Flimsy 3: PBN Navigation Specification Comparison

Nav Spec	Environment	COM	Route Spacing	Required Sensors	Database, sequencing	On-board monitoring
RNAV 1/2 (P-RNAV)	All IFR En-route RNAV 1 SIDs STARs with surveillance	DCPC*	None specified [+2]	GNSS; or DME/DME; or VOR/DME; DME/DME/IRU	Yes	No but present with GNSS
RNAV 5 (B-RNAV)	Low-end IFR aircraft En-route with surveillance	VHF only	None specified [+1]	GNSS; or DME/DME; or VOR/DME; DME/DME/IRU	Database optional but waypoints capability required	No but present with GNSS
RNP 1	All IFR SIDs STARs	DCPC*	3NM with surveillance	GNSS or GNSS/IRU	Yes	Yes
RNP 2	All IFR En-route Category R airspace en-route (dual systems required)	DCPC*	15NM LAT 20NM LONG 7-10NM Terminal (Draft)[+3]	GNSS; or GNSS/IRU	Yes	Yes
RNP 4	Category R/S en route	CPDLC	With CPDLC and ADS-C: 30NM LAT 30NM LONG	GNSS or GNSS/IRU	Yes	Yes

*VHF and CPDLC

[+1] Europe uses 18NM reciprocal direction, 16.5NM same direction with surveillance, 10NM special cases

[+2] Republic of Korea demonstrated high density 8NM parallel spaced routes with surveillance met TLS

[+3] Australia uses 7NM CEP en-route (=15NM spacing) in procedural airspace, 5NM with surveillance

Notes:

1. *RNAV 5 does not require a navigation database but the system must have the capability of creating a flight plan with at least 4 waypoints. If a navigation database is used, the standard database management criteria should be applied.*
2. *RNAV 5, RNAV 1 and RNAV 2 are intended for use in a surveillance environment but may be used for short durations without surveillance.*
3. *RNAV 2 is a low accuracy version of RNAV 1.*
4. *RNP 4 is a navigation specification that is normally used to achieve reduced separation in a category R airspace environment that requires CPDLC and ADS-C.*