

Recap DIGITS Webinar Part 1



Demonstration of Air Traffic Management Improvements generated by initial Trajectory Sharing



Tom MAIER
DIGITS Project Leader
Webinar 2nd Dec 2020



founding members



14:00 Welcome by event host AIRBUS ([Hugues de Beco](#))
Welcome by the SESAR JU ([Benoit Fonck](#))

14:10 Agenda presentation ([Tom Maier - AIRBUS](#))

14:15 Introduction to PJ31 and PJ18-6
([Tom Maier - AIRBUS](#) / [Julian Alonso - INDRA](#))

INFRASTRUCTURE

14:25 Avionics ([Thierry Harquin - AIRBUS](#))
& Operations ([Andreas Linner - NOVAIR](#))

14:40 Ground demonstration platform
Pre-Operational platform ([Noud de Lang - MUAC](#))
Shadow mode platform ([Hendrik Oberheid - DFS](#))

14:55 Q&A session

RESULTS AND BENEFITS

15:05 Summary of data collection/
Technical Analysis results ([Jean Boucquey - EEC](#))

RESULTS AND BENEFITS (cont'd)

15:20 Situational awareness: EPP display to ATCO
([Federico Ferrari – ENAV](#) / [Preetam Heeramun - NATS](#))

15:35 Safety: 2D discrepancy monitoring and
EPP display results ([Christopher Adams - EEC](#))

15:50 Q&A session

16:00 Coffee break

16:10 Complementary Operational Analysis
([Hendrik Oberheid - DFS](#))

16:25 TP-enhancements validations ref PJ18-06a
([Angel Olbes - INDRA](#))

16:35 ADS-C contribution to ground TP enhancement:
a few figures ([Jean-Philippe Chapelle - AIRBUS](#))

16:45 Q&A session

16:55 Wrap-Up Day 1 / Day 2 Teaser ([Tom Maier - AIRBUS](#))

Recap DIGITS Webinar Part 1



- ➔ The DIGITS project lasted over 4 years comprised **19 partners** from main stakeholders and invested **34 M€** to prepare the deployment of Initial Trajectory Information Sharing in line with EU Implementation Regulations
- ➔ ATS-B2 **avionics** enabling EPP sharing was developed and certified, now available from Airbus through the FANS C product, in forward- and retro-fit
- ➔ By end 2020, **6 airlines** will have upgraded **91 aircraft**, trained **10 000 pilots** and produced **20 000 DIGITS flights** from which **1.4 million reports** will have been received under a representative variety of operational conditions
- ➔ For the Demonstration Report about **16 000 DIGITS flights / 800 000 reports were analyzed** which contribute to
 - better understand the impact of airline operating practices on the downlinked data
 - fine tune the requirements for integration of EPP in ground systems
 - bring the systems to full maturity and capture proposals for evolutions of standards

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- ➔ **4 ANSPs developed ground tools** which allowed to identify use cases and the benefit potentials of 4D trajectory information sharing
- ➔ **MUAC trained 24 ATCOs and went pre-operational** in July 2019, using basic versions of EPP display and trajectory discrepancy algorithm, applied on 11 000 DIGITS flights. Transition to full operations with all 300 ATCOs is planned for 2022
- ➔ **DFS, ENAV and NATS trialed more enhanced versions** of EPP applications in shadow mode, capturing valuable feedback from ATCOs wrt. HMI, situational awareness, safety, predictability etc.
- ➔ The technical results obtained in Solution 18-06a using ADS-C data in ground Trajectory Predictions provide enough confidence **to continue with operational validations** in future projects. Influence of ATC instructions remains to be studied further.

The benefit potential of 4D Trajectory Sharing could be evidenced:
Increase of safety, ATCO efficiency and last but not least flight efficiency.

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Technical Data Analysis: valuable findings were obtained wrt. bandwidth usage, transmission times, compliance to standards and ground network & avionics issues
DIGITS collected data can be shared for further analysis beyond this project.

Complementary analysis looked at numerous operational **real world factors influencing** the EPP reliability → DIGITS shares valuable findings

DIGITS airlines: have great merit in their pioneering role wrt. training implementation and avionics retrofit upgrades

Airbus: Research for the purpose of deployment and benefits for airline customers

SJU: Partnership is key, DIGITS is a piece in the 'European ATM Research vitrine'

Wrap-Up DIGITS Webinar Part 1



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- ✈ **All presentations will be published on the SJU web-site**
 - exact address will be communicated
- ✈ **Questions**, which cannot be treated during the webinar will be answered post-event and also made available on the SJU web-site
- ✈ **DIGITS Demo Report** (800 pages) will be made public early 2021

10:00	Welcome 2 nd Part host AIRBUS (Thierry Harquin)
10:05	Recap DIGITS Key Results – Day 1 (Tom Maier - AIRBUS)
10:15	Next research and development steps under SESAR (David Lewin - NATS)
10:45	Airline Expectations & Needs (Pascal Colles – Air France)
11:05	SESAR DM - Airborne equipage plans & ground deployment aspects including update on mandate PCP/CP1 (Cristian Pradera – SESAR DM)
11:25	Coffee break

11:35 **PANEL DISCUSSION**
Moderator David Lewin (NATS)

- Benoit Fonck - SESAR JU Chief Development and Delivery
- Dan Wood - EasyJet, Training Captain and Fleet Manager
- Niels Lokman – MUAC COO
- Hugues de Beco - Airbus, Head of Multi-Program Projects & ATM Program

Q&A session

12:30 Wrap-Up and Overall Conclusions
12:40 Open Day Webinar Closure & Adjourn
(Tom Maier – AIRBUS)

AIRFRANCE

BRITISH AIRWAYS

easyJet

IBERIA

novair

WIZZ

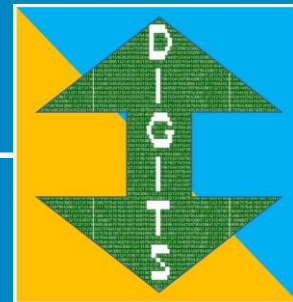
Airlines

AIRBUS

Honeywell

THALES

Airborne
Industry



Thank you very much for your attention!

ANSPs

AIRTEL^{ATN}

indra

LEONARDO

Ground
Industry

DFS Deutsche Flugsicherung

enav

EUROCONTROL

NATS

LFV
AIR NAVIGATION SERVICES
OF SWEDEN

NAVIAIR

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