

# Comment to NextGen Advisory Committee (NAC)

Monday, June 5, 2023



For the public speak agenda item for the NAC meeting on **June 12, 2023**

NextGen's Performance Based navigation resulted in overflight communities across the country that now suffer from excessive aviation noise events because of GPS-navigated flight corridors. The number of noise events is so excessive that the FAA is considering changes to its noise policy to address the negative consequence of NextGen for "overflight communities" - areas "away from airports" where aviation events are not as loud as "close to the airport" but often are as many.

During the May 18, 2021 House Transportation & Infrastructure Subcommittee Roundtable on the "Final Approach: An Update on ATC Modernization", Paul Renaldi, President of the National Air Traffic Controllers Association, made a statement that the sacrificial overflight communities understand and live daily. He said:

We hit the same position at the same altitude every time. .... There's a lot of winners in the noise game. They don't say anything because they don't hear any airplane noise. But the losers hear a lot of airplane noise.

So how can the FAA and this Committee remedy the problem it created for the losers? One way is to disperse flight paths across a "family of RNAVs" as Dr. Tom G. Reynolds of the Air Traffic Control Systems Group at MIT Lincoln Laboratory described in a January 13, 2016 email. However, we have learned that the Flight Management Systems (FMS) of most aircraft in use today lack the memory to allow two, let alone 4 or 5, arrival and departure paths for the purpose of dispersion by RNAV families.

How did it happen that NextGen, with its purpose to **modernize** the national airspace, ignored the need for upgraded memory in the FMS?

We encourage the FAA to ask the NAC to form a working-group committee that will report back to the full committee within 6 months with information that identifies capability and requirements to implement RNAV families including the 5 items in my written comment.

Thank you.

VERBAL COMMENT ENDS HERE.

1. Percent of aircraft by airline with a FMS capable of handling 4 or more approach and departure PBN flight paths for the aircraft's departure and arrival airports.
2. Barriers to developing and using RNAV-families to return flight path disbursement over communities and neighborhoods currently sacrificed by Performance Based Navigation's single concentrated flight paths;
3. The minimum distance from runway ends that dispersion can occur after departure and on approach;

4. Potential uses of Equivalent Lateral Spacing Operations (ELSO) for dispersion of departures, not for increased capacity;

5. Role of Ground Based Augmentation System (GBAS) for developing and using a Family of RNAVs for flight path dispersion over heavily impacted communities; and other topics, possibilities, and questions that occur during the engagement process.

### **Details**

On January 13, 2016, when discussing procedures to disperse aircraft, Dr. Tom G. Reynolds of the Air Traffic Control Systems Group at MIT Lincoln Laboratory described a Family of RNAVs to disperse aircraft:

There has long been the idea of a hybrid “multi-RNAV procedure” solution where the current RNAV procedure defines the center-line track of a family of RNAVs, with other family members offset by 1 and 2 nmi left and right of the center-line which ultimately all converge at about a 5 nmi final for arrivals, or diverge to these families a few miles after departure. When the airport is operating in a given configuration for long periods, each individual track could be used for an hour at a time to spread the noise within a swath similar to what would naturally result from vectored arrivals, but still enabling benefits of optimized RNAV procedures to be achieved.

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