

Flight Log Functional Specification

Paul Bogard

Date	Version	Comments
04/27/2013	1.0	<ul style="list-style-type: none">Initial version
10/24/2013	1.1	<ul style="list-style-type: none">Rewrote the home page to show flight maps, and top 5 lists and counts of routes, airports, aircraft, airlines, and tailsAdded Index Routes and Show Routes pagesAdded top aircraft, airlines, and classes to Show RoutesAdded top origin/destination cities, aircraft, airlines, and classes to Show AirportAdded top airlines and classes to Show AircraftAdded top aircraft and classes to Show AirlineAdded top classes to Show TailAdded top airlines and aircraft to Show ClassUpdated logos and icons for high-resolution displaysSwitched Tails and Classes on the main navigation barMinor bug fixes
10/27/2014	1.2	<ul style="list-style-type: none">Added operating airlines, fleet numbers, and codeshares
02/08/2015	1.3	<ul style="list-style-type: none">Added details to Index Flights by YearAdded flight distancesMinor improvements to flight entry form

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Overview

The Flight Log will be a web-based system to keep track of all flights flown by Paul Bogard. The primary use will be for Paul to be able to generate various reports and maps of his flight history; however, visitors should be able to read the majority of the reports and maps as well.

Definitions

Aircraft Family	The general family of aircraft (for example, "Boeing 737")
Aircraft Variant	The subtype of aircraft within a family (for example, "737-800")
Airline	The entity responsible for the flight, as the flight is branded. If a codeshare is involved, the actual brand of the flight is used. If the flight is branded as one airline but operated by another (for example, a regional subsidiary), the brand airline will be used as the Airline, and the operating airline will be used as the Operator.
Airport	A known location which flights may have as an origin or destination.
Distance	The great circle distance between two airports.
Fleet Number	The Operator's identification for a particular aircraft. May contain letters, numbers, or both.
Flight	<p>A nonstop plane route from an origin city to a destination city.</p> <ul style="list-style-type: none">• Stops where passengers do not leave the plane (for example, weather diversions) are permitted. If passengers are permitted to deplane and reboard, the stop shall be considered a layover, and the routes prior to and following the layover shall be considered separate flights (even if the flights have the same flight number).• If an airplane returns to its origin airport, it shall still be considered a flight with the origin and destination the same. This shall count as two visits to the airport in question.

Layover	A stop at an airport between two flights on a trip, where the traveler does not leave the airport property (but may leave the airside part of the airport). The destination of the earlier flight will be the same as the origin of the later flight.
Operator	The entity which actually operates the flight. May or may not be the same as the Airline.
Route	A connection between two airports on a map. Many flights may use the same route in either direction.
Section	A collection of one or more flights describing a one-way part of a trip.
Tail Number	A unique identifier for a particular aircraft. May contain letters, numbers, or both.
Travel Class	Quality of service for the seat booked on a particular flight (for example, "Economy" or "First")
Trip	A collection of one or more flights taken for the same purpose.
Verified User	A person using the website who is successfully logged in. (Authentication is provided by the existing pbogard.com, and is thus not described in this spec.)
Visitor	A person using the website who is not logged in.

Scenarios

Scenario 1: Paul

Paul is an engineer who travels frequently. He likes to make maps of routes he's flown and airports he's visited, but with several hundred flights in his history, keeping track of them with a spreadsheet and copying and pasting into mapping software has become unwieldy.

Paul wants a way to easily record his flights on his smartphone while he's at the airport, rather than waiting until he gets home from his trip to enter the data into his spreadsheet.

If the tail number he just entered from the flight he's about to board matches one already in the database, he'd like to be informed that he's flown on this aircraft before, and on what routes he flew on this aircraft.

When he's home, Paul will want to spend hours looking at pretty maps of his flights based on arbitrary criteria. Often, he'll just look at a map of every flight he's taken, but sometimes he'll want to create maps filtered by airports, airlines, dates, tail numbers, Aircraft Family, or travel class. He will probably want to post links to interesting maps on his social networks and forums.

Of course, he doesn't want visitors to his maps to see that he's currently traveling, so Paul would prefer his flights to be invisible to visitors until he gets home and specifically marks them visible.

Scenario 2: Alice

Alice follows Paul on Twitter, and sees that he's posted a link about his travels that he seems sufficiently excited about in 140 characters or less. Having nothing better to do, she clicks the link and sees a map with a lot of airports connected by a lot of lines.

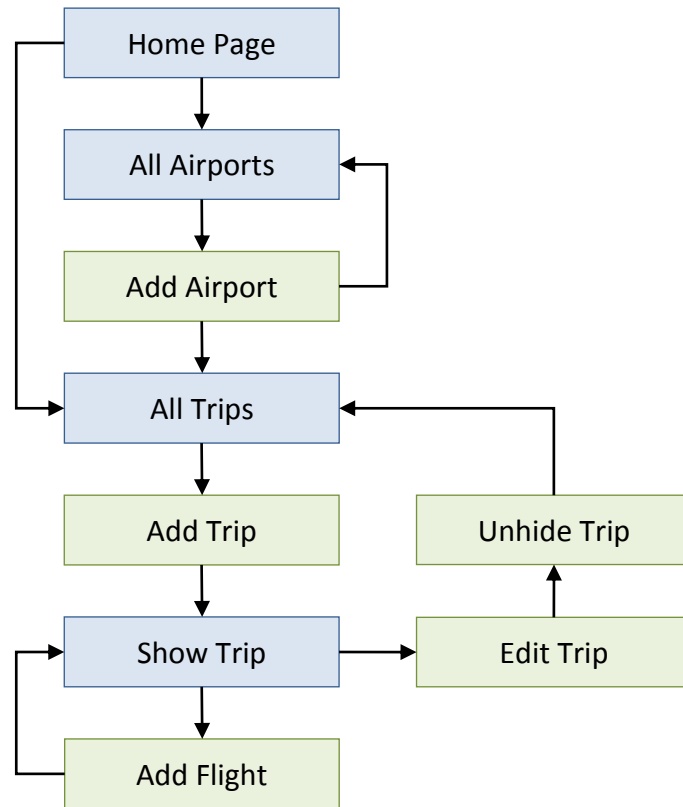
This particular view does not particularly interest her, but she sees a menu which allows her to view other maps – one of them will let her see what airlines Paul flies on. "My cousin works for Oceanic Airlines," she thinks. "I wonder if Paul's flown on them." She clicks the link and is presented with a list of airlines Paul's flown and the number of flights on each. She picks Oceanic from the list, and is presented with a map and a list showing every Oceanic flight Paul has flown on.

Non Goals

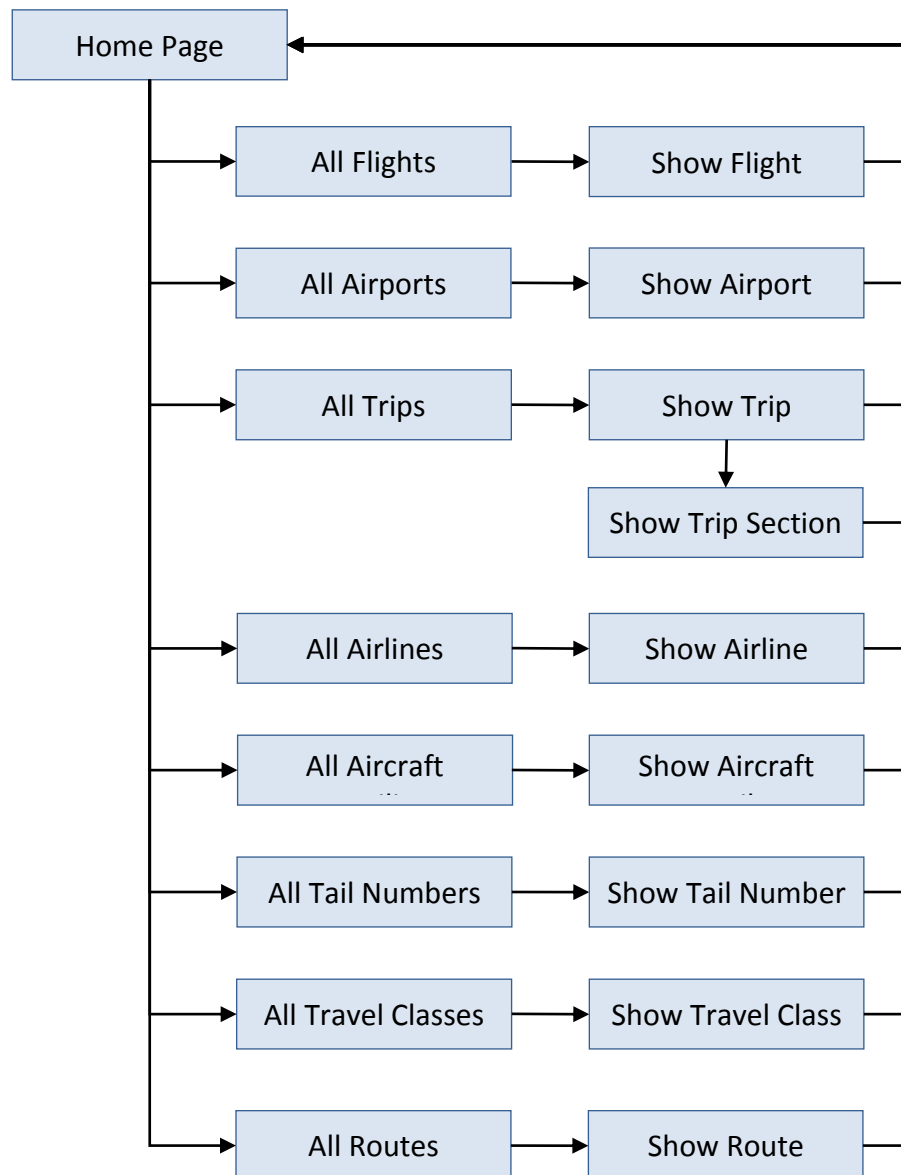
The Flight Log is specifically designed to track only Paul's flights. Multiple users are not supported. While it would be interesting to develop a site where anybody could track their own flight history, the amount of data could grow beyond the site's current capacity, and there are no plans to commercialize the site to cover the costs.

Flowchart

Entering Flights



Browsing Flights



Note that every view directly links to each of the “Index” views via a common menu. Many of the “Show” views directly link to other “Show” views as described in the Views section below.

Views

Common to Every View

Menus

Every view shall include a link to the following “Index [object]” views at the header of the page:

- [Index Aircraft Families](#)
- [Index Airlines](#)
- [Index Airports](#)
- [Index Flights](#)
- [Index Routes](#)
- [Index Tail Numbers](#)
- [Index Travel Classes](#)
- [Index Trips](#)

Hidden Trips, Flights, and Airports

By default, all new trips and their associated flights shall be considered hidden. This allows the user to enter data as he travels without visitors knowing the user is traveling until after the travel is complete.

All views on all pages for visitors who are not logged in shall ignore any flights and trips which are considered hidden. On airport views, any airport associated only with hidden flights shall not be listed. However, if the same routes or airports are associated with non-hidden flights, the route and airports shall be displayed as normal on maps as they would be if the hidden flight did not exist.

For verified users, hidden trips and flights shall be displayed in all views. Any time a hidden trip, flight, or airport is listed in a table, it shall be formatted to obviously distinguish it as hidden.

Legal

Every view that uses a map generated by gcmap.com shall have the required gcmap.com copyright notice in the footer. (See <http://www.gcmap.com/faq/other#embed>.)

Every view that uses an airline icon shall have the following notice in the footer:

The airline logos used on this page are trademarks of their respective airlines. It is believed that the use of these logos qualifies as nominative fair use under United States trademark law.

Home

Path	/flightlog
Title for Links to this View	View the home page of Paul Bogard's Flight Log

This view shall be the default view.

This view shall show the CONUS and World flight maps with a tab to switch between them. The view shall have a count of flights and a link to the Index Flights page.

The view shall show top 5 lists of routes, airports, aircraft, airlines, and tails, with the number of flights for each. Each entry in each list shall link to the appropriate Show page for that entry. At the bottom of each list shall be a count of the total number of routes, airports, aircraft, airlines, and tails, and a link to the appropriate Index page for each.

This view shall show the total distance flown across all flights.

This view shall show the longest and shortest route flown. If the shortest route flown is zero net distance, then the shortest non-zero route shall also be shown. If there is a tie for any of these positions, then all routes shall be shown for the tie.

If any trips are hidden and the user is verified, a link to each hidden trip shall be displayed near the top of the view.

Add/Edit Airport

Path	/airports/new /airports/:id/edit /airports/1/edit
-------------	---

This view shall allow a verified user to add or edit an airport. The form shall be identical between Add and Edit, but Edit shall prefill the form fields with the airport record's information from the database.

IATA Code*	<input type="text"/>
City*	<input type="text"/>
Country*	<input type="text"/>
<input type="checkbox"/> CONUS	*Required
<input type="submit" value="Submit"/>	

Visitors attempting to access this view shall be redirected to the Home view.

Add/Edit Flight

Path	<code>/flights/new</code> <code>/flights/:id/edit</code> <code>/flights/2/edit</code>
------	---

This view shall allow a verified user to add or edit a flight. The displayed form shall be identical between Add and Edit, but Edit shall prefill the form fields with the flight record's information from the database. When adding a flight, the Origin Airport field shall default to the destination airport of the most recent flight (the flight with the latest UTC Departure).

Local Departure Date*

UTC Departure Date/Time*

Airline*

Flight Number

Codeshare Airline

Codeshare Flight Number

Origin Airport*

Destination Airport*

Aircraft Family

Aircraft Variant

Tail Number

Operator

Fleet Number

Travel Class

Trip Section*

Comment

Submit

*Required

The Add Flight form shall be launched from the [Show Trip](#) view. Thus, the [Show Trip](#) view shall pass its trip ID to the Add Flight form, which then shall include it upon submittal.

The form shall only show origin and destination airports that are already in the database; the user must add the airports via the Add/Edit Airport view prior to adding the flight.

Upon submission, leading and trailing spaces shall be stripped from string form fields before saving to the database.

Visitors attempting to access this view shall be redirected to the Home view.

Add/Edit Trip

Path	/trips/add /trips/:id/edit /trips/1/edit
------	--

This view shall allow a verified user to add or edit a trip. The displayed form shall be identical between Add and Edit, but Edit shall prefill the form fields with the flight record's information from the database.

Trip Name*
<input type="text"/>
Description
<input type="text"/>
<input checked="" type="checkbox"/> Hidden
<input type="submit" value="Submit"/>

Visitors attempting to access this view shall be redirected to the Home view.

Edit Route

Path	/routes/:airport1/:airport2/edit /trips/DAY/DFW/edit
-------------	---

This view shall allow a verified user to edit a route's distance. If a record already exists for this route's distance, then the distance shall be prefilled.

<p>Distance (whole statute miles)</p> <input type="text"/> <input type="submit" value="Submit"/>

Upon submittal, if no record exists for this route distance, it shall be created, otherwise, the existing record shall have its distance updated. Route distances shall be unique per pair of airports, direction insensitive.

Visitors attempting to access this view shall be redirected to the Home view.

Index Aircraft Families

Path	/aircraft
Title for Links to this View	View a list of the types of planes on which Paul has flown

This view shows a table of all Aircraft Families flown, and a count of the number of flights on each. Each Aircraft Family will be a link to the Show Aircraft view for that particular Aircraft Family.

Aircraft Families

Aircraft Family	Flights
ERJ-145	36
MD-80	18
CRJ200	13

CRJ700	8
737	5
767	4
A320	3
717	2
777	2
757	1
DC-9	1
11 aircraft families	

Index Airlines

Path	/airlines
Title for Links to this View	View a list of the airlines on which Paul has flown

This view shall show a table of all airlines flown, and a count of the number of flights on each. The table shall be sorted by flight count descending, then by airline ascending. Each airline shall link to the [Show Airline](#) view for that particular airline.

This view shall also show a table of all operators flown, and a count of the number of flights on each. The table shall be sorted by flight count descending, then by operator ascending. Each operator shall link to the appropriate [Show Operator](#) view.

Airlines

Airline		Flights
	American Airlines	135
	United	28
	US Airways	18
	AirTran	17
	Delta	9
	Northwest	2
7 airlines		

Operator		Flights
 Envoy		68
 American Airlines		50
 Trans States Airlines		48
 ExpressJet		45
 Mesa Airlines		23
 AirTran		17
 Delta		9
 United		5
 US Airways		2
 Northwest		2
10 operators		


Index Airports

Path	/airports
Title for Links to this View	View a list of airports Paul has visited

This view shall show a table of all airports (IATA code and airport name) that are the origin or destination for at least one flight, and a count of all such airports. The table shall include a column for the number of times each airport was visited (layovers count as a single visit to an airport), and shall be sorted descending on this column, then ascending on the IATA code. Each IATA code and airport name shall link to the appropriate [Show Airport](#) view. The table shall include a total row which shows the total number of airports visited (not the total number of flights).

Airports

City	Code	Visits	Country
Dayton	DAY	92	
Dallas/Fort Worth	DFW	64	

Chicago-O'Hare	ORD	25	
Abilene	ABI	12	
Charleston (SC)	CHS	12	
Columbus	CMH	11	
Washington/Dulles	IAD	10	
Charlotte	CLT	9	
Cincinnati	CVG	8	
Orlando	MCO	8	
Seattle	SEA	8	
Salt Lake City	SLC	8	
Atlanta	ATL	7	
Indianapolis	IND	6	
Los Angeles	LAX	5	
Frankfurt	FRA	4	
Oklahoma City	OKC	4	
Phoenix	PHX	4	
Savannah	SAV	4	
Baltimore	BWI	3	
San Francisco	SFO	3	
St. Louis	STL	3	
Wilkes-Barre/Scranton	AVP	2	
Washington-National	DCA	2	
Newark	EWR	2	
Honolulu	HNL	2	
Las Vegas	LAS	2	
Milwaukee	MKE	2	
Newport News	PHF	2	
Rapid City	RAP	2	
Toledo	TOL	2	

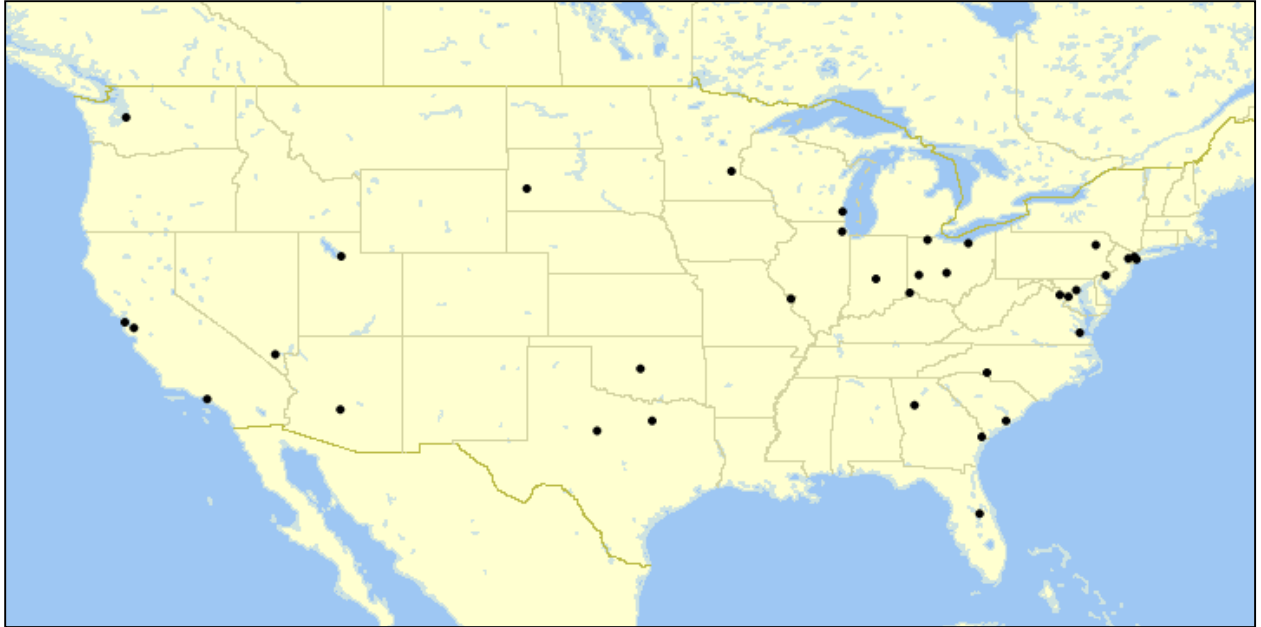
Cleveland	CLE	1	
New York-JFK	JFK	1	
New York-LaGuardia	LGA	1	
Minneapolis/Saint Paul	MSP	1	
Philadelphia	PHL	1	
San Jose (CA)	SJC	1	
37 airports			

The following maps of airports (with no routes drawn between them) shall be shown:

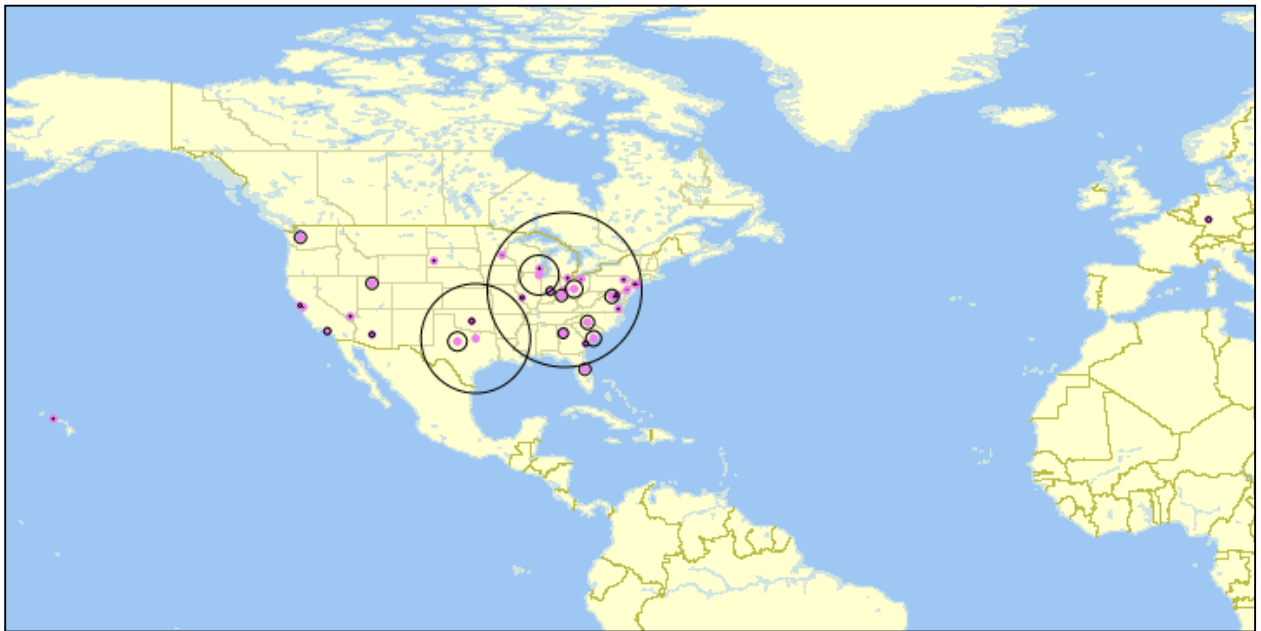
- World Airports – a map zoomed to sufficient level to show all airports meeting the above criteria.



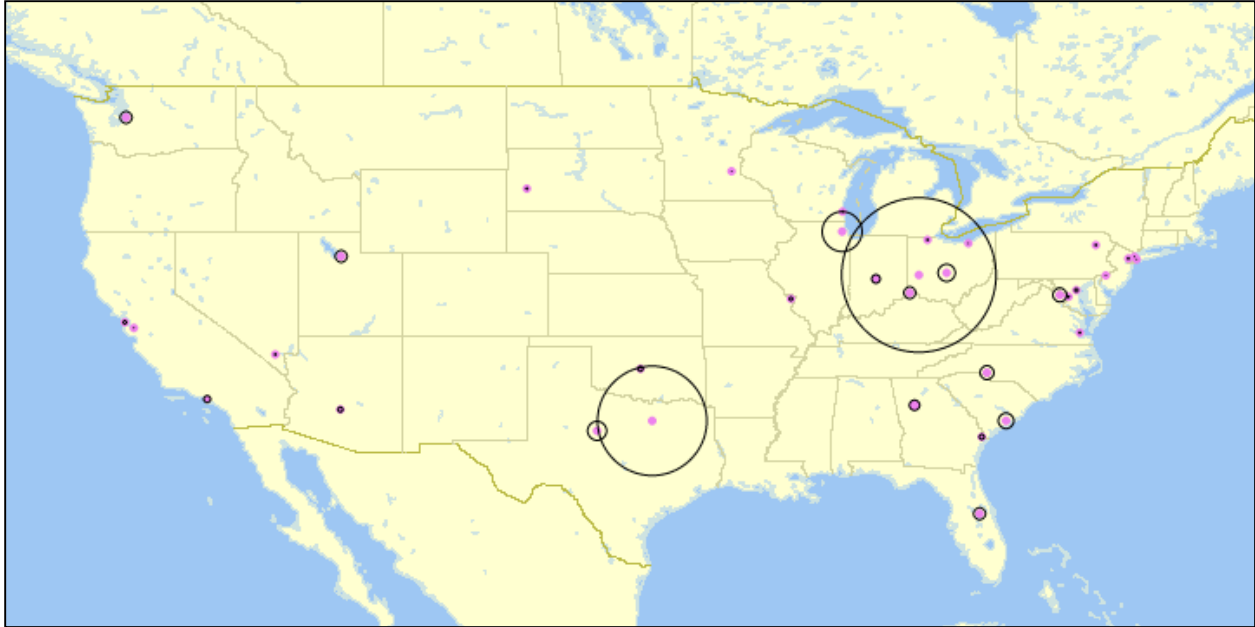
- CONUS Airports – a map zoomed to display airports within the 48 contiguous United States.



- World Airport Frequency – same as World Airports, but with circles centered on each airport with areas proportional to the number of visits an airport has received.



- CONUS Airport Frequency – same as CONUS Airports, but with circles centered on each airport with areas proportional to the number of visits an airport has received.



Verified users shall have the option to add a new airport with a link to the Add/Edit Airport view.



Future Version: Have more regions defined as they become necessary (for example, Europe). Each airport can be a member of zero, one, or many defined regions.

Index Flights

Path	/flights
Title for Links to this View	View a list of all of Paul’s flights

This view shall show a table of all flights in chronological order. Each flight in the table shall be a link to the appropriate [Show Flight](#) view. Each airport in the table shall be a link to the appropriate [Show Airport](#) view.

Flights

Flight	Route	Date
...
 American Airlines 3989	DAY – ORD	25 Aug 2011
 American Airlines 415	ORD – SEA	25 Aug 2011

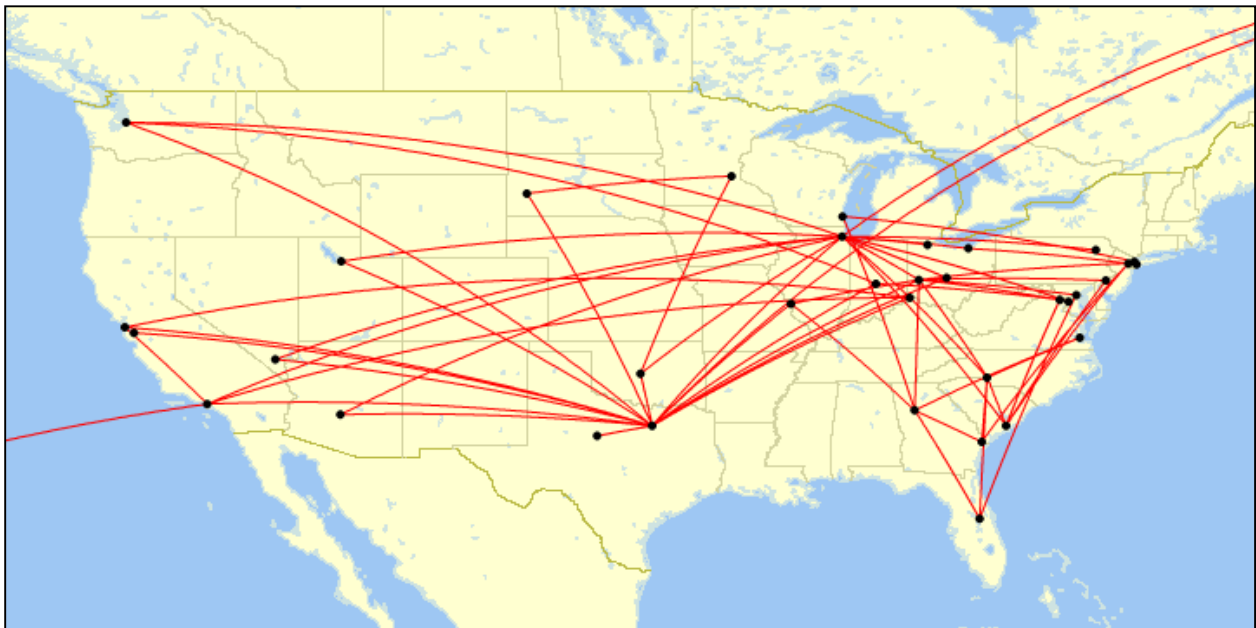
	American Airlines 1598	SEA – DFW	29 Aug 2011
	American Airlines 658	DFW – DAY	29 Aug 2011
	American Airlines 3260	DAY – DFW	6 Sep 2011
	American Airlines 2749	DFW – DAY	10 Sep 2011
	American Airlines 3989	DAY – ORD	5 Dec 2011
	American Airlines 2325	ORD – DFW	5 Dec 2011
	American Airlines 1822	DFW – DAY	8 Dec 2011
	American Airlines 3905	DAY – ORD	1 Feb 2012
	American Airlines 1155	ORD – LAX	1 Feb 2012
	American Airlines 267	LAX – HNL	1 Feb 2012
	American Airlines 298	HNL – LAX	14 Feb 2012
	American Airlines 2416	LAX – DFW	15 Feb 2012
	American Airlines 1822	DFW – DAY	15 Feb 2012
	United 3334	DAY – IAD	20 Feb 2012
	United 5760	IAD – CHS	20 Feb 2012
	US Airways 2686	CHS – CLT	23 Feb 2012
	US Airways 2269	CLT – DAY	23 Feb 2012
...
250 flights			

Two maps shall be shown:

- World flights – a map zoomed to sufficient level to show every flight route.



- CONUS flights – a map zoomed to display flights within the 48 contiguous United States. The portions of flights with exactly one CONUS airport that fall within this view are shown (for example, a flight from LAX to HNL draws a flight route originating at LAX and traveling toward HNL until it hits the edge of the displayed map, but HNL is not shown).



Each flight in the table shall have a link to the [Show Flight](#) view for that particular flight, and each airport in the table shall have a link to the [Show Airport](#) view for that particular airport.

This view shall offer links to filter flights by calendar year.

Index Flights by Year

Path	/flights/year/:year /flights/year/2014
Title for Links to this View	View a list of all of Paul's flights in <i>:year</i> View a list of all of Paul's flights in 2014

This view shall show a map of all flights in the given year, with tabs to switch between World and CONUS views.

This view shall show a list of airports visited in the given year, sorted by number of visits to each airport in the given year descending. Airports that were visited for the first time in the given year shall be highlighted.

City	Code	Visits	Country
Dayton	DAY	31	
Chicago-O'Hare	ORD	25	
St. Louis	STL	6	
Denver	DEN	5	
...
Baltimore	BWI	2	
San Diego*	SAN	2	
San Juan*	SJU	2	
Houston-Intercontinental	IAH	1	
29 airports in 2014			

* Airport first visited in 2014

This view shall show a list of airlines flown in the given year, sorted by number of flights on each airline in the given year descending. Airlines that were flown for the first time in the given year shall be highlighted.

This view shall show a list of operators flown in the given year, sorted by number of flights on each operator in the given year descending. Operators that were flown for the first time in the given year shall be highlighted.

This view shall show a list of aircraft families flown in the given year, sorted by number of flights on each aircraft family in the given year descending. Aircraft families that were flown for the first time in the given year shall be highlighted.

This view shall show the total distance flown in the given year.

This view shall show the longest and shortest route flown in the given year, along with the distance of each of these routes. If multiple flights are tied for longest or shortest, all ties shall be shown. If the shortest route is zero distance, than the shortest non-zero distance route shall also be shown, including ties if necessary. All routes listed shall link to the appropriate [Show Route](#) view.

Index Routes

Path	/routes
Title for Links to this View	View a list of the routes Paul has flown

This view shall display a table of all routes (direction-insensitive), their distances, and the number of flights involving them. By default this table shall be sorted by number of flights descending, but the table shall be sortable by number of flights or distance, ascending or descending. Each route shall link to the appropriate [Show Route](#) page.

Routes





Route	Distance	▼ Flights
DAY ↔ DFW	861 mi	47
DAY ↔ ORD	240 mi	28
ABI ↔ DFW	158 mi	12
DAY ↔ IAD	368 mi	12
CMH ↔ DFW	926 mi	8
CHS ↔ IAD	441 mi	7
...		...
80 routes		

Index Tail Numbers

Path	/tails
Title for Links to this View	View how many flights Paul has flown on each individual airplane

This view shall display a table of all tail numbers, their aircraft families and airlines, and the number of flights involving them, sorted by number of flights descending, then tail number ascending. Each tail number shall be a link to the appropriate [Show Tail Number](#) view.

Tail Numbers

Tail Number	Flights	Aircraft	Airline
N909EV	2	CRJ200	
N11548	1	ERJ-145	
N424AA	1	MD-80	
N600TR	1	DC-9	
...
30 unique tail numbers			

Index Travel Classes

Path	/classes
Title for Links to this View	View how many flights Paul has flown in each class

This view shall display a table of First, Business, and Economy travel classes (not including flights with unknown travel classes, or classes with no flights) and the number of flights involving them. The table shall be sorted in order of descending count of flights. Each of the travel class titles shall be a link to the appropriate [Show Travel Class](#) view.

Travel Classes

Travel Class	Flights
--------------	---------

Economy class	180
First class	17

Index Trips

Path	/trips
Title for Links to this View	View a list of trips Paul has taken

This view shall display a table of all trips. Each trip name shall be a link to the appropriate [Show Trip](#) view.

Trip	Departure Date
Washingcon Outbound	15 Jul 2007
Washingcon Return	23 Jul 2007
New Year's 2009 Leg 1	27 Dec 2008
New Year's 2009 Leg 2	02 Jan 2009
New Year's 2009 Leg 3	04 Jan 2009
Dayton to Dallas	09 Feb 2009
Dallas to Dayton	13 Feb 2009
Dayton to Charlotte	22 Mar 2009
Charlotte to Dayton	25 Mar 2009
Dayton to Dallas	29 Mar 2009
Dallas to Dayton	03 Apr 2009
...	...
42 Trips	

Verified users shall have the option to add a new trip via a link to the [Add/Edit Trip](#) view.

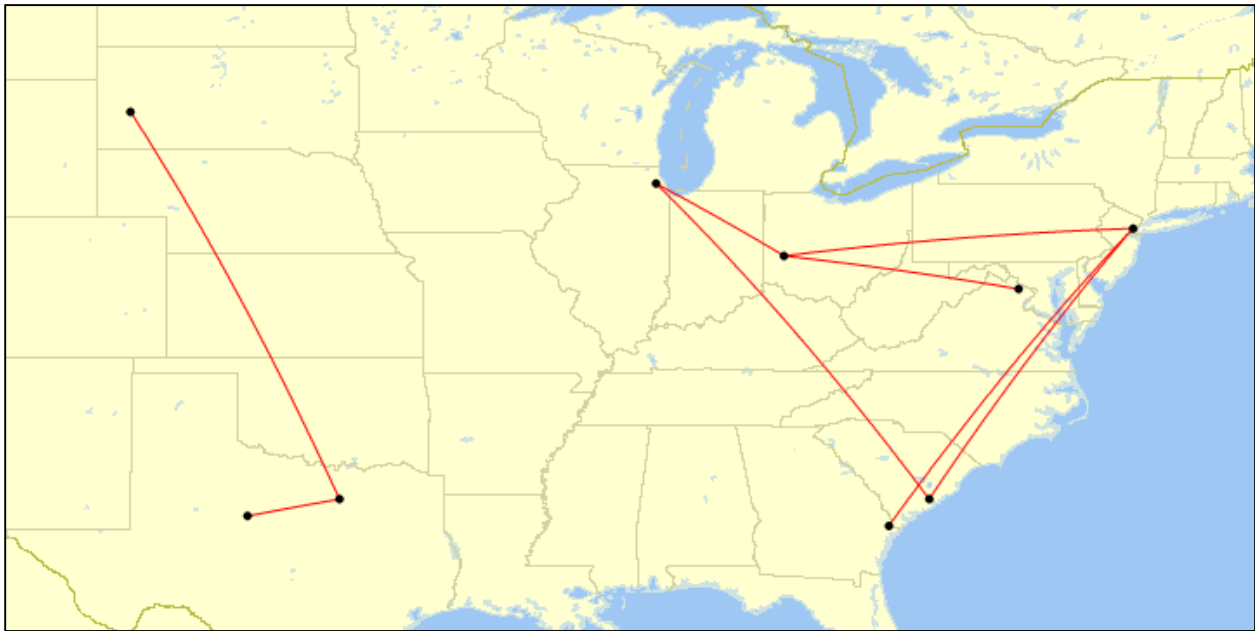
Show Aircraft Family

Path	/aircraft/:type /aircraft/ Embraer_ERJ_145
-------------	--

Title for Links to this View	View flights on <i>Flight.aircraft_family</i> aircraft View flights on Embraer ERJ 145 aircraft
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This view shall display a map and table of all flights with an aircraft of a particular family, and the total distance of all flights flown on that aircraft family.

Embraer ERJ 145



4,321 total miles (6,954 km)

Flight	Route	Departure
 American Airlines 4292	DAY – ORD	08 Aug 2009
 American Airlines 4217	ORD – DAY	13 Aug 2009
 American Airlines 3995	DAY – ORD	19 Apr 2010
 American Airlines 3905	DAY – ORD	29 Aug 2010
 American Airlines 3918	ORD – DAY	06 Sep 2010
 American Airlines 2975	DFW – ABI	07 Dec 2010
 American Airlines 2940	ABI – DFW	10 Dec 2010
 American Airlines 3995	DAY – ORD	16 Jan 2011

	American Airlines 3918	ORD – DAY	22 Jan 2011
	American Airlines 2975	DFW – ABI	20 Jun 2011
	American Airlines 2866	ABI – DFW	25 Jun 2011
	American Airlines 2975	DFW – ABI	10 Jul 2011
	American Airlines 2940	ABI – DFW	17 Jul 2011
	American Airlines 3989	DAY – ORD	25 Aug 2011
	American Airlines 3989	DAY – ORD	05 Dec 2011
	American Airlines 3905	DAY – ORD	01 Feb 2012
	United 3334	DAY – IAD	20 Feb 2012
	American Airlines 3989	DAY – ORD	28 Feb 2012
	United 6181	ORD – DAY	16 Mar 2012
	United 4488	SAV – EWR	04 May 2012
	United 4381	EWR – DAY	04 May 2012
	United 4367	DAY – EWR	25 Jun 2012
	United 4363	EWR – CHS	25 Jun 2012
	United 3354	IAD – DAY	28 Jun 2012
	American Airlines 3898	DAY – ORD	16 Jul 2012
	American Airlines 2721	DFW – ABI	16 Jul 2012
	American Airlines 2974	ABI – DFW	19 Jul 2012
	American Airlines 3994	ORD – DAY	19 Jul 2012
	United 5927	ORD – DAY	27 Jul 2012
	American Airlines 2814	RAP – DFW	18 Aug 2012
	United 6076	IAD – DAY	24 Aug 2012
	American Airlines 2975	DFW – ABI	27 Aug 2012
	American Airlines 2950	ABI – DFW	29 Aug 2012
	American Airlines 3989	DAY – ORD	23 Sep 2012
	American Airlines 3994	ORD – DAY	25 Sep 2012
	United 5907	CHS – ORD	16 Nov 2012
36 flights (12% of all flights)			

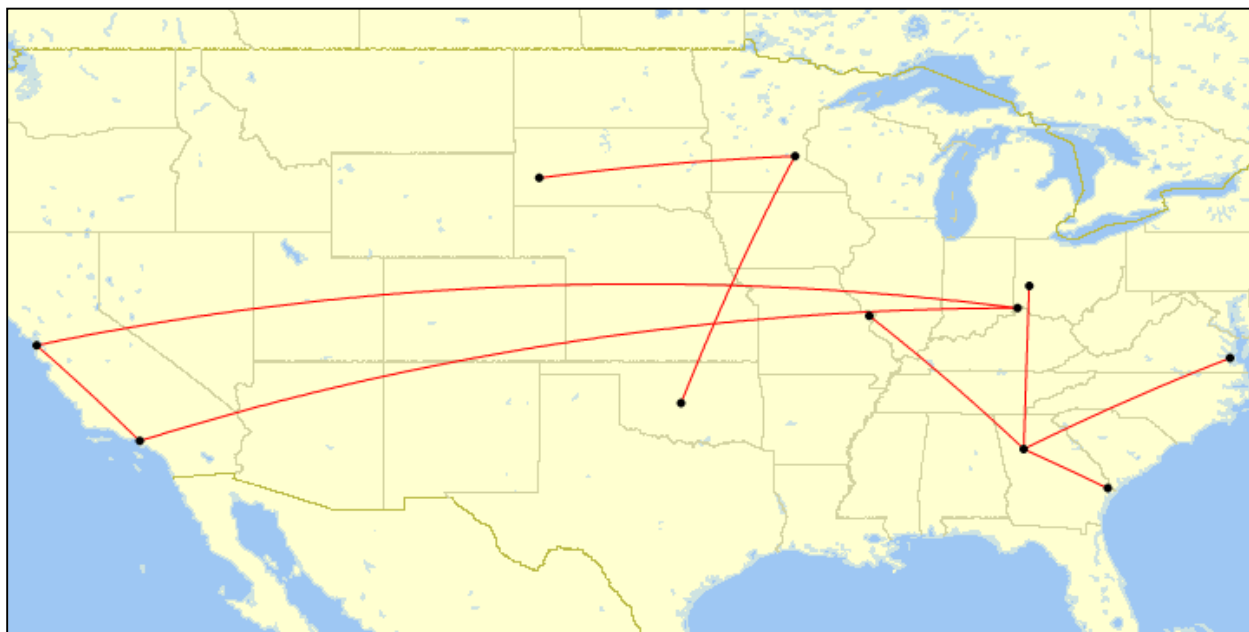
The view shall show tables of airlines and classes on this aircraft family versus the number of flights for each, sorted by number of flights for each.

Show Airline



Path	<code>/airlines/:airline</code> <code>/airlines/Delta</code>
Title for Links to this View	View flights on <i>Flight.airline</i> View flights on Delta




This view shall display a table and map of all flights flown on a particular airline, and the total distance flown on that airline. Each flight in the table shall be a link to the appropriate [Show Flight](#) view. Each airport in the table shall be a link to the appropriate [Show Airport](#) view.

Delta Flights



7,096 total miles (11,420 km)

	Flight	Route	Departure
	Delta 5821	STL – ATL	27 May 2009
	Delta 5307	ATL – PHF	27 May 2009

	Delta 1161	DAY – ATL	02 May 2012
	Delta 1484	ATL – SAV	02 May 2012
	Delta 4613	OKC – MSP	16 Aug 2012
	Delta 2187	MSP – RAP	16 Aug 2012
	Delta 1933	CVG – LAX	05 Oct 2012
	Delta 4784	LAX – SFO	05 Oct 2012
	Delta 2396	SFO – CVG	09 Oct 2012
9 Flights (3.0% of all flights)			

The view shall show tables of aircraft and classes on this airline versus the number of flights for each, sorted by number of flights for each.

Show Airport

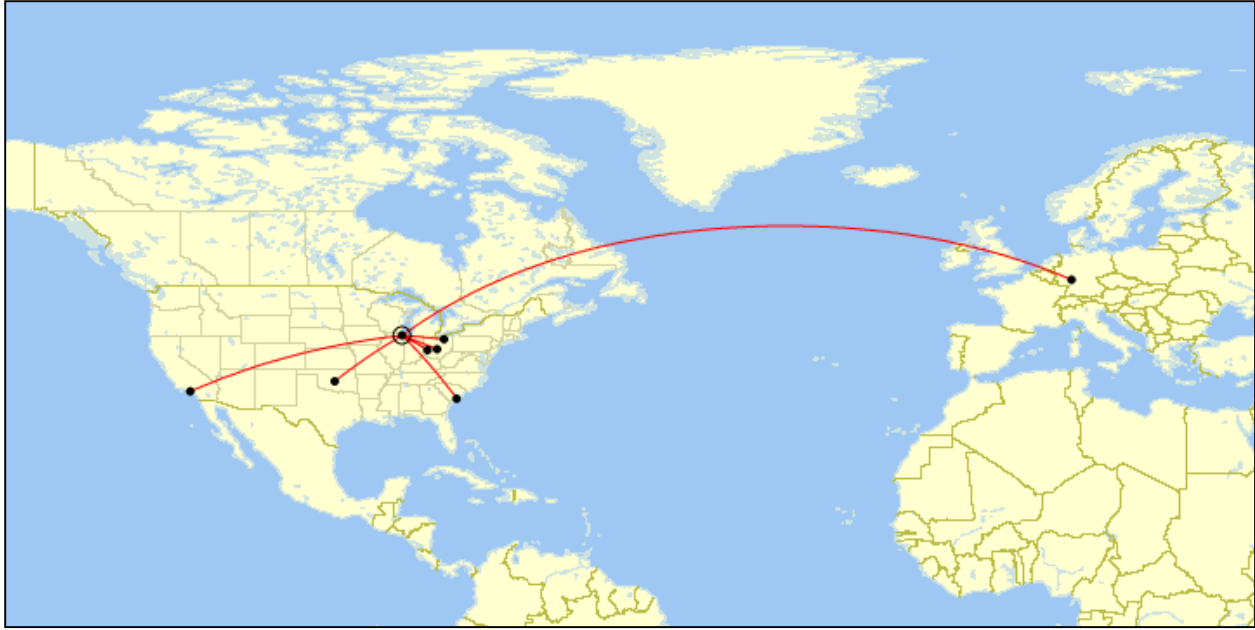
Path	/airports/:id /airports/3
Title for Links to this View	View airport details for <i>Airport.city</i> View airport details for Chicago (O'Hare)







This view shall display the name, city, and IATA code of a particular airport.

Verified users shall have the option to edit (via the [Add/Edit Airport](#) view) or delete the airport. Deleting the airport will require a confirmation. The airport may only be deleted if no flights use it as an origin or destination.

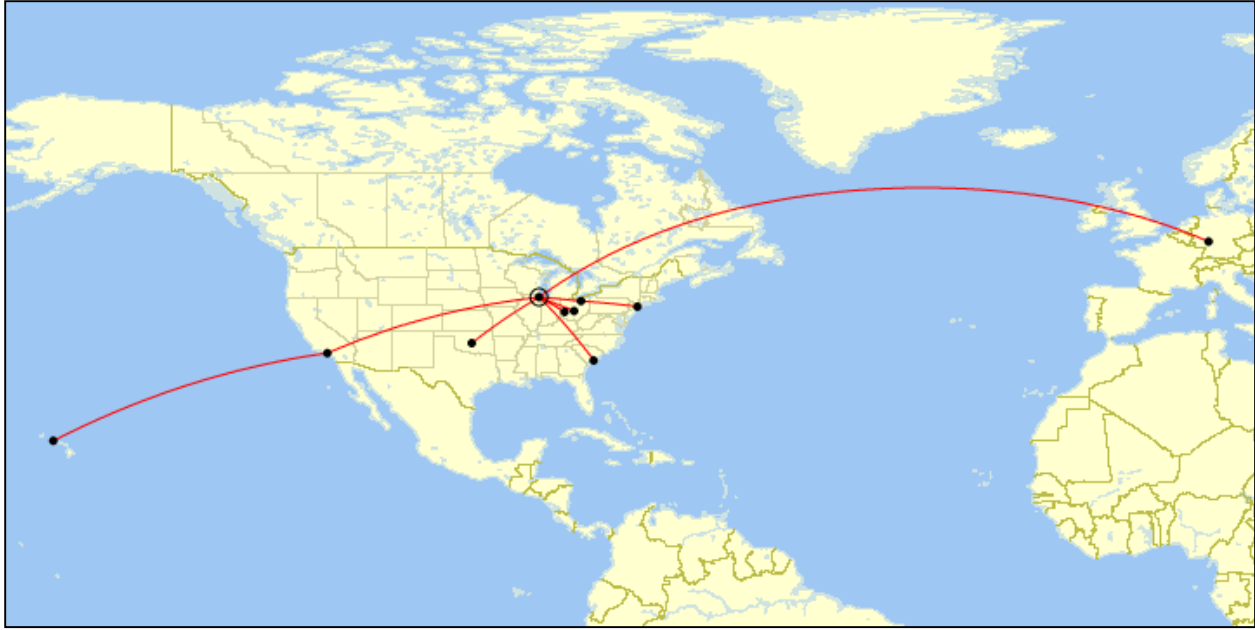
This view shall display a table and map of all flights with this particular airport as an origin or destination. Each flight in the table shall link to the appropriate [Show Flight](#) view. Each IATA code in the table shall link to the appropriate [Show Airport](#) view (with the exception of all instances of the code for this view's airport, which shall not be a link).

Chicago-O'Hare



Flight	Route	Departure
 American Airlines 4357	ORD - CLE	27 Dec 2008
 American Airlines 4292	CMH - ORD	8 Aug 2009
 American Airlines 84	ORD - FRA	8 Aug 2009
 American Airlines 3905	DAY - ORD	1 Feb 2012
 American Airlines 1155	ORD - LAX	1 Feb 2012
 American Airlines 3989	DAY - ORD	28 Feb 2012
 American Airlines 3818	ORD - OKC	28 Feb 2012
 United 5740	CHS - ORD	16 Mar 2012
 United 6181	ORD - DAY	16 Mar 2012
 United 5742	DAY - ORD	23 Jul 2012
 United 3785	ORD - CHS	23 Jul 2012
 United 5740	CHS - ORD	27 Jul 2012
 United 5927	ORD - DAY	27 Jul 2012
15 flights (5.0% of all flights) · 8 visits		

This view shall show a map and table of all trip sections involving this airport. Each trip section in the table shall link to the appropriate [Show Trip Section](#) view.



Trip	Departure
Section 1 - New Year's 2009	27 Dec 2008
Section 1 - Frankfurt, Germany	8 Aug 2009
Section 1 - Hawaii Vacation	1 Feb 2012
Section 1 - Oklahoma City, OK	28 Feb 2012
Section 2 - Charleston, SC	16 Mar 2012
Section 1 - Charleston, SC	23 Jul 2012
Section 2 - Charleston, SC	27 Jul 2012
7 sections	

This view shall show a map and table of all trips involving this airport. Each trip in the table shall link to the appropriate [Show Trip](#) view.



Trip	Departure
New Year's 2009	27 Dec 2008
Frankfurt, Germany	8 Aug 2009
Hawaii Vacation	1 Feb 2012
Oklahoma City, OK	28 Feb 2012
Charleston, SC	12 Mar 2012
Charleston, SC	23 Jul 2012
6 trips	

The view shall show tables of airlines, aircraft, and classes at this airport versus the number of flights for each, sorted by number of flights for each.

This view shall show a table of origin and destination airports paired with this airport. Each row shall show an airport with flights to or from the current airport, the number of flights between these two airports, the distance between these two airports in miles, and the affiliated route. The entire table shall be sorted by number of flights descending by default, but shall be sortable by city, code, number of flights, or distance in either direction. Each city and airport shall link to the appropriate [Show Airport](#) view. Each route shall link to the appropriate [Show Route](#) view.

City	Code	Flights ▼	Distance	Route
Dayton	DAY	28	240 mi	ORD ↔ DAY

Charleston, SC	CHS	7	760 mi	ORD ↔ CHS
Dallas/Fort Worth	DFW	6	802 mi	ORD ↔ DFW
Columbus, OH	CMH	3	296 mi	ORD ↔ CMH
Seattle/Tacoma	SEA	3	1721 mi	ORD ↔ SEA
...
20 origin/destination airports				

Show Fleet Number

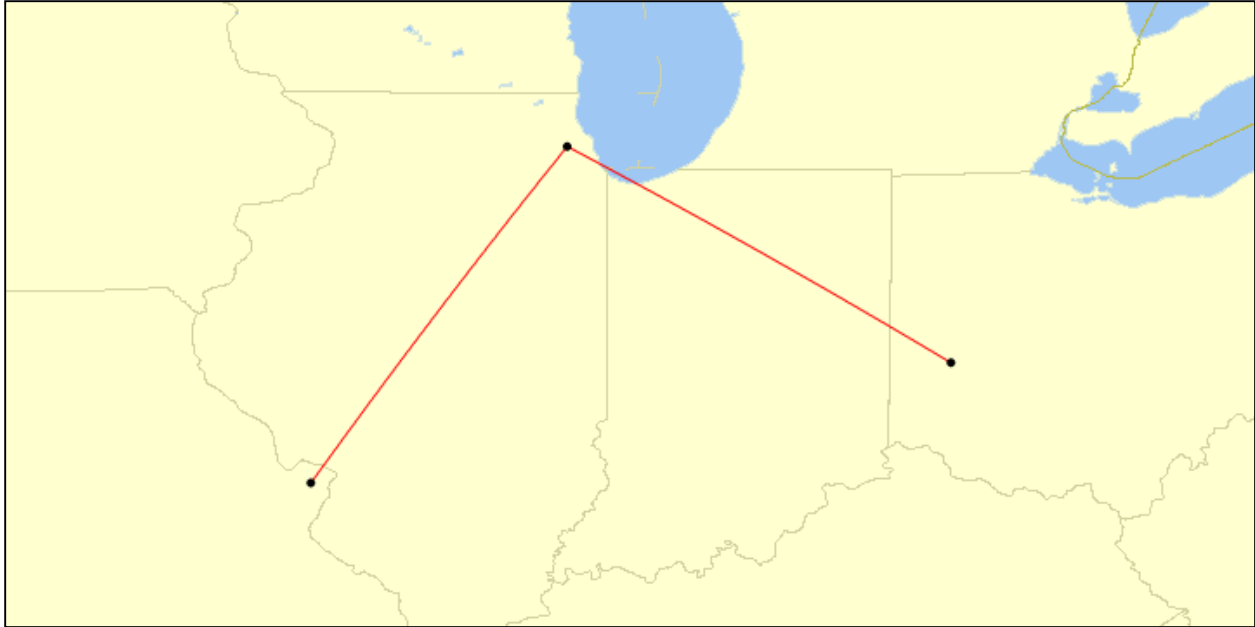
Path	/operators/:operator/:fleet_number /operators/GoJet/155
Title for Links to this View	View flights on <i>Flight.operator</i> aircraft # <i>Flight.fleet_number</i> View flights on GoJet aircraft # 155

The operator and fleet number shall be listed in the page title.



GoJet #155

A link shall be provided to the appropriate Show Operator view.


This view shall display a table and map of all flights involving an aircraft with this operator and fleet number, and the total distance flown on this collection of flights. The table shall list flight details, route, departure date, aircraft family, and tail number for each flight. Each flight, airport, aircraft family, and tail number shall link to the appropriate Show view.



498 total miles (787 km)

Flight	Route	Departure	Aircraft	Tail Number
 United 3661	ORD – DAY	28 Sep 2013	E-Jet	N155GJ
 United 3632	STL – ORD	14 Feb 2014	E-Jet	N155GJ
2 flights (1.0% of all flights)				

The view shall show tables of airlines, aircraft, and classes on this tail versus the number of flights for each, sorted by number of flights for each.

Airline	Flights
 United	2

Aircraft Family	Flights
E-Jet	2

Travel Class	Flights
Economy	2

Show Flight

Path	/flights/:id /flights/204
Title for Links to this View	View flight details for <i>Flight.airline Flight.flight_number</i> View flight details for American Airlines 3260

This view shall display information relevant to a particular flight. Airline, flight number, trip name, departure date, origin airport, destination airport, aircraft family, aircraft variant, tail number, travel class, codeshare, operator, operator fleet number, and distance shall be listed in tabular format. The trip, airports, airline, aircraft family, tail number, travel class, operator, and fleet number shall all be links to the appropriate Show view. If any entries in the table would be blank, their row shall not be shown. Comments (if any) shall be displayed immediately below the page title.

This view shall display a map of the flight.

American Airlines 3260

This is a comment about this flight.



DAY

Dayton



DFW

Dallas/Fort Worth

Departure Date	29 Mar 2009
Trip	Dallas, TX
Route	DAY ⇄ DFW 861 miles
Airline	 American Airlines
Codeshare	 British Airways 6876
Travel Class	Economy
Aircraft	ERJ-145 ERJ-140
Tail Number	N476AA
Operated By	 American Eagle (#476)

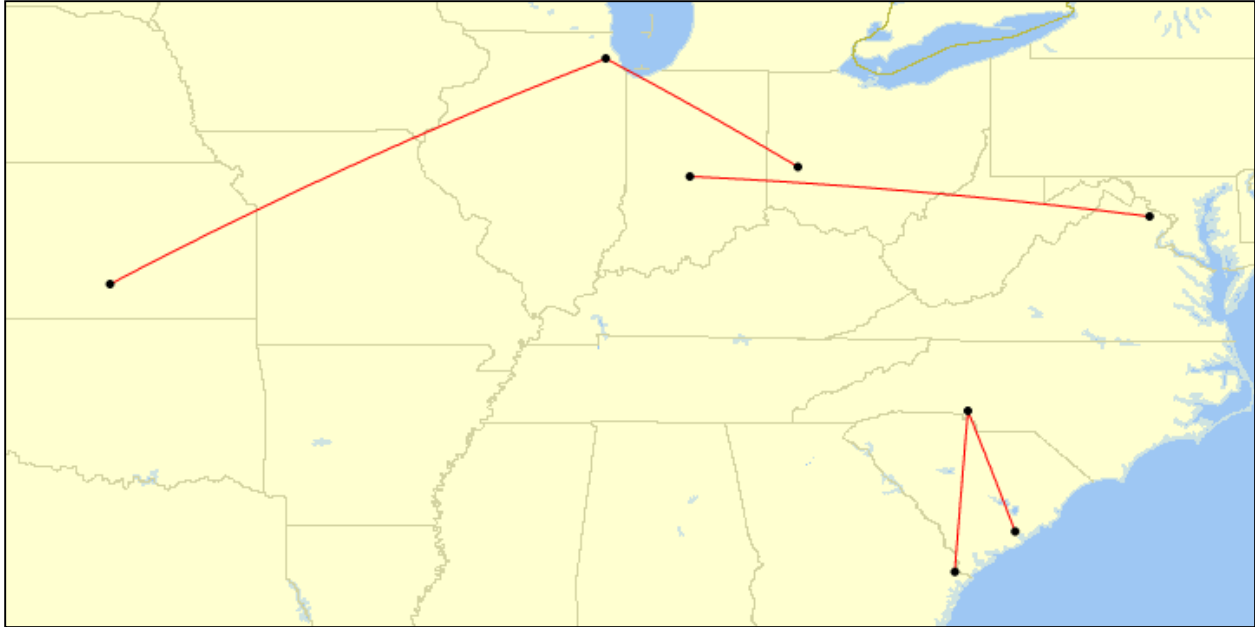
Show Operator

Path	/operators/:operator /operators/Mesa_Airlines
Title for Links to this View	View flights operated by <i>Flight.operator</i> View flights operated by Mesa Airlines








This view shall display a table and map of all flights operated by a particular airline, and the total distance of flights operated by this airline. Each flight in the table shall be a link to the Show Flight view for that particular flight. Each airport in the table shall be a link to the Show Airport view for that particular airport.

Additionally, this view shall display a table of fleet numbers and the aircraft family of the most recent flight using it, sorted by fleet number. The fleet number shall link to the appropriate [Show Fleet Number](#) view.

Flights Operated by Mesa Airlines



2,375 total miles (3,822 km)

	Flight	Route	Departure
	US Airways 2689	CLT – SAV	16 Oct 2009
	US Airways 2692	SAV – CLT	18 Oct 2009
	United 7279	IND – IAD	31 Oct 2010
	United 7245	IAD – IND	5 Nov 2010
	US Airways 2686	CHS – CLT	23 Feb 2012
	United 3744	ICT – ORD	31 May 2014
	United 3735	ORD – DAY	31 May 2014
7 flights (3.0% of all flights)			

Fleet Number	Aircraft
115	ERJ-145
424	MD-80
600	DC-9
909	CRJ200
...	...

Show Route

Path	/routes/:route /routes/ DAY-DFW
Title for Links to this View	View flights between <i>airport[0]</i> and <i>airport[1]</i> View flights between DAY and DFW


This view shall display a map of a route and a list of all flights involving that route in either direction. Each flight in the table shall be a link to the appropriate [Show Flight](#) view. Each airport in the table shall be a link to the appropriate [Show Airport](#) view. This view shall also display the distance of the route, and the total distance of all flights flown on this route.


If this view is shown to a logged-in user, this view shall display a link to edit the route distance, which will take the user to the [Add/Edit Route](#) view for this route.

DAY ↔ DFW



861 per-flight miles (1,386 km)
40,467 total miles (65,125 km)

Flight	Route	Departure
 American Airlines 1042	DFW – DAY	13 Feb 2009

	American Airlines 1309	DAY – DFW	29 Mar 2009
...
	American Airlines 1432	DFW – DAY	15 Feb 2013
	American Airlines 423	DAY – DFW	21 Mar 2013
47 flights			

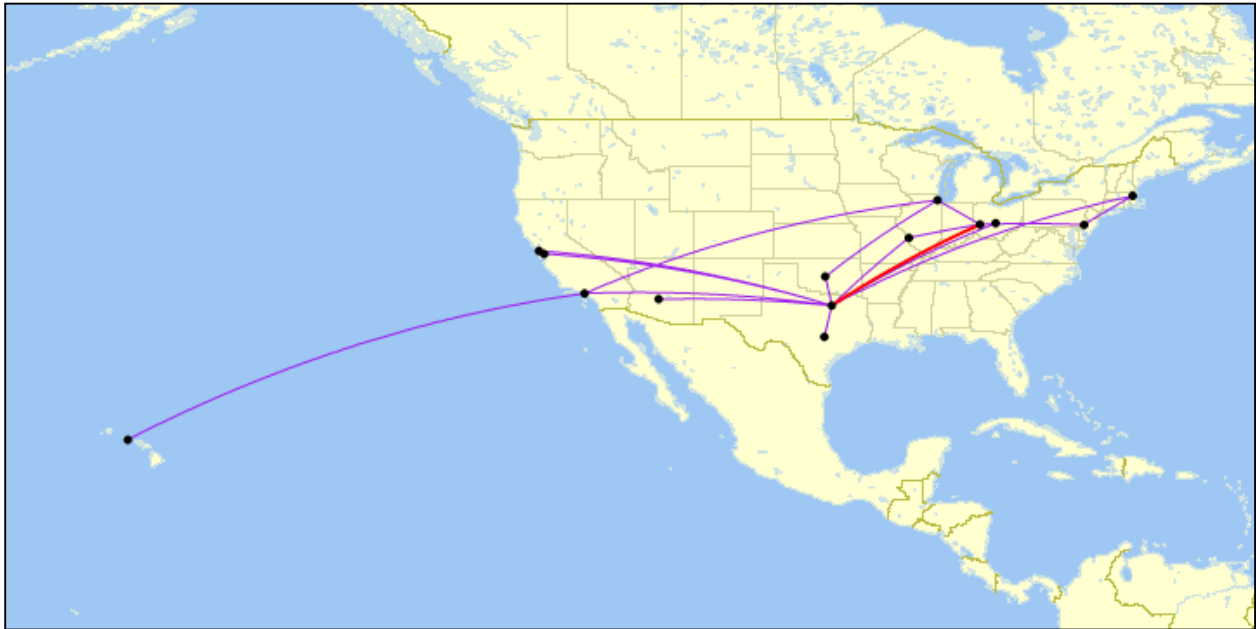
A map and table of all trip sections involving this flight's route (direction-insensitive) shall be displayed with the current flight highlighted. Each section in the table shall be a link to the appropriate [Show Trip Section](#) view.



Trip Section	Departure
Section 2 - Dallas, TX	13 Feb 2009
Section 1 - Dallas, TX	29 Mar 2009
Section 2 - Dallas, TX	3 Apr 2009
Section 2 - Dallas, TX	5 Jun 2009
Section 3 - Cupertino Vacation and Dallas, TX	26 Jun 2009
Section 2 - Hawaii Vacation	15 Feb 2012
Section 2 - Oklahoma City, OK	2 Mar 2012
Section 1 - Phoenix, AZ	4 Jun 2012
Section 2 - Phoenix, AZ	10 Jun 2012

Section 1 - Austin, TX	11 Feb 2013
Section 2 - Austin, TX	15 Feb 2013
Section 1 - PAX East	21 Mar 2013
12 sections	

A map and table of all trips involving this flight's route (direction-insensitive) shall be displayed with the current flight highlighted. Each trip in the table shall link to the appropriate [Show Trip](#) view.



Trip	Departure
Dallas, TX	9 Feb 2009
Dallas, TX	29 Mar 2009
Dallas, TX	1 Jun 2009
Cupertino Vacation and Dallas, TX	15 Jun 2009
Hawaii Vacation	1 Feb 2012
Oklahoma City, OK	28 Feb 2012
Phoenix, AZ	4 Jun 2012
Austin, TX	11 Feb 2012
PAX East	21 Mar 2013
9 trips	

The view shall show tables of airlines, aircraft, and classes on this route versus the number of flights for each, sorted by number of flights for each.

Verified users shall have the option to edit (via the Add/Edit Flight view) or delete the flight. Deleting the flight shall require a confirmation.

Show Tail Number

Path	<code>/tail_numbers/:tail_number</code> <code>/tail_numbers/N909EV</code>
Title for Links to this View	View flights on tail number <i>Flight.tail_number</i> View flights on tail number N909EV

The title of this view shall be the tail number.

N909EV




This view shall display a table of operators and fleet numbers for flights using this tail number. Each operator shall link to the appropriate [Show Operator](#) view. Each fleet number shall link to the appropriate [Show Fleet Number](#) view.

Operator	Fleet Number
ExpressJet	#909

This view shall display a table and map of all flights involving an aircraft with this tail number, and the total distance of all flights flown on this tail. The tail number shall be listed at the top of the body of the page. Each flight in the table shall link to the appropriate [Show Flight](#) view. Each airport in the table shall link to the appropriate [Show Airport](#) view.



1,442 total miles (2,321 km)

Flight		Route	Departure
	United 5740	CHS – ORD	16 Mar 2012
	United 5742	DAY – ORD	23 Jul 2012
	United 5771	CHS – IAD	14 Mar 2013
3 flights (1.0% of all flights)			

The view shall show a table of classes on this tail versus the number of flights for each, sorted by number of flights for each.

Travel Class	Flights
--------------	---------

Economy

3

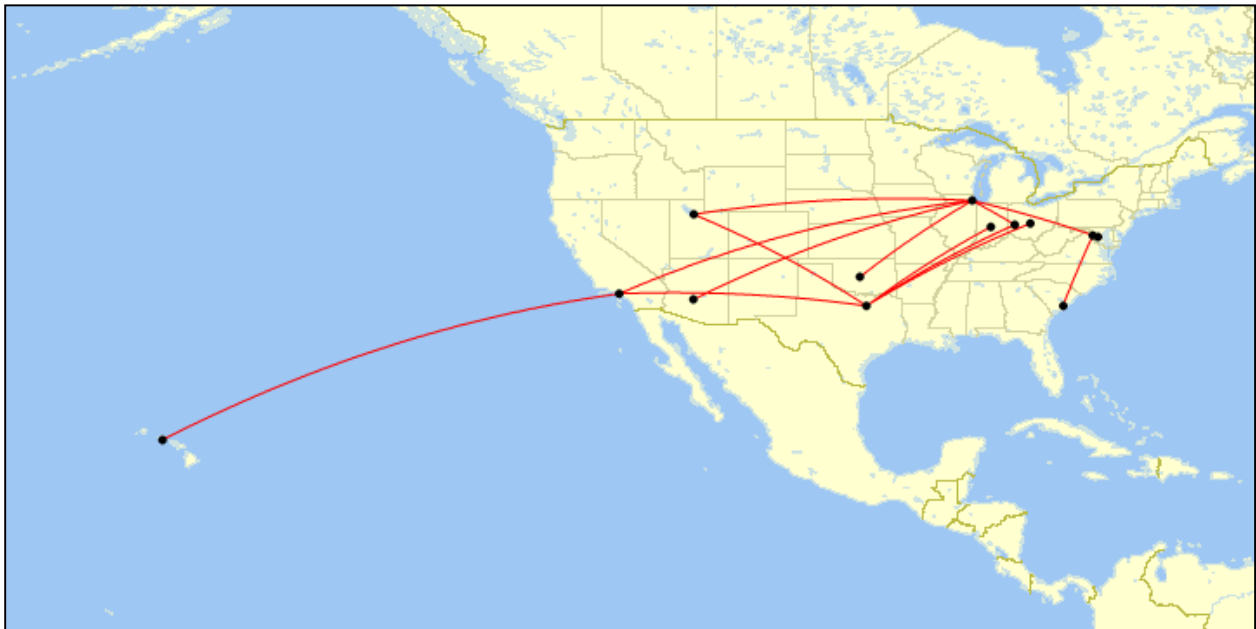
The view shall provide a link to FlightAware's live flight tracking for this tail number.

Show Travel Class

Path	<code>/travel_classes/:travel_class</code> <code>/travel_classes/First</code>
Title for Links to this View	View <i>Flight.travel_class.downcase</i> class flights View first class flights

This view shall display a table and map of all flights flown on this travel class, and the total distance flown in this travel class. Each flight in the table shall be a link to the appropriate [Show Flight](#) view. Each airport in the table shall be a link to the appropriate [Show Airport](#) view.

First Class Flights



18,886 total miles (30,394 km)

Flight	Route	Departure
 American Airlines 1206	PHX – ORD	18 Jul 2010

	American Airlines 1865	IND – DFW	02 Jan 2011
	American Airlines 3879	ORD – DCA	27 Jun 2011
	American Airlines 627	CMH – DFW	24 Jul 2011
	American Airlines	DFW – SLC	24 Jul 2011
	American Airlines 1155	ORD – LAX	01 Feb 2012
	American Airlines 267	LAX – HNL	01 Feb 2012
	American Airlines 298	HNL – LAX	14 Feb 2012
	American Airlines 2416	LAX – DFW	15 Feb 2012
	American Airlines 1822	DFW – DAY	15 Feb 2012
	American Airlines 3818	ORD – OKC	28 Feb 2012
	American Airlines 1822	DFW – DAY	02 Mar 2012
	American Airlines 1231	DAY – DFW	04 Jun 2012
	American Airlines 1658	DFW – DAY	03 Sep 2012
	American Airlines 3761	SLC – ORD	25 Sep 2012
	United 3754	IAD – CHS	13 Nov 2012
	United 3651	ORD – DAY	16 Nov 2012
17 flights			

The view shall show tables of airlines and aircraft on this class versus the number of flights for each, sorted by number of flights for each.

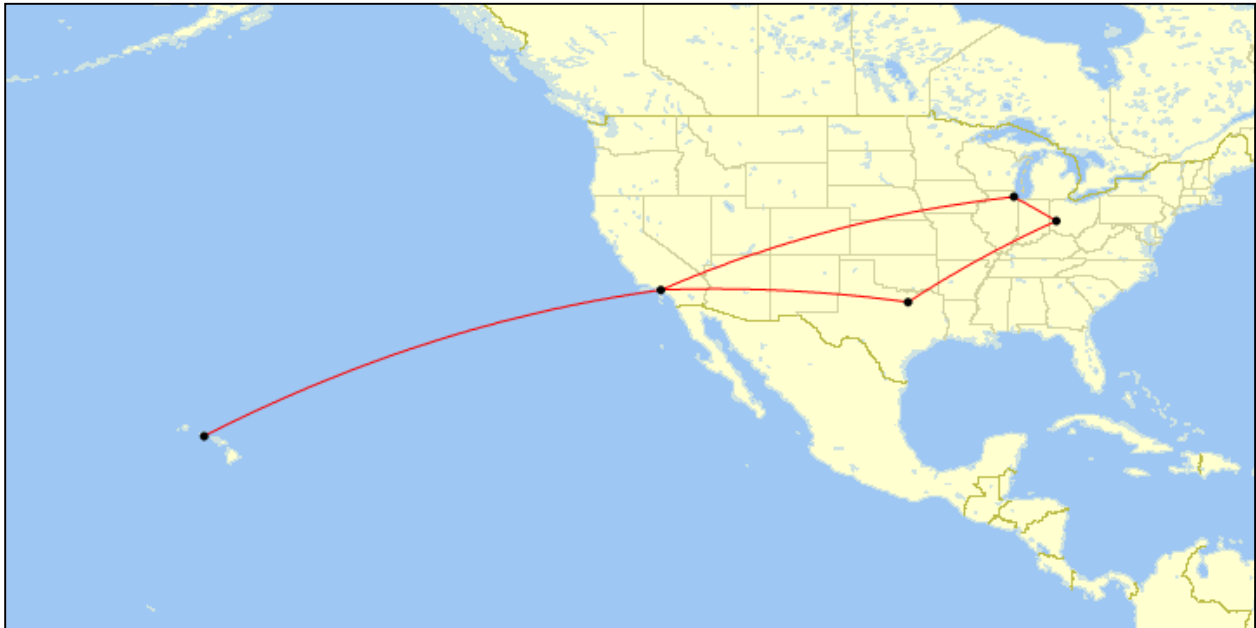
Show Trip

Path	<code>/trips/:id</code> <code>/trips/88</code>
Title for Links to this View	View trip details for <i>Trip.name</i> View trip details for Hawaii Vacation Outbound

This view shall display a table and map of all flights associated with a particular trip, as well as the total distance in miles and kilometers of all flights in the trip. The flights shall be sorted by their UTC departure date. Each flight in the table shall link to the appropriate

[Show Flight](#) view, and each section in the table shall link to the appropriate [Show Trip Section](#) view. If there are at least two flights in a section, the trip section column shall show the IATA codes of the first origin and last destination of that trip section.

Hawaii Vacation



Total Trip Distance: 9192 miles / 14793 km

Trip Section	Flight	Route	Departure
Section 1 DAY - HNL	 American Airlines 3905	DAY – ORD	01 Feb 2012
	 American Airlines 1155	ORD – LAX	01 Feb 2012
Section 2	 American Airlines 267	LAX – HNL	01 Feb 2012
Section 3 HNL - DAY	 American Airlines 298	HNL – LAX	14 Feb 2012
	 American Airlines 2416	LAX – DFW	15 Feb 2012
	 American Airlines 1822	DFW – DAY	15 Feb 2012
6 flights			

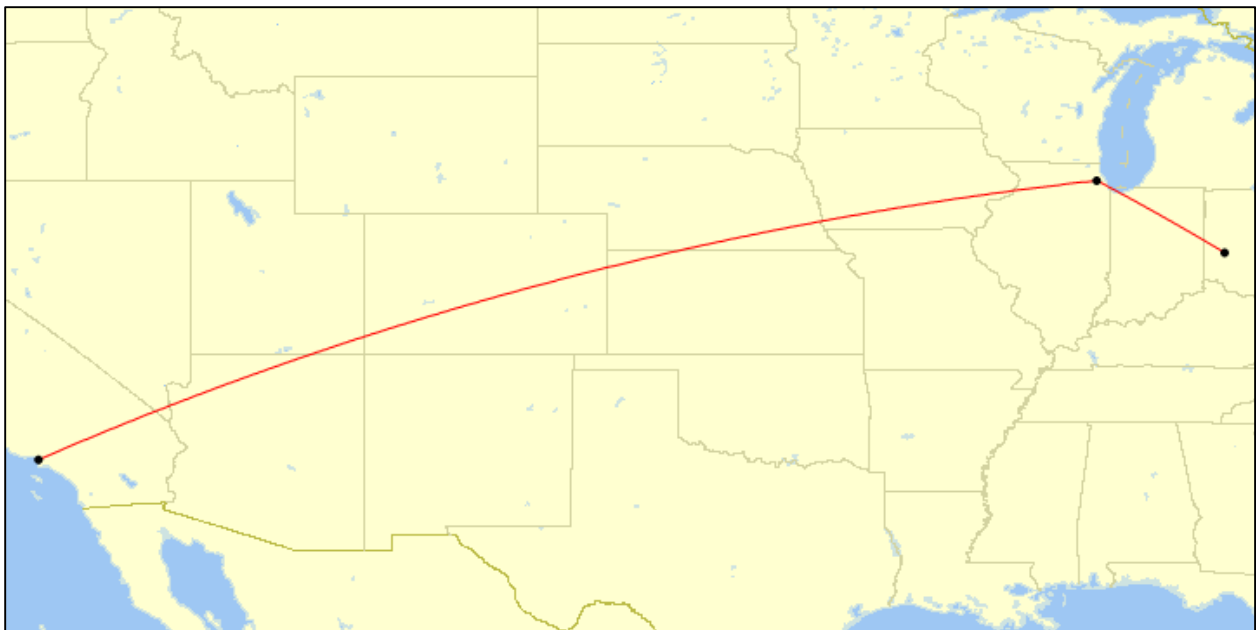
Verified users shall have the option to add flights to a trip or reorder the flights within a trip via the Add/Edit Flight view.

Show Trip Section

Path	<code>/trips/:trip/section/:section</code> <code>/trips/88/section/1</code>
Title for Links to this View	View trip details for <i>Trip.name</i> View details for section 1 of Hawaii Vacation Outbound

This view shall display a table and map of all flights associated with a particular trip section, as well as the total distance in miles and kilometers of all flights in the section. The flights shall be sorted by their order number. Each flight in the table shall link to the appropriate [Show Flight](#) view. Each airport in the table shall link to the appropriate [Show Airport](#) view.

Hawaii Vacation (Section 1)



Section Distance: 1985 miles / 3195 kilometers

Flight	Route	Departure
 American Airlines 3905	DAY – ORD	01 Feb 2012
 American Airlines 1155	ORD – LAX	01 Feb 2012
2 flights		

