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Brief Introduction To LDACS

- Standardization: *ICAO and Industry*

LDACS Webinar 1

April 23, 2021

Presented by Vaughn Maiolla
ICAO CP-DCIWG Secretary





LDACS Standardisation

A short History

The Early Days

- Action Plan 17 – Future Communications Study Operational Concepts and Requirements Study Team:
 - A joint FAA/EUROCONTROL activity
 - Main Deliverable the COCR (2007)
 - *Candidate technologies identified for Future Communications INFRASTRUCTURE (FCI).*
- Briefing on the above given to the Air Navigation Commission in 2009





LDACS Standardisation

Industry Involvement

- **ECTL contract** (DLR, Frequentis AG, University Salzburg):
 - **LDACS** design (2007)
 - Initial draft **LDACS** specification (2008)
- **SESAR**: Revised draft **LDACS** specification since 2011



LDACS Standardisation

What is the current status of LDACS?

- **SESAR** (Frequentis AG, DFS, DLR):
 - **LDACS** lab demonstrator developed by Frequentis AG (2013)
 - L-band compatibility testing @ DFS labs (2014)
- Additional work @ **DLR**:
 - First **LDACS** lab demonstrator (2010)
 - Development and flight testing of **LDACS** ranging (2011-13)
 - Robust **LDACS** receiver design (finalized 2015)



LDACS Standardisation

ICAO's Role

- December 2014 at the first meeting of the Communications Panel (CP/1)
 - New work programme item – **Selection and Standardization of the Future Terrestrial Data Link**
 - Action Item to re-establish **Project Team – Technology, to work on this.**
 - First Meeting December 2016
 - Joint work with NSP and SP on interference
 - Avionics Architecture Task Force

TARGET: SARPS and related provisions with Applicability by November 2024.



LDACS Standardisation

What is the current status of LDACS?

Current developments

- **ICAO** Communications Panel (**LDACS** standardization):
 - Launch of project team “Terrestrial Data Link” (PT-T)
 - Development of Initial Standards (2018)
 - Frequency assignment and interference mitigation (2020)
 - Development of Initial Guidance Material (2022)



LDACS Standardisation

What is the current status of LDACS?

Current developments

- **SESAR 2020**:
 - Refinement and extension of **LDACS** specification and inclusion of ranging/navigation functionality
 - Finalization of fully functional **LDACS** demonstrators
- German national project **MICONAV** (Rohde & Schwarz, DLR, iAd, BPS):
 - Implementation of fully functional **LDACS** demonstrator
 - **LDACS** flight testing in October 2018



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