Regional Aircraft: A New CNS Challenge
The View from the Front Seat
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The Usual Disclaimer

- The opinions expressed herein may be solely mine but they are based on a long and varied career in aviation

- The opinions expressed may or may not represent those of Delta/Atlantic Southeast Airlines

Overview

- The Present
  - Regional Airlines?
  - Integration into the System
  - The Avionics- and Capabilities
  - Viewpoints
- The Future (Near and Mid Term)
  - The Top 5 Solutions
  - Conclusions/Final Comment

A Regional Route Structure ?

Hub/Spoke Operations

- Schedules/Frequency/Passengers
- Ramp
- Departures
- Cruise
- Arrivals
- Outstations

Avionics Suite

The View from the Front Seat

- **<u>Observation 1</u>** - There is a shortage of runways

- **<u>Observation 2</u>** - We should not forget there are physical limitations to closer spacing on approaches and runway occupancy

- **<u>Observation 3</u>** - Weather will always be a major factor with respect to schedule and safety

The View from the Front Seat

- **Observation 4** - Overall, the FAA's AAT/AAF personnel are outstanding and the human element is making the system function

- **Observation 5** - ATC is operating as close to the edge as is safe with the in-place technology. The CNS technologies are sorely outdated

- **Observation 6** - Aircraft are out performing the ATC system and the controllers need rapidly 'implementable' technology assistance

The Top 5 Solutions

- **<u>SOLUTION 1</u>** - Build more runways

- **<u>SOLUTION 2</u>** - Build more airports

The Top 5 Solutions

- **<u>SOLUTION 3</u>** - Congress and the Executive Branch should make it a ***<u>national goal</u>*** (priority and commitment with resources and enabling legislation), that before the end of the decade we will:
  - Eliminate the current nav system known as 'routes'
  - Eliminate all ATC/ATM induced delays
  - Ensure a continued flow of highly trained and skilled professionals for the ATC system
  - →

The Top 5 Solutions

- Implement <u>affordable</u> CNS Technologies to make the system as safe and efficient as possible (for example):
  - immediately implement precision approaches to all qualified runway ends (high mins then decreasing)
  - implement SATS type technologies
  - implement communications (voice and/or data) at all qualified airports
  - implement runway incursion protection systems for all qualified airports

The Top 5 Solutions

- **SOLUTION 4** - Establish a National 'Interstate' Runway System

- **SOLUTION 5** - Implement, and make sacred, a schedule to accomplish the national goal

Conclusions

- Concrete is required for large capacity and safety gains

- Rapid infusion of CNS Technology is needed to make the system function and to ensure the maximum capabilities are extracted from all the precious resources