Problem

The number of runway incursions—that is, the number of times that airplanes are on the runway when they should not be—is too large.

Summary:

For my project, I have chosen to work for the Federal Aviation Administration. The FAA was established under the Federal Aviation Act of 1958 as the Federal Aviation Agency. Its name changed in 1967 when the FAA became part of the Department of Transportation. Specifically, I will work for the Air Traffic Organization, the part of the FAA responsible for air traffic control (http://www.faa.gov/about/office_org/headquarters_offices/ato/)

Runway incursions are, stated simply, instances where aircraft enter the active runway when they should not be there. Such incidents can occur when taxiing aircraft cross active runways, when ground vehicles like snowplows or maintenance trucks enter runways, or when airplanes land on a runway on which a recently landed airplane has not yet entered the taxiway.

The problem appears to be growing, as shown in the following chart. These data should be treated with caution, however. The dramatic increase in the number of incidents between 2007 and 2008 can be attributed to the FAA’s adoption of the International Civil Aviation Organization (ICAO) definition of incursion, which includes what the FAA called “surface incidents.” These incidents include vehicles that enter runways when not cleared by ground controllers. By this definition, the number of incursions grew, and, even if it had held steady at FY 2007 levels, the number of incursions is too high. Even if we accept that the rate of incursions is down in 2009, the rate remains too high.

According to the GAO, most runway incursion incidents involve small planes in what is called general aviation. But even a small number of incursion incidents involving large planes can be serious, the best example is the 1977 collision between a Pan Am 747 and a KLM 747 at Tenerife, in the Canary Islands. The KLM plane attempted to take off before the Pan Am plane had cleared the runway; the Pan Am crew was confused by ground control instructions, and remained on the runway longer than the KLM crew or the ground controllers had anticipated. The collision destroyed both planes and remains the single worst civil aviation disaster in world history. In the United States, runway incursions have led to

fatal accidents, including the collision of a landing USAir 737 with a smaller commuter plane at Los Angeles International Airport on February 2, 1991. Even an accident in which all aboard survive can be costly, as when a Korean Airlines cargo plane took off while a commuter plane was on the runway; no one was killed, but both aircraft—and the cargo in the KAL plane—were destroyed.

Given the potential for significant loss of life, property damage, and disruption to the nation’s airports and airways, it is important to take steps to reduce the number of runway incursion incidents, lest one become the cause of another fatal accident.


---
