



ACT NOW!

Airport Community Team Meetings

ACT Meeting Summary Report

Topic:	Why are airplanes noisy and the technology to make them quieter
Video Link:	https://vimeo.com/602195511
Date:	September 8, 2021

Attendance
<ul style="list-style-type: none">• 14 ACT Members• 5 Staff• 1 Guest Speaker• 2 Board Members

Total Members
<ul style="list-style-type: none">• 90 ACT Members

Summary

- Kevin Smith, General Manager, welcomed members to ACT and gave an overview of the group's mission and goals. Mr. Smith introduced Jean Reindel from HMMH to members. Mr. Smith presented a noise contour modeling map for the TTAD, and graphical noise signature footprints for both arrivals and departures. He explained the difference between the noise signatures of different types of aircraft and that bigger is not necessarily louder. Hardy Bullock, Director of Aviation and Community Services, presented video graphical models of the notional moving noise footprints with decibel (dB) values for departures for a Cessna Jet, a Pilatus turboprop, and a Cirrus piston aircraft.
- Jean Reindel, Vice President of HMMH Acoustic Consultant, defined noise, how ears detect pressure variations, and how we relate noise to annoyance, speech interference, and sleep disruption. He described the decibel scale and provided the detectable change thresholds. Sound quality, duration, and time of day all play into the perception of noise and annoyance. He detailed two industry noise metrics: Lmax - describes the maximum sound level of an event, and SEL, Sound Exposure Level or SENEL Single-Event Noise Exposure Level - accounts for the sound amplitude and event duration. He then described the FAA regulation of noise standards, noise certification for aircraft, and the noise stages of aircraft. Mr. Reindel outlined the different sources of aircraft noise which include engine noise, airframe noise, and atmospheric conditions (temperature, humidity, rain, cloud, and wind speed). He then reported on the changes manufacturers have been making to each of these sources to reduce noise. Mr. Reindel also discussed the

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emergence of electric aircraft, their small noise footprint, distance limitations, and potential uses as training and commuter aircraft. The FAA's Neighborhood Environmental Survey Results were outlined, as was the finding that overall annoyance with aircraft noise has increased. The FAA continues to study the reasons behind the increase in annoyance. Mr. Reindel also described acoustic versus non-acoustic factors for annoyance, and how understanding these factors is shaping the future of the aviation industry and the development of noise regulations and policies.

Member Comments and Questions – (See Video Link for Detailed Responses)

- Can the noise models include a 3-D component from the ground up?
- Can you model a particular aircraft, for example: the skydive jump plane?
- Can we utilize electric aircraft for repetitive operation training at KTRK like what is being done in Fresno?
- What is KTRK doing to promote the quieter technologies discussed?
- Please display the carbon emissions graphic more prominently on the website.
- Is there a way to disseminate more detailed information showing aircraft dispersal among runways?
- Pilots do not always follow the recommended approaches shown in the graphics on the website and after the recent crashes this is of concern.
- Is annoyance purely related to sound or does the perception change if it is emergency mission related?
- Common good, isolated incidents are not annoying. Those that break airport curfew policy with no community benefit are annoying.
- Volume and frequency are the main causes of annoyance. Emergency mission operations are rarer and infrequent, thus not a cause of annoyance.
- Does the airport track noise complaints to specific aircraft operations?
- Is there an avenue to capture the data from those of us that are fatigued from calling?
- Could a noise complaint app be utilized to improve accessibility and ease?

Scheduled Future Meetings Topics

- A discussion about airport hangars – 10/13/2021
- Overview of the District's Agency and Community Sponsorship Programs – 11/10/2021
- A discussion about District Finances and overview of the 2022 Budget – 12/8/2021



Bike Rack – Topics Racked for Future Meetings

- Meeting with Commercial Operators and Flight Instructors
- FAA Officials Q & A
- Safety Programs and Facilities at the Airport
- An overview of Airport Properties and the Airport Land Acquisition Program

