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Aviation Gridlock

Phase II: Airport Capacity and Infrastructure

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Preface

As pressure increases on the national airspace system, including airports and supporting facilities and services, it is important that all elements of the system—commercial airlines; passengers; local, state, and federal governments; business and industry—understand and work together to maintain the world's safest and most efficient aviation system. To address this need, the Federal Aviation Administration and the Transportation Research Board have launched a series of three 1-day seminars on **Aviation Gridlock: Understanding the Options and Seeking Solutions**, with sessions in February, April, and May 2001 in the Lecture Room of the National Academy of Sciences, Washington, D.C.

The seminars aim to enhance public understanding of the issues, organizations, and possible solutions to air transportation problems as the nation enters a period of increased demand, limited capacity, and inclement weather patterns traditionally associated with summer. Following are the topics and schedule for the seminars on Aviation Gridlock: Understanding the Options and Seeking Solutions:

- **Phase I: Airport Capacity and Demand Management,** February 16, 2001;
- **Phase II: Airport Capacity and Infrastructure,** April 11, 2001; and
- **Phase III: Weather and Technology**, May 16, 2001.

Phase I of the seminar series focuses on demand management by examining three areas: airport delay and congestion; administrative and market demand management options; and operational, legal, and political challenges in adopting new demand management strategies. The Phase I proceedings are available from TRB as **Transportation Research Circular E-C029: Airport Capacity and Demand Management** (www.trb.org).

Phase II of the series—the proceedings published in this Circular—examines airport capacity through improvements in infrastructure. Phase III focuses on weather as an impediment to air travel and on the technologies to ameliorate the negative effects of weather.

Each seminar features presenters from selected elements of the aviation industry and engages an audience of individuals representing the industry, the federal government, the business community, the general public, and the media.

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Introduction

JEFFREY N. SHANE
Hogan & Hartson

JANE F. GARVEY
Federal Aviation Administration

Jeffrey Shane: Good morning everybody and welcome to the second of three symposia being sponsored by the Federal Aviation Administration and the Transportation Research Board on the very pressing issue of aviation gridlock—arguably the most important single transportation policy issue immediately facing the country and, of course, the new administration.

I am Jeff Shane. I'm with the law firm of Hogan & Hartson here in Washington. I'll be serving as your moderator today. I have a few administrative remarks that I'll go into shortly, but I don't want to waste any time in introducing to you the Federal Aviation Administrator, the Honorable Jane F. Garvey, who has some introductory remarks for us this morning.

Jane Garvey: Thank you very much and good morning everyone. First of all, let me begin by thanking Jeff. Once again, he is here for a return performance. He did a wonderful job for us the first time, and I think as everyone in this audience knows, he really brings to this topic a wealth of experience. He served in the Department of Transportation as the assistant secretary for policy—that was both international and domestic policy—and served in a comparable position at the State Department. He's been a partner for a number of years at one of the most prestigious law firms here in Washington. But, more importantly, I think for all of us he really is a world-renowned expert on aviation, and we're really just very delighted and honored that he is moderating this session for us.

Let me begin, too, by welcoming each and every one of you, as Jeff said, to our second series. We are very, very pleased to be working with the Transportation Research Board in convening this seminar series. As many of you have written—and I see lots of friends from the media—but as you all have written and as each of the participants certainly knows, aviation touches virtually every citizen in this country. It is important not only to our global competitiveness, but it's important to our economy. It's important to the quality of life that we all live. It is a system, that with all of its complexities, is also extraordinarily safe. I think that is worth noting at each one of these sessions.

But having said that, we also know that the demand for aviation continues to grow. The numbers are extraordinary. The challenge that Secretary Mineta has so aptly stated is really to close that gap between the demand for aviation and our ability to meet that demand. It is, as the Secretary has said, the central challenge facing the aviation community.

Now, at the congressional hearings—and I must say there have been many congressional hearings and I've had the pleasure to be at all of them, and I see some of our friends from the staff here today—and also in the press, I think there have been two messages that have come through loud and clear: One is that there is no single solution. There are no simple answers, and we really may need to revisit some long-held assumptions.

The second message, which I think is equally important, is that the solution to the problem requires the constructive collaboration of three key groups—and we have heard this again and again—and that is the airlines, the airports, and the government. So, these discussions, these symposia, are really designed to bring those groups together to understand not just the complexity of the problem, but even more importantly, to bring those people together who are in the best position to suggest some possible solutions.

Our first session in February was on the subject of demand management. What can we do at those airports where demand has simply outpaced capacity? We heard some very practical, some well-thought-out proposals that dealt with some of the most difficult public policy questions in this arena. We heard about market-based solutions. We heard about administrative solutions from Bill DeCota. We heard about the operational, the legal, and the political challenges from people on the frontline. This was all put into perspective by the reality of airline scheduling and the customers whom we are ultimately serving.

The question is: What will we do with all of that information? Let me mention, and I see them all in the audience, the public policymakers are here—people from the Department of Transportation, from the secretary's office, from the FAA. They are here to listen, and they are here to learn. Certainly, the perspectives we heard at the first session and the ones we'll hear today will help us shape policy as we consider solutions to some of the most complex problems that we face. We are very grateful to the panelists and to the members of the audience who are participating with us.

Today's topic is airport capacity. Last year, U.S. airlines carried nearly 700 million passengers. That was nearly a 50 percent increase from the number who flew in 1991. That number will grow to more than one billion by 2010. And, just as important as that level of growth is the fact that it is not distributed evenly. The United States has 546 airports that have commercial airline service. Yet, if you look at 1999, for example, 7 out of 10 airline passengers boarded planes at just 31 airports—the nation's 31 busiest airports. Fewer than 6 percent of our nation's commercial airports account for 70 percent of the traffic. Each one of those 31 airports is expected to experience even greater demand. As many of you know, at those busiest airports, we often face what seem like insurmountable hurdles to adding system capacity.

It raises some very tough and very difficult public policy questions. How does a community balance environmental concerns with growth? What is the responsibility of an individual community to the national aviation system? And, what is our responsibility to the local community? But, the experts are here. Whether it is David Plavin giving his perspective on the future needs of capacity from the airport's viewpoint, or Jeff Fegan outlining a case history of how a runway was built in his community, or Dennis McGrann from the National Organization to Insure a Sound-Controlled Environment speaking from the perspective of the environmental community, we're going to hear about the complexities of adding system capacity.

We would encourage members of the audience to offer their perspective and perhaps to challenge some of our assumptions. I look forward to the discussion, look forward to the dialogue, and again, thank you all for being with us today. Thank you very much.

Shane: Thanks very much, Jane, for those remarks, and thank you, too, for those very kind personal remarks. We have a lot to cram into today's program. We have three panels, and you will see they are organized quite logically. We want to talk first about the state of the system— where are we today? We will then talk in our second panel about

the current approach to expanding system capacity. Finally, in the third panel, which will be after lunch, we will talk about suggestions for new approaches to the expansion of airport capacity.

As the Administrator pointed out, the first of our programs in February was addressed to what we call demand management solutions. Assuming static airport infrastructure, what are the tools available to airport managers and to others in the system to use scarce resources as effectively as possible?

Today, we are reversing the assumptions, if you will. We are assuming we've done everything now that is possible, through economic and administrative tools. We have made the system as efficient as possible—given the capacity that we have. The question now is simply how can we expand the capacity itself? How can we pour more concrete? How can we build more airports, more runways, more taxiways, [and] make the infrastructure in our airport system more consistent with the demand which travelers are putting on it? The statistics are astonishing. What's amazing to me—as I said last time as "a recovering federal policymaker"—is that the FAA has always been uncannily accurate in estimating the growth of the system. We knew in 1991 that we would be at about 700 million [passengers] today, and we know today that we're going to be at about a billion in 2010-2012. So, there is no secret about how fast the system is growing. The issue is how, in fact, can we get the capacity in the system to grow as fast as the demand on the system is growing? That has been the challenge.

I go back a long way personally, and that is why this particular session is going to be so interesting to me. There was a time, I hate to tell you how long ago it was—1970 and 1971—when I was the only lawyer at the Department of Transportation who was supposed to know anything about environmental law, environmental management, or environmental impact statements. It wasn't really called environmental—a lot of the time it was called ecology or "the ecology" as a lot of my colleagues would refer to it. I remember the first environmental impact statement that came across my desk as the special assistant for environmental affairs—I think is what my title was—in the General Counsel's Office. It was a page-and-a-half long, and it discussed a new project we were thinking about at the time called the SST.

Well, we've gone some way past those early days. There is no question that things have become much more sophisticated both at the federal and at the state and local levels. The question now is, how can the process of environmental review be streamlined? That is an important question that is before the House. It is an important question before the Congress. There is a bill now pending, introduced by Sen. Kay Bailey Hutcheson, who is the Chairman of the Senate Aviation Subcommittee, called the Aviation Delay Prevention Act, and it calls upon the Secretary of Transportation to establish the most efficient and expedited and coordinated environmental review process that's possible. We don't know what the fate of that legislation will be, but it obviously points its finger at a very important problem in the system. We're going to hear a lot today about the extent to which it is going to be possible to expedite some of those reviews that have been fingered as an important problem in the process. Can we expedite any of that and be true to the thrust of the National Environmental Policy Act and true to environmental concerns that exist throughout the country? That certainly will be the challenge.

On the administrative side, because we have so little time and because we have so much to cover, we are going to be ruthless. We are going to ask each of our speakers to time their prepared remarks to 10 minutes—12 minutes at the outside. I might give

someone the hook if we go to minute 13. But, the point is, as the Administrator said, the people in this audience include a lot of folks that are in the process. We want to leave as much time as possible for give and take so that we take advantage of all the talent that is here not just on this side of the table but on that side of the table. So, I hope I'll be forgiven for running this program with an iron fist, if I may.

In that connection, I am going to ask for your forgiveness for not reading long introductions of everybody. You have the biographies of each of our speakers in your materials. Please refer to those. Let's stipulate that everybody has a long and distinguished record. I will tell you, of course, what they are doing today and, of course, the relevance of what they're doing today doesn't need much explanation from me. So, we will try to conserve time in that way as well. Having said all of that, I notice that we are ahead of schedule which is good. Maybe I won't give the hook on minute 13—I may wait until minute 14. Let's turn to our first panel—"The State of the System—the Nation's Needs vs. Existing Capacity." I am very pleased to introduce as our first speaker, David Z. Plavin, who is the President of the Airports Council International-North America. The only thing I'll say in addition to David's title is that he comes from the Port Authority of New York and New Jersey, where he was the Director of Aviation. So, he is not just a talking head, notwithstanding the fact that he leads one of the biggest associations in Washington. He actually comes from the community and he knows what he's talking about. So David, welcome to the podium. You have 10 minutes.

PANEL 1

Forecast of Future Needs and Discussion of Airfield Capacity Problems

Introduction

DAVID Z. PLAVIN
Airports Council International–North America

You'll notice that they put me over here between Jane Garvey and Woodie Woodward, so if I say anything unduly critical of FAA, they'll knee-cap me from both sides.

What I want to do is run a little bit through my sense of how the airports fit into the view, and you'll see when the first slide comes up that I have a view. I may not be right, but I'm also not in doubt. Some context here—U.S. air traffic is a very large piece of the worldwide stage. Its share is not growing except that it is, in itself, growing very rapidly, as is true for everybody else. Jane Garvey says that there are 546 commercial service airports in the United States, and she is the Administrator and she knows. But, here is the point (Figure 1): 90 percent of the commercial traffic travels at 70 airports, the top 30 airports account for 70 percent, [and] the top 17 airports account for 50 percent of all of the traffic. And, people are only talking about two airports—two new airports in the United States, even as there are some 80 under discussion around the rest of the world.

Of the 546 commercial airports, this is the breakdown of the FAA's hub definition. I think while a lot of folks in this room know this, Randy Malin pointed out to me before that the hub isn't what most people think of when they think of hub. That is to say a

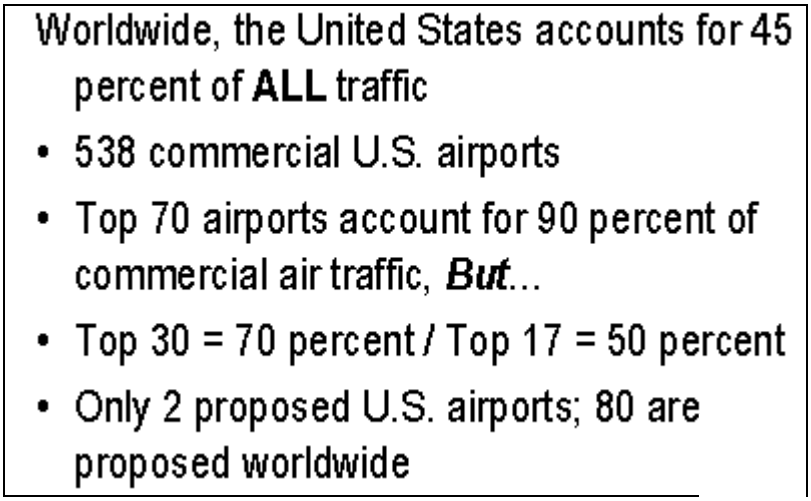

FIGURE 1 Growing pains.

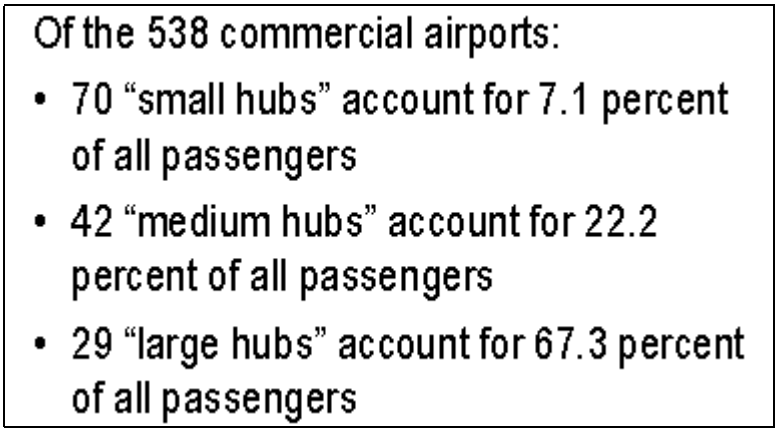

FIGURE 2 The airport puzzle.

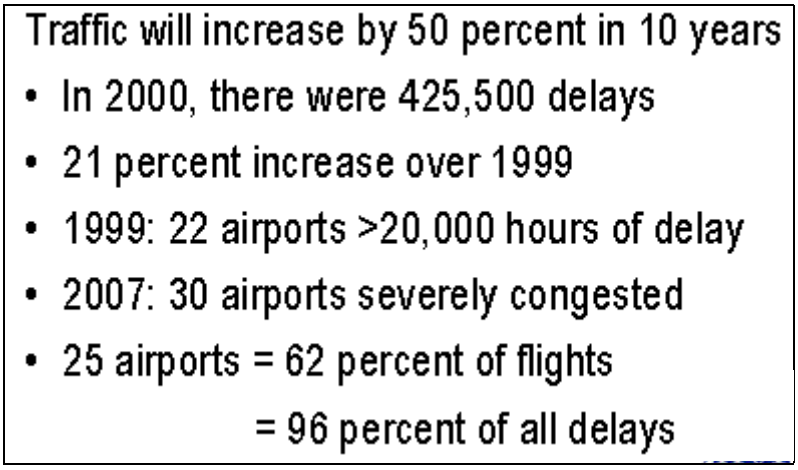

FIGURE 3 Our impending traffic jam: one billion enplanements.

transfer point or a place where one airline tends to dominate. These are federal legislative terminologies—regulatory terminologies. But, the point again is the largest 29 airports account for 67 percent plus of the traffic (Figure 2). As Jeff pointed out, we're talking about a billion enplanements 10 years from now—maybe it will be nine, maybe it will be 12 years; but given how long it takes to build things in the airport business, it doesn't much matter.

In the year 2000, we had 425,000 delays in the system, which is a one-fifth increase over what we had over the year before (Figure 3). FAA's numbers suggest that we have 22 airports which are severely congested—maybe by now it is 24. The "severely congested" definition says there are 20,000 hours of delay or more per year. FAA projects that number to go to 30 or 31 severely congested airports by the year 2007.

Here is a piece that I find fascinating: the top 25 airports, with 62 percent of flights in the system, account for 96 percent of all the airport-related delays in the system. We are not talking about some of the other causes of delay. This is flow and capacity at the airport level.

So, since 1991, we've actually built 19 new runways in the system, but at the 25 airports, which had more delays than everybody else, we only built 5 in the last decade (Figure 4). We are expecting, at those top 25 airports, for nine more runways to come on

line by the year 2005. That means they are already underway; we are not going to get the runway on line by the year 2005 unless it is already well underway, having passed the planning stage for sure.

So, if we say—and I'm not suggesting this is possible or a good idea necessarily—but if we say 25 airports account for 96 percent of the airport-related delays, and we put a runway at every one of them—which is probably not possible—we are probably going to talk about building a grand total of 50 miles of runway. The delay calculations are based on current demand. But, if we built 50 miles of runway, that shouldn't be that big of a deal. Yet, we all know that it is. But, when you think about it, the highway program does a lot more than that. Yes, I know we are using more concrete per square foot and a runway is wider, but nevertheless, this ought not to be that big of a deal.

Let's talk about how we got to some of the problems we are facing today. One of the things that has been happening over a long period of time is that the passengers have said, "We would really rather have more frequencies than just more seats in a market." So, the airlines responded, as they are wont to do, without putting more seats in the market, but, instead, adding more planes to accommodate the existing number of seats (Figure 5). So, we went from a situation where in 1999 we actually had 10 fewer seats per take-off, on average, than we had in 1993. That is a big reduction. And, not surprisingly, the load factors increased while all of that was going on. So, we actually were able to accommodate some of the growth over that period of time, but we did it with more smaller airplanes in the system.

FAA projects that average aircraft size begins to grow, again, after a short period of time, but as a practical matter, if we don't do something about the way we're looking at

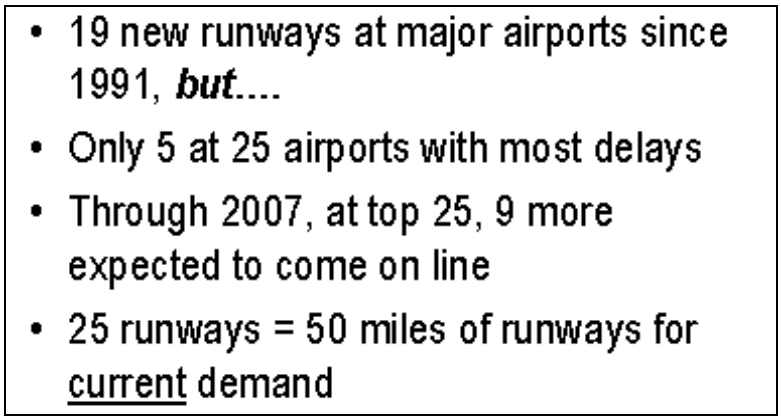

FIGURE 4 Keeping pace with demand.

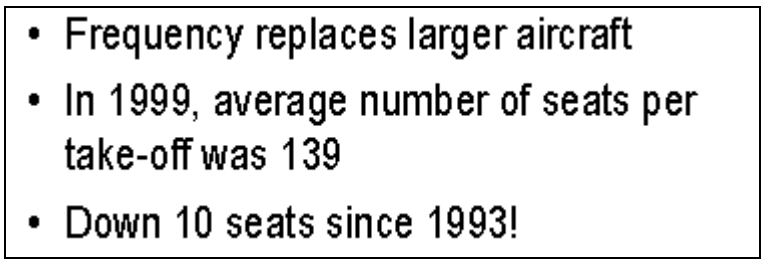

FIGURE 5 Airlines respond to passenger demand.

airplanes, that is probably not likely (Figure 6). Today, it is also true that 8 percent of the enplanements in our system are on 42 percent of the air carrier movements. That is an interesting observation about how we actually are using the scarce resource that is air space and airports.

Look at the growth in regional jets (RJs)(Figure 7).We went from a total of six airplanes at a little over 1 percent of the airports in 1991. Now, RJs operate at almost 40 percent of the airports, with 184 airplanes. Look at the dependence at Cincinnati on RJs—55 percent plus of their departures are on RJ's.

We can, obviously, get some more capacity in today's system, talking about airspace and airports. Jeff talked about the idea of rationing the capacity and managing the demand. Let me focus on what the airports can be doing at this point. We think we can make better use of existing capacity, but we would like, first, to develop new capacity. It is not a scare tactic to say that, on average, a new runway can take 10 years (Figure 8). If it is a fast project, maybe it will be 7 or 8 years. But, we know there are some that take a lot longer than 10 years. Again, at the 28 largest airports in the last 5 years, we only had three new runway projects.

In order to deal with this, Airports Council International (ACI) and American Association of Airport Executives (AAAE) have come up with something that we call EASE. This is one of those wonderful examples where the acronym comes before the subject. So, we tried to fit "Expedited Aviation System Enhancement" into EASE (Figure 9). The point is, that what we really would like is a program which has a process for approval of complex projects that is comprehensible—we don't really understand them in the same way across the board;

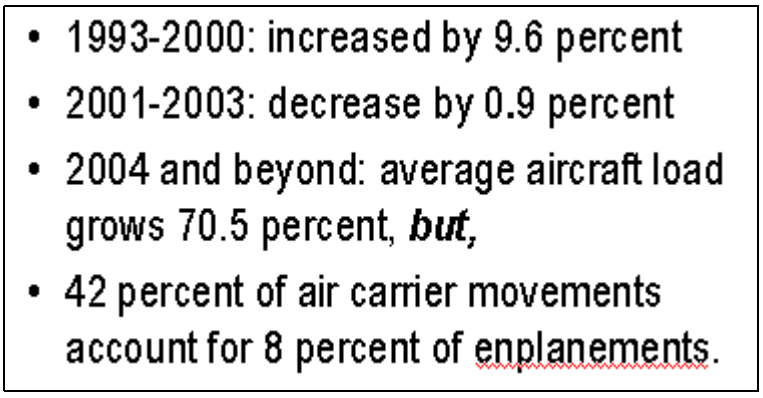

FIGURE 6 The load factor.

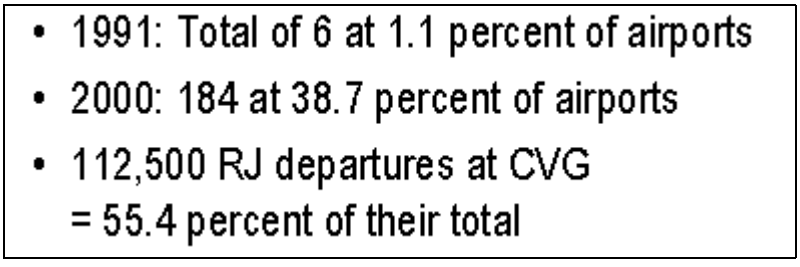

FIGURE 7 Regional jets take off.

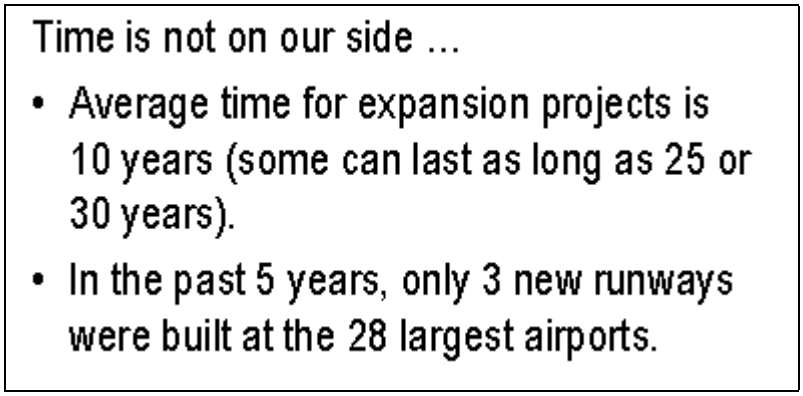

FIGURE 8 Developing capacity.

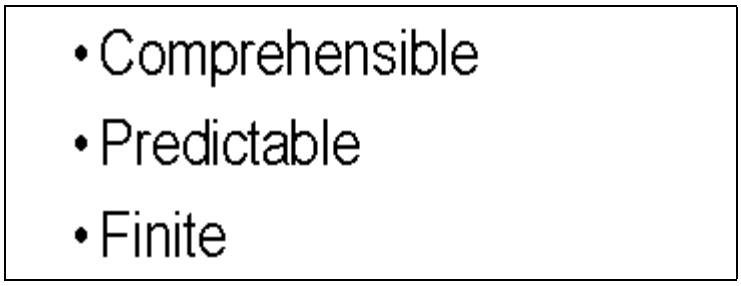

FIGURE 9 Expeditied Aviation Systems Enhancement (EASE).

predictable—as you will see in a minute, they are not predictable; and finite—that is to say they have an end. Sometimes our projects don't always have an end. Here are a couple of examples of the randomness of the process.

First, we have a "Categorical Exclusion" approval process. A categorical exclusion, for those of you who don't follow this stuff, is something which is automatically deemed to be in compliance with environmental rules. Look at the difference in how long it takes to get a categorical exclusion approved (Figure 10). That ranges anywhere from 40 business days at the top to 1 or 2 [days] at the bottom, and it has nothing to do, as you can see, with the size of the project.

Now, here is a slightly more elaborate review process—the "Environmental Assessment" approval process. Here, you have projects that range from $135,000 to $355 million, and the process ranges from 12 months to 96 months (Figure 11). Again, [this is] unrelated to the size of the project. And finally, [there is] the "Environmental Impact Statement" (EIS) approval process (Figure 12). This part is one where a lot of people will say, "Well, so what." But, look at this. It says that for every one we looked at, the actual time to complete that project took substantially longer than what we had estimated. And, it is not like we have people who are not in the business, estimating how long it is going to take. This is to say that nobody has yet been able to properly anticipate how long an EIS will really take; and, of course, the same kind of numbers relate to how long it will cost you to actually implement the EIS process (Figure 13). It has nothing to do with the

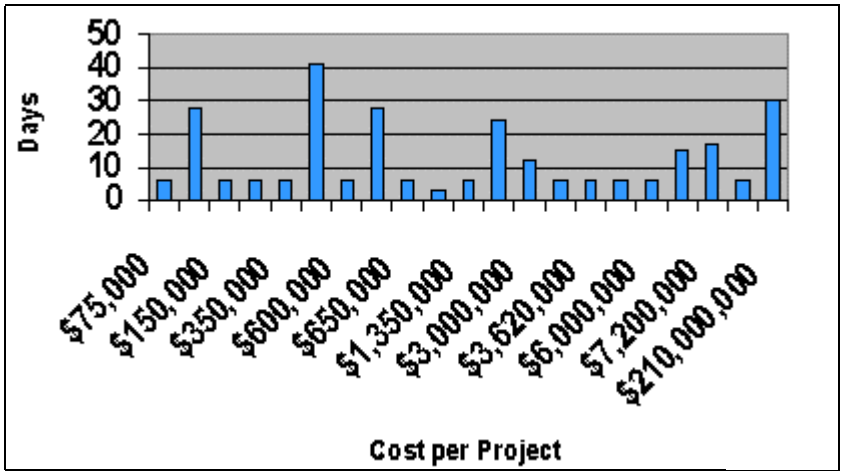

FIGURE 10 Categorical exclusion approval process: time versus cost.

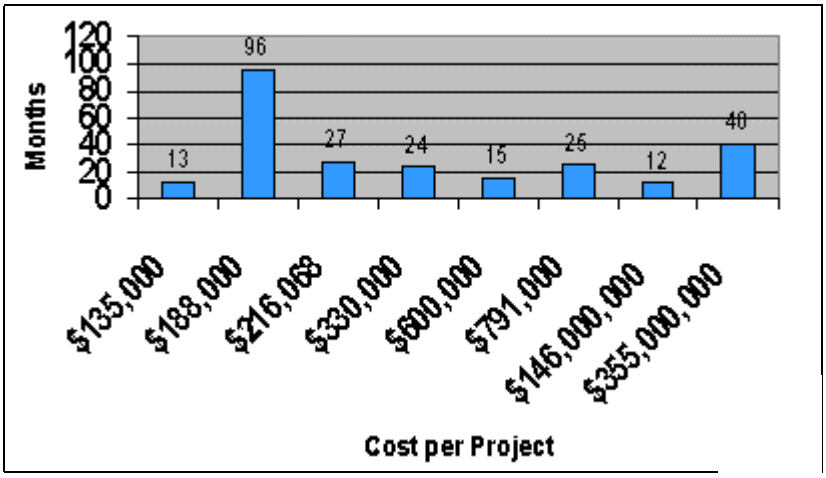

FIGURE 11 EASE process: time versus cost.

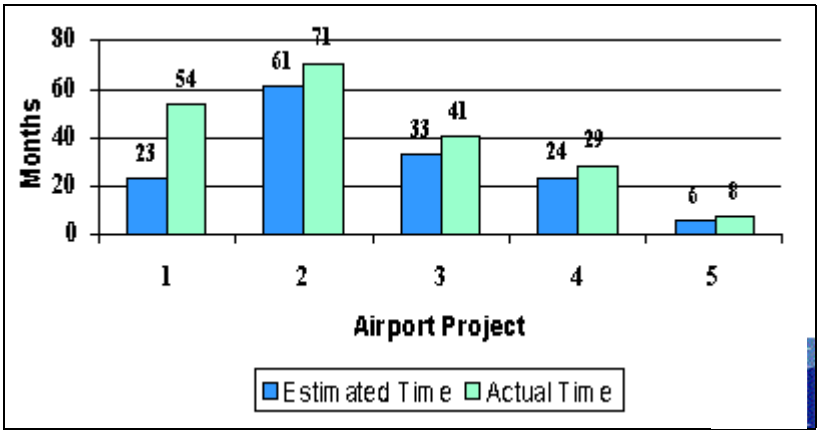

FIGURE 12 EIS approval process:
estimated time versus actual time (in months).

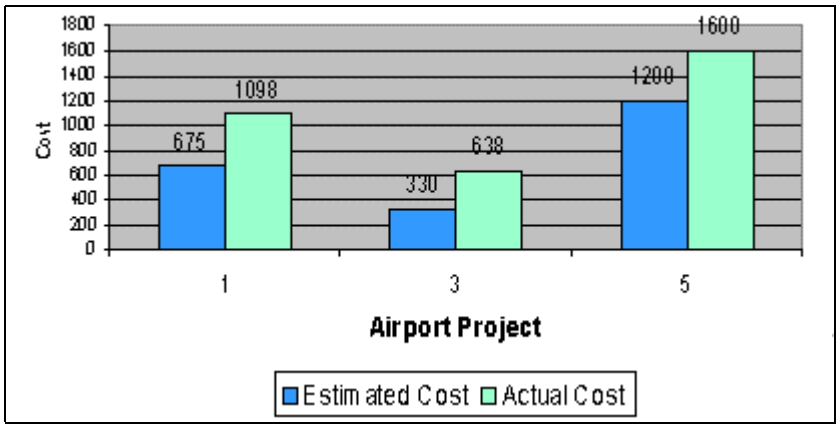

FIGURE 13 EIS approval process: estimated cost versus actual cost (in thousands).

project as a whole, except that, if it takes that long, you have got to know that the project itself will cost you more money.

It is also generally true that these projects don't get modified dramatically during the course of this process. At the end of the day, it is typically true that the project that went in is the same project that came out. It just takes longer. As Jim Wilding is fond of pointing out, the longer process isn't necessarily a better process. The fact that it takes too long to get the array of approvals—and I don't want to focus just on the environmental approvals: that is just one of a long series of approvals necessary from the initial approval at the local level to grant approvals to environmental approvals to local permits [and] clean air [and] clean water approvals (Figure 14a and 14b).

So, these are some of the specifics. We'll talk about them in greater detail in a minute. But, the point that these are designed to focus on: is there a way to curtail some of the time that it now takes? A lot of people are fond of talking about maybe we can do things in the same timeframe rather than doing them sequentially. That isn't quite what I would say. What I would say is that, generally speaking, the data-gathering analysis process does take place sequentially, but nobody has any incentive to make a decision. There is no timetable for making a decision. Everybody is playing Alphonse and Gaston—"Let's just wait until the other guy approves it so I don't have to be hanging out here and look like I'm approving it without anybody else." That obviously is not helpful in the process.

So, as we go down the road—you talked a little about managing limited capacity—I just want to make the point that limiting demand is nobody's first choice. Nobody wants to limit capacity in the system (Figure 15). People want a system that can accommodate what passengers want in the system. Most airports don't need it and don't want it. It is not a useful tool for most airports in most cases, and even when you're going to do it, one size obviously doesn't fit all. What would make sense at one airport doesn't make a lot of sense at others. So, whether it is building a runway or managing demand, who gets to say yes [and] who gets to say no? There are a whole bunch of questions (Figure 16). I'm not going to spend time on the administrative stuff—that has been discussed before. But I do want to make one point about the fact that we have a number of conflicting public policies here (Figure 17). Whatever we wind up doing here, my preference would be to

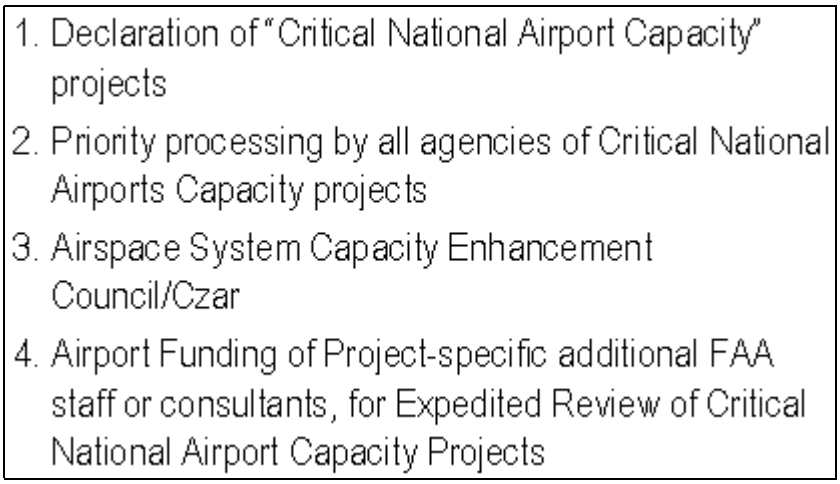

FIGURE 14a EASE initiative.

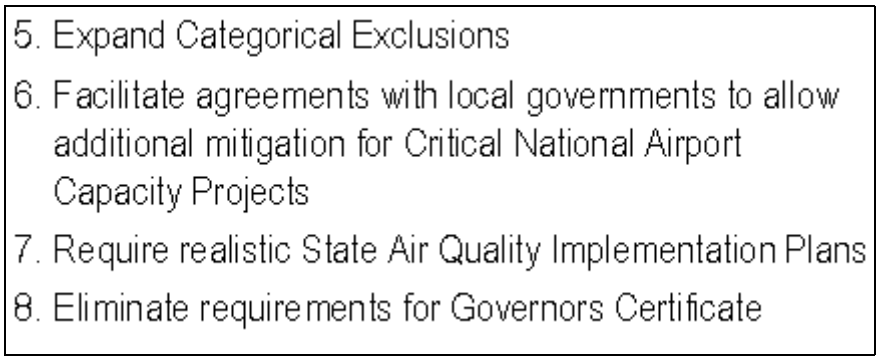

FIGURE 14b EASE initiative (continued).

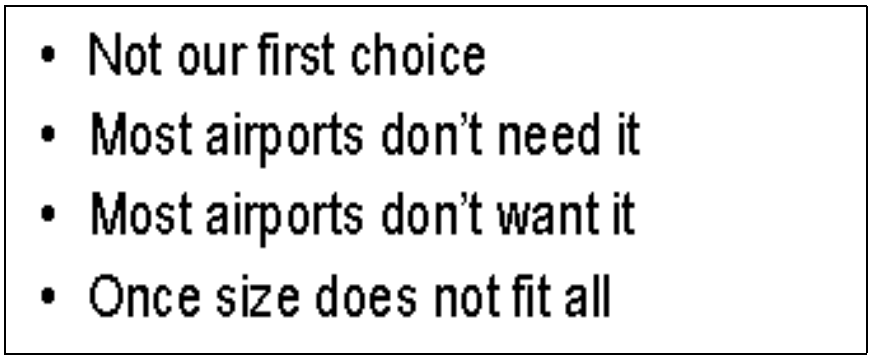

FIGURE 15 Manage limited capacity.

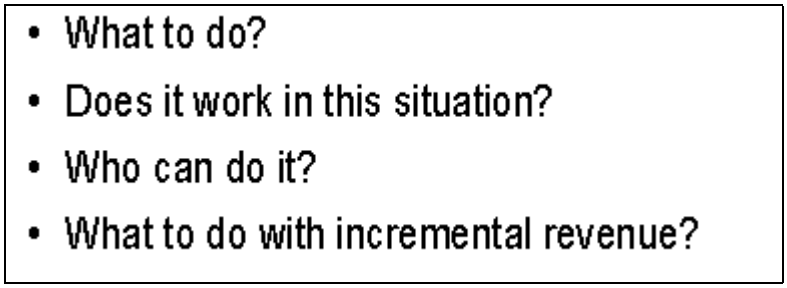

FIGURE 16 Key questions.

FIGURE 17 Conflicting public policies.

manage demand—if we have to—by price (Figure 18). Other people would like to do it by collusion, but that is a whole separate question.

We need to make the most efficient use of scarce public resources. We are clearly not doing that today. We need to expand the effective capacity of the system. We want to promote competition for the consumer. We hope that gives us better service and better prices. We want to make sure that all the communities in our country have access to the national air space system and the airport network at the larger communities in the system. We have to take care of the environmental and social impacts. Nobody in all of the expedited techniques that we have been proposing is suggesting that we ought not to be cognizant of the environmental needs of the society. We are all public servants, and we want to be sure that is done. But, what we are saying is there has got to be an end to that process. There are international agreements we need to take care of. We need to be sure that what we're doing is reasonably administrable, and obviously U.S. public policy is designed to protect the U.S. airline industry.

So, having said all of that, I'm hoping that within the next few hours we are going to talk specifically about some of the things we can do to pour the concrete for the runways, to build the terminals, to build the gates to make sure that what we can do on the ground (and ultimately you'll hear about in the airspace, as well) is done before we start messing

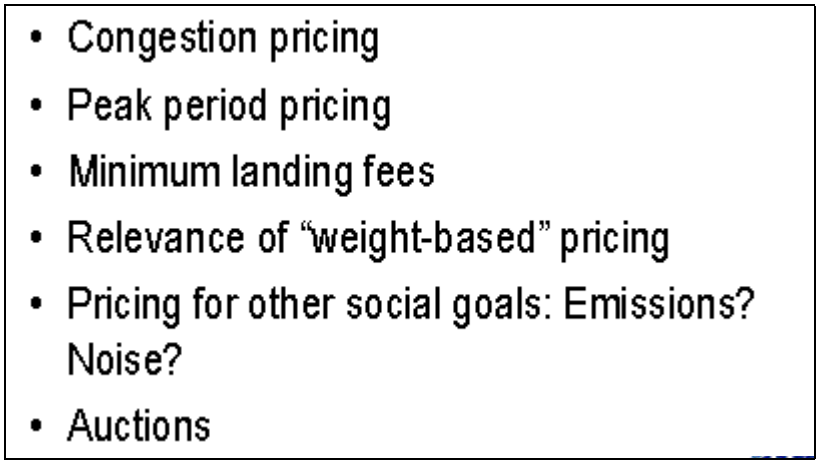

FIGURE 18 Managing demand by setting prices to change behavior.

around with some of the actual demand management tools. In some places we have to start there. But, in most places that is not the point. It is time to really get on with expediting the process, and I know in this room I'm pretty much preaching to the choir. But, it is something we really have to make sure all the folks on the Hill and indeed throughout the country are fully cognizant of. Thanks very much.

Click here to see David Z. Plavin's entire presentation.

Jeffrey N. Shane: Thanks very much for a superb introduction. David, you actually ended your presentation before you were scheduled to begin. That is making me grateful and also making me thinking again of the SST—that is what happens on a westbound flight on the Concorde when there is a Concorde. Next on our program I'm very pleased to introduce Dr. Woodie Woodward, who is currently serving as the Acting Associate Administrator for Airports at the FAA. Actually, Woodie Woodward is the director of the FAA's renowned Center for Management Development in Palm Coast, Florida. But, now she is getting a chance to be a manager—having trained thousands of them. She has a lot to share with us this morning. So, Woodie, welcome to the podium.

PANEL 1

Description of the Current System

WOODIE WOODWARD
Federal Aviation Administration

My role this morning is to talk a little bit about the current system, and, I think, David covered all of that. So, I'll finish much quicker than anticipated. But, I think he made one real interesting point that we have been looking at in the FAA, and that is that while the U.S. population represents about 5 percent of the total world's population, we consume, as David said, about 40 to 45 percent of the commercial air travel. As we all know, because we fly in the system so much, there are many consequences of our high rate of air travel. It enriches our lives. It expands our horizons and broadens them as well. On the other hand, it often leads to busy and sometimes congested airports, and thankfully that is the issue we are going to focus on today with a lot of experts to help us here in the audience.

What we'll be discussing around this issue raises the realm that we are discussing a largely symptomatic issue of an enormously successful air transportation industry. We are eager to reduce congestion and delay, but we are also eager for continued growth, competition, and improvement in the industry. Because of these conflicts, that adds a lot of complexity to our discussion—especially from a public policy standpoint.

Without a doubt, we have the world's largest airports and aviation system. There are more than 19,000 airports in the United States when we count all the permanent landing areas, including even grass-owned landing strips and heliports. In the federal government, of these 19,000, we concentrate on about 3,500 public airports that we consider significant to the national air transportation system. We've actually been involved for about 50 years in helping develop these airports as a component of the national system. But we have done it respecting the American tradition that most issues are best decided locally.

The FAA uses two major tools to foster the national system of airports. First, we maintain an enormous amount of technical information about where airports are needed and how they should be developed. This information in the form of numerous plans, reports, advisory circulars, and other documents, helps local officials decide what type of airport development is best warranted in their communities.

The second way we foster a national airport system is through our grant and aid program—one that you are mostly familiar with. This program encourages local officials to plan, develop, and operate their airports in a manner that is consistent with the needs of the total national system. As others speaking before me have said, we always keep in mind that airport planning and development is primarily a local responsibility. The FAA is a partner in the process, but our success largely depends on the performance of our two partners—airport operators and the private sector. As in any partnership, there are some differences and concerns among the partners. We share the goal of a safe and efficient airport system, but often our focus is different and our viewpoints do not coincide.

The FAA is foremost in its concern for the safe and efficient movement of aircraft. We want to minimize congestion because it adds to the complexity and difficulty of air traffic control. We tend to take a long view, forecasting 10 to 20 years into the future, so

that we can be confident that when we do make major investments in our system, they will be relevant to long-term needs.

On the other hand, airport operators are employed by local and sometimes state government, and they tend to be driven by local economic and political concerns. They must balance the local demand for air transportation and associated employment and economic benefits, against local opposition to noise, pollution, and other environmental concerns. Airport operators are engaged in day-to-day management, and as such, are involved with issues that are very complex and close to home. They answer to elected officials with relatively brief terms of office, so it is often necessary for them to focus on more short-term plans.

Focusing on the private sector now, the private sector encompasses a number of different elements—each with a unique viewpoint. The airlines, for example, bring the concerns of a dynamic and competitive business where profit margins have been slim. Airlines want an adequate airport system, but because they pay much of the cost in landing fees and other rates and charges, they don't want development before it is needed nor do they want a lot of excess capacity that might benefit the competition. The airline planning horizon is notoriously short— perhaps until the next schedule change or the next quarterly report.

On the other hand, the financial sector underwrites much of the cost of developing major airports through the issuance of revenue bonds. This perspective focuses on credit worthiness, how much can an airport borrow and what is the risk that debt payment might be interrupted. Credit rating agencies impose great discipline on airport operators—requiring them to manage well and develop prudently in order to avoid risk. The horizon is as long as it takes to repay debt—typically 20 years into the future.

Another segment of the private sector that can play a major role is the local business community, often represented by the Chamber of Commerce. Its focus can range from short-term economic impact to long-term visions for regional and national economy. Local business can be a very effective proponent of airport development, but only occasionally does it organize a high visibility support program. We believe this may be an area where our partnership can be expanded and made much more effective.

Given the differences in perspective among the FAA, local government, and the private sector, it is somewhat surprising that our partnership has been so successful in developing the national airport system. Yet, it has been successful because despite all of our differences, we also share a fast area of agreement and a common desire for a safe and efficient system.

We still have some lingering problems. The most serious and the most publicized is congestion at major metropolitan airports. This is a complex problem with many contributing factors. Our 31 busiest airports can handle about 14.5 million aircraft operations annually without excessive congestion and delay. However, they are currently accommodating about 15.5 million operations annually, and demand is expected to increase to more than 17 million operations in 2006. We face the dual challenge: We have to catch up and at the same time look to the future and build more capacity.

The solutions to these challenges are varied. As David said, potential remedies include expansion of existing airports, development of new ones, redistribution of passenger traffic to off-peak hours into uncongested airports, larger aircraft, improved air traffic procedures, and the use of advanced technology. The problem is so complex and the menu of potential of solutions is so broad that it is difficult to formulate an effective

public policy. This is an area where some simplification and organization might be helpful. That is something we are looking to all of you for. The FAA, as many of you have heard, is trying to do that by benchmarking the capacity of 31 of the busiest airports. We are working closely with those airports to do that right now.

We're also looking, like David's organization and AAAE, into ways to streamline the planning and environmental review process to bring airport capacity improvements online as soon as possible. This is important because it just takes too long to build runways. As David said, data show that 10 years or more often elapses between the time an airport operator begins the planning process to the time that a new runway comes under construction. We are taking a hard look at planning timelines for new runways to identify where time might be reduced.

First, we are looking at the environmental review process. This is a process that is driven in large part by federal and state laws and regulations. It is clear that this process takes, on average, about 3.5 years to complete. That is about one-third of the total planning for a new runway. Here at the FAA, we are considering ways to streamline and expedite the environmental review process. We are looking at things like assigning teams of environmental experts to work on major projects, increasing FAA environmental specialist and attorney resources. David mentioned categorical exclusions. We are also looking at more of those and shortening and streamlining environmental impact statements and findings of no significant impact.

In addition, we are searching for ways of improving interagency coordination at the federal level, and issuing a best practices guide to helps folks out in the field. Another thing we are doing is sponsoring this set of meetings to help gather expert opinion on a full range of problems and what we can do about them. We expect this process will help all of our partners agree on a course of action to address airport congestion. I can assure you that we in the airports organization in the FAA are committed to helping implement those solutions. Thank you.

Jeffrey N. Shane: Thank you very much, Woodie. The third and last presentation on this morning's opening panel is going to be a presentation, I'm happy to say, from the real world. Gerald Roper, for the last 8 years, has been President and Chief Executive Officer of the Chicagoland Chamber of Commerce, a business organization that serves more than 2,600 members in the six-county northeastern Illinois region by providing a strong unified voice on government issues, commercial issues and everything else. He has a long background in tourism. He can tell you what it's like out there and why this problem is so important to the country at-large.

PANEL 1

Economic and Consumer Impacts

GERALD J. ROPER
Chicagoland Chamber of Commerce

Good morning, everyone. I would like to thank you Jane, and your staff, for the opportunity because I think with the absence of fact, people will believe anything, and believe me they are believing a lot out there. So, the business community is joined at the hip with you. I've said it time and time again publicly, we are in this together. So, thank you very much.

I am not a consultant. I think what has happened to me over the past 8 or 9 years is I've become the gladiator, for those of you who have seen the movie. The communities who are anti-growth just pegged me yesterday in one of their newsletters as the cheerleader for runways and that Gerry Roper has never seen a runway he doesn't like—and that is true. It is true because the business community is concerned. The U.S. Chamber of Commerce—we have identified this as a national crisis, and we believe it is critical that within the system we work together with the administration, with the communities, etc., and get the system turned around. It is critical.

One of the things I keep saying to the mayor [of Chicago is] that when I retire, I'm going to be walking around like this gentleman that you have seen in *Forbes* magazine with the sign that says, "collaborate or die." I think this is the only thing that is really going to bring us together and to help solve the issues that are taking place.

I have a presentation, and I think most of you have picked it up. Some of you can follow along—there are some more at the end of this table if you would like it. But, let me just try to set the stage. Some of the things that are being talked about in the business community and the communities in Chicagoland and probably no doubt throughout the United States: the highest home heating bills in our history, record layoffs in industries across the board, the stock market tanking, record gasoline and transportation costs. What else do I have to say to remind all of us that protecting our economy must be the number one priority. One of the best ways, we feel, to protect our economy is to protect our airports—my Chicago airport system and my counterparts across the country—because, airports across the country serve as regional economic engines that drive local prosperity in good times. And, in bad times, which we are experiencing now, our Chicago airports, we feel, can act as a flu shot against our down-turning economies.

We have found that people are not running away from airports. In fact, because we couldn't get anybody to tell the real story in the suburban communities, we did our own newsletter and I'm proud to say that we do that. We're saying it is a myth that people are running away from airports. They are buying new homes nearer airports because airports mean jobs. In Illinois, for example, the recent preliminary census report shows there has been a record increase in populations of communities closest to the O'Hare Airport. In fact, in Bensonville, one of our communities that is leading the charge against expansion, they have grown by 19 percent. In fact, on average, all of these 13 communities that have joined together have a 6 to 8 percent growth near O'Hare Airport.

What does this tell us? It tells me that O'Hare Airport is helping the people and the economy (Figure 1). It is serving businesses and helping them throughout these tough economic times. So, why should we start thinking about trimming back airports, the

ANNUAL IMPACT: O'HARE AND MIDWAY			
ECONOMIC IMPACT DRIVER	**EMPLOYMENT (000)**	**INCOME ($B)**	**ECONOMIC OUTPUT ($B)**
Airport	144	3.8	13
Visitors	174	3.2	10
Access-Sensitive Businesses	106–196	2.6–4.8	8–15
Total Economic Impact	424–514	9.6–11.8	31–38

FIGURE 1 Aviation is a prime driver of economic development.

business community is saying, or putting the brakes on airport expansion. We need new runways at O'Hare. Nothing is more important to us at this stage of the game. I should say getting Boeing Aircraft to move to Chicago—that took place yesterday. For example, Chicago's airport system employs almost directly and indirectly a half million people, and they are the region's primary economic engine, generating $35 billion on an annual basis. So, we consider that airport expansion is important. We believe that our economy depends upon it. Of the 33, soon to be 34, Fortune 500 companies, when Boeing moves to Chicago, that believe it is critical because right now they are wasting billions of dollars not only on surface transportation but also in the air. They need to have this resolved because it is, in fact, a critical crisis to the business community.

We started—and I see her out in the audience, Mary Rose Loney, who was our commissioner of aviation for O'Hare Airport—and put it in the positive light. We came together and formed the Midwest Aviation Coalition, which is an initiative of the Chicagoland Chamber of Commerce and did a study to try to bring everybody back to center. We felt we needed to tell the community what these airports were all about because everybody viewed it as Mayor Daley's airport. We, the business community, view it as our airport and we confirmed that with the mayor, because the mayor doesn't fly in and out of it as much as the business community does. So, it isn't his airport. He manages it, does an excellent job, with individuals like former Commissioner Mary Rose Loney, but it is critical that the business community in every city, I think, in America focuses on the highway of the 21st century, and that is their airports.

Our findings found that right now, after we realize how much economic impact these airports are bringing in, we needed to do something about them. We needed to promote the positive aspects of the airport because we had enough people, including our news folks, beating up on the FAA, beating up on the local airport administrators. We needed to start talking about the positive and that is what resulted in our report. I think that the real issue in Chicago or any city is that we have one world-class hub—is our belief that Chicago and Illinois needs to decide, and we had the mayor and the governor together yesterday at a press conference, and it was kind of interesting when somebody said what do you think Boeing will say about O'Hare Airport. So, these two politicians were jockeying back and forth trying to say the politically correct thing, while we the business community are sitting off talking to

ourselves about the needs for airport expansion. Lester Crown of Material Services Industries, one of the great leaders in Chicago, said to me yesterday, Gerry, we have to stop talking to each other. The business community has to get out in front of this, or at least be at the table when these decisions are made and not let these communities choke off our city.

As we move ahead with our continued approach to help not only the FAA, but we at the local level have to come to grips with this because they are not going to necessarily walk into our cities and say, okay, we're going to start laying concrete tomorrow because there is always this issue that there needs to be regional consensus. Well, I think to a point, but I think what we have to start realizing is that the economy and the commerce is being affected by this, what David pointed out earlier—this lack of building new runways in this country. I think that what must take place is that the federal administration, from the President to Secretary Mineta and others need to sit down with these larger communities and start to move forward to not only build more capacity but at the same time focus on the local communities. I'll just briefly talk about that.

In Chicago, there is the O'Hare Noise Compatibility Commission that is focused on the needs of the community. This just isn't the business community saying lay concrete—we're going to run over everyone. We have, through the O'Hare Noise Compatibility Commission, to date spent $408 million for residential and school improvements. That is an average of about $32,000 per home. The other day on television I was glad to see that they actually put a microphone on the inside of a home and a microphone on the outside of the home. For the first time in our community, the plane took off, and you could hear it on the outside, but when you went inside, it was just a muffled sound. So, it is getting better. There is a focus on helping the community. If there is anybody who is more committed to it, it was Mary Rose Loney and Mayor Daley. They realize that if they don't and if we don't, we are going to be choked off at this point. It is going to get tougher and tougher to build continued capacity.

We are working with the businesses within some of these communities to explain to the mayors of these towns that we don't need you to get into a dispute with O'Hare Airport or Mayor Daley. We need you to understand as Sara Lee or as Kraft or as Boeing that that airport is important to us. So, when you attack that airport, you could be attacking the businesses in that community.

I'll end by saying to all of you who will be involved in this decision, businesses do move with their feet. They sometimes move at night, as we found in Chicago. So, it is critical that we come to a conclusion on this and start moving ahead. Will some people have to move—absolutely. But, it is better than really having the businesses move and having all of a sudden 2,000 or 3,000 jobs go with it. So, with that I'll look forward to any questions. Thank you.

Click here to see Gerald J. Roper's entire presentation.

Question-and-Answer Session

Jeffrey N. Shane: [the session audiotape did not record the first part of Shane's comments] . . . use one of the microphones that is set out for that purpose. I have a bunch of questions myself, but let me see first if there are any from the audience or any comments. Hands please.

Michael McNerney: I'm Dr. Mike McNerney from the University of Texas at Austin [and] chair of one of the TRB committees on airport/aircraft compatibility. I'm also chair of an American Association of Airport Executives committee on airport geographic information systems (GIS). One of the things I wanted to mention is that we just had our airport GIS conference and it is ongoing on the other side of the river right now. But, [with] the issue of coordination and talking and getting approvals, one of the things that came up from our conference yesterday was a lot of the airports—and in particular the big airports—are using GIS as a means to communicate the planning process and the engineering process. But, we are finding in the FAA, we're not really ready to use those tools for that communication with the FAA and approvals. We think that could be done a lot more and help speed the communication. You say a picture is worth a thousand words. If you have got the picture on a map, [and] the map is registered [and] geographically correct and [has] exact coordinates—that coordination process with the FAA would speed some of the approval processes up, even with some of the other agencies.

An example of that right now is that of obstruction clearances around airports—that's very useful for planning. The non-operating aircraft authorization charting people have that information in GIS, but the FAA is unable to accept it in a GIS format. They need it in the ASCII format. The airports don't have that same information available to them. They go out and they resurvey these obstacles every time. So, the whole process could be speeded up by having a consensus database and an accurate database, ensuring the information with these new tools that are available.

Shane: Any comments from the panel about whether we're moving in that direction? A consensus database sounds like a sensible suggestion.

Jane F. Garvey: Sounds like a very good suggestion, and why don't we take that and take a very careful look at it. It sounds like a great idea, and thanks for the comment.

Randall Malin: Randy Malin, former airline marketing and planning executive. I would like to offer both a comment and a question, if that is okay. The comment goes back to David's saying that airlines keep pointing out that the customer is demanding increased frequency. I think one of the real benefits of this series of symposia is that we ought to destroy some of the myths and the self-serving statements—and even some of the conventional wisdom that permeates this discussion—in the hopes of sharpening the focus of this discussion. As a former airline executive, I'm embarrassed by the statement that it comes from customers demanding all this increased frequency. It is a totally self-serving excuse, and we ought to prick a little hole in that balloon. If the airlines were as concerned about what the customer

wanted, walk-up fares would be half of what they are, pitch would be 6-inches greater, and several other things that we all can list would be there.

The interesting frequency on the part of airlines has nothing to do with the customer. It has something to do with believing in the S-curve, and the S-curve for those of you who don't know it just says that the greater the share of frequency you have, a disproportionate share of the markets you get. At slot-restricted airports, the increased frequency has to do with if I use two slots instead of one, somebody cannot use that slot to offer competitive service. My friend, Jim Wilding, talked about the number of flights at Ronald Reagan National Airport (DCA) that are scheduled within a half-hour of each other to the same destination—that is the real world. But, let's stop saying "the customer made me do it" like somehow the customer is at fault here.

My question really goes to David, but I also want to direct it to Jeff because he sat in the hot seat. On your chart of policy objectives, with which it is hard to disagree, you said to use scarce resources efficiently. But you also said provide low-fare service to spur price competition and protect service to small communities. Those are good things. The only trouble with them is that they are incompatible with the first one. Somebody has got to make a decision. Somebody has to be appointed God or czar or Solomon to make the decision as to which small community gets served [and] which new entrant gets allowed in. Since 1969, we have had a set-aside for commuters on the slot program. But, we see lots of jet slots being used for commuters. So, my question to you David, but also to Jeff—because he sat there—[is] who is that person [and] who is that organization that we can establish to make these decisions that will not be pressured by Congress? Think just a few months ago to the feeding frenzy that followed the Air-21 decision to allow more DCA slots. Think of all the carriers that applied for the new DCA slots. Think of all the politicians that wrote letters and made phone calls. We really don't want to reestablish that again. That is what deregulation was all about—to get rid of domestic route cases. So, David and Jeff, who can make those decisions?

Shane: David, you go first.

David Z. Plavin: I think Randy's two comments really go together because, over a period of time, we really have accepted the notion that if that is what is flying around, that is what the customer wants. Even if you accept the notion that greater frequency is not a bad thing from the customer's point of view, I don't think they want it if they means they'd have to sit on the tarmac for an hour waiting for their take-off slot. But, in that context, it goes to the point that we do have a bunch of incompatible goals here, especially if you insist on doing them all by administrative fiat. My view—and this was primarily the subject of the last discussion in this forum—is that we systematically have not allowed economic solutions that measure the value of that scare resource to actually become the law of the land or the regulation of the land. All of our government laws and regulations are actually designed to prevent an economic solution to the dilemma that you've posed.

I don't believe for a moment that we cannot accommodate, with standard economic tools, a gesture to each of those public policy goals. It is not a problem conceptually in my mind to be able to say that we should start pricing the airport resource at something close to its economic value. Right now it is essentially a free good. It is way underpriced. It is subsidized. It is heavily controlled and regulated for the benefit of the airline

community. Right now, therefore, there is no incentive to try to make effective or efficient use of that resource.

The second part of that is if you decide you're going to price it, you will have to make some sort of an administrative "carve-out" for the other public policy goals—a certain amount of space in that economic spectrum for new entrant carriers to provide some level of competition [and] a certain amount of space in that spectrum for service from certain small communities, all of which ought to be priced at a level that reflects the value of those services. So, I have no doubt that you could do this economically and that the notion of administrative fiat, which says there will be six flights to this community and four flights to that community, hasn't proven to be useful. I think FAA did a great job in coming in to support the Port Authority in what it tried to do to get out of the madness that was LaGuardia a couple of months ago. I really mean that. I think that was something it had to do, and I think it is a great interim, short-term solution. But, in the longer term you really have to figure out a way to make sure that the scarce resource is priced at its economic value, and I don't think we are anywhere close to doing that. I think we have to get much closer. It can accommodate those other goals, and I'm not worried at all about being able to do that.

Shane: Randy Malin broke one of the cardinal rules of this proceeding which is you don't ask questions of the moderator. I won't give much of an answer to that other than to say that we have a long history of making exceptions to the rule—that we have a completely open and deregulated market. Obviously, when the Airline Deregulation Act was passed, it was recognized that on day one a whole host of smaller communities around the country would lose service. So, part of the Airline Deregulation Act was the essential air services program which calls upon the Department of Transportation now to decide whether or not a community is getting service, whether there is somebody out there who can provide the service, and if they can't provide the service economically on a self-supporting basis, then a subsidy is made available to make sure at least there is scheduled service to that community. For any community that had service on the day the airline deregulation was passed in 1978, there have been a variety of efforts to repeal the essential air services program. Congress has never allowed that to happen. So today, long after the program was supposed to expire, we still have it.

I think it is fair to say that if it were perceived in Congress that a pure economic approach to rationalizing the use of scarce capacity meant that communities around the country—because they just didn't have the traffic to support viable, scheduled service—would have the kind of administrative exception or statutory exception or what have you, to ensure that those communities had the service to which they feel they are entitled and to which we all believe they are entitled.

The Regional Airline Association—I think I saw Debbie McElroy back there—can be counted upon to be front and center in that debate, making sure that nobody is left out of whatever newly designed system that we come up with as a result of the discussions we are having. So, I don't know who decides. I mean that was your question. I think that is an issue of government organization and maybe administrative due process and a whole host of other things that may be beyond the scope of today's discussion. I have no doubt that we can set up a mechanism. The real issue is what is the policy that we're applying and what do we expect that mechanism to do?

Gerald Roper: Randy, I have the decision—let the chambers of commerce do it. I think in some of the foreign countries they do that.

But, let me play the other side of "the customers made me do it." Let me paint the Chicago picture to you. With 8 million people living within the O'Hare/Midway area [and] about 25 million tourists, which is a makeup of about 4 to 5 to 6 million conventioneers and several million corporate meetings, we want all the frequency we can get. We have got a lot of customers coming to our city that are demanding times, and they don't all decide to come in at the same time. They've got the richest doctors in the world come in for the Radiological Society of America that come in from all over the world. They want to come in when they want to come in. Do I sound greedy? Absolutely. The reason why we have more conventions and trade shows than Las Vegas or Orlando or San Francisco is because we have O'Hare Airport and we have Midway Airport. When I used to sell major conventions and trade shows, the reason why I was able to get them was because I had McCormick Place and I had O'Hare Airport. Those were the two questions that were always posed of me when a big convention was considering Chicago. So, the more the merrier and let me make the decision.

Chris Fotos: I'm Chris Fotos, editor of the newsletter *Airports*, here in town. David, I wanted to ask you about environmental streamlining, but first I wanted to get you to elaborate on something you just said. When you were talking about peak pricing, basically you were saying that, of course, some carve-outs would have to be made to satisfy other demands—for example, smaller community service. But, did I understand you to say that even through small community carve-outs, to use that term, on those routes those folks would also have to pay a peak price for the privilege of flying to a high-demand destination?

Plavin: This is a personal construct, so it doesn't have any policy status. But, it does strike me that within whatever universe you carve out for small communities, there is no reason not to have competition among those particular small communities for that resource. I think it basically says that there is no free lunch here. At the airport level, we have understood for a long time that the inability to charge something more resembling the value of the services we provide has really made it very difficult for airports to make the kind of investments that they need to make. So, yes, I think that within that universe that has been carved out for small communities, there ought to be some sort of price competition.

Fotos: When you were talking about environmental streamlining, you acknowledged that the whole issue of making decisions simultaneously—as opposed to sequentially—is an issue. But, I don't know if you said the real problem but another main problem is that people are afraid to make decisions. I wonder if you could elaborate on why that is? What is the cost of making a decision and how can you change the system to eliminate that cost?

Plavin: I think the answer to the first part of that is easier. The reason that people are afraid to make decisions is because they are all public servants and they are all accountable to a public elected official who has, himself, to account to a broad array of constituencies. That constituency includes those people who are the NIMBY contingent in his community, although now I gather it is not NIMBY— "Not In My Back Yard," anymore. It is now BANANA, which is "Build Absolutely Nothing at All, Not Anytime,

Anywhere." But, I think the elected official for whom this public official (in the environmental or in the historic preservation or in the grand review process) works is accountable to the full array of folks, and nobody wants to be in a position where his decision is challenged, whether it is by his superior or in the courts.

One of the things that we have seen time and time again is that everybody from whom you need an approval wants to be sure that there is no possible way in which a court challenge can be successful. So, the kinds of things that are very good aren't good enough. They have to be perfect in order to give you the basis for putting your name on it. To be fair about it, these are very competent people who have a statutory task to do. To the extent that the statute requires somebody to do something, these competent people will take that seriously and will spend the time trying to make sure it is the right decision. So, having been there, I'm perfectly willing to say that I think the process is more likely to be institutional than it is somebody not doing his job. On the contrary, they are doing their job. There are just too many jobs to be done, according to statute, and in many cases, not enough people in the bureaucracy to do it, which is one of the reasons we have proposed that there be some way of finding some people to do the reviews and so they can be completed more timely.

Roper: Let me underscore that. It is: "I will lose the election." It is that simple. The U.S. Chamber of Commerce has stated that 51 percent of the people in this room do not get out and vote. So, what has happened here is that we now have, in our community, pitted the business community against the local residents, which is so wrong. We will never—remember my little thing—collaborate if we get there. We have been accused of trying to overturn elections in the community. Well, to a certain extent maybe that is true because we are trying to get some pro-business people for a lot of other reasons as elected officials—for tax reasons and some other things. Airports are critical. But, it is: "I will lose that election."

What concerns me more, though, is this staff starts to sound like the elected official. I'm concerned about our secretary of transportation in Illinois who is becoming the secretary of transportation of Peotone, which is the only area that is being discussed for a future airport. So, there is a lot out there. But, if we have to unelect people to get this process moving, then I keep saying to them that you don't want to wake up the business community because when you do—when we get organized—we've got a lot more money and a lot more people.

Shane: One more ground rule if I may. We are here to talk about infrastructure expansion. David, in giving that superb opening talk, talked about some things that go beyond infrastructure expansion, demand management and the like. I should have mentioned when I began my own introduction that the transcript of the first of the symposia was handed out to everybody at the beginning when you walked in. If you're interested in the economic and administrative solutions to the capacity issue, this is a must-read. The presentations given at the first of these symposia were absolutely wonderful. So, I commend this publication to everyone. It is also online if you want to get it there. So, questions on airport expansion, the environmental issue I think is a terribly important one.

I'm concerned about the fact that while all the presentations were wonderful, they were all from airport proponents. This environmental issue is not just a nuisance issue.

There are a lot of folks out there who are generally concerned about airport noise, about the impact on the community of an expanded airport—let alone a new airport. The notion of streamlining environmental review—it is easy to talk about that. But, that environmental review process has been in place for 31 years. I worked for a lot of Secretaries of Transportation, ladies and gentlemen, and I don't remember any of them that said, "Could you slow down that environmental review process? It is moving too quickly." Nobody ever said that. Everybody wanted to speed it up. Making the review process more efficient has been an objective of the U.S. government for as long as there has been a review process. So, the question really becomes, how do you do it? How do you do it consistent with the genuine concerns that a lot of people do have about the impact of an expanded airport?

I ended up in those early days that I talked about earlier, actually going up to Boston and arguing a case before a very good 1st Circuit Court of Appeals because the Massachusetts Port Authority—Jane, who used to be the Director of Logan International Airport—the Massachusetts Port Authority was trying to build a taxiway called the Outer Taxiway. It was opposed by the people in the city of Boston, particularly at Jeffrey's Point, which was going to experience some increased noise. My argument to the Court of Appeals, believe it or not, was they hadn't received any federal approval. They hadn't gotten federal funds to do the taxiway. It was nothing but a state project. Therefore, the state environmental procedures didn't apply. The court, to my astonishment, actually agreed with that argument. You could almost hear the shuffling of papers throughout the country as all the controversial projects suddenly became state projects and all the non-controversial projects became the federal projects. Well, I'm happy to report to you that that same court three months later realized the error of its ways and overruled that decision—not that case. But, the rule became if you want federal money, if you apply for federal money, you are in the federal procedure and you have to do an environmental impact statement (EIS).

There has been an awful lot of law and administrative experience under the EIS process, and that is why I'm really interested in hearing from folks that have been involved in it, where the opportunities are. And indeed, are there dangers in trying to streamline the process that might be blasphemy to even ask the question? But, I think it is a question that we really have to ask if we're going to make progress in the course of the day. So, forgive me for taking so much time. Question or comment?

Paula Hochstetler: I'm Paula Hochstetler, executive director of the Airport Consultants Council. Jeff, your comments there just prompted me to come up briefly and mention those that belonged to this association [and] Max Wolfe beside me from Landrum & Brown and others are the ones in the trenches preparing the environmental assessments (EAs) and the impact statements (ISs). Rick Alberts—you may have known from the 70s—helped prepare the first EA/IS documents with some others to distribute to the airport and consultant communities as to how to prepare these first documents. They, behind the scenes, have fortunately been willing to contribute time to prepare suggestions as to how this process can be speeded up. Many of you here in the room are on the policy side. I think the resources they provide is very valuable because they are preparing these documents, and they are hired by the airports to prepare them—working with the airports responsible for the public involvement programs.

There are about 11 proposals that were forwarded to Woodie back in January that are very specific. Actually, Lynne Pickard was the specific individual who received them. But,

they are not necessarily going to be directly included in the policy report being given to Congress, I think, later this month. There's the more specific kinds of suggestions—that the devil is in the details. So, I think they again provide another different level of input that can help to complement a lot of the broader crucial policy issues that are discussed here.

In addition, some of the consultants got on the phone last week and talked with Airports Council International (ACI) and American Association of Airport Executive's (AAAE's) Todd Hauptli and provided him with some behind-the-scenes feedback on this Expedited Aviation Systems Enhancement initiative. So, if there are other efforts ongoing where this kind of specific in-the-trenches perspective of the details—the devil being in those details—this kind of input can be helpful. Please feel free to contact me, and I can put you in touch with the people with specific experience in a particular environmental impact category or with the broader process in terms of filings and review.

Shane: Say again how people can get in touch with you.

Hochstetler: Paula Hochstetler is my name and I'm executive director of the Airport Consultants Council here in Alexandria, Virginia, here in the D.C. area. We have a full-time staff. It is an association that works alongside David and Chip Barclay over at AAAE and ACI. We also work with American Transit Association and all the other associations. There's a whole crew that collaborates on other issues. We likewise are accustomed to dealing with FAA headquarters, as well as the regions. I would be happy to give my card to anyone later today if you do have a specific interest in contacting us.

Shane: I think you have that in common with everybody in the audience.

David Ballard: My name is David Ballard, and I'm an economist at GRA, Inc. I would like to try to connect what is going on today with the last seminar, and, in particular, Dr. Sinha's very interesting presentation of examples of how delays propagate in a very systemic and complex way—so, that delays that are experienced at one airport may have very little to do with the circumstances at that airport, which suggest that in a lot of cases, building a runway would not be a local panacea. I wonder if there is any way of identifying where, if you could build one runway in the country, for example, is there a place that would be ideally located? It may not be your first thought. Maybe there could be a remotely located runway that would provide the most service to the system as a whole and which kind of contrasts with the emphasis on the runway to the local phenomenon that has come up so far. I guess that is a question. Would you like to comment?

Shane: Let me just ask for clarification. Are you talking about the wayport concept or are you talking about where the most bang for the buck would occur if you were to expand the system by one additional runway?

Ballard: ...if you were looking to build one runway.

Shane: At an existing airport?

Ballard: What would have the biggest impact on delays mass wide...

Plavin: I don't think the answer is one runway. But, I don't think the answer is necessarily a lot more than one runway either. It goes back to what I was trying to say before about the fact that in terms of airport-related delays, 96 percent of all the delays in the country are attributable to 25 airports. So, if you start pruning away those places where you probably could not build a runway, you're probably talking about 10 or 12 runways that become fundamental. It is not just from the point of those airports per se, but as you made the point quite rightly, delays propagate themselves. Everybody who has the need to access those runways has the same kind of interest, which is one of the reasons why we focused on those 25 key points because all of the other airports in one way or another depend on adequate capacity at those key airports, which are now contributing to the delay profile. So, I do believe this is a manageable task if we can focus our attention on some very finite locations in the system—precisely for the reasons you said.

Garvey: Just to pick up on that, too, I think the work we are doing around the benchmarks—which I guess as many of you know and the Secretary mentioned will be out by the end of this month. We have a hearing on [April] 25th, I believe, and we will be talking about that on the House side. But the whole point again of that exercise is really to focus, as David said, our attention and our energies on those handful of airports where, if you make improvements there, you really have an effect on the entire system. It really was compelling to see that presentation at the last session that showed that what happens at LaGuardia has an effect on a large number of airports by the end of the day.

I think, though, it is also important to point out that it may be runways that are the answer, but it may also be a combination of other options, as well. This focus today is primarily airport capacity and people automatically think of runways. There is no doubt that runways add an enormous amount of capacity, sometimes as much as 40 or 50 percent. But, we should not lose sight of the fact that there may be other options, particularly in the shorter term—whether it is procedural changes that we're talking about from air traffic control (ATC) or whether there are some short-term technologies that can be put in place. So, there are a number of techniques or a number of options that I think we need to look at. But, David is right when he says it is focusing on those handful of airports that have an impact to the system that will really give us, I think, the greatest systemwide benefits.

Roper: I might add, and apologize for the commercial, but our report clearly points out that through some ATC and AVOS enhancements, O'Hare can continue to grow, but ultimately a new runway is going to be needed. What is interesting is our polling over the last 5 years, of which people in most cases have been very supportive: About 78 percent of the people out around the O'Hare area have been very supportive of that airport, but we have seen the tide going against us from the standpoint that since there has been really no activity, the people are starting to believe that the best thing to do is to build another airport. We don't know whether that is the case. But, with that absence of fact, people will believe anything. So, another airport is really what we have to do. It has become—I think it is a myth—but it has become what the people in the region believe now has to happen because we have not made a decision to do anything. They don't really understand AVOS and ATC, etc.

Shane: This will be the last question by the way before we start the next panel.

McNerney: This is a comment and a proposal that was proposed at the TRB conference this last January. The issue of large hub airports—one of the biggest causes of delays there is the disruption that is due to weather and other things that occur. That occurs throughout the whole system. A disruption at a major airport like Atlanta or Dallas/Fort Worth (DFW) can cause major delays throughout the rest of the system, as well.

One of the things that we proposed there was a concept of a reliever hub. When you have a situation—a disruptive event at DFW, for instance—you have a situation where you either have to cancel a bank or you delay a bank of airplanes coming in. And, the issue may not only be runway capacity but also gate capacities. One of the things that we said you could do—rather than holding all these airplanes on the ground at other locations waiting for this event to take place—is you divert a small percentage to another airfield such as we studied [in] Austin, as a reliever for Dallas, and transfer 20 or 30 airplanes with the passengers as much as you can and then the rest get transferred back up to DFW. We looked at that and did some analyses of these and said you could actually pay for those infrastructure improvements at this reliever hub, adding 20–30 gates, in a short period of time over a short number of years.

But, then there are a lot of policy issues involved in that. Who is going to build those extra gates? Who is going to use those gates? Could this also be shared as a reliever hub for Houston? Those are things that the airlines probably don't want to build, because if they build that extra gate capacity, that means it is another chance for other people to come and use it and that they are paying for it. It is a concept. It is using existing airports and maybe some expansion in capacity at some of those airports as well as reliever hubs. But, the big super hubs are getting so big that any delays whatsoever occurring there really backs up the systems, and it is a concept that we think we should study a little bit further.

Shane: Any comments about the possibility of reliever hubs as a contributor to a solution?

Garvey: Just a very short comment, and that is that, I think, if you look at the Air-21 bill and look at the way Congress structured some of the funding, I think it does give an added boost to some of the mid-size and smaller airports which I think is a great step forward and does, in a sense, begin to build up some of those airports so they can handle some additional capacity. And, I do think the airlines deserve a great deal of credit—the ones that are stepping up and really looking at their scheduling and making some changes. American made a number or changes last summer in Chicago where weather has always been a factor. Delta is certainly doing that in Atlanta. So, I do think we are beginning to see a reexamination of how the scheduling is done and also the idea of using some of those smaller and mid-sized airports. I think there is a lot to be said for that. You're right about some of the public policy and some of the competition issues. They are there. They are not always easy, but I think we are making steps in the direction to really build up those mid -size and smaller airports.

Roper: And I think that is also what American did with St. Louis—using that as the reliever. Our report clearly points out also that there comes a time where Chicago is going to need to take a look at another point-to-point airport. So, we are not walking away from that. We are just not saying it has to be O'Hare and Midway.

Plavin: Just one other point. There is capacity in the system now. It just isn't where people want to use it. I think that is one of the reasons why we need to figure out a way to do both—that is to say create capacity where we can, where people want to use it, but also provide incentives in some form or another for people to use some of that additional capacity that is out there in the system. I think we have a task before us to figure out how to do that. But, I do believe if you look over a long period of time, those secondary and third level relievers, in fact, have developed and have developed into major airports of their own. So, I'm optimistic that the capacity is out there where we can use it, and we really need to be focusing on both that and on the notion of adding capacity where we can.

Shane: I think we should close our first panel discussion with a warm round of applause for our panelists. Joe Breen, how quickly can we transition to the second panel?

PANEL 2

Current Approach to Airfield Capacity Development

Introduction

JEFFREY N. SHANE
Hogan & Hartson

As I indicated, our first panel was really a look at the state of the system and what our country's needs are in the way of airport capacity. Our second panel is really a hands-on examination of the process that we are living with today. How do we expand airport capacity when there's a shortfall?

I'm very pleased to introduce as the first speaker on this panel, Jeff Fegan, who has for the last 7 years been Chief Executive Office of the Dallas/Fort Worth (DFW) International Airport Board. He is the Chief Administrator and Executive Officer of the DFW Airport Board and recommends policies to the board for planning, constructing, maintaining, operating and regulating the airport, and I think he is going to bring a lot of hands-on information to us about the process.

PANEL 2

How to Build a Runway
Airport Case History Approach

JEFFREY P. FEGAN
Dallas/Fort Worth International Airport

Thank you very much. I have the pleasure today to talk a little bit about how to build a runway and provide a little bit of a case history of what happened at Dallas/Fort Worth Airport (DFW). The irony is that I have 10 minutes to talk about what took 10 years to accomplish, so it is a process that really does take a lot of energy and certainly has a tremendous impact on an airport. We've all heard about a wide variety of measures of demand management and ideas to introduce new technology, but really runways are really what define an airport's capacity and one that really will have the biggest impact in terms of new capacity in the national aviation system.

I mentioned it took 10 years from beginning to end to build our seventh runway at DFW Airport. It is a process that, again is a decade. It is a life-changing experience. It is very difficult. It is also very time consuming. It consumes a tremendous amount of energy by all the parties that are involved, both the FAA [and] the airlines, as well as the airport and the governing bodies and the staff.

Just to give you a little bit of background, though, we are very fortunate at DFW Airport (Figure 1). We have 18,000 acres of land. And, with that 18,000 acres, over the last 27 years we have grown to be the third biggest airport in the world in terms of

FIGURE 1

aircraft operations and we still have a long way to go. We now have over 27 domestic and international carriers. We have service to over 130 domestic markets, 32 international destinations, and 15 domestic and international cargo carriers. And, I think it is safe to say that DFW Airport has, and hopefully will continue to be, the economic engine that has driven the economy of north Texas over the last 27 years, and, as I said, hopefully over the next 27 years and beyond. It has an economic impact of over $12 billion a year [and] over 200,000 jobs either directly or indirectly related to DFW Airport. We're also hopeful—and we are certainly not conceding the Boeing decision—that DFW Airport offers a tremendous asset for companies like Boeing who are looking to relocate. Certainly, Chicago is a formidable competitor, but we believe we have a lot to offer in the Dallas/Fort Worth area.

One of the things we wanted to do and we have been doing over the 27-year history is to make sure that we provide the infrastructure for runways and for terminals and for ground access so that we can create an environment where airlines can succeed. We do have both American and Delta Air Lines providing hub operations at DFW Airport. Again, they make up a large percentage of the operations and obviously have a big impact on our capacity at DFW Airport.

Again, we are looking at the future. We did, last year, about 62 million passengers. We expect, at some point in time in the future, depending on the forecast, to reach 100 million passengers at DFW Airport. We did about 837,000 aircraft operations last year [and] are forecasting that DFW could handle about 1.2 million aircraft operations at our facility. This is really the time line for what it took from beginning to end (Figure 2). In 1986, we began a process at looking at the future of DFW and what the needs of the airport were. We actually identified that need [and] created a criteria of not having any more than 6 minutes of annual average delay at DFW Airport; again, this is a very aggressive criteria. Many airports wish they had 6 minutes of delay. The significance of it is that for every minute of delay at DFW Airport, it actually had an airline cost of about $25 million. That is every minute and every year. So, when you add new runways, you find

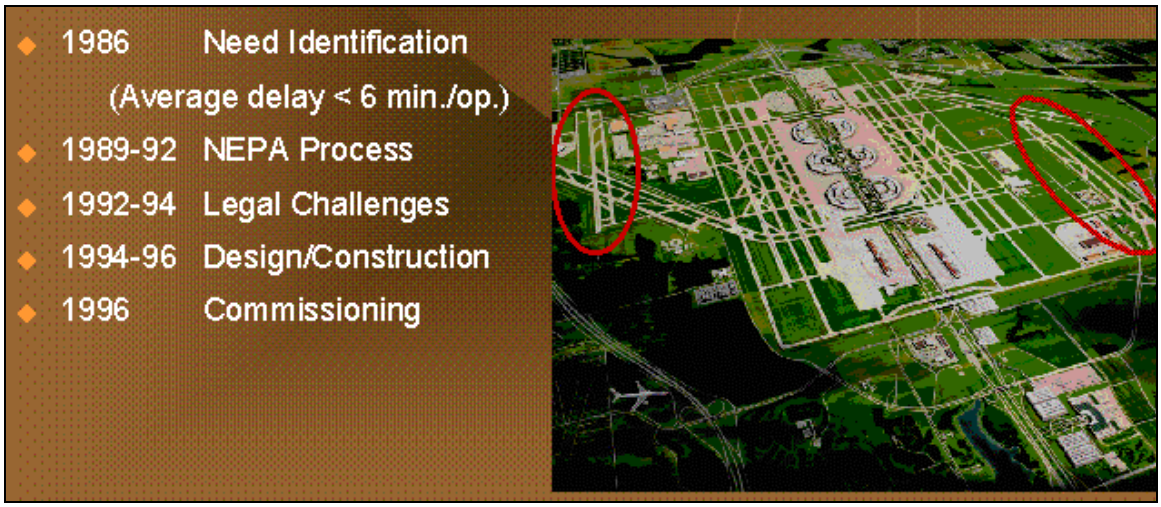

FIGURE 2 Runway timeline (10 years from identification of need to commissioning).

yourself actually reducing delays by minutes and actually having a very significant, positive impact on the operation and the operating cost of the airlines. Again, that criteria is very aggressive, but it also required us to build two new runways at DFW to meet that 1.2 million aircraft operation forecast. The environmental process actually took about maybe 42 months, I believe. And again, once you finish that process, then you are faced with another process—the legal challenges—and there are many that have taken place at DFW Airport. Again, we spent 2 years on legal challenges that actually required us to go to the state legislature to actually clarify who had the right of zoning on DFW Airport. Once you finish all that process, you get to design it, construct it, and then open it up. Of course, in 1996 we opened up our seventh runway at DFW Airport.

When you look at the cost of doing all of this, the National Environmental Policy Act of 1969 (NEPA) process of $2.8 million seems rather reasonable today (Figure 3). It was a lot of money back in 1989 when we got started on it. I think if you did the same process today, it would probably cost you two or three times that amount.

Construction was actually one of the more reasonable costs of the whole project—$121 million to build an 8,500 foot runway [that was] separated 5,000 feet from the existing north/south parallel runway (Figure 4). Noise mitigation—$146 million. We

	Cost (millions)	Percent of Cost
NEPA Process	$2.8	1
Construction	$121.0	45
Noise Mitigation	$146.0	54
Total	$269.8	

FIGURE 3 Runway 17L-35R costs.

FIGURE 4 Runway 17L-35R.

ended up buying an apartment complex and two single-family residential developments. We actually sound-proofed a number of multifamily structures, and bought 1,100 easements for single-family homes. The $146 million is actually twice the amount that the airport spent to acquire its initial 18,000 acres back in the late 60s and early 70s. So, it puts it in perspective how much has changed over a brief period of time. Again, this also did not include about $6 million worth of legal fees that we had to also spend to defend the environmental impact statement (EIS) and ward off other challenges in terms of zoning control over the airport.

The only other point is that mitigation costs will be really the big driver. Again, all this development took place on land that DFW already owned. This it the off-airport mitigation costs. But, I think it also shows that airports are willing to make the investment in environmental protection, if necessary, in order to add that very, very necessary capacity.

One of the things, of course, that led to our success is that we did have a very strong, comprehensive planning process [and] worked very closely with the FAA. They actually went through a Metroplex Air Traffic System Plan, which not only looked at the current capacity but basically challenged themselves to double the Dallas/Fort Worth region as a whole (Figure 5). This is an effort that went along side-by-side with a master planning process. Again, that established all the forecasts and justified and identified the need for the two new runways.

[With] the NEPA process, when we first went into it, we identified early on that we needed to start it as soon as we identified the need for the new runways (Figure 6). But again, our initial vision—we thought it would take about 18 months and cost us a $1 million dollars. Again, 42 months and $2.8 million later, we actually finished. One of the things we did learn, though, is that once you identify the need for runways, don't wait until you finish the master plan because there are a lot of issues in a master plan. That is the time to begin the EIS process, because it is very lengthy. Again, I think from a scope definition standpoint, that is a very, very important part of the process and one that, I think, we would do differently in the future on our next runway.

We required a very strong and dedicated team of professionals (Figure 7). The FAA was very much a part of that process. We actually had lawyers from the FAA, as well as the U.S. Department of Justice, that were assigned to this project—not too dissimilar from what we're proposing in the Expedited Aviation System Enhancement (EASE) initiative. And, it also takes a tremendous amount of staff time and dedication. In fact, at the time I was director of planning and engineering. I basically quit my job just to work on the runway project because there was nothing more important for DFW Airport's future, and it took the full-time commitment of someone in that position to be able to make this kind of thing happen. This is not a part-time effort. It is a full commitment of everyone's time. Again, once you create this team, that team has to stay together over a very long period of time and basically communicate very effectively and make sure that everyone is speaking with one voice.

[With] the agency review process, we had extended comment periods from a variety of different agencies (Figure 8). I believe the minimum review time is 60 days. I think it can be extended to 90 days. In most cases, ours went as much as a 260-day review process. Again, after that review process takes place, you have to respond to the review comments. We also had a lot of public comments in our process, and, in fact, there were

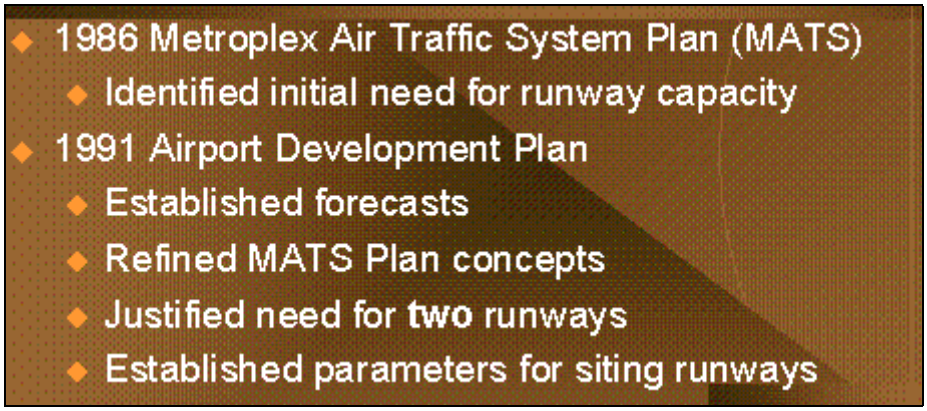

FIGURE 5 Comprehensive planning.

FIGURE 6 Runway NEPA process.

FIGURE 7 Dedicated team.

11,000 pages of public comments in this whole process. Again, I think part of what we are proposing in the EASE program is to identify the review requirements of the federal agencies and make sure that they adhere to a reasonable time line to make sure this process can continue.

There is also a lot of other interagency coordination required—in fact, there are 19 federal agencies and 15 state agencies that require coordination (Figure 9). Again, during this time period, there is often a lot of change that takes place in organizations, so we may talk to one group one day or one person one day. Two years later as we get closer and closer to the end, we have a whole new set of people who have different agendas.

Again, it was one of those things that required us to constantly seek out who is the decision maker and basically initiate a lot of face-to-face discussions to make sure that they understood the priority of the project.

Again, the public process is a growing process (Figure 10). It is one that required extensive public meetings, public information meetings, and public hearings. We actually held dozens and dozens of public information meetings. Again, one of the things that I think we were able to do was to garner quite a bit of support from the business community.

The business community in the Dallas/Fort Worth area truly understands the importance of aviation. They truly understand the importance of the jobs that are created not only by the airport but by all the corporations that have moved into our region because of the airport. We often found ourselves talking that DFW means jobs, and the business community was very strong. In that public process, they came out just as strong as the opposition. I think it actually had a very positive impact in terms of the final outcome.

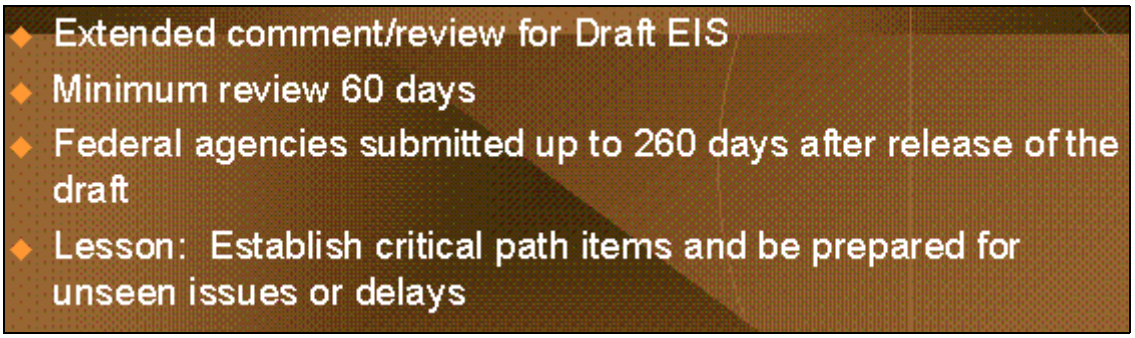

FIGURE 8 Agency reviews.

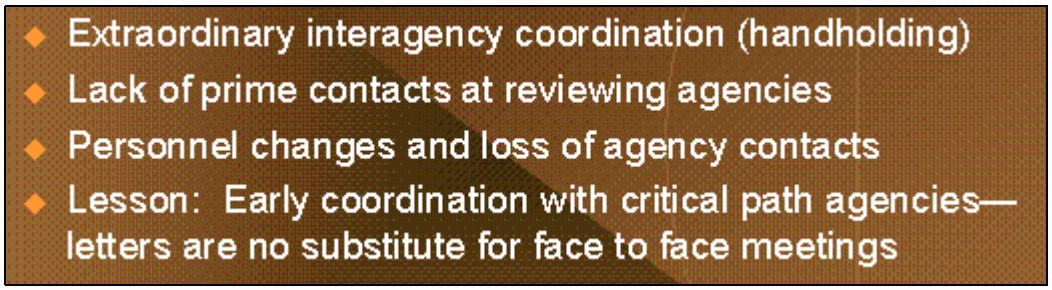

FIGURE 9 Interagency coordination communication

Another area that is really growing in terms of importance and difficulty for airports is in the air quality and the general conformity (Figure 11). For many years, airports typically focused on noise issues. Air quality is becoming more and more of a significant issue, especially for those airports who are in non-attainment regions. The difficulty often is that the states are required to provide a budget of emissions for airports. Unless they give airports an adequate budget so that they can operate today, as well as grow into the future, then they cannot meet the general conformity requirements. The other challenge is that most of the air pollutant or airport air quality issues are really aircraft issues and ground access in and around the airports. Some of those are very difficult to control by the airport's sponsor.

One of the things I would like to begin to advocate is the EASE legislative initiative that has been outlined—and we certainly have supported Airports Council International and AAAE—and this being considered by Congress is again effectively to find ways to basically increase air transportation services at airports through a process that makes sure that you have a time-definitive outcome. Again, the program that has been outlined is

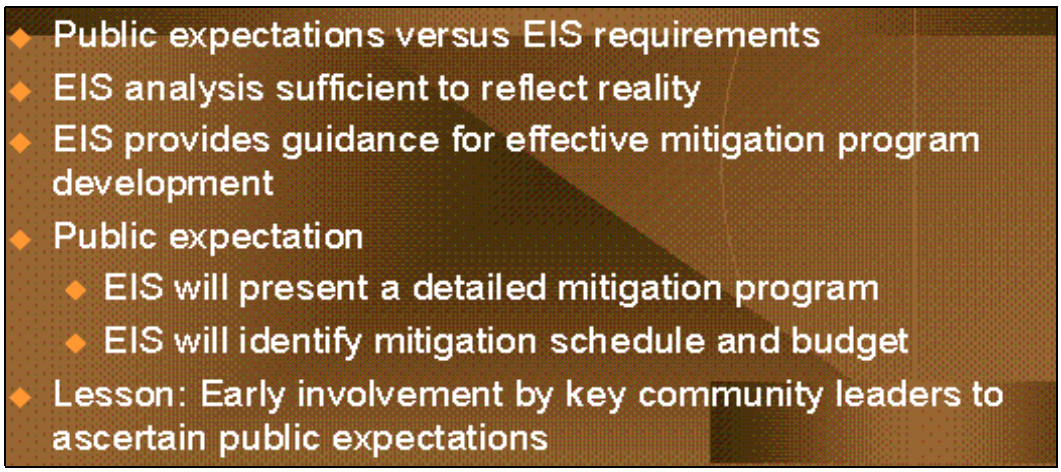

FIGURE 10 Public expectations.

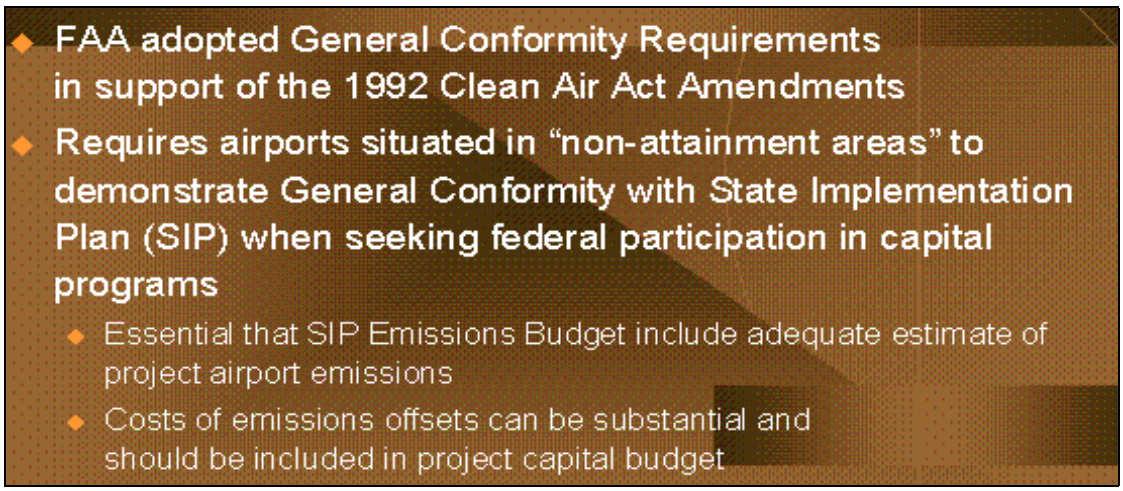

FIGURE 11 Air quality–general conformity.

really designed to facilitate and to provide enough resources to begin this process and then continue through this long process and then come back to a successful conclusion.

In summary, I would say that this is a process again that can be very difficult, very long and very time-consuming. It does require total commitment of the governing body. Can you imagine being an advocate for runway expansion for a 10-year period? You have to keep your governing body together for that period of time. Jane, that is two terms as Administrator. That is how long it takes to get one of these things done. It is a tremendous effort by the governing body to ward off and hold off all of the opposition for that period of time. It also takes a lot of commitment from the organization and from the staff, and, of course, the FAA played a key role in making our seventh runway a success.

You also have to have excellent attorneys and legal representation to ensure that you have legal involvement from the beginning (Figure 12). You have to anticipate your legal challenges. You have to bulletproof your EIS as much as you possibly can. You will have to anticipate delays and anticipate uncooperative agencies that often have a variety of different agendas that you need to address. Again, you will also have to anticipate extensive local opposition. But, with the help of this new legislation and committed professionals in the airport and aviation community, I do believe that runways can be built in this country, and it shouldn't take 10 years to finish. Thank you very much.

FIGURE 12 EASE legislative initiative goals.

Click here to see Jeffrey P. Fegan's entire presentation.

Jeffrey N. Shane: [the session audiotape did not record the first part of Shane's comments] .... being so specific about that project. I think it provides a great foundation for the discussion that will take place later on. Thank you particularly for that heart-felt endorsement of the importance of my profession. I appreciate that. I want to underscore what he said about the importance of good, legal advice.

Next up is John Almond, project director for Austin's International Airport in Texas. We seem to favor Texas these days in Washington, D.C. I don't know exactly why that is. John directed the planning, engineering and construction of Austin's new airport which opened successfully in May 1999. Previously, he was responsible for the design of the expansion of San Jose's airport, San Jose International, which took place between 1982 and 1990.

PANEL 2

Challenges to Airport Development

JOHN ALMOND
Austin International Airport

Thanks, Jeffrey. I'm happy to be here today to share with you some of the challenges that we faced in building the airport in Austin, as well as the challenges in general that we all face. The Austin Airport opened in 1999. It was, of course, on our terms a success in that once the project was approved pretty much by the community, it seemed to go pretty well for us.

I'm going to focus on three challenges primarily, and, of course, the first is environmental. Environmental management has come to be a primary function of airport management. Environmental feasibility is now as important to airport development as financial feasibility or engineering feasibility. Usually, the toughest problem to handle is noise. I know that to some of you I'm preaching to the choir, but some of you may not be members of the choir, and it is still one of the toughest problems we have. Even after opening the airport, it is still a significant challenge for us, even though the exposure to affected neighborhoods is considerably less. It can make an airport unpopular no matter how well the airport serves the needs of the community or how greatly it contributes to the economic well being of the community. Aircraft noise extends beyond the boundary of the airport and into areas in which we at the airport have no authority. Nevertheless, the airport is considered responsible for the noise.

The original defense for aircraft noise was to remove the airport far enough away from the population center that noise would not be a problem—or at least much of a problem. That is what we did in Austin. The old airport was impacted by 30,000 residents that lived in the noise footprint. For us to expand the airport and relocate some of the residents [and] sound proof others was economically not an option. However, moving to an abandoned Air Force base just 9 miles away was because there were only 1,700 residents that were impacted by the noise footprint of the new airport and that we could manage—although still, the cost to do that was very expensive. We will have to install sound-proofing in some nearby houses, and we had to relocate four schools before we opened the airport. The reason being is that when the Air Force was there, they had one runway. We added the second runway, and the second runway was the reason we had to relocate the four schools.

Our challenge now is to manage that noise. To do that, we are going to have to implement a noise/land use compatibility plan. We have been considering what we will include in that plan. We have to decide how far out from the noise footprint we can realistically enforce our plan. We would like to start with a buffer around the noise footprint in the event the noise footprint grows over time—and we think it probably will. Although planes are getting quieter, our operations may grow. Our enplanements will grow 15 percent a year in the 2 years after we opened the airport.

Although our current measure of noise is the 65 dnl contour, we are considering requiring a buffer of at least a half-mile beyond that. [We] may even do some other things to foster an understanding in the community that when you look at buying a house in the proximity of the airport, understand there is going to be noise.

The second challenge I would like to bring to you is the challenge of airport funding. Most medium and large airports in the United States are self-sustaining. They are an enterprise fund—meaning that they do not rely on the city's general fund or sales and property taxes. In building a new airport, we had debated that for 20 years—I didn't, but the city debated that in the community for 20 years. That was always one of the issues—the cost. It became quite an educational task on our part to tell the community that your property taxes and your sales taxes do not have an impact on the cost of the airport; they are not affected, and they are not going to be impacted. Instead, it is the airport users that pay the cost. The airport receives money from its parking operations, the leasing of land and space on the airport, and concessions like the rental cars and the food and beverage retail inside the terminal.

Let's see if I can show you this pie chart. To give you an idea of our airport operating revenue, this is what we use to operate and maintain the airport (Figure 1). It is quite simple—this is a simplified pie chart. But, you can see there are no sales or property taxes involved. Airline revenue constitutes a large, large share. Our parking revenue last year in Austin was $23 million. Our concessions, including rental cars and other rentals and fees on the airport, was $18 million. We use the revenues to do a lot of things besides just maintaining the airport. We also use it to pay off debt on our revenue bonds. Revenue bonds are a part of the funding. When we fund a new airport, there are several components that make up the funding, and this pie chart gives you an idea of what we used in Austin (Figure 2). Bonds, certainly revenue bonds that I was talking about, [make up] a healthy share. Available capital is money we had bankrolled over the years that we had saved to help fund a new airport. Passenger facility charges (PFCs)—we use $3 at Austin. We will probably consider $4.50 in the future. And then, we have construction by others. I also want to mention the FAA

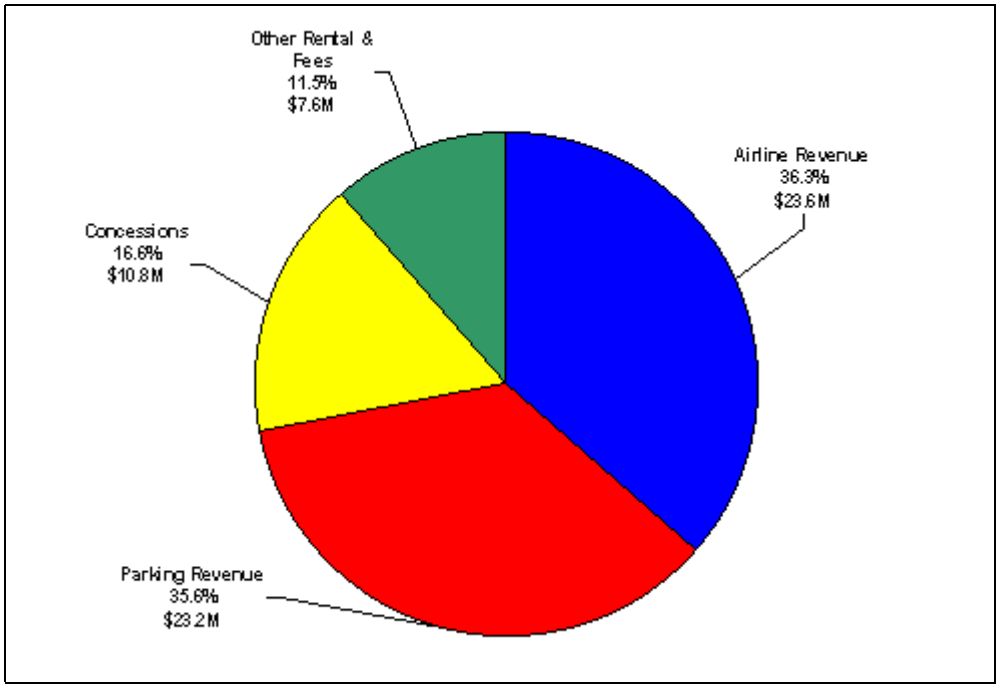

FIGURE 1 FY2000 Airport operating revenue.

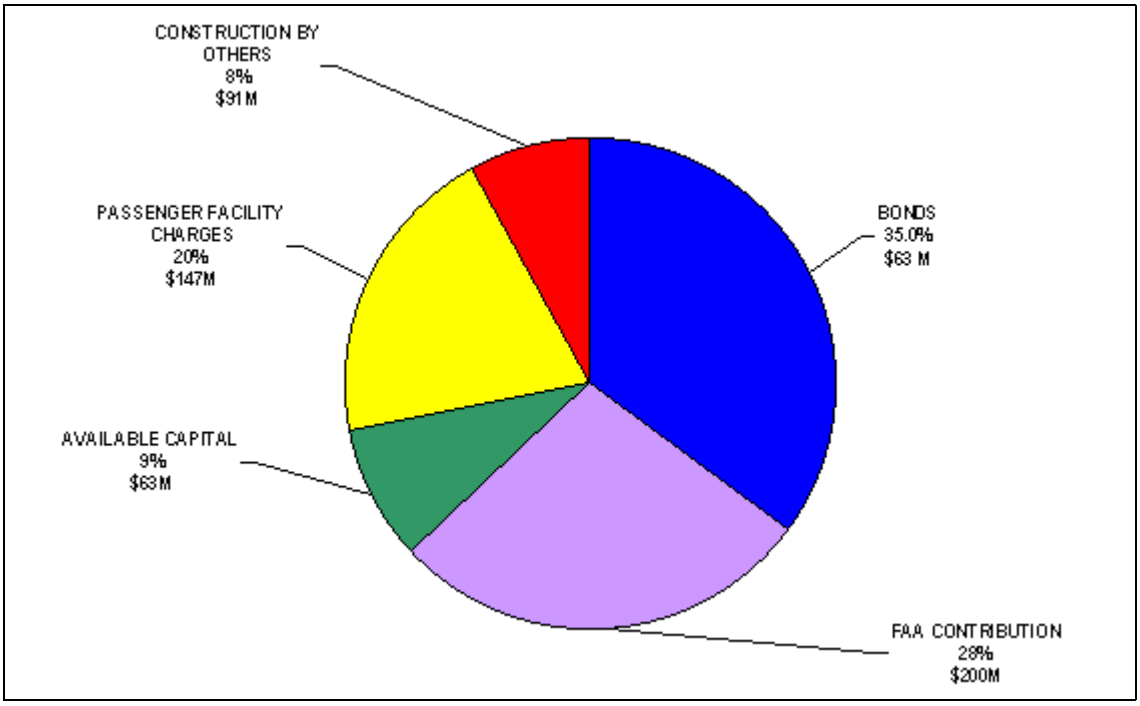

FIGURE 2 Austin-Bergstrom construction funding sources

contribution—a very healthy share, a very generous share—and thank you, Jane Garvey, for helping us with that.

As you can see, there is a diverse [array] of applications of funding for the airport, and we have used a considerable amount. This is a simplified form. There are other various types of bonds that we use in the process—all looking to help the airport achieve its financial goal. The primary source of funding in the future is going to certainly be the general aviation revenue bonds. We are going to need help. As you see the huge amount of money needed by airports across the country, we are going to need more help with PFCs and certainly from the FAA.

The last challenge I wanted to mention to you: Why does airport development take so long? Jeff Fegan has given you an idea as to some of the things he had to go through. I've been through two major airport expansions—first in San Jose and then in Austin. Both from initial planning all the way through engineering and construction and opening the airport, each has taken about the same amount of time—about 8 years. That was from the time that approval was given to actually begin. Once the plan has been approved, two major processes happen next and that is the architectural engineering design, which is one, followed by construction. The design phase usually requires several months of a public selection process for the architect and engineer—followed by 2 years of complicated design. Two years seems like an enormous amount of time. When you're looking at a terminal project, because there are so many tenants that have a say in the size and shape of the terminal, it usually takes that long, including the bidding time. Several months of bidding and obtaining a contractor then occur followed by construction. For a major passenger terminal project, construction may take 3 years or longer.

In the construction of the terminal, airline input is essential, and an airport expansion should not proceed without it. However, this is a fundamental problem because an airline typically cannot forecast what its market needs will be by the time the design and construction is complete. It has to offer its best guess, and that is certainly true today. If we began planning and discussing with the airlines what we thought the gate requirement would be in 1982, knowing the airport would open in 1990, some of them would tell you they are not even sure they will be in business by the time the airport opens. So, they have to offer their best guess.

So, as the years of a project go by, it is common to expect that an airline would want to make significant changes to accommodate new market needs placed on that airport. When that happens, additional time is usually needed, and along with time, additional money. This has typically been the case in the United States, in U.S. airport construction in the past 20 years. San Jose, Nashville, and we had a little bit of that in Austin, as well, are examples of that experience. But, the process I've just described to you is really the easy part. The hard part is getting a major project to that point.

When we built the Austin project, everybody told me the engineering and construction would be the easy part, and that is really true. Getting to that point requires the political and community buy-in. Years of community debate over the social, economic, and environmental issues of a major runway expansion, a major airport expansion where additional capacity is concerned can take a generation. We've seen that. There is no quick solution to the dilemma of adding capacity at strained airports. The airlines want it. The airports want it. The FAA wants it. The traveling public wants it. We have to get the community to want it just as bad.

In Austin, we finally got the community behind us after the 20 years of debate and took advantage of Bergstrom Air Force Base, a military base that closed in 1993, and saved approximately $300 million to $400 million by moving to that site [by] using the infrastructure in place, including a 12,000-foot military runway 20 inches thick. From Austin, we can fly a fully loaded 747 to Tokyo nonstop using that runway. Compare it to the new Greenfield site which the city was considering before that, out in the little town of Manor, east of Austin. No highways, just land—raw, Greenfield land. So, it was a considerable savings for us. The community bought into it. The airlines bought into it. And, we have been able to keep our cost per enplaned passenger down considerably over what it would have cost at Manor, so it has been a success for us.

Click here to see John Almond's presentation.

Jeffrey N. Shane: Thank you very much, John. Third on this morning's panel is Doug Goldberg, Vice President and leader of Landrum & Brown, a facilities and operations planning practice, who has been involved in the planning and approval process for airport facilities for 17 years. He has participated in the planning and approval process for the evaluation of more than 30 airports in the United States, Europe and Asia.

PANEL 2

Role of Airlines in Airfield Capacity Development

DOUGLAS F. GOLDBERG
Landrum & Brown, Inc.

Good morning. I am very pleased and very honored to be here with such a distinguished group of aviation professionals, including several of you I see out there who have really been mentors for me over my past 17 years in this business. I will acknowledge in this industry that 17 years really does make me a newcomer given the breadth of experience out there.

The topic of airfield capacity and airport capacity development is certainly one that has been very near and dear to my heart. As I speak about the role of airlines, I should probably admit that I do not work for an airline, nor have I ever worked for an airline. But, I've been involved in enough debates and discussions with airlines about airport capacity development that I'm beginning to learn a little bit about the perspective of airlines.

I would like to begin by sharing with you some of the few things I've learned over the last 17 years about the way airlines look at things. I will tell you there will be a real airline representative up here this afternoon, and hopefully we won't be too far apart.

First of all, airlines do serve passengers. Serving passengers requires facilities. And facilities require investment. It is pretty profound, I know (Figure 1).

But, let's talk about the way airport capacity is defined in this country and around the world. Airport capacity—unlike measuring the capacity of a glass of water or a jar of discrete elements—is a series of capacities of various elements throughout the system. On a very simplistic basis, if you look at the various components of the system—the airspace, the runway system, the taxiway system, the gates, the terminal, the curbside, and the access roads—the capacity requirements of any airport is going to be defined by each airport's weakest link, which will vary from airport to airport. We have heard already that we know there is no one solution that meets the requirements of every airport. But, from an airline perspective, understanding the things that drive the very particular capacity requirements will be very important. While airlines will have influence over the way all the various components of the system are going to be utilized, they have particular influence over the utilization of gates and runways (Figure 2).

Let's talk about the role of the airlines in particular. First of all, they do provide flight schedules—in terms of the gauge of the aircraft, the fleet, the frequency, the time of

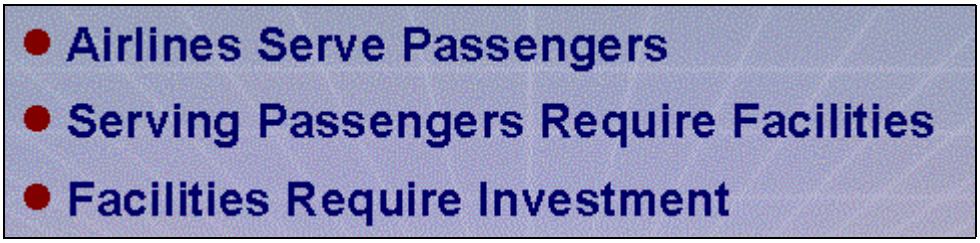

FIGURE 1 Some basic observations.

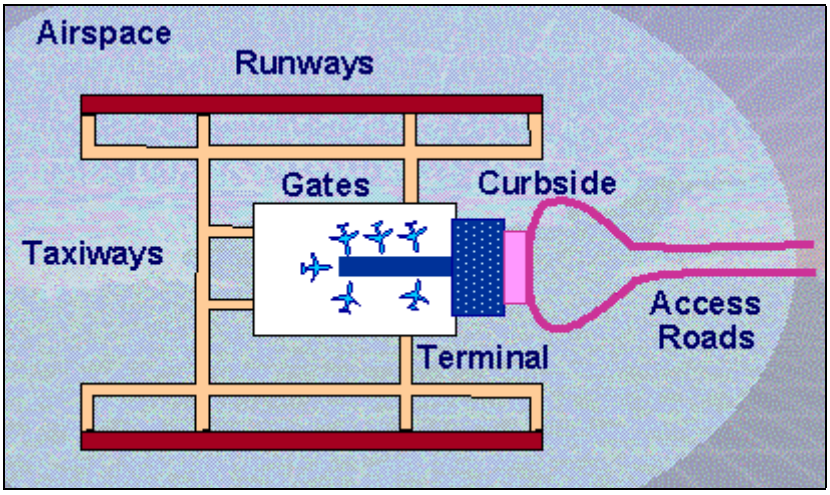

FIGURE 2 Airport capacity defined by weakest link: Airlines have influence on the utilization of runways and gates.

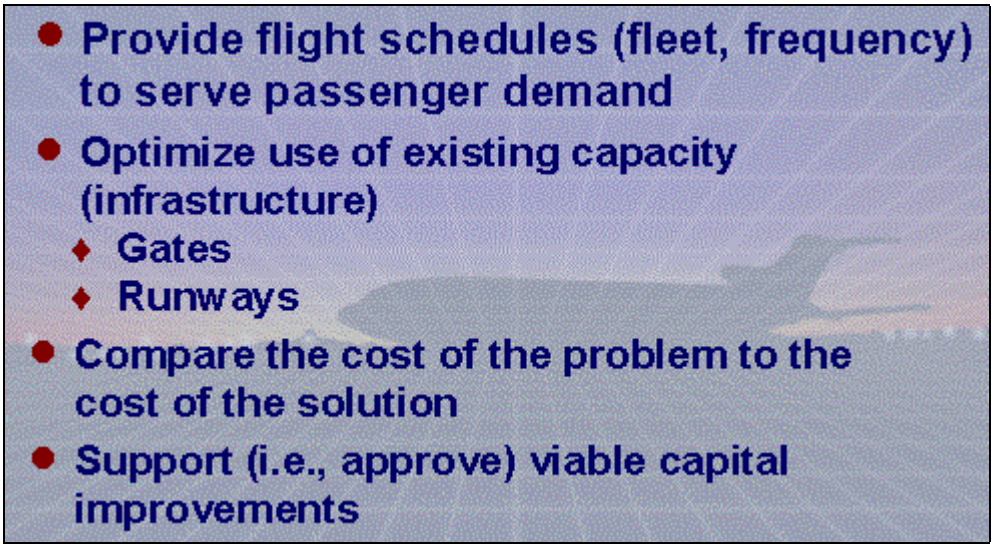

FIGURE 3 Role of the airlines.

flights throughout the day—to serve the particular aircraft demand within their business model (Figure 3). There will always be an incentive for an airline to try to optimize the use of existing capacity before it is time to invest in new capacity. We will talk about this a little bit more in a minute, whether that means gates or runways or other capacity components of the overall system.

Airlines will always tend to compare the cost of the problem—whether that is defined in terms of delays, cancellations, competition or a whole host of other metrics, to the cost of the solution. The cost of the solution means not only the capital costs but also the operating costs, financing costs, and a variety of other costs that influence how capacity is implemented. For the most part, airlines are willing to support those capital improvements that make sense. When I say "support," I mean approving an increase in

landing fees or other operating costs to cover the debt service and the other financing costs of airport facility improvements.

We heard from David Plavin that we need to look at new airport capacity initiatives, and from an airport perspective, he is absolutely right in many cases. The airline perspective is going to appear to be 180 degrees off from the airport perspective, because the airlines will first try to exhaust all options for noncapital intensive solutions—by finding ways to increase gate utilization, reduce block time, or reduce intra-arrival variability through schedule refinement (which by the way I would characterize to be very different than demand management) (Figure 4).

The airlines have become very sophisticated in understanding the characteristics of their passengers and their flights over time. They take this understanding in consideration when developing flight schedules, as they look at ways to help solve other system bottlenecks. I suspect you may hear this afternoon from John Boatright from Delta Air Lines that the airlines have been pretty successful in putting some of these systems in place.

Let's talk about some of the things that affect airfield capacity (Figure 5). There is a very long list of these factors—such as weather conditions or air traffic control rules or runway geometry. But, I would submit to you that of all these factors that do indeed influence capacity at airports, the characteristics of demand are most critical to defining the right amount and the right type of capacity requirements that are needed at individual airports. This requires looking at capacity not from the perspective of an annual number

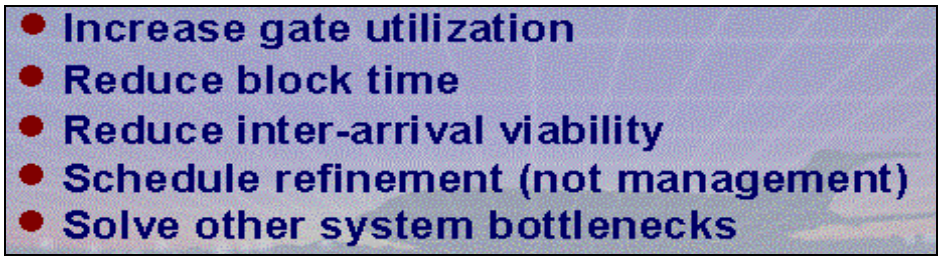

FIGURE 4 First exhaust options for non-capital solutions.

FIGURE 5 What affects airfield capacity?

of enplanements or operations, but looking at demand at a much more finite period of time. The supply side of capacity is provided on an hourly basis, or even a 15-minute basis—not on an annual basis. So, it is important to look at those sorts of characteristics.

Defining the right capacity solution requires knowing the profile of peak period demand and understanding the role of a particular airport. Some basic questions:

Is the airport a hub? We know a hub is characterized by a series of arrival peaks followed by a series of departure peaks. If the demand you are trying to serve is hub demand, where you are taking advantage of combining the connecting passengers with local origin and destination (O-D) passengers that serve certain markets, adding runways at other supplemental airports around a particular hub airport is not going to solve the problem of meeting hub demand.

Is the port an international gateway? Like a domestic hub, an international gateway also relies very heavily on the feeder traffic from the domestic markets. International gateways are also characterized by longer ground times—usually a proliferation of larger, wide-body aircraft, and it is usually limited to certain windows or times throughout the day that is conducive to an airplane arriving at the destination at an appropriate time. For example, in this country in the Midwest and on the East Coast, most European markets will depart in the late afternoon/early evening period in order to arrive in Europe at a time that is after the 7 a.m. night-time curfews.

Is it a spoke? Yes, it is true the demand at spoke markets are going to be influenced by the timing of flights arriving from the hub. But, they tend to have higher peaks in the morning and higher peaks in the afternoon. From an airline perspective, it is important to understand those sorts of characteristics. We are going to see some very specific examples of that in a minute. And, there are many airports around this country that serve combination or all three of these various functions.

Another basic question pertains to the maturity of a particular market. A very mature market is going to have different requirements than a market that is growing.

Finally, how does performance vary with weather? There are some airports in this country, like the new Denver airport, where the capability under poor weather conditions or instrument flight rules (IFR) conditions is very similar to the capability under visual flight rules (VFR) conditions. There is a basic balance between the bad weather and poor weather operating capability. At many airports, however, the IFR operation is almost performed as if it were a different airport than during VFR conditions. Understanding these issues will help identify where specific capacity requirements are needed.

Let’s take a look at some very specific examples. Here is a profile demand at a typical Midwest airport. It happens to be Cincinnati (Figure 6). You see the peaks of arrivals on top, followed by the peaks of departures on the bottom. It is characterized by relatively high peaks and relatively low valleys. There are about eight arrival banks and eight departure banks in a day. At Cincinnati, it is a growing hub. I would not characterize it as a mature hub. You see in the late afternoon period, some of the banks are much lower than others, which suggests there is opportunity for adding additional operations in some of those banks without a commensurate increase in peak-hour capacity. Remember, peak-hour capacity is supplied at an hourly basis not on a longer period of time. If you look at the peaks that go above the line from the top or the bottom, those are flights that today would be delayed. There is a new runway that is under development in Cincinnati and is specifically designed to help serve some of those peaks.

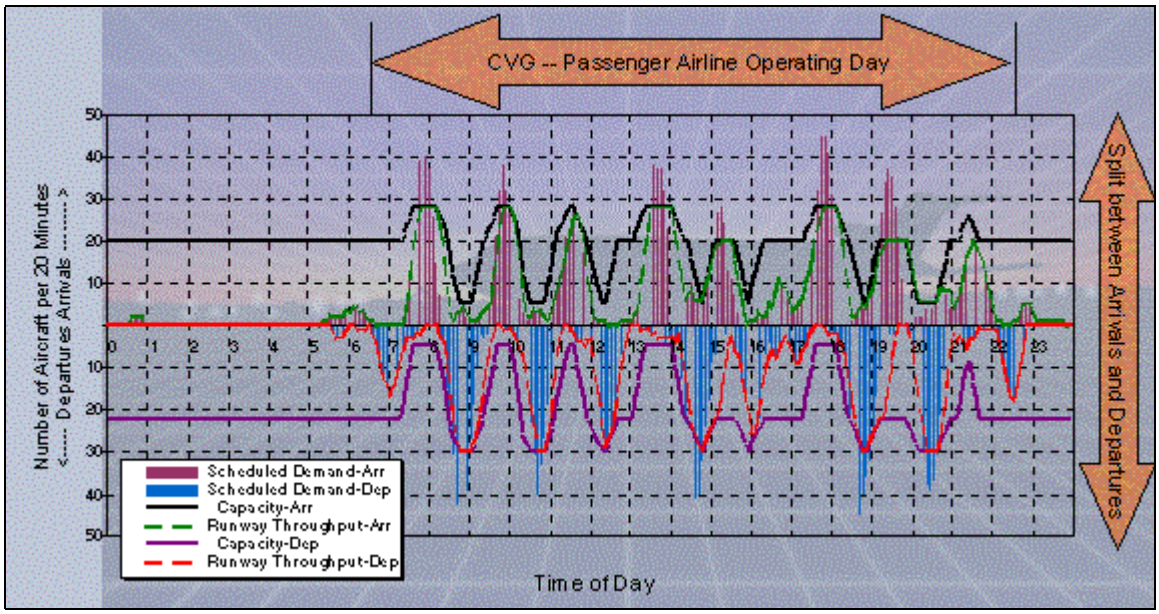

FIGURE 6 Capacity varies with the profile of demand.

Now, if we were to move about 300 miles to the west and look at a more mature market—this happens to be O'Hare—we see a couple different things (Figure 7). One, instead of having 8 banks a day, there are 10 to 11 and sometimes even 12 banks a day in a place like O'Hare. There happens to be banks by not just one airline but by two hubbing airlines. The valleys tend to be a lot lower. The difference between the valleys and the peaks are harder to discern. But, for the most part, except for some times in the late afternoon, the actual demand during those peaks is well balanced with the capability of the airport, at least during good weather conditions. We know that is not the case during poor weather conditions.

Let's take a look at this from a different perspective. We know that over the past 10 years in Chicago—and this is true at a lot of airports—the overall number of operations has increased. (Figure 8). However, the number of operations during the peak hour is virtually unchanged. The peak hour today is not much higher than the peak hour was 10 years ago. What does that tell us? That tells us that there is an opportunity for more annual demand than there is a need for an increase in peak-hour capacity. This sort of pattern of the day spreading out is something that occurs in most airports around the country as they mature. It means that the need to provide peak-hour capacity to serve demand is always less than the opportunity for growth on an annual basis.

I could show you the same sort of examples for a number of other airports, but the patterns are very similar. I'm going to, in the interest of time here, go straight to the summary of my remarks. There is a very focused effort, from an airline perspective, to try to utilize existing infrastructure and existing capacity to the extent that it is available. There is also a very strong tendency for the airlines to indeed support investments that are

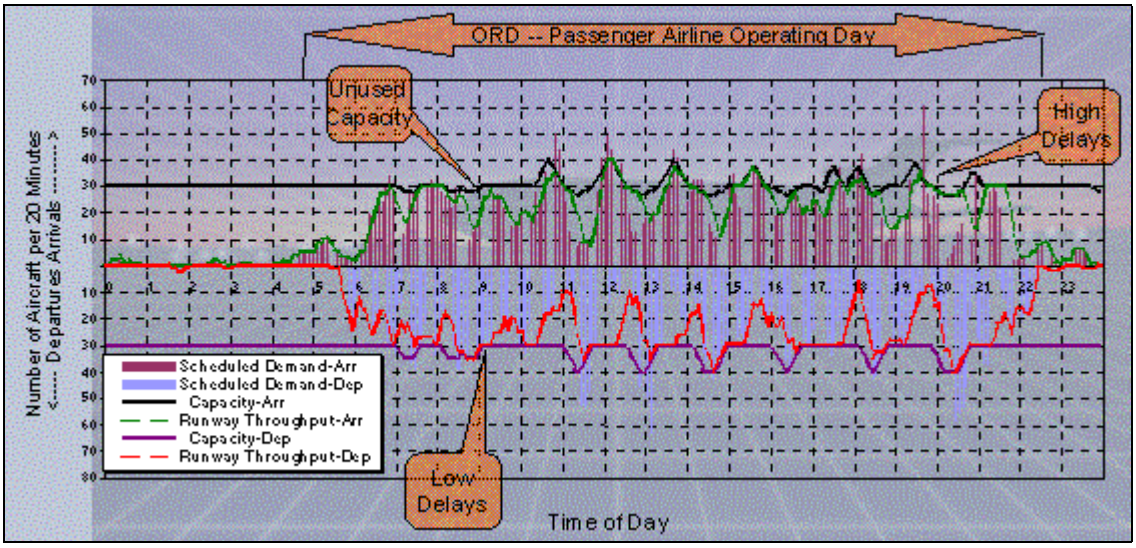

FIGURE 7 Demand profiles depend on market maturity (ORD).

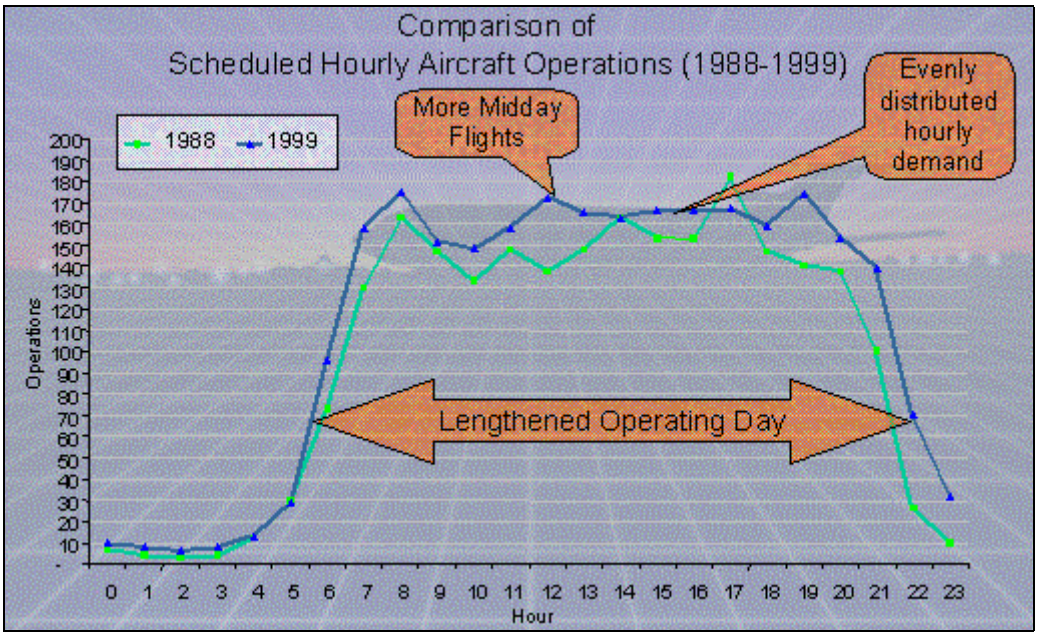

FIGURE 8 Peak-hour demand never grows at the same rate as annual demand (ORD).

designed specifically to meet these passenger demands. Conversely, airlines will not usually support investments where the cost of that investment—and this is the full life-cycle cost—is greater than the cost of the problem. I would suspect that we've gotten to a point in this industry where the airlines at a lot of airports around the country have indeed began to exhaust the range of noncapital options—and I think there is going to be a much greater tendency for the airlines to support some of the most viable capital improvements. Thank you.

Click here to see Douglas Goldberg's entire presentation.

Jeffrey N. Shane: Thanks very much Doug. It was a very interesting presentation. We're moving to questions and comments.

Question-and-Answer Session

Mary Rose Loney: My name is Mary Rose Loney and sitting here I realize that I've had the pleasure of working with all three gentlemen over the years at Dallas/Fort Worth International Airport (DFW) and at San Jose and at O'Hare. I want to commend you for the outstanding work you've done in enhancing our system.

I'd like to make three general comments. First of all, I think that, Jeff, you really did a great job of casting the extent of the mitigation efforts that DFW undertook in order to build the seventh runway. I think that those are certainly appropriate, and we need to stay focused on those. I think at the same time, though, there needs to be attention to local conditions that are imposed on projects that have an impact on the national air transportation system. Historically, we really haven't taken that kind of broader look, and yet historically there have been some conditions—and O'Hare is one of them—where the price to pay for airport development has had an impact on the system. The same year, Jeff, that you were identifying the need for the seventh runway at DFW, which was 1986, was the first year of a 10-year ban on new runway development at O'Hare, which had been imposed as a condition to building new terminals at O'Hare. And while I would hope that we wouldn't see that level of onerous restrictions attached to future airport projects, I think it is something that we really need to pay attention to as an industry.

Second of all, we've been talking about streamlining agency review and environmental processing, which I think are all very positive. All of us that have been involved in airfield capacity enhancement and expansion projects have experienced the protracted nature of those reviews. I also think there is an opportunity, though, for local governments to review their own practices—not only in terms of procurement and purchasing but also in terms of development, zoning, and licensing. Jeff had mentioned his 10-year schedule for runway development it took 2 years to design and construct 17 left at DFW. I would say that probably most airports are very envious of a 2-year design and construction schedule. They don't have the same kind of self-contained purchasing and construction departments that DFW has. I know that when I led Philadelphia's airport, we certainly did not design and construct a new commuter runway within that period of time.

Finally, my third point, and I think, Doug, you did a great job of identifying the distinct difference between peak-hour demand capacity needs as well as annual capacity needs. If anything, I think there needs to be a really sharply honed focus on those airports that do have a problem during peak-hour capacity because I think a lot can be gained in terms of delay reduction in focusing on those problems. Particularly using O'Hare again as an example—an airport that has seven runways—the same number as DFW—but because of its complex airfield geometry [it] just can't perform to the same degree that DFW can.

Jeffrey N. Shane: Thank you, Mary Rose. Mary Rose Loney, as was mentioned before, was Commissioner of the Department of Aviation for the City of Chicago for a number of years and Philadelphia before then. Thank you very much for the comment. Do we have others? I have a question for Jeff Fegan myself because he put a number upon the screen that really caught my attention—again as a former fed. That was the number

260—the number of days it took the federal government to complete its review of the entire environmental impact statement process. What can you tell us about that 260 days and were there obvious targets of opportunity there? I imagine you would probably say yes to the last question. Give us a little more color—put some flesh on the bones.

Jeffrey Fegan: I have blocked out most of my memory of that period of time—that was such a traumatic point in my life. But, I think what the chart was really trying to say is that while agencies are expected or required to have a 60- to 90-day review period, often we had some that wouldn't comment for as much as 260 days, which again drove the entire schedule. Again, there are a lot of federal agencies involved. I think we had 19 different agencies. Often, there would be periods of time where they would request more information. We would go back and provide more information, and they would review that information and ask more questions, and come back and forth, back and forth. The point was that to get all the federal agency reviews completed, it took about 260 days.

Shane: Why is that? From the very first day of the National Environmental Policy Act (NEPA), those federal agency reviews have been simultaneous. My perception when I was part of the process was that some agencies had an ownership attitude toward the project. Obviously, the Department of Transportation and the FAA would. Others were, in effect, more sympathetic to their own constituencies, which is a perfectly logical thing for them to be. So, the Department of Interior would think about natural resources in some projects, and the Environmental Protection Agency would obviously have concerns, and so forth. How is it possible—and you've been right there in the middle of it—what would you recommend to the federal government as a way of speeding that along? The proposed legislation I referred to from Senator Hutchison would require a fixed date by which the reviews must end. Would anything be lost if you had a fixed date? Would it produce exactly the same quality review? Tell us what your view is of that.

Fegan: I think what Senator Hutchison is proposing is exactly in line with the Expedited Aviation System Enhancement proposal that Airports Council International and AAAE have been supporting, and that is to define a certain period of time in which federal agencies have to respond back to the airport or to the FAA in terms of their review period. Again, the reasons for those delays are many, but I think it does require some measure or some mechanism to enforce the deadlines.

If you enforce the deadlines, I think people in the agencies will respond and not have the attitude that they can continue to ask more questions and get more time. Some of the agencies were very responsive. They turned it around very, very quickly. Other agencies—who may have had some interest in the outcome or possibly even some mitigation funds flowing their way, depending on what the issue was—often took longer and used that time to negotiate to get the best deal, so to speak, from the project so that they could accomplish their own agenda. Again, there is nothing necessarily wrong with that. But, when you have such a vital, important transportation facility at risk and on the line, it does carry with it some costs.

I think the airlines and the airport are willing to pay for the environmental cost, but the cost of time is probably more critical when you're experiencing a tremendous amount of growth and experiencing tremendous increases in delay year after year. So, again we

are not afraid to address the environmental issues head-on and actually pay for or find creative solutions. But, the dimension of time in this business is one that you can't avoid.

Shane: The last question I have, and then I'll stop monopolizing the questions is, you did a lot of noise abatement. You acquired apartment complexes and so forth. There were negotiations with some federal agencies over mitigation. How much change did you see in the project as a result of those negotiations of the litigation of requirements that came out of the EIS review?

Fegan: We actually had two sources of litigation on this project. One was challenging the adequacy of the EIS. They challenged it on a variety of different grounds—everything from the purpose and need to look at all the alternatives. That had its own life. There was another series of litigation that actually we initiated when one of the host communities surrounding the airport attempted to rezone the airport to a nonconforming use in an attempt to block the development of new runways on the airport. Again, that had another life to it and that went on for about 2 years. Actually, it required us to go to the state legislature and clarify DFW Airport's power of zoning within the confines of the 18,000 acres. At the end of the day, the mitigation program, I don't believe, changed at all. If it did, it was very slight. So, the value of the litigation, I think, is certainly not reflected in a larger mitigation program. In fact, there was a period of time when we were negotiating with one of the communities where the mitigation program was approximately $20 million more than what it ultimately ended up being. They refused to accept that offer, so we went back to the previous program that was $20 million less and again the EIS was ultimately approved and the community, I guess, missed out on a little bit of a mitigation bonus by opposing the ultimate offer. So, again the litigation resulted in no additional mitigation that I can recall.

Shane: Doug, I noted the clock at 12:30 p.m. and I want to be conscious of the schedule. Do we have a little bit more flexibility?

Douglas Goldberg: I just want to make a very quick observation about your question about the process. I suspect every region in the FAA in the nation today has multiple environmental assessments (EAs) or EISs that are underway right now. When we talked about bottlenecks in terms of the airspace system, a lot of these regions are dealing with multiple EAs and NEPA documents and while they have the technical staff to assist with the review, one bottleneck that we are starting to review and that we're starting to observe out there is getting in line for the legal review. That is the final review before the documents are ready to go. Some of the processes are beginning to stack up and part of it is, I suspect, a resource issue.

Shane: Thank you very much. I apologize that the comment period was shorter for the second panel than it was for the first. We will have an opportunity for more comments about the third panel, which will take place after lunch. I encourage everybody—maybe the weather is still lousy outside and maybe that will encourage you to stay here, have lunch here, come back at 1:30 p.m., and we'll have our third and final panel and then follow with further comments and questions.

PANEL 3

Suggestions to Expand Airfield Capacity

Introduction

JEFFREY N. SHANE
Hogan & Hartson

Thank you for coming back. I know you had a quick lunch, and I hope it was still a good one. We had two panels this morning. One described the state of the system—just comparing the existing capacity of the system with the nation's needs. Second, we had a panel in which we look at the current way in which airport projects are done—the approval process, give and take about where there might be some opportunities for improvement. This afternoon, we have a third panel whose purpose is to suggest new options, perhaps new approaches to the expansion of airport capacity. We'll have speakers who will give us the perspective of the airports, perspective of the airlines, and finally a perspective from residents—the community and regional perspective. Kicking us off this afternoon will be Jeff Hamiel who is Executive Director of the Minneapolis–St. Paul Metropolitan Airports Commission. Jeff, would you like to come to the podium?

PANEL 3

Airports' Perspective

JEFFREY W. HAMIEL
Minneapolis–St. Paul Airports Commission

Thank you very much for the invitation to be here today. It is a pleasure to join you, and it is an enjoyable opportunity for me to talk a little bit about this particular second part of the series on capacity and infrastructure.

My focus will be suggestions to expand airfield capacity and giving that to you from an airport's perspective on how best to tackle those issues. I have been asked to respond to three questions as part of a 10-minute fly-through [on] my issues today. The first question is why does it take so long to build airfield capacity? Let me first say to you in the simplest of terms, it is a very, very complicated public process, and, in fact, there are two elements that are critical when we take a look at the very issue of trying to move forward in the public process of decision making and developing airfield capacity.

One is the local review and local approval processes. I would argue, and many of you have heard hints of this already today, that in fact in my experience we spend more time working on local issues and taking ourselves through local processes than we do dealing with the federal process itself. So, you are going to find me to be less critical of the federal process and federal timing and more critical of the local timing and the length of time and energy and money spent dealing with all of the local processes and environmentalism, community relations, and so forth.

Second, what makes this process complicated is that once we finish with the local issues—and we have defined our problem or a project and we have to move forward in some sort of effort to get on with implementation—we finish the state process [and] then we go into a massive federal review process. That extensive review, in fact, takes its own share of time, as well.

What I would like to do when I talk about the processes is briefly tell you what we are doing in Minneapolis and St. Paul. And, I promise to take about 1 minute to do this. In 1989, the Minnesota State Legislature, which is the body that the Airports Commission reports to—we don't report to the mayors of St. Paul or Minneapolis or to the counties—but rather to the state legislature with the governor appointing our board members for the most part. We initiated in 1989, at the direction of the state legislature, a process known as the Airport Planning Act. The Airport Planning Act directed the airports commission to basically study the future aviation needs of our community from two perspectives. One perspective, or one track, was to take a look at building an entirely new airport in a Greenfield site somewhere within the seven-county metropolitan community. The second track, or the second course of action, was to take a look at examining the existing airport and asking ourselves the question that if we take a look at the forecast for the next 30 years—and in this case to the year 2020—can the existing airport facility be expanded to meet the growth projections and demand through the year 2020? This became known as the "dual-track airport planning process."

As part of that analysis, we first of all had to take a look at identifying the problem—looking at the needs [and] scoping of the project (Figure 1). We had initiated a study locally to go ahead and begin to evaluate and investigate the problem [and to] establish

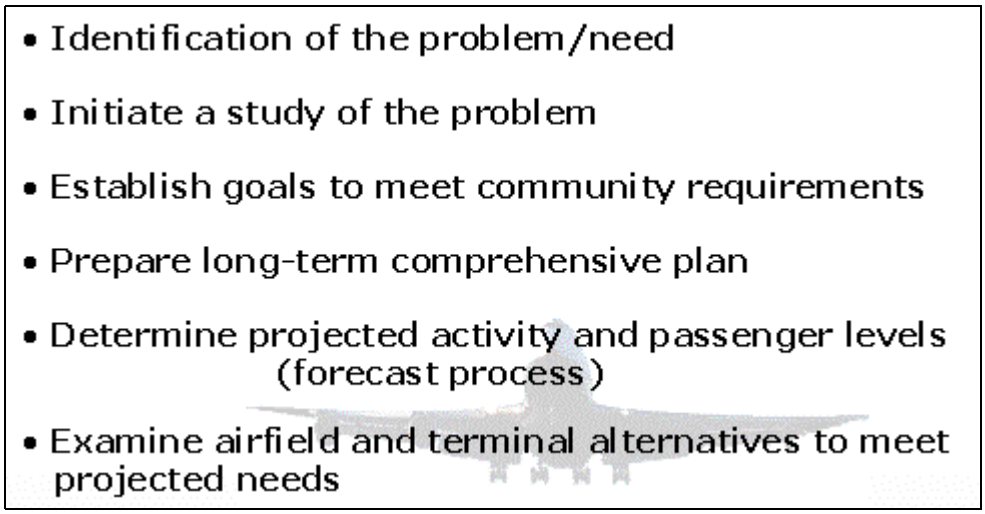

FIGURE 1 Dual-track airport planning process.

goals that would meet the community requirements. When I say "community" here, I don't mean the neighbors. What I mean is what is the need of the Minneapolis–St. Paul metropolitan community as a whole to meet the growth demands of our overall community. In other words, what are the aviation needs to serve the growth of the community to be competitive with the rest of the United States?

We had to prepare a long-term, comprehensive plan for our process, determine project activity and passenger levels—in other words an elaborate forecasting process. All of us in this room know very well when you talk about projecting and forecasting passenger growth and activity 30 years into the future, it is pretty much a crap shoot. We'll do our very best, but the fact of the matter is that none of us really know what will happen in the immediate, intermediate, or long-term basis.

What we can do, however, is look back over the last 20 or 30 or 40 years and predict the future and try to build into that analysis some understanding of what may happen in the future that would affect those growth rates. We need to examine airfield and terminal alternatives to meet the project needs.

We did this in our particular case. It is not required in every case, but we did prepare a FAA capacity enhancement plan (Figure 2). We evaluated all of the alternatives in the process. We identified all of the environmental issues associated with our project. We had to study the development costs—in other words, what is it going to cost to build this facility and is building a new airport versus spending on the existing one the most cost effective methodology to follow? Develop a full environmental impact statement (EIS)—and most of us in this room understand the complexity involved with that. Then, complete local and environmental review—in the state of Minnesota we have in an environmental quality board review that is necessary before we can proceed. The bottom line is that all of these processes have to take place in preparation to begin, so it is a very complicated system that we have to deal with at the local and the federal levels.

One of the most critical elements, of course, I think is public participation (Figure 3). Let me tell you that my experience tells me that the more engaged you are—involve the community in the project—the better it will sail through the entire process. We in the Minneapolis–St. Paul marketplace basically develop all sorts of task forces. We develop

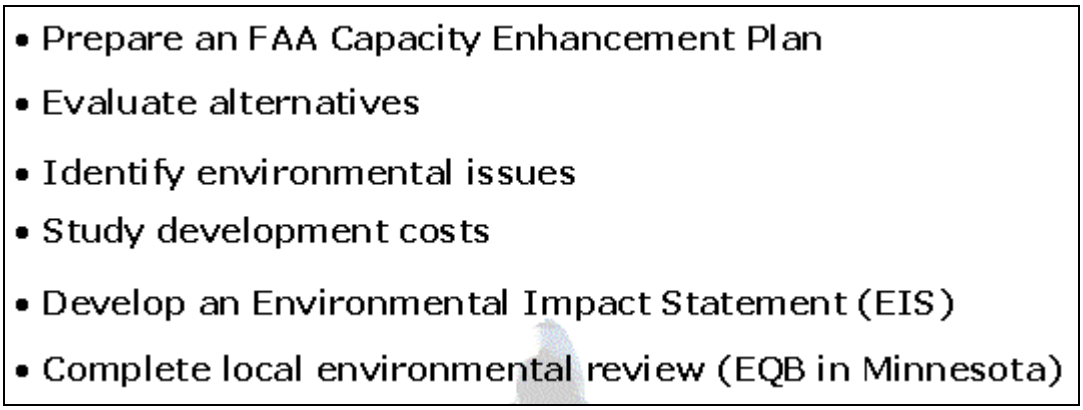

FIGURE 2 FAA capacity enhancement plan.

technical review committees to help us study these issues. We seek out and encourage citizen and community input and a review on all of these various stages and phases of our projects. We include local government agencies to include the Minnesota Pollution Control Agency, the Department of Natural Resources at the state level, and in our case the legislature, the governor's office, and the regional planning agencies, of which there are many in our seven-county metropolitan area. The bottom line is that part of this is overall public participation, you have got to engage these people early in the process. This process then led us—and quite frankly, I believe, would lead most communities—to a process of final project approval from which you can move on to a more formal and federal process.

Well, what can we in the aviation community do to improve this process? Obviously, I'm an advocate for working cooperatively together (Figure 4). Airports, airline companies, the FAA, the local level, the city council, your mayor, your chambers of commerce, and business interests and so forth must engage together cooperatively, working toward meeting the needs of the airport and the community as a whole. We need to determine airport improvement needs mutually—agreeing on a program. In other words, we all have to understand what the needs of the community are and then work together toward selling that program. All parties must participate in a review process, and it must be a public process of review—encouraging everyone who has an interest in the project to be vocal and to be heard.

Finally, we must clearly define the needs and develop community understanding of the project that we are engaging in. The bottom line [is] we have to show the community what the benefit is in proceeding with the project and show the community what the benefit is at the end of the project. Finally, we have to encourage and facilitate all public processes simultaneously.

That gets us to an overview of the airport, and I'm just going to take 30 seconds and show you what we're doing in the Twin Cities. So, let me just very quickly show you that we have a brand new runway under construction. It is a new 1735 runway 8,000 feet long on the airfield that will be completed by December 2003 (Figure 5). We have a brand

- Task force
- Technical review committee
- Citizen and community input and review
- Governmental agency involvement (MPCA, DNR, legislature, governor, regional planning agencies, etc.)
- Process leads to project final approval

FIGURE 3 Public participation.

- Work cooperatively together (airport, airline, FAA, city council, mayor, Chamber of Commerce, etc.)
- Determine airport improvement needs and mutually agree on a program
- All parties participate in the public review process
- Clearly define need and develop community understanding
- Identify community benefits
- Encourage and facilitate public process

FIGURE 4 What can the aviation community do?

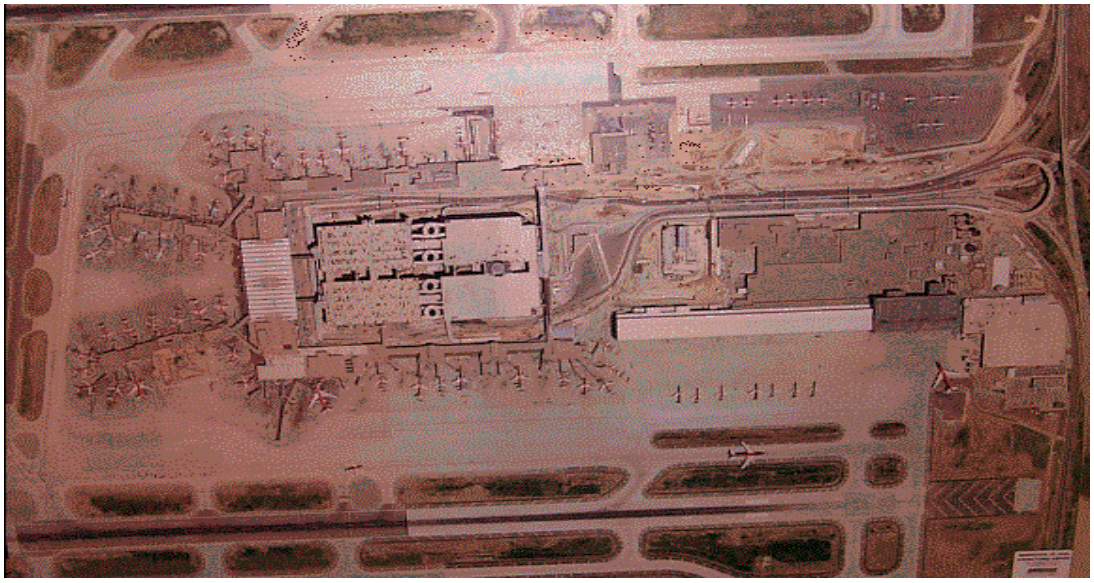

FIGURE 5

new 25-acre ramp area being developed to house the FedEx and United Parcel Service facilities on the airport for air cargo handling, and we have under construction, in addition to this ramp, a new Hubert H. Humphrey terminal building (Figure 6) to be completed and opened up on May 2 of this year that basically will provide 10 additional gates to the overall airport operation.

We then have in our main terminal complex significant projects underway. We just completed two new parking facilities that accommodate rental vehicle parking plus 7,000 additional vehicles [and a] $146 million transit and parking facility at the airport (Figure 7). It is where all the rental cars, the city buses and transportation systems will be. We have a small people-mover system that takes people from that location into our main

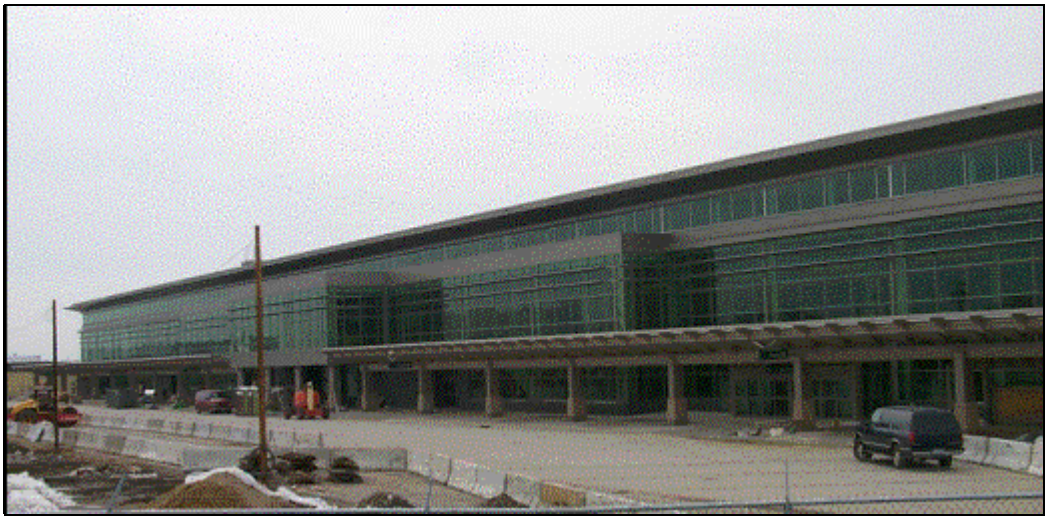

FIGURE 6 Hubert H. Humphrey terminal building.

FIGURE 7 Parking ramp and transit center.

terminal building which is located here. We also have a light-rail transit system coming in from downtown Minneapolis, underneath the airport, stopping at the back of this location and going out to the south and onto the Mall of America. We also have a completely rebuilt roadway system, and if you can see it from this point on down, arebeginning construction of 12 new large aircraft gates and 29 regional or jet gates on the airport. Also, we have a brand new postal facility on the airfield that will provide airline companies access from both sides of the facility—removing the existing postal facility that sits right here.

The bottom line folks is that a great deal is happening at the Minneapolis–St. Paul Airport, and it all started with the planning act of 1989. We didn't make decisions on whether we should even stay at this location until April of 1996. So, this has all happened since April of 1996—the approvals for the process, plus the beginning of the construction on all these facilities.

This is just a quick look at the Humphrey Terminal Building (Figure 8). Six of the 12 large aircraft gates are now completed and up and operational. The large building in the back is the new parking structure. The horizontal silver structure, in fact, is a connector between the north side and the south side of our main terminal building. We have completely redone the interior of our terminal facility (Figure 9). It now looks like an honest to goodness 21st century terminal building with a significant change in the behavior of travelers. Since this facility was redesigned and opened, we have tripled retail sales in our terminal building.

FIGURE 8 New Concourse C gates.

FIGURE 9

Now, all of this in a very quick presentation comes down to some things that I think we did right (Figures 10–12). This is the essence of the conversation I am having with you today. We did basically 11 things that, I think, have paid off. First of all, we integrated planning and environmental activities from the very beginning of the process. You heard me allude to that throughout this entire discussion.

Second, federal and state approvals were tiered as alternative environmental processes were reviewed. In other words, we basically took the process apart. Instead of being one huge, massive project, we tiered a variety of projects and made them simpler pieces that complemented one another, and basically we were able to take smaller pieces of the pie, work them through a process, and combine them in the end for overall approvals.

We involved the FAA from the very beginning, specifically the airports office and air traffic folks. From the very first day we started talking about this expansion program, which has now grown to be a $2.7 billion airport expansion program; we involved and engaged the FAA.

Number four [was] to provide consultant assistance to the FAA to expedite the EIS process. We figured that the FAA may very well have some difficulty with just

1. Integrate planning and environmental activities from the start of the process.
2. Federal and state approval of a tiered alternative environmental review process.
3. Involvement by FAA (airports, air traffic) from beginning of work.
4. Provided consultant assistance to FAA to expedite EIS completion.

FIGURE 10 Things we did right/lessons learned.

5. Developed joint federal-state EIS which was processed simultaneously.
6. Extensive coordination review process involving communities, agencies (federal and state), industry and public.
7. Support from, and cooperation with, users (i.e., NWA).
8. Thorough analysis of all options during planning process (i.e., new airport, remote runways, high speed rail, use of other airports).

FIGURE 11 Things we did right/lessons learned.

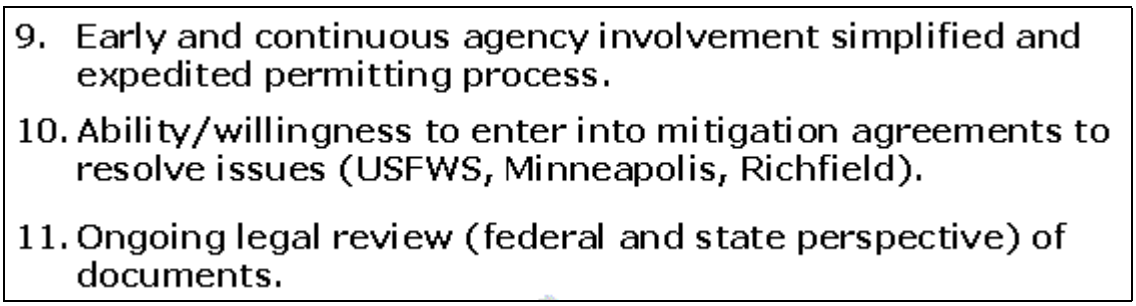

FIGURE 12 Things we did right/lessons learned.

manpower and people power needs in processing the paperwork. So, what we did basically was offer, from the beginning, to pay for a consultant service to help them go through the review process. They accepted and worked out the specifics to that arrangement, and, in fact, it paid off in spades.

Five, we developed joint federal and state EIS, which was processed simultaneously. In other words, instead of doing a state process and going through all the ramifications of that and then moving onto a federal process, we kicked off both the state and federal processes simultaneously. What that did, quite frankly, was that everybody involved in this project be engaged simultaneously and work on it together so that every question was answered along the way. At the end of the process then, all of the environmental questions had already been resolved and addressed.

Sixth [was] the extensive coordination review processes involving communities, agencies (both state and federal), industry and the public. You have heard me say through this entire presentation that you've got to engage the community—you've got to have their input. Sooner or later they will be involved, and we decided to engage them very early and not just invite them to meetings, but asking those folks to join the federal and state agencies in being members of task forces and members of policy review committees and being part of the discussion—part of the development, part of the solution.

Seven, we needed support from and cooperation with the various users. In our case, as John Boatright just pointed out, Northwest Airlines is pretty important in our community. They're 80 percent of our total operation. There is not a lot that is going to happen unless Northwest Airlines is not only engaged but participating and, quite frankly, supportive. By starting them early in the process, again, from day one with the FAA, Northwest Airlines knew what was going on, agreed with the process, and through this entire process, Northwest never balked at the money, the time or the expansion programs that were being advocated. Why? Because they were part of the process.

Eight [was] thorough analysis of all options during the planning process. We looked at new airport consideration, remote runways, the use of high-speed rail, the use of other airports in the community. Rochester, Minnesota, is just about an hour away by car. St. Cloud is about an hour away, and Duluth is about 2.5 hours away. We looked at all of these various pieces to make certain that in fact they were considered as part of the overall review.

Almost finished here. Nine was an early and continuous agency involvement simplified and expedited the permitting process.

Ten was ability and willingness to enter into mitigation agreements to resolve issues was important. The U.S. Fish and Wildlife Service had some serious problems with that

new runway that I pointed out in the airport going over a lot of the open space in the Minnesota River. We decided initially to work with them aggressively to figure out how we could resolve our conflicts before we got to the end of the process. The city of Minneapolis had serious concerns because they now have 96 percent of all flight operations over the most affluent part of the city. What is it that we could do with the city to make certain that they wouldn't resist this new runway. In fact, the solution was that the north/south runway would not be operated to or from the north over the city's densely populated areas. The city of Richfield asked us to take a look at some low-frequency noise mitigation considerations, and we agreed to do that as well. In other words, be willing to bend and work with communities to get the ultimate result, which was a new runway and a significant airport expansion.

And finally, be prepared for ongoing legal review. Jeff Fegan said this a few minutes ago and that is build your EIS that is bullet-proof . We did from the first day of the project basically say let's plan on this being challenged. Let's make certain of the proper legal support and ensure that this thing will be a successful legal document down the process.

I believe that quite frankly you can integrate these 11 things that we did right from the lessons learned on our $2.7 billion expansion program. If you integrate that into some sort of a process, quite frankly, you would streamline the process, make it more effective, and be much more successful.

The bottom line again is my first statement when I stepped up to the podium and that is this: We have found that the state process required more time, more energy, and more expense than the federal process. We spent 4 or 5 years looking at the local levels. We spent less than 3 years working with the federal authorities to get through the environmental approval process. So, I think I would encourage us to take a look at both the federal and the state as we look to improve the efficiencies. With that, I'm done. Thank you very much.

Click here to see Jeff Hamiel's entire presentation.

Jeffrey N. Shane: Thanks, Jeff. That was great. Now, we are going to hear from an airline representative so you get the airline's perspective. John Boatright is Vice President of Properties and Facilities for Delta Air Lines, at its world headquarters in Atlanta. John's responsibilities include landlord–tenant relationships, property leasing, architectural and engineering design, construction, and administration of facilities worldwide for Delta. So, he is the right guy for this assignment.

PANEL 3

Airlines' Perspective

JOHN BOATRIGHT
Delta Air Lines

It is my pleasure to be with you today, and after hearing Jeff's comments, I would have to say that going through the process, we are just beginning in Atlanta. Wehave gone through or are in the process of going through exactly just about everything you've said. Community involvement in following those processes is the only way to do it successfully. Congratulations to you, you're further along than we are.

Our issue today, and it is very clear to all of us is what can be done to expand airfield capacity? Before I go into a couple of ideas, I would like to just frame up some facts because I think things are worth stating or restating and they have certainly been alluded to today (Figure 1).

Airline travel today is affordable by virtually all citizens. Demand is certainly growing steadily. Passengers will grow 52 percent, you heard this morning, from 660–700 million today to around 1 billion by 2011, 2012, or somewhere in that time frame. Operations will grow 28 percent from 68–87 million in that same time frame. So, hopefully there is some efficiency that we gain by not growing operations at the same growth rate that we grow the customers. But still, that is exponential growth for all of us to digest.

At the top 20 airports, only five runways are planned, enplaning 59 percent of the passengers. If you take in all the top 100 airports, and David Plavin said a little while ago that you could easily build 50 miles of runways—well, I profess that in 100 airports, you could build about 100 miles of runways. So, we are on the same track.

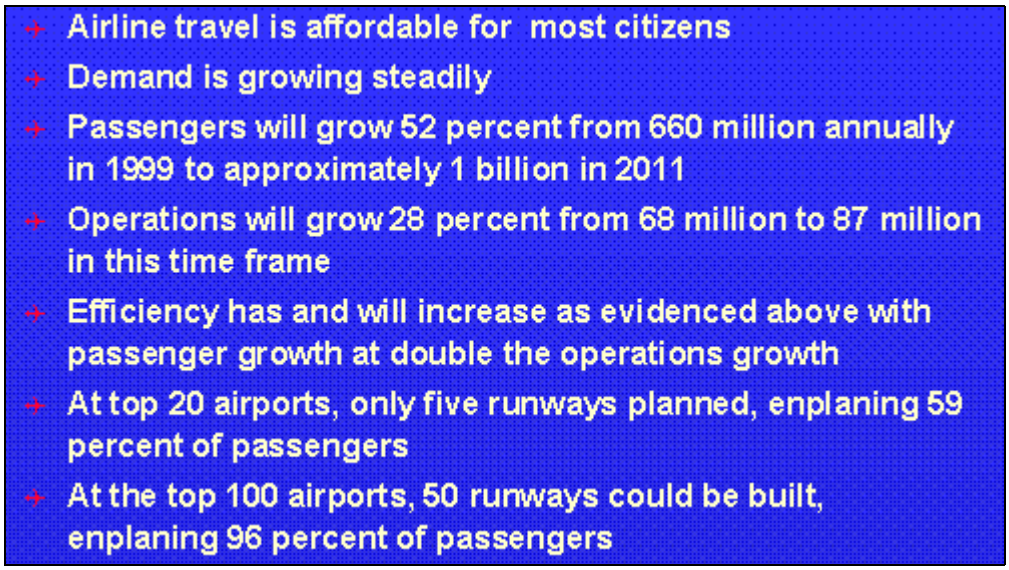

FIGURE 1 Facts.

The simple facts are there are really no new airports in the planning process that are about to become a reality. Only two new hub airports have come into place in the last 30 years. Jeff Fegan leads Dallas/Fort Worth, which began operations in 1974, and Denver in 1995, but that was a replacement airport for Stapleton. Then we had three non-hub airports in the last 3 years—Northwest Arkansas, Mid-America, and Austin—but Austin is a replacement airport as well. So, really what you have had is three new airports in the last 35 years that have come into being on a commercial airport basis.

Approximately, $25 billion in hub infrastructure projects are planned over the next 6–7 years (Figures 2 and 3). Certainly, there will be a lot of growth potential realized. Again, operational constraints, whether it is they are gates, runways, slots, airspace—it doesn't matter—can slow the growth of any given airport to match that potential demand. The two most noted projects coming on line this year that I'm aware of and my research

FIGURE 2 Facts continued.

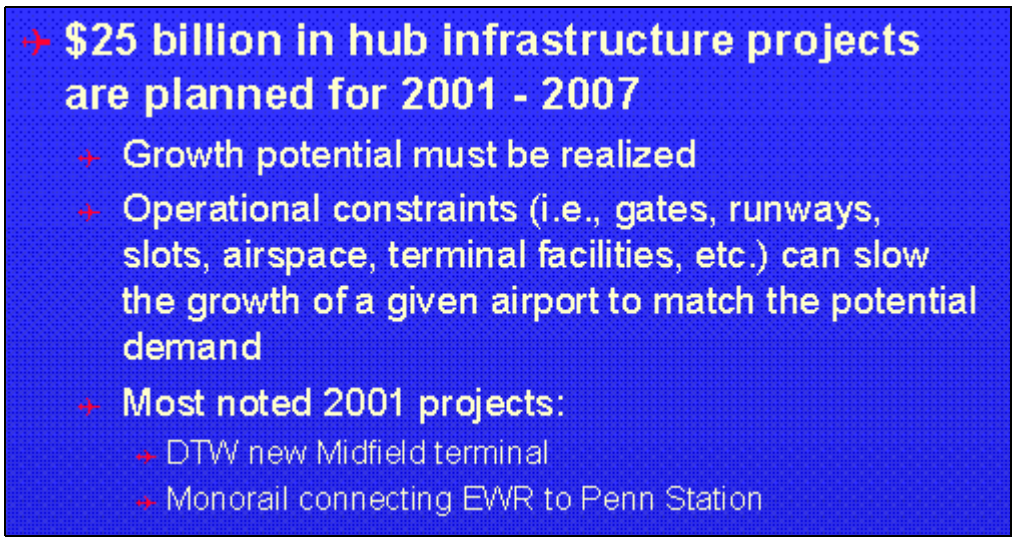

FIGURE 3 Facts continued.

took me to were Detroit's New Midfield terminal, which is a Northwest hub, and the monorail connecting Newark to Penn Station. Both of those, while very much needed projects, do not give you additional airfield capacity.

So, let's talk about the ways delays are impacting us for just a minute., and I think these charts really will just give you a flavor, and I'll run through these quickly. The total flights delayed in 2000—you can see on there that your average is somewhere in the 25,000–30,000 operations delayed in each of these key airports (Figure 4). While it goes to a low of 10,000, it also goes as high as 60,000 in some airports. The percentage of flights don't necessarily track exactly the same correlation, but that is still quite significant. If you look across the bars, it is probably on average at these same airports about 5 percent of flights are being delayed across all the airports (Figure 5).

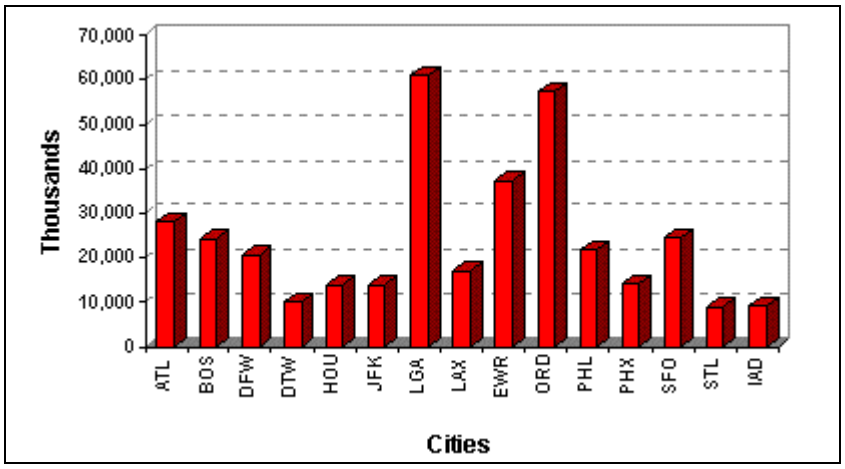

FIGURE 4 Total flights delayed in 2000.

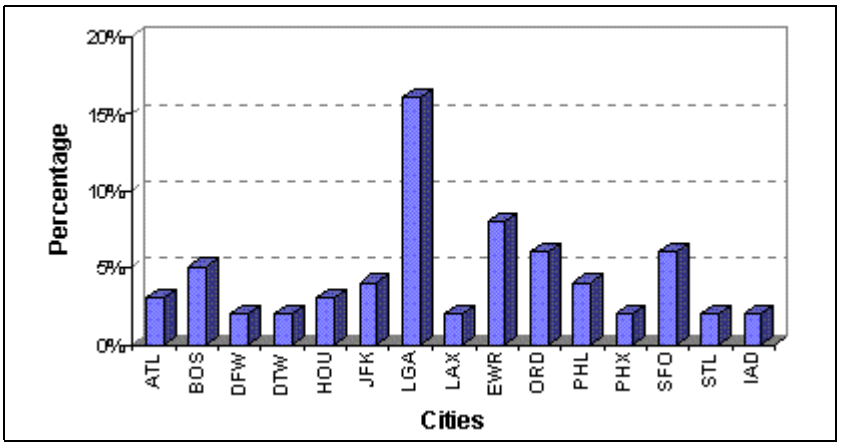

FIGURE 5 Percentage of flights delayed in 2000.

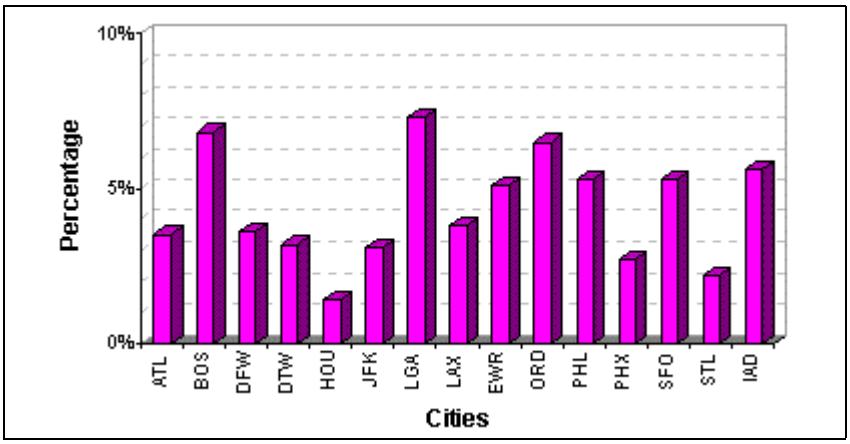

FIGURE 6 Percentage of major airline flights canceled in 2000.

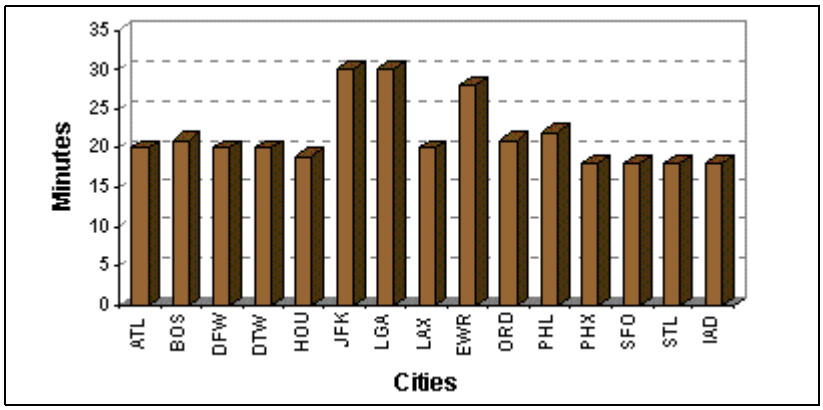

FIGURE 7 Average minutes for taxi-out in 2000.

The percentage of major airline flights cancelled in 2000 comes up to again about an average of 5 percent when you look across those same airports, and obviously it varies greatly from airport to airport. But, anywhere from 2 percent to 5 percent to 7 percent is just a phenomenal number of inconvenienced customers as they come to us for travel (Figure 6).

Your average minutes per taxi time in 2000, and it is pretty easy to see shows a very even distribution (Figure 7). As you look across, that is very close to a 20-minute average. That definitely makes the case for additional pavement, additional runways, and it just says that the airfield capacities have to be improved. When you consider time is money to business travelers, to leisure travelers, when you are starting to delay every flight an average of about 20 minutes, it is a huge cost to our economy.

The additional minutes—and again, correlating this back to the last chart you saw an average of 20 minutes—but this is just a change in the last 5 years (Figure 8). Again, you can see that on average, you're probably in the 4–5 minute range of increases just in the last 5 years. So, if you correlate that back, that is about 1 minute per year being added to delays.

I really liked this when I found it by Secretary of State General Colin Powell (Figure 9). He says, "Keep looking below surface appearances. Don't shrink from doing so (just)

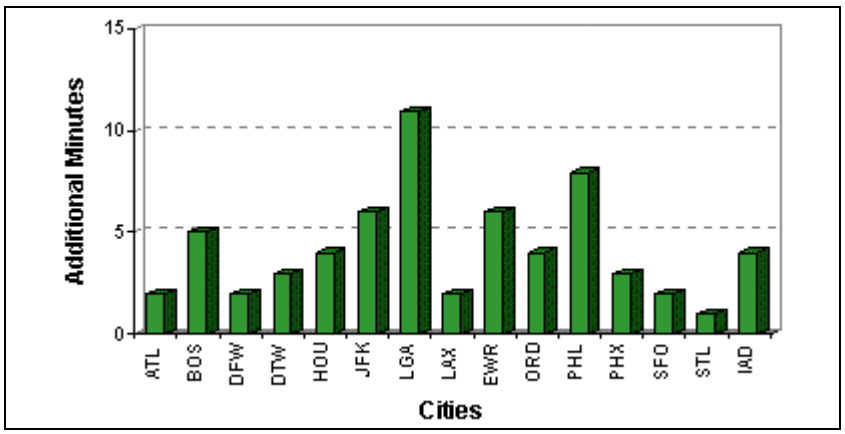

FIGURE 8 Additional minutes for average taxi-out, 2000 versus 1995.

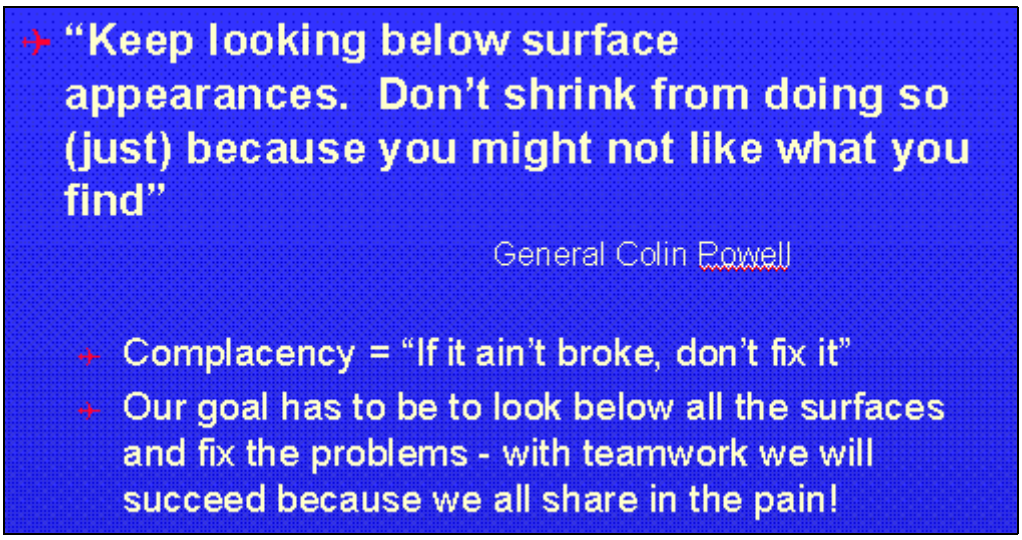

FIGURE 9 Delays.

that because you might not like what you find." He went on to say in this same presentation that complacency is equal to "If it ain't broke, - don't fix it." Well, obviously we are all here because we know that the system is near capacity and it is nearly broken. We know that gridlock is a possibility, and we realize that there are many things that we can do to fix the problems. And, with teamwork we will certainly share in the success of fixing those problems.

When you look at the passenger trends of what is taking place again at those key airports, you've got double-digit growth in these 10–12 airports (Figure 10). And some of them have more than doubled, but a number of them are anywhere from 25 to 50 percent in passenger growth in just an 8- to 9-year time period.

Airport improvement plan (AIP) funding levels show what I found here as a correlation (Figure 11). Again, I blame a lot of this area right in here on the airline industry, because if you go back and you look at the timing, we were in at peak spending along about the time of the Gulf War. And, as we reached that peak spending, because airlines were in a survival mode we all said stop spending. We can't afford it. You've got

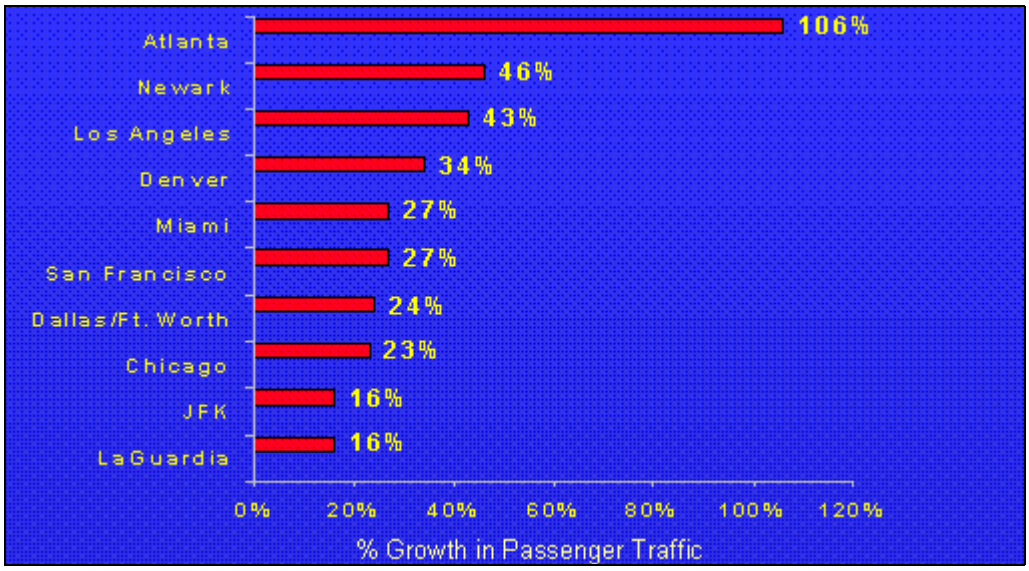

FIGURE 10 Growth in passenger traffic, 1991 versus 1999.

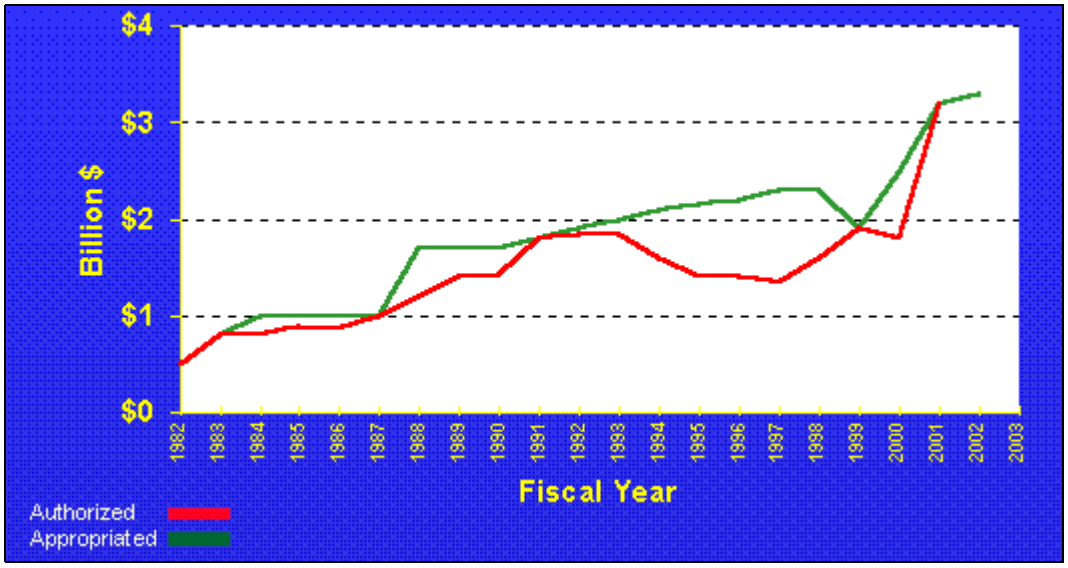

FIGURE 11 AIP funding levels (note: FY 2002-AIP planned at $3.3 billion).

to stop. You've got to cut our costs. We've got to reduce. We were really successful. We got them to quit spending. But, now you look at this curve, and it has to go up considerably higher than it has ever been before. The funding levels have to continue to increase and I just read the other day that the appropriations plan is for the $3.3 billion in the budget for this year, and hopefully, maybe Jane can tell us for sure that it will all be approved. But, we're very hopeful that it is going to be approved as it is required to succeed with all the many projects we are now fully supporting. When you look at the $25 billion that I showed you a minute ago over just a 6-year period, we can stand up here and in less than two hands' worth of fingers, we can count over $50 billion worth of active projects that are going on at airports in this decade. Many of them are capacity-

driven projects which is the reason we are here today—one of the things that we certainly can do and this can be done today. It was mentioned this morning that American is already doing it. And Delta just put this in place at our Atlanta operation on April 1.

Let me refer you up here (Figure 12). For those of you who read *USA Today* yesterday, this was just prophetic because they published on the front page a number of articles about airlines delays and what was going on in the industry. But, then they also published what some of the solutions are that are coming into play.

[With] our old schedule, the afternoon banks, we went from 62 flights down to 52 on departures on arrivals and from 62 down to 49 on departures. In moving to the next time period, in the time frame, from 77 to 53 and from 75 down to 56. Then we have added another bank in here during that same timeframe, and you've actually got 66 additional arrivals and 61 departures by creating additional banks. Then we took the heaviest bank of the day from 3 to 6 p.m. in the afternoon, we still kept it in that 3:30 to 6:05 p.m. time frame. But, the greatest reduction took place here and we actually brought in 17 fewer rivals, 14 fewer departures. The reason for doing that is to improve our on-time operation to give better connectivity to our customers.

And, while we went from a total of 10 banks in the old system to 12 banks in the new system, it gives you what I found call the equivalent of a virtual hub. It gives the customer still a really good connectivity. But, as you level off these peaks and when you consider 83 in this time period—and that is 83 in and 83 out—and the capacity of Atlanta today when Atlanta is running very good on visual flight rules (VFR), there is about 95 departures now. When the FAA capacity numbers come out, they may say I'm a little bit off there but, you're very close to 90 to 95 on the really good VFR day in Atlanta.

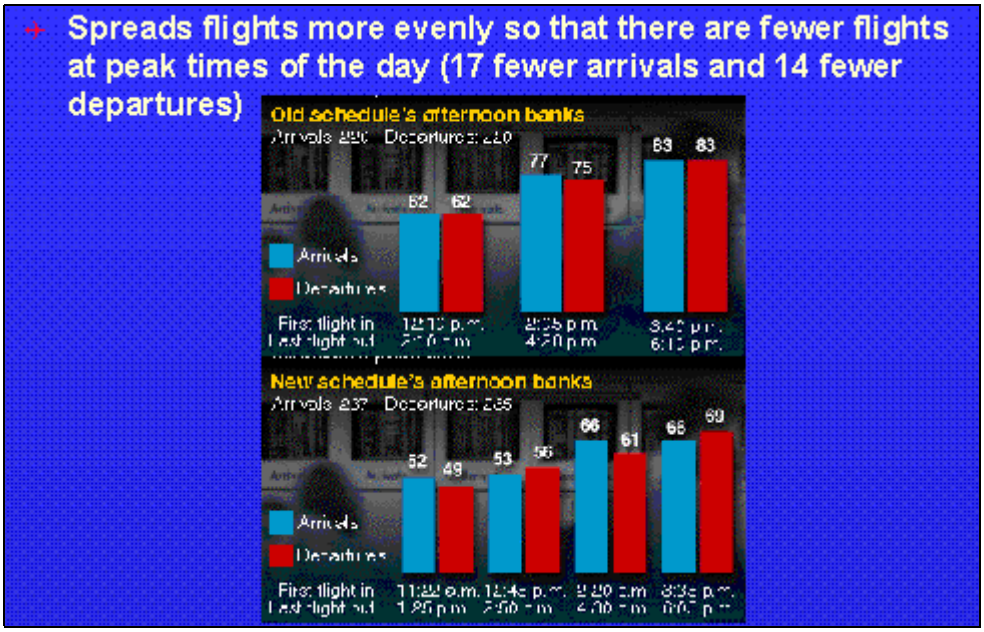

FIGURE 12 Delta's ATL schedule.

But, you consider this was just Delta. You have another hub carrier there that is Air Tran, and then a number of other carriers that have multiple flights. Contrary to my counterpart, Mr. Plavin, this morning, questioning scheduling by airlines and whether it is us or the customers deciding where they want to go and when you want to go. I will tell that you—you put the flights in when the customers want to go, and they tell you when they want to go. That is where we have to be creative in how we make those connections happen.

Only eight runways have opened since 1995 (Figure 13). I'm not going to go through each of these. But, you can see key airports around the country. And, if you look, only 14 runways were slated to open between now and December 2005 (Figure 14). Certainly, there is the number one runway that we were trying to find out this morning as Ms. Garvey spoke, but I hope she was referring to Atlanta. Number two, I think, was probably Dallas and three Minneapolis, or something like that. We can adjust those numbers for you.

This slide I think is well worth focusing on for just a minute because it really comes back to the framework of what we've been talking about (Figure 15). Most runway projects take 10 to 15 years to put in place from the time of inception to completion. [It]

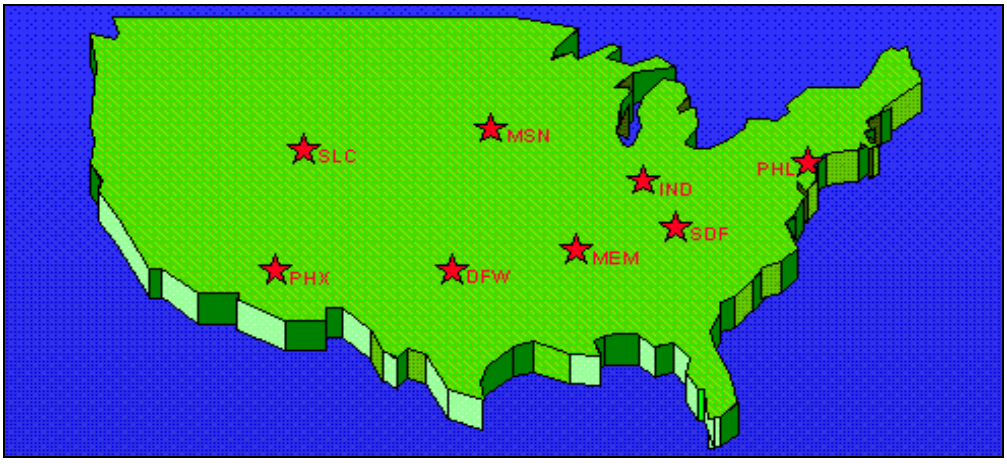

FIGURE 13 Eight runways opened since 1995.

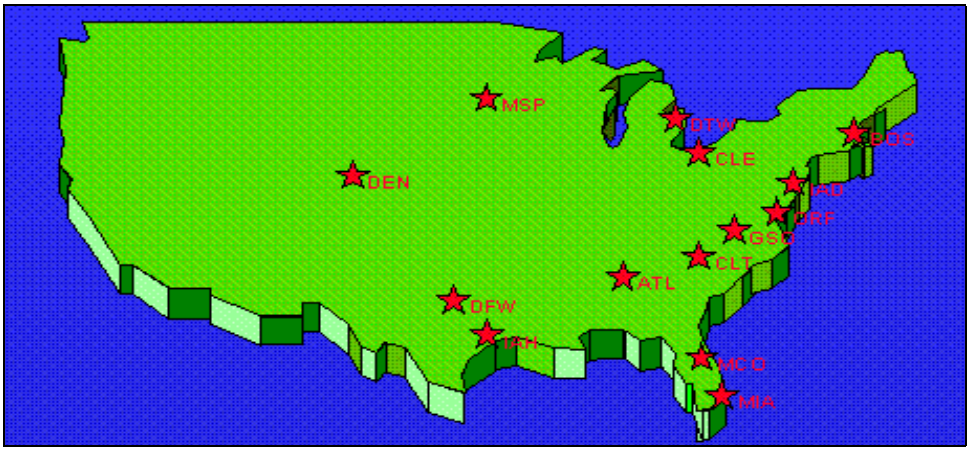

FIGURE 14 Fourteen runways slated to open by December 2005 (of the top 100 airports).

Airport	Runway Length	Cost Estimate	Master Plan Start	Master Plan Finish	Environmental Approval Start	Environmental Approval Finish	Land Acquisition and Construction Start	Land Acquisition and Construction Finish	Total Development Duration
Houston (IAH)	9,000'	$257 Million	1994	1996	1996	2001	2001	2003	10 Years
Cleveland (CLE)	9,000'	$467 Million	1990	1997	1998	2001	2001	2002	13 Years
Atlanta (ATL)	9,000'	$1 Billion	1996	1999	1999	2002	2003	2005	10 Years
Cincinnati (CVG)	8,000'	$220 Million	1992	1996	1998	2001	2002	2005	13 Years
Seattle (SEA)	8,500'	$773 Million	1992	1996	1996	2001	2002	2006	15 Years
St. Louis (STL)	9,000'	$1.1 Billion	1994	1996	1996	2001	2002	2006	13 Years
Washington (IAD)	10,000'	$216 Million	1999	2000	2001	2004	2005	2007	9 Years
Phoenix (PHX)	7,800'	$170 Million	1987	1989	1990	1995	1996	2000	14 Years
Memphis (MEM)	9,100'	N/A	1984	1986	1987	1992	1993	1997	14 Years

* Data includes estimates and was confirmed with varying sources including city planners, airlines, airport consultants, and ATA.

FIGURE 15 Most projects take from 10 to 15 years from start of planning to operation. Typically, a third to half of the overall development time is spent on environmental approval. The average time to complete is 12.4 years. These nine runways required 111 years to complete!

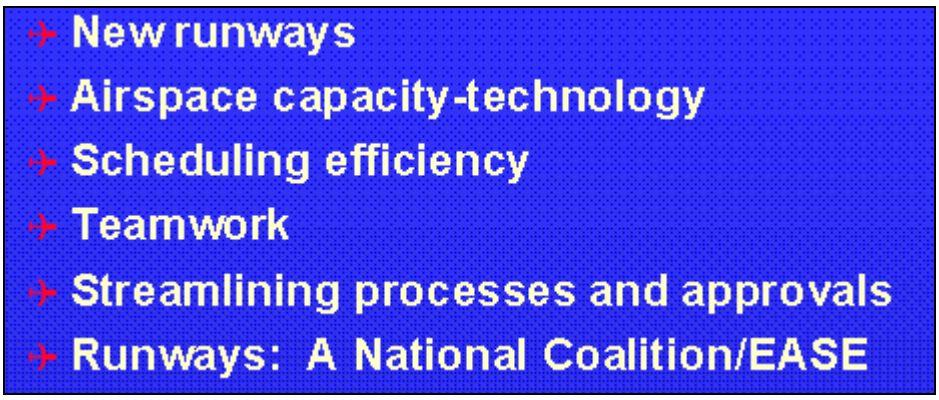

FIGURE 16 Opportunities—a call to action!

took 111 years [to complete] these nine runways; 12.4 years is the average [time to complete the runways]. You have places like Houston, Cleveland, Atlanta, Cincinnati, Seattle, St. Louis, Washington, Phoenix, and Memphis. These are real-live projects. These are the actual start dates. You've got the environmental processes, land acquisition and construction. But again, 12.4 years average and nine runways in 111 years really puts it in perspective. It's not going to happen overnight.

So, what are our silver bullets? Well, first of all, there are no silver bullets. The only way that we can move forward and do so successfully is that we've got to add new runways to the system (Figure 16), and we all know new runways are going to take us a number of years to actually put in place. In the meantime, [also needed are]:

- Airspace capacity and technology improvements;
- Scheduling efficiency as I've just shown you that the airlines are beginning to work toward (because out of necessity we need to do that);
- Teamwork among airports, among airlines, among industry trade associations, and among the federal government, all sharing [in the fact that] this is a joint problem and we all have to work toward the joint solutions;
- Streamlining processes and approvals for environmentals to the extent that we can. Again, that is where much of the time is taken up in the runway process.

Then, you've heard this morning the mention of Expedited Aviation System Enhancements and there is another very important organization. Its existence shows the criticality of what we are here about today, and it is called Runways: A National Coalition. It's made up of the trade associations: the American Association of Airport Executives, Airports Council International, and the American Transit Association, airlines, airports. We all have one common goal and that is to get more concrete, more runways, more capacity in the system because that ultimately is our only long-range fix that we have for the system. Thank you.

Click here to see John Boatright's entire presentation.

Shane: Thanks, John, very much. David Plavin talked about the EASE program this morning and mentioned that it was an acronym that actually preceded the name. Our next representative represents another one of those one suspects, non-coincidental acronyms: The NOISE (National Organization to Insure a Sound-Controlled Environment). I'm very pleased to introduce to you Dennis McGrann, the Executive Director of NOISE.

PANEL 3

Region and Community Perspective

DENNIS MCGRANN
National Organization to Insure a Sound-Controlled Environment

I thank you very much, Jeff. I'm pleased to be here. I would also like to thank Jeff and John for their suggestions on how to improve airport capacity. I would also like to take the opportunity to thank Administrator Garvey for your leadership on this issue. We look forward to working with you to ensure that America's communities have an opportunity to meaningfully contribute to the development of the capacity issue.

I'm proud to join you today as the Executive Director of the National Organization to Insure a Sound-Controlled Environment (NOISE). NOISE is the organization that represents America's communities. We are made up of cities, counties, and elected officials—primarily mayors and city council members—from across the United States that, for over 31 years, as an affiliate of the National League of Cities have been working on the issue of aviation noise.

I was asked by the events organizers today to comment on how much noise is too much. I'm not a scientist and I can't give you the facts and figures on decibels or frequencies. I don't have a chart with noise contours or metrics up here. But, I think I can answer the question [of] how much noise is too much? When a teacher has to stop teaching routinely throughout the day because the students can't hear because of aviation noise, that is too much. When a family has to stop its dinner conversation every evening because of the jets overhead, that's too much. How much noise is too much? Consider a Richfield, Minnesota, couple that recently moved from the neighborhood that bordered the airport to the countryside. Their neighbors heard them screaming and came over to ask if everything was all right. Of course, everything was fine. It just turned out that the couple had simply grown accustomed to competing with the jets taking off at dinner every evening and their normal conversation was at these decibel levels. That is too much noise.

I would like to frankly echo the sentiments of Congressman James Oberstar, the ranking member of the House Transportation Committee, who, at a hearing last fall, stated that if we succeed in addressing these airside issues and the hard capital issues—but do not address noise— we will not succeed in expanding airport capacity. To quote Congressman Oberstar, noise is a capacity issue. Mr. Oberstar is right. When local communities feel that their noise concerns are not being reasonably addressed, a confrontational rather than a cooperative relationship develops. I think we can all agree that does not enhance capacity.

That is why we have heard today that there is a great deal of talk in Washington about streamlining the environmental review process for runway construction. As we have heard in some cases, it takes 10 years, as in the case of our friends in Dallas. We've also learned today that the FAA's found that environmental study requirements normally take only 3 to 4 years. Clearly, this is not the major cause of construction delays for major airports. In fact, the FAA found that frequently the longest periods of delay are caused by the time needed to complete legal and political processes mandated for other purposes. The airports know this, and while we commend Airports Council International (ACI) for their contributions to this discussion with their Expedited Aviation Systems Enhancement proposal, we have major concerns with any suggestion of short-circuiting the

environmental impact statement process or bypassing the concerns of local communities and neighborhoods.

All across the country impacted citizens are communicating to their city council members and their mayors begging them to do something about airport noise or to secure noise mitigation funding. These citizens many times are shocked to learn that these issues are not controlled at the local community level. These issues are actually out of the hands of local community officials.

What if instead of bypassing local officials we made them partners and stakeholders in the process? As indicated in a recent General Accounting Office report on the subject, there is a lack of communication and cooperation. There is also obstruction. So, why not try a little communication and cooperation? Or, as Mr. Roper earlier today suggested, collaboration.

That is why our organization advocates the institution of airport planning organizations, or APOs, composed of all airport stakeholders, including the representatives of communities affected by the airport noise. If this idea sounds familiar to some of you, there is good reason for it. During the debate in 1988 on the highway funding bill, ISTEA (the Intermodal Surface Transportation Equity Act), some members of Congress pushed the idea of metropolitan planning organizations (MPOs), which would give local governments a voice in the key decisions regarding federal highway projects that affected them. At the time, many stakeholders in the highway industry said this was a terrible idea. They suggested this would bring the whole process to a grinding halt—we would vulcanize everything, we would create a Tower of Babel, and nothing would get done.

But, despite their gloomy warnings of impending chaos, the establishment of the MPOs was written into ISTEA and subsequently into the Transportation Equity Act for the 21st Century. As we all know, a funny thing happened. Once elected representatives from local communities were given a seat at the table, they made their contributions to the highway planning on behalf of their constituents, but at the beginning of the process. This allowed the planners to anticipate the strongly held concerns of local citizens and address them in planning before construction began. As a consequence, you have local communities working with highway planners to secure approval of the plan they have collaboratively crafted. As a result, we saw more expeditious approval of highway proposals because there was less need for local community groups to try to stop the project. In fact, quite the opposite occurred. These local communities had bought into the plan and now had a stake in its approval. ISTEA and the MPOs, became an undeniable success for our nation’s transportation infrastructure and for its communities.

Using APOs to make local communities partners rather than obstacles will produce a runway that is completed in less time, with less controversy than the current confrontational approach sometimes induced. Such an attitude of inclusion can go a long way toward avoiding what happened in Louisiana this last year, when members of Congress inserted language into the fiscal 2001 transportation appropriations bill, suspending federal funds for runway construction at New Orleans International Airport, because they felt the constituent communities had been left out of the planning process.

One way to foster the relationship between airport communities is allow local governments to receive noise mitigation funding from the federal government. Current regulations only allow the airport operator to receive this funding, and they decide how to spend it in the community. Wouldn’t it be a better idea to have the local elected officials who are accountable to the voters working with the FAA to make decisions about which houses or schools to insulate and what property to purchase?

Let me add that in addition to making local communities partners, we need to address the core issue of the continuing push for quieter aircraft. That is why NOISE supports Congressman Oberstar's call for the development of a green engine, which can be a whopping 30 to 40 decibels quieter than current noise levels. It is also why this organization supports ACI's proposal for a phase-out of hush-kitted aircraft.

Local communities are not obstructionists. They are not NIMBY's (not in my back yards). In fact, most local communities affected by noise also depend on their airport neighbors for their very economic viability. We recognize the reality of aviation today and that it requires airports increase capacity. We simply ask for a seat at the table and an opportunity to meaningfully contribute to this process.

As Deputy Assistant Secretary for Aviation and International Affairs, Susan McDermott, recently told the Senate Commerce Committee, local cooperation is a key component of speeding the environmental process, and local officials must be our active partners in this effort if we are to make significant progress. I agree with Deputy Secretary McDermott —local communities want to work with airports to design smart runways and ensure that local citizens' needs for noise mitigation are not summarily dismissed.

I thank you for this opportunity to participate. NOISE and our member communities across the United States stand ready to help in developing meaningful and comprehensive capacity enhancement procedures. Thank you very much.

Shane: Thanks very much, Dennis. We are now into questions and comments. I will tell you we are supposed to run until about 3 p.m. The schedule suggests that there is supposed to be a half-hour between 2:30 p.m. and 3 p.m. for closing statements from myself but more importantly, from the Federal Aviation Administrator Jane Garvey. She is assuring me she has no intention of taking up time with closing remarks. We are going to leave you the option—you may be moved to say something to us. I want to say, by the way, but notwithstanding the fact that there is an empty chair next to me with Jane Garvey's name on it: She has been here for the entire day. I think it speaks volumes to the importance of this meeting to the FAA Administrator and it speaks volumes to the importance of the subject that you are here. So, thanks very much for being with us. Not just the Administrator, but of course her entire brain trust: Monte Belger was here for a long time this morning and I see Louise Maillett, and a whole host of people who are very much in the planning process who are listening and taking notes and absorbing the information that is being presented during this meeting.

So, this is not, as I said last time, just another meeting. This is a problem that we can no longer continue to talk about. It is something that needs to be addressed. We have hit the wall. While runway construction is not going to be the solution to the problem in the near-term, it is not going to solve the problem this summer. We have probably spent more time in the last of these sessions talking about solutions that will help us this summer—at least we hope so. But, unless we get this problem addressed now in a meaningful way, using the kinds of suggestions that we have heard about this afternoon, the economy of the country is going to be in trouble. This is what the issue is. It is all about economic growth in the country. So, we cannot be spending our time on a more important subject.

The floor is open ladies and gentlemen.

Question-and-Answer Session

James Baumgarner: I'm Jim Baumgarner from *Aviation Daily*. I was in this very room 10 years ago when the TRB released its study for long-term airport capacity improvements. My question is: what is different now?

Jeffrey N. Shane: It's a good question. Who would like to hazard an answer?

Jeffrey W. Hamiel: I'll start. I think you're right. We've been talking about airport capacity improvements for a long, long time, and we have been saying for many years the industry is growing. There is a sense of developing and growing urgency that has existed over the last many, many years. But where we are today is, in fact, confronted with the issue of hitting that wall of capacity. I think 10 years ago we recognized that eventually this problem would bring us to this point in time, but now we are here. Now we find ourselves in the position where air transportation has had an enormously successful economic role, and the last 5, 6, 7 years have been unprecedented. The airline industry has been extremely healthy. More and more of us travel for business and for leisure purposes. Pricing has been much more affordable, I think, for folks, in spite of the fact that competition is a concern of all of us. There has been competition to drive pricing down, and we are projecting a billion people in this country and 2.5 billion people around the world will use the air transportation services over the next 10 years. The difference is that back then we theoretically knew it was coming. Today, it is here. It is time now for some action.

Shane: I think that is the right answer. You're beginning to see proposals in Congress that suggest if necessary our government is prepared to break a little china in order to address this problem. I understand the incentive to reduce unnecessary delay in the system. I will share a personal view. I don't think there is a lot of unnecessary delay in the system. Indeed, one of the important lessons of today's session is that in fact most of the delay doesn't occur at the federal level. Most of the delay occurs probably where it ought to occur—where people live and where people are likely to be affected most directly by these developments. The question is does the federal government have a role in streamlining the local or state review process? Last time I checked, the U.S. Constitution said no. So, it is not going to be easy, I think, to find ways of telescoping the review process if what you're focused on is at the federal level. I think there are undoubtedly efficiencies that can be built in. There is a determination to build them in. The real question is whether or not those efficiencies are going to translate into meaningful expediting of the runway and airport development process.

Theresa Smith: I'm Theresa Smith and I'm with Washington State Department of Transportation Aviation Division. I'm very pleased that you have these sessions and such great discussions and looking at solutions. I did want to make a suggestion. In Washington state, we have an airport land use compatibility program, which we are successfully implementing on compatible land use around airports. It started in 1996, and we're just 4.5 to 5 years into our program. But, I can't encourage enough some thinking and linking with more in the sense of aligning airport planning and expansion planning

with community planning. One of the tools that we found in resolving some of the issues in Washington state has been in utilizing community planning tools in making that happen. Part of that is prior to the environmental review. We do environmental review in my office as well, and we found that we weren't able to stem the tide of that lack of balance. What we found is by linking comprehensive planning at the community level with airport planning, we've been able to find solutions.

One example I will give is the Tacoma Narrows Airport. They have spent 25 years in a battle between the community and the airport sponsor and, in a sense, improving communication and utilizing regulatory authority at the local level—not just comp plans but development regulations or overlays. There are many tools that are out there, and it is a different way of thinking. I tend to get glazed looks when we talk about this, but we're making it happen in Washington. One other point is when you do have language in your comp plans, your sub-area plans, or your development regulations, that gives some predictability and some sustainability for both the airport and any expansion and for the community in really ensuring that balance.

Shane: Stay there for just one moment. Federal law, as I understand it, has long required that in order to qualify for a federal grant or transportation grant, or any kind of federal grant, you need to make that application from within a comprehensive planning process. That is typically what is the case with transportation grants. I think there is a planning process that is required in order to apply for an airport improvement grant (AIP). So, could you define for us—you're talking about doing something more than what has been required from time immemorial—could you define for us what that something more is?

Smith: Yes. Typically within an AIP grant, the requirement is between the federal government and the airport sponsor. Even though the airport sponsor may be within a jurisdiction, there is not necessarily a linkage there. It is not the jurisdiction that is signing the contract. So, what you have is a disconnect. Even though there is a requirement for sponsors to influence that land use decision making, there is not necessarily a link there. What we found is that the link is comprehensive planning. I will tell you with our program, we have airport sponsors, pilots, and cities and counties that are our strongest advocates, because what we are recommending is good planning. Airports are essential public facilities, and it is again going back to how to preserve that balance. I agree with bringing folks to the table. But 25 years from now, those same folks may not be at the table. So, by linking some of those intentions within the grant assurances to comprehensive plans and development regulations, you ensure some stability in that investment and in the long-term investment.

Shane: Any other comments on this suggestion please?

Dennis McGrann: If I could add one thing. Our organization would commend you for that effort. We think that is a wonderful idea. In fact, there are other places around the country where that is occurring. For example, in San Francisco, where it is not legislatively mandated, but they have a memorandum of understanding between the communities around the airport and the airport authority that meet on these very same issues and have gone to the state legislature on various combined efforts to enhance

the whole communities around the airport. So, that is exactly what we're trying to advocate and we commend you for that.

Smith: It has been a fun program because we have been able to think creatively in finding ways to really turn down the heat, of really getting folks to identify what is it that you need for airport expansion and for the community to be at a sense of peace there—and then looking at ways of how people are communicating with each other. I will also suggest that part of the success of it has also been in our role because I think in looking at solutions that don't require such significant expenditure of political capital at the local level—and whether it is a community blaming us for making them do this, or it is standing with them through the process—a lot of times folks don't want to politically put their neck out there and be standing alone. So, that is also important.

Charles Huettner: [Senior Policy Advisor for Aviation with Office of Science and Technology Policy] Are you able, as part of this process, to balance or trade off environmental issues to the airport with other development in the cities in order to, in a sense, help to mitigate and move one area forward on a balanced plane?

Smith: That is one of the benefits of really linking city and county, particularly planning. They do this quite often. So, I know in some communities this is not favorable, but the transfer of development rights. A roadway was an issue for one facility, and after they were able to reach some agreement, the county engineer is looking at alternative ways of moving a road which had been an impediment to the airport. So, there are ways to do that. I will also tell you that developers are sending us their conceptual plans to take a look at before they get so far down the road to see if this is a problem.

Shane: It raises a very interesting question as to whether something can be done at the federal level to encourage precisely that kind of activity at the state or local or regional level.

Smith: If I could just add, the one thing that I think you really can do is provide information because in aviation we know aviation. Communities know communities. There is really not a natural forum to allow that interchange. We are holding short courses for airport sponsors and cities and counties, really understanding each other's world. We have no authority there. We are just partnering and encouraging filling those information gaps. I really see a natural role for the FAA in that regard.

Shane: Thank you for that.

Randall Malin: [Malin and Associates] Let me add a postscript to Jim Baumgarner's good question. I can think of two other issues that we didn't see 10 years ago that have affected this issue, as Jeff says, of now hitting the wall. In 1993, I think, for the first time the average seats per plane mile turned down—this is pre-regional jet (RJ)—but the major carriers' average seats turned down in 1993 and have been going down every since. Most of us that always assume that there would be an ever-increasing capacity per departure, we're absorbing some of that growth—not all of it— making departures grow much less than passengers. The RJ phenomenon—I think I would stick my neck out here a little bit and say we ought to all watch the Com Air settlement real closely, because when we finally

see what Com Air's pilots are going to be paid to fly the RJs, which will ripple through the whole system, that make change the economics of that airplane quite dramatically. I, for one, was dead wrong when they came to see me 12 years ago and tried to sell me the RJ, and I said the Air Line Pilots Association will never fly that airplane per your assumption, so get out of here. So far, I have been wrong, but we will see.

You mentioned Jane and the whole FAA brain trust being here, so I'm going to raise an issue and ask for clarification. About 15 years ago, Jane, a FAA staffer was running around the country with the idea of a "wayport." For those of you who don't know what a wayport is, the idea was to put a new airport out in the middle of the Kansas corn field and it would have no local traffic and this would be a tremendous idea. Not surprisingly, every mayor, congressman, and senator jumped on this as a new WPA project to get money for his local district. The airlines, including myself, objected strenuously, using such terms as dumb, simplistic, and other such warm appreciation. I've lived fat, dumb, and happy for the past 15 years until I picked up *Aviation Daily* on Monday, and there it was, as big as light: Wayports, not only back but with certain people like Trent Lott and John McCain supporting it. So, I want to ask you, is this from the FAA or did this come out of the blue because I don't know any reason why wayport makes any more sense today than it did before?

Again, I am going to harp back to an issue I made last time and it was made this morning—I believe part of the problem, Jane, is that you don't define hubs and spokes differently. Because when John McCain and Trent Lott are talking about hubs here, I don't think they are talking about connecting hubs. I think they're talking about Boston, New York, Washington, Los Angeles, and San Francisco. But, please tell me wayports aren't coming back. Because if they do, they are going to eat up a lot of that money that we got under Air-21.

Garvey: I was actually hoping not to find a microphone. I'm trying to think of how I can answer this so that I don't offend either Senator McCain or Senator Lott. First of all, thank you so much, Randy. I think that part of the brain trust just went back to the FAA too. Where is John Rodgers? John, that was not something we really had initiated. I was a little bit surprised to see it. John, don't contradict me here though. Come to the microphone, but never contradict the Administrator.

John M. Rodgers: We've made no recent proposals to resurrect wayports.

Garvey: But let me just tell you though, if Senator McCain, seriously, and Mr. Lott are interested in it, we will certainly look at it. John, I'm sorry. I didn't mean to interrupt you. You may want to add to that.

Rodgers: I was just going to say that the proposal that was made was not made by the FAA. It was indeed made by a gentleman by the name of Jim Sheppard, who at the time was a member of the FAA. Jim is now with the Orlando Airport Authority and Jim is still pushing this issue. Interestingly enough, I happened to run into Jim at our forecast conference last month and Jim buttonholed me and assured me that the real answer to all our problems was wayports. So, that, in fact, may be the continuing source of inspiration.

John Boatright: Could I comment on that? I think many of you have probably seen the Solomon Smith Barney hub fact book that came out on Monday or Tuesday of this week. But, it is very interesting because, Randy, I think you're question is right on target about wayports. There is no hub that can sustain itself purely on connecting traffic. You've got to have a large enough origin-destination (O-D) base to make that hub work economically. If you just look across the top 10 hubs of all the major carriers—and Southwest has theirs lumped in all 5 together—the local traffic percentage goes from a low of 23.9 percent to 82.2 percent, with obviously Southwest being at the high end because of how they hub differently than the majors. Then, on the connecting side, Southwest is at 17.8 percent, but the high was TWA at 76.1 percent in St. Louis. So, I think there is proof that a hub cannot be sustained if you don't have a really heavy local O-D base. Many times people make the comment that people really don't care where they connect, as long as they efficiently connect. There may be a lot of truth to that, but you still have to be able to make the economics work in the hub for people to use it.

Baumgarner: I wrote that story on the hub. It wasn't Jim Shepherd who resurrected that. It was the Congressman who addressed the American Association of Airport Executives meeting on March 27.

Shane: Which Congressman was that?

Baumgarner: Harold Rogers [R-Kentucky; chairman of the House Appropriations Transportation Subcommittee].

Hamiel: When we talk about capacity demand and the system and how we are going to handle not just airports but airspace, there is a phenomenon that is developing that quite frankly points in the wrong direction. And, it is one that I have a personal interest in, and that is the fact that we are becoming less efficient as time goes on. We're trying to serve more and more communities with direct service into hubs for connectivity to final destinations. But, in my own airport, we are doing 29 RJ gates and we are trying to accommodate a Northwest air link partner to do that. What time of the day are they going to operate their airplanes and how are they going to serve the community is a question we have in mind. We'll have 29 gates to accommodate RJ-85's and CRGs. But, what time will they arrive? There are only a few times in the day where there is room for them to slide in. If they try to come in at 4:30, 5:30, 6:30, 7:30 in the evening, that means that we are going to sacrifice a slot occupied by 175- to 250-passenger airplanes to accommodate a 50-passenger airplane that requires the same amount of airspace, the same amount of time, that delivers fewer product to the business operation—that is, fewer passengers delivered on the airplane.

If, in fact, regional aviation is going to grow at the numbers I have seen forecast to be as much as 90 percent over the next 10 years, where do these airplanes fit in the system and how important is it to sacrifice capacity at the major hubs to accommodate smaller and medium city air service directly into the hubs? I'm not making a judgment: I'm simply saying that I think we have ourselves a real tiger by the tail here as more and more demand is placed on the hubs to accommodate all the users at all times of the day. We may be getting to a point where judgments have to be made that basically say we

can't meet everybody's needs all the time and decisions have to be made on priorities sometime very soon. I think we are getting very close to that point in our history.

Shane: If you were here at the first of these sessions, you would have been relieved to hear that it is not necessary for anybody to make a judgment. All you have to do is set the price—something like the cost of the service—and then things will take care of themselves. That is not my recommendation. I'm just saying a lot of economists are saying that and a lot of economists are saying that at more and more conferences. At some point, now that you're hearing the Secretary of Transportation make remarks along the same lines and the FAA Administrator talk about it, I think some form of pricing mechanism that begins to address this capacity shortfall will find its way into airport operations around the country. Again, however, we're here to talk about pouring concrete, building more runways.

Ryan Wilkins: Ryan Wilkins from Boeing Helicopters in Philadelphia. In 1995, we had a meeting out in Seattle that was hosted by the Boeing Company. The people that were there were all the major air carriers, along with air traffic control, FAA, Euro Control, and some of the European airlines. Everybody sat around the table and wrung their hands and said, by 2010 we are going to come to aviation gridlock in the United States and Europe. If the accident and safety rates stayed the same as it was, you could potentially have a mishap every week. Well, if you look in the latest issues of the newspapers that are coming out from Europe, especially with what Euro Control is saying and what we are saying in the United States, it is not 2010—it is 2007 that we are going to be at that point in time. It is Jeff who just brought out a statement about our resource called runway occupancy time. The FAA came out with a study (empirically compiled data) in 1996 that says that 40 percent of the arrivals and departures in the United States airports right now carry only 20 percent of the people. That means we've got—in those days it was turboprop aircraft that were carrying only 20 percent of the people—so, we needed to find a way to get that fee to the major air carriers, as well as reduce the delay and increase the capacity.

Well, if I replace one of those 40-passenger airplanes in those days, which is now a 60-, 70-, 80-passenger RJ, with a 200-seat airplane, then I can increase capacity at the same rate of arrivals and departures, but I'm still competing for runway occupancy time.

If I find an alternative form of transportation to get those people there, we can supply the feed to the air carriers that they really, really need, as well as increase capacity and reduce some delay in the system. If I take an aircraft out of a slot, is that slot going to stay open? My good friends from GRA and other economists say, absolutely not. Once you open up a slot, somebody is going to fill it with something, no matter what size it is. If we are going to fill it with something, then we ought to fill that slot on a runway with a large airplane that has increased capacity.

I flew for 10 years for an outfit that, at that time, was a leading edge regional aviation— Ransom Airlines, which was the largest regional air carrier in the United States at one time. We flew de Havilland Dash 7s and we came up with an innovative transportation system we called SALS (separate access landing systems) which used operating aircraft into the sub-runways here of Ronald Reagan National Airport (DCA), into Kennedy, into Newark, into Boston, Massachusetts. We did it very well. We carried a lot of people. We made 86,000 non-interfering landings at DCA without a single incursion of their primary runway space. That is a pretty good safety record.

The people are here in the capacity office right now at [airspace capacity and inner space design], who worked that system and know that system works. The tools are in place. The technology is in place. The rules are in place. All you need to do is use little innovative ways of putting them together.

We did a massive study in 1997–1998 that the FAA looked at and saw some merit to that. We called it simultaneous and non-interfering operations, where I separate the arrival streams and departure streams of aircraft based on performance alone. In other words, I keep all my MD-80-type aircraft, or A-300 aircraft, flying in the same stream, but I separate the slower aircraft out and have a different arrival stream—maybe to an alternative runway for them, but at the same airport. Guess what? By doing that, they get a 36 percent increase in capacity and reduction delay at Newark Airport without anything else other than separate arrival and departure streams. That needs to be looked at seriously all around the United States and especially in Europe.

If I trade out some of that 40 percent—if we got rid of the turboprops with RJs because passengers like RJs. They are jets. What do the RJs do to our system? I think one of these gentlemen here was talking about RJs. They take up more runway occupancy time and they take up more airspace than any aircraft they have ever replaced to get a fewer number of people into an airport. If I'm using up more runway space and I'm using up more airspace to fly them in there and it is taking a controller longer to get them there, I've reduced capacity and increased delay in the system and not helped it out any better.

There are alternatives other than looking for concrete. Other than for ways to pour more concrete, we really seriously need to be looking at alternative forms of transportation—need I say vertical flight, of some way or another, to get people in and out of there that are extremely useful and economically viable in less than 300 nautical miles.

There was a young lady from [inaudible]—as of Tuesday, it was the largest air carrier in the United States—who several years ago stated, in a transportation planning conference in Chicago, that if you're not looking (she was telling major airlines this because she worked for them) at alternative forms of transportation, including till rotors, you're wasting your time.

Shane: Thank you very much for covering an awful lot of additional possibilities that we haven't discussed today. My only concern about the suggestions is that they seem, all of them, to assume a lot more central decision-making in some entity than, in fact, what we have. I don't know how you would impose some of these solutions on the marketplace. Not to really argue the point now, but all these options have been out there. They have been discussed and presented in well-documented studies that the marketplace somehow is going for RJs. That is an important message. The market does, in fact, have an awful lot of power in this country and unfortunately sometimes the market doesn't do that which might produce the most efficient result in terms of infrastructure.

Larry Krauter: Good afternoon. My name is Larry Krauter and I'm the director of planning and engineering for the Lehigh–Northampton Airport Authority. We operate two airports just 50 miles north of Philadelphia and 75 miles west of Newark. One of the things I was a little bit concerned about in today's discussion is that we didn't get a lot of discussion going on demand management as it relates to second-tier airports. John, I was going to ask a question of Delta, of course, which we are glad to have at our airport serving the Lehigh Valley, whether or not, from an airliner perspective, you see that as an

opportunity when you look at an airport like Lehigh Valley, that has 1,400 acres of land that we have set aside for future capacity, and essentially no delays at this point in time.

Boatright: I guess there are probably a lot of people at Delta much more qualified to answer that than I. But, I'll take my best stab at it. While you are in close proximity to those other key airports—again, I said it in my presentation and there was some debate on it this morning—we don't necessarily just say we want to automatically put an airplane in a particular market and then we go there. We first go in and do a lot of in-depth research and make the determination on the traffic and then try to match the type of equipment to that traffic. A number of smaller airports that are reliever opportunities—one which we just recently started service into is Manchester, and that service is going on an RJ from Atlanta to Manchester and is doing quite well. There is a fair amount of traffic. But, for people that want to go to Boston, they will fly on the mainline flights going into Boston and make those drives where they want to go that are in closer proximity.

The great part about the sizing of the airplane or the right sizing of the airplane is when you put that 30- or 50-seat airplane in there, then you can efficiently and effectively fly to those smaller airports and overfly some of those hub airports where the other restrictions are. What that does allow for Delta or for anybody else is for the opportunity for that 180- or 200-seat airplane to go into that higher density airport where the demand is much greater, and it is not just one airline. When the capacity is used up, it is all the carriers, and it is going to be in those peaks like you saw on my chart and I would challenge the group—every hub will look exactly like Atlanta within frameworks. The times may be a little bit different, but the peaks are all going to hit roughly within the same time frame of day. They may adjust a little bit for time zones to make sure the arrivals and departures hit their other hubs or their spokes correctly.

But, [for] the demand management or reliever airport, if I'm understanding your question correctly, there certainly is a place for that. But, for the bigger aircraft to be able to take that over and to go to one of those airports and expect that we can fill 180 seats, it just doesn't happen. We do think we've been pretty effective in the RJs. It is true that an RJ uses up the same space as that 180-seat jet. I can't argue with the gentleman that it uses up more or uses up less. I don't see how it would use up more. But I guess with that aside, what you're able to do in many of those markets is overfly your hubs and save your hubs and that airspace for the bigger airplanes when you're going from a Jacksonville into LaGuardia. Now, what you're able to do is fill up a plane out of LaGuardia [or] out of Atlanta to LaGuardia full of customers and they're connecting where you can't just find RJ nonstops from say Jacksonville to LaGuardia. But, again, all have to deal with the constraints of the slots, and 75 per hour is where we are in places like that. So, I hope that answers your question. It is all very scientific, and it is based around the models and the traffic. We look at the catchment areas, but then how far people will drive. Once you get past 30 to 40 miles, unless that is the only alternative, people will just not drive it.

Chris Fotos: Chris Fotos, editor of *Airports*. A quick footnote to the wayports discussion—that pouring concrete question for Dennis. I just want to call attention to the fact that about a month ago, there was a very interesting hearing. It was House Appropriations Transportation Subcommittee. The chairman of that committee, Harold Rogers, who is not shy about expressing his views, was really pushing the idea of looking at connecting airports, for lack of a better term, and taking traffic out of the really

congested hubs and pushing them into connections. So, he didn't use the term wayports, but clearly his idea was that maybe there is a way to shift traffic out of more congested airports to other facilities simply to facilitate connections. So, whatever terminology you want to use, there are some people out there who will be developing this idea for you, whether it comes from Congress or elsewhere.

For Dennis, I've got to say you're the first —I don't know if I should call you an environmentalist or what—but on the whole issue of environmental streamlining, every time that I've talked to a handful of environmentalists or anti-airport or anti-growth people (whatever term you want to use), they have said to me, uniformly, we know what environmental streamlining means: It means shutting us up. So, the question I want to ask you is—granted, there is a huge diversity of groups out here, so many different communities—is there any way to characterize the reaction of your community to the streamlining concept? Are environmentalists or community activists uniformly skeptical of streamlining and should they be?

McGrann: First of all, I can only speak for our membership which is predominately made up of elected officials from across the United States. These are mayors of cities that depend upon the airport for their very existence. The tax base of that community is dependent upon the incomes and the level generated by that airport. So, our members are going to be people that have a real investment in the viability of the major airports in this country. But, in the same token, we have major concerns about being left aside from the planning process. So, when you see environmental streamlining, if you went through and did a poll of our members, first of all there might be some concerns about that. There would be concerns if you were going to be advocating, or if you were going to be short-circuiting, or you were going to disregard the National Environmental Policy Act of 1969 or other legislation like that. But in the same token, there are people who are going to be willing to discuss ways in which environmental streamlining might work in certain communities. I call tell you those conversations have occurred. I have had my members share with me ideas that they have specifically on major airport projects around the country, where they say, if we did this it might help expedite the process.

So, on one hand, they are willing to do that. They are willing to sit down and discuss that, and also have a real investment in the airport being successful. That is one of the big differences, I would suggest to you. Our communities and our members depend on the airport and want the airport to be successful. They just want to have an opportunity to have a role in that process.

Fotos: Does that mean perhaps there is a need for another seat at the table—God knows you don't have enough seats at the table—because there are groups out there who may be separate from the mayors that you represent, like the official government structure that you represent. Maybe Administrator Garvey would like to comment on this? Does there need to be some kind of formal, systematic way to bring those people into the system so that they don't feel left out? I'm not familiar with Washington state's system well enough to comment on whether or not that is really part of what you were talking about, but is there a need to create another seat at the table, Administrator Garvey?

Garvey: I think in many ways that seat is there. I think when you look at the environmental process and you look at the planning process that both Jeff Hamiel and

Jeff Fegan talked about, I think in those places where it has really worked, the community activists, the community environmentalists are at the table. I think certainly the federal process allows for that kind of participation. I think where the environmentalists have felt short-changed, it is often not so much the process itself but perhaps at various times where they feel they are not really being listened to. They may be there at the table but they wonder if they are really being listened to. That obviously is a more difficult question to answer. But, I think the process as it is does allow, in the majority of cases, for those other voices to be heard. The question is how well do you respond? How willing are the parties to really engage in that discussion, and also how willing are they to identify some of the mitigations that may be necessary?

Hamiel: Can I respond to that? To your specific issue, we have probably eight or nine environmental groups in our community that want to participate, and I would have to say that in all honesty it is my judgment that the majority of those people decided before the process ever began that they were already opposed to it. But, by engaging representatives from these various groups into a process of discussion, they were forced to become knowledgeable and, quite frankly, intelligent on the issue. As they learn more about the process, and quite frankly, looked at the process that they could participate in, they became more engaged in the process to the point where they were no longer just blatantly resisting the process of expanding the airport. They were now having to contribute into a thought process of how they could protect the interests of the group they represent. But it was not good enough to stand up and say we are opposed to everything and anything. All of a sudden, they became part of the process of developing a viable alternative that would lead to a solution. At the end of the day, ultimately, the majority of the people in communities are going to want to expand their airport.

The majority of people in the Minneapolis–St. Paul metropolitan area wanted that airport expanded. They wanted the runway, the terminal building, the additional gates, reconstructed parking facilities, and roadways. Probably 5 percent of the community didn't want anything done to the airport at all. They were very vocal and highly visible. But, once engaged, they had to participate intelligently or embarrass themselves and lose credibility. As a result, they helped us come to solutions. We addressed those solutions with things like low-frequency noise studies, and taking a look at limiting the use of runways in certain directions to recognize the impact on the community. But, by engaging them early in the process, you can cut off a lot of that obstruction and, quite frankly, force public opinion to change.

Garvey: Just one quick one. I also think you asked the question earlier: Are environmentalists skeptical? I think the honest answer is yes. I think many are. I do think when people hear the term "streamlining," they immediately leap to, does this mean cutting out, does this mean isolating those folks who feel they should be at the table? So, I think in any of those discussions—I think we have certainly heard it today—that no one is talking about short-changing the environmental process when we talk about it. Is there a more efficient way? Is there the predictability that David Plavin talked about? I think really that is really what this is about.

Deborah McElroy: [Regional Airline Association] I hesitated to participate because I was such an active participant at the last meeting. But again, I did want to say that we do

understand that capacity enhancement is the only solution. I commend Minneapolis–St. Paul and Memphis and other airports that have recognized that RJs are a part of the system and are building to accommodate that growth.

I think it is important to note that 41 percent of the new RJ service is new nonstop markets. This has provided competition for communities that didn't have alternatives. I think we need to view the system holistically. As John mentioned, we need to know how RJs are being deployed. Some carriers are more innovative in terms of how they are able to deploy those RJs. Some carriers are limited by the agreements with some of their labor groups, and all of these things, as part of the entire discussion, need to be looked at. I think we need to guard against simply grasping one segment of the industry as a potential scapegoat simply because of the success of the type of aircraft or type of service—it has been so successful that it provides an easy target. The purpose of this meeting and the others that the FAA has held is really to educate ourselves about the system and to look at it on a national basis to recognize that we need to accommodate local concerns, but again to recognize that we have a national system that accommodates a wide variety of users—both in large and small communities. Any solution, especially solutions that are going to be palatable to Congress, need to address that.

David Ballard: David Ballard of GRA, Inc. I want to follow-up on John's remarks and Deborah's: The idea that the value of an RJ from Jacksonville to LaGuardia is determined, in part, by the fact that it leaves a slot open for higher use in Atlanta. I wonder if you would speculate a bit on how you might see, say, 10 percent additional capacity being used at Atlanta—if you got a runway or something that added capacity. Would you expect a reduction in delay on average? Different types of operation or operations? And I know that is a big question...

Boatright: The short answer is yes. Certainly the additional runway for Atlanta takes us, I mentioned, approximately 90 operations per hour on the arrival stream. That additional runway in just using it in one direction at a given time takes you to 135 arrivals or 135 departures. So, it is really the equivalent of a 50 percent capacity increase when it is being used for all arrivals or all departures. The parallel runway capability in Atlanta and, of course, anytime I hear people like Jeff talk about seven runways and going to eight, it just makes you really salivate very quickly because going from four to five to us is just absolutely wonderful. But, the efficiency of four parallels and now a fifth parallel really is the greatest capacity enhancer you can have. You may remember Jeff's slide up there—it showed a couple of intersecting runways. You just don't get the same capability and capacity out of those.

Certainly, we have growth plans for Atlanta. Air Tran has growth plans for Atlanta, and some of that growth will be in the mainline and some of it will be in the regional jet category. But, the other thing that I think we've been very successful in Atlanta in doing and what I showed you up there on the hubs—that was just Delta mainline. It did not include the Aviation Safety Alliance (ASA). But, what we do with many of the regional jets and the props that are still flying with ASA is we bring them in on the shoulders. And what you do then is you're not denigrating capacity. You're using that unused capacity. If you go back to Doug's chart this morning, there is a lot of unused capacity at virtually any airport. LaGuardia probably is the exception out there because after about 8 a.m. to 10 p.m., we manage to fill it up. But, there are the arrival and departure banks. As long as you can fill in those shoulders and not take away

that capacity going somewhere else, that is the time to plug those airplanes in there. You can still give good connectivity to the customers coming from those smaller markets and going to their final destination to the larger markets—connecting to the bigger airplanes. But, then the example I used where you overfly Atlanta, now you saved that one additional slot because eventually you're going back to capacity. Our delays in Atlanta are approximately 8 minutes per operation across the 24-hour clock today. The new runway is forecast to get us back down to about 3 minutes. Will it go back above 3 minutes at some point? I'm quite confident that it will because the demand will be there. I would love to say a sixth runway is the answer, but I'd get shot back home if I were to say that right now. Again, we are very much real estate constrained. We are having to cross the Interstate with this runway—the new fifth runway. So, we are capacity and real estate constrained.

Shane: I think we have time for just one more.

Mike McNerney: Mike McNerney from the University of Texas. Getting back to the idea of concrete—being a pavement engineer. I wanted to talk about concrete again, as an airport pavement engineer. One of the things we talked about was maybe 5 new runways that are planned, or maybe 12 new runways that are being planned. But, the capacity constraint that is may be worse than you considered. Because, if you look at those airports that are existing and those runways that are existing, they are going to exceed their 20-year capacity or design life. Many of those airports are going to need to reconstruct at least one or two of those existing runways in that period of time. I think we need to put a little more resources into looking at ways of reducing that time. They did it at Atlanta—a very sophisticated process with a very extreme coordination in order to do that, in order to reconstruct a runway in 33 days. Previous to that, it would probably be much longer—a 3- to 6-month process.

But, there are a lot of things that we can be doing in research related to better construction techniques, better standards. The FAA has had a problem of getting adequate funding for the research in this area. We have been trying to get advisory circulars updated, and even pushed within the FAA. There are not enough resources put into that research. There is a research study that is going to take place that the FAA is going to do with the National Academy of Sciences, looking at more research related towards airports; but there needs to be a lot more.

One of the things that Mr. Boatright said that really impressed me, coming from an airline, was that he said in those 20 minutes taxiing out, the cost to our businesses was really significant. There is a direct delay cost to the airlines for usability in that taxi-out period of time or any time that they are taxiing. If you close a taxiway or close a runway, those taxi times go up. But, when we do life-cycle analysis for new construction or reconstruction, we don't take that into account. We don't take into account the actual costs that the airlines are going to be put into it. We don't take into account any additional indirect costs such as the delay to the passengers, the delay to the business traveler, and also any additional cost to our environment like additional air quality impacts because you're taxiing longer, and those sorts of things.

It would be kind of a sea change. It would be a very important step if we could do in our life-cycle analysis—if we looked at those extra additional direct and indirect costs that are borne by other than the person who is building it. In other words, you would build for maintenance-free or for better quality construction to minimize those costs. That is not something we're doing right now. It is something we could do. With the amount of money it is going to cost us to reconstruct these runways, we should look at those sorts of things.

Shane: Thank you. We've had a productive day, ladies and gentlemen. I would try to sum it up, except that I don't think I'm capable of doing it. I've heard some pretty powerful suggestions about the streamlining process. And, not just at the federal level where I think some options are obviously available—a deadline on environmental reviews at various agencies is one that comes to mind—but also at the regional and the state and the local level where so much of this planning gets done. How it is possible for the federal government to influence the quality of that process at the state level? Certainly, the federal government has influenced that process through the requirements that are in a whole host of programs for comprehensive and continuing planning. That process has become part of the process everywhere. If we need something more than that, it must mean that we will have to do something more at the federal level in order to encourage it. At least that is one of the options that I hear being discussed.

Again, there isn't any more time to dither about this issue. It is now clear that decisions are going to be made in real-time. The Secretary of Transportation, Norman Mineta, has made that absolutely clear. Our FAA Administrator has made it absolutely clear. The industry is calling for it, and passengers aren't going to tolerate much more of what they have experienced in the past few summers. So, we know some action will be taken.

I hope that this session has been a help to you and to your team, Jane, because it seems to me that TRB and FAA have assembled some terrific talent in order to bring the best and the brightest ideas to your attention. With that, unless you have anything to say at the end?

Garvey: Just a couple of comments. First of all, I thank everyone for staying with us all day. I know for a number of you this is the second session you have attended, and I appreciate that. I think Debbie said it very well when she said that one of the goals here was to really understand the complexity of the issues and to understand the different perspectives that we each bring to what is a complex problem. I think we did that very well today.

Jeff is right when he says that you identified for us some solutions. You'll see some of those in the April report that we submit to Congress as part of the environmental streamlining. But, I think we also heard loud and clear that there is no substitute for a strong local consensus and the work that is being done in Washington and what we heard from Mary Rose [Loney] and others, I think really underscore that. There is no substitute for that sort of local consensus that you can create and develop at the local level, as well. That is very, very important.

Finally, just to pick up on a comment that I think the gentleman from Boeing made a little bit earlier. He talked about there being a number of solutions. While today's session has been focused primarily on runways, we should always remind ourselves, or never lose sight of the fact, that we are pursuing this from many, many angles. There is technology and if you come to the next series, we will be talking about weather technology and so forth. But, there is technology that we are pursuing aggressively. There are certainly procedural changes that we've talked about with air traffic control. So, there are a number of options. There is no one single solution—as has been said repeatedly. But, it is all of those solutions together and all aspects of this community really pulling together that, I think, really will solve the problem in the long run.

So, thank you again for your great participation. For those of you who are here for the second time, thank you doubly, and come back for the third session. Thank you very much.

APPENDIX

Biographical Summaries

JOHN ALMOND

Austin International Airport

John Almond has a background in Civil Engineering and Airport Management. He is responsible for Airport Development for the city of Austin's Department of Aviation. He directed the planning, engineering, and construction of Austin's new airport, which opened successfully in May 1999.

Previously, Mr. Almond was responsible for the design of the expansion to San Jose International Airport, which took place from 1982 to 1990.

JOHN BOATRIGHT
Delta Air Lines

John Boatright is Vice President—Properties and Facilities for Delta Air Lines at its world headquarters in Atlanta, Georgia. His responsibilities include landlord and tenant relationships, property leasing, architectural and engineering design of facilities, construction, and administration of facilities worldwide.

Mr. Boatright has been in his present position since October 1996, having joined Delta in 1972 as a cargo service agent. In 1977 he was promoted to Facilities Engineer; to Administrative Assistant–Operations in 1987; to Regional Manager–International Stations in 1989; to Regional Manager–Europe–International in April 1991; to Director–Europe–International in October 1991; to Director–Facilities in 1992; and Director–Airport and Corporate Affairs in 1994.

A native of Swainsboro, Georgia, Mr. Boatright received the B.S. degree in Industrial Management from Georgia Southern University in Statesboro, Georgia, and his M.B.A. degree from Mercer University in Atlanta.

Active in community affairs, Mr. Boatright is President of Atlanta Airlines Terminal Corporation and Chairman of the Atlanta Airport Affairs Committee, and past Chairman of Air Transport Association Airport Affairs Committee. He is very active with the Boy Scouts of America–Atlanta Area Council, holding a position on the Executive Board. He is also Chairman of the Childhood Autism Development and Educational Foundation in addition to serving on its Board of Directors. Additionally, he is a member of the Board of Trustees and President of the Delta Air Transport Heritage Museum.

Mr. Boatright is married to the former Karen McClanahan.

JEFFREY P. FEGAN

Dallas/Fort Worth International Airport

In February 1994, Jeffrey P. Fegan was appointed Chief Executive Officer of the Dallas/Fort Worth (DFW) International Airport Board. He is the Chief Administrator and Executive Officer of the DFW Airport Board and recommends policies to the board for planning, constructing, maintaining, operating, and regulating the airport.

In November 1993, Fegan was named Deputy Executive Director of Finance and Administration where he was responsible for finance, property management, procurement, and budget. He served in this role on an interim basis from July 1993 until November 2000.

Mr. Fegan was named to the position of Director of Planning and Engineering in March 1989. He was responsible for the development of the Airport's Master Plan; administration of a planning program to promote growth and development of the airport; development of the Capital Improvement Program; development of the Airport Noise Compatibility Program; and implementation of ground transportation improvement to enhance safety and capacity. Fegan joined DFW in December 1984 as Chief Planner and was later promoted to Assistant Director.

As the Noise Abatement Officer at Westchester County Airport in New York in 1983 and 1984, Fegan was responsible for the development, implementation, and management of the noise abatement program for the airport. Fegan was in the aviation consulting business from 1978 to 1983, where he served as project manager on airport master plans for air carrier and general aviation airports, and was involved in all phases of the airport noise control plans.

Fegan received a Master of City Planning from the Georgia Institute of Technology and a B.S. in geography from Frostburg University, Maryland. He completed the Advanced Airport Management Course at the International Aviation Management Training Institute in Montreal. Representing DFW, he is past Chairman of the Board of Directors of Airports Council International–North America. Fegan is an Accredited Airport Executive, a member of the American Association of Airport Executives, American Planning Association, and the American Institute of Certified Planners.

Mr. Fegan is married and has two daughters.

JANE F. GARVEY
Federal Aviation Administration

Jane F. Garvey, the 14th Administrator of the Federal Aviation Administration (FAA) was sworn in August 4, 1997. She is the first Administrator confirmed by the Senate to a 5-year term. With an outstanding career in public service and extensive administrative experience, Garvey brings to the FAA a strong commitment to ensure the world's safest skies become even safer.

As Administrator, Garvey manages a 49,000-person agency with worldwide impact and presence in promoting aviation safety and security. The FAA regulates and oversees aviation safety and security, conducts cutting edge research and development, and operates the world's largest air traffic control system.

Administrator Garvey initiated *Safer Skies*, the U.S. aviation community's safety agenda, which focuses the agency's resources on taking the actions that safety data and analysis indicate can make the biggest difference in lowering the accident rate. She led the successful transition of the FAA's air traffic control system to January 1, 2000, with no disruptions to service. In addition, the FAA provided world leadership on Y2K transition. Under Administrator Garvey's leadership the FAA is moving forward on its phased plan to modernize the air traffic control system and has, for the first time, achieved government and industry consensus on how to proceed. To bring immediate modernization benefits, she initiated the Free Flight Phase 1 program under which the FAA reached consensus with the aviation community to deploy five specific technologies by the end of 2002.

Prior to being named FAA Administrator, Garvey was Acting Administrator of the Federal Highway Administration (FHWA). She served as Deputy Administrator of FHWA from April 1993 until February 1997. FHWA, also an agency of the U.S. Department of Transportation, has an annual budget of $20 billion and works in partnership with the states to maintain the safety and efficiency of the nation's roads and bridges. A creative leader at FHWA, Garvey chaired FHWA's Innovative Financing Initiative, which resulted in more than $4 billion in transportation investment in more than 30 states—projects that in many cases would not have otherwise been built.

Before joining FHWA, Garvey served as director of Logan International Airport, one of the nation's busiest aviation facilities. From 1988 to 1991, she was Commissioner of the Massachusetts Department of Public Works. Before that, Garvey was Associate Commissioner in the Massachusetts Department of Public Works, where she directed construction activities and developed environmental initiatives.

Garvey holds degrees from Mount Saint Mary College and Mount Holyoke College. She has participated in the Fellowship Program for Public Leaders at Harvard University.

DOUGLAS F. GOLDBERG
Landrum & Brown, Inc.

Doug Goldberg, Vice President and leader of Landrum & Brown's Facilities and Operations Planning Practice, has been involved in the planning and approval process for airport facilities for 17 years. With a background in operations research, he specializes in the assessment of aircraft operational impacts, airport and airspace operations, financial feasibility, and capacity and delay analysis. He has participated in the planning, program definition, and operational evaluation of more than 30 airports in the United States, Europe, and Asia. He is a past Chair of the Operations and Capacity Committee of the American Society of Civil Engineers and he was a two-term member of the Transportation Research Board's Committee on Airfield and Airspace Capacity and Delay. He is also an active participant on the Airports Council International–North America Technical Committee. Mr. Goldberg has provided expert testimony on behalf of several clients in the area of capacity, delay, and airside operations, and he is currently helping several major airports bridge the gap between planning and program implementation.

JEFFREY W. HAMIEL
Minneapolis–St. Paul Airports Commission

Jeffrey W. Hamiel began his career with the Metropolitan Airports Commission in 1977 as Manager of Noise Abatement and Environmental Affairs. He was promoted to Director of Operations, Airport Director, Deputy Executive Director, and has been the Executive Director since 1985. Previously, Mr. Hamiel was Executive Director of Metropolitan Airports Commission.

Mr. Hamiel was born in St. Paul, Minnesota, on March 17, 1947. He has a B.A. from the University of Minnesota with major in Geography and minors in Aerospace Studies and Speech and a master's degree in public Administration from Northern Michigan University. He pursued additional graduate study in accounting and mathematical statistics and public administration.

Mr. Hamiel is a multi-engine, instrument-rated, licensed commercial pilot. He began his career as an Air Force pilot flying several types of high-performance and transport aircraft from 1970–1977. He joined the Air Force Reserve in 1978 and retired as a lieutenant colonel, flying military aircraft for over 28 years and accumulating over 8,000 hours of experience.

Jeff is active in both the American Association of Airport Executives, has served on the Airport Council International–North America (ACI–NA) Board of Directors since 1995, and currently serves as the ACI–NA Chairman.

DENNIS M. MCGRANN

National Organization to Insure a Sound-Controlled Environment

The National Organization to Insure a Sound-Controlled Environment (NOISE) is led by Executive Director Dennis M. McGrann, a 20-year Washington insider, who was repeatedly recognized as one of the United States Congress' most influential staff members by the nationally noted publication *Almanac of the Unelected*. McGrann also serves as Director of Public Affairs for the Minnesota-based law firm Lockridge Grindal Nauen, P.L.L.P., and provides the firms' federal relations clients with unique and valuable expertise in the complex area of federal budget and appropriations processes as well as critical insights into the federal health, energy and transportation policy arenas.

McGrann served in the United States House of Representatives for over a decade in a number of key Congressional policy positions including Committee Staff Director and Chief of Staff to the Vice Chair of the Commerce Committee's Subcommittee on Health and Environment. He also served in a high-level presidential transition position in the U.S. Department of Energy and was directly responsible for department oversight of Congressionally-mandated directives.

Over the past two decades, McGrann has been engaged in many of the major federal regulatory and legislative battles, including amending the Clean Air Act, telecommunication industry deregulation, health-care reform, energy deregulation, financial market reform, and nationwide air and surface transportation reauthorizations. Both Democratic and Republican administrations have called upon him to lend his expertise and support to a host of major U.S. government high-priority initiatives.

McGrann has long been recognized as an effective advocate on behalf of client interests and has regularly received accolades from print and electronic media in those efforts. The publication, *Politics in Minnesota,* said, "Few people in Washington know their way around the maze … like McGrann does." On the nationally syndicated *Imus Show,* a commentator singled McGrann out for his efforts in helping secure $8.6 billion in disaster relief for Midwestern communities. He was recognized in the Washington, D.C., newspaper, *The Hill,* for his "role in establishing communication between Congressional Representatives and flood-ravaged areas and local officials." He was identified in the *Journal of Law & Politics* as a member of an elite group of Minnesota natives that are "among Washington insiders and wield considerable influence in Congress…"

McGrann is a native of Watertown, South Dakota, attended the Universita 'd Sacra Cuore in Milan, Italy, and pursued advanced studies at the University of Delaware in Newark, Delaware. He is a graduate of the University of St. Thomas, St. Paul, Minnesota, with MBA, M.A. and B.A. degrees.

DAVID Z. PLAVIN
Airports Council International–North America

David Z. Plavin was appointed President of the Airports Council International–North America (ACI–NA) in January 1996. As North America's "Voice of Airports," ACI–NA provides a wide range of member services as it represents 150 governing bodies that own and operate some 300 airports—from general aviation and small commercial service airports to the largest airports in the world—with a multitude of interests and priorities, throughout the United States, Canada, and the U.S. Virgin Islands. ACI–NA also represents the interests of more than 375 corporate members who serve the airport community. ACI–NA is the largest of six regions of the Airports Council International based in Geneva, Switzerland.

In November 2000, Mr. Plavin received a presidential appointment to FAA's Management Advisory Council.

Previously, Mr. Plavin served as Director of Aviation for The Port Authority of New York & New Jersey where he was responsible for the management and development of John F. Kennedy International, Newark International, LaGuardia, and Teterboro airports, and two Manhattan heliports. Together, these facilities constitute the world's leading aviation hub. During that time, Mr. Plavin was a member of the Board of the Airports Council International, worldwide, and of ACI's North American region. He joined the Port Authority in 1986 as Chief Financial Officer, and became Director of Aviation Redevelopment Programs in 1987, with responsibility for the $4.5 billion program of modernization for the airport system.

Mr. Plavin came to the Port Authority from the Jacob K. Javits Convention Center where he served as Executive Vice President for Operations. That followed 8 years at the Metropolitan Transportation Authority, where he served as Executive Director from 1981 through 1984.

Mr. Plavin holds a B.A. from Dartmouth College and a Master of Regional Planning degree from the Maxwell Graduate School of Public Affairs at Syracuse University.

GERALD J. ROPER

Chicagoland Chamber of Commerce

Gerald J. Roper is President and Chief Executive Officer of the Chicagoland Chamber of Commerce, a business organization that serves more than 2,600 members in the six-county Northeastern Illinois region by providing a strong unified voice within government, and by providing a variety of programs, services, and information that members need to successfully grow their businesses.

Roper became President and Chief Executive Officer of the Chicagoland Chamber of Commerce in 1993 following a 9-year career with the Chicago Convention and Tourism Bureau. While at the Convention and Tourism Bureau he served as the head of marketing and sales before being elected the Bureau's President and Chief Executive Officer in 1988.

Roper has been the recipient of numerous awards that have served to recognize his service to the association, convention, and tourism fields. Chief among these is the Kathy Osterman Industry Award in 1997 (presented annually by the Chicago Chapter of Meeting Planners International); the Harold Washington College Distinguished Business Leader Award in 1997; and the Roosevelt University Lifetime Achievement Award in 2000 (presented by the University's Manfred Steinfeld School of Hospitality and Tourism Management.)

Roper is also active in a number of community, civic and industry organizations. He serves as chairman of the President's Advisory Council for Harold Washington College (City Colleges of Chicago); as well as serving on the Jones Academic High School Local School council. He is a member of the boards of the International Visitors Center of Chicago, Chicago Sister Cities International Program, Creating Pride, Visit Illinois, and is on the Executive Committee of the Manfred Steinfeld School of Hospitality and Tourism Management. He is active on a number of civic advisory committees and is currently serving as chairman of the Gateway Green Committee, a citywide business initiative that leads the effort to landscape all major approaches to Chicago and Chicago-area airports. Mr. Roper is an outspoken advocate for the aviation community serving as President and Spokesman of the Midwest Aviation Coalition, an organization dedicated to preserving Chicagoland's preeminence as the aviation capitol of the world. Mr. Roper also serves on Mayor Daley's Zoning Reform Commission, working to rewrite the zoning laws of Chicago to address the needs of residents and businesses in the 21st century.

A native of Pittsburgh, Pennsylvania, he and his wife, Carol, reside in Chicago.

JEFFREY N. SHANE
Symposium Moderator
Hogan & Hartson

Jeff Shane is a partner in the Washington, D.C., office of Hogan & Hartson, L.L.P., and a member of the firm's Aviation Group. He has a domestic and international transportation practice, with a major emphasis on regulatory, legislative, and transactional issues arising in aviation and aerospace. He has focused particular attention on licensing and enforcement proceedings, regulatory compliance, aircraft transactions, rulemakings, and airport development projects.

Mr. Shane served as Assistant Secretary for Policy and International Affairs at the U.S. Department of Transportation (1989–1993); Deputy Assistant Secretary of State for Transportation Affairs (1985–1989); and in a number of other transportation-related positions.

He currently serves as Chairman of the Commission on Air Transport of the International Chamber of Commerce (based in Paris) and as Chairman of the Military Airlift Committee of the National Defense Transportation Association. From 1985 through 1989, he was Adjunct Professor of Law at Georgetown University, teaching a course in International Transportation Law.

Mr. Shane received his A.B. from Princeton University and his L.L.B. from Columbia University, where he was Articles Editor of the *Columbia Journal of Law and Social Problems*. He is a member of the District of Columbia Bar.

WOODIE WOODWARD

Federal Aviation Administration

Woodie Woodward is currently serving as the Acting Associate Administrator for Airports at FAA. Her permanent position is the Director, FAA Center for Management Development, in Palm Coast, Florida. Appointed to that position in October 1993, she is responsible for providing non-technical training for FAA supervisors and managers as well as specialized training for non-supervisory FAA employees.

Woodward also has served as Acting Chief of Staff and Acting Associate Administrator for current FAA Administrator Jane F. Garvey. She previously worked in the Southern Region as Deputy Regional Administrator. Before joining the FAA in 1987, Woodward was Chief of Staff to U.S. Senator Mack Mattingly.

Woodward holds master and doctoral degrees in administration and personnel management from the University of Kansas, and a bachelor's degree from Florida State University.

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