LEIGH FISHER ASSOCIATES
A Division of Jacobs Consultancy Inc.

555 Airport Boulevard, Suite 300
Burlingame, California 94010 U.S.A.
1.650.579.7722 Fax 1.650.343.5220

April 8, 2005

Mr. Yul McNair
Senior Manager of Business Development
Jacksonville Airport Authority
P.O. Box 18018
Jacksonville, Florida 32229

Re: Final Report, *Air Cargo Market Assessment, Jacksonville Airport Authority*

Dear Mr. McNair:

Please find enclosed 12 copies of the Final Report, *JAA Air Cargo Market Assessment for Jacksonville Airport Authority.*

This final report includes an Executive Summary as well the findings from our market assessment (submitted as a PowerPoint presentation). We look forward to working with the JAA on developing the cargo market at the airports under your control in the future.

Sincerely,

Kenneth A. Bukauskas
Associate Director

KAB/sq
Enclosure
JAX518

EXECUTIVE SUMMARY OF THE CARGO MARKET ASSESSMENT

OVERVIEW

As the prospect of global markets becomes more and more of a reality, the demand for air cargo movement will continue to grow as part of an expanding logistics system that emphasizes higher processing speeds, greater efficiency, more specialized customer services, time-definite delivery, and reduced costs. Many of the world's leading companies (manufacturers, high-tech producers, and telecommunication and information systems providers) have developed sophisticated worldwide networks that rely on air cargo to maintain production lines, increase precision of inventory management, and improve competitive positioning and customer satisfaction. These trends create an opportunistic environment for airports that have low congestion (airside and groundside), superior multi-modal access, and the ability to expand required infrastructure to accommodate mid- to long-term future growth opportunities—not typically the traditional cargo gateways, such as Los Angeles, John F. Kennedy (New York), O'Hare (Chicago), and Miami international airports.

The rapid evolution of the air cargo industry has created opportunities for the non-traditional cargo airports to significantly increase their cargo activity and its region's access to the global marketplace; it also has created an ultra-competitive environment where many airports and cities have development programs to recapture their "rightful share" of the cargo market. The Jacksonville Airport Authority (JAA) has real opportunity to expand its cargo market and has several key drivers to fuel the development: (1) an expanding (and increasingly dynamic) economy in Jacksonville, (2) non-congested airports, namely Jackson International Airport and Cecil Field, that have excellent infrastructure, roadway ingress/egress, and long-term expandability, and (3) superior access to multi-modal transportation—interstate highways (1-95 and I-10), a major deep seaport, and national railroad systems that will support the shipping community's growing need to use cost-effective transportation.

To leverage these market fundamentals, the JAA has developed a Strategic Air Cargo Action Plan that will guide the future cargo development program and increase the likelihood that the market opportunities for cargo activities are realized. Leigh Fisher Associates (LFA) assisted in the development of the Plan and completed a Cargo Market Assessment to determine the key market drivers, analyze the current demand and service patterns, assess the regional competitive airport landscape, and assess the ability of the JAA airports to accommodate additional cargo activity. This Executive Summary of the Cargo Market Assessment summarizes the components on which the JAA Strategic Air Cargo Action Plan is based.

CARGO MARKET ASSESSMENT

The air cargo industry is characterized by speed and flexibility. Oftentimes, air freight travels hundreds, even thousands of miles, on trucks before reaching an airport or airplane. The criteria on which these transportation decisions are based are driven largely by economic and customer demand. Understanding these dynamics, and identifying those segments of the air freight market that can be affected by shifts in demand/service patterns, are fundamental to the development and implementation of the JAA cargo marketing and development plan. Jacksonville's specific air cargo market demand, its competitive landscape, and various development opportunities are reviewed in the following paragraphs.

Air Cargo Industry Trends and Competitive Issues

An important component of strategic cargo marketing and planning is the identification of the air cargo industry trends and competitive issues that affect demand and capacity at the Airport. Identifying these trends and issues involves much more than simply analyzing Airport cargo activities or surveying potential service providers. Analyses of local and regional demand shifts, current air cargo operators and their corporate direction, worldwide economic conditions, and the competing factors and development strategies for air cargo volumes by competing airports must be incorporated into the development strategy.

Defining Jacksonville's Catchment Area

The Jacksonville region is known as a growing distribution center and truck consolidation center for the lower southeast United States. Since 80% of the manufactured goods that are shipped by or through Jacksonville are manufactured elsewhere, Jacksonville is not known as a manufacturing center. Imports far exceed exports, which challenges the near-term goal to develop a significant international air freight business at Jacksonville International Airport and Cecil Field (the Airports).

Given this evolving environment, identifying JAA Airports' realistic market opportunities is imperative to maximize the efficiency of the marketing program and minimize the overall manpower and cost to the JAA. In an industry as diverse as air cargo, combined with today's troubling financial/economic environment, a rifle (rather than a shotgun) approach towards marketing is not only more effective, but also more cost efficient and more likely to return positive results. A fundamental first step towards realistically defining market opportunities at the JAA Airports is to identify its market catchment area.

Traditional concentric circles or political boundaries do not convey the distance a truck can attain or the ease at which cargo crosses state and county boundaries. A more precise approach to determining the Airports' reach is to incorporate real-world transportation characteristics (truck drive-distance programs that account for interstate speeds, topography, and roadway congestion) and competing airport factors. The fact that Jacksonville is within a day's truck drive to the core of the industrial heartland of the United States is a major reason why trucks dominate the transportation in the region and it is a challenge to develop a growing air cargo business. Trucks are significantly less expensive, yet can still deliver and guarantee, high-value, time-sensitive goods door-to-door from Jacksonville to approximately one-third of the U.S. population. In light of the competitive issues discussed in the previous section and the fact that two major airports in the region accommodate large volumes of cargo (Miami and Atlanta international airports), Jacksonville's five-hour truck drive radius is determined to be the primary service region in which Jacksonville can effectively compete (see Figure 1). As Jacksonville's cargo market develops, coinciding with the attraction of scheduled international freighter service, its market reach will expand accordingly. Until that situation occurs, competitive forces indicate attention should be focused on freight activity that emphasizes regional transportation needs. Consequently, our analysis on freight activity concentrates on this five-hour area.

Regional Air Freight Generation

As mentioned previously, the Jacksonville air cargo market is significantly imbalanced towards imports. Given that air carriers require strong bi-directional freight activity to achieve desired results, we have concentrated on the export freight generation and movement in the area.

Sources of economic, manufacturing, and transportation data, such as the Florida Department of Transportation, Department of Commerce, and U.S. Census, among others, provide data that presents a good picture of the composition of the region's leading commodities. As shown in Table 1, the companies that manufacture the leading commodities employ thousands of workers in northern Florida. The production, transportation, and consumption of these commodities is a major factor in the region's economy. These data characterize the area's freight composition. However, a more precise analysis is required to determine which segments of this regional freight activity are "air-eligible" and likely to require air transportation. Leigh Fisher Associates' Freight Flow Model analyzes data to identify air freight generation as well as the leading companies that produce these goods, at the county level.

Figure 1

JACKSONVILLE 0-5 HOUR DRIVETIME RADIUS

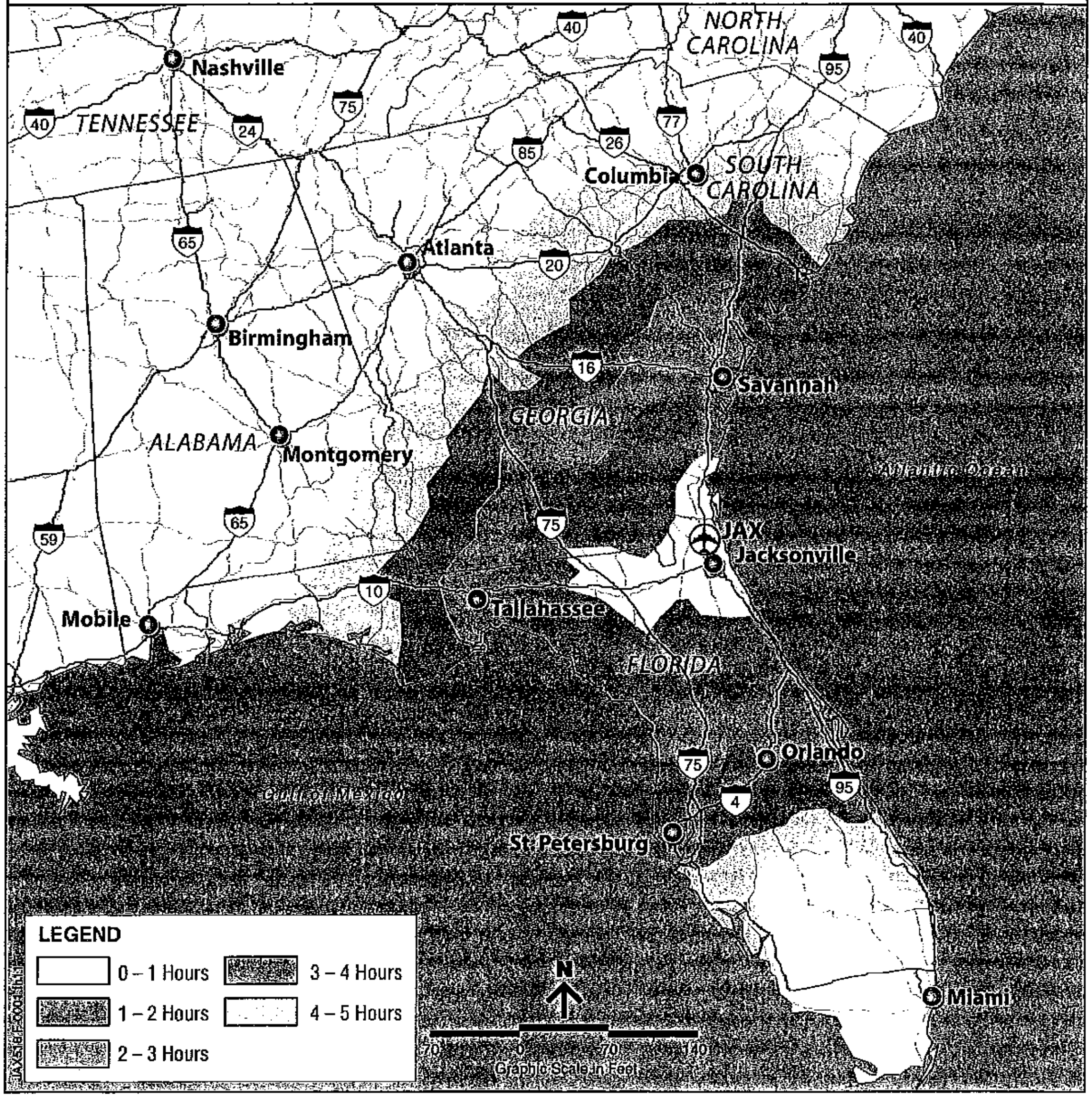

Table 1

LEADING JACKSONVILLE AREA MANUFACTURERS
AIR-ELIGIBLE PRODUCTS
October 2004

Company/institution name	Employee	City	Commodity description
Northrop Grumman Corp.	1,050	Saint Augustine	Transportation equipment
Unison Industries Inc.	600	Jacksonville	Measuring equip./instruments/photography/optical
DURA Automotive Systems Inc.	500	Jacksonville	Glass products/stone products
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Rayonier Inc.	300	Fernandina Beach	Chemicals
Ideal Division	300	Saint Augustine	Transportation equipment
Vac-Con Inc.	250	Green Cove Springs	Industrial/commercial machines and computers
Florida North Shipyards Inc.	205	Jacksonville	Transportation equipment
Unisource Worldwide Inc.	200	Jacksonville	Paper products
Mercury Luggage Manufacturing	200	Jacksonville	Leather
Gate Concrete Products Co.	200	Jacksonville	Glass products/stone products
Tech Packaging Inc.	200	Jacksonville	Industrial/commercial machines and computers
Crown Products Co Inc.	195	Jacksonville	Fabricated metal products
Corbel & Co Inc.	188	Jacksonville	Printing and publishing
Coastal Industries Inc.	170	Jacksonville	Glass products/stone products
American Coolair Corp.	160	Jacksonville	Industrial/commercial machines and computers
American Technical Ceramics	160	Jacksonville	Electronics and electrical except computer
Fishman & Tobin Inc.	150	Orange Park	Apparel from fabrics
Arizona Chemical Co.	150	Jacksonville	Chemicals
Walter Lorenz Surgical Inc.	150	Jacksonville	Measuring equip./instruments/photography/optical
GCR Tires	145	Jacksonville	Transportation equipment
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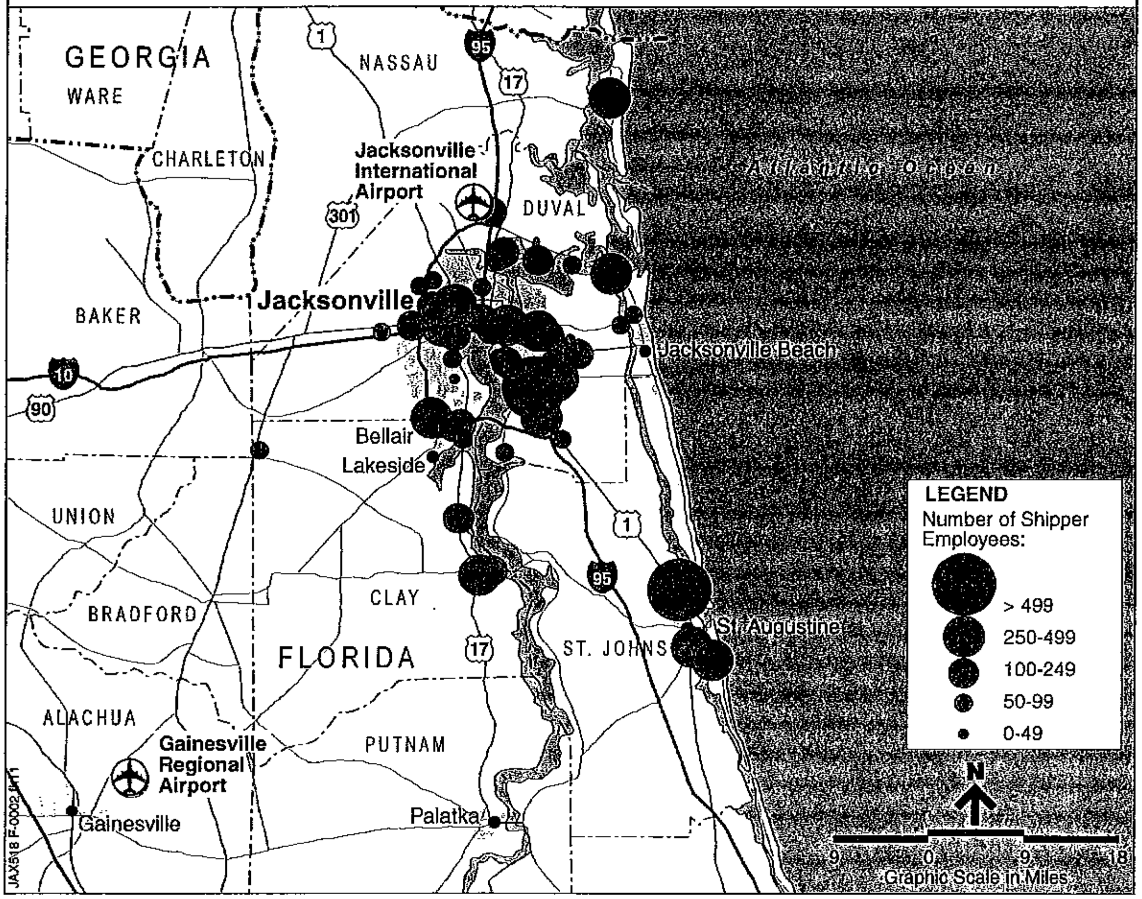
Information & Display Systems	128	Jacksonville	Jewelry/precious metals/misc. manufacturing
Trend Offset Printing Services	125	Jacksonville	Printing and publishing
IFS Chemical Holdings Inc.	120	Jacksonville	Chemicals
Sun State Marine Services Inc.	120	Green Cove Springs	Transportation equipment
Goodrich Corp.	100	Jacksonville	Chemicals
Crane Resistoflex-Aerospace	100	Jacksonville	Fabricated metal products
Breidert Air Products Inc.	100	Jacksonville	Industrial/commercial machines and computers
Northrop Grumman Corp.	1,050	Saint Augustine	Refrigeration/air conditioning and heating equip.
Unison Industries Inc.	600	Jacksonville	Magnetic and optical disks/drums and tapes
DURA Automotive Systems Inc.	500	Jacksonville	Electric lamps and bulbs
Atlantic Dry Dock Corp.	500	Jacksonville	Petroleum refining
Colomer USA	350	Jacksonville	Internal combustion engines
Mainship Corp.	327	Saint Augustine	Motor vehicle parts and accessories

By incorporating these data with a Geographic Information System platform, detailed maps are generated that indicate where air freight is produced. These products have proven valuable in identifying specific marketing targets—and translate directly into future direct airline marketing presentations. In the past, airline management has stated that these data are influential in the route planning decision-making process. Figure 2 illustrates the regional perspective of the leading producers of air-eligible freight in the greater Jacksonville area.

Figure 2

JACKSONVILLE AREA-ELIGIBLE SHIPPERS



During our in-field research, many of the freight forwarding firms described an increasingly optimistic outlook for cargo growth in the region and were keen on the multi-modal potential (air and seaport) with special emphasis on the Puerto Rico and Caribbean markets.

The integrated carriers also discussed regional growth prospects. These companies have diversified their service offerings and now provide a broad-range of surface transportation options. Jacksonville is seen as a good location for serving the lower southeast market. In fact, UPS management mentioned that the company plans to begin direct Puerto Rico service (daily B-757 aircraft) from Jacksonville International Airport in the late spring of 2005.

The cargo generation and distribution analysis indicates that Jacksonville's economic development is strong and incorporates an increasing amount of companies that rely on expedited transportation. While these data and trends portend a developing critical mass of air cargo activity, the competitive forces in the Jacksonville catchment area are extremely strong.

Competitive Issues

While there is a growing amount of freight activity in the Jacksonville area, there is a high degree of competition from other airports that are currently attracting a large proportion of the locally generated freight activity. As the logistics community understands, the freight forwarders and logistics providers are attracted to the relatively cheap cargo capacity that exists in the bellies of the passenger aircraft, particularly in the widebody international flights. Accordingly, the traditional passenger gateways, Los Angeles, Chicago, and New York (John F. Kennedy) international airports, are also some of the world's leading cargo airports. Unfortunately, Miami and Atlanta international airports are within 350 miles of Jacksonville.

Our leakage analysis indicates that, of the approximately 175,000 tons of air cargo produced in the Jacksonville area, over 100,000 tons is "leaked" away to competing airports. As indicated on Figure 3, a tremendous amount of cargo activity is accommodated in the State of Florida but also as far away as Los Angeles, New York's John F. Kennedy, and Chicago's O'Hare international airports.

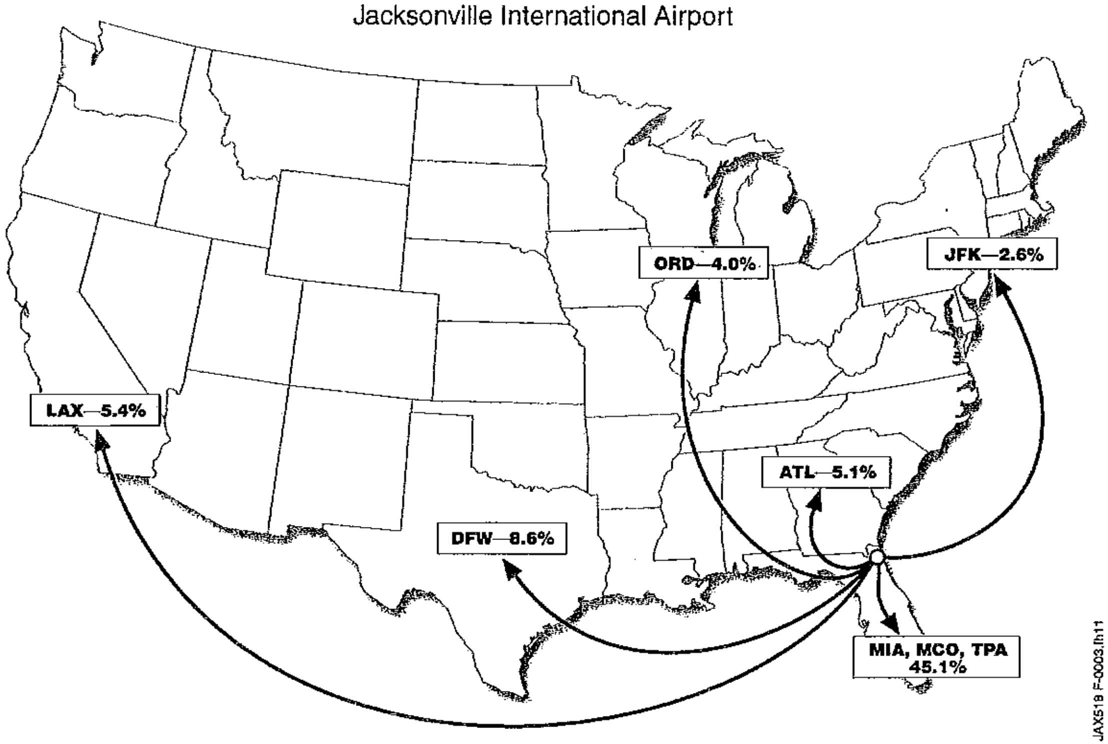
The amount of air-eligible cargo activity that is currently being trucked away from Jacksonville to other airports is significant; however, the fluid nature of air cargo, the growth in regional economic activity, and the ability of the JAA Airports to efficiently accommodate additional cargo volumes creates an opportunity for the JAA to recapture regional freight flows and realize the economic impact to the region of a growing air cargo program.

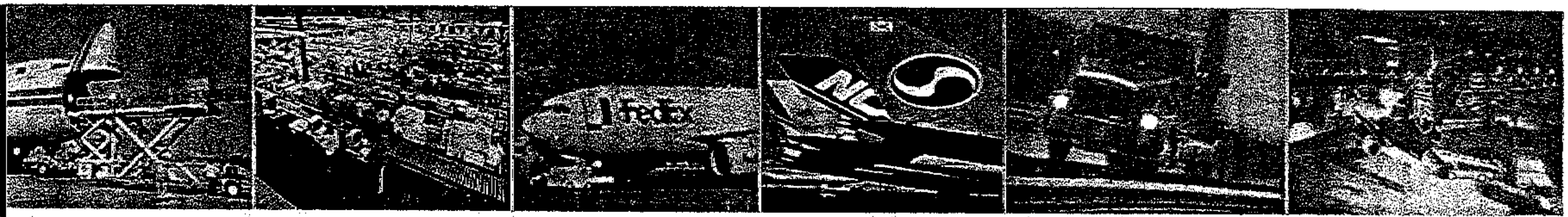
The JAA Strategic Air Cargo Action Plan incorporates the current market demand, capacity issues, and the key growth drivers in Jacksonville into a market development plan that will assist the JAA in translating the market opportunities into cargo activity and economic benefit to the JAA Airports and the region.

Figure 3

JACKSONVILLE AREA CARGO LEAKAGE

Jacksonville International Airport





Presentation

JAA Strategic Air Cargo Action Plan

Leigh Fisher Associates
and
Jacksonville Airport Authority
Jacksonville, Florida

April 8, 2005

LEIGH FISHER ASSOCIATES
A Division of Jacobs Consultancy Inc.

JACKSONVILLE
AIRPORT AUTHORITY

Agenda

Introduction

Air Cargo Market Assessment

- Industry Overview
- Air Cargo Demand Analysis
- Market Service Analysis

Air Cargo Strategic Development Plan

- Action Plan
- Recommendations/Key Targets
- Next Steps

Introduction

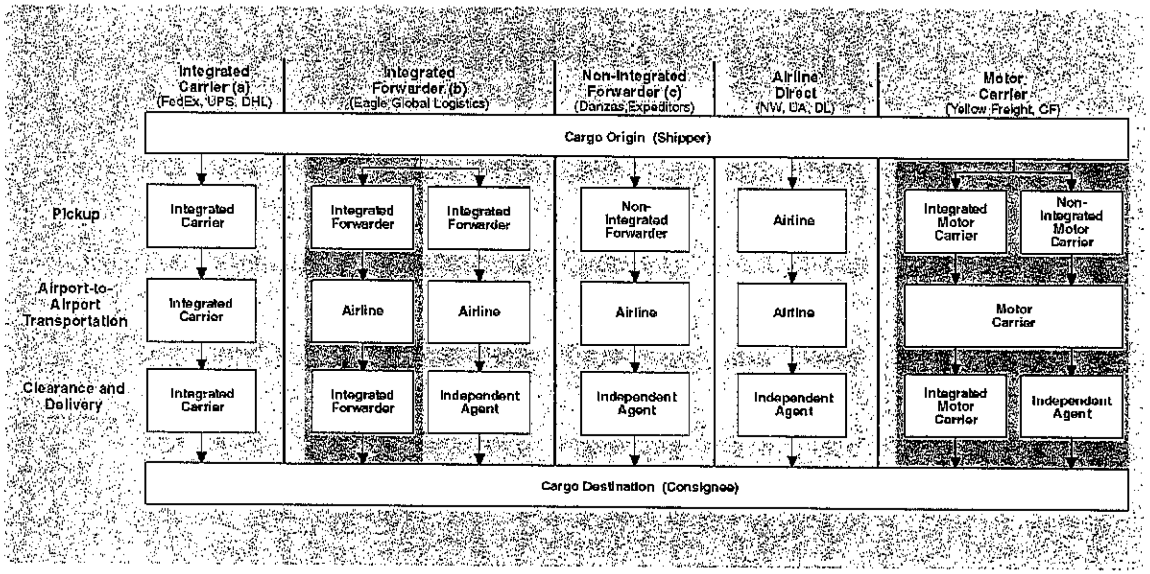
- The air cargo industry is more dynamic than the passenger market (cargo often travels thousands of miles before loading onto an airplane)
- Regional economic and industrial activity is changing and increasing numbers of U.S. cities and their economic development organizations are targeting cargo/manufacturing activity
- Successful air cargo marketing programs require the involvement of many regional entities, however, most airports and cities do not communicate and coordinate efforts
- Cargo development programs that produce results understand that there are three primary targets – air carriers, logistics providers, and shippers
- The JAA Air Cargo Action Plan is based from a cargo market assessment and an evaluation of the opportunities and challenges as they relate to the primary targets in the Jacksonville cargo market

JAA Air Cargo Development = Coordinated Development Approach

AIR CARGO INDUSTRY OVERVIEW

Air Cargo Industry Overview
Key Cargo Operators/Role Within Cargo Industry

SERVICES AND SERVICE PROVIDERS INVOLVED IN DISTRIBUTING AIR CARGO



LEGEND

U.S. Domestic Market only

Notes: (a) Integrated carriers are all-cargo carriers that own and operate all the equipment and services necessary to provide complete door-to-door customer services.

(b) Integrated forwarders are companies who own, or partially own, components and services necessary to provide complete door-to-door customer services, but also outsource/utilize logistical assistance in particular markets.

(c) Non-integrated forwarders are logistics providers who are non-asset based companies. These companies consolidate shippers freight and arrange complete transportation services for the end users.

Source: *Hartford's World Wide Shipping Guide* and Cass Information Systems, Inc.

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- **The combination of several key service providers accommodates the entire industry**
  - **The integrated carriers have grown to dominate the domestic market over the past 20 years**
  - **Freight forwarders control approximately 75% of the world's international freight activity**
  - **Logistics providers, especially the integrated forwarders, are growing rapidly as supply chain service providers**
  - **Increasing the freight consolidations (of all types) is critical to developing an airport's cargo market**

Air Cargo Industry Overview
Airlines and Their Market Characteristics

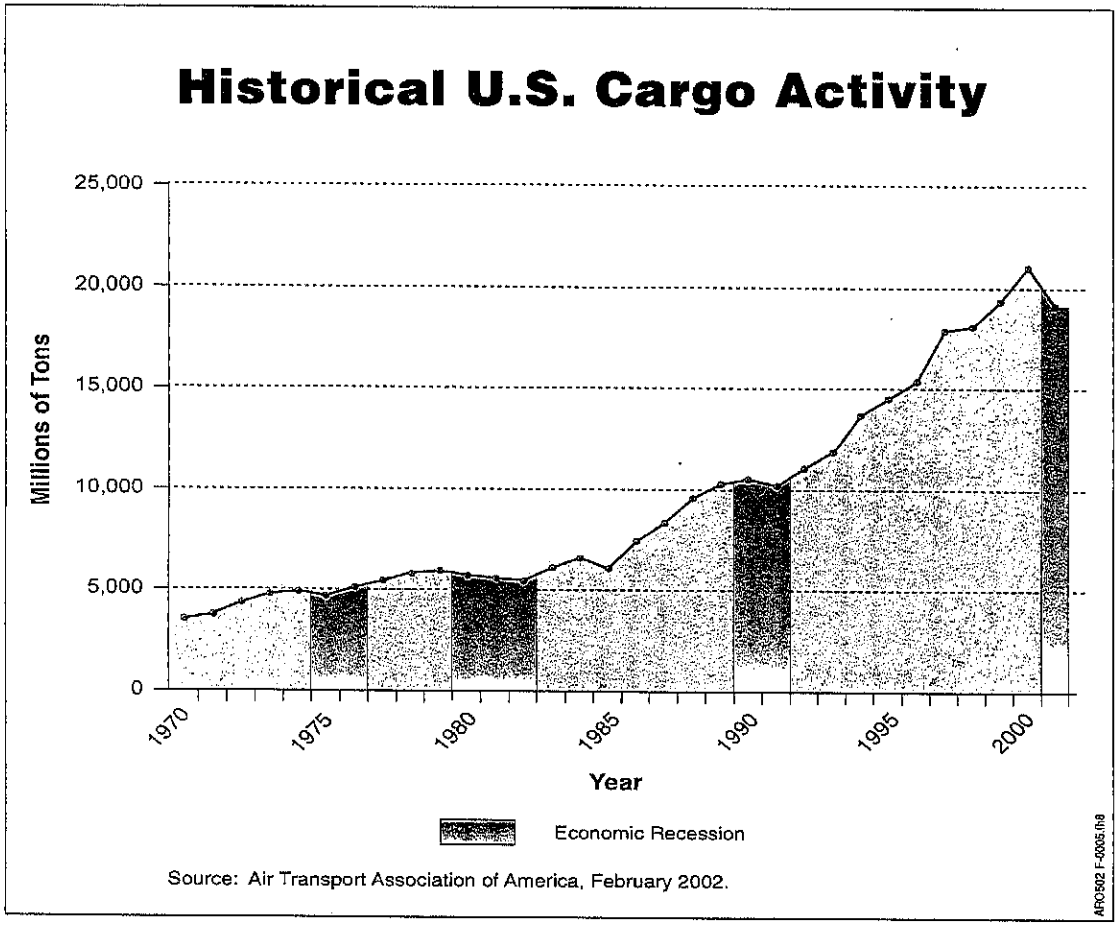
AIR CARGO CARRIER TYPES AND THEIR BUSINESS CHARACTERISTICS

Air cargo carrier types	Characteristics	Illustrative carriers	Customers	Desired airport characteristics
Belly	Baggage holds of passenger aircraft	Delta, Continental, US Airways	Wholesale, mail, retail	Passenger airport
Mixed	Baggage holds of passenger aircraft and main decks of all-cargo aircraft	Northwest, United, Lufthansa, EVA	Wholesale, mail, retail	Passenger airport
Integrated	Main decks of all-cargo aircraft	FedEx, UPS, DHL	Retail	Airport near population
All-cargo	Main decks of all-cargo aircraft	Challenge Air Cargo, Cargolux, Evergreen	Wholesale	Remote Airport

- **Airlines that transport air cargo have significantly different characteristics – and ability to use different types of airports**
  - Belly and Mixed cargo carriers must operate from passenger gateways
  - Integrated carriers would prefer to operate at an uncongested facility but require proximity to customer demand
  - All-cargo carriers can effectively conduct business at a remote facility (Cecil Field)
  - Freight forwarders are the key to all-cargo activity

Air Cargo Industry Overview

Historical Perspective on Air Cargo Growth



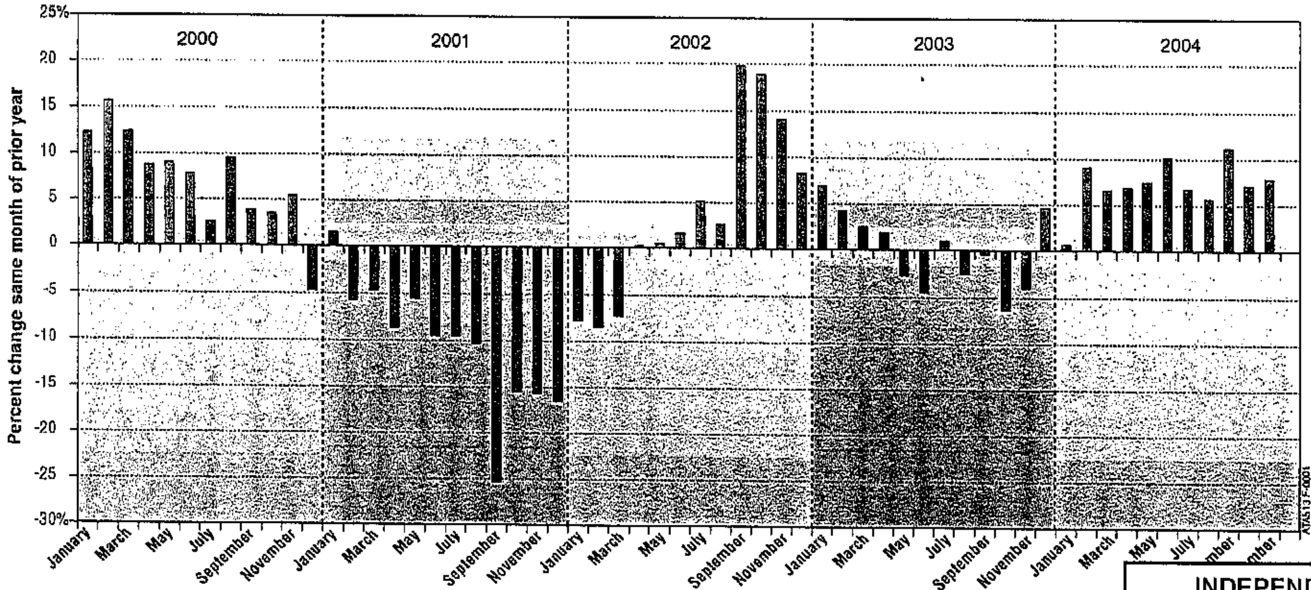
Source: Air Transport Association of America, February 2002.

- The recent downturn in cargo activity, and the aviation industry in general, is not unique
- Historical temporary periods of decline
  - Economic recession
  - Other events (Gulf War)
  - Followed by resumption of long-term cargo growth
- During these periods of slowdown, the shipping industry is required to address inefficiencies in system
- Proper planning and market development efforts are required to react to new opportunities

Air Cargo Industry Overview

Recent Trends and Forecasts of Air Cargo Growth

RECENT TREND—CARGO TON-MILES



Source: Air Transport Association.

- The cargo industry has already experienced a bounce off of the bottom and is resuming growth

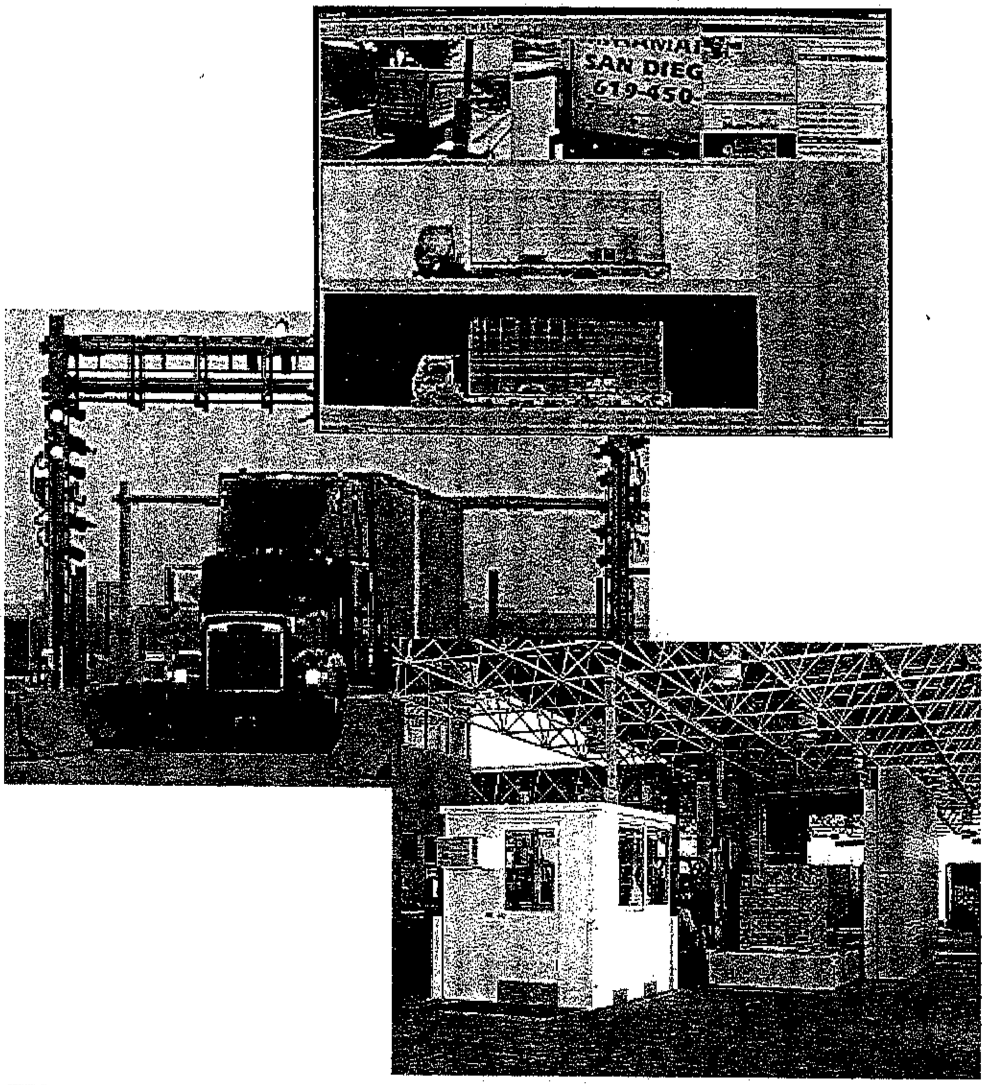
- Independent forecasts suggest moderate long-term growth rates
- The major cargo gateways (LAX, JFK, ORD, MIA) are not growing as quickly as some of the smaller markets and alternative cargo airports

INDEPENDENT AIR CARGO GROWTH FORECASTS
Worldwide Growth Rates

	Forecast period	Annual growth rate
Airbus *(a)*	2003-2023	5.8%
Boeing (b)	2003-2023	6.2%
FAA *(c)*	2003-2014	5.0%

(a) 2003 Global Market Forecast.
(b) 2004/2005 Market Outlook
(c) FAA Forecast, 2003-2014.

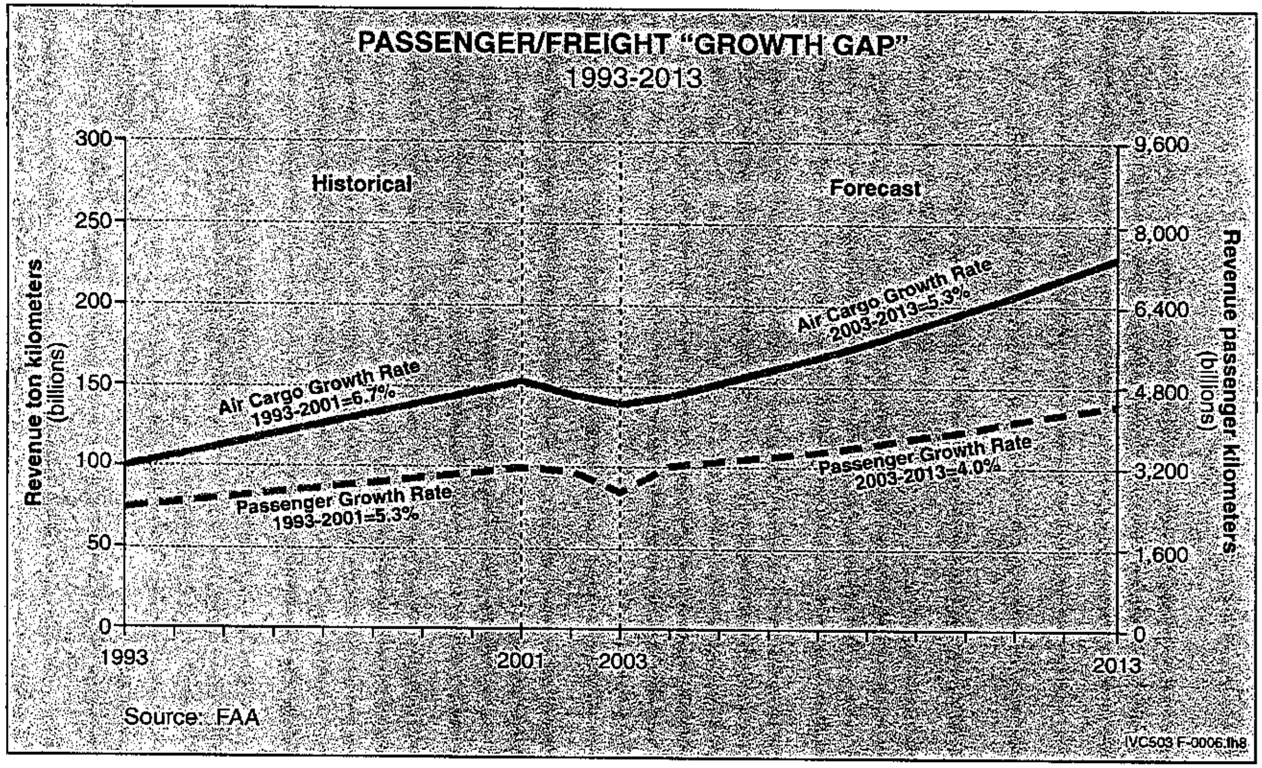
Air Cargo Industry Overview
Security Implications



- **Increased security equates to additional time**
  - Air cargo is driven by time-sensitive shipments
  - Many companies are built around expedited transportation
  - Growing competition by different modes of transportation will reduce air transportation if increasing delays occur
- **Passenger airline "belly capacity" could be constrained**
- **Security enhancements**
  - Automated Gate Systems (AGS)
  - Vehicle and Cargo Inspection System (VAICS) II
  - Pallet VAICS
- **Uncongested airports could become invaluable assets to the air cargo industry**

Air Cargo Industry Overview

Air Cargo and Freighter Aircraft

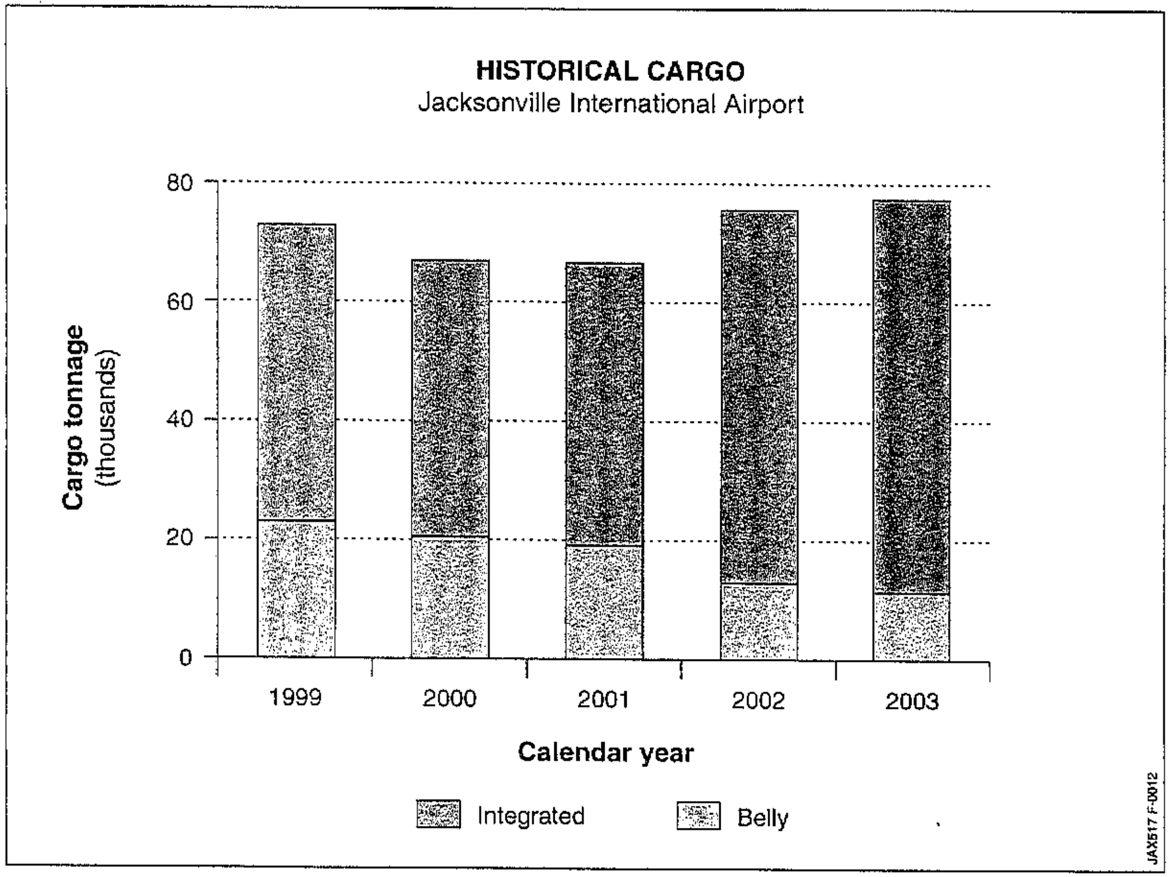


- **The passenger/cargo "growth gap" indicates continuing use (and growth) of all-cargo aircraft**
  - Air cargo growth rates have exceeded those of passenger over the past decade
  - Forecasts that take the recent economic downturn and implications from increased security requirements into account continue to predict faster growth rates for cargo
  - Passenger airlines will not add additional capacity to accommodate cargo – the "gap" can only be made up with freighter aircraft activity

AIR CARGO DEMAND ANALYSIS

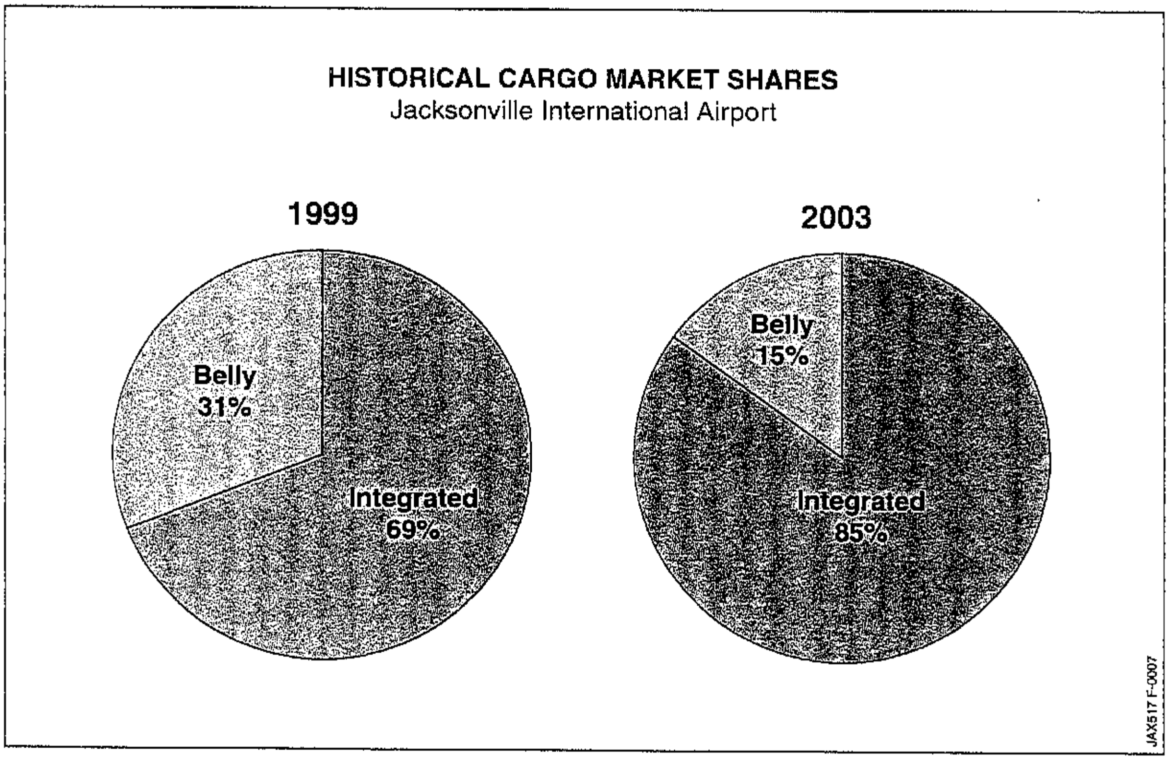
Market Demand Assessment

Jacksonville Historical Cargo Data



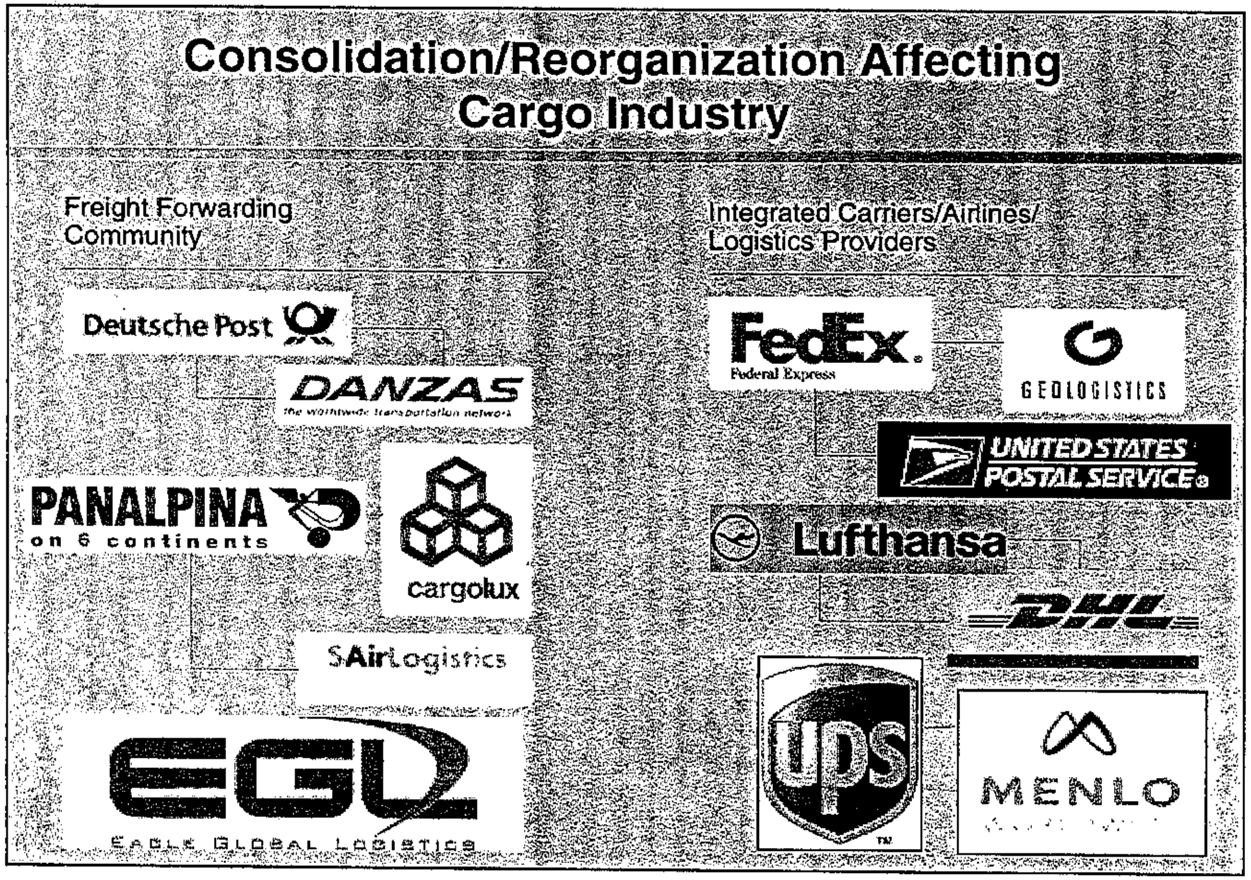
- **The Jacksonville cargo market has recovered from the economic slowdown and has grown 8% per year since 2001**
- **The JIA cargo market has several key drivers for future growth**
  - Regional economic activity is strong and is attracting companies who rely on expedited transportation
  - The freight forwarding community is reporting strong growth in all modes of transportation
  - The region's ability to accommodate facility needs of entire intermodal spectrum
  - Current truck volumes can translate into air activity

Market Demand Assessment
Jacksonville Historical Cargo Data



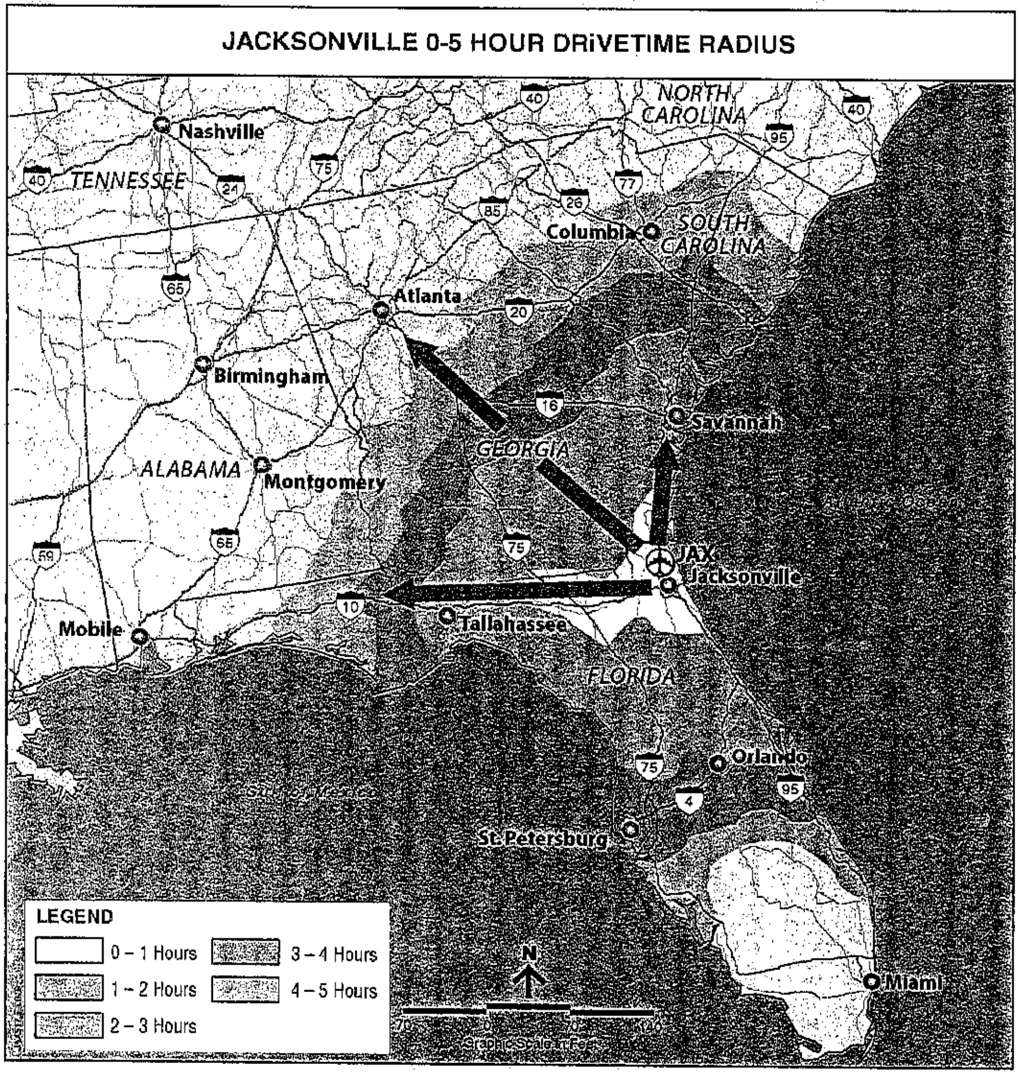
- **The integrated carriers have taken significant market share over the past 5 years**
- **Two main factors behind recent market development**
  - The integrated carriers have been in an acquisition frenzy to expand service offerings
  - The expansion of the regional jets (and a lesser degree, the low cost carriers) has reduced the available belly cargo capacity
- **As the regional economy develops, it will be important to increase freight forwarding consolidations and direct freighter service**

Market Demand Assessment
Industry Shifts Affecting Future Market



- The largest transportation providers continue to add to their services and networks
- Through acquisitions, fewer (more powerful) companies represent market opportunities for alternative airports
- Many of these multimodal companies are beginning to expand multi-modal services in Jacksonville
- The DHL/ABX development will likely have impact on JIA cargo market

Market Demand Assessment
Jacksonville's Catchment Area



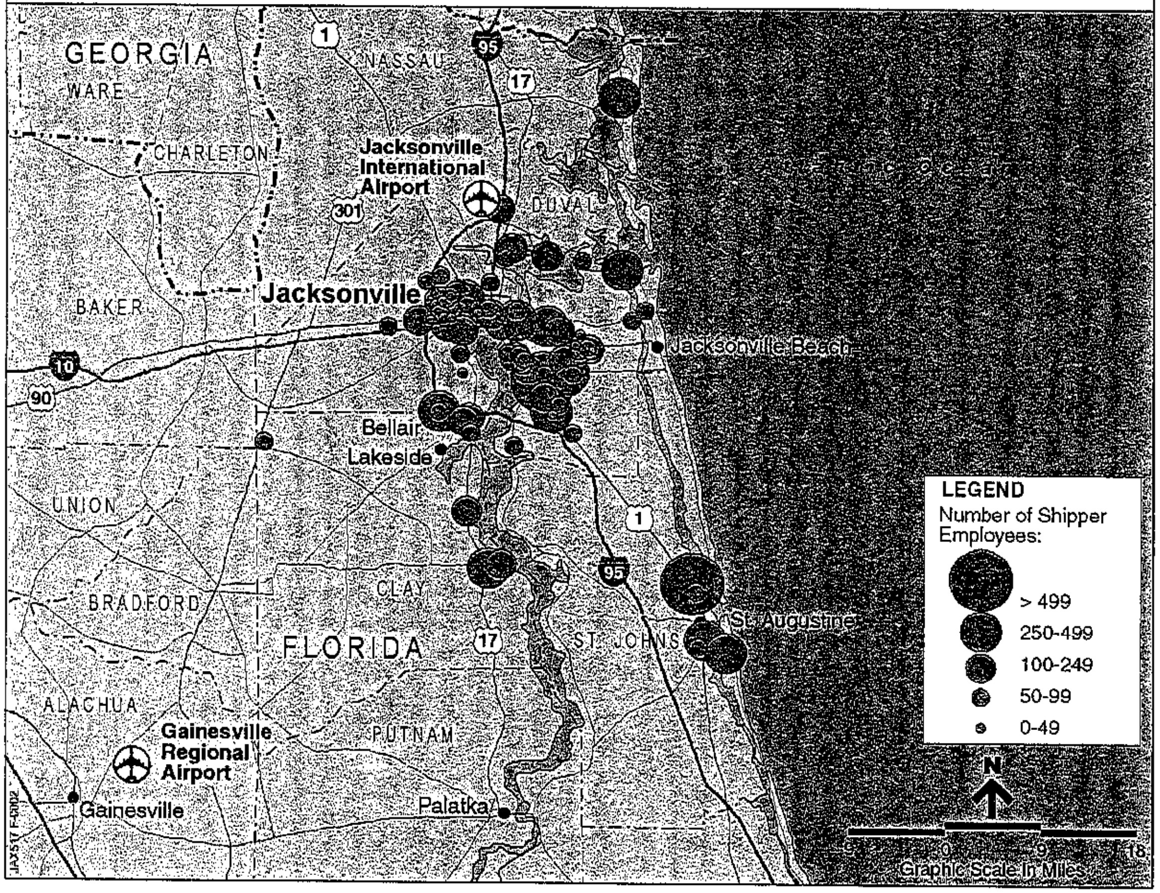
- JIA's catchment area is currently limited to 1-2 hour drivetime due to locally generated volume of air cargo demand
- The potential exists to expand to the 5 hour (and even beyond) as additional critical mass gathers, driven largely by the forwarders and consolidators
- Jacksonville sits at the nexus of major highways to the north, west, and the midwest and the multi-modal infrastructure can stimulate cargo demand and shipping

Market Demand Assessment

Regional Cargo Market Demand

Figure X

JACKSONVILLE AREA-ELIGIBLE SHIPPERS



- A growing amount of cargo demand in the greater Jacksonville area
- Air-eligible shippers are locating throughout the region and rely heavily on expedited transportation
- Critical mass of locally generated cargo is essential to expanding Jacksonville cargo market
- Company shipping managers can affect airport choice for movement of their product

Market Demand Assessment
Regional Cargo Market Demand

Figure X

JACKSONVILLE AREA-CHEMICALS AND MEASURING EQUIPMENT/ INSTRUMENTS/PHOTOGRAPHY/OPTICAL SHIPPERS

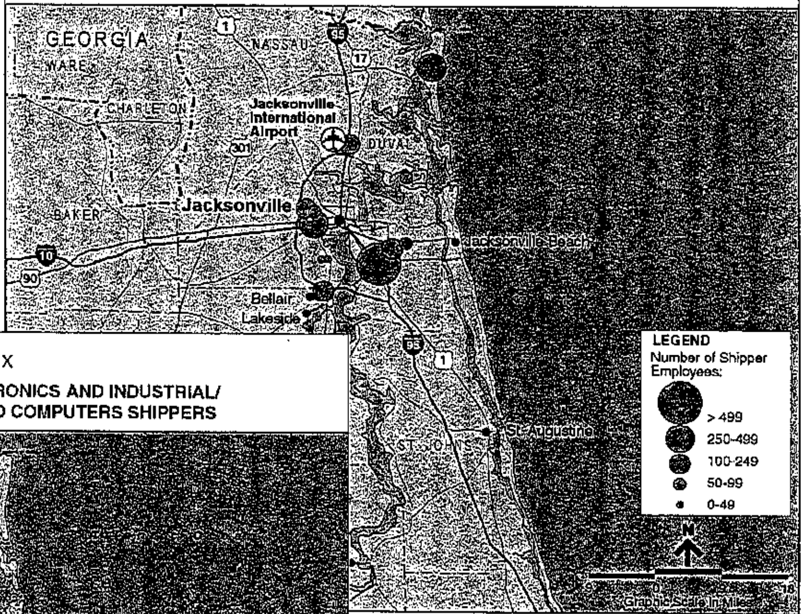
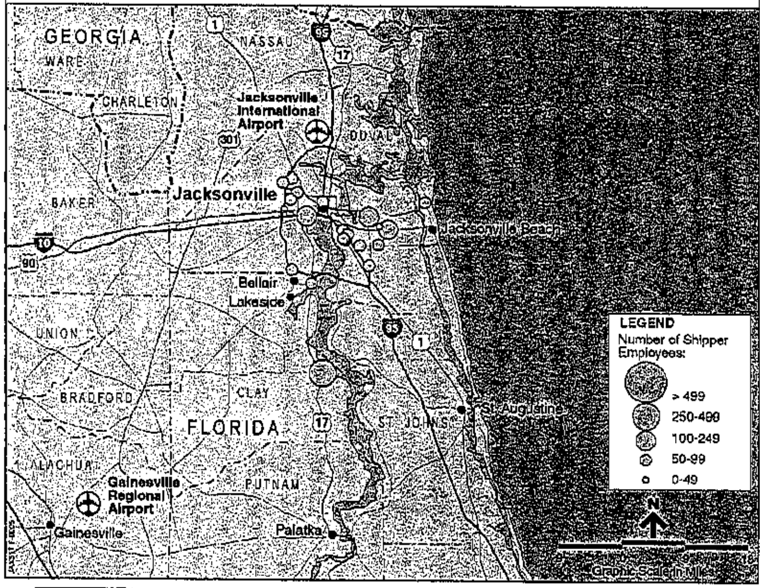


Figure X

JACKSONVILLE AREA-ELECTRONICS AND INDUSTRIAL/ COMMERCIAL MACHINES AND COMPUTERS SHIPPERS



- There are several key industry sectors that produce (or import component parts/ingredients) high-yielding products in the region
- A consolidated effort between the City and the JAA will enhance likelihood of attracting additional air-eligible producers
- Airports free from groundside and airspace congestion (and offers efficient customs clearance) will provide a valuable "relief" valve from congested gateways

Market Demand Assessment

Key Air-Eligible Shippers

Table 1
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Air-Eligible Products
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Company/Institution Name	Employee	City	Commodity Description
Northrop Grumman Corp	1,050	Saint Augustine	Transportation equipment
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BellSouth Advertising & Publ	300	Jacksonville	Printin and publishing
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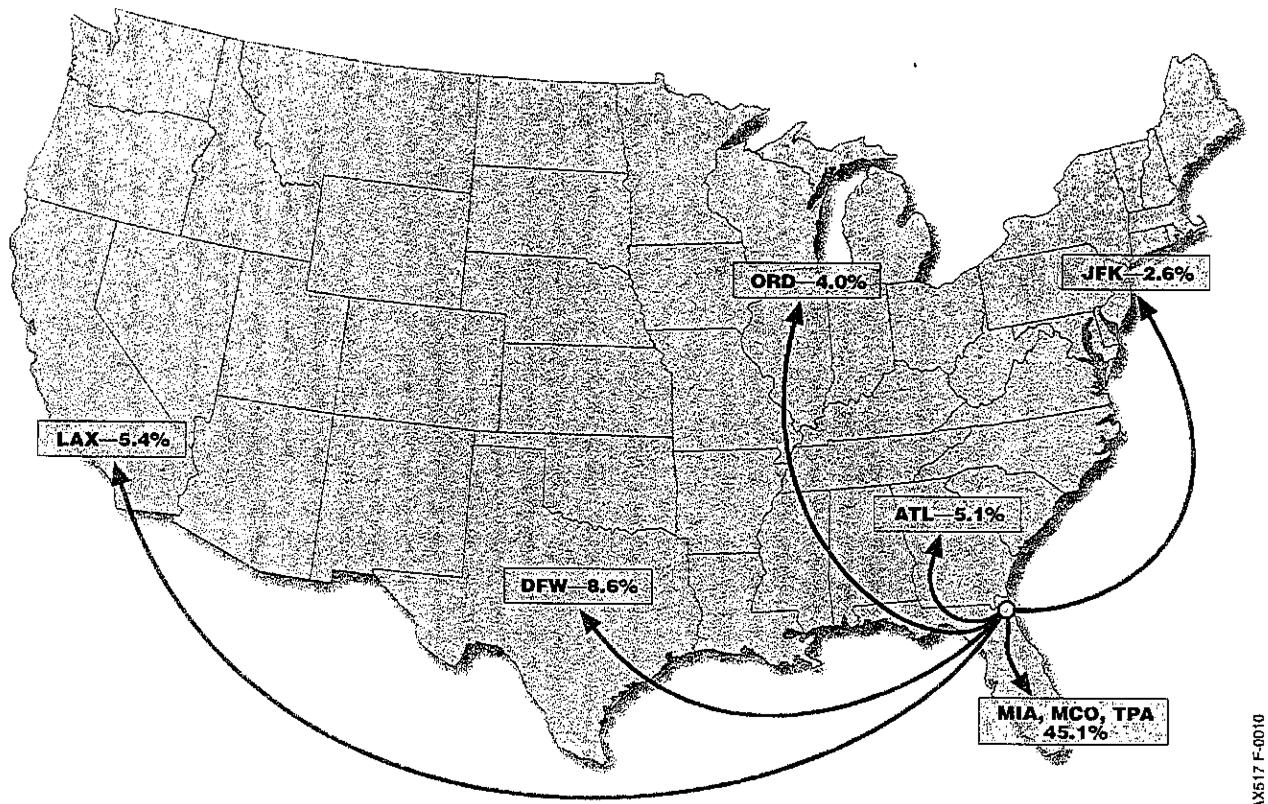
Atlantic Dry Dock Corp	500	Jacksonville	Petroleum Refining
Colomer USA	350	Jacksonville	Internal Combustion Engines
Mainship Corp	327	Saint Augustine	Motor Vehicle Parts & Accessories

- **Jacksonville's economy is changing and a growing base of shipper's who rely on expedited shipping have located in the region**
- **Several key industry sectors are emerging**
  - Transportation Equipment
  - Ophthalmologic goods
  - Aircraft parts (Cecil)
  - Industrial/commercial equipment
- **Competing airports are all vying for their "share" of the freight activity in the region**

Market Demand Assessment
Leakage Analysis

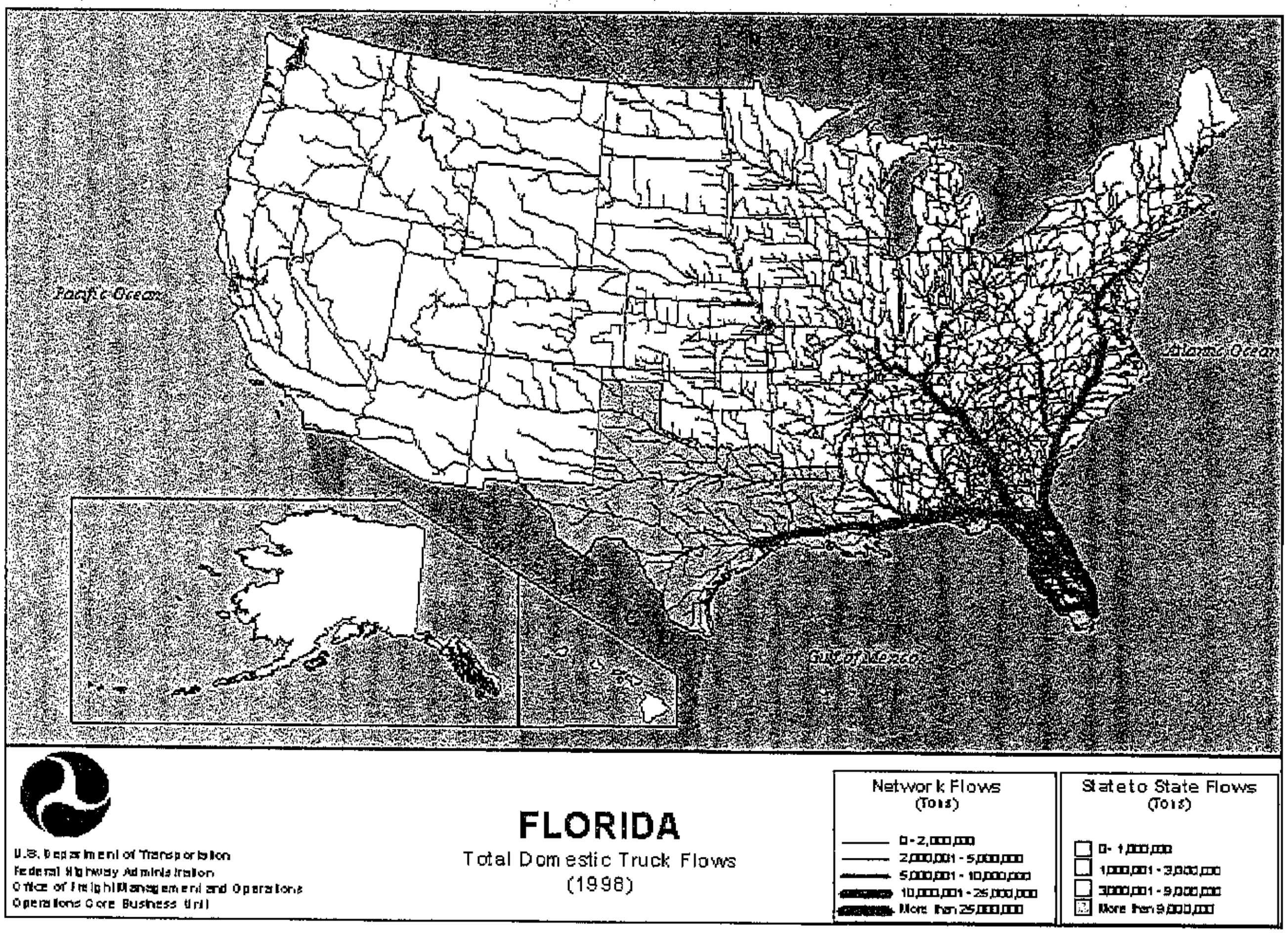
JACKSONVILLE AREA CARGO LEAKAGE
Jacksonville International Airport



- A large proportion of Jacksonville's air eligible production is being trucked to other airports
- Our analysis suggests that approximately 175,000 tons of air cargo is produced within the JIA catchment area
- Jacksonville's cargo leakage is substantial (over 100,000 tons annually) and almost 50% is accommodated in the state of Florida

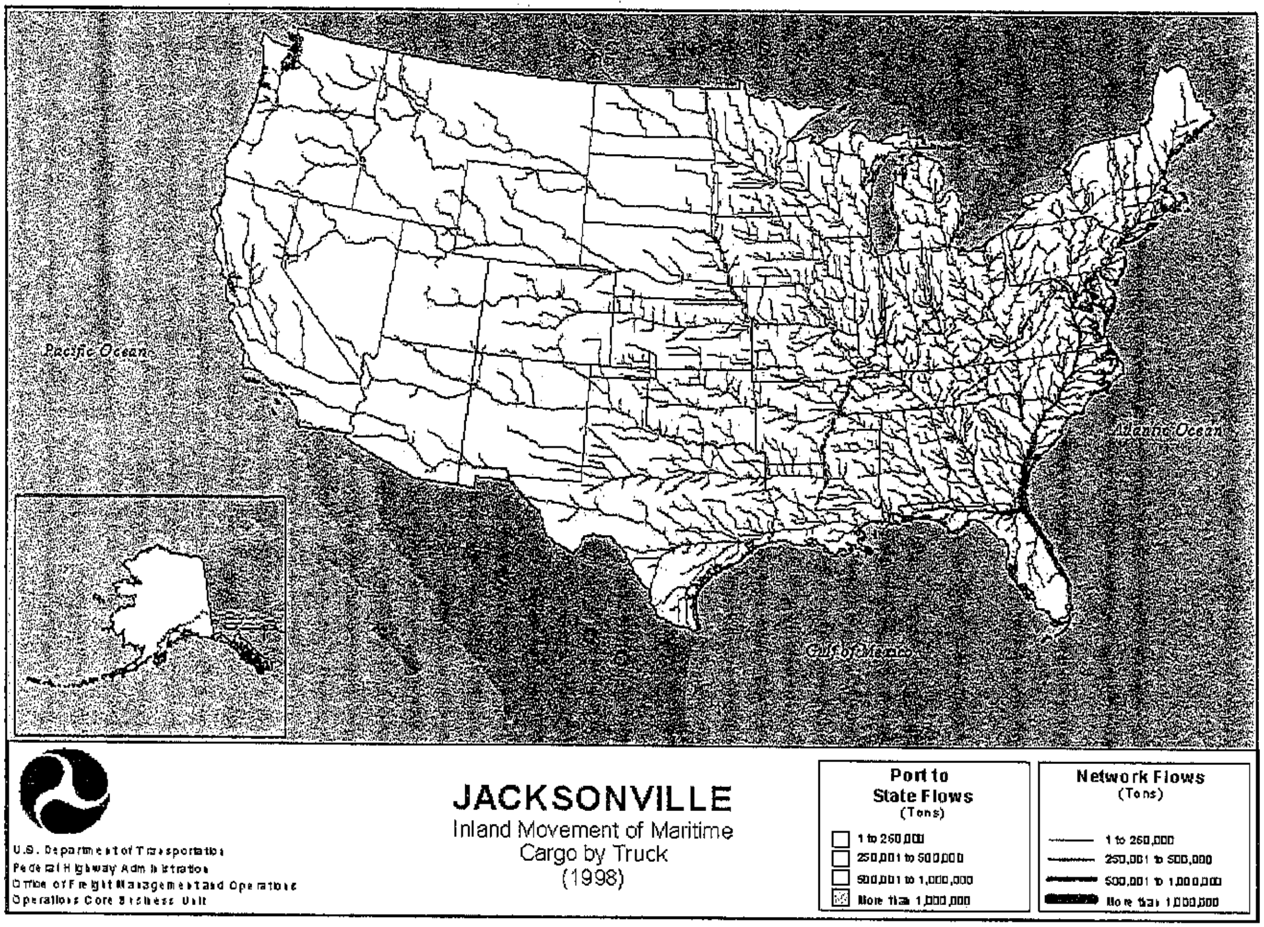
Market Demand Assessment

Florida Cargo Trucking Activity



- I-95, I-10, and I-75 are the primary "trunk" routes for both Florida generated/consumed and MIA cargo activity
- From a logistics standpoint, Jacksonville is at the nexus of routes to the NE, west coast, and midwest
- As the logistics providers become increasingly multi-modal, strategically located consolidation points will prove vital to future success

Market Demand Assessment
Truck Movement – Port Activity

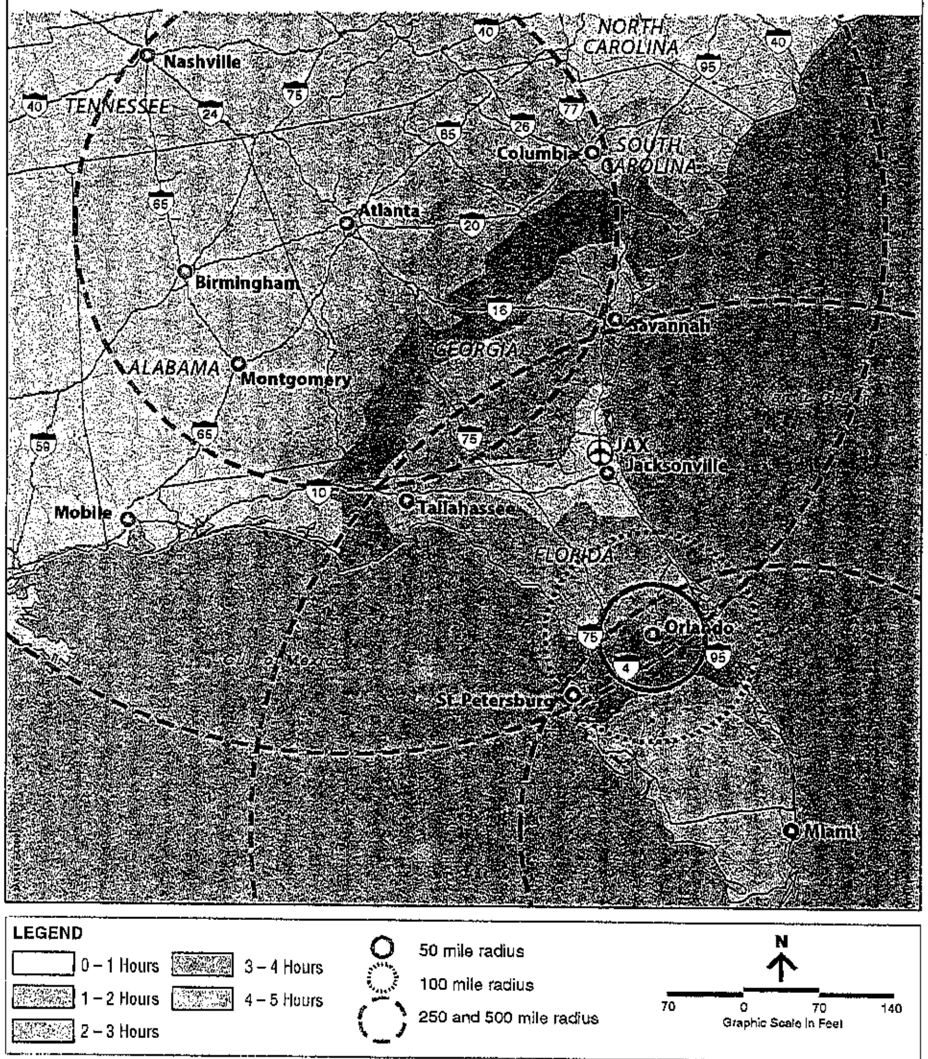


- Similar to the passenger market, Jacksonville has strong port activity and JAA strategy should embrace multi-modalism opportunities
- Growth in cargo activity (in general) will always be beneficial to the air cargo future
- As the graphic illustrates, trucking from the port activity covers large portion of the country
- As the air cargo market develops, similar patterns will emerge

Market Demand Assessment

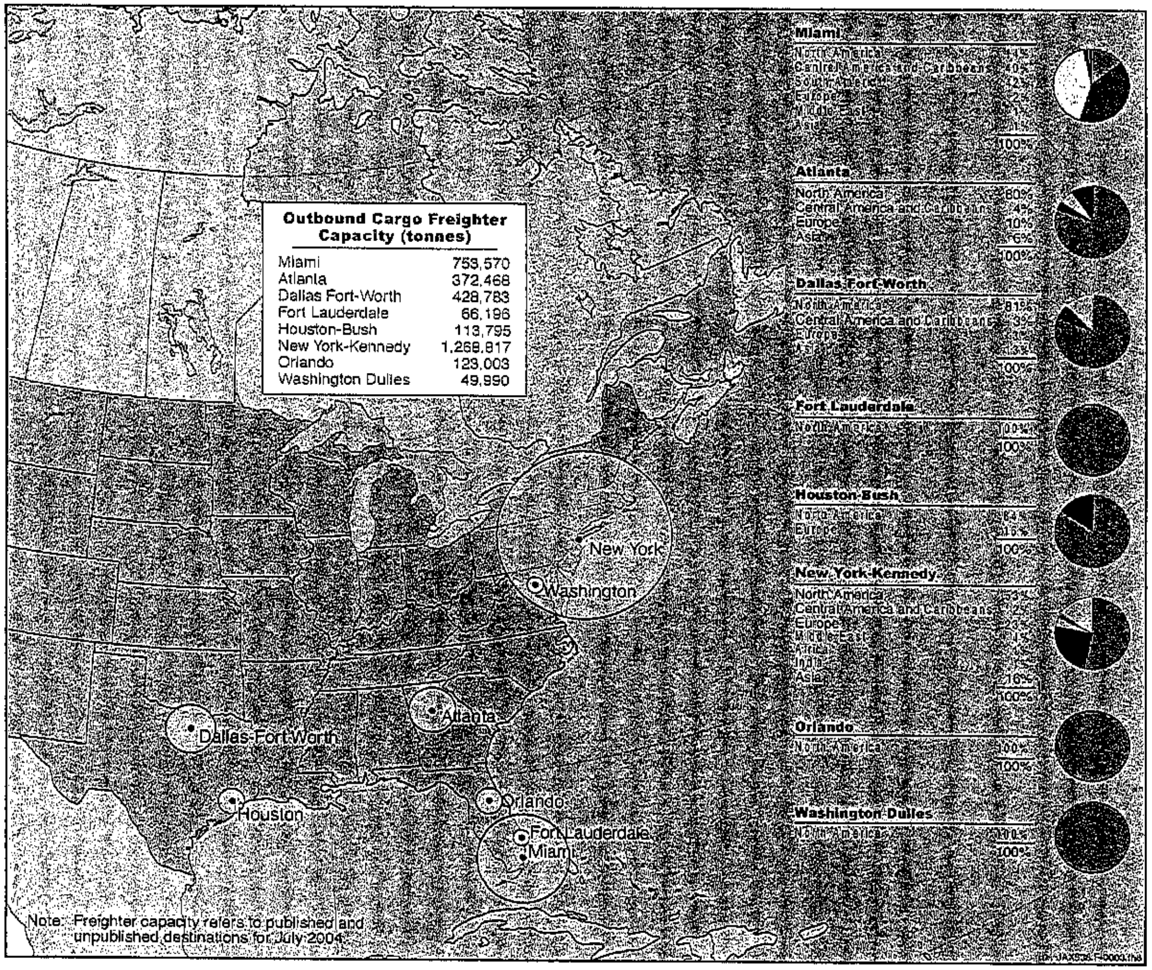
Regional Cargo Service – Airport Competition

JACKSONVILLE 0-5 HOUR DRIVETIME RADIUS



- Traditional cargo gateways have had tremendous "gravity pull" due to their available capacity
- Atlanta and Miami consider the Jacksonville market as their own
- As discussed earlier, some serious shifts to this traditional model are taking place
- Freight forwarding community and logistics companies are key to Jacksonville's future cargo market
- Jacksonville could be very well situated to take advantage of these opportunities

Market Demand Assessment
Regional Cargo Service – Airport Competition



- These data do not include integrated carrier capacity (not published)
- Stated earlier, the key to all-cargo (and international) activity are the forwarding and logistics companies
- Marketing efforts and local development programs can have positive affect on freight consolidations
  - Direct marketing material can be used by JAA, Jacksonville economic development efforts, and the forwarding and logistics companies

Market Demand Assessment
Comparative Airport Analysis

COMPARISON OF AIRPORT ACTIVITY AND AIR CARGO FACILITIES FOR SELECTED AIRPORTS

Airport	2003 Activity Total Passengers *(a)*	2003 Activity Total freight tons (metric tons) *(a)*	Air cargo facilities *(b)* (square feet) Warehouse	Air cargo facilities *(b)* (square feet) Ramp	Aggregate cargo building utilization (tons per sq. feet)	Airport area (acres) *(c)*
Jacksonville	**4,883,329**	**70,650**	**200,000**	**775,000**	**0.35**	
Miami	29,595,618	1,637,278	2,700,000	3,700,000	0.61	3,230
Atlanta Hartsfield	79,086,792	798,501	950,000	1,500,000	0.84	3,750
Dallas/Fort Worth	53,253,607	667,574	2,600,000	2,283,000	0.26	18,076
Fort Lauderdale	17,938,046	156,449	n.a.	n.a.	n.a.	1,360
Houston-Bush	34,154,574	381,296	880,000	2,550,000	0.43	7,660
New York – Kennedy	31,732,371	1,626,722	4,100,000	n.a.	0.40	4,930
Orlando	27,319,223	193,037	750,000	n.a.	0.26	14,500
Washington Dulles	16,767,767	285,352	400,000	1,000,000	0.71	11,000

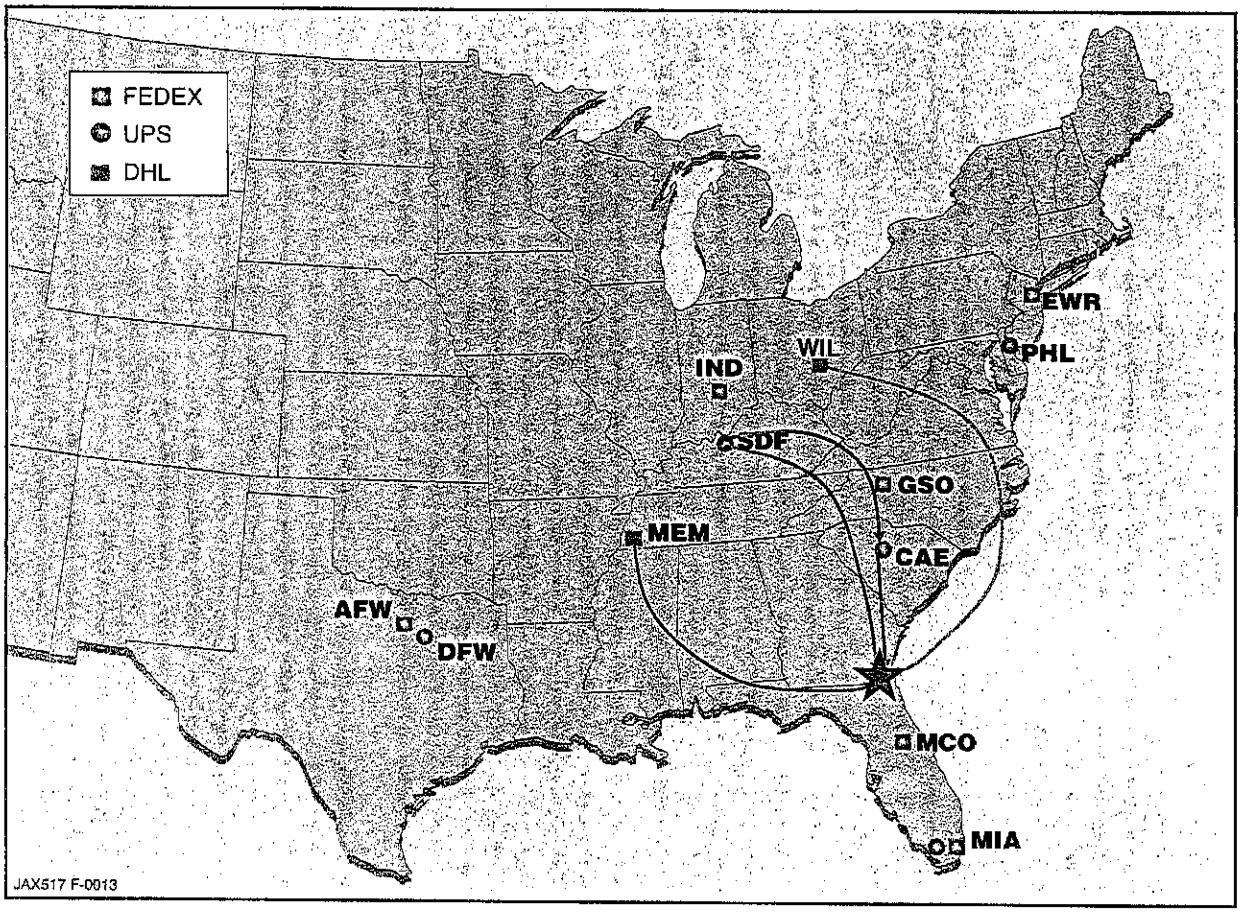
n.a. = Not available.
(a) Preliminary data from 2004 *ACI Worldwide Airport Traffic Report* and from official airport web sites.
(b) From *Air Cargo World, 2004 World Airports Directory* and official airport web sites.
(c) From Airport Layout Plans (ALPs) and official airport web sites.

- **As indicted, cargo facility utilization at JIA is lagging most competitive airports**
- **This lower ton per-square foot ratio indicated that carriers do not require more space to increase tonnage totals**
- **The JAA should develop general marketing reports that communicate with the cargo industry about available space and planned projects**

CARGO MARKET SERVICE ANALYSIS

Cargo Market Service Analysis

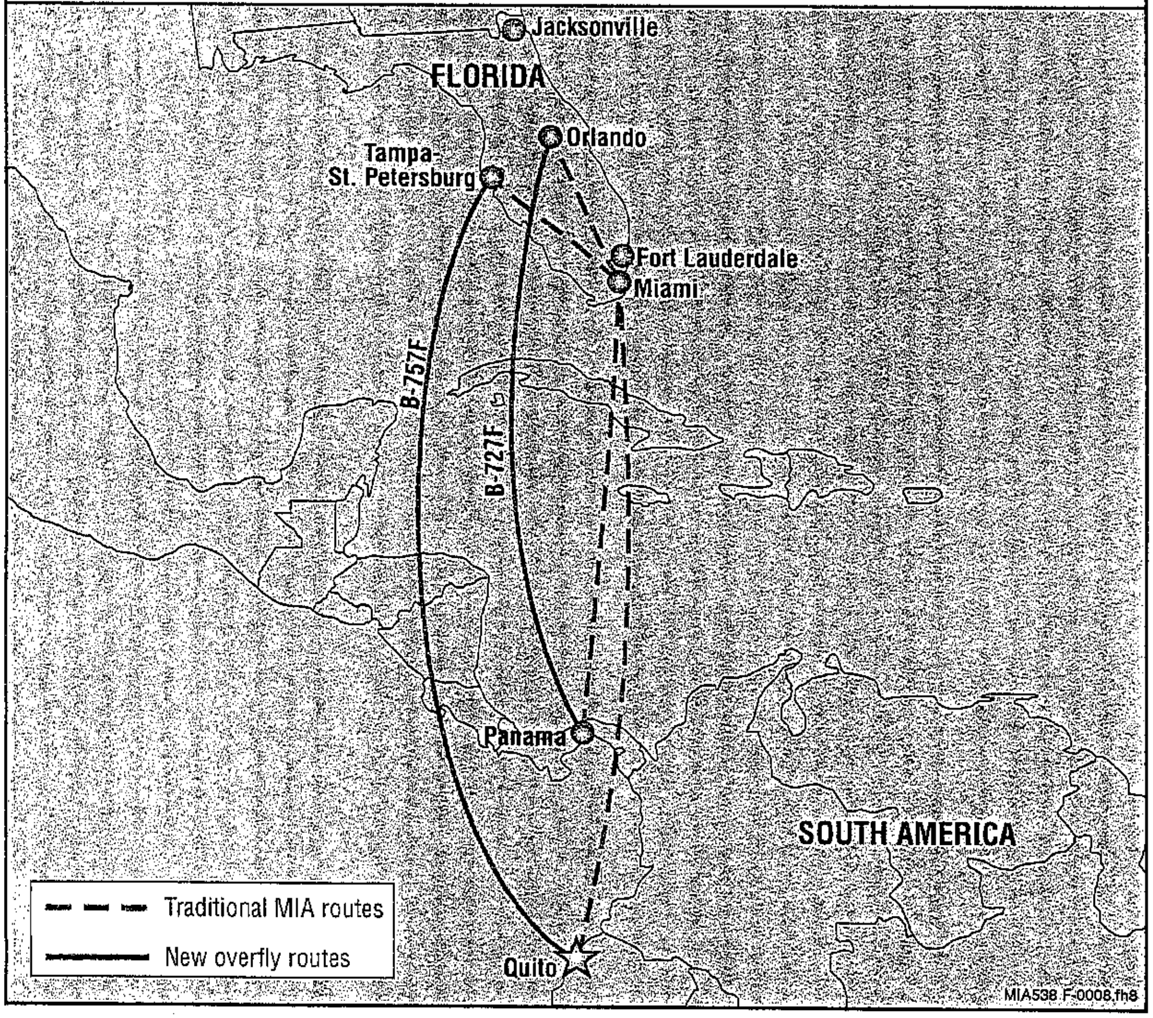
Regional Cargo Service – Cargo Service at JIA



- JIA is served by the integrated carriers primarily from their national sorting hubs
  - UPS sends one flight from SDF and another through CAE (Columbia)
  - FedEx and DHL are direct flights from hubs (MEM and WIL, respectively)
- Additional trucking by these carriers and affiliates (Forward Air Cargo/UPS, for example) should be marketed and accommodated
- These carriers can (and will) expand services beyond US market from alternative airports

Cargo Market Service Analysis
Additional Integrated Carrier Service

UPS ROUTES OVERFLYING MIAMI



- For the international market, each carrier has ability to route around MIA hub
- For example, UPS has expanded its service into the Latin American market from Orlando and Tampa
- JIA can increase "reach" by integrated carriers
  - It is likely that UPS will start daily Puerto Rico service from JIA this Spring
  - With the facility expansion capability, JIA could see additional service of this nature

Cargo Market Service Analysis

Cargo's Effect on Airline Routing Decisions (PAX)

COMPARISON OF AIRLINE PASSENGER AND CARGO REVENUES
Selected Foreign Flag Carriers
For Fiscal Year Ended March 31, 2004, except as noted

	Passenger revenues	% of total	Cargo revenues	% of total	Total
Alitalia *(a)*	$3,730,783,041	89%	$ 458,270,365	11%	$4,189,053,406
All Nippon Airways	6,284,891,671	93%	474,899,086	7%	6,759,790,757
British Airways	6,940,704,132	94%	476,458,229	6%	7,417,162,361
Cathay Pacific Airways *(a)*	2,638,637,448	71%	1,069,686,697	29%	3,708,324,145
China Airlines *(a)*	1,215,943,658	65%	667,859,925	35%	1,883,803,583
Japan Airlines *(b)*	8,106,830,000	85%	1,483,532,000	15%	9,590,362,000
KLM Royal Dutch Airlines	4,744,806,361	83%	1,002,229,368	17%	5,747,035,729
Korean Air *(a)*	2,539,996,000	68%	1,189,077,000	32%	3,729,073,000
Lufthansa German Airlines *(a)*	10,488,492,991	81%	2,404,585,047	19%	12,893,078,039
Singapore Airlines	6,326,300,000	86%	1,032,200,000	14%	7,358,500,000

(a) Calendar Year ended December 31, 2003.
(b) Fiscal Year ended March 31, 2003.

Sources: Hoovers Online, EDGAR Online, and various airline websites.

- **For certain airlines, the cargo activity is a vital portion of its bottom-line**
- **Clearly, cargo has more of an impact on the international routes**
  - **Trans-Pacific market relies more heavily on cargo's contribution than the Atlantic**
  - **However, cargo will be important to JIA European marketing efforts**
- **Recent results show that domestic (and even low cost carriers) airlines posted extraordinary revenues from cargo during 2004**
  - **Southwest Airlines reported a 42% growth in fourth quarter results (4th qtr 2004/4th qtr 2003)**
- **Local shippers rely heavily on passenger belly capacity but truck to Orlando (and other airports) due to early cut-off times lack of destinations**

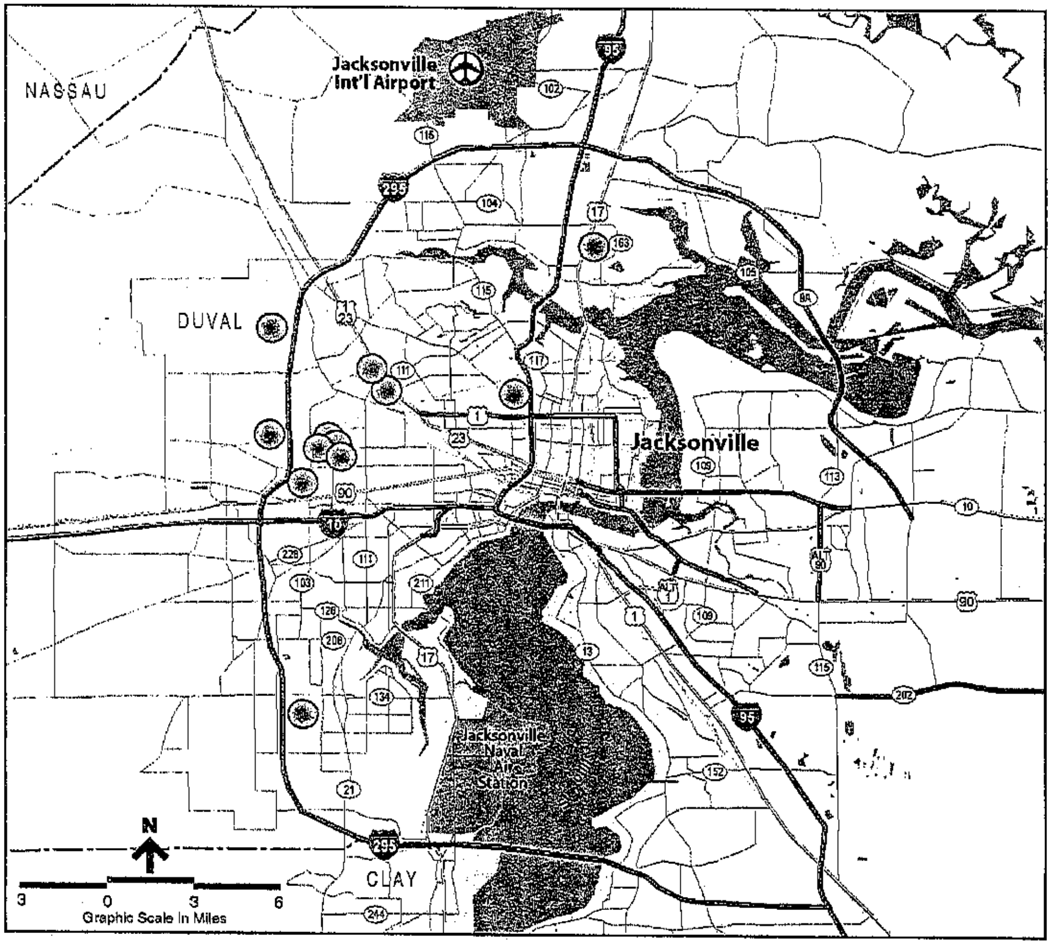
Cargo Market Service Analysis

Freight Forwarders and Logistics Providers

- A refined marketing approach is required in today's ultra-competitive environment
- The freight forwarding community is becoming increasingly important to large companies as they outsource shipping responsibilities
- These companies are becoming a vital component to worldwide supply chain services and control inventory movement of many of the world's largest companies
- Many of the largest companies already have offices in Jacksonville and we should work hard to help these companies grow
- Cecil Field could provide the space (ramp accessible and warehouse space) to accommodate this growing sector of the industry

Cargo Market Service Analysis
Trucking Companies in Jacksonville

JACKSONVILLE AREA–MAJOR TRUCKING COMPANIES



- **Trucking is the lifeblood of the air cargo industry – Jacksonville is home to many major trucking companies with very large consolidation centers**
- **A tremendous amount of LTL freight is transshipped along the I-295 corridor as route planners send freight activity north/south and west (I-95 and I-10, respectively)**
- **The growing base of logistics providers in the area will benefit from size (and depth) of trucking industry**
  - Some of the "traditional" LTL services can transition to air as service offerings expand

Air Cargo Strategic Development Plan

Action Plan

Jacksonville Cargo Market Development

To take the Jacksonville International Airport beyond the regional airport that serves its local catchment area well, a comprehensive cargo marketing and business plan needs to be developed through creative/innovative thinking, hard work, and commitment.

The following courses of action are offered to assist to move to the next level. They have independent merit but are much more powerful in concert.

- Communication and Partnerships
- Direct Marketing
- Clusters and Consolidation
- Foreign Trade Zone Development

Developmental Opportunities and Strategies
Communication and Partnerships

Communication

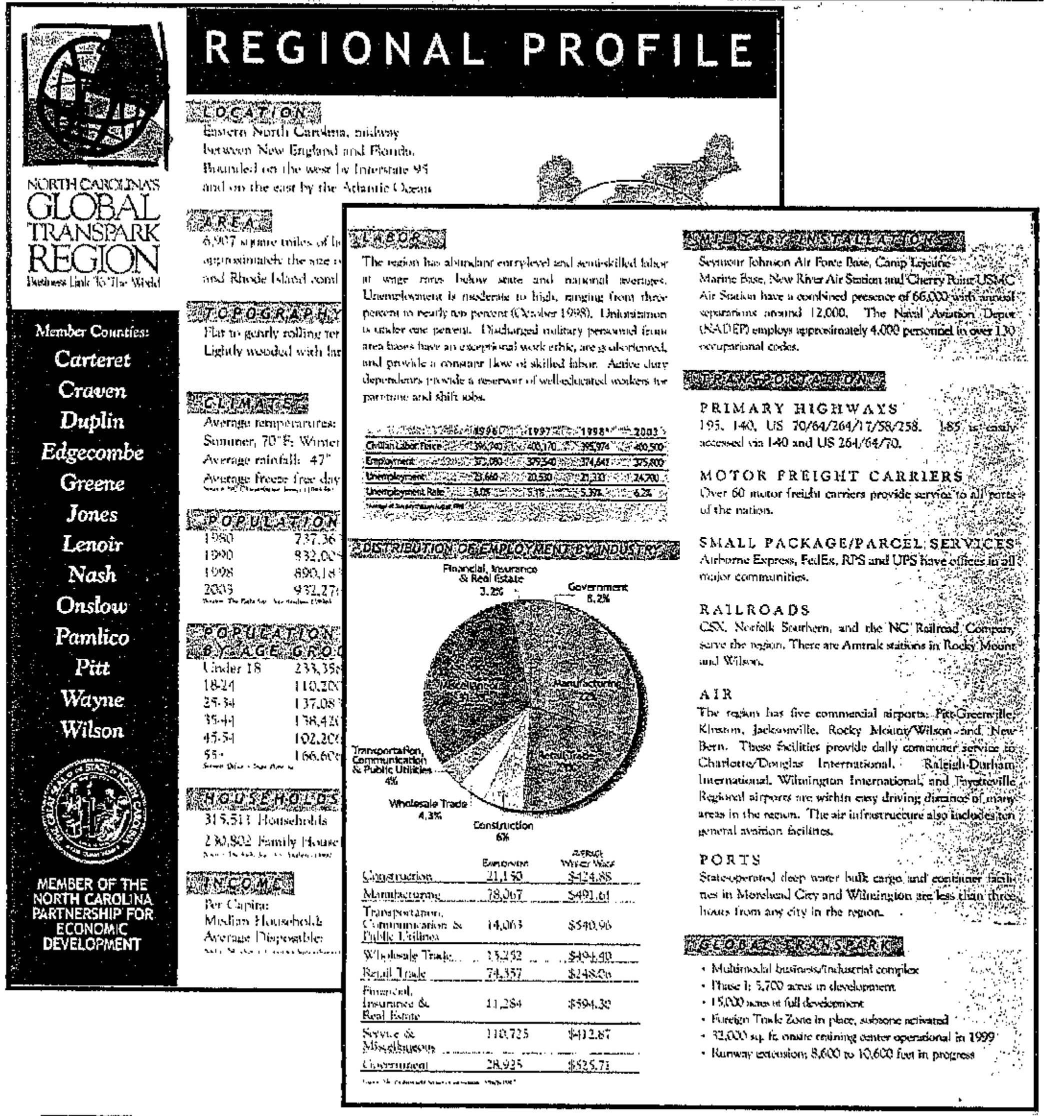
- It is imperative that Jacksonville (both the JAA and downtown) effectively communicate with the cargo community (air carriers, shippers, logistics providers, and perspective tenants at the FTZ).
- It is suggested that the JAA form an Air Cargo Association that meets on a regularly scheduled basis. These associations have assisted with the consolidation of multiple shippers at other airports and helps keep the Airport ahead of the development curve and anticipate shifts in demand.
- The JAA is key to the continuity and should host/sponsor these events

Partnerships

- The power of key stakeholders working together as a team is yielding significant results despite economic uncertainties. Economic development organizations that understand the importance of a successful airport are gaining at the expense of others. The following list is recommended for active membership and partnering:
  - Jacksonville Economic Development Commission, Jacksonville Regional Chamber of Commerce, Northwest Jacksonville Economic Development Committee, Northern Florida International Trade Partnership, National Association of Foreign Trade Zones, Local associations whose companies depend on reliable logistics management (Northern Florida Optics Industry Association, Professional Aerospace Contractors Association, Technology Industries Association, Florida Biotechnology & Biomedical Association)
- City Twinning -- Recommend that city officials review their international twinning program with a view to identifying those that offer business development potential and other cities that are not currently twinned with Jacksonville but represent valuable business potential.
- Airport Twinning -- Recommend that the authority review international airports that could become partners with the common aim to improve air service by combining resources and intelligence at both locations.

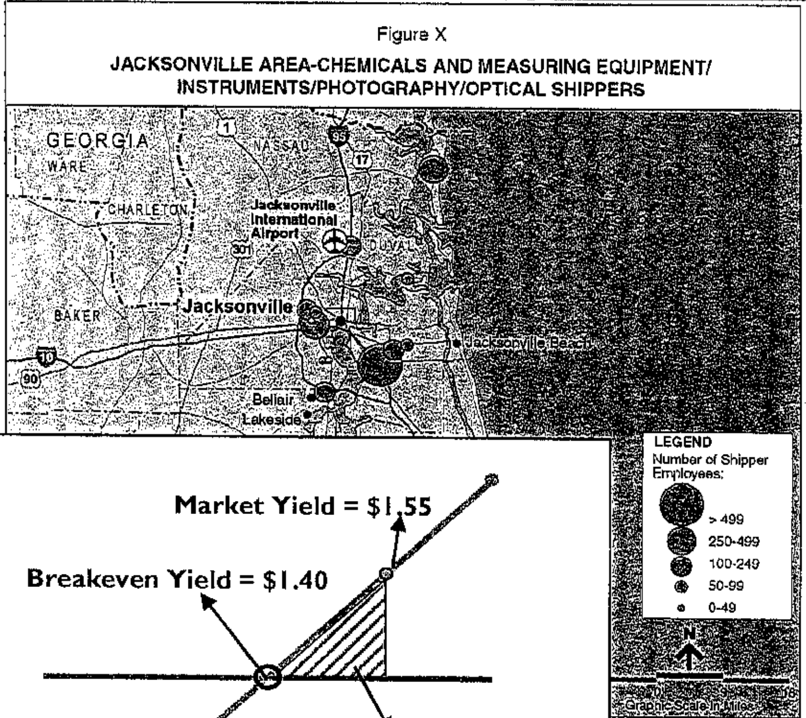
Action Plan/Recommendations

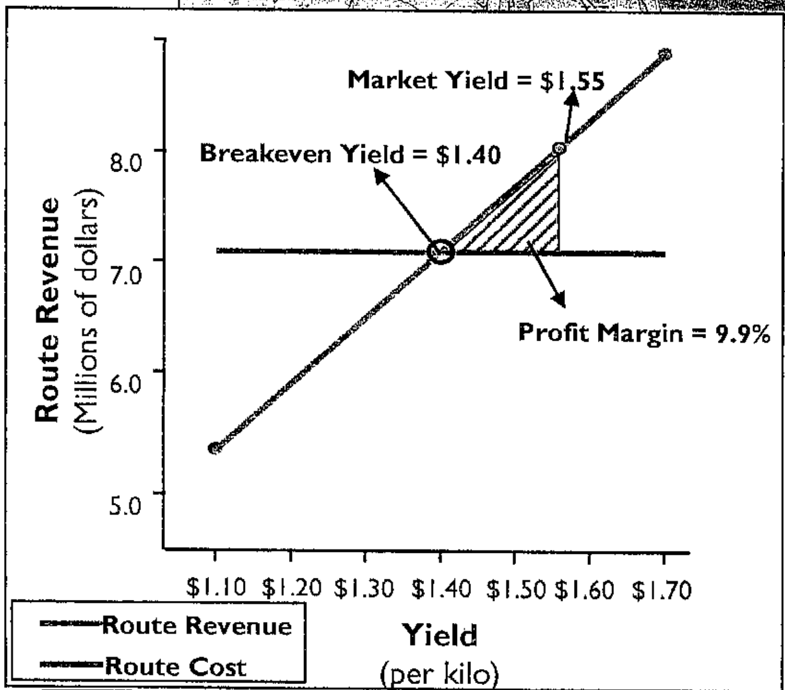
Direct Marketing – Jacksonville Cargo Material



- **A refined marketing approach is required in today's ultra-competitive environment**
- **In addition to increasingly precise data (freight activity and revenue), airlines and shippers will seek regional perspective on economy and infrastructure development**
- **Tradeshows attract key industry decision-makers and a coordinated effort will have a positive impact**
  - Apply individual knowledge and experience towards collective benefit
  - Know what you don't know
  - Relax and have fun
  - Walk before you run, there is a lot of work to be done but cannot be completed overnight

Action Plan/Recommendations
Direct Marketing – Detailed Presentation Material





- **Prepare presentations for target cargo operators that include logistics providers and carriers**
- **These presentations will include detailed Jacksonville cargo market data (shippers, weight, and value data)**
- **Specific route and sensitivity analyses will illustrate the market opportunity of initiating or expanding service in Jacksonville**
  - Increase in customer service
  - Profit margins
  - Sensitivity analysis includes matrix of revenues (yield fluctuation) and costs (changes in fuel price, for example)

Recommendations/Key Targets

Direct Marketing – Target Cargo Operators

- **Puerto Rico and Latin America show strength and developmental opportunities**
  - Freight forwarders explain that multi-modal volumes are growing and yields are increasing
  - Support is growing for direct service from Jacksonville
- **Amerijet has emerged from Chapter 11 and shows growing stability and has ideas of developing a hub in Panama**
- **EGL is growing rapidly and has just entered into a strategic alliance with DHL for guaranteed cargo capacity (JAA needs to secure activity rather than competing airports...MCO!)**
- **Logistics and heavy freight consolidations are key to future Jacksonville cargo market**
  - Menlo provides UPS with the critical heavy freight sector and should be targeted by JAA
  - With heavy freight consolidations, additional freighter activity will be required. Evergreen has some unused Brazilian routes as should be targeted

Action Plan/Recommendations

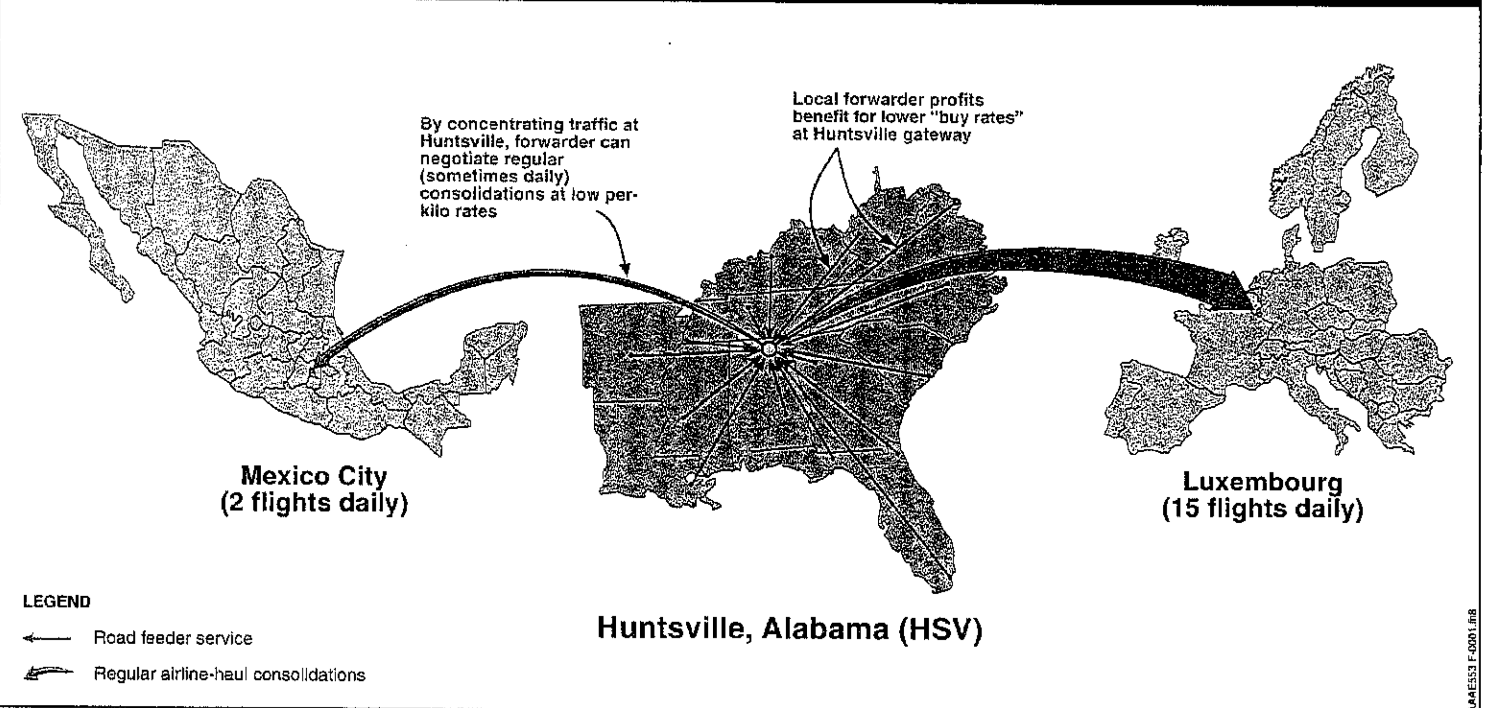
Clusters and Consolidation

- Clusters and Consolidation
  - Jacksonville has a growing collection of high tech industries that naturally fall into different clusters. Hopefully, the economic development leadership in Jacksonville recognizes the value in using the collective power of the companies within each cluster to its advantage. However, the shippers within each company in the various clusters are universally reticent to share logistics data such as routing, mode, destination, customers, etc. By pro-actively bringing the various companies together and actively involving the JAA, this traditional wall can be penetrated to everyone's advantage.
  - This concept merits a closer investigation which is beyond the scope of this Study. The strategic aim should be to create a Greater Jacksonville Competitiveness Strategy. This initiative will bring together the region's economic stakeholders to work collaboratively to build a next-generation economy. If put into action in a carefully planned strategy, will create increased business opportunities, wider opportunities for strategic alliances, better competitive intelligence and a stronger inter-modal supporting network to facilitate the movement of goods.

Action Plan/Recommendations
Clusters and Consolidation

- **Clusters and Consolidation (cont.)**
  - To penetrate the closed world of the shipper will require a creative approach by the JAA and the Office of Economic Development. Competing shippers and their freight forwarders will cooperate if it is in their business interest. Kuehne and Nagel compete directly with Schenker for international freight; yet, they share an aircraft trans-Atlantic from New York on a regular basis.

ILLUSTRATIVE "FORCED GATEWAY" CONCEPT



  - In the late 1990's, Panalpina redirected their trans-Atlantic traffic in Huntsville and their operation has grown to multiple weekly flights to LUX and MEX

Action Plan/Recommendations

Foreign Trade Zone Development

- FTZ #64
  - There are 18 approved Foreign Trade Zones in Florida. The Jacksonville FTZ is located at the Port with one active subzone and is under the jurisdiction of the Jacksonville Port Authority.
  - At the present time there is not a clear marketing plan that targets companies that rely on EXPEDITED transportation.
  - Jacksonville is not alone in this situation. The Department of Commerce lists over 250 registered FTZs in the United States and only a handful are operating as designed, to create a competitive advantage for businesses that function inside the protection of an FTZ.
  - FTZ #64 should be expanded to include subzones at both JIA and Cecil Field.
  - Current (and future) Cecil Field tenants, aviation industry and airplane manufacturing, could realize tremendous benefits from tax relief.
  - A critical issue to future cargo market development is growing the critical mass of Jacksonville shippers. Jacksonville has the opportunity to attract and promote participation in international commerce and trade through FTZ #64 but it needs a professional marketing plan and dedicated, experienced resources to tap its full potential and contributions to the air cargo market.