# Introduction to Fare Construction Using ExpertFlyer to Find Better Flights

Scott Mackenzie Frequent Traveler University – 30 April 2016



Blog – www.travelcodex.com Forum – forum.travelcodex.com

## **The Basics**

• Airlines don't sell tickets on a particular flight. They sell fares between two cities.

- Airlines don't sell tickets on a particular flight. They sell fares between two cities.
- Each fare has several rules. Fares are matched to inventory on specific flights that meet these rules.

- Airlines don't sell tickets on a particular flight. They sell fares between two cities.
- Each fare has several rules. Fares are matched to inventory on specific flights that meet these rules.
- Inventory is divided into booking classes. Availability does not correlate to the number of reserved seats.

- Airlines don't sell tickets on a particular flight. They sell fares between two cities.
- Each fare has several rules. Fares are matched to inventory on specific flights that meet these rules.
- Inventory is divided into booking classes. Availability does not correlate to the number of reserved seats.
- Sometimes multiple fares can be combined in a single itinerary according to the rules of each fare.

## **Knowledge Is Power**

- Some people believe that airfare rises and falls at random. In fact, you can predict most changes.
- Some people search for alternate dates and cities at random. In fact, you can search intelligently.
- You <u>WILL NOT</u> find flights for less than the advertised price. But you will know <u>WHAT</u> the advertised price is.
  - Unlike Macy's, most airlines don't advertise their sales.
  - You must be flexible to take advantage of cheaper fares.

## Sample Itineraries from Seattle to Miami

Itinerary 1

Fare A: SEA-MIA-SEA

Requires round-trip travel.

Itinerary 2

Fare B: SEA-MIA

Fare C: MIA-SEA

Might be cheaper. Different booking class each way?

Itinerary 3

Fare D: SEA-DFW

Fare E: DFW-MIA

Fare F: MIA-DFW

Fare G: DFW-SEA

Might be cheaper. Different booking classes? Different

connection?

## Why Do Ticket Prices Change?

- Fare rules and inventory both cause prices to increase. You can (usually) predict these increases.
- Fares can expire or require advance booking.
  - After this date, you can't book that fare even if the matching inventory still exists.
- Inventory can change as people buy tickets.
  - Even if there is a cheap fare, when inventory for the matching booking class hits zero you must buy a more expensive fare.
- Airlines can change fares or inventory at any time.

# **Searching for Fares**

## Sample Trip from Seattle to Austin

Return Date:

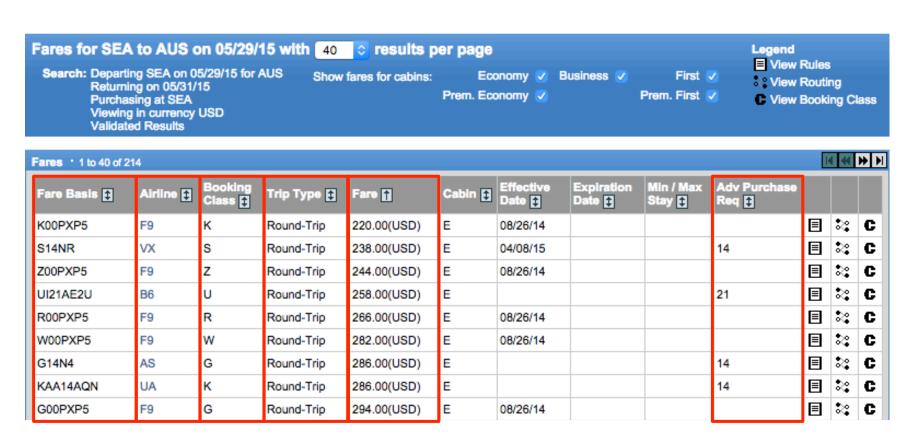
05/31/15

# Please fill out the form below to start your search. Hide Advanced Options Departing Airport: Seattle, WA, USA, Seattle/Tacoma International Airport | \* Arriving Airport: Austin, TX, USA, Austin-Bergstrom International Airport | \* To perform an Around the World (RTW) fare search, use the same Departing and Arriv Purchasing City: Seattle, WA, USA, Seattle/Tacoma International Airport | ? Depart Date: 05/29/15 | \*

Enter your destination and dates like any other search.

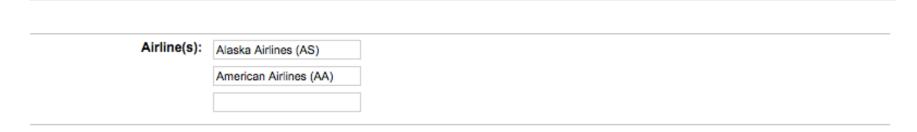
(?)

## **Basic Fare Information**



- Each fare is "named" with a unique fare basis code.
- Other information is also available on the first page.

## **Searching for Specific Airlines**

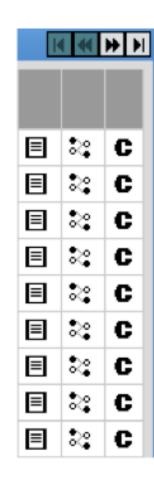


Fares 1 to 40 of	62										4	<b>*</b> •
Fare Basis	Airline ‡	Booking Class	Trip Type 🚼	Fare †	Cabin ‡	Effective Date	Expiration Date	Min / Max Stay 🛊	Adv Purchase Req 🛊			
G14N4	AS	G	Round-Trip	286.00(USD)	E				14		<b>*</b>	C
K14N4	AS	K	Round-Trip	320.00(USD)	E				14		<b>%</b>	C
V14N4	AS	V	Round-Trip	380.00(USD)	E				14	▤	<b>*</b>	C
QA07ZSL3	AA	Q	Round-Trip	390.00(USD)	E	02/17/15	06/01/15		07		**	C
NA00ZNG3	AA	N	Round-Trip	430.00(USD)	E					▤	<b>*</b>	C
L14N4	AS	L	Round-Trip	460.00(USD)	E				14	▤	<b>*</b>	C
SA00ZSL3	AA	S	Round-Trip	476.00(USD)	E	02/17/15	06/01/15			▤	<b>*</b>	C
SA14ZNG3	AA	S	Round-Trip	500.00(USD)	E				14	▤	<b>::</b>	C
SA07ZNX3	AA	S	Round-Trip	520.00(USD)	E	01/15/15			07	▤	<b>*</b>	C

 Take advantage of codeshares by searching for fares issued by partner airlines.

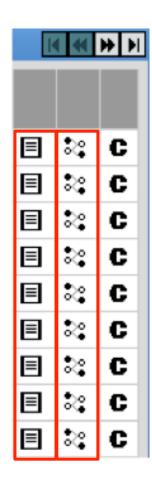
## **Detailed Fare Information**

Fares 1 to 40 of 62	2			
Fare Basis 🛊	Airline 🛊	Booking Class	Trip Type	Fare 👔
G14N4	AS	G	Round-Trip	286.00(USD)
K14N4	AS	K	Round-Trip	320.00(USD)
V14N4	AS	V	Round-Trip	380.00(USD)
QA07ZSL3	AA	Q	Round-Trip	390.00(USD)
NA00ZNG3	AA	N	Round-Trip	430.00(USD)
L14N4	AS	L	Round-Trip	460.00(USD)
SA00ZSL3	AA	S	Round-Trip	476.00(USD)
SA14ZNG3	AA	s	Round-Trip	500.00(USD)
SA07ZNX3	AA	S	Round-Trip	520.00(USD)



## **Detailed Fare Information**

Fares 1 to 40 of 62	2			
Fare Basis	Airline 🛊	Booking Class	Trip Type	Fare 1
G14N4	AS	G	Round-Trip	286.00(USD)
K14N4	AS	K	Round-Trip	320.00(USD)
V14N4	AS	V	Round-Trip	380.00(USD)
QA07ZSL3	AA	Q	Round-Trip	390.00(USD)
NA00ZNG3	AA	N	Round-Trip	430.00(USD)
L14N4	AS	L	Round-Trip	460.00(USD)
SA00ZSL3	AA	s	Round-Trip	476.00(USD)
SA14ZNG3	AA	s	Round-Trip	500.00(USD)
SA07ZNX3	AA	S	Round-Trip	520.00(USD)



## Sample Fare Rules

#### Rules

Search: Departing SEA on 05/29/15 for AUS Fare basis code G14N4 Flying AS

Routing code 4

Rule Category	Rule Text
RULE APPLICATION AND OTHER CONDITIONS	NOTE - THE FOLLOWING TEXT IS INFORMATIONAL AND NOT VALIDATED FOR AUTOPRICING.  ONE WAY INSTANT PURCHASE FARES APPLICATION  CLASS OF SERVICE  THESE FARES APPLY FOR COACH CLASS SERVICE.  CAPACITY LIMITATIONS  SEATS ARE LIMITED.
ELIGIBILITY	NO ELIGIBILITY REQUIREMENTS APPLY.
DAY/TIME	NO DAY/TIME TRAVEL RESTRICTIONS APPLY.
SEASONALITY	NO SEASONAL TRAVEL RESTRICTIONS APPLY.
FLIGHT APPLICATION	NO FLIGHT RESTRICTIONS APPLY.
ADVANCE RESERVATIONS/TICKETING	CONFIRMED RESERVATIONS FOR ALL SECTORS ARE REQUIRED AT LEAST 14 DAYS BEFORE DEPARTURE. WAITLIST NOT PERMITTED. TICKETING MUST BE COMPLETED WITHIN 1 DAY AFTER RESERVATIONS ARE MADE OR AT LEAST 14 DAYS BEFORE DEPARTURE WHICHEVER IS EARLIER.

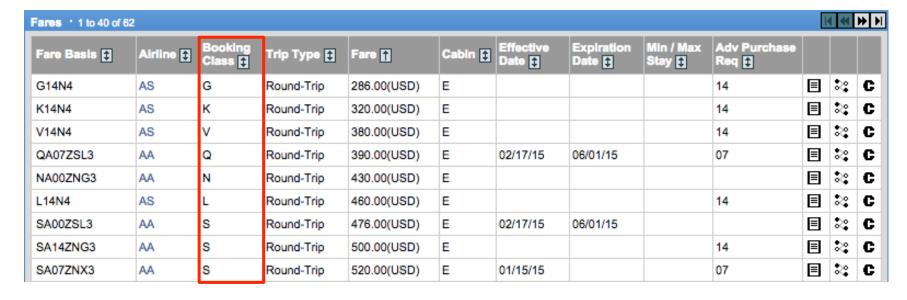
## Sample Fare Rules

MINIMUM STAY	NO MINIMUM STAY REQUIREMENTS APPLY.
MAXIMUM STAY	NO MAXIMUM STAY REQUIREMENTS APPLY.
STOPOVERS	NO STOPOVERS PERMITTED ON THE PRICING UNIT. NO STOPOVER OCCURS IF PASSENGER TAKES NEXT AVAILABLE FLIGHT WITHIN 4 HOURS.
TRANSFERS	UNLIMITED TRANSFERS PERMITTED SURFACE AT FARE BREAK AND EMBEDDED SECTORS PERMITTED EXCEPT FOR PRICING UNITS WITHIN/BETWEEN US AND CANADA - INCLUDING PR/USV1 - SURFACE AT FARE BREAK IS NOT PERMITTED.
COMBINATIONS	DOUBLE OPEN JAWS NOT PERMITTED.  OPEN JAWS/2-COMPONENT CIRCLE TRIPS/MULTI-COMPONENT CIRCLE TRIPS/END-ON-END  FARES MAY BE COMBINED ON A HALF ROUND TRIP BASIS  -TO FORM SINGLE OPEN JAWS  A MAXIMUM OF 2 STOPOVERS PERMITTED AT FARE BREAK POINTS. MILEAGE OF THE OPEN SEGMENT MUST BE EQUAL/ LESS THAN MILEAGE OF THE SHORTEST FLOWN FARE COMPONENT.  -TO FORM 2-COMPONENT CIRCLE TRIPS  -TO FORM MULTI-COMPONENT CIRCLE TRIPS WITH AS FARES A MAXIMUM OF 2 STOPOVERS PERMITTED AT FARE BREAK POINTS.  END-ON-END COMBINATIONS PERMITTED. VALIDATE ALL FARE COMPONENTS. SIDE TRIPS PERMITTED WITH NO RESTRICTIONS. TRAVEL MUST BE VIA THE POINT OF COMBINATION.

# **Searching for Availability**

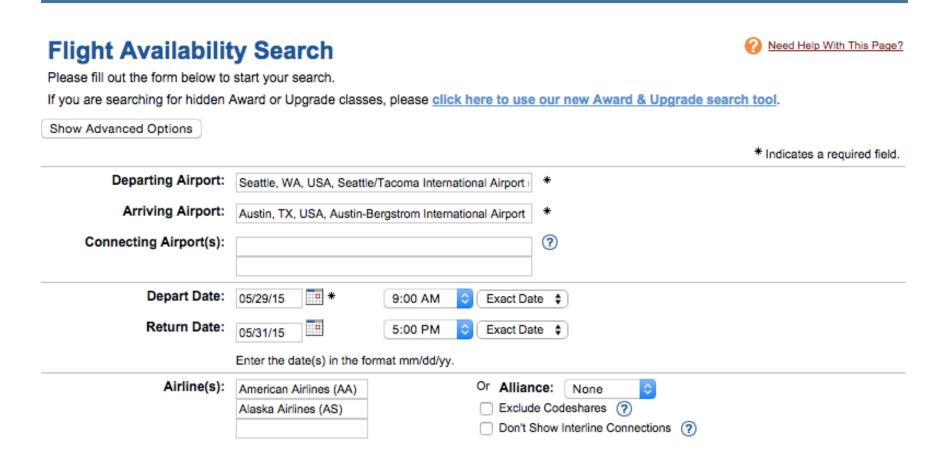
## Sample Trip from Seattle to Austin





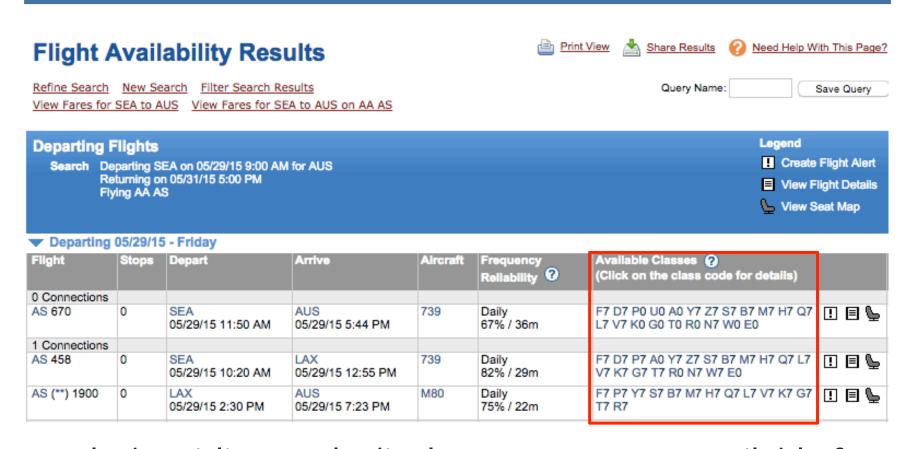
 Remember the AA and AS fares we found in the previous section. Each has a required booking class.

## Flight Availability Is Separate from Fare Info



Provides the number of seats in each booking class.

## Results Have an Upper Limit



- Alaska Airlines only displays up to 7 seats available for each booking class. Could be more you don't see.
- Other airlines might show up to 9, or as few as 4.

## **Availability Might Change Your Strategy**

Arrive	Aircraft	Frequency	Available Classes ?			
	7014.1	Reliability 0	(Click on the class code for details)			
AUS 05/29/15 5:44 PM	739	Daily 67% / 36m	F7 D7 P0 U0 A0 Y7 Z7 S7 B7 M7 H7 Q7 L7 V7 K0 G0 T0 R0 N7 W0 E0	<b>!</b> ■ <b>!</b>		

• Decent availability for outbound flight. V fare for \$380.

## **Availability Might Change Your Strategy**

Arrive	Aircraft	Frequency Reliability 7	Available Classes (?) (Click on the class code for details)	
AUS 05/29/15 5:44 PM	739	Daily 67% / 36m	F7 D7 P0 U0 A0 Y7 Z7 S7 B7 M7 H7 Q7 L7 V7 K0 G0 T0 R0 N7 W0 E0	<b>!</b> ■ <b>\</b>
LAX 05/29/15 12:55 PM	739	Daily 82% / 29m	F7 D7 P7 A0 Y7 Z7 S7 B7 M7 H7 Q7 L7 V7 K7 G7 T7 R0 N7 W7 E0	□ 🖹 🖢
AUS 05/29/15 7:23 PM	M80	Daily 75% / 22m	F7 P7 Y7 S7 B7 M7 H7 Q7 L7 V7 K7 G7 T7 R7	□ 🗏 🖢

- Decent availability for outbound flight. V fare for \$380.
- Could pay less (\$286) for G fare if willing to connect.

## **Availability Might Change Your Strategy**

Arrive	Aircraft	Frequency Reliability 0	Available Classes (2) (Click on the class code for details)	
AUS 05/29/15 5:44 PM	739	Daily 67% / 36m	F7 D7 P0 U0 A0 Y7 Z7 S7 B7 M7 H7 Q7 L7 V7 K0 G0 T0 R0 N7 W0 E0	□ 🗏 🖢
LAX 05/29/15 12:55 PM	739	Daily 82% / 29m	F7 D7 P7 A0 Y7 Z7 S7 B7 M7 H7 Q7 L7 V7 K7 G7 T7 R0 N7 W7 E0	<b>!</b> ■ <b>\</b>
AUS 05/29/15 7:23 PM	M80	Daily 75% / 22m	F7 P7 Y7 S7 B7 M7 H7 Q7 L7 V7 K7 G7 T7 R7	□ 🗏 🖢

- Decent availability for outbound flight. V fare for \$380.
- Could pay less (\$286) for G fare if willing to connect.
- R is lowest, but not available on all flights. Also, none
  of the published fares use the R or T booking classes.

## Only Nonstop Is Alaska -> Repeat Fare Search

	_				_							
Fare Basis	Airline ‡	Booking Class ‡	Trip Type	Fare 1	Cabin 🛊	Effective Date ‡	Expiration Date	Min / Max Stay 🛨	Adv Purchase Req 🛊			
G14N4	AS	G	Round-Trip	286.00(USD)	E				14		\$\$	1
K14N4	AS	K	Round-Trip	320.00(USD)	E				14		\$\$	1
V14N4	AS	V	Round-Trip	380.00(USD)	E				14		\$\$	1
L14N4	AS	L	Round-Trip	460.00(USD)	E				14		\$\$	(
Q14N4	AS	Q	Round-Trip	540.00(USD)	E				14		\$\$	1
H07N3	AS	Н	Round-Trip	650.00(USD)	E				07		\$\$	1
M07N3	AS	М	Round-Trip	770.00(USD)	E				07		\$\$	(
P21N2	AS	Р	Round-Trip	848.00(USD)	F				21		\$\$	(
BASN3	AS	В	Round-Trip	916.00(USD)	E					▤	\$\$	(
P14N2	AS	Р	Round-Trip	948.00(USD)	F				14	▤	\$\$	1
SASN3	AS	S	Round-Trip	1050.00(USD)	E					▤	\$\$	1
YASR1	AS	Υ	Round-Trip	1176.00(USD)	E					▤	<b>≎</b> ≎	(
FASR	AS	F	Round-Trip	1426.00(USD)	F						\$≎	1

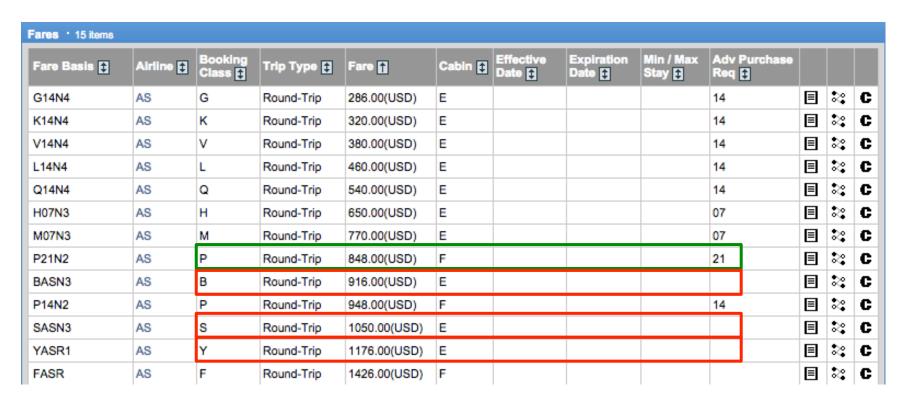
- V fare has availability on outbound and costs \$380 round-trip. Fares as high as \$1,426 for F (first class).
- G inventory not available on our preferred date, but if we found it on another date, we could pay \$286.

## Multiple Fares Can Share Booking Class

					_						
Fare Basis	Airline ‡	Booking Class ‡	Trip Type	Fare 👔	Cabin 🛊	Effective Date ‡	Expiration Date	Min / Max Stay 🛊	Adv Purchase Req 🛊		
G14N4	AS	G	Round-Trip	286.00(USD)	E				14	\$≎	C
K14N4	AS	K	Round-Trip	320.00(USD)	E				14	<b>≎</b> ≎	•
V14N4	AS	V	Round-Trip	380.00(USD)	E				14	<b>≎</b> ≎	•
L14N4	AS	L	Round-Trip	460.00(USD)	E				14	<b>≎</b> ≎	•
Q14N4	AS	Q	Round-Trip	540.00(USD)	E				14	<b>≎</b> ≎	•
H07N3	AS	Н	Round-Trip	650.00(USD)	E				07	<b>≎</b> ≎	•
M07N3	AS	М	Round-Trip	770.00(USD)	E				07	<b>≎</b> ≎	•
P21N2	AS	Р	Round-Trip	848.00(USD)	F				21	<b>*</b>	•
BASN3	AS	В	Round-Trip	916.00(USD)	E					<b>*</b>	•
P14N2	AS	Р	Round-Trip	948.00(USD)	F				14	<b>*</b>	•
SASN3	AS	S	Round-Trip	1050.00(USD)	E					<b>\$</b> \$	(
YASR1	AS	Y	Round-Trip	1176.00(USD)	E					\$≎	(
FASR	AS	F	Round-Trip	1426.00(USD)	F					<b>*</b>	(

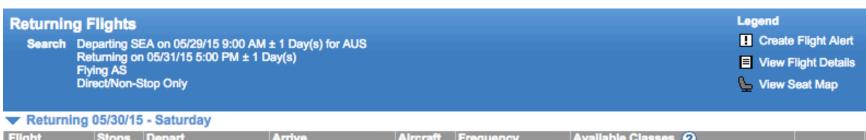
- These two P fares have different rules, including different advance purchase requirements.
- Each fare is a set of rules. Booking class is one rule.

## Cabin Class Doesn't Determine Price!



 Notice that this P fare (green, first class) is cheaper than other B, S, or Y fares (red, economy class).

## **Use Inventory to Choose Return Date**



Flight	Stops	Depart	Arrive	Aircraft	Frequency Reliability 0	Available Classes (2) (Click on the class code for details)	
0 Connections							•
AS 671	0	AUS 05/30/15 6:40 PM	SEA 05/30/15 9:00 PM	739	Daily 83% / 37m	F7 D7 P2 U2 A0 Y7 Z7 S7 B7 M7 H7 Q0 L0 V0 K0 G0 T0 R0 N0 W0 E0	□ ■ •

#### H fare = \$650

#### ▼ Returning 05/31/15 - Sunday

Flight	Stops	Depart	Arrive	Aircraft	Frequency Reliability 0	Available Classes (2) (Click on the class code for details)	
0 Connections							
AS 671	0	AUS 05/31/15 6:40 PM	SEA 05/31/15 9:00 PM	739	M,T,W,Th,F,Sa 83% / 37m	F7 D7 P0 U0 A0 Y7 Z7 S0 B0 M0 H0 Q0 L0 V0 K0 G0 T0 R0 N0 W0 E0	□ 🗏 🖳

#### Y fare = \$1,176

#### Returning 06/01/15 - Monday

Flight	Stops	Depart	Arrive	Aircraft	Frequency Reliability 0	Available Classes (2) (Click on the class code for details)	
0 Connections							1
AS 671	0	AUS 06/01/15 6:40 PM	SEA 06/01/15 9:00 PM	739	Daily 83% / 37m	F7 D7 P0 U0 A0 Y7 Z7 S7 B7 M7 H7 Q7 L0 V0 K0 G0 T0 R0 N0 W0 E0	□ 🗏 🖢

**Q** fare = \$540

## **Combining Fares**

COMBINATIONS

DOUBLE OPEN JAWS NOT PERMITTED.

OPEN JAWS/2-COMPONENT CIRCLE TRIPS/MULTI-COMPONENT

CIRCLE TRIPS/END-ON-END

FARES MAY BE COMBINED ON A HALF ROUND TRIP BASIS

-TO FORM SINGLE OPEN JAWS

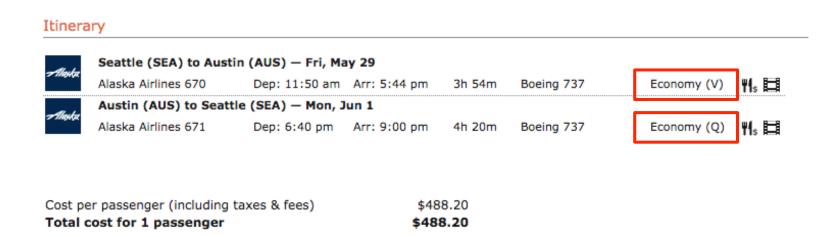
A MAXIMUM OF 2 STOPOVERS PERMITTED AT FARE BREAK POINTS. MILEAGE OF THE OPEN SEGMENT MUST BE EQUAL/ LESS THAN MILEAGE OF THE SHORTEST FLOWN FARE COMPONENT.

- -TO FORM 2-COMPONENT CIRCLE TRIPS
- -TO FORM MULTI-COMPONENT CIRCLE TRIPS WITH AS FARES A MAXIMUM OF 2 STOPOVERS PERMITTED AT FARE BREAK POINTS.

END-ON-END COMBINATIONS PERMITTED. VALIDATE ALL FARE COMPONENTS. SIDE TRIPS PERMITTED WITH NO RESTRICTIONS. TRAVEL MUST BE VIA THE POINT OF COMBINATION.

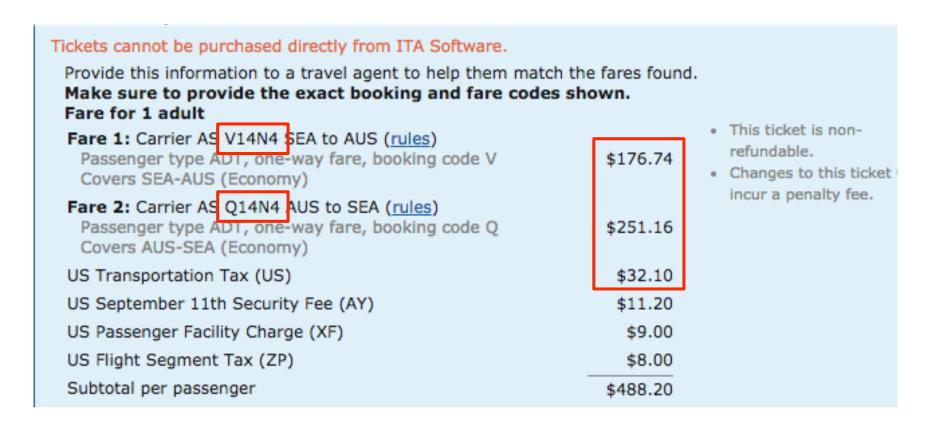
- Outbound V fare (\$380) and return Q fare (\$540) are both for round trip travel. BUT... rules in each fare permit combining fares on half round trip basis.
- \$190 + \$270 = \$460 + fees

## **Use ITA Matrix to Confirm Your Itinerary**



- Notice V and Q fares, but not quite the \$460 originally estimated. Where did \$28.20 come from?
- ITA Matrix breaks down price in blue box.

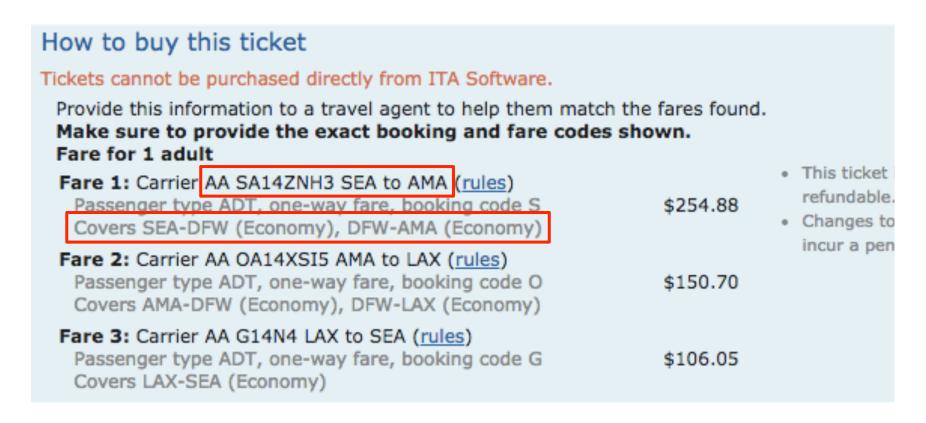
### **ITA Matrix Price Breakdown**



 Notice that ExpertFlyer included US Transportation Tax in the fares it quoted. ITA lists it separately.

## **Combining Fares & Pricing Units**

## **One Itinerary Can Have Many Fares**



Each fare will list the city pair and segments covered.

## **Each Fare Has Rules for Combinations**

Fare 3: Carrier AA G14N4 LAX to SEA (rules)

Passenger type ADT, one-way fare, booking code G Covers LAX-SEA (Economy)

\$106.05

DOUBLE OPEN JAWS NOT PERMITTED.

OPEN JAWS/2-COMPONENT CIRCLE TRIPS/MULTI-COMPONENT

CIRCLE TRIPS/END-ON-END

FARES MAY BE COMBINED ON A HALF ROUND TRIP BASIS

-TO FORM SINGLE OPEN JAWS

END-ON-END COMBINATIONS PERMITTED. VALIDATE ALL

FARE COMPONENTS. SIDE TRIPS PERMITTED WITH NO

RESTRICTIONS. TRAVEL MUST BE VIA THE POINT OF

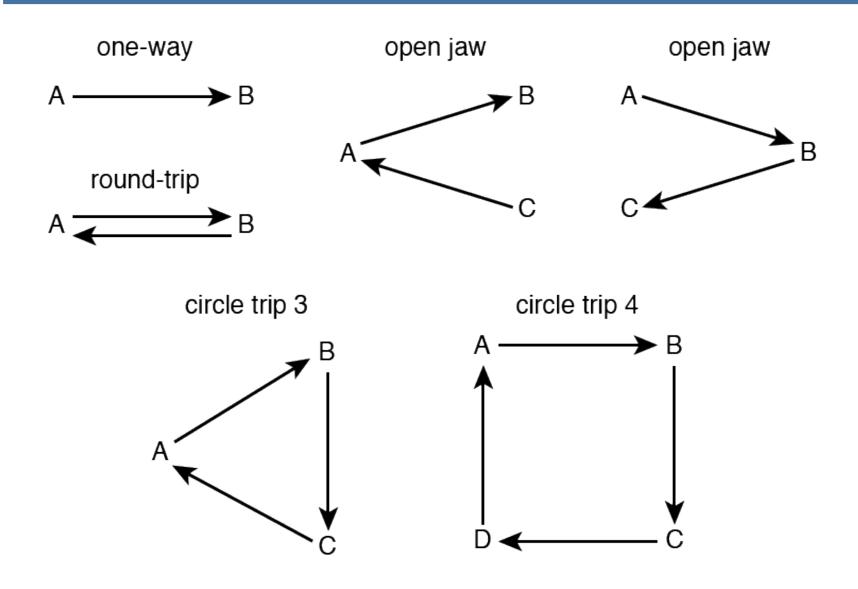
COMBINATION.

PROVIDED -

COMBINATIONS ARE WITH ANY FARE FOR CARRIER AS IN ANY RULE IN ANY TARIFF.

COMBINATIONS ARE WITH ANY FARE FOR ANY CARRIER WITH ANY RULF IN ANY PUBLIC TARIFF.

## Fares → Pricing Units → Itinerary

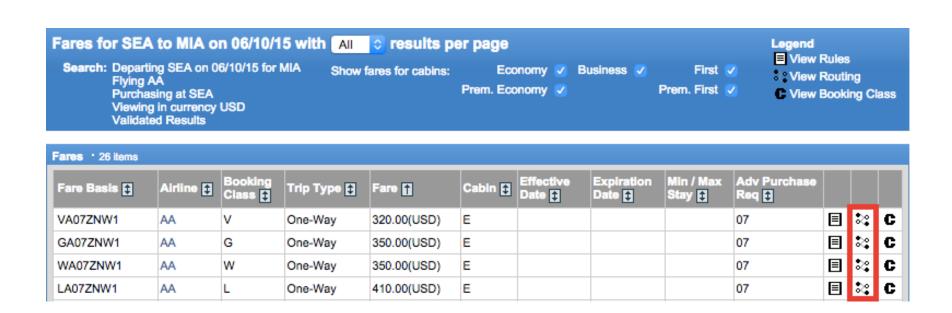


## **How Is a Fare Different from Pricing Unit?**

- Fares are the individual units sold by the airline.
- You combine these into an itinerary, which is the final reservation you make as a customer.
- Pricing units are in between.
  - Sometimes they're the same (e.g., one-way flight).
  - Sometimes they're complex (e.g., two round-trip fares combined on a half round-trip basis to form an open jaw , PU1, with the addition of a one-way fare, PU2.)
- Sometimes identify key actions (e.g., must travel over an ocean on the first pricing unit)

# **Routing Rules**

## Routing Rules Are a Type of Fare Rule



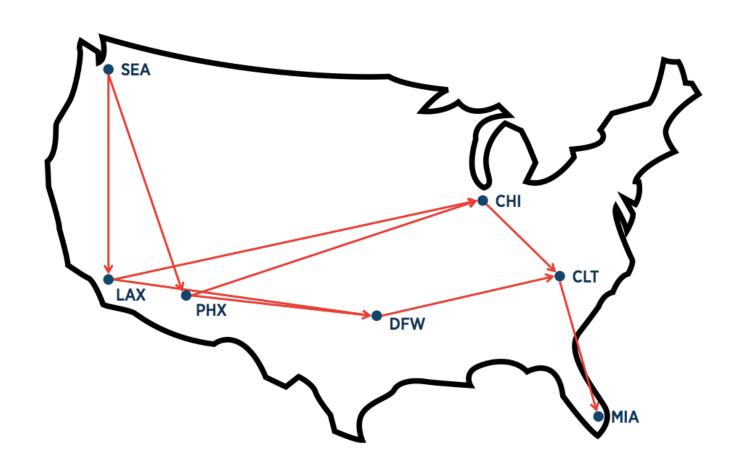
- Itinerary = fare + availability on eligible flights
- Routing rules are just as important as seasonality, advance purchase restrictions, etc.

## **How to Interpret Routing Rules**

- Most fare rules have duplicative or contradictory language, and you follow a strict interpretation
- Routing rules are different. Lots of options, none of which you have to use. Follow loose interpretation.
- Example for Seattle-Miami fare on American Airlines:
  - SEA-PHX/LAX-DFW/CHI-MIA
  - SEA-DFW/CHI-MIA
  - 3. SEA-PHX/LAX-DFW/CHI-CLT-MIA
  - 4. SEA-DFW/CHI-CLT-MIA

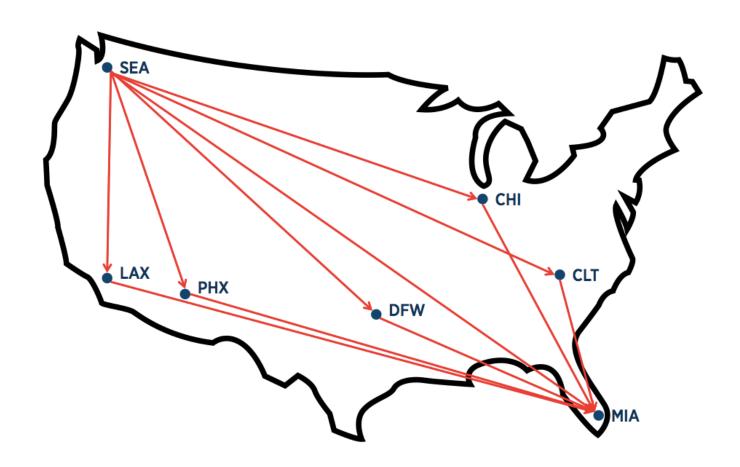
## Theoretical Routings for ONE Rule

#### 3. SEA-PHX/LAX-DFW/CHI-CLT-MIA



## You Can Fly Direct if Desired

#### 3. SEA-PHX/LAX-DFW/CHI-CLT-MIA



## **Maximum Permitted Mileage**

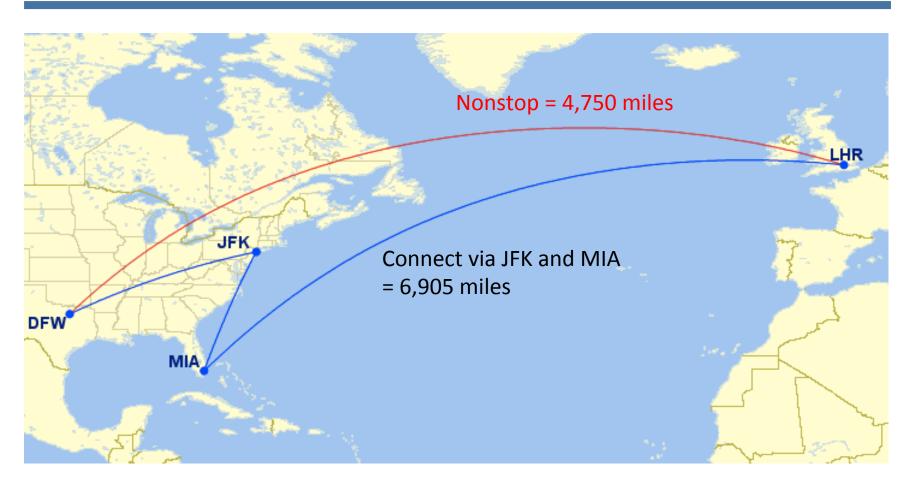
 Some airlines don't have routing language. They just tell you how far you can fly, known as MPM.

/VIA THE ATLANTIC/ MPM 5702 MILEAGE SYSTEM APPLIES
BETWEEN ORIGIN AND DESTINATION MILEAGE SYSTEM APPLIES
ORIGIN TO DESTINATION

TICKETED POINT **DEDUCTION OF 550 MILES** APPLIES WHEN TRAVEL IS VIA **CHI** AND/OR **NYC** AND/OR **RDU** AND/OR **MIA** AND/OR **DFW** 

• Translation: You can travel via the Atlantic Ocean up to 5,702 miles, but if you connect in one of those cities then the maximum is <u>increased</u> to 6,252 miles.

## **Example: Dallas to London**



Map generated by the Great Circle Mapper – © Karl L. Swartz

## Why Bother with Routing Rules?

• Some loyalty programs still award miles based on the distance flown. Even if one airline doesn't, it may have partner airlines that do.

## Why Bother with Routing Rules?

- Some loyalty programs still award miles based on the distance flown. Even if one airline doesn't, it may have partner airlines that do.
- Some low fares are published, but inventory is not available on nonstop routes. Check connecting flights for more availability. (Fees may increase)

## Why Bother with Routing Rules?

- Some loyalty programs still award miles based on the distance flown. Even if one airline doesn't, it may have partner airlines that do.
- Some low fares are published, but inventory is not available on nonstop routes. Check connecting flights for more availability. (Fees may increase)
- Some fares allow stopovers. You can't stopover in a connecting city if you can't reach it in the first place.

# **Q&A**