Scott, A. & Menn, J. (2014) [**Exclusive: Air traffic system failure caused by computer memory shortage.**](https://www.reuters.com/article/us-airtraffic-bug-exclusive/exclusive-air-traffic-system-failure-caused-by-computer-memory-shortage-idUSBREA4B02320140512) Reuters.

**What are the issues around this incident?**

Failure of an Air traffic control system was caused by logging details of a U2 spy plane with a complex flight plan. The system is designed for a certain amount of data per airplane, mostly flights with simple point-to-point routes

The flight plan for the U2 plane did not have an altitude data and when a controller entered an unusual value, it caused the system to make several calculations of possible flight paths. This process utilised a lot of memory space and interrupted other functions of the system.

This incident revealed the data limitations and vulnerabilities of the ERAM system. According to Scott & Menn (2014), a source told Reuters that all it takes for an attacker to bring down the system is to mimic a complex flight plan, an altitude discrepancy and an input from the controller that added to the flight plan data.

**The impacts on the organisation (and the wider community)**

Impact on reputation: Security Experts claimed that Lockheed Martin Corp, the creators of the ERAM system, did not conduct adequate tests prior to deployment.

Disruption of passengers’ schedule: Hundreds of flights were delayed or cancelled on the day of the incident. This would have altered the activities of the flight passengers.

**How it could have been avoided**

**Testing**: it is crucial to test a system with a wide range of data or scenarios before deployment. Though complete testing of is not realistic, all possible values need to be tested and verified (Pan, 1999).

**References**

Pan, J., 1999. Software testing. *Dependable Embedded Systems*, *5*, p.2006.

Scott, A. & Menn, J. (2014). Exclusive Air Traffic System Failure. *Reuters* Available from : <https://www.reuters.com/article/us-airtraffic-bug-exclusive/exclusive-air-traffic-system-failure-caused-by-computer-memory-shortage-idUSBREA4B02320140512> [Accessed 10 May 2021]