

## **EVALUATION OF MODIFIED AIR TRAFFIC CONTROL PHRASEOLOGY FOR AREA NAVIGATION (RNAV) STANDARD INSTRUMENT DEPARTURE CLEARANCES**

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During the past two years the FAA has begun the deployment of new Area Navigation (RNAV) Standard Terminal Arrivals (STARs) and Standard Instrument Departures (SIDs) at selected airports across the U.S. The FAA has closely monitored operations performance and accrued benefits. Although recordings of the accuracy and consistency of flight paths using the RNAV procedures have shown excellent performance in many cases, several exceptions have been noted in the case of aircraft departing on RNAV SIDs. Some of the deviations from the required three-dimensional departure track have been attributable to navigational equipment failures and errors. However, many cases of non-compliance with an RNAV SID clearance have been traced to human factors issues associated with pilot/controller or pilot/Flight Management System (FMS) interaction. A Pilot/Controller Phraseology and Procedures Action Team (P/CPP AT) was established to address such pilot/controller phraseology and procedure issues. Accordingly, the P/CPP drafted new phraseology to address potential misunderstandings of SIDs. In order to evaluate the potential impact of the proposed phraseology, a series of cockpit cognitive walkthroughs were conducted. The information obtained will be used as input to a second phase of this effort which will be conducted at various cockpit simulator facilities around the United States.