Airline Data for Raleigh-Durham International
Visualizing 21 Years of Flight Data
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Introduction
Data for domestic flights that originated or ended at Raleigh-Durham International airport (RDU) since October 1987 are examined and visually presented. The following questions are investigated:
- Has the fast population growth of the Raleigh-Cary metropolitan area been reflected in the number of flights in and out of RDU?
- What were the peaks and valleys in RDU’s traffic?
- How has the amount of air traffic changed over the past 21 years?
- What trends in RDU’s air traffic can be found in the airline data provided?
- How has the amount of air traffic changed over the past 21 years?
- Has the on-time performance of RDU flights improved or worsened over the past 21 years?

Timeline of RDU Scheduled Flights and Time Period Comparisons

Figure 3: Time plot of average number of daily scheduled flights per month in/out of RDU over the entire period of data as well as the average number of daily scheduled American Airlines flights in/out of RDU. This clearly shows the initial effects of American discontinuing hub service. Also plotted is the number of airlines serving RDU for each month. As the recovery of air traffic following the hub closing led to the more stabilized current levels, the diversity of airlines serving RDU steadily increased.

Overall Trends
AA Hub
Oct 1987 – Aug 1993

Closing the Hub
Sep 1993 – Apr 1996

Recovery
May 1996 – Dec 2003

Stability
Jan 2004 – Dec 2008

Analysis of RDU Delay Data

Arrivals

Departs

Conclusions
Changes in the patterns of air traffic at RDU over the past 21 years are explored. Most notably, American Airlines utilized RDU as a hub on the central east coast until 1993. By 1996, the hub was completely gone, but a slow recovery started to take place. The current levels of air traffic have been more or less stable over the five year period ending in 2008. The population growth of the surrounding area only seems to correlate with air traffic levels in the post-hub time period. Also, as more airlines serve the airport, more destinations have been added. However, delays for both arrivals and departures have increased as well.