

# Airspace Technology Demonstration - 3 (ATD-3)

NEXTGEN

## Overview

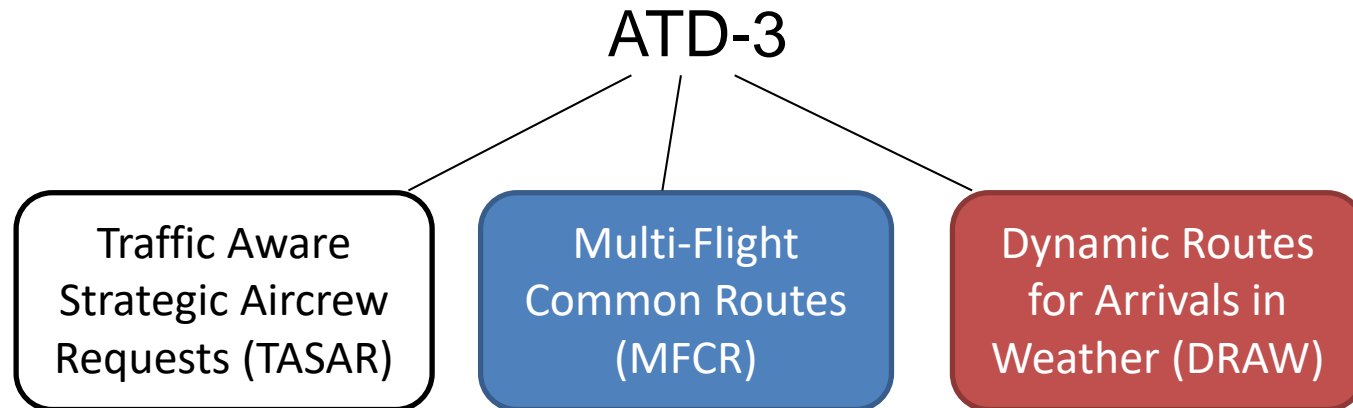
November 5, 2019

Hayashi, Miwa

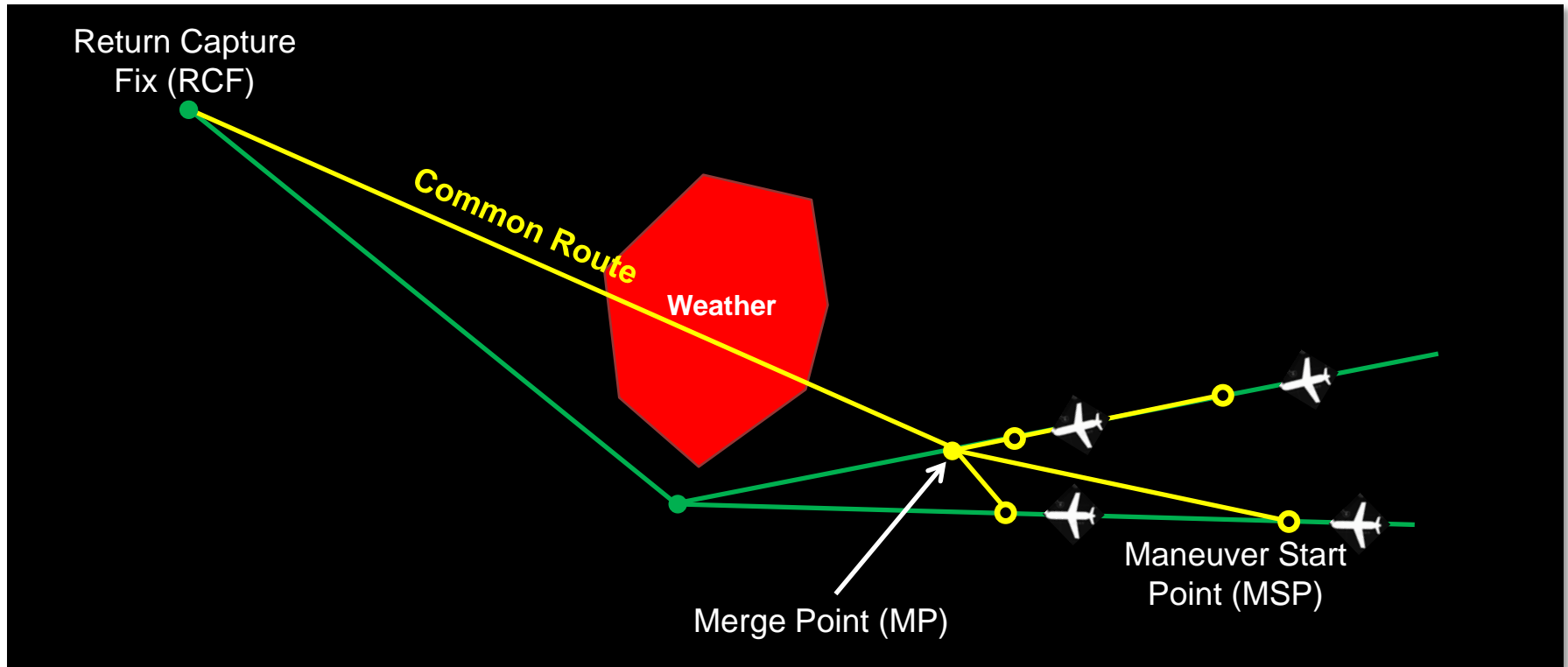
## Primary objective of ATD-3:

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

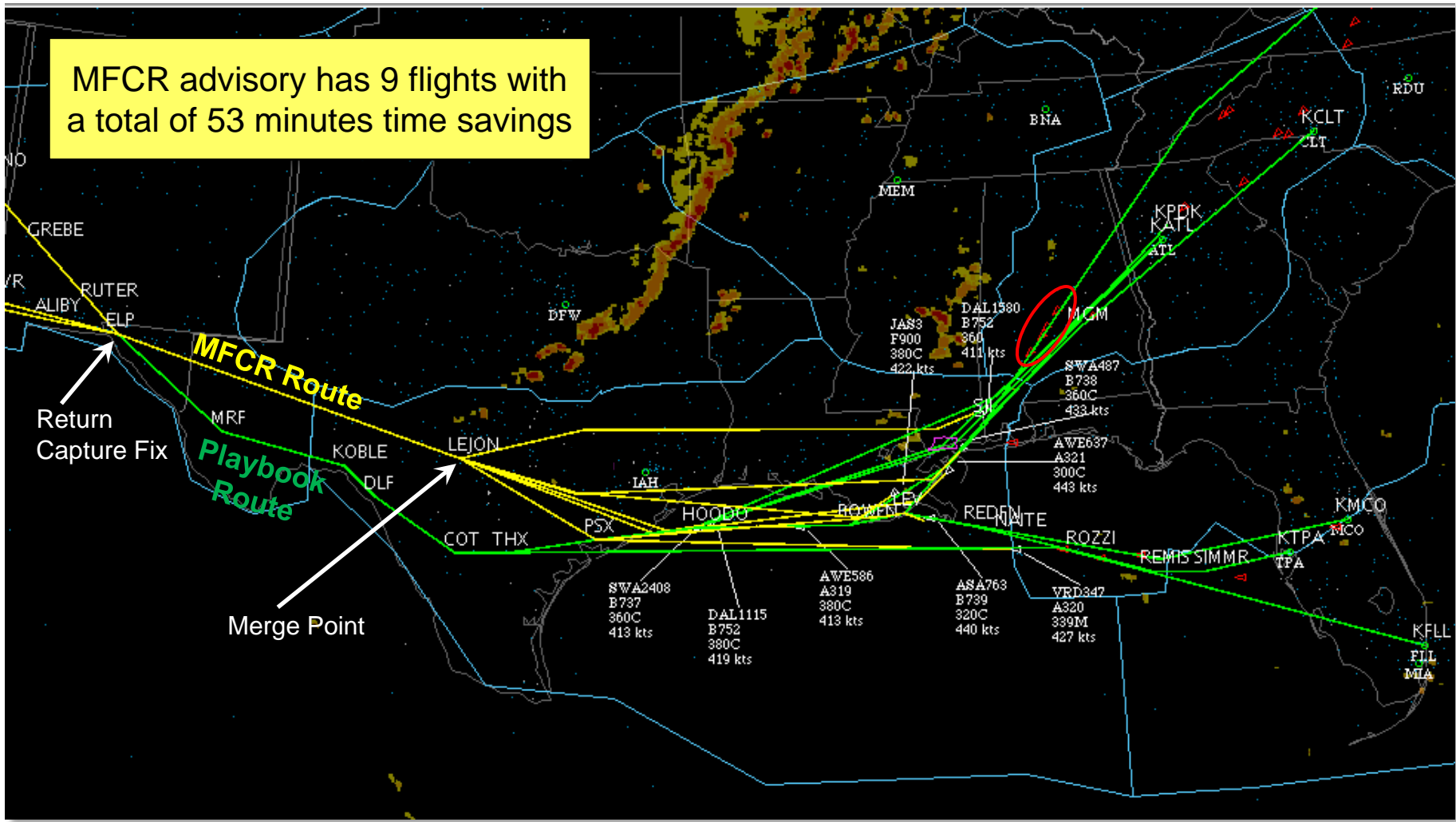
- Assess flight trajectories
- Identify more efficient routes for individual flights and groups of flights



Multi-Flight Common Routes (MFCR) identifies opportunities for delay recovery by refreshing outdated routes.

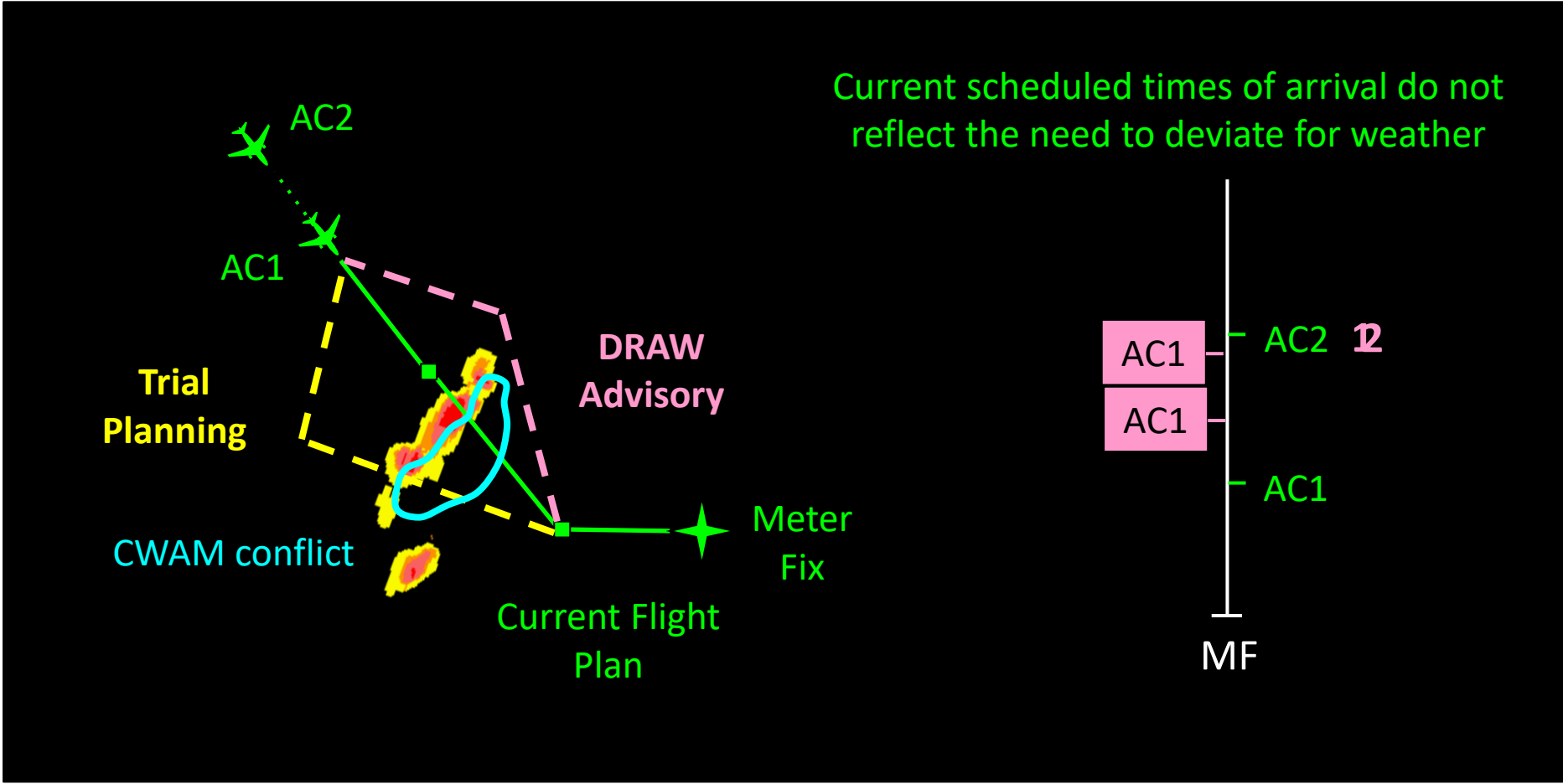


MFCR advisory has 9 flights with a total of 53 minutes time savings



- MFCR 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

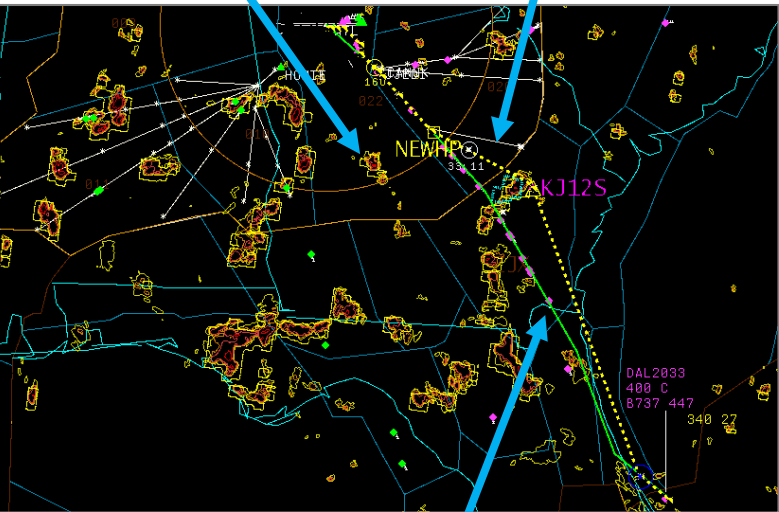


## Plan View GUI (PGUI)

CIWS weather polygons

DRAW Advisory route

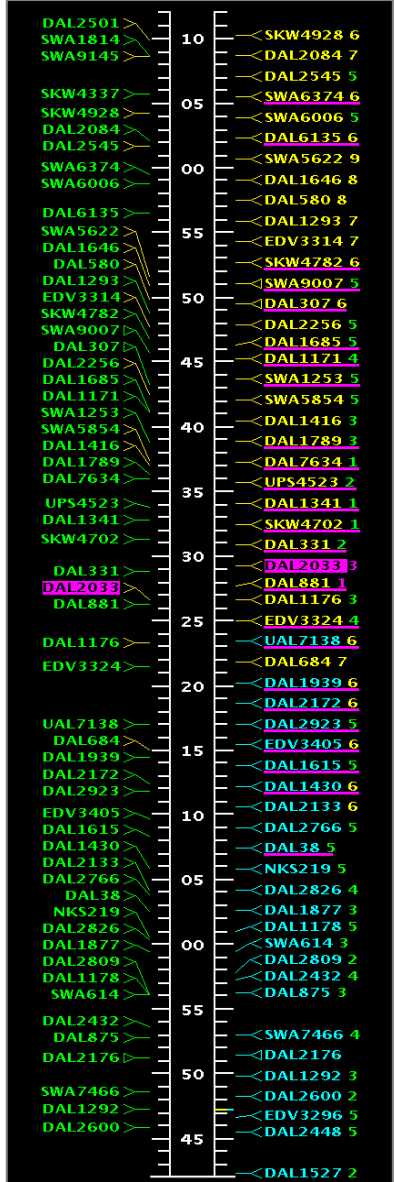
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<input type="checkbox"/>			GLAVN   CHPPR   ERLIN					
<input type="checkbox"/>			ONDRE   OZZZI   WHINZ					
<input type="checkbox"/>			HOBTT   HONIE					
<input type="checkbox"/>			CANUK   JJEDI					
<input type="checkbox"/>			SWA6374/TNCA/KATL	0.0	LARZZ	JJEDI1/1	WX	<input type="checkbox"/>
<input type="checkbox"/>			DAL2033/TNCF/KATL	-1.0	LARZZ	JJEDI1/1	WX	<input type="checkbox"/>
<input type="checkbox"/>			EDV3324/KPHF/KATL	1.4	SKWKR	JJEDI1	WX	<input type="checkbox"/>
<input type="checkbox"/>			UAL7138/KJFK/KATL	0.1	SKWKR	JJEDI1	WX	<input type="checkbox"/>
<input type="checkbox"/>			DAL1939/MROC/KATL	1.7	LARZZ	JJEDI1	WX	<input type="checkbox"/>
<input type="checkbox"/>			DAL2172/KMCO/KATL	-5.7	LARZZ	JJEDI1/1	WX	<input type="checkbox"/>
<input type="checkbox"/>			DAL2923/KJFK/KATL	0.1	SKWKR	JJEDI1	WX	<input type="checkbox"/>
<input type="checkbox"/>			DAL881/KMCO/KATL	-1.4	LARZZ	JJEDI1/1	WX	<input type="checkbox"/>
<input type="checkbox"/>			DAL2133/MKJS/KATL	-0.0	LARZZ	JJEDI1	NR	<input type="checkbox"/>
<input type="checkbox"/>			DAL2766/MTPP/KATL	-0.0	LARZZ	JJEDI1	NR	<input type="checkbox"/>
<input type="checkbox"/>			DAL38/KMLB/KATL	0.1	LARZZ	JJEDI1	WX	<input type="checkbox"/>



DRAW Advisory List

Flight Plan route

## Timeline GUI (TGUI)



# ATD-3 Concept

