



O&D Training Manual

Data Base Products' Training Sessions

Training for our various CD Products

Overview

- Our CD Products contain data bases of airline information which has been filed by U.S. Air Carriers with the U.S. Department of Transportation.
- Our data is used by airline analysts to ascertain supply and demand for air travel on both the market and aggregate levels.

CD Products

- O&DPlus - Domestic Passenger Origin and Destination data 1990 through current.
- International O&D - International Passenger Origin and Destination data 1990 through current
- ONBOARD - U.S. Air Carrier Departures and Loads at U.S. Airports data 1990 through current.
- Form41 - Financial and Summary Traffic data for U.S. Air Carriers from 1977 to current.
- HUB - Domestic U.S. Origin and Destination information by Itinerary Level detail.
- Gateway - International Origin and Destination information by Itinerary Level detail.

Features & Benefits

- Each of our O&D CD Products is updated quarterly as soon as the data becomes available from the U.S. DOT.
- O&D CD Product line is updated quarterly.
- Form 41 and Onboard CD Products are updated monthly.
- Our CD's contain customized access software which the user installs on their local PC or on their Network server and allows the user to query the data bases and output the results in various formats.

Specifications

- Our CD's can be used by any PC with a Windows operating system.
- Our software generally requires 3 Meg of disk space per product.

Pricing

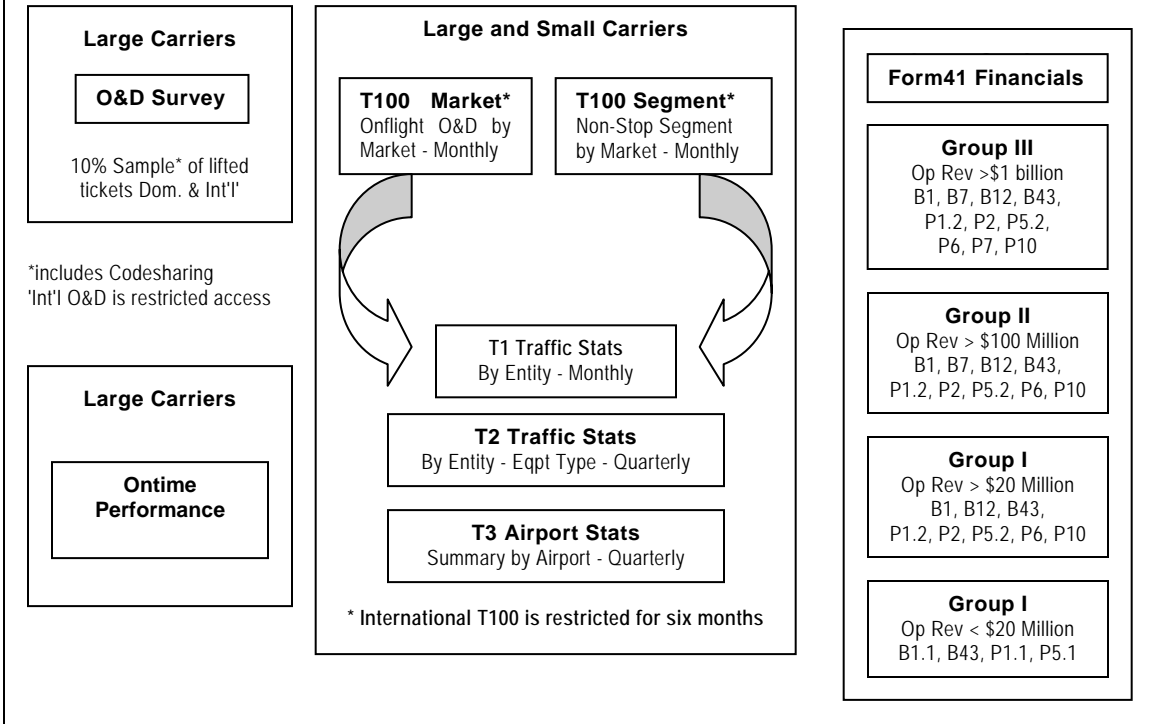
- Our Products are only available on a subscription basis.
- Each CD Product costs \$5,000 per year for quarterly updates for a single user subscription and \$7,000 for multi-user subscriptions. Substantial discounts are available for multiple products. Subscription rates for once-per-year updates are \$3,500 for each product.

Restrictions

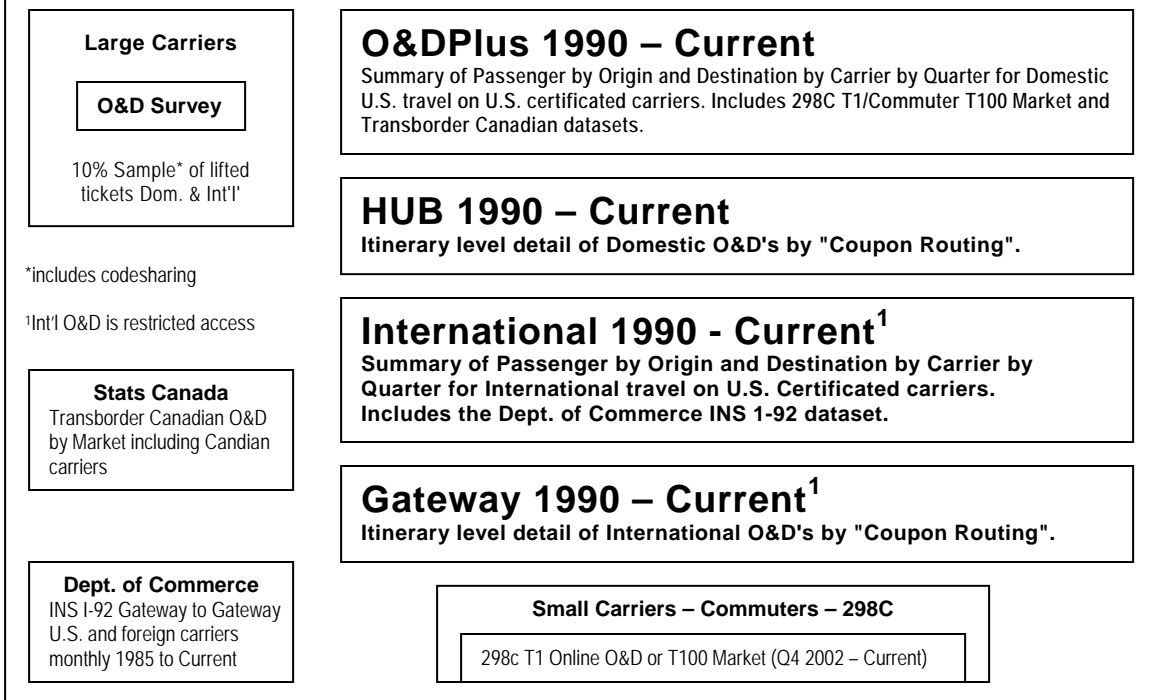
Our CD Products are generally available to anyone, except that, our International O&D products (International and Gateway) are only available to those U.S. Citizens who have applied for and received U.S. DOT authorization. (Applicants must also sign a confidentiality agreement with the U.S. DOT.)

Data Reported by U.S. Carriers to U.S. DOT

Reported by Certificated Domestic Scheduled Passenger Service beginning October 2002



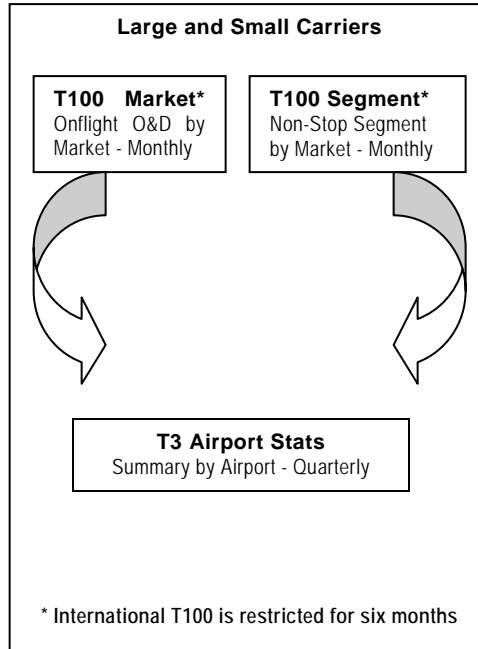
Data Base Products' O&D CD Products



Data Base Products' "Onboard" CD Product

Product Description

Our Onboard CD products contain data for Domestic and International service. Many of the long standing reporting rules have been revised. Small carriers no longer report their traffic to the 298c but have begun reporting T100 Market and Segment data. Large and small carriers now must report all their operations, scheduled and nonscheduled, passenger and freight for all entities. International T100 is restricted for six months and when released available to everyone. This development has reduced the value of T3 data and we have chosen to no longer provide it.



Data Base Products' "Form41" CD Product

Product Description

Our Form41 product is published quarterly on CD and is supplemented by monthly floppy disk updates. It contains data from 1977 to current. It does not contain data for Group I under \$20 million since they file only semi-annually on abbreviated schedules. Also not included for any of the Carriers are Schedules B7, B12 and P2.

¹ not included on CD

Large Carriers

T1 Traffic Stats
By Entity - Monthly

T2 Traffic Stats
By Entity - by Eqpt Type - Quarterly

Group I - Op Rev
< \$20 Million¹
B1.1, B43, P1.1,
P5.1

Large Carriers

Form41 Financials

Group III - Op Rev
>\$1 billion
B1, B7, B12, B43,
P1.2, P2, P5.2,
P6, P7, P10

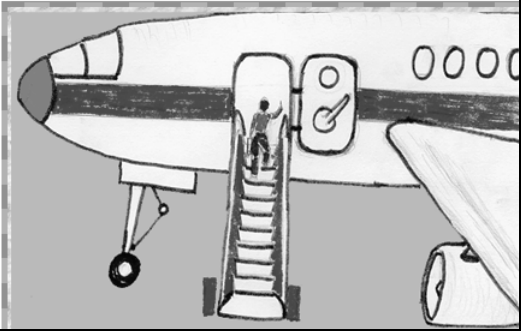
Group II - Op Rev >
\$100 Million
B1, B7, B12, B43,
P1.2, P2, P5.2, P6,
P10

Group I - Op Rev >
\$20 Million
B1, B12, B43,
P1.2, P2, P5.2, P6,
P10

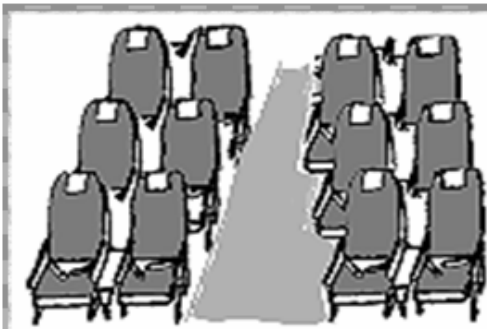
Airline Data Terminology

Standard Airline Terms and Specific Terms used by
Data Base Products, Inc

Enplaned Passenger - a person who boards an aircraft



Available Seats - Seats which can be or have been sold



Onboard Passengers - Passengers occupying seats



Load Factor- Percent of seats filled

- In our example there were 12 seats and 4 onboard passengers; therefore, the load factor for that flight was 33.3%.
- Average Load Factor uses distance as a weighting factor.
- ASM's = 12 seats x 448 miles = 5,376
- RPM's = 4 onboards x 448 miles = 1,792
- Avg. Load Factor = $1,792 / 5,376 = 33.3\%$

Plane Miles = Departures x Distance

- The great circle mileage from DFW to MSY is 448 statute miles.
- A non-stop trip from DFW to MSY by American Airlines generates
Plane Miles = 1 Trip x 448 Miles = 448

Average Stage Length = Plane miles/Departures

American Airlines Domestic Segment Average Stage Length in 2003

- Total Plane Miles = 774,398,032
- Total Departures = 742,708
- ASL = $774,398,032 / 742,708 = 1,043$ miles

Avg Length of Passenger Haul = RPM's/Onboards

Average Length of Passenger Haul for AA Domestic Segments for 2003

- Total Domestic Revenue Passenger Miles (RPM's) =
82,979,893,000
- Total Onboard Passengers or Passengers Transported =
73,098,595
- ALH = $82,979,893,000 / 73,098,595 = 1,135$ miles

Service Types

- Non-Stop Service - The airplane which takes off from the passenger's origin point and does not land until it reaches the passenger's destination point.
- Connecting Service - The passenger must change aircraft between the origin and destination.
- Off-Line Connection - Not only does the passenger need to change aircraft but must also change airlines.
- On-Line Connection - The passenger must change airplanes but remains on the same airline.
- Direct Service - Other than connect service - May be Non-Stop or 1 Stop or Multiple Stops, but does not require changing aircraft.
- Change of Gauge - The passenger changes airplanes but, since the flight number does not change, it is not considered "Connect" service.

Code of Federal Regulations, Part 241

Section 03 - Definitions for Purposes of This System of Accounts and Reports Excerpt of Operations and Traffic Related Terms

Air carrier - Any citizen of the United States who undertakes, whether directly or indirectly or by a lease or any other arrangement, to engage in air transportation.

Air carrier, charter - An air carrier holding a certificate issued under 49 U.S.C. 41102(a)(3).

Air carrier, large certificated - An air carrier holding a certificate issued under 49 U.S.C. 41102, as amended, that: (1) Operates aircraft designed to have a maximum passenger capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds; or (2) conducts operations where one or both terminals of a flight stage are outside the 50 states of the United States, the District of Columbia, the Commonwealth of Puerto Rico and the U.S. Virgin Islands.

Aircraft days assigned to service - carrier's equipment - The number of days that aircraft owned or acquired through rental or lease are in the possession of the reporting air carrier and are available for service on the reporting carrier's routes plus the number of days such aircraft are in service on routes of others under wet-lease agreements. includes days in overhaul, or temporarily out of service due to schedule cancellations. Excludes days that newly acquired aircraft are on hand but not available for productive use, days dry-leased or rented to others, and days in possession but formally withdrawn from air transportation service.

Aircraft days assigned to service - carrier routes - Same as aircraft days assigned to service carrier's equipment but excluding the number of days owned or rented equipment are in the possession of others under interchange agreements and including the number of days aircraft of others are in the possession of the air carrier under interchange agreements.

Airport - A landing area regularly used by aircraft for receiving or discharging passengers or cargo.

Airport, alternate - An approved airport to which a flight may proceed if a landing at the airport to which the flight was dispatched becomes inadvisable.

Airport-to-airport distance - The great circle distance between airports, measured in statute miles in accordance with Part 247 of this Chapter.

Air transportation - The carriage by aircraft of persons, property, or mail.

Air transportation, charter - Air transportation authorized pursuant to section 401(d)(3).

BTS - The Bureau of Transportation Statistics.

Cargo - All traffic other than passengers.

Cargo transported - Cargo on board each flight stage.

Certificated point - A city, place or population center authorized to receive scheduled air service under a Certificate of Public Convenience and Necessity or under an exemption issued to an air carrier.

Certificate of Public Convenience and Necessity - A certificate issued to an air carrier under 49 U.S.C. 41102, by the Department of Transportation authorizing the carrier to engage in air transportation.

Continental United States - The 48 contiguous States and the District of Columbia.

Department - Department of Transportation.

Departures completed, percent scheduled - The percent of scheduled departures that were performed.

Departures completed, scheduled - The number of takeoffs performed at each airport pursuant to published schedules, exclusive of extra sections to scheduled departures.

Departure performed - A takeoff made at an airport.

Departure, scheduled - A takeoff scheduled at an airport, as set forth in published schedules.

DOT - Department of Transportation.

Flight, developmental - A flight for (1) the development of a new route either prior or subsequent to certification by the Department of Transportation; (2) the extension of an existing route; or (3) the integration of a new type of aircraft or service.

Flight, extra section - A flight, conducted as an integral part of scheduled service, that has not been provided for in published schedules and is required for transportation of traffic that cannot be accommodated on a regularly scheduled flight. Flights made in ferrying aircraft to meet schedules, or for similar operational reasons, are not extra sections and are classified as nonrevenue flights even if an occasional shipment, as a matter of special accommodation, is on board.

Flight, ferry - A flight for the purpose of returning an aircraft to base, equipment equalization, or moving an aircraft to and from a maintenance base.

Flight, paid positioning - A flight for the purpose of positioning an empty aircraft in connection with a charter flight for which a specific charge is set forth in a tariff or contract for application directly to the positioning miles operated. Such flights are considered revenue flights for Form 41 reporting purposes.

Flight, personnel training - A flight for the purpose of obtaining flying time for flight personnel or a flight in connection with a personnel training program.

Flight stage - The operation of an aircraft from takeoff to landing. For purposes of classifying flight stages as between 'domestic', 'territorial', and 'international', technical stops are disregarded. (See Stops, technical.)

Freight - Property, other than mail, transported by air.

Hours, aircraft - The airborne hours of aircraft computed from the moment an aircraft leaves the ground until it touches the ground at the end of a flight.

Hours flown, revenue aircraft - The aircraft hours of flights performed in revenue service.

Hours in capitalized projects, aircraft - Aircraft hours applicable to ferrying newly acquired aircraft from the factory, to capitalized extension and development preoperating projects and to other costs which have been capitalized.

Hours per aircraft per day - carrier's equipment, revenue - Average hours of productive use per day in revenue service of reporting carrier's equipment determined by dividing (1) Aircraft days assigned to service - carrier's equipment into (2) Revenue aircraft hours minus Revenue hours on other carrier's interchange equipment plus Total hours by others on the carrier's interchange equipment.

Hours per aircraft per day - carrier's routes, revenue - Average hours of productive use per day in revenue service on reporting carrier's routes determined by dividing (1) Aircraft days assigned to service-carrier's routes into (2) Revenue aircraft hours.

Hours, ramp-to-ramp - The aircraft hours computed from the moment the aircraft first moves under its own power for purposes of flight, until it comes to rest at the next point of landing.

Load, available - Represents the maximum salable load. It is the allowable gross weight less the empty weight, less all justifiable aircraft equipment, and less the operating load (consisting of minimum fuel load, oil, flight crew, steward's supplies, etc.). For passenger aircraft, the available load must not

exceed the weight of the maximum number of passengers who can be accommodated in the seats installed in the aircraft plus the weight of the traffic that can be accommodated in the cargo space.

Load, average revenue - The average total revenue tons carried in revenue services, determined by dividing total revenue ton-miles by aircraft miles flown in revenue services.

Load, average revenue passenger - Average number of revenue passengers carried in passenger services, determined by dividing revenue passenger-miles by aircraft miles flown in revenue passenger services.

Load factor, over-all revenue - The percent that total revenue ton-miles (passenger plus nonpassenger) are of available ton-miles in revenue services.

Load factor, revenue passenger - The percent that revenue passenger-miles are of available seat-miles in revenue passenger services.

Load, minimum fuel - The minimum quantity of fuel with which an aircraft may be dispatched in accordance with the safety operating needs of the air carrier.

Load, salable - (See Load, available.)

Mail, nonpriority - All mail for which transportation by air is provided on a space available basis.

Mail, priority - All mail for which transportation by air is provided on a priority basis.

Mile - A statute mile (5,280 feet).

Miles completed, percent scheduled aircraft - The percent of scheduled aircraft miles which were performed.

Miles completed, scheduled aircraft - The aircraft miles performed on scheduled flights computed between only those scheduled points actually served.

Miles flown, aircraft - The miles (computed in airport-to-airport distances) for each flight stage actually completed, whether or not performed in accordance with the scheduled pattern. For this purpose, operation to a flag stop is a stage completed even though a landing is not actually made. In cases where the interairport distances are inapplicable, aircraft miles flown are determined by multiplying the normal cruising speed for the aircraft type by the airborne hours.

Miles flown, nonrevenue aircraft - The aircraft miles flown on nonrevenue flights, such as ferry (including empty backhauls to MAC one-way charters), personnel training, extension and development, and abortive revenue flights.

Miles, revenue aircraft - The aircraft miles flown in revenue service.

Miles, scheduled aircraft - The sum of the airport-to-airport distances of all flights scheduled to be performed over the air carrier's certificated routes pursuant to published flight schedules. Flights listed in the published schedules for operation only as extra sections, when traffic warrants, are excluded.

Off-Line - Installations maintained or facilities used for other than scheduled certificated air services.

On-Line - Installations maintained or facilities used in conducting scheduled certificated air services.

Domestic - Flight stages with both terminals within the 50 States of the United States and the District of Columbia.

Territorial - Flight stages with both terminals within territory under U.S. jurisdiction where at least one of the terminals is not within a State or the District of Columbia.

International - Flight stages with one or both terminals outside of territory under U.S. jurisdiction.

Operations, systems - The over-all operations of an air carrier including all of the operating entities of an air carrier having multiple operations.

Passenger-mile - One passenger transported 1 mile. Passenger-miles are computed by multiplying the aircraft miles flown on each flight stage by the number of passengers transported on that stage.

Passenger-mile, nonrevenue - One nonrevenue passenger transported one mile.

Passenger-mile, revenue - One revenue passenger transported one mile.

Passenger, nonrevenue A person traveling free or under token charges, except those expressly named in the definition of revenue passenger; a person traveling at a fare or discount available only to employees or authorized persons of air carriers or their agents or only for travel on the business of the carriers; and an infant who does not occupy a seat. (This definition is for 14 CFR part **241** traffic reporting purposes and may differ from the definitions used in other parts by the Federal Aviation Administration and the Transportation Security Administration for the collection of Passenger Facility Charges and Security Fees.) The definition includes, but is not limited to following examples of passengers when traveling free or pursuant to token charges: (1) Directors, officers, employees, and others authorized by the air carrier operating the aircraft; (2) Directors, officers, employees, and others authorized by the air carrier or another carrier traveling pursuant to a pass interchange agreement; (3) Travel agents being

transported for the purpose of familiarizing themselves with the carrier's services; (4) Witnesses and attorneys attending any legal investigation in which such carrier is involved; (5) Persons injured in aircraft accidents, and physicians, nurses, and others attending such persons; (6) Any persons transported with the object of providing relief in cases of general epidemic, natural disaster, or other catastrophe; (7) Any law enforcement official, including any person who has the duty of guarding government officials who are traveling on official business or traveling to or from such duty; (8) Guests of an air carrier on an inaugural flight or delivery flights of newly-acquired or renovated aircraft; (9) Security guards who have been assigned the duty to guard such aircraft against unlawful seizure, sabotage, or other unlawful interference; (10) Safety inspectors of the National Transportation Safety Board or the FAA in their official duties or traveling to or from such duty; (11) Postal employees on duty in charge of the mails or traveling to or from such duty; (12) Technical representatives of companies that have been engaged in the manufacture, development or testing of a particular type of aircraft or aircraft equipment, when the transportation is provided for the purpose of in-flight observation and subject to applicable FAA regulations; (13) Persons engaged in promoting air transportation; (14) Air marshals and other Transportation Security officials acting in their official capacities and while traveling to and from their official duties; and (15) Other authorized persons, when such transportation is undertaken for promotional purpose.

Passenger, revenue – A passenger for whose transportation an air carrier receives commercial remuneration. (This definition is for 14 CFR part **241** traffic reporting purposes and may differ from the definitions used in other parts by the Federal Aviation Administration and the Transportation Security Administration for the collection of Passenger Facility Charges and Security Fees.) This includes, but is not limited to, the following examples: (1) Passengers traveling under publicly available tickets including promotional offers (for example two-for-one) or loyalty programs (for example, redemption of frequent flyer points); (2) Passengers traveling on vouchers or tickets issued as compensation for denied boarding or in response to consumer complaints or claims; (3) Passengers traveling at corporate discounts; (4) Passengers traveling on preferential fares (Government, seamen, military, youth, student, etc.); (5) Passengers traveling on barter tickets; and (6) Infants traveling on confirmed-space tickets.

Passengers transported - Passengers on board each flight stage.

Person controlling an air carrier - Any person, as defined in 49 U.S.C. 40102, whom the Department has found, in any proceeding, to control an air carrier, or who holds, directly or indirectly, the legal or beneficial ownership of more than 50 percent of the outstanding voting capital stock or capital of an air carrier, and who does not make a proper showing to the Department that he or she does not control the carrier despite such stock ownership, shall be deemed to be a person controlling the carrier for the purpose of this part. A brokerage firm which holds record ownership of securities merely for the convenience of the customer

beneficially owning the stock shall not be deemed a person controlling an air carrier.

Route, certificated - The route(s) over which an air carrier is authorized to provide air transportation by a Certificate of Public Convenience and Necessity issued by the Department of Transportation pursuant to section 401(d) (1) or (2) of the Act.

Passenger Types

- In our example 4 passengers are Onboard American's Non-Stop flight from DFW to MSY.
- John lives in LA, works for Disney and is going to Orlando on business (has 2-Stop Direct Service - Stops at DFW and MSY).
- Paul is from Chicago and is going to the Mardi Gras in New Orleans (has Off-Line Connect Service - UA to AA at DFW).
- George is from Dallas and is going to the Mardi Gras in New Orleans (has Non-Stop Service).
- Ringo is from Dallas and is going to visit Disney World in Orlando (has 1-Stop Service - A Stop at MSY).
- Yoko is getting on at New Orleans and going to a recording studio in San Juan Puerto Rico. She will change to American Eagle (Executive) at Orlando which is an Online (codeshare) transfer.

Relative to the Flight's Take-Off at DFW:

- John LAX-MCO is a "Through" passenger at Dallas. He did not need to "Enplane" at Dallas because the airplane was continuing on to his destination.
- Paul ORD-MSY is an "Off-Line Connecting" passenger changing carriers and airplanes at Dallas. He is counted as an "Enplaned" passenger at DFW.
- George DFW-MSY is an "Originating Enplaned Passenger" at Dallas as opposed to Paul who was a "Connecting Enplanement".
- Ringo DFW-MCO is an "Originating Enplaned Passenger" at Dallas and will be a "Beyond Passenger" at New Orleans since he will not need to change airplanes.

Origins & Destinations

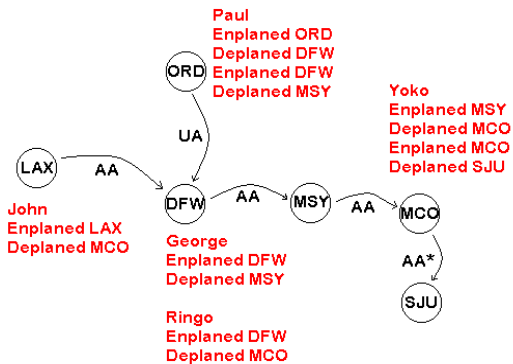
- John, Paul, George and Ringo each have a different O&D.
- John, George and Ringo have something in common: They only needed to "Enplane" one time to travel to their Destination. They were each on "Direct" service (also called "Single Plane Service).
- This means that they only needed "one Coupon" of their ticket for their "Directional Journey".
- If any of their Ticket Numbers ended with "0", then the first coupon of their ticket would be sampled by AA for reporting to the DOT in the "Ten Percent O&D Survey".
- Included in the report of their ticket would be their "Coupon Routing" including the carrier on each "Coupon Segment" and the total "Fare" paid including Federal Excise Taxes, Security Fees and PFC's.

Coupon vs. Non-Stop Segment

It is very important to note that:

- The O&D Survey data does not contain the passengers' Non-Stop Segment routing.
- The O&D Survey contains the passengers "Coupon" routing which shows how many times and where the passengers needed to "Enplane" in order to travel from their Origin to their Destination.
- "Fare" information on a Market by Market basis is only available from Survey data.

Examples of how various itineraries are reflected in the data reported to the DOT

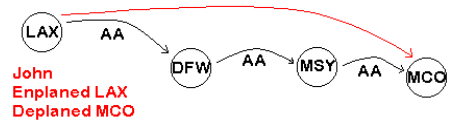


Data Reported to DOT for John's Journey

— T100 Segment —
 Onboard Non-Stop Segment AA LAX DFW
 Onboard Non-Stop Segment AA DFW MSY
 Onboard Non-Stop Segment AA MSY MCO

— T100 Market —
 Enplane/Deplane Market AA LAX MCO

— O&D Survey —
 One Coupon AA LAX MCO
 O&D LAX MCO - Carrier AA
 O&D Connect Type - "Online Local"

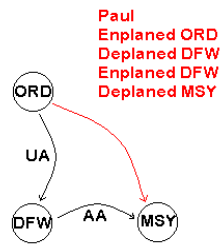


Data Reported to DOT for Paul's Journey

— T100 Segment —
 Onboard Non-Stop Segment UA ORD DFW
 Onboard Non-Stop Segment AA DFW MSY

— T100 Market —
 Enplane/Deplane Market UA ORD DFW
 Enplane/Deplane Market AA DFW MSY

— O&D Survey —
 One Coupon UA ORD DFW
 One Coupon AA DFW MSY
 O&D ORD MSY - Carrier UA
 O&D Connect Type - "Offline Connect"

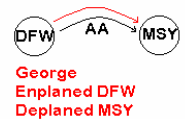


Data Reported to DOT for George's Journey

— T100 Segment —
 Onboard Non-Stop Segment AA DFW MSY

— T100 Market —
 Enplane/Deplane Market AA DFW MSY

— O&D Survey —
 One Coupon AA DFW MSY
 O&D DFW MSY - Carrier AA
 O&D Connect Type - "Online Local"

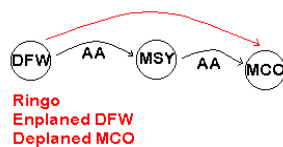


Data Reported to DOT for Ringo's Journey

— T100 Segment —
 Onboard Non-Stop Segment AA DFW MSY
 Onboard Non-Stop Segment AA MSY MCO

— T100 Market —
 Enplane/Deplane Market AA DFW MCO

— O&D Survey —
 One Coupon AA DFW MCO
 O&D DFW MCO - Carrier AA
 O&D Connect Type - "Online Local"

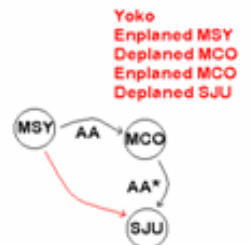


Data Reported to DOT for Yoko's Journey

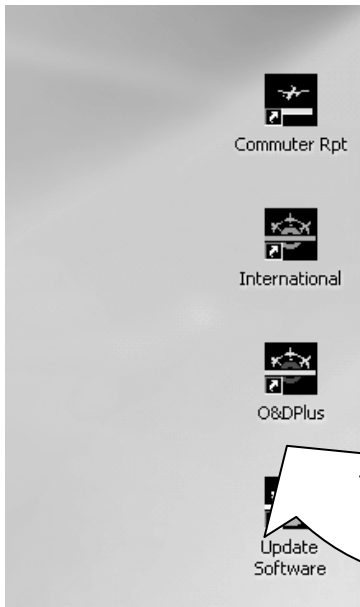
— T100 Segment —
 Onboard Non-Stop Segment AA MSY / MCO
 Onboard Non-Stop Segment NA MCO / SJU

— T100 Market —
 Enplane/Deplane Market AA MSY MCO
 Enplane/Deplane Market NA MCO SJU

— O&D Survey —
 One Coupon AA MSY MCO
 One Coupon AA MCO SJU
 O&D MSY SJU - Carrier AA
 O&D Connect Type - "Online Local"



Accessing O&D Data through O&DPlus



To access any Data Base Products data, begin by clicking on the applicable icon on your desktop.

O&DPlus Main Menu

Click on "O&D Database"

O&D Database	CAN Database	Main Menu Utilities	Global Settings	Quit ODPLUS
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O & D P L U S
Data Base Products, Inc.

O&D Database Menu

Click on "Reports"

Reports	O&D Database Specifications	Exit
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O & D P L U S
Data Base Products, Inc.

Report Selection Screen

Select "Totals by Airport Summary" and "Base Airport Screen"
Click on <RUN REPORT>

Domestic U.S. O&D Data	Selections:
(*) Totals by Airport Summary	Bases Selected
() Totals by Market Summary	
() Carrier Market Level Detail	Not Applicable
() Totals by Airport by Carrier	
() Airport Distances	
Domestic U.S. Base Summary Reports	
(*) Base Airport Screen	
() Base City Screen	
() Alpha Order	
() Pax Rank Order	
() CPM Rank Order	
() Initiated Trips & Dom. Port. Int'l	
() Base Averages Report	
() Base Fare Type	
() Time Series - 3 Yrs. by Quarter	
() Time Series - 4 Yrs. by Calendar Year	
() Time Series - 8 Yrs. by Calendar Year	
() Nat'l Mkt. Rank - 3 Yrs. by Quarter	
() Base Extract Report	
<RUN REPORT> <CANCEL>	

Base Airport Screen Report

Enter Airport Code into the "Base" Prompt window

<Base Airport (10%), ESC to end>

Base: PBI	Rank: 45
Year: 2000 Qt: 4	CPMS Rank: 42
	Outbound Inbound Total
Total Passengers:	71,417 72,626 144,043
Avg. Fare:	118.40 120.00 119.21
Avg. coupons:	1.37 1.36 1.36
Avg. Length of Haul:	1.135 1.129 1.132
Coupon Yield:	10.43 10.63 10.53
Fared Passengers:	66,608 67,754 134,362
Avg. Fare:	126.95 128.63 127.80
Coupon Yield:	11.18 11.39 11.29
Zero Fare Passengers:	4,809 4,872 9,681
DPIJ:	1,734 1,714 3,448
	Base Ref. Total
Initiated trips:	53,721 89,373 143,094

<ARROW Qtrs; PGUP,PGDN Airports; END Prints; F4 Clipboard>

Base Airport Screen Report

<Base Airport (10%), ESC to end>

Base: IAD Rank: 35
 Year: 2003 Qtr: 4 CPMS Rank: 28

	Outbound	Inbound	Total
Total Passengers:	104,224	103,953	208,177
Avg. Fare:	177.30	177.00	177.15
Avg. coupons:	1.29	1.30	1.29
Avg. Length of Haul:	1,317	1,318	1,317
Coupon Yield:	13.46	13.43	13.44
Fared Passengers:	97,017	96,719	193,736
Avg. Fare:	190.47	190.24	190.35
Coupon Yield:	14.46	14.43	14.45
Zero Fare Passengers:	7,207	7,234	14,441
DPIJ:	20,729	20,875	41,604
	Base	Ref.	Total
Initiated trips:	112,588	93,375	205,963

Copyright
 <ARROW Qtrs; PGUP, PGDN Airports; END Prints; F4 Clipboard>

Fixed Format Reports Working NOSELECT 10:48 am

Using the "Base Airport Screen Report" for IAD

Domestic U.S. O&D Data

- <=> Totals by Airport Summary
- <> Totals by Market Summary
- <> Carrier Market Level Detail
- <> Totals by Airport by Carrier
- <> Airport Distances

Domestic U.S. Base Summary Reports

- <(*) Base Airport Screen
- <> Base City Screen
- <> Alpha Order
- <> Pax Rank Order
- <> CPM Rank Order
- <> Initiated Trips & Dom. Port. Int'l
- <> Base Averages Report
- <> Base Fare Type
- <> Time Series - 3 Yrs. by Quarter
- <> Time Series - 4 Yrs. by Calendar Year
- <> Time Series - 8 Yrs. by Calendar Year
- <> Nat'l Mkt. Rank - 3 Yrs. by Quarter
- <> Base Extract Report

Fixed Format Reports

Since most of the "Data Elements" are displayed on our "Screen Reports," we will use them as a framework for our discussion. Let's look at the data elements available at each level.

Two "Screen" reports access the Base Database: the "Base Airport Screen Report" and the "Base City Screen Report".

Select Totals By Airport Summary and Base Airport Screen. Either click the <Run Report> box or press the F2 Key. Enter "IAD" in the grey box next to Base:.

The most recent quarter of data will be displayed. Use the Up and Down Arrows to scroll through the available quarters of data.

The following is a discussion of each of the terms and data elements shown on the screen above as well as commonly asked questions and answers on topics related to those terms:

Description of Data Elements and Related Issues

Base

In the top left corner of the screen, next to the airport code, IAD, is the word "Base".

Why do we use the term "Base" instead of "Origin" to specify the airport?

We use "Base" and "Reference" instead of "Origin" and "Destination" because these terms become confusing when dealing data that is Directional. For example, consider the phrase "Inbound from Destination to Origin." The meaning is not clear. "Inbound from Reference to Base" is clearer.

All data in our O&D Plus databases is cross posted data. This means that each passenger trip will show up in the databases twice, once as an Outbound passenger from their Origin to their Destination and once in the cross posted (reverse) market as an Inbound passenger.

We cross post the data so that you can determine total passengers into and out of an airport (or between an airport pair) with only one query. It is very handy to have cross posted data; but, it must be used with caution.

For example, if you run a Base level report for all airports in the U.S., the total "Outbound Passengers" (or "Inbound Passengers") would actually tell you the total trips made while the "Total Outbound plus Inbound" would double count each trip due to cross posting.

Year and Quarter

The next item down on the report is "Year:2003 Qtr:4".

How frequently is the data updated? What time periods are in the databases?

The O&D Survey is filed quarterly. Our Base database contains data beginning with Q1 1990 through the current quarter.

Passenger Rank

In the top right corner of the report is "Rank:35".

This is the passenger ranking of the airport within all domestic U.S airports. It tells you that in this quarter IAD - Dulles International was the 35th busiest airport for U.S. Domestic air travel in terms of O&D passengers. Since this is a ranking of "Domestic U.S. O&D's", it does not consider the number of passengers on an international itinerary (non-Domestic) nor does it consider on-line or off-line connecting enplanement passengers (non-Origin and non-Destination).

Where can I find data for Enplanements?

Total enplanements are not found in the O&D Databases but can be found elsewhere. Enplanement data by airport or market and carrier from the T-100 Market is published in our "Onboard Domestic" product.

Description of Data Elements and Related Issues

CPM Rank

The next item reads "CPMS Rank:28".

"CPM" stands for Coupon Passenger Mile. CPM Rank represents basically the same thing as "Passenger Rank" except that it ranks the U.S. airports by coupon miles traveled.

What is the difference between a CPM and an RPM?

The term CPM is a non-standard term which we made up. It represents the number of itinerary miles that passengers flew. Unlike "Revenue Passenger Miles" (RPM's), it does not take into consideration any additional miles which the passengers may have flown to a point which was not in a direct line between their coupon origin and coupon destination. This may occur in the case of single plane through service. The total miles flown are included in RPM's but, since the passenger was not required to change planes, he did not need an additional coupon.

If RPM's reflect the true miles flown, why not use RPM's instead of CPM's?

The reason that we use CPM's, which do not include these additional miles, is because there is no data in the survey about the single-plane through point since it does not involve an enplanement and is therefore not part of their coupon itinerary.

How are CPM's ("Total Itinerary Miles") calculated?

Distances for each coupon leg of the journey are calculated as the non-stop distance from the coupon origin to the coupon destination using the "Great Circle Mileage" distance formula applied to the airports' latitudes and longitudes from DB5.

Why is the difference between CPM's and RPM's important?

The difference between the passenger's actual itinerary miles (RPM's) and his coupon itinerary miles (CPM's) is important to know because it is a consideration when analyzing yield per mile, average coupons and average length of haul. We will examine these issues later in more detail.

Outbound, Inbound and Total

On the next row of the report we find the terms "Outbound", "Inbound" and "Total".

The "Outbound" data represents "Originating Enplanements" data and the "Inbound" data represents "Destination Deplanements".

Are Outbound Passengers those who started their journey at this airport?

It is important for you to know that Outbound refers only to a directional portion of the entire journey. This information does not tell you how many passengers started at IAD as their first point of origin. An "Outbound" originating passenger could just as well represent a passenger on the return leg of a round trip returning to his "Original Point of Origin" of Boston, BOS.

Description of Data Elements and Related Issues

Why are the Outbound and Inbound passenger counts always so close?

Since most passenger journeys are round-trips journeys, the "Outbound" and "Inbound" numbers will almost always be very close to each other. Even if all of the trips into and out of an airport were made by people who started their round-trip at that airport, the "Outbound" and "Inbound" would be the same. It's because the passengers are being counted by the number of directional journeys (we call trips). A round trip passenger therefore would be counted once as an **Outbound** passenger and once as an **Inbound**.

If you need to know where the passenger's "Original Point of Origin" was, see the discussion of the "Initiated trips" data element below.

Total Passengers

The next item in the report is "Total Passengers".

This represents revenue passengers who traveled a "Purely Domestic" itinerary at any fare including a zero fare.

Do "Total Passengers" include Non-Rev Passengers?

A "Non-Revenue" passenger, usually representing an airline employee (see page 12), is not counted in the O&D Survey data.

Why do "Total Passengers" include zero fare passengers?

A zero fare passenger is included because he is considered a "Revenue Passenger". A Zero Fare Revenue Passenger would probably be a passenger who is using their frequent-flyer mileage points in lieu of cash (see page 13).

Doesn't the DOT include the "Domestic Portion of International Journeys" in total passengers?

The fact that we are only including "Purely Domestic" itinerary passengers is important because this represents one of our few divergences from reporting the passenger data to you in exactly the same manner as you would find it in DOT processed summaries of the data.

We decided to separate the "Domestic Portion of International Journeys" for two reasons:

- 1) The data which is most useful to you and the data which, in fact, you expect to get from the Domestic O&D data is data for persons traveling between Domestic U.S. Origins and Domestic U.S. Destinations.
- 2) To provide you with a more accurate representation of average fare and yield for U.S. travel. If we did include the "Domestic Portion of International Journeys" it would effect the average fare and yield because it is usually longer haul and lower yield than Domestic travel; but, the worst part is that, even though probably not significant at non-gateway airports, the effect would be unknown to the user of the data. The DOT does not publish these data items.

Description of Data Elements and Related Issues

How does this difference affect comparability to the DOT Tables?

Our passenger counts and "Airport/City Rankings" differ from those found in the DOT/ATA "Table 3" and our total mileages and mileage rankings differ from "Table 4". In order to reconcile the passenger counts to DOT/ATA "Table 1" and "Table 3" one can add our "Total Passenger" number to the "DPIJ" passengers which, on this screen report, is found near the bottom.

Codesharing passengers are shown in their True O&D Market.

One more very important item to consider while we are discussing "Total Passengers" is that it **does** include passengers who were carried pursuant to a Codesharing agreement. The passengers show up in the carrier level data under the code of the marketing code-sharing partner. Because the marketing codesharing partner's code is used in all our O&DPlus databases, it is not possible to distinguish a codesharing ticket from a non codesharing ticket. To determine the operating carrier, you **MUST** have our Hub Sup product which will be discussed later.

What is Commuter Codesharing?

Codesharing is frequently referred to as "Commuter Code Sharing" because the preponderance of code sharing has consisted of a Commuter who uses a Majors code for marketing, reservations and ticketing purposes under a Code sharing Agreement (which also includes a revenue-sharing agreement).

Average Fare

"Average Fare" is the total revenue divided by the total passengers. Since total passengers include zero fare passengers the average fare on the line below Total Passengers includes their dilutive effect. The "Average Fare" located just under the "Fared Passengers" line is a different average fare. It represents the average fare calculated by dividing total revenues by "Fared Passengers" and therefore does not include the dilutive effects of zero fared passengers.

Does the average fare represent what the passengers paid?

The fare that the passenger paid is called the "Gross Fare". The average fare found here and elsewhere is not the Gross Fare. We subtract Federal Excise Tax, PFCs and federal security fees as they apply from the Gross Fare. All Revenue, average fare and yield numbers are NET of Federal Excise Tax, PFCs and Federal Security Fees. The "Net Fare" is the amount of revenue the air carrier recognizes.

What is a "Bad Fare" and how does it affect "Average Fare"?

When our "Fare Filter" identifies a fare as being above its maximum or below its minimum allowable yield for the mileage block that is appropriate, we flag it as a "Bad Fare". We do not add the fare to our revenue accumulators.

Description of Data Elements and Related Issues

How does a "Bad Fare" record affect the passenger count?

We accumulate the good fare passengers and the bad fare passengers separately, so that, when it is time to print a summary level record, we can divide the revenue by the good fare passengers (to produce the "Average Fare") and record the passenger count as the sum of the good fare passenger accumulator and the bad fare passenger accumulator. I am going through this detail because there has been confusion occasionally by our stating simply that, the passenger counts include 'Bad Fared' passengers; but, the average fare does not include their 'Bad Fares.'

Average Coupons

The next item on our sample report is "Avg. coupons". This data element is unique to our data and can be very useful. It is the average coupons which are used between this airport to all of the destinations served. It is a measure of how much single plane (single coupon) service this airport receives. The average outbound coupons in this example is 1.29.

How can I tell how many passengers were single coupon passengers?

If we assume that all travel in one directional journey is two coupons or less (in Q1 2004 98% of domestic trips were one or two coupons) then we can calculate the number of single coupon passengers who traveled to and from IAD vs. two coupon passengers as follows: First, subtract average coupons from the next highest integer (i.e. $2 - 1.29 = .71$), then convert to a percentage (i.e. = 71%).

You can prove mathematically that, if 71% of the passengers used a single coupon and the remainder used two coupons, the average number of coupons used would be 1.29. Or, an even shorter short-cut is to simply drop the whole number and convert the remaining decimal into a percent. This will represent the percentage of passengers who used two coupons (the next highest integer from 1.29). In this case you could determine at a glance that approximately 29% of the passengers traveled on two coupons per directional journey from Dulles.

Average Length of Haul

"Average Length of Haul" is calculated by dividing the sum of all passenger miles traveled ("Coupon Passenger Miles") by total passengers. It represents the average directional itinerary distance that was traveled by passengers to or from Dulles, based on the coupon distances.

Is this the same as the "Average Length of Haul" calculated from other Form 41 data sources?

No, not quite. The O&D Survey is coupon based and a stop where the passenger did not deplane (as in single-plane through service) is not quite the same number as the "Average Length of Haul" which would be calculated by using Revenue Passenger Miles (found in T-Schedules or financial reports), but it is a close proximity of it.

Description of Data Elements and Related Issues

Coupon Yield

"Coupon Yield", is calculated by dividing total revenue by total coupon passenger miles, "CPMs".

What is the significance of Coupon Yield?

This is a very important data item because it is in essence a key to market profitability. A very highly traveled airport or market with a high yield should be profitable. If you assume that most U.S. carriers in major markets are using comparable jet equipment, and that their break-even load factor is around 55%, and that they will adjust their schedules according to market demand and competitive forces to achieve at least system-wide break-even, then one can broadly assume that in the markets which are at an average yield are those where the carriers are doing only slightly better than break-even and that their cost per seat mile is approximately one half of that average yield. Also, it follows that, higher than average yield markets are those producing profits while low yield markets are producing losses.

Isn't that profitability model a little simplistic?

Since you are a person who has analyzed markets before and in fact may even be a person in charge of maintaining this delicate profit-balancing act, you realize what an over simplification the previous statement was. In fact there are few things as complex and as difficult as creating and performing a profitable marketing plan. That is why there are market analysts and planners and why there are excellent analytical tools like O&DPlus. I digress.

Fared Passengers

"Fared Passengers" are revenue passengers who paid a fare or, in other words, are not zero fare passengers. If you add this number to the passengers on the line entitled "Zero Fare Passengers" the sum agrees to the "Total Passengers" line item.

Fared Average Fare

This "Average Fare" is the average fare for "Fared Passengers" which is stated net of Federal Excise Tax, PFCs and federal security fees. It is calculated by dividing total revenues by "Fared Passengers". This is the same as the "Average Fare" discussed above except that it does not include the dilutive effect of zero fare passengers.

Fared Coupon Yield

The "Coupon Yield" is the yield per coupon passenger mile "CPM" for "Fared Passengers". This is the same as the "Coupon Yield" discussed above except that it does not include the dilutive effect of zero fare passengers.

Zero Fare Passengers

"Zero Fare Passengers" are "Revenue Passengers" who paid no fare because they used frequent-flyer mileage points in lieu of cash. A zero fare passenger is different from a "Non-revenue passengers". "Non-revenue passengers" (frequently called a "Non-revs") are usually airline employees and are not included in the O&D Survey data.

Description of Data Elements and Related Issues

DPIJ Passengers

"DPIJ". Passengers represent domestic segments of international itinerary tickets. We also refer to these passenger counts as the "Domestic Portion of an International Journey" (abbreviated DPIJ). These passenger segments are from their Origin to their U.S. port of departure or from their U.S. port of entry to their final Destination.

Can you tell me which airport was used as the U.S. gateway?

From our data you can not distinguish, in a DPIJ market segment, which airport is the first or last U.S. port vs. the true U.S. origin or destination airport.

What is the significance of the "Domestic Portion of an International Journey" passenger counts?

These passengers are very important in analyzing U.S. markets because they constitute a large percentage of traffic to and from U.S. gateways such as JFK and Miami. Also, since foreign carriers are not allowed to serve Domestic U.S. O&D markets, an analyst can obtain valuable information about international travel patterns within the U.S. from this data element.

The missing pieces of information about international travel are: the true foreign origin or destination, the miles traveled, the fare paid, international carrier statistics, and U.S. carrier international traffic which originates or terminates at the U.S. gateway. These items are available in our "International" product.

Can I find "DPIJ" data in the DOT/ATA summary reports?

The only place that you can find DPIJ passenger counts broken out separately in the DOT/ATA summary reports is "Table 12", the full coupon itinerary listing report.

Initiated Trips

The last item on the report is "**Initiated Trips**" from "**Base**", "**Reference**" and "**Total**". This line item is sometimes referred to as "Point of Sale Data" or "Point of Original Origin." It separates journeys which were one ways or round trips which began originally at the Base airport, Dulles, from journeys which were one ways or round trips which began originally somewhere else, a Reference airport.

How can I tell how many people started their journey at the "Base" airport?

This can get confusing but is very valuable information. Let's first assume that all passengers travel on round trips (in Q1 2004, 80% of all passengers flew round trip). The total trips Initiated at the Base of Dulles as indicated in the report is $112,588 \times 10 = 1,125,880$. If all of these trips were round trips then we could say that 562,940 people from the Washington D.C. area generated 562,940 trips Outbound from Dulles and 562,940 trips Inbound to Dulles.

Likewise, we could say that 466,875 people started elsewhere making a round trip to Dulles generating 933,750 trips which is shown on the report as 93,375 (ten percent of 933,750) initiated trips from Reference.

Description of Data Elements and Related Issues

How do "Initiated Trips" relate to "Outbound" and "Inbound" Passengers?

First, take half of the "Initiated Trips" from "Base" and half of the "Initiated Trips" from "Reference" and add them together ($56,294 + 46,688 = 102,982$). This should be approximately the same as the "Total Passengers" "Outbound" (104,224) and also to the "Total Passenger" "Inbound" (103,953) numbers on the first line of the report. If all journeys were symmetrical round trips, they would be identical. There will be a small difference created by having more one way trips in one direction than in the other direction. The remaining difference is due to odd routing patterns.

Why doesn't the Total of "Initiated trips" agree to "Total Passengers"?

The "Initiated trips" "Total" column (205,963) does not agree with the "Total Passengers" "Total" column (208,177) because not all trips in the O&D markets originated at the Base or Reference. These odd travel patterns are called "Non-symmetrical round trips" and "Open Jaws". There is a more thorough discussion about how we count passengers using various travel patterns and about cross posting the data in the "HUB" documentation.

Base City Screen Report

Base City (<10%), ESC to end			
Base: +WS		Rank: 9	
Year: 2003	Qtr: 4	CPMS Rank: 10	
	Outbound	Inbound	Total
Total Passengers:	253,726	251,558	505,284
Avg. Fare:	165.60	164.80	165.20
Avg. coupons:	1.31	1.31	1.31
Avg. Length of Haul:	1,065	1,064	1,065
Coupon Yield:	15.54	15.47	15.51
Fared Passengers:	236,899	234,830	471,729
Avg. Fare:	177.36	176.54	176.95
Coupon Yield:	16.65	16.59	16.62
Zero Fare Passengers:	16,827	16,728	33,555
DPIJ:	31,571	31,604	63,175
	Base	Ref.	Total
Initiated trips:	256,422	243,746	500,168

Copyright Fixed Format Reports | Working | NOSELECT | 8:26 am

A Discussion of Metropolitan "City Codes" & "Plus Codes"

Using the Base City Screen Example for "+WS"

In order to change from the previous "Base Airport Screen Report" to the "Base City Screen Report" illustrated above, press the escape key, move the cursor down to "Base City Screen" and press return, now enter "+WS" at the cursor position.

Domestic U.S. O&D Data	
(*)	Totals by Airport Summary
()	Totals by Market Summary
()	Carrier Market Le
()	Totals by Airport by Carrier
()	Airport Distances
Domestic U.S. Base Summary Reports	
()	Base Airport Screen
(*)	Base City Screen
()	Alpha Order
()	Pax Rank Order
()	CPM Rank Order
()	Initiated Trips & Dom. Port. Int'l
()	Base Averages Report
()	Base Fare Type
()	Time Series - 3 Yrs. by Quarter
()	Time Series - 4 Yrs. by Calendar Year
()	Time Series - 8 Yrs. by Calendar Year
()	Nat'l Mkt. Rank - 3 Yrs. by Quarter
()	Base Extract Report

Fixed Format Reports

The difference between this screen report and the "Base Airport Screen" is that this "Base City Screen" report is accessing summary level data elements for the metropolitan area of Washington D.C.

Description of Data Elements and Related Issues

Questions and Answers-Metropolitan Areas and City Codes

What constitutes a metropolitan area?

Airports that are within the same metropolitan area are assigned a two-letter "City Code" by the DOT. The City Codes are found in Databank 5 which we receive from the DOT. The metropolitan area of Washington D.C. for example is assigned the two letter code of "WS" and consists of the airports of "IAD" and "DCA". "WS" does not include BWI (Baltimore).

Why did we enter "+WS" instead of just "WS"?

We added a plus sign to the DOT's two letter code to turn them into a three character code. This makes the programming of the access and reporting software somewhat easier.

Where can I find a listing of the "City Codes"?

These "City Codes" appear in our "Airport Codes Manual II" beginning on Page C-1. Most of them are fairly easy to remember: "+DA" is Dallas, "+HO" is Houston, "+NY" is New York, "+CH" is Chicago, etc.

I thought that the city code for Washington D.C. was "WAS" rather than "WS"?

Some people think that NYC is the city code for New York, CHI is for Chicago and WAS is for Washington. This represents a small problem in the O&D Survey data because data does exist for these codes.

What is the source of the confusion over city codes?

These codes appear in the OAG and travel agents write airline tickets using these codes. When the ticket is then pulled and data entered into the O&D Survey the data entry person enters the code which appears on the ticket. This used to be a larger problem than it is today. Carriers are now instructed to correct the erroneous codes before submission of their Survey data. There is still however some records which contain these codes in the "Airport" code field in the raw data. We programmatically change these codes to the appropriate airport code by verifying the correct airport in the T100 Market database.

How does the DOT resolve the problem of erroneous city codes as airport codes?

The DOT decided to add the three character OAG city codes as "Airport Codes" and assign them to the two letter metropolitan area code as the real airports in that area. Therefore, the metropolitan area of "WS" not only includes "IAD" and "DCA", but also includes an airport with the code of "WAS". The fact that the airport name assigned to the "WAS" airport code is "Washington Metropolitan Area, DC" adds a bit to the confusion.

What coordinates are used for the metropolitan area codes?

The latitude and longitude for all city codes such as "WS" and mythical airport codes such as "WAS" are calculated using the average of all the actual airports within that area such as "IAD" and "DCA".

Market Screen Report

```

<True O&D by Market <10%>, ESC to end>
Base: IAD Reference: BOS Rank: 39
Year: 2003 Qtr: 4 Distance: 413

```

	Outbound	Inbound	Total
Total Passengers:	1,889	1,972	3,861
Avg. Fare:	154.20	155.50	154.86
Avg. coupons:	1.01	1.02	1.02
Avg. Length of Haul:	412	414	413
Coupon Yield:	37.36	37.54	37.45
Fared Passengers:	1,807	1,888	3,695
Avg. Fare:	161.20	162.42	161.82
Coupon Yield:	39.13	39.23	39.18
Zero Fare Passengers:	82	84	166
DPIJ:	646	701	1,347

```

O&D PLUS
Copyright Initiated trips: 2,028 1,810 3,838
<ARROW Qtrs; PGUP,PGDN Markets; END Prints; F4 Clipboard>
Press F2 or Click on Run to Execute Report

```

A Discussion of Market Database Data Elements

Using the Market Screen Example for IAD/BOS

In order to select the "Market Screen" illustrated above, go to the O&D Database Reports screen. Select "Totals by Market Summary" and then "Market Screen Report" and press the F2 key or click on <RUN REPORT>. Enter "IAD" at the initial cursor position and then "BOS".

```

Domestic U.S. O&D Data
(*) Totals by Airport Summary
(*) Totals by Market Summary
(<) Carrier Market Level Detail
(<) Totals by Airport by Carrier
(<) Airport Distances
-----
Domestic U.S. Market Summary Reports
(*) Market Screen Report
(<) Market Matrix
(<) Markets Ranked by Base
(<) Markets Ranked by Market
(<) Top 1,000 U.S. City Pair Markets
-----
(<) Standard Market Report
(<) Initiated Trips & Dom. Port. Int'l
(<) Market Averages
(<) Market Fare Type
(<) Time Series - 3 Yrs. by Quarter
(<) Time Series - 4 Yrs. by Calendar Year
(<) Time Series - 8 Yrs. by Calendar Year
(<) Market Extract Report

```

Notice that the format and data items of this report are almost identical to the previous screens.

This is important. It illustrates the similarity of "Data Elements" between the Market Level summary data and the Base Level summary data. Indeed, if you wanted to you could derive the same data as is found in the Base Level by using any of our comprehensive reports by selecting a Base airport and all References and selecting a Report Option Summary Level of Airport-to-Total Selected or City-to-Total Selected. The reason not to do this is that it would be considerably slower.

The Market Level database is for use when you are not interested in the total to all References or when you are interested in seeing the breakdown by Reference.

Description of Data Elements and Related Issues

In addition to needing to input a Reference airport, a "Market Screen Report" only differs in two ways from the previous "Base Screen Reports".

Distance

"Distance" replaces "CPM Rank" in the top right corner. This distance is the non-stop distance between the two airports.

Market Rank

The other difference is the line above "Distance" which displays "Rank: 39". This is potentially misleading because it does not mean that the "IAD/BOS" Airport-Pair market is the 39th largest market for U.S. Domestic O&D's. The "Rank" refers to the City-Pair markets of Washington D.C. to Boston ("+WS/+BO"). Therefore, you would find the same market rank if you looked at the airport-pair market of "DCA/BOS".

How does the term "True O&D" relate to the Market Level data?

One of the most frequently used terms when discussing market level summary data is "True O&D". What is "True O&D" and what is it not? O&D obviously stands for "Origin" and "Destination". O&D information is from the perspective of the passenger. In other words, it represents the place that he started and the place that he was going. This perspective must be able to track a journey over any connections which it makes along the way even if it involves changing carriers.

The O&D Survey is a unique and very valuable data set. The participating carriers spend a lot of time and money gathering, entering and reporting the data from a 10% sample of all tickets used. It is the only source of industry wide information on passengers' "True" Origin and Destination or on the average fares which these passengers paid. Since airline tickets are priced on an O&D basis, the O&D Survey constitutes an invaluable source of marketing information by profiling the revenue stream on a market by market, carrier by carrier basis.

What O&DPlus "True O&D" data will **NOT** tell you is information about specific routings between the O&D. Nor does it offer insights on flow over, hub and spoke, operations. Using only our O&DPlus databases you cannot see hubbing.

What if I need to know the routings for the O&D's?

The routing data is included in the O&D Survey but is not presented in our O&D summaries. Our "HUB" product was designed specifically to allow analysis of routings and flow-over traffic derived from the O&D Survey data. If studying the individual routings is critical to your analysis, you can find that information in our "HUB" product which will be discussed later today.

The Market Database

Some of the Data Elements in the Market Database are pre-calculated. They are summed by EACH Base-to-Reference Airport Pair that represents the "True Origin" and the "True Destination" of travel via ALL Carriers. Separate sums are kept for Inbound or Outbound Direction of travel. These calculated and summed Data Elements appear in Boldface in the list below.

Data Elements of O&D PLUS Market Database Extract Report

Base Airport Code - Three-Letter Alphanumeric Code for each Base Airport that was a "True Origin" of air travel.

Base City Code - Three-Letter Alphanumeric Code for the City of the Base Airport, if there was only one airport in the city; or the "Plus Code" for the multiple airport city where this airport is located.

Base State Code - Two-Letter State Identifier Code for the Base Airport.

Reference Airport Code - Three-Letter Alphanumeric Code for each Reference Airport that was a "True Destination" of air travel.

Reference City Code - Three-Letter Alphanumeric Code for the City of the Reference Airport, if there was only one airport in the city; or the "Plus Code" for the multiple airport city where this airport is located.

Reference State Code - Two-Letter State Identifier Code for the Reference Airport.

Year and Qtr – The Y2K compliant year and quarter.

Market Rank - National Ranking of the City-to-City market for this Airport-to-Airport Pair, for this quarter, based on total Passengers.

Non-Stop Mileage - The number of statute miles calculated as the great circle distance between the Base Airport that was the origin of travel to the Reference Airport that was the Destination of travel.

PAX Outbound - Passenger Count for this quarter for Outbound traffic from this Base Airport to the Reference Airport via ALL Carriers.

PAX Inbound - Passenger Count for this quarter for Inbound traffic to this Base Airport from the Reference Airport via ALL Carriers.

CPM Outbound - Coupon Passenger Mlles for this quarter, Outbound from the Base Airport to Reference Airport via ALL Carriers.

CPM Inbound - Coupon Passenger Mlles for this quarter, Inbound traffic to the Base Airport from Reference Airport via ALL Carriers.

Average Fare Outbound - Average Fare for this quarter based on Outbound PAX from this Base Airport to the Reference Airport via ALL Carriers.

Average Fare Inbound - Average Fare for this quarter based on Inbound PAX to this Base Airport from the Reference Airport via ALL Carriers.

Average Coupons Outbound - Average Coupons for this quarter, Outbound PAX from this Base Airport to the Reference Airport via ALL Carriers.

Average Coupons Inbound - Average Coupons for this quarter, Inbound PAX to this Base Airport from the Reference Airport via ALL Carriers.

Fared PAX Outbound - Count of Fared Passengers for this quarter, Outbound from this Base Airport to the Reference Airport via ALL Carriers.

Fared PAX Inbound - Count of Fared Passengers for this quarter, Inbound to this Base Airport from the Reference Airport via ALL Carriers.

Average Fare, Fared PAX, Outbound - Average Fare for this quarter, Fared PAX, Outbound from this Base Air port to the Reference Airport via ALL Carriers.

Average Fare, Fared PAX, Inbound - Average Fare for this quarter, Fared PAX, Inbound to this Base Airport from the Reference Airport via ALL Carriers.

Initiated at Base - Number of Passengers that Initiated their Trips at this Base Airport (i.e., bought their coupon ticket here).

Initiated at Reference - Number of Passengers that Initiated their Trips at the Reference Airports (i.e., bought their coupon ticket there).

International PAX Outbound - International Passengers for this quarter that had a Domestic Portion of their International Journey Outbound from this Airport to the Reference Airport via ALL Domestic Carriers.

International PAX Inbound - International Passengers for this quarter that had a Domestic Portion of their International Journey Inbound to this Airport from Reference Airport via ALL Domestic Carriers.

O&D PLUS Market Extract Record Format

Col Pos #	Field Name and Description	Beginning Character Position	Field Length	Field Type	Field Justified	Trailing Blank Spaces	Delimiting Comma Position
1.	Base Airport Code	1	3	A	L	0	4
2.	Base City Code	5	3	A	L	0	8
3.	Base State Code	9	2	A	L	0	11
4.	Reference Airport Code	12	3	A	L	0	15
5.	Reference City Code	16	3	A	L	0	19
6.	Reference State Code	20	2	A	L	0	22
7.	Year	23	4	N	L	1	28
8.	Quarter	29	2	N	R	1	32
9.	Market Rank	33	5	N	R	1	39
10.	Non-Stop Mileage	40	5	N	R	1	46
11.	PAX Outbound	47	12	N	R	1	60
12.	PAX Inbound	61	12	N	R	1	74
13.	CPM Outbound	75	14	N	R	1	90
14.	CPM Inbound	91	14	N	R	1	106
15.	Avg Fare Outbound	107	8	N	R	1	116
16.	Avg Fare Inbound	117	8	N	R	1	126
17.	Avg Coupons Outbound	127	5	N	R	1	133
18.	Avg Coupons Inbound	134	5	N	R	1	140
19.	Fared PAX Outbound	141	12	N	R	1	154
20.	Fared PAX Inbound	155	12	N	R	1	168
21.	Avg Fare, Fared PAX, Outbound	169	8	N	R	1	178
22.	Avg Fare, Fared PAX, Inbound	179	8	N	R	1	188
23.	Initiated at Base	189	12	N	R	1	202
24.	Initiated at Reference	203	12	N	R	1	216
25.	Intl PAX Outbound	217	9	N	R	1	227
26.	Intl PAX Inbound	228	9	N	R	0	None

SPECIAL NOTE: This report has no headings. To know what the columns in the file represent, use this Record Layout and Description.

Carrier Screen Report

<Carrier O&D (10%)>											
Origin:	IAD	Dest:	BOS	Out+In,	Local+Connect	Dist:	413	Year:	2003	Qtr:	4
Mkt.		Pax.	Avg. Fare	Avg. Coupons	Avg. Haul	Coupon Yield	CPMS	DPIJ Pax	Initiated Trips		
UA	83%	3,237	161	1.00	412	38.96	1,335,004	1,308	3,215		
XX	14%	566	117	1.00	413	28.40	233,758	0	566		
	97%	3,861	155	1.01	413	37.44	1,596,739	1,340	3,838		

<Arrow Thru Qtrs; PGUP,PGDN Thru Markets; END Prints; F4 Clipboard; ESC Quits>

A Discussion of Carrier Database Data Elements

Using the Carrier Screen Example for IAD/BOS

In order to duplicate the "Carrier Screen" above, go to the O&D Database Reports screen. Select "Carrier Market Level Detail" and then "Market Carrier Screen Report" and press the F2 key or click on <RUN REPORT>. Enter "IAD" at the initial cursor position and then "BOS."

Domestic U.S. O&D Data	
<input checked="" type="checkbox"/>	Totals by Airport Summary
<	Totals by Market Summary
(*)	Carrier Market Level Detail
<	Totals by Airport by Carrier
<	Airport Distances
Domestic U.S. Carrier Summary Reports	
(*)	Market Carrier Screen Report
<	Carrier Passengers Screen Report
<	Carrier Market Matrix
<	Carrier Markets Ranked by Base
<	Carrier Markets Ranked by Market
<	Top 1,000 U.S. City Pairs by Carrier
<	Standard Carrier Report
<	Directional Connects
<	Initiated Trips & Dom. Port. Int'l
<	Carrier Averages
<	Carrier Fare Type
<	Time Series - 3 Yrs. by Quarter
<	Time Series - 4 Yrs. by Calendar Year
<	Time Series - 8 Yrs. by Calendar Year
<	Carrier Extract Report

Description of Data Elements and Related Issues

Cursor down to the
OUT+In, Local+Connect
Selection. Press ENTER.

<Carrier O&D <10%>>			
Origin: IAD	Dest: BOS	Out+In,	Local+Connect
Mkt.	Avg.	Dist:	CPMS
Car Shr.	Pax.	Fare	
		Outbound,	Local
		Inbound,	Local
		Out+In,	Local
		Outbound,	Connect
		Inbound,	Connect
		Out+In,	Connect
		Outbound,	Local+Connect
		Inbound,	Local+Connect
		Out+In,	Local+Connect

Carrier

We attempt to maintain the latest two character carrier code assigned by the DOT listed in this column. Of course, the problem of new carriers being reassigned an old carrier's code always exists. Pan American World Airways' code of PA is an example of this phenomenon. PanAm went out of business in 1991. Then in 1998, an airline with the same name and code PA came into existence. When they changed their name to Pan American Airways Corp. at the end of 1999, their code was changed to PN. In 2003, a small commuter named Florida Coastal Airlines was assigned the code PA. Fortunately, they have no O&D data at this time. So always be watchful of new carriers that appear unexpectedly in or in unusual markets.

Market Share

A carrier's market share is simply the carrier's percentage of total passengers carried in the selected market.

Local and Connect

What are the meaning of the terms "Local" and "Connect"?

These terms are frequently used in the airline industry but please disregard any other meaning and except for the purpose of O&DPlus the following special definitions. The term "Local" for our Carrier level summary data means that the passenger did not change marketing carriers between his origin and destination. The term "Connect" means that the passenger did change marketing carriers between his origin and destination.

It may also be useful to think of "Local" vs. "Connect" as one marketing carrier "on-line" from origin to destination versus those passengers who make an "off-line connection".

If the passenger changed carriers, which carrier do you assign as carrying him?

The first marketing carrier on the passenger's directional journey, the one which departs the origin airport, is given credit for carrying the "Connect" passenger.

Are your definitions of "Local" and "Connect" the same as the DOT uses in their Table 10?

Those of you who are familiar with the DOT/ATA "Table 10" will probably recognize that our definition of "Connect" differs from that context while our usage of "Local" is the same. Those of you not familiar with "Table 10" should not be concerned about it but should be aware that the "Connect" statistics which you obtain from our Carrier database are not the same as "Table 10". Our definition corresponds to the "Off-line Connect" data as published in the DOT/ATA "Table 12".

Description of Data Elements and Related Issues

What problems are associated with off-line connect data?

Fortunately, as off-line connections become fewer and fewer, Carrier level market data becomes easier to analyze. "Connect" passengers, however, present a problem in attempting to allocate revenues between carriers and also in identifying the connect point for the purposes of determining distance and therefore yield proration. Since the carrier connected to or the point of connection is not given to you in our Carrier O&D database, there is not much that you can do to discover their full routing without resorting to the Hub product.

How can I analyze off-line connect information?

There are three things which you can do if you wish to maximize the utility of the detail which does exist.

1) You can run a Carrier level report called "Directional Connects" like the one below. This report only gives you passenger counts but can be used to determine the magnitude of connections in each direction (outbound and inbound) for specified markets.

Period [2003:4]

RRTR -PASSENGER TRAFFIC -FOR PAIRS SELECTED

Sum of Periods Selected

(Ten Percent Sample)

NAME	Mkt Rank	Code	NStop Miles	Car Cod	PASSENGERS-OU TBOUND			PASSENGERS-IN BOUND			ASSNGRS-O 'BOUND+INBOUND		
					Local	Conn	Total	Local	Conn	Total	Local	Conn	Total
BASE: Newark Intl		EW R											
San Francisco In	10	SFO	2,565	AA	265	3	268	251	6	257	516	9	525
San Francisco In	10	SFO	2,565	AS		3	3	4	12	16	7	12	19
San Francisco In	10	SFO	2,565	CO	6,180	67	6,247	6,348	8	6,356	12,528	75	12,603
San Francisco In	10	SFO	2,565	DL	143	1	144	155	7	162	298	8	306
San Francisco In	10	SFO	2,565	F9		0	0	0	0	0	0	0	0
San Francisco In	10	SFO	2,565	FL		3	3	2	0	2	5	0	5
San Francisco In	10	SFO	2,565	HP	126	2	128	122	9	131	248	11	259
San Francisco In	10	SFO	2,565	NW		72	79	80	32	112	152	39	191
San Francisco In	10	SFO	2,565	TZ	1,169	2	1,171	1,189	0	1,189	2,358	2	2,360
San Francisco In	10	SFO	2,565	UA	3,214	16	3,230	3,149	45	3,194	6,363	61	6,424
San Francisco In	10	SFO	2,565	US	129	0	129	132	4	136	261	4	265
San Francisco In	10	SFO	2,565	YX		0	0	0	1	1	0	1	1
Sub-total					11,304	98	11,402	11,432	124	11,556	22,736	222	22,958
TOTAL FOR BASE EW R					11,304	98	11,402	11,432	124	11,556	22,736	222	22,958
REPORT TOTAL					11,304	98	11,402	11,432	124	11,556	22,736	222	22,958

Match the carriers with outbound connect passengers to the carriers with inbound connect passengers. You may fairly assume that these carriers are connecting to each other. If you have knowledge of the carriers route structures, you may be able to make an educated guess about the connect point being used.

2) Another thing you can do is, when you are required to select a report specification of "Local", "Connect" or "Total", run the report twice, selecting your preferred two of the three choices so that you can determine the magnitude of "Connect" traffic in your selected markets.

3) Also, if "Connects" are significant to your analysis, you should choose "Outbound +Inbound" and divide the total by two. The effect of this is to prorate the passengers and revenues associated with connections evenly between the connecting carriers. Otherwise, the revenue as well as the passenger will be attributed to the first carrier.

How significant is prorating connect traffic?

Normally, the prorations between connecting carriers are not significant items. Also, passenger and revenue prorations do not present a problem if you are analyzing a carrier's entire Domestic system because the total of either the Outbound or Inbound would be balanced by the fact that they would get full credit for connect markets where they are the first carrier on the directional itinerary but no credit for the reverse market.

The Carrier Database

The Calculated Data Elements in the Carrier Database are summed for each "Carrier." These records represent sums of the Passenger Count (or other data item) for EACH Carrier at EACH Airport that was a Base and EACH Reference Airport. Separate sums are kept for INBOUND or OUTBOUND Direction and for LOCAL or CONNECT "Connect Type" of traffic.

Data Elements of O&D PLUS Carrier Database Extract Report

Base Airport Code - Three Letter Alphanumeric Code for each Base Airport that was a "True Origin" of air travel.

Base City Code - Three-letter Alphanumeric Code for the City of the Base Airport, if there was only one airport in the city; or the plus Code" for the multiple airport city where this airport is located.

Base State Code - Two-letter State Identifier Code for the Base Airport.

Reference Airport Code - Three-Letter Alphanumeric Code for each Reference Airport that was a "True Destination" of air travel.

Reference City Code - Three-Letter Alphanumeric Code for the City of the Reference Airport, if there was only one airport in the city; or the "Plus Code" for the multiple airport city where this airport is located.

Reference State Code - Two-Letter State Identifier Code for the Reference Airport.

Carrier Code - Two-Letter Alphanumeric Carrier Code.

Year and Qtr – The Y2K compliant year and quarter.

Market Rank - National Ranking of the City-to-City market for this Airport-to-Airport Pair, for this quarter, based on total Passenger Count.

Non-Stop Mileage - The number of statute miles calculated as the great circle distance between the Base Airport that was the origin of travel to the Reference Airport that was the Destination of travel.

PAX Outbound, Local - Passenger Count for this quarter, Outbound from this Base Airport to the Reference Airport via EACH Carrier, Local traffic only.

PAX Inbound, Local - Passenger Count for this quarter, Inbound to this Base Airport from the Reference Airport via EACH Carrier, Local traffic: only.

PAX Outbound, Connect - Passenger Count for this quarter, Outbound from this Base Airport to this Reference Airport via EACH Carrier, Connect traffic only.

PAX Inbound, Connect - Passenger Count far this quarter, Inbound to this Base Airport from this Reference Airport via EACH Carrier, Connect traffic only.

CPM Outbound, Local - Coupon Passenger Miles for this quarter, Outbound from this Base Airport to Reference Airport via EACH Carrier, Local traffic only.

CPM Inbound, Local - Coupon Passenger Miles far this quarter, Inbound to this Base Airport from this Reference Airport via EACH Carrier, Local traffic only.

CPM Outbound, Connect - Coupon Passenger Miles for this quarter, Outbound from this Base Airport to Reference Airport via EACH Carrier, Connect traffic only.

CPM Inbound, Connect - Coupon Passenger Miles for this quarter, Inbound to this Base Airport from this Reference Airport via EACH Carrier, Connect traffic only.

Average Fare Outbound, Local - Average Fare for this quarter, Outbound PAX from this Base Airport to this Reference Airport via EACH Carrier, Local traffic only.

Average Fare Inbound, Local - Average Fare for this quarter, Inbound PAX to this Base Airport from this Reference Airport via EACH Carrier, Local traffic only.

Average Fare Outbound, Connect - Average Fare for this quarter, Outbound PAX from this Base Airport to this Reference Airport via EACH Carrier, Connect traffic only.

Average Fare Inbound, Connect - Average Fare for this quarter, Inbound PAX to this Base Airport from this Reference Airport via EACH Carrier, Connect traffic only.

Average Coupons Outbound, Local - Average Coupons for this quarter, Outbound PAX from this Base Airport to this Reference Airport via EACH Carrier, Local traffic only.

Average Coupons Inbound, Local - Average Coupons for this quarter, Inbound PAX to this Base Airport from this Reference Airport via EACH Carrier, Local traffic only.

Average Coupons Outbound, Connect - Average Coupons for this quarter, Outbound PAX from this Base Airport to Reference Airport via EACH Carrier, Connect traffic only.

Average Coupons Inbound, Connect - Average Coupons for this quarter, Inbound PAX to this Base Airport from this Reference Airport via EACH Carrier, Connect traffic only.

Fared PAX Outbound, Local - Count of Fared Passengers for this quarter for Outbound Direction from this Base Airport to this Reference Airport via ALL Carriers, Local traffic only.

Fared PAX Inbound, Local - Count of Fared Passengers for this quarter for Inbound Direction to this Base Airport from this Reference Airport via ALL Carriers, Local traffic only.

Fared PAX Outbound, Connect - Count of Fared Passengers for this quarter for Outbound Direction from this Base Airport to this Reference Airport via ALL Carriers, Connect traffic only.

Fared PAX Inbound, Connect - Count of Fared Passengers for this quarter for Inbound Direction to this Base Airport from this Reference Airport via All Carriers, Connect traffic only.

Average Fare, Fared PAX, Outbound, Local - Average Fare for this quarter based on Fared PAX Outbound from this Base Airport to this Reference Airport via EACH Carrier, Local traffic only.

Average Fare, Fared PAX, Inbound, Local - Average Fare for this quarter based on Fared PAX Inbound to this Base Airport from this Reference Airport via EACH Carrier, Local traffic only.

Average Fare, Fared PAX, Outbound, Connect - Average Fare for this quarter based on Fared PAX Outbound from this Base Airport to this Reference Airport via EACH Carrier, Connect traffic only.

Average Fare, Fared PAX, Inbound, Connect - Average Fare for this quarter based on Fared PAX Inbound at this Base Airport from this Reference Airport via EACH Carrier, Connect traffic only.

O&D PLUS Carrier Extract Record Format

Col Pos #	Field Name and Description	Beginning Character Position	Field Length	Field Type	Field Justified	Trailing Blank Spaces	Delimiting Comma Position	
1.	Base Airport Code	1	3	A	L	0	4	
2.	Base City Code	5	3	A	L	0	8	
3.	Base State Code	9	2	A	L	0	11	
4.	Reference Airport Code	12	3	A	L	0	15	
5.	Reference City Code	16	3	A	L	0	19	
6.	Reference State Code	20	2	A	L	0	22	
7.	Carrier Code	23	2	A	L	0	25	
8.	Year	26	4	N	R	1	31	
9	Quarter	32	2	N	R	1	35	
10.	Non-Stop Mileage	36	5	N	R	1	42	
11.	PAX Outbound, Local	43	9	N	R	1	53	
12.	PAX Inbound, Local	54	9	N	R	1	64	
13.	PAX Outbound, Connect	65	6	N	R	1	72	
14.	PAX Inbound, Connect	73	6	N	R	1	80	
15.	CPM Outbound, Local	81	12	N	R	1	94	
16.	CPM Inbound, Local	95	12	N	R	1	108	
17.	CPM Outbound, Connect	109	9	N	R	1	119	
18.	CPM Inbound, Connect	120	9	N	R	1	130	
19.	Avg. Fare Outb, Local	131	7	N	R	1	139	
20.	Avg. Fare Inb, Local	140	7	N	R	1	148	
21.	Avg. Fare Outb, Connect	149	7	N	R	1	157	
22.	Avg. Fare Inb, Connect	158	7	N	R	1	166	
23.	Avg. Coup Outb, Local	167	5	N	R	1	173	
24.	Avg. Coup Inb, Local	174	5	N	R	1	180	
25.	Avg. Coup Outb, Connect	181	5	N	R	1	187	
26.	Avg. Coup Inb, Connect	188	5	N	R	1	194	
27.	Fared PAX Outb, Local	195	6	N	R	1	202	
28.	Fared PAX Inb, Local	203	7	N	R	1	211	
29.	Fared PAX Outb, Connect	212	7	N	R	1	220	
30.	Fared PAX Inb, Connect	221	6	N	R	1	228	
31.	Avg. Fare, Fared PAX, Outbound, Local	229	7	N	R	1	237	
32.	Avg. Fare, Fared PAX, Inbound, Local	238	7	N	R	1	246	
33.	Avg. Fare, Fared PAX, Outbound, Connect	247	7	N	R	1	255	
34.	Avg. Fare, Fared PAX, Inbound, Connect	256	7	N	R	1	264	
35.	Initiated at Base, Local	265	9	N	R	1	275	
36.	Initiated at Reference Local	276	9	N	R	1	286	
37.	Initiated at Base, Connect	287	9	N	R	1	297	
38.	Initiated at Reference, Connect	298	9	N	R	1	308	
39.	Intl. PAX Outb, Local	309	9	N	R	1	319	
40.	Intl. PAX Inb, Local	320	9	N	R	1	330	
41.	Intl. PAX Outb, Connect	331	9	N	R	1	341	
42.	Intl. PAX, Inb., Connect	342	9	N	R	0	None	
EOL	Carriage Return	351	Total Line Length is 352 characters.					

SPECIAL NOTE: This Report has no headings. To know what the columns in the file represent, use this Record Layout and Description.

Why Change the O&D Survey Data?

Isn't the O&D Survey good enough the way it is reported? Why change it?

These are questions which we are frequently asked. Our first response is that we did publish as reported data for our first seven years in business. We did make corrections in extreme cases when it was obvious that an error had occurred and only when the DOT and the carrier involved agreed that it was incorrect as filed. We go on to explain that we wish that we did not have to change the data. We certainly would not if the need were not compelling. After many years of working with "As Reported" data, reconciling it to other datasets, and making apologies for its inaccuracies, we could no longer publish the "As Reported" data in clear conscience no matter how many warnings, reliability reports, caveats and disclaimers we issued. We had to change the data. We had to make it more reliable for general analytical purposes.

What causes the data to be incorrect "As Reported"?

We have found many reasons, but most of them revolve around the complexity of the data as well as the complexity of the systems for ticketing, passenger tracking and use/match revenue accounting.

I do not believe that any carrier intentionally misreports their Survey data. I do believe that the data which is filed is not very thoroughly verified prior to its filing. Why? Verification is a very complex and difficult process. Due to the "First Reporting Carrier" rule, a Survey filing by a carrier will necessarily not represent 100% of their own data. It will exclude any data which interlined with another reporting carrier where the interlining carrier was the first reporting carrier on the itinerary. Also, the records for a given carrier include any codesharing activity which would need to be identified during a reconciliation process. Neither the filing carriers nor the DOT have developed methods of thoroughly reconciling the Survey data.

We found some quarters in the 1990's for major carriers to be underreported by as much as 16%. Our reason for normalizing the data is to attempt to remove, to the extent we can, fluctuations in reporting and sampling biases so that the analyst can use the data for its intended purpose, that being to assess market demand.

What is "Total O&D"?

Total O&D is normalized (and partially constructed) O&D Survey data plus otherwise not included Small Commuter data with manufactured fares.

In 2003, approximately 73% of the Small Commuter data is included in the O&D Survey as filed with the DOT. Their data is represented under the airline code of their codesharing partner (i.e. Pinnacle ("REX") as "NW"). Also, small amounts of data for Small Commuters are included in the O&D Survey due to interlining with reporting carriers.

During our reconciliation of O&D Survey data to reporting carrier T100 data, we identify coupon segments which are operated by the reporting carrier's codeshares, including their codesharing Small Commuters.

By accumulating the codesharing and interlining data for each Commuter by coupon segment, we can then subtract these accumulated amounts from each Small Commuter's T100 Market data to derive what we term "Unduplicated Commuter" data. Another way of thinking of "Unduplicated Commuter" data is that it is an attempt to create O&D data which has not already been included in the O&D Survey data.

In order to include the "Unduplicated Commuter" data with Survey data we needed to assign fares to the O&D's. Since fares are not included in the T100 Market data, we established a formula which assigns a fare for a given distance. The formula is a yield curve which was calibrated from O&D Survey data for codesharing carriers operating in short haul markets. We have subjected the result of the yield curve to several reasonability tests and feel comfortable that the resultant fares are reasonable.

Non Codesharing Small Carrier O&D Missing

Those small carriers which were granted a Part 298c exemption are not required to report to the DB1B and they report only very abbreviated financial data in the Form 41. Prior to October 2002, they reported Commuter T1 Online O&D data. Since that time, they have reported T100 Market and Segment data. The change in reporting has had the effect of altering our O&DPlus database.

Let's begin by looking at how we handled Part 298c Commuters prior to October 2002. Since Q1 1998, carriers reported the operating and marketing carriers for each coupon. After all our normalization is complete, we totaled the number of coupon passengers in each market reportedly flown by a Part 298c commuter. We then compared the total number of Online O&D passengers reported by each of the Part 298c commuters to the number of coupons passengers reported in the DB1B for that commuter. The difference was then written out as a record. The fare is derived by multiplying the Online O&D distance by the yield from the yield curve.

Since October 2002, the Part 298c carriers no longer report Online O&Ds but rather T100 Market and Segment data. **NONE** of these passenger types are exactly comparable. We would prefer to have the Online O&D in order to report the commuters' local O&D traffic, but we do not have it. The best we can do is to compare the DB1B coupon passengers with the quarterly sum of the T100 Market passengers. Again we write the difference of the DB1B and T100 coupon passengers with the calculated fare.

In the old methodology, we were able to report spoke to hub and spoke to spoke routings. Now the spoke to hub totals are overstated by the number of spoke to spoke passengers passing over the hub. An example of a problem caused by this reporting change is when Pinnacle flies a passenger between Cincinnati and Austin. All Pinnacle passengers change planes in Memphis. Under the old reporting rules, this passenger would be reported as a CVG-AUS Online O&D and as such would flow through to our databases as a spoke to spoke passenger. Under the current rules, he would be included in the total CVG-MEM T100 Market passengers as well as the MEM-AUS T100 Market passengers. There is no way to tie the passenger's coupons together. Today he would flow through to our databases as two passengers from the spoke to the hub.

Be careful when analyzing XX carrier data in a time series spanning Q4 2002.

Who is the "XX" carrier?

The most straightforward way to discover the identity of the Small Commuter Carriers which are represented in aggregate by the "XX" coded is to perform an "Unduplicated Commuter" Report .

Let's assume that you have found O&D data for the "XX" carrier code in the MSY / DFW market.

To discover the identity of the "XX" carrier or carriers, use the Commuter Report software and run an "Unduplicated Passenger" report for MSY to DFW:

The total "XX" data is broken down by carrier associated with the data in the "UDPax" field of this report.

MSYDFW.TXT											
For Quarters >= 2003 2 and < 2003 4											
COMMUTER, UNDUPLICATED PASSENGERS REPORT											
Org	Dst	Car	Year	Qtr	Dist	TtlPax	UDPax	CSPax	AvgFare	UDFare	CSFar
MSY	DFW	CHA	2003	2	448	1968	0	1968	51.00	116.54	51.00
MSY	DFW	CHA	2003	3	448	10883	2556	8327	66.39	116.54	51.00
MSY	DFW	SEA	2003	2	448	11660	8078	3582	97.94	116.54	56.00
MSY	DFW	SEA	2003	3	448	4013	431	3582	62.50	116.54	56.00
Totals:											
Passengers							=	28524			
Undup Pax							=	11065			
CodeShare Pax							=	17459			
Average Fare							=	77.68			
Undup Avg Fare							=	116.54			
CodeShare Avg Fare							=	53.05			
Total Revenue							=	2215744			

Notes:

CSPax passengers are those who either 1) appear in the O&D Survey under the code of their Codesharing partner (i.e. CHA and SEA as DL) or 2) appear in the O&D Survey as a result of interlining with a "Survey-Reporting Carrier" using the Commuter's OAG code (i.e. RP = Chautauqua Airlines = CHA).

UDPax are those passengers who are represented in the **TtIPax** reported by the small commuter carrier in their T100 Market enplanements which were not identified as either Codesharing or Interlining in the O&D Survey (as reconciled and normalized by Data Base Products, Inc.).

AvgFare is the weighted average of the **UDFare**, Unduplicated, and **CSFare**, codeshare. The CSFare is observed from the data reported in the O&D Survey. The UDFare is calculated using distance and the yield curve. Notice the UDFare is constant for both quarters and carriers.

DB1B Data Issues

First Quarter and Last Quarter Exemptions:

The DOT has a long-standing policy of not requiring O&D Survey data to be reported in a new carrier's first quarter of operations. Also, when a carrier goes out of business, it is frequently difficult to get from them Survey data for their last quarter of operation. Since it is our goal to have all enplanements for all US Carriers represented in the "Total O&D" database, we used a variety of tools and techniques for creating data for unreported periods. The most usual technique used to create Survey data was to assign fares to their T100 Enplanement data. This would assume that all O&Ds were point to point with no connections. While we understand that this was not strictly the case, we feel that it is a good enough assumption to use to fill in the missing quarter (or quarters) of Survey data.

What is the O&D Loadfactor? What is the Revenue Per ASM?

O&D Survey indicates Demand not Capacity so you are **NOT** able to answer either of those questions using O&DPlus.

The Supply side of the airline economic model is a network problem of trying to satisfy the Demands for O&D travel by Supplying seats over a network of Non-Stop Segments at fares which are acceptable and competitive.

The question "How many Seats are available in a given O&D Market?" has no answer. Available Seats are occupied by Onboard Passengers with numerous Origins and Destinations. Seats are only available on Non-Stop Segments and therefore do not relate to O&D Markets.

The Supply of seats in Non-Stop Markets is data which is reported to the DOT in T100 Segment and is available to the analyst on our "Onboard Domestic" CD Product.

Expenses are incurred on Non-Stop Segments whereas Revenues are generated by O&D's. An airline analyst can not determine Route P&L or Break Even.

Other Problems with Survey Data:

We have found numerous errors in the O&D Survey data as well as errors in T100 data and Form 41 Financial Data. Our normalization and reconciliation procedures detect such errors because they create unexplainable anomalies or fluctuations. It would not be possible to resolve all problems for all carriers' datasets for all periods. We have attempted solutions for major problems, but cannot guarantee that we have done so.

We are not completely satisfied with our O&D databases nor should you be. The ultimate solution to better data is better reporting. Our methods cannot replace the reliability of accurate reporting. We work with the DOT and the carriers to this end. We feel that we have made a difference. But, even if the data were filed perfectly in the future, there would still be the need for an historical dataset of reasonable quality. That is what we feel we have accomplished. Still, however, we caution you that, due to the inaccuracies in the base data, you should use the data as something less than gospel truth.

Example Base Carrier Report

Domestic U.S. O&D Data	Selections:
<ul style="list-style-type: none"> < > Totals by Airport Summary < > Totals by Market Summary < > Carrier Market Level Detail (* > Totals by Airport by Carrier < > Airport Distances 	<ul style="list-style-type: none"> <Base Airport Codes> <Carrier Codes>
<ul style="list-style-type: none"> Domestic Base Airport by Carrier < > Base Carrier Screen Report < > Base Carrier Passengers Screen Report < > Base by Carrier Matrix < > Carrier Ranked by Base 	<ul style="list-style-type: none"> Bases Selected <LAS>-McCarran Intl NU
<ul style="list-style-type: none"> < > Standard Carrier by Base Report < > Directional Connects < > Initiated Trips & Dom. Port. Int < > Base Carrier Averages < > Base Carrier Fare Type (* > Time Series - 3 Yrs. by Quarter < > Time Series - 4 Yrs. by Calendar Year < > Time Series - 8 Yrs. by Calendar Year < > Base Carrier Extract Report 	<ul style="list-style-type: none"> Carriers Selected <6M>-40-Mile Air Ltd. <Q5>-40-Mile Air (Warbelows) <7L>-Ab Airlines <ZA>-AccessAir Holdings <XQ>-Action Airlines <5U>-Advantage Airline <EI>-Aer Lingus Teoranta <TP>-Aerial Transit Co.
	<ul style="list-style-type: none"> <RUN REPORT> <CANCEL>

The first example report is from our Base Carrier database. In this database, we have presummarized all the data items by BASE and CARRIER for each quarter for each base. By definition, you will get all REFERENCES for the selected BASE.

Begin by selecting "Totals by Airport by Carrier" and then "Time Series - 3 Yrs. By Quarter." Make your Base Airport and Carrier Selections. We have selected McCarran International in Las Vegas and All Carriers for this data query. The either press the F2 Key or click <RUN REPORT>.

Time Frame Selected	Output	Select <Data Elements> Rank
<ul style="list-style-type: none"> 01/1 01/2 01/3 01/4 02/1 02/2 02/3 02/4 03/1 03/2 03/3 03/4 	<ul style="list-style-type: none"> < > Printer (* > File [LASTS] Form Feeds File Type < > Text (* > .xls File Extract Connect Type < > Local < > Connect (* > Total Direction < > Outbound < > Inbound (* > Total Report Total < > Detail < > Sub Total < > Grand Total 	<ul style="list-style-type: none"> (* > Passengers < > Revenues < > Average Fare < > Yield (Cents/GPM) < > Itinerary Miles Market Share (%) < > Average Coupons < > Initiated Trips < > International Pax < > Coupon Miles Pax/Per/Day/Each/Way √ Airport Code < > Fared Pax < > Fared Avg. Fare < > Fared Yield < > Zero Fared Pax Filter Min: Max: Distance Market Rank Destinations/Markets Enter Carrier Code
<ul style="list-style-type: none"> Modify Time Frame √ Quarterly Sum Qtr Base <Summary Level> Ref (* > Airport < > City < > State Continent < > Total Selected Total US 		
[X] Build Pairs File		
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px 10px;">RUN</div> <div style="border: 1px solid black; padding: 2px 10px;">CANCEL</div> </div>		
Carrier Time Series		
Press F2 or Click on Run to Execute Report		

Then select the Time Frame Range you require. The Summary level is a feature that allows you to customize the output to the Airport, City, State, or Total Selected levels. The word SELECTED is important here. If you only select LGA as a base and then choose the Summary Level of City, you will still get ONLY LGA data. It does not automatically increase your selections to the other New York Area airports. Give the output a filename of eight alphanumeric characters or less. Select if the output is to be a text file or a spreadsheet. Then choose the Connect Type and Direction. Only one of the Data Elements that have a () preceding them may be selected for each data query. If you need more than one Data Element, run them all before leaving this screen.

This is the output from the query which has been sorted by total passengers.

Period [2001:1 thru 2003:4]

Sm Lvl Airport to ALLUS

Dir Outbound+Inbound

Type Local+Connect

CARRIER - TIME SERIES - Passengers

QUARTERLY

(Ten Percent Sample)

NAME	Mkt Rank	Code	City Code	St	Car Cod	2001 1	2001 2	2001 3	2001 4	2002 1	2002 2	2002 3	2002 4	2003 1	2003 2	2003 3	2003 4
BSE M cCaman I		LAS	+LV	NV	-												
ALLUS Ref.Ai	0	ALL	ALL		WN	227,433	232,666	212,441	200,245	212,114	220,457	213,134	213,137	237,602	242,484	241,193	229,356
ALLUS Ref.Ai	0	ALL	ALL		HP	102,972	106,711	102,548	78,246	84,575	93,686	96,836	91,817	96,855	102,670	96,521	86,883
ALLUS Ref.Ai	0	ALL	ALL		DL	48,027	53,252	51,321	47,364	50,946	52,911	51,463	52,507	59,564	53,320	59,858	62,496
ALLUS Ref.Ai	0	ALL	ALL		UA	55,595	54,923	47,863	41,320	41,954	47,780	46,442	44,254	48,904	49,369	48,264	45,657
ALLUS Ref.Ai	0	ALL	ALL		AA	33,136	33,773	30,508	34,806	47,495	47,498	43,990	45,645	48,177	49,745	45,776	42,193
ALLUS Ref.Ai	0	ALL	ALL		CO	32,777	35,091	31,976	32,184	32,188	35,547	36,919	35,359	33,942	39,824	42,819	39,263
ALLUS Ref.Ai	0	ALL	ALL		NW	29,614	27,028	23,905	25,640	29,828	27,717	24,196	25,394	30,614	28,873	27,309	29,701
ALLUS Ref.Ai	0	ALL	ALL		N7	40,940	51,713	48,350	40,063	39,417	47,147	51,595	112	2	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		AS	19,047	19,971	18,700	18,858	20,814	22,215	21,811	20,927	21,383	23,230	23,028	22,914
ALLUS Ref.Ai	0	ALL	ALL		US	12,815	13,881	14,431	11,334	13,473	16,030	18,079	14,808	17,587	23,918	26,072	24,703
ALLUS Ref.Ai	0	ALL	ALL		TZ	11,959	11,698	10,063	10,388	11,251	11,571	12,723	11,795	13,446	15,754	16,431	18,668
ALLUS Ref.Ai	0	ALL	ALL		F9	5,732	5,383	3,713	3,116	4,488	4,777	5,044	5,449	6,240	6,175	7,138	8,296
ALLUS Ref.Ai	0	ALL	ALL		B6	-	-	-	-	-	-	-	7,220	13,338	15,409	15,430	13,377
ALLUS Ref.Ai	0	ALL	ALL		SY	14,145	12,155	10,718	8,331	375	1,331	1,343	1,572	2,957	2,503	2,710	3,576
ALLUS Ref.Ai	0	ALL	ALL		TW	10,480	10,633	8,760	7,778	-	-	-	-	-	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		G4	792	882	876	757	1,074	1,504	2,613	2,026	3,423	4,942	9,046	9,253
ALLUS Ref.Ai	0	ALL	ALL		HA	2,438	2,574	2,130	2,510	2,110	2,420	2,600	3,236	2,541	3,173	4,114	4,177
ALLUS Ref.Ai	0	ALL	ALL		XX	2,870	4,847	3,364	1,598	2,469	4,593	4,989	1,945	1,827	2,311	1,661	1,345
ALLUS Ref.Ai	0	ALL	ALL		AQ	1,618	3,319	3,242	3,304	2,994	2,736	2,391	2,654	2,831	2,943	3,073	2,587
ALLUS Ref.Ai	0	ALL	ALL		NK	-	-	-	-	-	98	2,611	3,804	6,491	6,339	7,036	6,294
ALLUS Ref.Ai	0	ALL	ALL		YX	1,456	1,525	1,275	1,715	2,456	2,627	2,155	2,091	2,201	2,349	2,687	3,105
ALLUS Ref.Ai	0	ALL	ALL		NJ	-	1,654	2,136	1,747	1,620	2,574	1,072	-	-	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		FL	-	2	2	-	1	1	1	3	1	930	4,258	4,338
ALLUS Ref.Ai	0	ALL	ALL		9N	-	-	-	-	-	-	48	1	1	571	193	-
ALLUS Ref.Ai	0	ALL	ALL		YY	27	29	29	22	14	21	29	29	14	9	4	4
ALLUS Ref.Ai	0	ALL	ALL		ZK	-	-	-	-	3	10	8	16	5	3	3	6
ALLUS Ref.Ai	0	ALL	ALL		GQ	-	2	3	2	-	1	1	1	1	4	4	3
ALLUS Ref.Ai	0	ALL	ALL		9K	2	-	4	1	1	3	1	2	3	2	1	1
ALLUS Ref.Ai	0	ALL	ALL		7H	2	-	-	3	6	-	2	1	1	2	-	-
ALLUS Ref.Ai	0	ALL	ALL		YR	-	3	1	-	2	1	1	2	-	1	-	-
ALLUS Ref.Ai	0	ALL	ALL		JT	-	2	5	-	-	1	-	-	-	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		RP	-	6	-	-	-	-	-	1	-	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		KS	2	1	1	-	-	-	-	-	-	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		YV	-	1	-	-	-	-	-	-	-	-	1	1
ALLUS Ref.Ai	0	ALL	ALL		K5	-	-	-	-	-	-	1	-	-	-	-	1
ALLUS Ref.Ai	0	ALL	ALL		LW	-	-	-	1	-	-	-	-	-	-	1	-
ALLUS Ref.Ai	0	ALL	ALL		6C	-	-	-	-	-	-	-	-	1	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		AF	-	-	1	-	-	-	-	-	-	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		C5	1	-	-	-	-	-	-	-	-	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		H6	-	-	-	-	-	1	-	-	-	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		NZ	-	1	-	-	-	-	-	-	-	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		QF	-	-	-	-	-	-	-	-	1	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		SK	-	-	1	-	-	-	-	-	-	-	-	-
ALLUS Ref.Ai	0	ALL	ALL		Z3	-	-	-	-	-	1	-	-	-	-	-	-
Sub-total						653,880	683,726	628,367	571,333	601,668	645,259	642,098	585,808	649,953	676,853	684,631	658,198
TOTAL FOR BAS LAS						653,880	683,726	628,367	571,333	601,668	645,259	642,098	585,808	649,953	676,853	684,631	658,198
REPORT TOTAL						653,880	683,726	628,367	571,333	601,668	645,259	642,098	585,808	649,953	676,853	684,631	658,198

Example Market Averages Report

<p>Domestic U.S. O&D Data</p> <ul style="list-style-type: none"> () Totals by Airport Summary (*) Totals by Market Summary () Carrier Market Level Detail () Totals by Airport by Carrier () Airport Distances <p>Domestic U.S. Market Summary</p> <ul style="list-style-type: none"> () Market Screen Report () Market Matrix () Markets Ranked by Base () Markets Ranked by Market () Top 1,000 U.S. City Pair Markets <ul style="list-style-type: none"> () Standard Market Report () Initiated Trips & ... Int'l (*) Market Averages () Market Fare Type () Time Series - 3 Yrs. by ... () Time Series - 4 Yrs. by Calendar Year () Time Series - 8 Yrs. by Calendar Year () Market Extract Report 	<p>Selections:</p> <p><Base Airport Codes> <Reference Airport Codes></p> <hr/> <p>Bases Selected</p> <p><LAS>-McCarran Intl NU</p> <hr/> <p>References Selected</p> <p><UXM>-47-Mile Mine AK <YXX>-Abbotsford BC <APG>-Aberdeen (AAF) MD <ABR>-Aberdeen SD <+AI>-Abilene TX <ABI>-Abilene Municipal TX <DYS>-Dyess AFB TX</p> <hr/> <p><RUN REPORT> <CANCEL></p>
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This example report may well be our most used. It is from our Market database. In this database, we have presummarized all the data items by BASE and CARRIER for each quarter for each market – base to reference. By definition, you will get all CARRIERS for the selected MARKET.

Begin by selecting “Totals by Market Summary” and then “Market Averages.” Make your Base Airport and Reference Airport Selections. We have selected McCarran International in Las Vegas and All References for this data query. Then either press the F2 Key or click <RUN REPORT>.

<p>Time Frame Selected</p> <p>03/1 03/2 03/3 03/4</p> <p>Modify Time Frame</p> <p>Quarterly <input type="checkbox"/> Sum Qtr <input checked="" type="checkbox"/></p> <p>Base <Summary Level> Ref</p> <p>(*) Airport (*)</p> <p>() City ()</p> <p>() State ()</p> <p>() Continent ()</p> <p>() Total Selected ()</p> <p>() Total US</p> <p>[X] Build Pairs File</p> <p><input type="button" value="RUN"/> <input type="button" value="CANCEL"/></p>	<p>Output</p> <p>() Printer</p> <p>(*) File</p> <p>[LASMKTAV]</p> <p>Form Feeds</p> <p>File Type</p> <p>() Text</p> <p>(*) .xls File</p> <p>Extract</p> <p>Connect Type</p> <p>Local</p> <p>Connect</p> <p>Total</p> <p>Direction</p> <p>() Outbound</p> <p>() Inbound</p> <p>(*) Total</p> <p>Report Total</p> <p><input checked="" type="checkbox"/> Detail</p> <p><input checked="" type="checkbox"/> Sub Total</p> <p>Grand Total</p>	<p>Select <Data Elements> Rank</p> <p><input checked="" type="checkbox"/> Passengers</p> <p><input checked="" type="checkbox"/> Revenues</p> <p><input checked="" type="checkbox"/> Average Fare</p> <p><input checked="" type="checkbox"/> Yield (Cents/CPM)</p> <p><input checked="" type="checkbox"/> Itinerary Miles</p> <p>Market Share (%)</p> <p><input checked="" type="checkbox"/> Average Coupons</p> <p>Initiated Trips</p> <p>International Pax</p> <p><input checked="" type="checkbox"/> Coupon Miles</p> <p>Pax/Per/Day/Each/Way</p> <p><input checked="" type="checkbox"/> Airport Code</p> <p>Fared Pax</p> <p>Fared Avg. Fare</p> <p>Fared Yield</p> <p><input checked="" type="checkbox"/> Zero Fared Pax</p> <p>Filter Min: Max:</p> <p>Distance</p> <p>Market Rank</p> <p>Destinations/Markets</p> <p>Enter Carrier Code</p>
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Press F2 or Click on Run to Execute Report | Ready |NOSELECT| 1:21 pm

Select the time frame you require. In this report, all selected quarters will be summarized together. We chose the entire calendar year of 2003. We also chose to have all the references summarized into the City level. Again, only those airports selected on the previous screen will be included. Give the output file a name. Press the F2 Key or click RUN.

The report will include all the Data Elements that are preceded with a check mark. No other elements can be selected and none may be excluded.

The following is the resulting report after it has been sorted on Passengers, ranked and then sub-totaled.

Period [2003:1,2,3,4]
 Sm Lvl Airport to City
 Dir Outbound+Inbound
 m zavg

MARKET - AVERAGES REPORT
 Sum of Periods Selected
 (Ten Percent Sample)

NAME	Mkt Rank	Code	City Code	St	NS top Miles	ASSENGERS	REVENUES	AVERAGE FARE	(000) COUPN M L S	YELD /CPM	ITEN MILES	PASSNGRS /DAY	AVG COUP	\$0 PAX	
BASE:McCarran Intl			LAS	+LV	NV										
1 New York/Newark	11	+NY			NJ	2,238	169,308	\$26,173,717	\$154.59	385,608	6.79	2,278	463.9	1.2	7,660
2 Chicago	16	+CH			IL	1,518	152,286	\$17,251,338	\$113.28	234,542	7.36	1,540	417.2	1.1	9,231
3 Los Angeles	22	+LA			CA	236	122,494	\$7,438,148	\$60.72	28,848	25.78	236	335.6	1.0	2,844
4 Phoenix	35	+PX			AZ	256	93,210	\$4,918,948	\$52.77	23,850	20.62	256	255.4	1.0	2,653
5 Seattle/Tacoma	53	+SE			WA	866	83,121	\$7,707,359	\$92.72	73,070	10.55	879	227.7	1.1	4,235
6 Oakland	57	+OA			CA	407	77,105	\$6,153,534	\$79.81	31,957	19.26	414	211.2	1.0	3,723
7 Burbank	66	+BR			CA	223	72,112	\$3,878,647	\$53.79	15,994	24.25	222	197.6	1.0	2,116
8 San Diego	88	+SG			CA	258	68,867	\$4,255,976	\$61.80	17,791	23.92	258	188.7	1.0	2,072
9 Detroit	96	+DT			MI	1,750	62,865	\$8,268,557	\$131.53	111,916	7.39	1,780	172.2	1.2	3,087
10 San Jose	109	+SJ			CA	386	57,091	\$4,653,950	\$81.52	22,230	20.94	389	156.4	1.0	2,127
11 Denver	114	+DE			CO	629	54,566	\$6,510,610	\$119.32	34,981	18.61	641	149.5	1.1	2,738
12 Baltimore/Wash I	154	BW I			MD	2,106	52,149	\$6,712,301	\$128.71	112,267	5.98	2,153	142.9	1.4	3,349
13 Dallas/Fort Worth	129	+DA			TX	1,056	51,652	\$7,612,430	\$147.38	56,080	13.57	1,086	141.5	1.1	6,071
14 Houston	128	+HO			TX	1,227	50,515	\$6,311,424	\$124.94	62,853	10.04	1,244	138.4	1.1	6,034
15 Reno	134	RNO			NV	345	50,109	\$3,291,672	\$65.69	17,421	18.90	348	137.3	1.0	1,811
16 Sacramento	140	+SQ			CA	397	50,104	\$4,099,726	\$81.82	20,264	20.23	404	137.3	1.0	2,291
17 Atlanta	110	+AL			GA	1,747	48,694	\$6,926,856	\$142.25	86,791	7.98	1,782	133.4	1.2	3,627
18 Portland	156	PDX			OR	762	48,537	\$4,446,287	\$91.61	38,127	11.66	786	133.0	1.1	2,228
19 San Francisco	162	+SF			CA	414	46,271	\$4,719,688	\$102.00	19,289	24.47	417	126.8	1.0	1,391
20 Minneapolis/St P	149	+MN			MN	1,300	45,981	\$6,242,327	\$135.76	62,084	10.05	1,350	126.0	1.2	1,707
21 Santa Ana	174	+SN			CA	226	43,561	\$2,837,970	\$65.15	9,826	28.88	226	119.3	1.0	600
22 Philadelphia/Cam	183	+PH			PA	2,176	41,841	\$6,362,313	\$152.06	92,121	6.91	2,202	114.6	1.2	3,070
23 Ontario	212	+ON			CA	197	41,123	\$2,110,278	\$51.32	8,087	26.10	197	112.7	1.0	1,272
24 Indianapolis	200	IND			IN	1,591	40,162	\$3,998,162	\$99.55	66,567	6.01	1,657	110.0	1.3	1,040
25 Boston	194	+BO			MA	2,381	37,526	\$5,761,231	\$153.53	91,472	6.30	2,438	102.8	1.4	2,793
26 Salt Lake City	229	+UT			UT	368	35,630	\$2,545,075	\$71.43	13,202	19.28	371	97.6	1.0	1,401
27 Kansas City	275	+MK			MO	1,140	34,846	\$3,667,209	\$105.24	41,885	8.76	1,202	95.5	1.3	2,580
28 Cleveland	255	+CL			OH	1,825	33,386	\$4,426,732	\$132.59	62,108	7.13	1,860	91.5	1.2	2,212
29 Tampa	263	+TP			FL	1,983	31,299	\$3,579,455	\$114.36	64,081	5.59	2,047	85.8	1.4	2,345
30 Columbus	350	+CU			OH	1,772	30,628	\$3,463,371	\$113.08	56,477	6.13	1,844	83.9	1.4	1,568
31 Orlando	304	+OR			FL	2,039	26,702	\$3,425,473	\$128.29	57,080	6.00	2,138	73.2	1.6	2,244
32 Fort Lauderdale	309	+FF			FL	2,174	25,451	\$3,312,693	\$130.16	57,486	5.76	2,259	69.7	1.6	2,053
33 Pittsburgh	320	+PU			PA	1,910	25,224	\$3,007,098	\$119.22	49,830	6.03	1,976	69.1	1.3	1,432
34 St Louis	358	+SZ			MO	1,372	24,729	\$3,358,261	\$135.80	35,085	9.57	1,419	67.8	1.2	2,215
35 Washington	318	+W S			DC	2,076	24,159	\$4,791,502	\$198.33	51,948	9.22	2,150	66.2	1.5	2,733
36 Austin	397	+AS			TX	1,085	23,538	\$2,481,819	\$105.44	27,008	9.19	1,147	64.5	1.3	2,709
37 Albuquerque	385	+AB			NM	487	22,851	\$2,124,831	\$92.99	11,556	18.39	506	62.6	1.1	1,643
38 San Antonio	401	+SO			TX	1,069	22,653	\$2,517,465	\$111.13	25,354	9.93	1,119	62.1	1.2	3,160
39 Honolulu (Intl)	333	HNL			HI	2,762	22,164	\$4,226,772	\$190.70	62,264	6.79	2,809	60.7	1.5	2,500
40 Omaha	430	+OH			NE	1,099	21,610	\$2,315,312	\$107.14	25,062	9.24	1,160	59.2	1.3	992
41 Milwaukee	306	MKE			WI	1,524	21,364	\$2,584,182	\$120.96	33,970	7.61	1,590	58.5	1.4	1,792
42 Long Beach	500	LGB			CA	231	20,498	\$971,438	\$47.39	4,726	20.56	231	56.2	1.0	24
43 Tucson	446	+TU			AZ	365	19,568	\$1,183,523	\$60.48	7,219	16.39	369	53.6	1.1	549
44 Raleigh/Durham	470	RDU			NC	2,027	18,982	\$2,230,955	\$117.53	40,392	5.52	2,128	52.0	1.8	1,211
45 Hartford	453	+HR			CT	2,298	18,391	\$2,332,946	\$126.85	43,824	5.32	2,383	50.4	1.8	1,210
46 Nashville	586	BNA			TN	1,588	17,615	\$2,100,450	\$119.24	29,577	7.10	1,679	48.3	1.3	1,859
47 Buffalo	571	BUF			NY	1,987	15,722	\$1,914,726	\$121.79	33,127	5.78	2,107	43.1	1.6	890
48 Miami	561	+M F			FL	2,175	15,142	\$2,602,246	\$171.86	33,690	7.72	2,225	41.5	1.2	1,304
49 New Orleans	604	+NR			LA	1,501	15,040	\$1,792,002	\$119.15	23,861	7.51	1,587	41.2	1.6	1,333
50 El Paso	658	+EL			TX	584	14,086	\$1,188,923	\$84.40	8,467	14.04	601	38.6	1.3	946
Other							427,107	\$58,240,084		700,512					33,338
REPORT TOTAL							2,669,635	\$295,027,988	\$110.51	3,323,830	8.88	1,245	7,314.1	1.3	156,013

Example Initiated Trips and DPIJ's Report

<p>Domestic U.S. O&D Data</p> <p>(>) Totals by Airport Summary (*) Totals by Market Summary (>) Carrier Market Level Detail (>) Totals by Airport by Carrier (>) Airport Distances</p> <p>Domestic U.S. Market Summary Reports</p> <p>(>) Market Screen Report (>) Market Matrix (>) Markets Ranked by Base (>) Markets Ranked by Market (>) Top 1,000 U.S. City Pair Markets</p> <p>(>) Standard Market Report (*) Initiated Trips & Dom. Port. Int'l (>) Market Averages (>) Market Fare Type (>) Time Series - 3 Yrs. by Quarter (>) Time Series - 4 Yrs. by Calendar Year (>) Time Series - 8 Yrs. by Calendar Year (>) Market Extract Report</p>	<p>Selections:</p> <p><Base Airport Codes> <Reference Airport Codes></p> <hr/> <p>Bases Selected</p> <p><LAS>-McCarran Intl NU</p> <hr/> <p>References Selected</p> <p>47-Mile Mine AK <YXX>-Abbotsford BC <APC>-Aberdeen (AAF) MD <ABD>-Aberdeen SD <ABI>-Abilene TX <ABI>-Abilene Municipal TX <DYS>-Dyess AFB TX</p> <p><RUN REPORT> <CANCEL></p>
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This example report is from our Market database. It is used to determine how many people begin their itinerary at the BASE airport and how many begin their itinerary at the REFERENCE airport. Remember that the carriers report a tickets itinerary, and we use the DOT's Trip Break Algorithm to break a single itinerary into trips. A round trip itinerary, has two trips assigned to the BASE and none to the REFERENCE.

Begin by selecting "Totals by Market Summary" and then "Initiated Trips & Dom. Port. Int'l." Make your Base Airport and Reference Airport Selections. We have selected McCarran International in Las Vegas and All References for this data query. Then either press the F2 Key or click <RUN REPORT>.

<p>Time Frame Selected</p> <p>03/1 03/2 03/3 03/4</p> <p>Modify Time Frame</p> <p>Quarterly <input checked="" type="checkbox"/> Sum Qtr</p> <p>Base <Summary Level> Ref</p> <p>(*) Airport (*) (>) City (>) (>) State (>) Continent (>) Total Selected (>) Total US</p> <p>[X] Build Pairs File</p> <p><input type="button" value="RUN"/> <input type="button" value="CANCEL"/></p>	<p>Output</p> <p>(>) Printer (*) File [LASVISIT] Form Feeds</p> <p>File Type</p> <p>(>) Text (*) .xls File</p> <p>Extract</p> <p>Connect Type</p> <p>Local Connect Total</p> <p>Direction</p> <p><input checked="" type="checkbox"/> Outbound <input checked="" type="checkbox"/> Inbound <input checked="" type="checkbox"/> Total</p> <p>Report Total</p> <p>Detail Sub Total Grand Total</p>	<p>Select <Data Elements> Rank</p> <p><input checked="" type="checkbox"/> Passengers <input type="checkbox"/> Revenues <input type="checkbox"/> Average Fare <input type="checkbox"/> Yield (Cents/GPM) <input type="checkbox"/> Itinerary Miles <input type="checkbox"/> Market Share (%) <input type="checkbox"/> Average Coupons <input checked="" type="checkbox"/> Initiated Trips <input checked="" type="checkbox"/> International Pax <input type="checkbox"/> Coupon Miles <input type="checkbox"/> Pax/Per/Day/Each/Way <input checked="" type="checkbox"/> Airport Code <input type="checkbox"/> Fared Pax <input type="checkbox"/> Fared Avg. Fare <input type="checkbox"/> Fared Yield <input type="checkbox"/> Zero Fared Pax</p> <p>Filter Min: Max:</p> <p>Distance Market Rank Destinations/Markets Enter Carrier Code</p>
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[Market Init. Trips]

Press F2 or Click on Run to Execute Report | Ready | NOSELECT | 1:23 pm

Select the time frame you require. In this report, all selected quarters will be summarized together. We chose the entire calendar year of 2003. We also chose to have all the references summarized into the City level. Again, only those airports selected on the previous screen will be included. Give the output file a name. Press the F2 key or click RUN.

Again, the report will include all the Data Elements that are preceded with a check mark. No other elements can be selected and none may be excluded.

The following is the resulting report after it has been sorted on Total Passengers, ranked and then sub-totaled. It shows that only 11% of the trips between Las Vegas and New York market had their original point of origin in Las Vegas. To obtain the number of visitors that came from New York Area to Las Vegas, take the Initiated From Ref, 149,854, and multiply it by 10 to get a 100% number of trips. Then divide by two because the assumption is the average trip has only an outbound and an inbound trip. For the year of 2003, we can say that 749,270 visitors came from New York to Las Vegas.

Period [2003:1,2,3,4]
Sum Lvl Airport to City MARKET -DOMESTIC PORTDN OF NTL DATA AND INITIATED TRIPS DATA
Dir Outbound+Inbound Sum of Periods Selected
m zpant Sample)

NAME	Mkt Rank	Code	City Code	St	NStop Miles	Pure Domestic	Dom Part of Intl	% of Tot	Total	Out+In Domestic	Initiated From Base	% Base	Initiated From Ref.
BASE:McCann Intl		LAS	+LV	NV									
1 New York/Newark	11	+NY		NJ	2,239	169,308	7,805	4.4%	177,113	169,308	18,625	11.0%	149,854
2 Chicago	16	+CH		IL	1,518	152,286	13,664	8.2%	165,950	152,286	17,093	11.2%	134,404
3 Los Angeles	22	+LA		CA	236	122,494	21,538	15.0%	144,032	122,494	30,496	24.9%	91,025
4 Phoenix	35	+PX		AZ	256	93,210	3,803	3.9%	97,013	93,210	22,590	24.2%	69,787
5 Seattle/Tacoma	53	+SE		WA	866	83,121	5,942	6.7%	89,063	83,121	11,051	13.3%	71,731
6 Oakland	57	+OA		CA	407	77,105	179	0.2%	77,284	77,105	14,801	19.2%	61,831
7 Burbank	66	+BR		CA	223	72,112	4	0.0%	72,116	72,112	13,465	18.7%	58,369
8 San Diego	88	+SG		CA	258	68,867	200	0.3%	69,067	68,867	17,383	25.2%	51,257
9 Detroit	96	+DT		MI	1,750	62,865	4,016	6.0%	66,881	62,865	5,955	9.5%	56,676
10 San Francisco	162	+SF		CA	414	46,271	14,755	24.2%	61,026	46,271	8,648	18.7%	37,120
11 Denver	114	+DE		CO	629	54,566	6,257	10.3%	60,823	54,566	7,677	14.1%	46,283
12 San Jose	109	+SJ		CA	386	57,091	1,138	2.0%	58,229	57,091	8,991	15.8%	47,818
13 Atlanta	110	+AL		GA	1,747	48,694	7,802	13.8%	56,496	48,694	6,634	13.6%	41,536
14 Dallas/Fort Worth	129	+DA		TX	1,061	51,652	4,600	8.2%	56,252	51,652	6,422	12.4%	44,658
15 Houston	128	+HO		TX	1,233	50,515	5,335	9.6%	55,850	50,515	5,807	11.5%	44,332
16 Baltimore/Wash	154	BWI		MD	2,106	52,149	34	0.1%	52,183	52,149	5,919	11.4%	45,838
17 Minneapolis/St	149	+MN		MN	1,300	45,981	5,442	10.6%	51,423	45,981	5,215	11.3%	40,479
18 Sacramento	140	+SQ		CA	397	50,104	152	0.3%	50,256	50,104	8,829	17.6%	41,091
19 Reno	134	RNO		NV	345	50,109	82	0.2%	50,191	50,109	22,721	45.3%	27,211
20 Portland	156	PDX		OR	762	48,537	637	1.3%	49,174	48,537	7,014	14.5%	41,313
21 Philadelphia/Ca	183	+PH		PA	2,176	41,841	3,973	8.7%	45,814	41,841	4,131	9.9%	37,526
22 Santa Ana	174	+SN		CA	226	43,561	101	0.2%	43,662	43,561	8,626	19.8%	34,736
23 Ontario	212	+ON		CA	197	41,123	219	0.5%	41,342	41,123	8,145	19.8%	32,818
24 Indianapolis	200	IND		IN	1,591	40,162	9	0.0%	40,171	40,162	3,187	7.9%	36,895
25 Boston	194	+BO		MA	2,381	37,526	450	1.2%	37,976	37,526	3,469	9.2%	33,869
26 Salt Lake City	229	+UT		UT	368	35,630	1,518	4.1%	37,148	35,630	10,554	29.6%	23,819
27 Kansas City	275	+MK		MO	1,140	34,846	7	0.0%	34,853	34,846	4,324	12.4%	30,433
28 Cleveland	255	+CL		OH	1,825	33,386	885	2.6%	34,271	33,386	3,041	9.1%	30,203
29 Tampa	263	+TP		FL	1,981	31,299	42	0.1%	31,341	31,299	4,010	12.8%	27,123
30 Columbus	350	+CU		OH	1,772	30,628	188	0.6%	30,816	30,628	2,428	7.9%	28,116
31 Washington	318	+WS		DC	2,078	24,159	3,875	13.8%	28,034	24,159	3,847	15.9%	19,864
32 Orlando	304	+OR		FL	2,039	26,702	217	0.8%	26,919	26,702	6,622	24.8%	19,785
33 Pittsburgh	320	+PU		PA	1,910	25,224	792	3.0%	26,016	25,224	2,415	9.6%	22,726
34 Fort Lauderdale	309	+FF		FL	2,174	25,451	156	0.6%	25,607	25,451	4,878	19.2%	20,282
35 St Louis	358	+SZ		MO	1,372	24,729	199	0.8%	24,928	24,729	3,469	14.0%	21,114
36 Austin	397	+AS		TX	1,085	23,538	9	0.0%	23,547	23,538	2,505	10.6%	20,946
37 Albuquerque	385	+AB		NM	487	22,851	5	0.0%	22,856	22,851	4,958	21.7%	17,782
38 San Antonio	401	+SO		TX	1,069	22,653	9	0.0%	22,662	22,653	2,927	12.9%	19,642
39 Honolulu (Intl)	333	HNL		HI	2,762	22,164	478	2.1%	22,642	22,164	6,150	27.8%	15,821
40 Omaha	430	+OH		NE	1,099	21,610	2	0.0%	21,612	21,610	2,528	11.7%	19,027
41 Milwaukee	306	MKE		WI	1,524	21,364	2	0.0%	21,366	21,364	2,031	9.5%	19,249
42 Long Beach	500	LGB		CA	231	20,498	0	0.0%	20,498	20,498	3,321	16.2%	17,170
43 Tucson	446	+TU		AZ	365	19,568	47	0.2%	19,615	19,568	4,307	22.0%	15,167
44 Raleigh/Durham	470	RDU		NC	2,027	18,982	35	0.2%	19,017	18,982	2,125	11.2%	16,756
45 Miami	561	+MF		FL	2,175	15,142	3,705	19.7%	18,847	15,142	3,027	20.0%	11,810
46 Hartford	453	+HR		CT	2,298	18,391	12	0.1%	18,403	18,391	1,633	8.9%	16,692
47 Nashville	586	BNA		TN	1,588	17,615	8	0.0%	17,623	17,615	2,415	13.7%	15,098
48 Buffalo	571	BUF		NY	1,987	15,722	23	0.1%	15,745	15,722	1,955	12.4%	13,715
49 New Orleans	604	+NR		LA	1,501	15,040	15	0.1%	15,055	15,040	3,658	24.3%	11,275
50 El Paso	658	+EL		TX	584	14,086	5	0.0%	14,091	14,086	1,967	14.0%	12,060
Other						427,107	4,685		431,792	427,107	59,769		364,993
REPORT TO TAL						2,669,635	125,056	4.5%	2,794,691	2,669,635	423,758	15.9%	2,229,125

Top Markets
Total Year 2003

Markets		Non- Stop	Pass	Revenue	%	Avg.	Avg.
Rank	Market/Carrier	Milage	Per Day	Per Day	Market Share	Yield	Haul
1	Fort Lauderdale FL New York/Newark NY	1068	4,803	497,895	100.00	9.60	1,080
	JetBlue		1,578	166,703	32.85	9.89	1,068
	Delta Air Lines		1,401	137,020	29.17	8.99	1,088
	Continental Airlines		661	83,411	13.76	11.81	1,069
	Spirit Airlines		644	59,191	13.41	8.54	1,076
	American Airlines		436	42,631	9.07	9.04	1,082
	Other Locals		81	8,231	1.69	7.81	1,304
	Off-line Connects		2	709	0.05	-	1,080
2	New York/Newark NY Orlando FL	947	3,985	406,664	100.00	10.61	962
	Delta Air Lines		1,358	127,830	34.06	9.73	968
	JetBlue		884	90,344	22.17	10.84	943
	Continental Airlines		813	100,809	20.41	13.16	942
	American Airlines		505	48,116	12.68	9.97	955
	Spirit Airlines		258	22,643	6.48	9.23	950
	Other Locals		164	16,151	4.12	8.54	1,151
	Off-line Connects		3	770	0.08	-	962
3	Chicago IL New York/Newark NY	723	3,680	560,220	100.00	20.88	729
	American Airlines		1,276	208,617	34.68	22.39	730
	United Airlines		1,104	181,030	29.99	22.50	729
	American Trans Air		605	67,361	16.43	15.43	722
	Continental Airlines		602	88,670	16.37	20.59	715
	Other Locals		82	11,239	2.24	15.51	882
	Off-line Connects		11	3,305	0.29	-	729
4	Atlanta GA New York/Newark NY	756	3,109	396,542	100.00	16.68	765
	Delta Air Lines		2,068	279,348	66.52	17.73	762
	Airtran/Frontier		498	52,149	16.00	13.83	758
	Continental Airlines		446	53,618	14.36	16.06	748
	Other Locals		87	8,795	2.81	10.68	943
	Off-line Connects		9	2,631	0.31	-	765
5	Los Angeles CA New York/Newark NY	2467	3,009	730,821	100.00	9.76	2,488
	American Airlines		1,020	290,473	33.89	11.47	2,484
	United Airlines		627	173,869	20.84	11.17	2,482
	Continental Airlines		567	123,370	18.83	8.81	2,472
	Delta Air Lines		338	65,534	11.23	7.73	2,510
	Other Locals		437	68,751	14.50	6.30	2,499
	Off-line Connects		21	8,826	0.71	-	2,488

Example Top Carrier Markets Report

Domestic U.S. O&D Data		Selections:	
(> Totals by Airport Summary		Bases Selected	
(> Totals by Market Summary		Not Applicable	
(* Carrier Market Level Detail		References Selected	
(> Totals by Airport by Carrier		Not Applicable	
(> Airport Distances		Carriers Selected	
Domestic U.S. Carrier Summary Re		Not Applicable	
(> Market Carrier Screen Report			
(> Carrier Passengers Screen Report			
(> Carrier Market Matrix			
(> Carrier Markets Ranked by Base			
(> Carrier Markets Ranked by Market			
(* Top 1,000 U.S. City Pairs by Carrier			
(> Standard Carrier Report			
(> Directional Connects			
(> Initiated Trips & Dom. Port. Int'l			
(> Carrier Averages			
(> Carrier Fare Type			
(> Time Series - 3 Yrs. by Quarter			
(> Time Series - 4 Yrs. by Calendar Year			
(> Time Series - 8 Yrs. by Calendar Year			
(> Carrier Extract Report			
		<RUN REPORT> <CANCEL>	

This example report is from our Top Carrier's Markets database. It is a presummarized database of ranked carrier city pair markets. Again, ALL the New York Area markets are summarized into a New York total and none can be deselected. Carriers may not be deselected either. Nor can you do complex queries such as the top markets with both American and United Airlines.

Selecting "Carrier Market Level Detail" and then "Top 1,000 U.S. City Pair Markets by Carrier." No CARRIER, BASE or REFERENCE selections can be made. Then either press the F2 Key or click <RUN REPORT>.

Time Frame Selected		Output		Select <Data Elements> Rank	
03/1 03/2 03/3 03/4		(> Printer		Passengers	
		(* File		✓ Revenues	
		[TOPAA 1		✓ Average Fare	
		Form Feeds		✓ Yield (Cents/CPM)	
		File Type		✓ Itinerary Miles	
		(> Text		✓ Market Share (%)	
		(* .xls File		Average Coupons	
		Extract		Initiated Trips	
		Connect Type		International Pax	
		✓ Local		Coupon Miles	
		✓ Connect		✓ Pax/Per/Day/Each/Way	
		✓ Total		✓ Airport Code	
		Direction		Fared Pax	
		Outbound		Fared Avg. Fare	
		Inbound		Fared Yield	
		✓ Total		Zero Fared Pax	
		Report Total		Filter Min: Max:	
		Detail		Distance	
		Sub Total		Market Rank	
		Grand Total		Destinations/Markets [100]	
				Enter Carrier Code [AA]	
				Enter Year/Quarter: [2003/0]	
Build Pairs File					
[RUN] [CANCEL]					
		Top Carrier Report			

Press F2 or Click on Run to Execute Report

| Ready |NOSELECT| 1:28 pm

The time frame is selected in the lower right hand corner of the screen. Again I selected 2003/0. As we said above, carriers, bases and references are not selected. Instead, enter the number of Markets and the carrier you want to analyze. Give the output file a name. Press the F2 Key or click RUN.

As always, the report will include all the Data Elements that are preceded with a check mark. No other elements can be selected and none may be excluded.

Top Carrier Markets
American Airlines
Total Year 2003

Carrier Market Rank	All Markets Rank	Market/Carrier	Non- Stop Mileage	Pass Per Day	Revenue Per Day	% Market Share	Avg. Yield	Avg. Haul
1	17	Miami FL	1,097	1,834.9	243,722.6	100.00	11.90	1,116
		New York/Newark NY						
		American Airlines		1,283.8	169,375.3	69.96	12.02	1,098
		Continental Airlines		407.6	56,095.3	22.22	12.60	1,092
		Other Locals		138.3	16,863.1	7.53	9.06	1,346
		Off-line Connects			5.2	1,389.0	0.29	-
2	3	Chicago IL	723	3,679.9	560,220.2	100.00	20.88	729
		New York/Newark NY						
		American Airlines		1,276.2	208,616.5	34.68	22.39	730
		United Airlines		1,103.6	181,029.6	29.99	22.50	729
		American Trans Air		604.6	67,360.6	16.43	15.43	722
		Continental Airlines		602.3	88,670.1	16.37	20.59	715
		Other Locals		82.2	11,238.8	2.24	15.51	882
Off-line Connects			10.9	3,304.5	0.29	-	729	
3	12	New York/Newark NY	1,603	2,148.7	318,762.2	100.00	9.11	1,628
		San Juan PR						
		American Airlines		1,182.6	170,941.2	55.04	8.98	1,609
		JetBlue		475.1	70,070.6	22.11	9.24	1,597
		Continental Airlines		363.9	59,154.5	16.93	10.02	1,622
		Other Locals		124.3	17,812.4	5.77	7.40	1,937
Off-line Connects			2.8	783.4	0.15	-	1,628	
4	23	Dallas/Fort Worth TX	1,389	1,652.2	376,848.3	100.00	16.17	1,411
		New York/Newark NY						
		American Airlines		1,021.6	253,133.2	61.83	17.74	1,397
		Delta Air Lines		215.7	37,785.2	13.05	12.29	1,425
		Continental Airlines		195.4	51,481.1	11.83	19.02	1,385
		American Trans Air		87.5	14,400.9	5.30	11.13	1,478
		Other Locals		122.1	16,393.6	7.39	9.04	1,485
Off-line Connects			9.8	3,654.3	0.60	-	1,411	
5	5	Los Angeles CA	2,467	3,008.6	730,820.9	100.00	9.76	2,488
		New York/Newark NY						
		American Airlines		1,019.6	290,472.5	33.89	11.47	2,484
		United Airlines		627.1	173,869.0	20.84	11.17	2,482
		Continental Airlines		566.5	123,369.5	18.83	8.81	2,472
		Delta Air Lines		337.8	65,533.5	11.23	7.73	2,510
		Other Locals		436.6	68,750.7	14.50	6.30	2,499
Off-line Connects			21.2	8,825.7	0.71	-	2,488	

International O&D Overview

The International O&D product is Data Base Products' compact disk database system of international airline passenger traffic. It consists of software and data, which is expressly designed to work in concert, producing an innovative and definitive way to use international airline passenger data.

Our staff is experienced in both the aviation and data processing fields, Data Base Products makes aviation data remarkably more useful, accessible and affordable.

International O&D CD product is offered on a subscription basis. Each subscription assures the receipt of the International O&D access software, full current documentation; and compact disks containing the entire database of statistics covering international airline passenger traffic data collected by the U.S. Department of Transportation, as well as data collected by the Immigration and Naturalization Service at gateway airports.

The information on the International O&D CD product is derived from two sources. The first is the U.S. Department of Transportation's Origin and Destination Survey adjusted using T100 Market data. The second is the Immigration and Naturalization Service Form 1-92.

Origin and Destination Survey Data passenger volumes can be summarized by individual airports or multi-airport cities, and by World Area code. Also available are fare and yield data, average itinerary mileage, average number of connections, average length of haul and more.

The INS information details passengers by carrier flag and has citizenship of passengers as U.S. or alien. The INS data also details information on chartered traffic.

Users have the option of using standard reports available with the International O&D product access software or of extracting the data for use in Microsoft ACCESS © or other data base managers.

International O&D

- Data Base Products' International O&D CD product for 1990 through current is very similar to our Domestic O&D product "O&DPlus".
- The access software, the summary levels available, the types of reports available, and even the file structures are almost identical to O&DPlus.

DOT Restricted Data

- A user of the International O&D data must be a U.S. Citizen.
- He must apply for and receive permission from the U.S. DOT to obtain the data.
- He must state his intended purpose for the use of the data.
- He must sign a confidentiality agreement.

Carriers in International O&D

- In Domestic O&D summary level data, we give credit to the first carrier outbound on each directional journey when there is a change of carrier between the O&D (a "Connect").
- In International, we give credit for offline connections to the "Gateway Carrier" (the carrier leaving or entering the U.S. Gateway airport).

Gateway Passengers not DPIJ's

Instead of tracking Domestic Portions of International Journeys (DPIJ's) as we do in O&DPlus, we use this data field to store "Gateway Passengers". When querying an O&D market such as JFK / LHR the analyst is told the number of O&D passengers as well as the number of passengers crossing that gateway pair.

Market Ranking in International

Instead of ranking all International O&D Markets as a group, we have divided the markets into several different gateways.

- Atlantic - Europe (WAC 400's), Africa (WAC 500's), Middle East (WAC 600's) and Greenland (WAC 975)
- Canada - Canada (WAC 900's except 975)
- Latin - Middle America (WAC 100's except 148) and South America (WAC 300's)
- Latin Caribbean - Non-U.S. Caribbean (WAC 200's)
- Mexico - Mexico (WAC 148)
- Pacific - Far East (WAC 700's) and Australasia and Oceania (WAC 800's)

Each set of gateway markets to/from the U.S. is ranked separately. We ranked the markets in this way because we felt an analyst is usually interested in only one set of gateway markets at a time and separate rankings are therefore more relevant.

Markets which are pure International directional journeys or pure Domestic directional journeys are given a rank of "0".

Different Codesharing Rules in DB1A

- All of our O&D products were developed prior to having the operating and marketing carrier information in the DB1B. To maintain consistency of data elements through all time series, we have continued to use the same rules to process the DB1B data as we did to process the DB1A.
- U.S. Carrier to Foreign Carrier codesharing was reported differently than U.S. Carrier to U.S. Carrier codesharing. The U.S. Carriers were requested by the DOT to replace the "Marketing Carrier Code" with that of the "Operating Carrier" on Foreign Carrier Codeshared Survey submissions.
- The DOT requested that the U.S. Carrier submit a special confidential O&D Survey filing which reflects the "Marketing Carrier" data.

INS I-92 Gateway Data

- In addition to U.S. Carrier International O&D data, on the International Product, we have include data from Immigration and Naturalization Service which is summarized from Form I-92.
- The data is monthly to and from the U.S. by Gateway Market and by Flag (country of registry) of Carrier For every international commercial airline flight arriving at or departing from a U.S. port city (except of those flights originating or terminating in Canada).
- For departing flights, the I-92 forms are collected at the very last domestic port, or gateway city, prior to leaving the United States. The I-92 form shows how many passengers (both revenue and non-revenue passengers) and crew members are on board the flight.
- All passengers are shown as departing from the gateway city at which the forms are completed regardless of their previous origins.
- For arriving flights, the I-92 forms are collected at the port where immigration inspections are conducted. Nearly always, these inspections take place at the very first port of arrival in the U.S.
- In some rare instances, immigration inspection is deferred for those passengers traveling on the same flight to a further downline point within the United States.
- All passengers are shown as arriving at the gateway city in which the forms are completed, regardless of subsequent destination.
- The INS data includes a breakdown between U.S. Citizens and Aliens.
- With the carrier level detail and improved timeliness of International T100 as well as the extremely high cost of the INS 1-92 data, 2004 will be the last data year we will publish INS data.

Stats Canada Transborder Data

- The INS I-92 data does not include traffic to and from Canada.
- In order to fill this void Data Base Products subscribes to data compiled and published by the Canadian DOT (Stats Canada).
- This data base is included on the O&DPlus CD.
- The data is a combination of U.S. DOT Survey data plus Canadian Survey data with duplication eliminated.
- The data is O&D Market level detail only and does not include carrier information or fares.
- Stats Canada has been tardy publishing their data and routinely run 2 years or more behind the U.S. DOT DB1B.
- Data Base Products has paid for your subscription to the data, however, you must abide by the Subscription Agreement.

Stats Canada Transborder Data Restrictions

- You may use the data for internal analytical purposes.
- You may provide the results of studies to others.
- You may not allow direct access to the data by others.
- You may not give or sell the data in its entirety or in its majority to third parties.

INTERNATIONAL Market O&D Data Base Extract Record Format

Field Length	Character Position	Justified	Field Description
3	1-3	L	Base Airport Code
1	4		Comma
3	5-7	L	Base Airport City Code
1	8		Comma
3	9-11	L	Base World Area Code
1	12		Comma
3	13-15	L	Reference Airport Code
1	16		Comma
3	17-19	L	Reference Airport City Code
1	20		Comma
3	21-23	L	Reference World Area Code
1	24		Comma
4	25-28	L	Date YYYY
1	29		Blank Space
1	30		Comma
1	31		Blank Space
1	32	R	Date Qtr
1	33		Blank Space
1	34		Comma
6	35-40	R	Market Rank
1	41		Blank Space
1	42		Comma
5	43-47	R	Non-Stop Mileage
1	48		Blank Space
1	49		Comma
12	50-61	R	Pax Count-Outbound Passengers
1	62		Blank Space
1	63		Comma
12	64-75	R	Pax Count-Inbound Passengers
1	76		Blank Space
1	77		Comma
14	78-91	R	Coupon Miles-Outbound Passengers
1	92		Blank Space
1	93		Comma
14	94-107	R	Coupon Miles-Inbound Passengers
1	108		Blank Space
1	109		Comma
8	110-117	R	Average Fare-Outbound Passengers
1	118		Blank Space
1	119		Comma
8	120-127	R	Average Fare-Inbound Passengers
1	128		Blank Space
1	129		Comma
5	130-134	R	Avg # of Coupons-Outbound Pax
1	135		Blank Space
1	136		Comma
5	137-141	R	Avg # of Coupons-Inbound Pax
1	142		Blank Space
1	143		Comma
12	144-155	R	Fared Outbound Pax
1	156		Blank Space
1	157		Comma
12	158-169	R	Fared Inbound Pax
1	170		Blank Space
1	171		Comma
8	172-179	R	Avg. Fare Fared Outbound Pax
1	180		Blank Space
1	181		Comma
8	182-189	R	Avg. Fare Fared Inbound Pax
1	190		Blank Space
1	191		Comma
12	192-203	R	Init Trips At Base Apt
1	204		Blank Space
1	205		Comma
12	206-217	R	Init Trips At Reference Apt
1	218		Blank Space
1	219		Comma
12	220-231	R	Outbound Gateway Pax
1	232		Blank Space
1	233		Comma
12	234-245	R	Inbound Gateway Pax
1	246		Carriage Return
1	247		Line Feed

Total Record Length is 247

International Carrier Extract Record Format

Col Pos #	Field Name and Description	Beginning Character Position	Field Length	Field Type	Field Justified	Trailing Blank Spaces	Delimiting Comma Position	
1.	Base Airport Code	1	3	A	L	0	4	
2.	Base City Code	5	3	A	L	0	8	
3.	Base World Area Code	9	2	A	L	1	12	
4.	Reference Airport Code	13	3	A	L	0	16	
5.	Reference City Code	17	3	A	L	0	20	
6.	Reference World Area Code	21	3	A	L	0	24	
7.	Carrier Code	25	2	A	L	0	27	
8.	Year	28	4	N	L	1	33	
9.	Quarter	34	2	N	R	1	37	
10.	Non-Stop Mileage	38	5	N	R	1	44	
11.	PAX Outbound, Local	45	9	N	R	1	55	
12.	PAX Inbound, Local	56	9	N	R	1	66	
13.	PAX Outbound, Connect	67	6	N	R	1	74	
14.	PAX Inbound, Connect	75	6	N	R	1	82	
15.	CPM Outbound, Local	83	12	N	R	1	96	
16.	CPM Inbound, Local	97	12	N	R	1	110	
17.	CPM Outbound, Connect	111	9	N	R	1	121	
18.	CPM Inbound, Connect	122	9	N	R	1	132	
19.	Avg. Fare Outb, Local	133	7	N	R	1	141	
20.	Avg. Fare Inb, Local	142	7	N	R	1	150	
21.	Avg. Fare Outb, Connect	151	7	N	R	1	159	
22.	Avg. Fare Inb, Connect	160	7	N	R	1	168	
23.	Avg. Coup Outb, Local	169	5	N	R	1	175	
24.	Avg. Coup Inb, Local	176	5	N	R	1	182	
25.	Avg. Coup Outb, Connect	183	5	N	R	1	189	
26.	Avg. Coup Inb, Connect	190	5	N	R	1	196	
27.	Fared PAX Outb, Local	197	6	N	R	1	204	
28.	Fared PAX Inb, Local	205	7	N	R	1	213	
29.	Fared PAX Outb, Connect	214	7	N	R	1	222	
30.	Fared PAX Inb, Connect	223	6	N	R	1	230	
31.	Avg. Fare, Fared PAX, Outbound, Local	231	7	N	R	1	239	
32.	Avg. Fare, Fared PAX, Inbound, Local	240	7	N	R	1	248	
33.	Avg. Fare, Fared PAX, Outbound, Connect	249	7	N	R	1	257	
34.	Avg. Fare, Fared PAX, Inbound, Connect	258	7	N	R	1	266	
35.	Initiated at Base, Local	267	9	N	R	1	277	
36.	Initiated at Reference, Local	278	9	N	R	1	288	
37.	Initiated at Base, Connect	289	9	N	R	1	299	
38.	Initiated at Reference, Connect	300	9	N	R	1	310	
39.	Gateway PAX Outb, Local	311	9	N	R	1	321	
40.	Gateway PAX Inb, Local	322	9	N	R	1	332	
41.	Gateway PAX Outb, Connect	333	9	N	R	1	343	
42.	Gateway PAX, Inb., Connect	344	9	N	R	0	None	
EOL	Carriage Return	353	Total Line Length is 354 character.					

SPECIAL NOTE: This Report has no column headings. To know what the columns in the file represent, use this Record Layout and Description.