



AIRSPACE OPERATIONS LAB

Air Traffic 101

At this video station you will see a series of short movies that will introduce you to Air Traffic Control. See just how big and complex the U.S. airspace that controllers manage is. Learn about the kinds of problems that controllers have to deal with – weather, congestion, and closely-spaced airports – and how researchers at NASA Ames and other locations are trying to develop tools and procedures to alleviate these problems.

Video 1: View of Air Traffic Patterns Across the Continents.

How many airplanes are in the sky at one time? Watch a cool visual of air traffic patterns within and across all continents of the world. The clip shows flows and densities of aircraft throughout the day.

Video 2: What is Air Traffic Control?

So who watches over all those airplanes you've just seen? Air Traffic Controllers! And not just one controller but many handle each flight, with each controller monitoring an aircraft through a specific phase or airspace. Get an introduction to the different types of air traffic controllers and the work they do.

Video 3: A day in the Life of Air Traffic Over the United States.

Now that you've seen what an air traffic controller does, watch this recording of 24 hours of U.S. air traffic, from 8pm one day (Eastern) to 8 pm the next day.

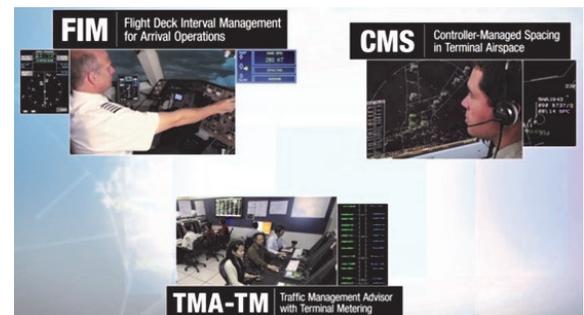
Video 4: The Impact of Convective Weather on New York Area Arrival Traffic.

How does weather impact air traffic? This clip looks at how traffic patterns in the New York area are affected by severe weather. It shows how traffic has to deviate around weather and

why and how Air Traffic Controllers have to delay aircraft that are already in the air.

Video 5: Next Generation Air Traffic Management.

Take a look at the Federal Aviation Administration's vision of the aviation system of the future. The FAA's objective is to develop new and more efficient routes between airports that will benefit passengers, airlines and the environment. This clip describes how Air Traffic Controllers will receive more accurate information that will allow them to manage traffic more efficiently.



A picture of prototype tools we're researching here in the AOL

Video 6: NASA's Air Traffic Management Technology Demonstration 1 (ATD-1).

So what do we, here in the Airspace Operations Lab (AOL), have to do with all of this? This clip gives an overview of one NASA project that we are currently working on in this lab. The tools that are in development are intended to provide decision support tools to TRACON controllers of the future to enable them to space aircraft more precisely but still safely. The aim is that more airplanes can be delivered to an airport at busy times.