

**GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING  
FORUM 06-01**

**April 19-20, 2006  
Recommendation Document**

**Subject:** RNAV-1 and RNAV-2 Descriptors for DPs, STARs and Routes

**Background/Discussion:**

**Recommendation:**

**Submitted by:** Mark Steinbicker

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**Date:** April 20, 2006

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**MEETING 06-01:** Mr. Mark Steinbicker, AFS-410, submitted this issue. Mr. Frank Alexander, Northwest Airlines, provided the following briefing. Several flight crews have reported that the current Type A/Type B equipment notes published on RNAV SIDs and STARs are confusing. Advisory Circular (AC) 90-100, US Terminal and Enroute Area Navigation (RNAV) Operations will be revised to eliminate all reference to RNP. The standard Type A and B procedure chart notes on approximately 190 RNAV DP and 22 RNAV STAR procedures will be replaced with new performance definitions. These new terms will be defined as RNAV-1 and RNAV-2 and will conform to ICAO standards:

RNAV-1 (+/- 1nm 95%)  
 RNAV-2 (+/- 2nm 95%)

All RNAV terminal procedures will be flown as RNAV-1. Mr. Alexander reported that the final draft of the AC would be submitted to the Performance Based Aviation Operation Rulemaking Committee (PARC) in June or July 2006. The proposed publication date of the revised AC will be February 2007. Mr. Brad Rush, NFPO, stated that February is a change notice date for the chart cycle. Therefore, the date will need to be pushed forward to March or back to January. Mr. Alexander recommended coordinating the effective date with Mr. Steinbicker and Mr. Vincent Chirasello, AFS-410. Mr. John Moore, NACG, inquired about changes to the chart title. Mr. Alexander responded that all the procedures would be RNAV-1. Is it necessary to depict this as part of the chart title or could the information be added to the AIM. He stated that in his opinion the less extraneous information on the chart the better. The performance expectations could be published in the AIM. However, the group would make the final decision. The participants asked since the ICAO standard is to no longer use RNP, would the term RNP still be used on the charts? Mr. Alexander responded that is to be determined. Mr. Rush stated that this change will likely only affect RNAV SIDs and STARs; the RNAV RNP procedures will not be affected. Mr. Ted Thompson, Jeppesen, inquired if the RNAV RNP related notes would be removed from all 200+ procedures in one cycle. Mr. Rush responded yes and proposed that the issue be coordinated through the AISWG. The changes will be provided via an Excel spreadsheet to the NFDC and published as an add-on page to the NFDD. Mr. Thompson requested clarification on the note issue. Mr. Rush responded currently there are three possible notes that could be published on the procedures for Type A and three separate notes for Type B. Of these three notes the equipment note (for Type A) 'DME/DME, DME/DME/IRU, or GPS required' will remain. The other two notes 'Pilots of RNP-capable aircraft, use RNP...' and the Type A (or Type B) note will be removed. The PARC will determine if a RNAV-1 note will be added to the charts. Mr. Moore and Mr. Rush both recommended that the RNAV-1 note not be charted. Mr. Rush commented that the issue could not be implemented until the AC is approved. The RNAV-1 and RNAV-2 briefing is not available for review at this time. The briefing will be added to the NACG website upon receipt from AFS-410. **ACTION:** AFS and NFPO.

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**MEETING 06-02:** Mr. Mark Steinbicker, AFS-410, was unable to attend the forum. Mr. Robert Carty, AFS-410, reported that the PARC (Performance Based Aviation Operation Rulemaking Committee) and ICAO agreed on the terminology RNAV-1 and RNAV-2, Type A/Type B would no longer be used. Mr. Tom Schneider, AFS-420, commented that the RNAV-1 and RNAV-2 information will need to be incorporated into the DP Order and the STAR Order 7100.9 will need to be updated. Additionally, an RD will be submitted to the IACC outlining the changes to the terminal procedures publication legend. Advisory Circular (AC) 90-100, US Terminal and

Enroute Area Navigation (RNAV) Operations will be revised to eliminate all reference to Type A/Type B. The new terms will be defined as RNAV-1 and RNAV-2 and will conform to ICAO standards. The modified AC will be published in February 2007 as AC 90-100A. The AIM guidance should also be published for the February 2007 effective date. Mr. Brad Rush, NFPG, will coordinate the procedure changes. These changes will be provided via an Excel spreadsheet to the NFDC and published as an add-on page to the NFDD. Mr. Ted Thompson, Jeppesen, requested that Mr. Rush provide advance information about affected procedures, as was done for the original Type A/Type B implementation. Mr. Richard Boll, NBAA, request a draft copy of the revised AC. Mr. Schneider responded that the draft AC is not ready for release. The proposed implementation date for this change is March 2007. Mr. Thompson requested that the implementation date be coordinated with Jeppesen. Mr. Steinbicker will be contacted to get an update on the PARC recommendation. This update will be attached to these minutes. **ACTION:** AFS-410, AFS-420, RNP/RNAV Office, and NFPO.

*Editor's note: On 1/25/07 Mr. Steinbicker provided the draft material for AC 90-100A and the draft AIM update.*

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**MEETING 07-01:** Implementation of RNAV 1 and 2 designations (replacing Type A and B) went into effect 15 March, 2007 according to AC 90-100a. All affected terminal procedures were concurrently modified and reissued by both NACO and Jeppesen. Brad Rush provided all the Type 1 and Type 2 notes. He mentioned hybrid STARs that don't have the RNAV notes because they technically weren't RNAV procedures. Mr. Richard Boll NBAA, asked if there were plans to convert the FMS SIDs to RNAV AC90-100 compliance? Mr. Brad Rush responded yes.

RD 644 was signed and implemented.

**CLOSED**