

*Global Harmonization
Through Collaboration*

The AIDX Unique Flight Identifier (UFI)

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**Federal Aviation
Administration**

**AIR TRANSPORTATION INFORMATION
EXCHANGE CONFERENCE - (FEATURING
AIXM, WXXM AND FIXM)**

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Silver Spring, Maryland





AIDX Unique Flight Identifier

So what's a Flight ?

Oxford English Dictionary says:

'The action or process of flying through the air'

Derived From the old English 'Flyht':

'Action or manner of flying'

AIDX is Flight Leg based

An aircraft movement comprising a flight between a departure airport and a subsequent arrival airport



AIDX Unique Flight Identifier

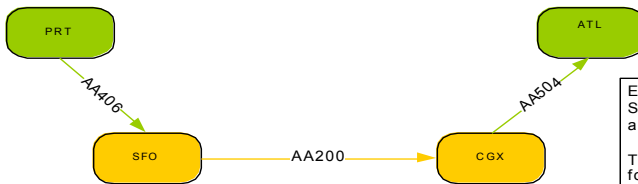
- Flight may be one or more Flight Legs – Multi-Leg.
- Most stakeholders need to identify a Flight Leg Uniquely. Impact on AODB(s)
- Identification methodology must be robust to support periods of mass disruption
- Post 9/11 security issues regarding the origin(s) of a flight.



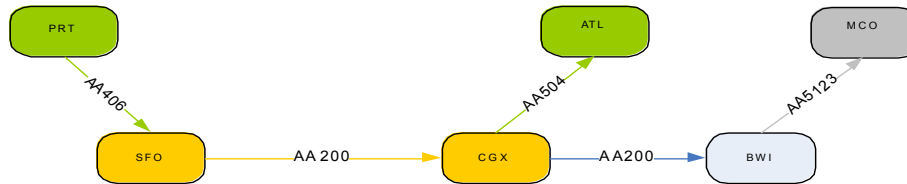
AIDX Associated Flight Legs

All examples from the instance of the SFO-CGX flight leg.
Details of the connected legs would be found by looking up those legs.

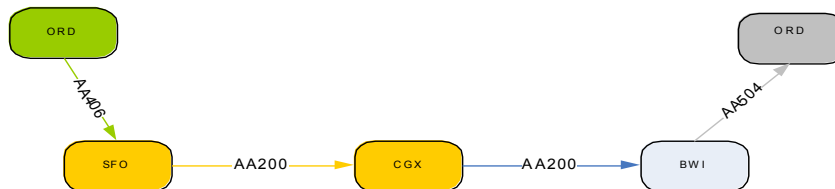
KEY	CGX	The 2 airports of this flight leg
	CGX	Airports associated with this flight leg the same aircraft (included in message)
	CGX	Airports associated with this flight leg the same flight number (included in message)
	CGX	Airports not directly associated with this flight leg (not included in message)



Example 1:
Single flight leg with connected legs with the same aircraft on all legs.
This would result in no entries in the 'Associated Flight Legs for the same flight number' and 2 entries (AA406 and AA504) in the 'Associated Flight Legs for the same aircraft'.



Example 2:
Multiple flight legs with connected legs with a change of aircraft at CGX for flight AA200.
For the SFO-CGX flight leg this would result in 1 entry 'Associated Flight Legs for the same flight number' for CGX-BWI leg and 2 entries (AA406 and AA504) in the 'Associated Flight Legs for the same aircraft'.



Example 3:
Multiple flight legs with connected legs with no aircraft change for flight AA200.
For the SFO-CGX flight leg this would result in 1 entry 'Associated Flight Legs for the same flight number' for CGX-BWI leg and 1 entry in the 'Associated Flight Legs for the same aircraft' (AA406).



AIDX Unique Flight Identifier

- At all stages in lifecycle of Flight Leg
 - Scheduled Flight Leg
 - Flight Leg prior to departure
 - Flight Leg in flight
 - Flight Leg arrived
 - Post operative analysis of Flight Leg
- What are the static data attributes of a Flight Leg that can uniquely identify a Flight Leg ?
 - 7 elements in composite key to be complete



AIDX Unique Flight Identifier: A Composite Flight Key

Airline Code	Flight Number	Flight Suffix	Origin Flight Date	Departure Airport Code	Arrival Airport Code	Repeat Number
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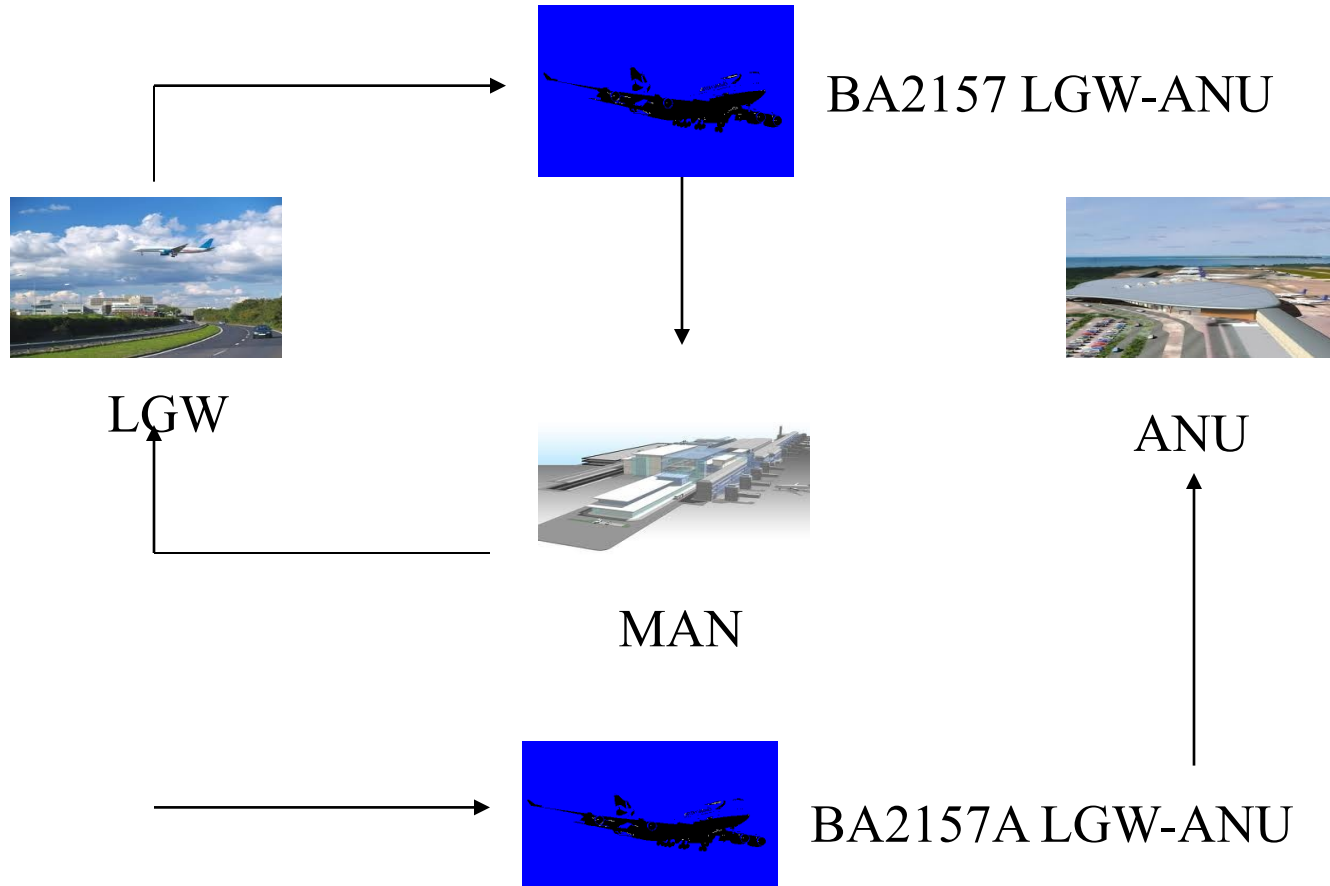


Flight Suffix – ‘Z’

Carrier	Flight	Suffix	Dep	Arr	UTC	Local
BA	066		PHL	LHR	24/3/12 2 00:05	23/3/12 19:05
BA	066	Z	PHL	LHR	24/3/12 2 23:30	24/3/12 18:30



Flight Suffix – ‘A’





Repeat Number



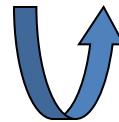
BA2770 LGW-JER

LGW

Attempt 1

Attempt 2

Attempt 3



JER



AIDX Unique Flight Identifier

Mismatching Key

Airline Code	Flight Number	Flight Suffix	Origin Flight Date	Departure Airport Code	Arrival Airport Code	Repeat Number
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Airline Code	Flight Number	Flight Suffix				
			Schedule Date Time	Arrival or Departure Indicator		



AIDX Unique Flight Identifier

- ‘Edge Code’ exists wherever there is an incomplete key.
- Industry has made significant investment using suboptimal data structures.
- Transition to an ideal will take time, and new product releases.
- AIDX UFI should provide target to work towards.
- Implementations should not overload or otherwise compromise the standard.



Questions



Air Transportation Information
Exchange Conference - (featuring
AIXM, WXXM and FIXM)

Contact Information

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