Henry Phillips

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The technology of the modern world heavily relies on software systems to function. Failures in these systems can lead to catastrophic interruptions of essential services. A recent example of such a failure occurred on Wednesday, January 11th, 2023, when a system vital to the Federal Aviation Administration experienced an outage that grounded thousands of commercial flights throughout the United States. This system, known as the Notice To all Air Missions (NOTAM) system, is responsible for alerting pilots to potential flight hazards. An investigation carried out by the FAA indicated that the system failure was caused by a damaged database file. Allegedly, the NOTAM system lacked the redundancies necessary to prevent this failure. This failure will have lasting political consequences, as multiple Senate panels condemned the FAA and called for Congressional briefings to address the outage and its effects. In total, nearly 10,000 flights were delayed, and approximately 1,300 were cancelled because of the NOTAM outage. This event illustrates the importance of proper software testing; by discovering software errors during testing, interruptions of this scale can be avoided.

Sources:

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