

Breakthrough Solution to Avoid Unnecessary Aborted Airplane Landings

PROBLEM ADDRESSED

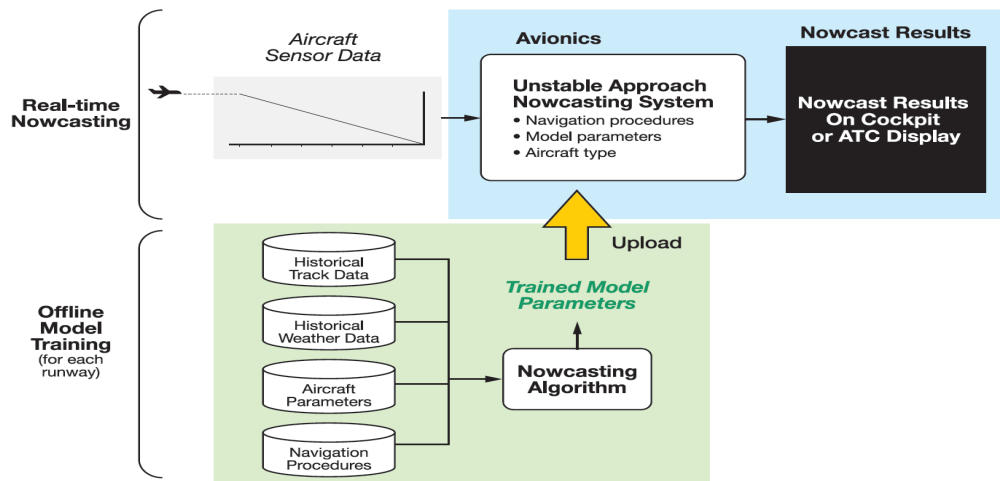
As an airplane approaches its landing, the pilot must decide if the approach is “stable” by checking the status of the trajectory for “stability” at 1000’ and 500’ above ground level. The pilot must make that determination using six independent sets of data located on displays on the flight deck.

If the stable approach criteria are not met, the pilot aborts the landing and initiates a “go-around.” A “go-around” carries high associated costs, significantly increases pilot workload, and can cause havoc for those with connecting flights. As a result, if there is doubt about whether the approach is stable, pilots often assume it is and proceed with the landing approach.

Sixty six percent of all airplane accidents occur during the approach phase.

TECHNOLOGY SOLUTION

Using Big Data Analytics (i.e., massive amounts of flight approach data) the “Nowcast” system can advise the pilot at the 3,000’ level *if there will* be a problem at the 1,000’ level. This method accounts for data in flap/slat and landing gear deployment, localizer intercept location, airspeed profile, ATC vectors, winds, and other traffic – none of which are addressed by kinematic equation solutions.



ADVANTAGES

- Provides a single indicator of whether the stabilized approach criteria are being met
- Provides information as to whether the flight will meet the stabilized approach criteria *prior to the 1000’ and 500’ check points*, allowing the pilot the time to perform adjustments to avoid an unstable approach