Airspace Technology Demonstration - 3 (ATD-3)

Overview

November 5, 2019

Hayashi, Miwa
Primary objective of ATD-3:

Reduce the impact of weather uncertainty by developing integrated air/ground decision support tools to continuously...

- Assess flight trajectories
- Identify more efficient routes for individual flights and groups of flights

ATD-3 Projects

- Traffic Aware Strategic Aircrew Requests (TASAR)
- Multi-Flight Common Routes (MFCR)
- Dynamic Routes for Arrivals in Weather (DRAW)
Multi-Flight Common Routes (MFCR) identifies opportunities for delay recovery by refreshing outdated routes.
MFCR advisory has 9 flights with a total of 53 minutes time savings
MFCR

- MFCR merges multiple flights to a common route, creating a new flow for increased operational acceptability.

- Each route segment is clear of weather.

- Each flight has time savings of at least 3 minutes.

- Total flight time savings for group is at least 10 minutes.

- MFCR provides graphical functionality for review and modification prior to implementation of advisory.
Example of Dynamic Routes for Arrivals in Weather (DRAW) Advisory and Trial Planning

Current scheduled times of arrival do not reflect the need to deviate for weather.
DRAW User Interface

Plan View GUI (PGUI)

CIWS weather polygons

DRAW Advisory route

DRAW Advisory List

Flight Plan route

Timeline GUI (TGUI)