIZATION REQUIRED [Large Font]

Option 2: The Title would be the name of the procedure and an RNP annotation. The equipment required would be located in the notes section. Example below

Operation	Title	Note(s)
RNP 1	SIMPL SIX DEPARTURE (RNP 1) SUUPR ONE ARRIVAL (RNP 1)	DME/DME/IRU or GPS Required [or “GPS Required” alone]
RNP 1 with RF	GREAT TWO DEPARTURE (RNP 1) SMART THREE ARRIVAL (RNP 1)	DME/DME/IRU or GPS Required [or only GPS Required] RF REQUIRED [notes as appropriate- by transition or entire procedure]
RNP AR/SAAAR	CMPLX THREE DEPARTURE (RNP. XX) [lowest RNP on procedure] HAARD ONE ARRIVAL (RNP.XX) [lowest RNP on procedure]	GPS REQUIRED RF REQUIRED [notes as appropriate- by transition or entire procedure] AUTHORIZATION REQUIRED [Large Font]

For performance based procedures, 3 things need to be charted (aside from path, communication, etc.):

1. Required performance (accuracy)
2. Sensors required (some might say supported), and
3. General (NavSpec) and specific ground/air equipment/functionality requirements (e.g., radius-to-fix (RF)).

RF legs will be an optional feature on RNP procedures but not on RNAV (specifically RNAV 1) procedures.

1. RF Manufacturers and pilots need to be able to readily identify procedures that contain RF segments
2. Use/implementation of RF on RNP procedures should be limited because, unlike with RNP AR operators, RF functionality is not widespread in RNP systems.
3. Should procedures with RF legs have the entire procedure noted “RF Required” or should just the transition that contains the RF leg be noted

We need to consider potential for future sensors as we name procedures.

ARINC 424 (version(s) TBD) considerations need to be rolled into planning.

Comments: This recommendation affects

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MEETING 11-01: Ms. Suzette Rash, FAA/AFS-470, submitted and briefed the issue. Ms. Rash stated that the FAA intends to start publishing RNAV RNP 1 SIDs and STARs. The first procedure is expected to be published within the next six months. Two chart naming options were presented and discussed.

Representatives of several air carriers noted that their FMS boxes differed in their ability to depict chart titles. Mr. John Moore, FAA/AJV-3B, noted that chart titling should not be constrained solely by FMS limitations. Mr. Moore suggested that such procedures should be handled in the same way as other RNAV procedures, with the type of approach/navigation specification placed in parentheses, i.e. (RNP1), (RNAV1), etc. The computer code would remain the same.

Mr. Brad Rush, FAA/AJV-3B, commented that only 6 characters are allowed for SIDs/STARs due to ARINC limitations. Mr. Rush cautioned against any changes to procedure naming conventions and that any such changes would have global implications, as well as to those procedures already charted in the U.S. (approximately 22,000 IFR procedures in the US alone.).

Mr. Ted Thompson, Jeppesen, commented that no equipment requirements should appear in the procedure title. Equipment-related comments should only appear as a Note in the procedure, as is the current practice both with Jeppesen and the FAA. Ms. Valerie Watson, FAA/AJV-3B, concurred with Mr. Thompson's comments.

Mr. Thompson express a concern over future naming conventions with the future charts being data driven as well as the impact related to FMS coding.

Mr. Moore added that there had previously been discussions within the PARC RNAV RNP Charting group regarding charting naming conventions. Mr. Thompson suggested to Mr. Moore that maybe the FAA PARC subcommittee should reconvene to review and develop a recommendation from the RD submitted.

ACTION: Ms. Suzette Rash, FAA/AFS-470, will report back at the next ACF.

MEETING 11-02: Mr. John Moore, FAA/AJV-3B, briefed the topic as part of the PARC Procedure Naming Convention, see report in paragraph V. I.

Mr. Kel Christianson, FAA/AFS-470, agrees the issues were adequately covered by the PARC Procedure Naming Convention Action Team recommendations which have been submitted to the FAA PARC.

STATUS: CLOSED