

Toward Mediation: An Examination of Consensus-Building Techniques Applied to the Aircraft Noise and Airport Access Dilemma

KIMBERLY J. JOHNSON

Current and forecast growth in operations at U.S. airports presents a mounting problem for the aviation industry, particularly major airport operators who are confronted by capacity constraints as well as an increasingly politicized constituency: local citizens who are no longer willing to tolerate the accompanying noise. Airport proprietors, legally responsible for environmental effects of airport operations, are resorting more and more to unilaterally developed noise-abatement plans that restrict access to the local airport. These plans can indirectly constrain the entire aviation system and often raise the constitutional question of restraint of interstate commerce. Beyond the federal aviation regulations already in effect, a comprehensive national policy on aircraft noise and airport access is not likely in the near future. In the absence of national guidelines, this paper examines the use of mediation as an effective option for making aircraft operations at many airports more compatible with their neighboring communities while maintaining adequate capacity at those airports to ensure an unrestricted interstate commerce system. There is evidence that formal and ardent commitment to participation in mediation from all parties, use of a preliminary dispute assessment, and the ability to distinguish positions from interests can help reduce noise and maintain capacity levels. Amending Federal Aviation Regulation Part 150 to make federal Airport Improvement Program funds available for mediation nationwide and institutionalizing a federal role in mediation would ensure adequate representation of the national interest as airports respond to political pressures to reduce noise.

THE AIRCRAFT NOISE/AIRPORT ACCESS DILEMMA

The 10 years since the Airline Deregulation Act was passed have seen dramatic changes in the way the nation's air transportation system operates. Partially as a result of the hub-and-spoke method of airline route system management, commercial aircraft operations have increased 50 percent since 1978. According to the FAA, 14 million commercial aircraft operations occurred at airports in 1978; by 1987 the number had reached 21 million. This figure is expected to escalate to 26 million before 1995 (1).

John F. Kennedy School of Government, Harvard University, 79 John F. Kennedy St., Cambridge, Mass. 02138

With the continual growth in air traffic has come an increase in the volume of angry cries from some of the communities neighboring airports. Voicing strong consensus over perceived deterioration of their quality of life, they continue to organize increasingly sophisticated and effective barriers to airport operations and development. The effects are becoming more and more evident: in spite of a growing need, there have been virtually no new runway developments during the deregulated period, and with the exceptions of Denver and Austin, no new airports are planned to open before the end of this century. Moreover, effective community pressures such as those experienced at John Wayne and Burbank-Glendale-Pasadena airports in California have resulted in severe restrictions on aircraft operations. Although at the present time these are not major airports, an extension of the trend could lead to critical limitations on future airport capacity.

As Figure 1 indicates, there are more than 400 locations where noise-limiting policies are in effect. These measures include curfews, restrictions of aircraft or operations, noise limits, noise budgets, noise-related landing fees, restriction or elimination of flight training, and noise-abatement approach and departure limitations. Although the majority of airports have not yet imposed severe restrictions, some have attempted to significantly limit (Long Beach, California) or preclude (Paine Field, Washington) air carrier service. In the case of Long Beach, restrictive limitations have been moderated by FAA administrative review via the Part 150 process and by litigation brought by air carriers. At Paine Field, a limited mediation process was used in the late 1970s to preclude air carrier service; in light of the current regional need for aviation facilities, and potential legal challenges, this policy is being reexamined.

Moreover, because of the time constraints associated with the hub-and-spoke network, as well as flight time and time zone changes, a curfew at a destination airport may indirectly impose restrictions at an intermediate hub or even the origination airport many hours earlier. Potential innovation such as peak-hour pricing schedules would become less feasible under widespread application of time-related access restrictions.

If airports, particularly primary airports critical to the national system, continue their current trend of individually imposing uncoordinated access restrictions in response to community



FIGURE 1 Airports that have implemented noise-control strategies (2) (heavy lines denote regional boundaries).

pressures, the benefits derived from deregulation may eventually be negated by an assortment of locally induced re-regulation, which may place unacceptable limitations on interstate and foreign commerce.

Thus, a difficult dilemma has arisen for participants in the national transportation system: in the face of an increasingly vocal citizenry, can airport operators meet their obligations to provide an unconstrained air transportation system while maintaining control over aircraft noise regulations? Can air carriers continue to look to national legislation to prohibit local restrictions on airport access, or should they work more with local airport operators and business interests? What role should the FAA assume in the problem? Clearly, a workable solution must involve all parties and levels of interest.

In the absence of federal regulations or specific guidelines for airport proprietors feeling the need to impose restrictions, mediation may in many cases effectively serve both local and national interests. Mediation emphasizes "win-win" resolution by employing a neutral party to negotiate an administrative rather than a judicial resolution to a dispute among conflicting parties. This paper will examine the degree to which mediation can serve as a vehicle for airport operators, local communities, system users, airlines, and the federal gov-

ernment to convene for the purpose of developing a mutually agreeable solution to the noise and access problems in that locale—while giving due consideration to the growing demand for capacity nationwide. If mediation can introduce a systematic, comprehensive, and interactive process to document and ensure review of all aspects of the conflict and potential remedies, then it can serve as a welcome alternative to local political pressure and litigation as the primary means of generating access restrictions.

Alternatives: Strengthened Federal Noise Regulation, Litigation

Before mediation, the two most commonly discussed alternatives have been strengthened noise regulation and litigation. Additional federal noise regulation (beyond the existing provisions in Federal Aviation Regulation Parts 36, 91, and 150) would impose uniform noise restrictions throughout the nation, whereas litigation typically focuses on compensating for damages or restricting operations based on environmental concerns at an individual airport. What the former lacks in flexibility, the latter lacks in uniformity and predictability.

Federal Regulatory Approaches

As discussed in the following paragraphs, in the current political climate federal regulatory approaches to airports beyond the framework of the existing Federal Aviation Regulation (FAR) Part 150 program appear unlikely. Part 150, administered by the FAA, offers federal matching funds for planning and implementation of noise-mitigation and noise-abatement strategies. More than 159 airports have received funds since this program has gone into effect (3). Many of these have completed or are in the process of implementing Part 150 programs yet are experiencing continued noise-related community problems. Others have decided not to participate in this program, concluding that other options are more appropriate for their circumstances or choosing specifically to avoid federal administrative review of noise-restricting proposals. (Although some further refinements to the Part 150 program can be expected, the program will be likely to remain a means of identifying and mitigating noise impacts in more immediate airport vicinities. One feature to consider adding would be provision of funding for the mediated approaches discussed later in this paper.)

Another commonly discussed federal approach is the accelerated phaseout of FAR Part 36 Stage II aircraft. The airline industry has recently expressed some willingness to pursue a phaseout schedule for Stage II aircraft in exchange for an intervening federal policy limiting local imposition of noise and access restrictions. The federal government, however, remains unwilling to assume the legal liability for noise that might accompany legislated implementation of national noise policies. Nor is it willing to subsidize the private sector in accelerating replacement or upgrades of Stage II aircraft. Thus it remains most likely that airline industry economics will be the predominant factor in pacing fleet replacement.

Even if a federal schedule for elimination of Stage II aircraft is imposed, resulting in stricter limits on the level of noise produced by individual aircraft, it will not be likely to limit the number of operations that may occur at a given airport. Moreover, growing passenger volumes will encourage the use of the larger, and therefore relatively louder, variety of Stage III aircraft. Ultimate reductions in single-event noise levels achieved by Stage III aircraft are not likely to fully offset negative community perceptions associated with the increased frequency of operations. Burbank-Glendale-Pasadena in California is a good example of an airport that has secured a 100 percent Stage III fleet yet continues to struggle with a persistent community noise problem.

In 1986 the FAA announced that it was considering issuance of a federal policy statement on airport access and capacity issues in response to what it called the "current ad hoc response to access and use issues" (4). Issuance of any statement, however, appears increasingly unlikely. In addition to the federal government's legal and financial reservations, Executive Order 12612 requires federal agencies, including the Department of Transportation, which oversees FAA, to emphasize local solutions to problems whenever possible, unless a clearly legitimate national purpose cannot be met without national legislation (5). The Bush administration is unlikely to deviate significantly from this policy. James Burnley, DOT Secretary under the Reagan administration, asserts that a "one-size-fits-all" federal policy on noise is not politically feasible (6).

Nor would it be likely to represent the degree of flexibility needed to reflect varying local and regional conditions.

Litigation

This paper does not attempt to review comprehensively the national record on litigation as an option or "solution" to the access dilemma. It is a persuasive, fundamental tool available often as a last resort to all parties. Although airport proprietor obligations regarding noise are themselves the result of evolving case law, reliance on litigation alone to resolve the access/noise issue is not, in the author's view, sufficient. Subsequent analysis of mediation will draw comparisons and contrasts with litigation to further document this conclusion.

MEDIATION AS A MEANS OF DISPUTE RESOLUTION

Before mediation can be examined as a possible tool in approaching airport access restrictions, it is necessary briefly to review the general concept. Negotiation pursues consensus solutions through voluntary, ongoing, face-to-face interaction among representatives of the disputing parties. These representatives agree to follow specified procedures throughout the duration of the process in an effort to identify a mutually beneficial solution to an agreed-upon problem. A mediated approach to negotiation uses a neutral party to convene representatives of the differing interests and direct their efforts toward resolution.

Like all methods of dispute resolution, mediation has its disadvantages. Those that are particularly germane to aviation are addressed in the case studies that follow. They illustrate that successful mediation may not occur without some formidable challenges, and therefore requires rigorous commitment to the process. The effort, however, may be justified by a superior outcome.

Whereas litigation imposes a win-lose outcome upon the involved parties, mediation uses voluntary interaction to arrive at a mutually supported outcome. Complex technical and scientific issues can be discussed and documented with the assistance of neutral experts. Because consensus requires universal commitment to the outcome, resulting decisions are generally implemented without further process, and are less likely to be challenged. They are therefore more likely to endure. Subsequent legal challenges, if they occur, would tend to have less effectiveness if a mediation process already addressed all the relevant interests and issues and established a documented consensus for the court to review. Table 1 further illustrates the differences in focus and outcome between litigation and mediation. (Although mediation is contrasted and compared with litigation, it should be noted that for the airport operator, litigation is typically not an option. Rather, it is a manifestation of community interest and pressure, and often incites local noise-based regulation of aviation or airport access. As a choice for the operator, mediation may therefore be preferable to unilateral regulation. As suggested in Table 1, litigation is not available to the airport operator except as a defendant.)

Mediation should not be considered strictly as an alternative

TABLE 1 ALTERNATIVE APPROACHES TO DISPUTE RESOLUTION (7)

CHARACTERISTICS	MEDIATION	LITIGATION
OUTCOME	<ul style="list-style-type: none"> Win-win; improved relationships. Promotes innovative and appropriate outcomes. 	<ul style="list-style-type: none"> Win-lose; impaired relationships. Favors financial compensation, which often fails to address real problem.
PARTICIPATION	<ul style="list-style-type: none"> Voluntary. 	<ul style="list-style-type: none"> Mandatory.
REPRESENTATION	<ul style="list-style-type: none"> Specially selected for each case. Complete; balanced. 	<ul style="list-style-type: none"> General purpose elected or appointed officials. Exclusive; favors those with greatest resources.
STYLE OF INTERACTION	<ul style="list-style-type: none"> Direct, face-to-face. Cooperative. 	<ul style="list-style-type: none"> Indirect (through attorneys). Adversarial.
ROLE OF INTERMEDIARIES	<ul style="list-style-type: none"> Assisted; various roles for intermediaries. 	<ul style="list-style-type: none"> Unassisted. No role for intermediaries.
PROCEDURES	<ul style="list-style-type: none"> Unique rules and procedures in each case. Focuses on issues. 	<ul style="list-style-type: none"> Same rules and procedures in all cases. Focuses on process.
METHODS OF REACHING CLOSURE	<ul style="list-style-type: none"> Voluntary. Those most familiar with issues choose compromises toward mutually supported outcome. 	<ul style="list-style-type: none"> Mandatory. Third party unilaterally decides outcome.
COST	<ul style="list-style-type: none"> Moderate to high in short-term; low in long-term if successful. 	<ul style="list-style-type: none"> Low to moderate in short-term; potentially very high in long term.

to litigation. It is more accurately presented as an instrument that can be used to augment the standard choices of litigation and other traditional decision-making methods. In some instances the use of mediation may not be warranted at all. Because the characteristics of disputes differ widely, no single approach to resolution is universally appropriate.

Features of a Successful Dispute Resolution

When should one pursue a mediated resolution? There are no absolute conditions that guarantee success. Because of the degree to which circumstances influence the outcome, even professional mediators cannot agree on the exact properties of a successful negotiation. Susskind and Cruikshank, authors of *Breaking the Impasse: Consensual Approaches to Resolving Public Disputes* (7), offer their list of "preconditions to success" as an indication of the wisdom of attempting to mediate a conflict. The authors assert that before starting out, the initiating party should get positive responses to the following:

- Can key players be identified, and if so, persuaded to participate?
- Are the power relationships sufficiently balanced?
- Can a legitimate spokesperson for each group be found?
- Can realistic deadlines be set?
- Can the dispute be framed so it does not focus primarily on sacrosanct values?

Gail Bingham, author of *Resolving Environmental Disputes: A Decade of Experience* (8), examined 161 environmental disputes and identified several factors common to the successful outcomes. She found that successful mediation processes most often included:

- direct participation by those with the authority to implement the decision;
- a dispute assessment conducted by the mediator to determine whether to proceed with a voluntary dispute resolution process, and if so, what the nature and rules of the process should be;

- parties with incentives to negotiate with one another; and
- willingness of the parties to identify the interests that underlie each other's positions, and to invent new alternatives that satisfy these interests.

She also found that the combined positive effect of these factors can often offset a deficiency or the existence of potentially negative factors.

Role of the Mediator

The mediator role may be filled by one party or a team of mediators. More critical than the number of mediators is the neutral position that all mediators must maintain throughout the mediation process. Mediators must serve at the mutual pleasure of the participants.

The mediator role may vary, depending on the situation and the mediator, but it usually involves determining whether mediation is appropriate, assisting the interests in developing the process and agreeing upon procedures, and facilitating the discussions between the parties. Mediators ensure that any technical information is shared and understood by all participants, and often work with the participants to develop suggested solutions (provided, of course, that they have no vested interest in those suggestions). Mediators also assist the negotiating parties in establishing communication with their constituents as well as others who are outside the process but concerned with the issues and outcome.

ROLES, INTERESTS, AND OPPORTUNITIES OF PARTIES INVOLVED IN ACCESS PLANS

With the general concept of mediation identified, it is necessary next to review the specific roles, interests, and opportunities of the parties potentially involved in the airport access topic, and examine these roles within the context of the three discussed resolution models.

FAA

The FAA faces a peculiar duality of purpose. The Federal Aviation Act, the Aviation Safety and Noise Abatement Act, and the National Environmental Policy Act have charged it not only with maintaining and improving the safety and efficiency of the national air transportation system, but also with protecting the public health and welfare from the negative effects of aircraft noise (9). Congress has given the agency the authority to review, comment, and issue approvals on local proposals, but not to initiate local policies concerning noise and access restrictions. Following review, the FAA may challenge an airport's proposed restriction if

- the initiative is a burden on interstate commerce;
- it invades the exclusive safety jurisdiction of FAA;
- a local authority is attempting to use one of the powers preempted by FAA; or
- the initiative violates existing contracts between FAA and airport authorities.

Only on rare occasions does the FAA initiate litigation, for it is a lengthy and costly process requiring extensive review and approval by many departments within the executive branch.

Recognizing the agency's dual responsibilities, Administrator T. Allan McArtor testified before the Senate that the FAA is "seeking balance between the needs of interstate commerce requiring a national approach to airport access and the rights of local communities to protect themselves against undue noise. This is a delicate but essential balance. I do not believe the answer lies in federal pre-emption [of local operators' authority over noise] nor 100 percent local solutions" (5).

Participation by FAA region or district officials may be essential to workable local access plans; a federal voice in a locally based process may provide the kind of balance McArtor envisions. The FAA participated peripherally in the developmental stages of the Minneapolis-St. Paul noise budget, through comment at public hearings and notification to the airport authority of concerns with the originally considered mandatory noise rule. Leonard A. Ceruzzi, assistant chief counsel of the Legal Services Division, subsequently asserted that this kind of participation is worthwhile because it "saved a lot of time, effort, and energy," and probably prevented litigation (10).

Protection of the national interest may require an even stronger federal role. Federal participation might include identifying workable combinations of service levels, facilities, and capacities with which a national system can function. In instances in which an airport serves as the primary or only origin or destination point for a region (e.g., Boston, Seattle), a domestic hub for which adequate substitutions are not likely (e.g., Chicago, Dallas-Ft. Worth), or a key international gateway (e.g., Miami, Los Angeles), the national system could not function without capacity matched to forecast demand. Conversely, an airport that enjoys alternatives for service to its region (e.g., Washington National) may have opportunities for more restrictive noise and access policies. By identifying and documenting these varying conditions within a national framework, the federal role can help to assess the impact of proposed access restrictions under each scenario.

If the FAA determines that a proposed restriction does not adequately protect the national interest, or believes that a process is not being correctly pursued, it may ultimately have to resort to its traditional role of comment, refusal of funds, or litigation in the national public interest.

Airport Operators

The airport operator is responsible for siting the airport and maintaining operations to ensure access to adequate air transportation. It is also responsible for any detrimental effects of actions taken in the pursuit of these goals, including adverse impacts on the airport environs. "At the same time that the airport sponsor wants to facilitate the growth of air commerce, it must recognize that the local citizenry has reasonable expectations for an environment free of intolerable levels of noise resulting from aircraft operations," explains the Airport Access Task Force report to Congress (11).

The courts have maintained the proprietor's right to protect itself by permitting planning and implementation of noise-abatement and noise-mitigation actions as well as airport access

restrictions, provided the restrictions address a demonstrable noise problem (12).

In response to pressure to lessen environmental impacts, an airport may conduct a planning process within or apart from the Part 150 program. Conducting a mitigation or abatement process independent of Part 150 eliminates both FAA's administrative review and approval role (thereby leaving the national interest potentially unrepresented) and the ability to receive the associated noise program funding.

An airport operator may also choose to develop and implement a variety of noise-based access restrictions. These may be determined unilaterally, or may be established as a result of a litigated, negotiated, or mediated process. If the airport operating authority makes a commitment to mediation, it will probably need to assume the role of process sponsor, including securing financial and political support.

Airport operators' relationships with the airlines are usually direct, often contractual, arrangements. These agreements often require air carrier commitment for airport bond financing and revenue support for major capital improvements.

System Users and Air Carriers

Airport users include passenger and package express air carriers, travelers, shippers, and local businesses—anyone who directly or indirectly benefits from goods or persons passing into or out of the region by air. With the major exception of the airlines, the airport user has had little or no direct input into matters of airport access and other air-system-related matters. Air carriers have no direct legal standing in the development of restrictive noise programs or procedures beyond the ability to initiate litigation to enjoin implementation. The carriers' strong, almost symbiotic financial relationship with many airport operators gives them considerable power, however. Many restrictive-access plans would require jointly accepted amendments to airline-airport agreements and thus make the carriers a critically necessary party to any mitigation effort.

Even air carriers without strong contractual positions have often managed to exert significant influence over threats of access restrictions. At the national level, representation by the Air Transport Association (ATA) has concentrated the carriers' political power, and provides a vehicle for clear articulation of the industry's views on access plans: " 'Unilaterally developed, uncoordinated constraints' have become a 'dagger pointed at the heart of commerce' " (13).

Because air carriers have such a large stake in the outcome of an access-restriction policy, they may have strong incentives to participate in a mediated effort if they believe that all other parties are committed to that effort. Alternatively, carriers can use their financial resources to pursue legal challenges to excessively restrictive plans on grounds similar to those used by the FAA. However, because of the high costs of litigation they may defer to the FAA, hoping a federal lawsuit or regulatory measures will stop the plan. As discussed earlier, reliance on FAA is not an ideal strategy, because few suits are filed by the federal government.

One frequent complaint of the airlines in their objections to unilaterally imposed access restrictions is that the economic beneficiaries of unrestricted air travel are not taken into con-

sideration. Although the benefits of air transportation to the economy are enormous, they are often indirect, and thus do not inspire a constituency to argue their merits.

Chambers of commerce and other representatives of local businesses may prove beneficial in this regard. These organizations are more apt to realize the importance of accessible air travel to the vitality of the local economy and so are interested in having their opinions heard. In the Puget Sound region, for example, a collective effort on behalf of all the chambers of commerce in the area has been formally organized to ensure direct or indirect representation of the system users and promote adequate long-term commercial-aviation capacity.

Residents of Affected Communities

Although community residents have traditionally had little say in local airport management, the trend is reversing. Citizens—both individually and in groups—are wielding increasing clout with elected boards, councils, and commissions that directly or indirectly operate airports.

One basic problem local groups face is a lack of internal consensus regarding not only their vision for resolution but also the very definition of the problem. For example, some neighborhoods may be concerned with runup noise, whereas others may dispute where aircraft flight paths should be located. In other instances a fundamental concern over noise may be masked or reinforced by an expressed concern over broader topics such as "growth of the airport." These can result in "positions" opposing even airport activities not directly related to noise that are inconsistent with their fundamental "interest." Residents' "not-in-my-backyard" views and choice of relevant issues may require internal resolution before a workable basis for discussion with airport and airline representatives can be established.

THREE EXAMPLES OF CONSENSUS-BUILDING APPROACHES TO THE NOISE/ACCESS DILEMMA

In the following case studies at three major airports, elements of negotiation and mediation have been used successfully to reach mutually agreeable solutions to the noise/access dilemma. In each case, some or all of the relevant parties were brought together to develop acceptable means of limiting the impacts of noise while maintaining efficient use of existing capacity.

The principles of negotiation were exercised at Minneapolis-St. Paul not only as an alternative to litigation, but as an outgrowth of administrative and legislative initiative by the Metropolitan Airports Commission (MAC). A formal series of negotiation sessions involving the affected parties was initiated by the Stapleton International Airport authority. This process, which came to closely resemble mediation, served as an alternative to litigation. In addition, it met the requirements of an intergovernmental agreement that would pave the way for construction of a new airport. A newly developing example is taking place at Seattle-Tacoma International Airport and represents a case in which the principles of mediation have been applied from the outset.

Minneapolis-St. Paul

In the early 1970s Minneapolis-St. Paul gained a reputation as a leader in airport noise control, yet a substantial growth in hub traffic following deregulation rendered its programs less adequate. Capacity demands quickly overcame noise-abatement policies, to the dismay of local residents. As a result of citizen protests, the governor and the MAC, the airport proprietor, formed a working group to make recommendations with respect to a "noise budget." (A noise budget is a regulation that limits the amount of noise at an airport. It may allot specific noise levels to individual carriers or may simply cap the single-event or aggregate noise level at the airport.) This group, which included members of the community, was endorsed by an established and vocal anti-noise committee. After 18 months a noise budget ordinance was drafted requiring an immediate 19 percent reduction in average daily aircraft noise energy levels, climbing to a 24 percent reduction over 5 yr (1992). However, threats of litigation from the airlines, primarily Northwest (which controls about 85 percent of the operations), and hints of litigation from the FAA led the MAC to attempt to negotiate agreeable reductions with the air carriers. It imposed a 2-month deadline on these one-on-one negotiations, which would be followed by unilateral enactment of the ordinance in the event of no agreement.

A voluntary agreement was ultimately reached with the seven major airlines for an immediate 11 percent reduction in total noise levels, leading to 24 percent reduction by 1992. Additionally, sound insulation of two schools was to be financed by the airlines. The voluntary noise budget has been so successful that airport staff reports reductions are already at the 1991 target level of 22 percent, with no threats of litigation. These reductions, however, are partially attributed to the consolidation of schedules resulting from the merger of the airport's two largest carriers.

The MAC sought to reduce noise levels at the airport without cutting into its capacity. By employing the principles of negotiation (although falling short of actual mediation), it was able to elicit input from citizens and air carriers and subsequently institute a voluntary rule that allows airlines to increase flights yet significantly reduces cumulative noise levels: in part, a "win-win" solution to a difficult situation. Issues including litigation over flight tracks may remain, however, and the long-term adequacy and capacity of the primary airport remains a topic of discussion.

Denver Stapleton

Denver's Stapleton International Airport is the fifth-largest airport in the nation in number of annual operations. When it became apparent that demand at Stapleton was going to exceed existing capacity, the city of Denver, which operates the airport, began plans to expand. Several citizens' groups concerned over the adverse environmental impact of the proposed expansion threatened litigation to block the project. Their efforts convinced the city and county of Denver that cooperation with the surrounding jurisdictions was the only way the project could proceed (14). Thus, an intergovern-

mental agreement with Adams County (the site of the proposed airport) allowed plans for the new airport to continue, provided the airport operator install a permanent noise-monitoring system, conduct a \$20 million sound-insulation project funded by the airport from airline leases and landing fees, and institute an interim noise budget.

To satisfy the noise budget requirement, the city of Denver first attempted unilaterally to impose an aircraft "fleet mix" rule. This rule would require the airlines to use a certain percentage of Stage III equipment and limit their use of Stage II aircraft at Stapleton. Because of the vehement opposition of the airlines, however, the city council directed the airport, the airlines, and the communities to negotiate. They were given 6 months to achieve a compromise that would cap the total airport noise levels without severely affecting the airlines or reducing the level of air service provided at the airport.

Representatives of the communities, air carriers, the airport operator, and the FAA met every 2 weeks in 5- to 8-hr sessions beginning in September 1986. As additional parties (e.g., cargo carriers, community groups) expressed interest in the process they were invited to join the discussions. Formal minutes taken by the airport preserved the legal history of the negotiations. Although this process did not initiate as "mediation," at this point it had taken on most of the characteristics of mediation, with the exception of an independent mediator.

The negotiations came to an impasse when the airlines and the public could not agree to a level at which to cap the noise. To resolve this dispute the city of Denver decided on the sound energy average of the two contending noise levels. Noise was then allocated to airlines based on each airline's historical contribution to the noise environment at Stapleton. By choosing the types of aircraft it uses and the time of day it operates, an airline can control the amount of noise it produces, and increase the degree of flexibility within which it can operate.

Noise reduction at Stapleton has exceeded expectations in every evaluation period since the budget went into effect on June 5, 1987. Although the airport attributes this reduction in noise impacts to previously planned fleet upgrades and the leveling off in the growth of airline operations, community reaction to the changes has been positive.

Conversely, although both United and Continental, which together occupy 85 percent of the space at Stapleton, participated throughout the process, Continental challenged the finalized budget in an administrative appeal. It was not successful, however, and no further challenge to the budget is expected.

Plans for the new airport have met with further complications because of a dispute with United and Continental over financing (15). While the future of the new airport is being debated, the noise budget and other controls remain intact.

Seattle-Tacoma

Seattle-Tacoma International Airport (Sea-Tac), operated by the port of Seattle, has long been in the forefront of noise compatibility planning and mitigation efforts. Direct measures to mitigate noise impacts began in 1974 with a home acquisition program that has since grown into a comprehensive

\$200 million noise remedy program providing sound insulation and transaction assistance as well.

Since 1983 a noise-abatement staff has also been working with the communities both within and beyond the remedy program areas to reduce the impact of operations from Sea-Tac. A 3-yr flight track project was conducted by a joint citizen-airline-pilot committee to evaluate the levels of compliance to noise-abatement rules (primarily approach and departure flight paths). Recognizing that virtually all feasible efforts had been taken to mitigate jet noise and that most conventional abatement measures had also been identified, the committee recommended the formation of a noise-management project to seek new programs to address the overall amount of jet noise and any possible access restrictions that might be implemented at Sea-Tac. The committee specifically recommended the use of mediation in this process.

A team of two professional mediators was subsequently selected by the committee and hired by the port of Seattle to identify the interests and assemble representatives for the mediation process, develop an overall negotiating process, determine the issues to be discussed, and establish the guidelines under which a consensus will be pursued.

During this preliminary dispute assessment (referred to as a "convening" process), the FAA, airlines, ATA, Airline Pilots Association, airport users, and communities endorsed the project and agreed to participate. Each group comprises a "caucus" that has selected one or two negotiators to represent its interests during the actual mediation. The FAA named senior representatives from the Northwest Mountain Region. Airlines are represented by senior management from two major carriers, another each from cargo and commuter carriers, and by an ATA representative. Airport users are represented by a chamber-of-commerce-based coalition. Five geographical sectors of the community are represented. Approximately 20 negotiators are participating in the mediation, which began in December 1988.

As the focus has turned to the task of carrying out the mediation, the largest obstacle has been the difficulty of identifying an agreeable scope. Whereas citizens want the discussions to focus on capacity issues such as new runways (and even a new airport), the port, the FAA, and the airlines prefer to restrict discussions to ways of limiting current noise levels.

Although the situation has not threatened the success of the process, it has been cause for some delay.

Criteria Applied: Measures of Success

With the arguable exception of balanced power relationships, Minneapolis-St. Paul, Denver, and Seattle all meet Susskind and Cruikshank's preconditions to a successful mediation. Although neither Minneapolis nor Denver used assisted (or mediated) negotiation, Table 2 analyzes these examples, as well as Seattle (where mediation has been initiated), in relation to Bingham's model for successful mediation.

Bingham asserts that none of the characteristics shown in Table 2 will by itself determine the outcome of an agreement. Examination of the three case studies, however, demonstrates that the stronger the presence of Bingham's criteria, the more likely that a "win-win" solution will result. The following section will further examine these case studies in detail, and will discuss additional conclusions to be drawn from these efforts.

Direct Participation by Implementing Authority

Each of the three cases examined here benefited from the direct participation of the implementing authority. Both the MAC and the city of Denver participated directly in their respective discussions. Thus, they were able to swiftly carry out those policies to which they (and the other parties) had made a commitment.

The port of Seattle has taken this concept one step further. To ensure participation by the "implementing" authority, full participation by all relevant parties is required. (Because it is unknown what remedies might be recommended as a result of the mediation, the implementing authority may well be a party other than the airport operator.) Moreover, each "caucus" has been asked to select representatives with the authority to direct or implement any actions it endorses. Thus, the port is represented by the director and deputy director of aviation, the FAA is represented by senior management at the region level, and the airlines are represented by senior management as well.

TABLE 2 BINGHAM'S CRITERIA FOR SUCCESS

Criteria	Minneapolis-St. Paul	Denver	Seattle-Tacoma
Direct participation by implementing authority	Yes	Yes	Yes
Preliminary dispute assessment conducted by the mediator	No	No	No
Incentives to negotiate			
Airlines/system users	Mixed	Mixed	Strong
Citizens	Tentative	Mixed	Mixed
FAA	Weak	Weak	Strong
Willingness to identify others' interests and invent mutually satisfactory alternatives	Strong	Strong	N/A

Preliminary Dispute Assessment Conducted by the Mediator

Of the three examples, only Seattle has made a commitment to a full mediation process, including a preliminary dispute assessment. By Bingham's definition, such an assessment involves determination of whether to proceed with a voluntary dispute resolution and, if so, what the nature and rules of that process will be. The port of Seattle extended that role to include a determination of which parties should participate.

Some of the community representatives were hesitant to participate in the process, believing that the real issues—growth and capacity—were beyond the stated scope of the discussions. As a result, the mediators attempted to bring these citizens to the table by soliciting “good faith” concessions from the port. Although no concessions were made, citizens eventually agreed to participate as they came to a better understanding of the process. Despite some concern over this approach, the port staff remains supportive of the concept of preliminary dispute assessment as well as the convening role given the mediator. The staff recognizes that the mediator's primary responsibility to the process, not the sponsor, is a necessary if sometimes unpleasant element of mediation.

Incentives to Negotiate

Incentives to participate may be born of a desire to gain from the negotiation or result from unattractive alternatives to participation. A common problem with distributional issues such as noise, however, is that incentives to participate are often unclear until the process is under way. Often only after groups learn through discussion what can realistically be achieved will they formulate clear incentives to negotiate. Parties with unrealistic goals may therefore refuse to participate, believing they will benefit more from litigation. Because mediation may be difficult to initiate with no clear promise of gain (other than the visible goodwill gesture of participation itself), a preliminary dispute assessment may be warranted in spite of the previously mentioned difficulties.

The perceived balance of negotiating power mentioned by Susskind and Cruikshank may be essential in getting parties to the table. Those with excessive power, such as the airlines, may feel that they will lose it in a consensus-oriented process; those with too little power, such as smaller community groups, may fear that their voice will not be heard. Again, a neutral convenor may be useful in this regard.

Desire for capital improvements at Stapleton, and especially a new airport, brought the airlines to the table in Denver. Of course, this type of enticement is not available to all operators. The greatest incentive to the airlines, therefore, may be the threat of unilaterally imposed restrictions in the event of no agreement. Both Minneapolis-St. Paul and Sea-Tac were able to secure airline cooperation by offering participation in the development of a potentially restrictive program. The airlines chose direct involvement over passive reaction.

Citizens at all three airports have exhibited skepticism of the process and hesitancy to participate. Seattle may be expe-

riencing the most difficulty with citizens, particularly those who were not involved in the Part 150 noise-mitigation planning. In addition to suspicions that the port has ulterior motives for supporting mediation, many citizens may well have unreasonably high expectations resulting from lack of familiarity with the aviation system and noise impacts, and with the mediation process in general. In any case, citizens are facing obstacles in overcoming disorganization and internal discord to achieve workable coalitions. Both the port staff and the mediators are attempting to remedy this situation by working closely with the citizen caucuses, providing technical information as well as seminars and literature covering the principles of mediation.

Conversely, citizens in Minneapolis-St. Paul have been organized and involved in airport issues on a more united front for nearly 20 yr. In addition to developing political savvy, they have become well educated on the complexities of the issues. This has enabled the MAC to work with them on a much more productive level.

Throughout negotiations in all three cases, the role of the FAA has been somewhat tentative, reflecting the conflicting concerns of the agency about federal liability for noise and the efficiency of the national system. Although the FAA supported MAC's efforts in the Twin Cities as an alternative to the establishment of an allegedly illegal ordinance, it refused to participate in the process, preferring to maintain its traditional observer status. Participation by the FAA in the agreement was limited to input at public hearings and comments on objectionable proposals. Beyond traditional objections to interstate commerce restrictions, there was no critical link to the national system.

Evidence exists that the philosophy on federalism may be shifting, or at least adjusting to the realization that the national noise problem is not fully going to be met locally. As Seattle enters the preliminary stage of mediation, the FAA has expressed the desire to participate in the actual negotiations and has supported this by designating senior Northwest Mountain Region officials as representatives.

Willingness to Identify Others' Interests and Invent Mutually Satisfactory Alternatives

Success of the mediation relies considerably on the participants' ability to distinguish positions from interests and thus present a unified position on each issue. Often a party will remain staunchly unyielding on a position, when in fact the underlying interest could be met in a different manner. In addition, each party must make a strong effort to understand the positions and underlying interests of the other participants. If parties fail to discuss their interests openly, the creative development of mutually satisfactory alternatives may be stifled.

This potentially fatal misreading is common to airport development projects, particularly those that enhance (or appear to enhance) capacity. For example, citizens may interpret plans for construction of a parking garage as a means to increase capacity and therefore noise. Their position may be to block construction, when in fact their interest is to reduce aircraft noise levels. All three airports have encountered this

problem when plans to expand have become public. The position of many citizens in Denver, Minneapolis-St. Paul, and Seattle has been to block growth. How well parties are able to separate the issues contributes in large part toward their eventual success.

Other Potential Complications to Success

Other factors beyond those suggested by Bingham may hamper a prompt resolution. The following may be particularly applicable to aircraft noise and airport access issues.

Lack of Adequate Technical Information and Understanding

Resolution of airport noise issues is often hindered by insufficient information on all sides. Communities, although growing in political sophistication, are often still uninformed about the myriad technical and operational constraints that limit an airport's ability to implement seemingly simple solutions. Residents may well be ignorant of the national interstate commerce issues. Airport operators do not always have a thorough understanding of the airline scheduling and cost implications of certain restrictive measures. Airlines do not experience the political heat or fully appreciate the responsibilities of the local public officials in some situations. Finally, even the FAA is often unaware of the strength of political pressures emanating from the community. In Seattle, the port authority has expressed willingness to finance the services of independent experts (who would be selected, if necessary, by the mediating parties) to ensure that these issues are identified, discussed, and documented.

Abuse of the Process as a Means of Securing Delay

Those who benefit from a less restrictive status quo (such as the airlines) may attempt to delay or prevent resolution by refusing to participate. A publicized deadline can minimize the use of such tactics. Without imposing a publicly declared 2-month deadline, the MAC might never have secured the voluntary agreements from the airlines critical to their noise budget. Similarly, Denver's use of a 6-month deadline resulted in the establishment of a noise budget within a mere 7 months.

What If Mediation Fails?

In the event the parties fail to reach consensus, the conflict may lead to litigation, unilateral administrative action, or other forms of negotiation. This should not discourage parties from entering into mediation, however. Although a failed mediation may incur additional cost in time and expense, the documentation and exchange of information, as well as the potential for better understanding among the parties, that results from the process can be beneficial in clarifying issues and even accelerating the pace of subsequent measures.

CONCLUSION

Aircraft noise is an inevitable externality of a successful aviation industry. As long as air transportation remains a common form of long-distance intercity travel, communities will be galvanized around the aircraft noise issue with increasing sophistication and effectiveness. In the absence of national guidelines, a number of airport proprietors where high-activity air operations occur will respond with restrictions on access that can decrease the capacity of the system nationwide. If an element of commonality is not introduced into the system, locally based reregulation can ultimately gridlock the system and destroy some of the benefits of deregulation.

The FAA and other elements of the aviation industry have focused on the need for more airports to meet capacity demands. Yet without a better means to deal with the associated noise impacts, it is unlikely that either new airports or other developments to improve capacity will occur.

Currently, the only alternatives to politically inspired local regulation are new federal noise regulation, litigation, and mediation. New national regulations addressing noise beyond the existing programs are unlikely in the current political climate. Litigation is a poor alternative: it is neither inclusive nor flexible and often results in inefficient and inappropriate outcomes. Mediation, if pursued comprehensively, is an approach that can lead to quieter skies while maintaining air transport system capacity. Mediation employs a neutral party to convene the interested parties for developing consensus solutions to a dispute.

As demonstrated by the efforts of the three case study airport authorities, resolution of noise concerns can be well served by voluntary, direct, and ongoing interaction among representatives of conflicting interests. The process of thorough documentation and review can systematically identify and evaluate alternatives for noise reduction.

Capacity concerns can also be served under nationwide use of mediation that documents and quantifies any reductions in capacity and local, regional, and national impact. Direct FAA participation can identify and protect the essential elements of national interest in the air system.

Mediation is potentially a workable and potent solution to a growing problem, but its benefits cannot be realized without a full commitment by all parties. Difficulties will be encountered throughout the process, from deciphering technical data to meeting sunshine laws. Sufficient time and financial resources can help to overcome these obstacles.

Institutionalizing the mediation process by incorporating it into the Part 150 program would benefit not only airport proprietors but the national system. The allocation of Airport Improvement Program funds for such processes would help defray the costs; federal participation would provide the critical link to the national system.

The use of mediation to resolve aircraft noise disputes is still young, and fully conclusive examples are absent. If the current effort at Sea-Tac proves successful, it may be a valuable model for similar situations elsewhere. Continuing attention to the developments in Seattle will be worthwhile as the industry comes to grips with the aircraft noise/airport access dilemma.

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