

Required Navigation Performance (RNP) is a type of performance-based navigation (PBN) that allows an aircraft to fly a specific path between two 3-dimensionally defined points in space with 95% accuracy at all times. RNP-4 and/or RNP-10 approval refers to long range navigational capability of an aircraft operating in remote airspace. Improved navigation capability allows for reduced lateral/longitudinal spacing along heavily used oceanic tracks particular to the Pacific airspace. Qualified navigation equipment for the aircraft and proper operational procedures for the flight crew are required for RNP approval.

The areas that require RNP-10 include the Central East Pacific (between Hawaii and the US west coast) and Northern Pacific (NOPAC), each utilize 50 nm lateral spacing. RNP-10 is also applied in the Southern Pacific (SOPAC) Regions. Certain Pacific regions further reduce separation to 30 nm therefore requiring RNP-4 approval.

Information required for RNP approval includes airworthiness documents that establish the aircraft navigation system is RNP approved and that approved maintenance procedures are performed. Dual Long Range Navigation Systems are required except of the Gulf of Mexico or GoMex which requires only a Single Long Range Navigation System. Operators that obtain RNP-4 approval are not required to also have RNP-10 approval as RNP-4 is the more stringent standard.

In order to fully utilize RNP-4 in all areas of 30nm spacing including certain ATC areas such as SOPAC, NOPAC and Central East Pacific (CEP), operators are required to also have data link (ADS, CPDLC) approval in these areas only WATRS Plus and GoMex do not require CPDLC/DATALINK and ADS-C. It is suggested that qualified operators request RNP-4 approval when obtaining a data link LOA.

#### RNP 2 Example: Certified Accurate and Repeatable Aircraft Navigation Performance

