The Ohio State University Airport

Part 150 Technical Subcommittee
Meeting #1 – SUMMARY[1]

9:30 – 12:30 a.m.
January 17, 2008
OSU Airport Administration Building
2160 West Case Rd., Columbus, 43235

This is a summary of the January 17, 2008 meeting of the Ohio State University Airport's Part 150 Committee's Technical Subcommittee.

Participation on this Subcommittee was open to all members of the Part 150 Committee. Eight members volunteered. The meeting was used to review and learn more about the detailed technical data that will be used to develop Noise Exposure Maps for the University's airport.

The following summarizes key informational and action items from the meeting.

Participants

Part 150 Technical Subcommittee Members Present

City of Worthington, David Zoll
Franklin County, Matthew Brown
Northwest Civic Association, Bill Carlton
We Oppose Ohio State University Airport Expansion, Jane Weislogel
Midwest (OSU) Air Traffic Control, Deral Carson
Port Columbus Air Traffic Control (FAA), Chris Lenfest
Aircraft Owners & Pilots Association, E.J. Thomas
Columbus Flight Watch, Al Harding for Don Peters

OSU/Consultant Team Members Present

Dean Bud Baeslack, Doug Hammon, Cathy Ferrari, Elizabeth Ike (OSU)
David Full, Don Andrews and Joe Jackson (RS&H)
Steve Alverson and Ron Seymour (ESA Airports)

[1] This Summary is intended to provide a paraphrased overview of presentations made, materials discussed, questions asked and comments made. It is not intended to be a word-for-word representation of the Subcommittee proceedings.

Marie Keister (Engage)
Bill Habig and Latane Montague (consultants)

Public Observers
Kim Nixon-Bell, Dennis Shea, Vera Tedrick, Bob Tedrick, Scott Whitlock

Materials Reviewed at the Meeting

- Agenda *(sent in advance)*
- Integrated Noise Model data inputs *(drafts sent in advance; updated versions provided at the meeting)*
- Integrated Noise Model flight tracks *(drafts sent in advance)*
- PowerPoint Presentation

Meeting Summary

Meeting Introductions
Marie Keister, the facilitator, convened the meeting at 9:30 a.m.

Review of Meeting Goals
Ms. Keister explained that, in response to a Part 150 Committee request made at the September 2007 study kick-off meeting, the University established the Technical Subcommittee to enable committee members the opportunity to comment on data inputs to the Integrated Noise Model (INM) prior to the development of the Noise Exposure Maps.

Thus, the goals of this meeting were to:

- Review Federal Airport Regulation (FAR) Part 150 noise modeling requirements
- Provide background on the Integrated Noise Model and Noise Exposure Maps
- Describe aircraft noise modeling concepts
- Review draft information to be used in the development of the existing and future OSU Airport Day-Night Average Sound Level (DNL) Contours

Meeting Ground Rules
Ms. Keister briefly reviewed the purpose and operating guidelines of the Part 150 Committee and the Technical Subcommittee, emphasizing the committees are advisory in nature. The University and FAA have the statutory decision-making authority in the FAR Part 150 process. The Technical Subcommittee meeting was open to the public, but the focus would be on first ensuring that Subcommittee members had the opportunity to share their comments and questions.

Ms. Keister noted that her role as facilitator was to clarify, communicate and to keep the Subcommittee and consultant team on track and on time. She noted that the January 17th meeting was intended to be less formal than the Part 150 Committee meetings, and that the team's objective was to review complex data, seek questions and receive comments throughout meeting.

Introduction to Aircraft Noise Modeling

Ms. Keister introduced Steve Alverson, Part 150 Study Task Manager and Ron Seymour, Deputy Task Manager, who will be working with the Integrated Noise Model; and Don Andrews, Part 150 Study Project Officer and Joe Jackson, Project Quality Advisor, who created the OSU Airport Activity Forecasts. These forecasts form the basis of the aircraft operations used in the noise modeling effort. The modeling will result in draft noise contours that will be shared at the next Part 150 Committee meeting and at a public meeting later that same day. Ms. Keister said all four team-members would likely be responding to questions and comments during the Subcommittee meeting.

Mr. Alverson noted that the draft operations and fleet mix tables forwarded to the Subcommittee prior to the meeting had been updated. The revised documents were distributed.

To help everyone understand the purpose of noise modeling and how it works, Mr. Alverson summarized the following (*see "Technical Subcommittee Presentation")*:

- Noise modeling in a FAR Part 150 Study
- Background on the INM
- Aircraft Noise Modeling Concepts

Questions and Comments (OSU/Consultant Team Responses in Italics)

1. Aircraft Owners and Pilots Association representative E.J. Thomas asked if foliage such as trees and such affect terrain and are taken into consideration during the modeling effort. *Mr. Alverson said no, the INM does not account for foliage on trees because it has little effect on the propagation of sound. The model does account for terrain, although because OSU Airport is located in a relatively flat location that won't likely be an issue here. Modeling assumes a "soft ground" condition for the propagation of noise from aircraft on the ground such as taxiing. You can change parameters based on unique conditions around the airport that could affect sound. For example, San Francisco International Airport modeling efforts take into consideration the large body of water – the San Francisco Bay -- right beside the airport.*
2. Public observer Vera Tedrick asked if this modeling effort will look at how the Scioto and Olentangy Rivers, located to the west and east of the airport, affect noise. She noted that bicyclists have reported immense noise in these areas. *Mr. Alverson said because the aircraft are in the air over the rivers, the water surface probably won't affect the noise exposure. Rivers are not usually a factor in noise propagation, and aircraft fly high enough over these rivers that there will likely be no difference in noise exposure due to noise propagation from the rivers. He said the team would double-check this to see if the INM could account for the effect of the rivers on noise propagation for aircraft in flight.*

3. WOOSE representative Jane Weislogel commented that OSU Airport is unique in that a low ceiling for departures is required here due to the Port Columbus landing patterns. Will that be considered in this effort? *Mr. Alverson said the team is reviewing the departure/arrival profiles at OSU Airport to see if there is a condition that would require them to ask the FAA to make an adjustment to modeling parameters. He said he would let the Subcommittee know how this analysis turns out.*

Review of OSU Airport Noise Model Inputs

Mr. Alverson and Mr. Seymour then reviewed draft data tables and flight tracks that will be used to create noise contours for 2007, 2012 and 2027.

Questions and Comments (OSU/Consultant Team Responses in Italics)

1. Public observer Kim Nixon-Bell asked if "local" operations noted on the tables included flights from OSU Airport to nearby airports in Mansfield and similar cities, or did "local" only include flights in OSU Airport's airspace. *Mr. Alverson said local operations are only those in OSU Airport's airspace or under the watch of the OSU Air Traffic Control Tower.*

2. WOOSE representative Jane Weislogel asked if pilots who opt out of the Flight Aware program are still included in the data used for the INM? *Yes.*

3. Ms. Weislogel commented that helicopters do not operate on instruments even when they operate at night. Are these accounted for in the data? *Yes.*

4. City of Worthington representative David Zoll asked that source documents be made available to the Technical Subcommittee so members could verify the accuracy of the data inputs. *Mr. Alverson said that to the extent allowable, source information would be forwarded to the Subcommittee. He said some of the data may be subject to confidentiality agreements that prevent their release. Doug Hammon, OSU Airport Manager, said that even OSU Airport has to make formal requests to Port Columbus and the FAA for information.* Chris Lenfest, Port Columbus Air Traffic Tower (FAA) representative, agreed this was true. It was also noted there may be security issues with STARS data, for example.

5. Mr. Zoll asked why the fleet mix data summarized on Table 2.8, for example, didn't provide actual numbers for 2006 and 2007, and provided only estimates. How can you be sure the numbers are accurate? *Don Andrews responded that all data inputs are called estimates because none of the data sources provide 100 percent of what is needed for the modeling effort. Because the information is pulled from a variety of sources, these tables are considered "estimates".*

6. Mr. Zoll questioned the day versus night operations splits being used in the INM inputs. *Mr. Alverson explained that there was an arithmetic error and it had been fixed. He said that a benefit of the Technical Subcommittee review was to give everyone an opportunity to review and verify the data, and to gain a better understanding of how the modeling process works.*

7. Public observer Scott Whitlock asked how the team had arrived at some of its findings, including why the Lear25 Jet data showed .007 departures, for example. *Joe Jackson explained that the data comes from a variety of sources: OSU Tower records and STARS (radar) data when the tower is closed. The team also reviews OSU's based aircraft list to*

note any exceptions or allow for unknowns that might otherwise be missed. We must take what we know, make informed judgments about what we can't know for sure, then extrapolate from there. Once this is done, the total annual number is divided by 365 days per year, which in most cases will be a fraction or decimal number.

8. Mr. Zoll asked the team to clarify how they account for unidentified aircraft. *Don Andrews explained that when they didn't know the exact total, they distributed the estimated data in the same proportions as the other flight operations. Mr. Jackson added that the underlying philosophy was to be conservative, and to assume noisier aircraft were in use when it couldn't be determined the exact aircraft being used.*

9. Mr. Whitlock asked for more detail on the percentage of unknown aircraft in Flight Aware, as he thought night-time operations were understated. Mr. Zoll offered that there are a number of unknowns and that when rounding occurs, it is rounded up, not down. Mr. Zoll asked the Subcommittee to share any data they had access to that was different from that presented at the meeting. Mr. Whitlock said it was his impression the team would review the Advisory Committee's (draft) Overnight Flight Subcommittee report developed after several meetings in 2006, but it didn't appear from this data to be the case. *Mr. Alverson and OSU Airport representative Cathy Ferrari said they would re-confirm that the team had this information.*

10. Mr. Whitlock asked for clarification on the timeframes used for collecting source data. *Ron Seymour said there were different timeframes for different data sources, and that revised tables and flight tracks would be sent to the Subcommittee with that information noted where applicable.*

11. Mr. Zoll asked if there was any data on how the Kawasaki BK-117 helicopter compares to the Bell Jet Ranger, since it appears to be a big driver of the data. How do you determine whether a substituted aircraft is viable? *Mr. Alverson explained that the FAA looks at gross weight, engine-type, and certified or estimated noise levels to select a noise match for an aircraft type.*

12. Mr. Whitlock said that the Piper Chieftain data appeared to show fewer operations than the data developed by the Nighttime Data Operations Subcommittee of the Airport Advisory Committee. Ms. Weislogel added that she sees Piper Chieftains three times a night five days per week, and are big complaint generators. How did the team arrive at the estimate being presented? Mr. Lenfest, representing Port Columbus Air Traffic, said he provided information confirming six operations per night Monday through Friday. *Mr. Jackson said he would review the data sources.*

13. Mr. Whitlock asked how the Subcommittee could have confidence in the data if non-technical members of the Subcommittee were finding errors.

14. Aircraft Owners & Pilots Association representative E.J. Thomas said it was not productive for anyone to subscribe malevolence to this effort. He asked participants to give the technical team a chance to hear the Subcommittee's input and take it under advisement, which was why the Subcommittee was formed.

15. Mr. Zoll asked why there appeared to be a problem in receiving or incorporating the accurate data from the Port Columbus tower and who had asked the data to be changed. *Mr. Alverson responded that no one had asked that the data be changed. Mr. Montague added that this issue will be reviewed to ensure the right data is being used, the*

appropriate corrections are made if needed, and if any breakdown in communication occurred. The findings will be reported to the Subcommittee.

16. Franklin County representative Matt Brown noted that the data calculations for the nighttime operation of the Piper Chieftain seemed close to six operations per night, five days per week.

17. Mr. Zoll asked if prevailing winds were used to calculate jet operations. OSU Air Traffic Control representative Deral Carson explained that prevailing winds are the main driver of jet operations, although there are many exceptions based on safety considerations, such as other aircraft, mowing, construction on or near the runways, etc. *Mr. Seymour added that the team used two sets of runway use data from the OSU Tower, and seven months of AirScene data, to estimate annual jet operations.*

18. Mr. Whitlock asked what time period was used in the data collection for jet operations. *Mr. Seymour reiterated that seven days of data from four quarters of the year were used, which included both east and west wind flows and various jet aircraft. This also provided data on the 50 degree turn over Worthington that pilots make when they depart to the east of the airport.*

19. Mr. Zoll asked if the 50 degree turn was assumed in all of the future forecasts. *Mr. Seymour said that it was because there is no reason at this point to indicate that the procedure is going to change. This effort will establish the baseline exposure in the Noise Exposure Maps for 2007, 2012 and 2027 based on existing flight tracks. Based on those findings, the team would look at what changes could be made to address any identified concerns. This work will occur in the Noise Compatibility Program phase of the study.*

20. Ms. Nixon-Bell asked how the team accounts for aircraft flying without transponders. *Mr. Seymour said that radar picks up these aircraft when AirScene does not, although radar does not provide aircraft identification information. As a result, we believe our operations estimates are an accurate representation of what is occurring.*

21. Ms. Nixon-Bell expressed a concern about whether the flight tracks accurately depicted the flow of aircraft departing to the east and making a 50 degree turn. *Mr. Seymour said that the team would look at this and any other concerns the Subcommittee might have about a particular flight corridor. Mr. Alverson said he thought the 50 degree heading was accurately reflected on these maps.* Mr. Carson explained that when the OSU Tower issues this direction to the pilots, pilots don't always take a true 50 degree departure for a variety of reasons, such as clouds and other aircraft in the area. The decision is ultimately up to the pilot how to follow this instruction safely.

22. Mr. Zoll commented that the 50 degree turn is a driver of Worthington issues. Ms. Weislogel helped clarify on the map the location of Worthington City Hall and the Village Green. Mr. Zoll said if all tracks were consolidated onto the 50 degree track, it could increase noise. Spreading out the tracks would reduce noise.

23. Ms. Weislogel asked if the 50 degree turn issue would be open for discussion during the Noise Compatibility Phase of the study. *Mr. Alverson said yes, that once FAA approves the noise contours in the Noise Exposure Maps, the team can start looking at how to change the impacts.*

24. Mr. Lenfest expressed his opinion that flight racks 2, 4, and 6 all funneled into the same track into the airport. These tracks also illustrate that they need to be heading in this direction to avoid Port Columbus airspace.

25. Ms. Nixon-Bell commented that one pilot told her he starts his 50 degree turn at 400 feet.

26. Mr. Zoll asked if flight tracks 9 and 10 depicted on the flight track maps were headed into Port Columbus airspace, and wasn't this banned? Mr. Lenfest said it is not a problem when they're flying above the Port Columbus corridor. There are some instances where this is the case. For example, aircraft departing Port Columbus are to climb to 5,000 feet, and to ensure 1000 feet separation. Observer Dennis Shea, also from Port Columbus Air Traffic Control – FAA, further clarified why they needed OSU Airport pilots to use the 50 degree turn some times and not others, based on winds and which runways both airports were using. Mr. Lenfest said that flying directly over Port Columbus International Airport is very safe, because aircraft operating at Port Columbus are on or near the ground.
27. Mr. Zoll asked for more details on preferential abatement procedures at OSU Airport. Mr. Lenfest, Air Traffic Control manager for Port Columbus, explained that when there are calm winds at Port Columbus, Runway #10 at Port Columbus Airport is preferred. Under calm wind conditions, the OSU Tower prefers to use Runway #27.
28. Mr. Zoll asked what conflicts exist when OSU is using Runway #9 and Port Columbus is using Runway #28. Mr. Carson said there are not any conflicts because Port Columbus Tower makes the initial runway heading assignments for OSU departures. Mr. Lenfest from Port Columbus said OSU can only release Instrument Flight Rules (IFR) aircraft with Port Columbus Tower's permission.

29. Mr. Whitlock asked why there were no flight tracks designated for #10 and #11 on the Jet Departures/East Flow flight tracks? *Mr. Alverson responded that flight tracks 10 and 11 are arrival tracks.*

30. Mr. Whitlock asked if flight tracks for night and day will be separated. He expressed his opinion that night time flight tracks are much more concentrated. Mr. Zoll said he expected to see more head to head arrivals and departures, and more U-turns at night. Mr Carson said he didn't think flight tracks would be that much different on night-time aircraft arrivals and departures. *Mr. Alverson said the team would review the night-time tracks and determine if they are substantially different from daytime tracks.*

31. Mr. Whitlock said their experience with the arrivals and departures of the PA31 was different than what was displayed on the flight tracks. His experience is that they arrive from the north and are west of the Olentangy River, not following the flight tracks displayed on the maps. Why? Mr. Zoll added that it appeared Barons were also under-represented. *The team said they would look into this and provide a response.*

32. Ms. Weislogel asked for clarification on the 2012 tracks. Runway #14/32 is shown to be closed. When would this actually happen? *Mr. Hammon said the runway closure is assumed to happen roughly the same time as a new runway opened – they both would be part of the same project.*

33. Mr. Whitlock asked why there were no flight track use tables for Turbo-Props. *Mr. Seymour said one of the charts was mislabeled. The document titled "Propeller Aircraft" should be titled "Turbo-Prop Aircraft".*

34. Regarding the 2012 INM input data, Ms. Nixon-Bell asked if Very Light Jets (VLJ) were assumed to increase in 2012. *Mr. Jackson said that was the case. VLJ are reflected in both the Air Taxi and General Aviation categories.*

35. Mr. Zoll asked what the noise footprint is for VLJs. *Mr. Alverson said FAA hasn't provided that information yet, but they will be much quieter than typical business jets. For now, modeling efforts use today's most quiet jets as a VLJ substitution for estimating purposes.*

36. Mr. Zoll asked if the model would provide a "No-Build" scenario for 2012 to show the Noise Exposure Map if no new runway is built. *Mr. Alverson said this scenario would not be produced during the Noise Exposure Map development phase of the study. It is important that the maps show the build-out scenario assumed in the draft Master Plan so that the technical experts and the public can identify any potential noise concerns created by the extension of the runway. This will provide direction on what mitigation and/or abatement measures should be considered during the Noise Compatibility phase. During this second study phase, it may be appropriate to consider a "No-Build" scenario in the review of noise compatibility measures. That could be one of the measures suggested by the community when we seek input on possible noise abatement measures.* Mr. Zoll said he thought not showing a No-Build contour as this point in the process would be a mistake. Running the No-Build scenario now would be a good way to demonstrate at the upcoming public meeting that OSU Airport will not make a decision on the draft Master Plan and the proposed runway extension until after the Part 150 Study is completed. *Mr. Alverson said Mr. Zoll's point was well taken, but for the development of the Noise Exposure Maps, FAA requires that we include future airfield development depicted on the airport layout plan.*

37. Ms. Weislogel asked if the 731 operations listed on page 214 of Chapter 2 of the draft Activity Forecast are seasonally based. Have you allotted for additional traffic during the Memorial Tournament in May? Why not extend the runway longer to accommodate some of these planes? Can I get a copy of the based aircraft? *Based aircraft will be provided. Mr. Hammon said that the maximum length of the north runway is restricted by geography – by Sawmill to the west, and train tracks to the east.*

38. Mr. Zoll asked why all the jet operations are not being modeled on the north runway for 2012? *Mr. Alverson said they are using the runway use percentages in the 2004 Draft Master Plan which indicated some continued use of the south runway by business jets.*

39. Mr. Montague asked if touch and go operations affect Worthington. Mr. Carson said they do, especially when the winds are to the east. He added, however, that he didn't think all of the noise concerns in Worthington are generated by touch and go operations. There are other aircraft mixed into that flight pattern that are affecting the area.

Draft Activity Forecasts

Mr. Don Andrews gave a brief summary of the draft Activity Forecast chapter.

1. Regarding the draft Activity Forecasts, Ms. Nixon-Bell asked for the underlying assumptions in Tables 2.9 and 2.11. *Mr. Andrews summarized the assumptions.*

2. Ms. Weislogel asked if the Activity Forecast chapter could note that air carriers won't fly into OSU Airport. *Mr. Andrews said that could be done.*

Next Steps/Action Items
Ms. Keister reviewed the action items identified at the meeting, which included:

1. Subcommittee members will forward their comments to Marie Keister within the next week.
2. The technical team will provide the latest versions of all documents presented at the Jan. 17th meeting. All materials should have dates, sources and page numbers, and be labeled appropriately.
3. The technical team will gather all source documents from team members and distribute them to the Subcommittee. When something can't be provided, the team will explain why and provide guidance on how Subcommittee members can pursue the data through other channels.
4. The technical team will review all comments provided by the Technical Subcommittee, re-check all the data tables and maps, make revisions as appropriate, and report findings to the Technical Subcommittee.
5. The technical team will review the process for receiving/incorporating data (e.g. from Port Columbus ATCT) and re-check base data to ensure all tables are accurate, e.g. Lear 25 Jets, Piper Chieftains, Barons, PA131s. If anything changes, summarize what changed and why.
6. The technical team will look at whether breaking night time tracks out separately provides any additional, useful information different than what is shown by existing flight track exhibits
7. The technical team will continue researching corridors on propeller aircraft departures and arrivals and provide an update to the Subcommittee
8. The technical team will provide information on aircraft based at OSUA

After Ms. Keister recapped the action items, it was asked if the team would consider holding another Technical Subcommittee meeting and postponing the Part 150 Committee and public meetings scheduled for February 12th. *Ms. Keister said they would review the comments provided today and next week and let the Subcommittee know. She asked those representing area residents if they thought postponing the meetings would be acceptable to those concerned about keeping to a tight schedule.* Ms. Weislogel, Ms. Nixon-Bell and Mr. Zoll said changing the date would be acceptable and likely be encouraged by the residents.

Adjourn
The meeting adjourned at 12:45 p.m.