

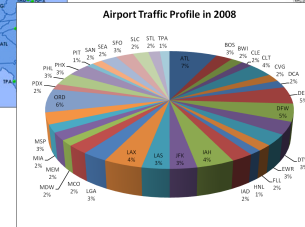
Goal: To develop novel graphical and statistical techniques to capture operational performance similarities and differences among airports.

Background:

- Key performance characteristics vary substantially among airports, e.g. demand, delay, utilization, capacity, etc.
- We are identifying similarities and differences among airports and eventually categories and trends.
- We then will seek to relate these characteristics to causal factors and develop recommendations for changes in operational procedures or access policies.



Chicago O'Hare International Airport

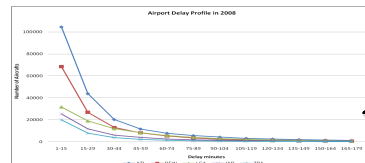


Methodologies:

- Key areas are identified to compare the operational performance among airports.
- Historical data is analyzed statistically and graphically.

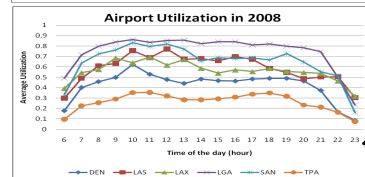
Operational Performance Areas

Delay



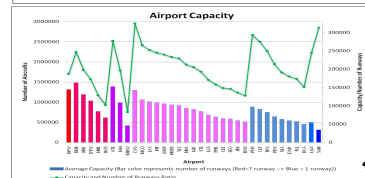
Delay profile at some of the busiest airports in US.

Utilization



Average utilization at LaGuardia Airport (LGA) is higher and more stable than other airports.

Capacity



Average Capacity varies among the top 35 busiest airports in US. Many factors contribute the differences in capacity, such as weather, number of runway, etc.

Future Work:

• **Apply statistical techniques:**

- to classify and compare airports.
- to understand causes of differences at airports.

• **Apply similar methodologies and techniques to European dataset:**

- Extend analysis to European airports.
- Investigate fundamental differences between US and European airspace systems; main areas to be investigated:
 - traffic flow management procedures.
 - airport access controls.
 - weather/climate.