Section 1 Time time_key day month year Air-travel data time_key airline_key origin_airport_key distance duration Airline Airport airline_key airport_key airline_name airport_name City State Country

Assumptions:

1. We will never need information about destination airport.

Concept hierarchies:

- → D Airline_D
 - → H Airline_H
 - Airline
- V D Airport_D
 - - Country
 - State
 - City
 - Airport
- → D Time_D
 - → II Time_D
 - Year
 - Month
 - Day

Section 2

Report 1:

No OLAP operations needed

Report 2:

Drilldown on "Airline"-Dimension from all to Airline

Report 3:

Slice for time_key = "2015-1-3"

Drilldown on "Time"-Dimension from All to Day

Section 4.

Report 1:

```
SELECT [Measures].[Long_Dur] ON 0 FROM [Cube]
```

	All	
Long_Dur		724

Report 2:

```
SELECT [Measures].[Avg_Elap_Time] ON 0,
   [Airline_D].[Airline_H].[Airline] ON 1
FROM [cube]
```

	Avg_Elap_Time
United Air Lines Inc.	203.9030248102413
American Airlines Inc.	175.72848159983508
US Airways Inc.	157.48206462212485
Frontier Airlines Inc.	151.36712846347606
JetBlue Airways	174.9407786885246
Skywest Airlines Inc.	103.39604705882353
Alaska Airlines Inc.	181.8318703578663
Spirit Air Lines	161.05662393162393
Southwest Airlines Co.	123.02938650029387
Delta Air Lines Inc.	150.87840264310853
Atlantic Southeast Airlines	103.57364270823892
Hawaiian Airlines Inc.	105.53900709219859
American Eagle Airlines Inc.	102.84952215464813
Virgin America	214.58455882352942

Report 3:

```
SELECT [Measures].[Flights] on 1,
  [time D].[Time_D].[Day].[3 Jan 2015] on 0
FROM [Cube]
```

	3 Jan 2015
Flights	15434

Report 4:

```
SELECT [Measures].[Flights] on COLUMNS,
   ORDER(
         ([Airport_D].[Airport_H].[Airport].members, [Time_D].[Time_D].[Day]),
        [measures].[Flights], BDESC) on ROWS
FROM [Cube]
```

		Flights
Hartsfield-Jackson Atlanta International Airport	2 Jan 2015	1042
	4 Jan 2015	1021
	5 Jan 2015	1006
	6 Jan 2015	958
	3 Jan 2015	948
Chicago O'Hare International Airport	2 Jan 2015	812
	5 Jan 2015	811
Dallas/Fort Worth International Airport	2 Jan 2015	809
	4 Jan 2015	798
	5 Jan 2015	794
Chicago O'Hare International Airport	4 Jan 2015	791
Dallas/Fort Worth International Airport	1 Jan 2015	790
Chicago O'Hare International Airport	6 Jan 2015	778
Dallas/Fort Worth International Airport	3 Jan 2015	758
Hartsfield-Jackson Atlanta International Airport	1 Jan 2015	740
Dallas/Fort Worth International Airport	6 Jan 2015	739
Chicago O'Hare International Airport	3 Jan 2015	737
	1 Jan 2015	692

Report 5:

```
SELECT [Measures].[Distance] on COLUMNS,
    order(
       [Time_D].[Time_D].[Day],
       [Measures].[Distance], basc) on ROWS
    from [Cube]
```

	Distance
7 Jan 2015	9085048
6 Jan 2015	12008665
1 Jan 2015	12024266
3 Jan 2015	13099597
5 Jan 2015	13573080
4 Jan 2015	13704246
2 Jan 2015	14058856