



EASA GA Conference on Prevention of Midair-Collisions

The EASA Team

- John Franklin (Host)
- Alain Leroy (Moderator)
- Vladimir Foltin (Moderator)
- Dimitri Garbi (Slido)
- Raphaelle Berthier (Everything)





Opening and Keynote Address

- **Florian Guillermet,
Executive Director, EASA**

jConspicuity Declaration

Introduction

This jConspicuity¹ Declaration is a voluntary policy statement, jointly established by participating aviation authorities and other entities², specifically addressed to the **General Aviation (GA)** sector. Its primary objective is to facilitate and encourage the use of jConspicuity devices and data (including ADS-B out³, ADS-L⁴, surveillance data, and similar information) by all stakeholders with the shared aim of improving operational safety and enhancing safety culture in GA⁵.

The adoption of this jConspicuity Declaration does not affect the application of Regulation (EU) No 376/2014 regarding the reporting, analysis and follow-up of occurrences in civil aviation and any other applicable European Union or national legislation⁶.

Commitment

By adopting this jConspicuity Declaration we, the signatories, express our commitment to foster the development of jConspicuity devices and their use and utilisation of related data with the intention of improving aviation safety, fostering innovation and enhancing operational efficiency through collaborative analysis. We pledge to adhere to the following:

Key Principles:

1. **Promoting Safety Culture:** The initiative aims to facilitate and promote safety culture in GA in order to foster positive safety behaviours.
2. **Voluntary nature:** The initiative is a partnership that signatories join on a voluntary basis.
3. **System-wide insights:** Analysis of jConspicuity data will focus on system-wide insights (big data approach) rather than the actions of specific situations. This encourages broad participation and fosters a safe aviation environment.
4. **360-Degree Collaboration:** All relevant stakeholders will be involved in the analysis of jConspicuity data, ensuring a holistic and trusted approach to safety and operational improvements⁷. The collaborative analysis will lead to **jointly agreed actions** that will benefit all participants.
5. **Transparent Monitoring:** The process for analyzing and acting upon jConspicuity data must be transparent, allowing all stakeholders to track progress and ensure alignment with safety improvement goals.
6. **Data protection:** The use of data and information derived from the initiative will comply with the EU's General Data Protection Regulation⁸ (GDPR), which governs how the personal data of individuals in the EU can be processed and transferred.

¹ jConspicuity webpage

² Associations representing airspace users and relevant industry

³ ADS-B stands for Automatic Dependent Surveillance–Broadcast. It's a technology that enables aircraft to broadcast their position, speed, and other data to other aircraft and ground stations, enhancing situational awareness and safety. ADS-B comes in two main types: ADS-B Out and ADS-B In.

⁴ ADS-L is a lighter version (subset) of the ADS-B message content, originally developed to make manned aircraft electronically conspicuous when operating in U-space airspace.

⁵ European Plan for Aviation Safety, Volume II., 2024 Edition, task MST.0027 - Promotion of safety culture in GA

⁶ Manned aircraft are not required to be electronically conspicuous, except when operating as uncontrolled traffic in U-space airspace

⁷ This can serve as preparation for future inclusion in the [Data4Safety](#) programme.

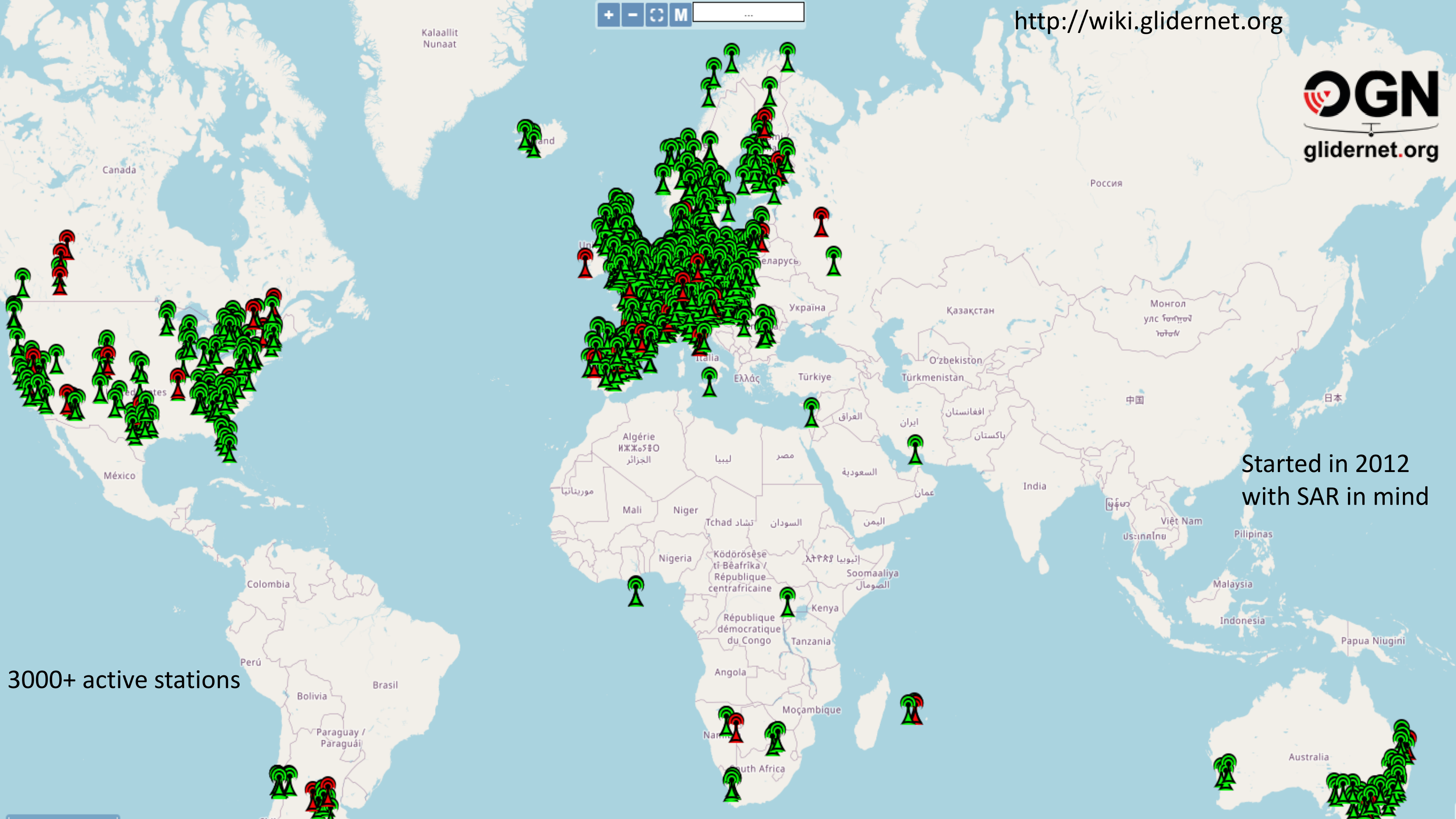
⁸ Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data.





Opening and Keynote Address

- **Angel Casado,
Co-Founder of
Open Glider Network**



Started in 2012
with SAR in mind

3000+ active stations

Questions via Slido

sli.do - #Beseen



Panel 1

*i*Conspicuity Declaration

- Marta Lestau Sáenz, Flight Safety Director, AESA Spain
- Karine Gay, Deputy Head GA Office, DGAC France
- Emmanuel Davidson, President France, IAOPA
- Michel Rocca, Vice-President, EAS
- Kyle Martin, Vice President - European Affairs, GAMA

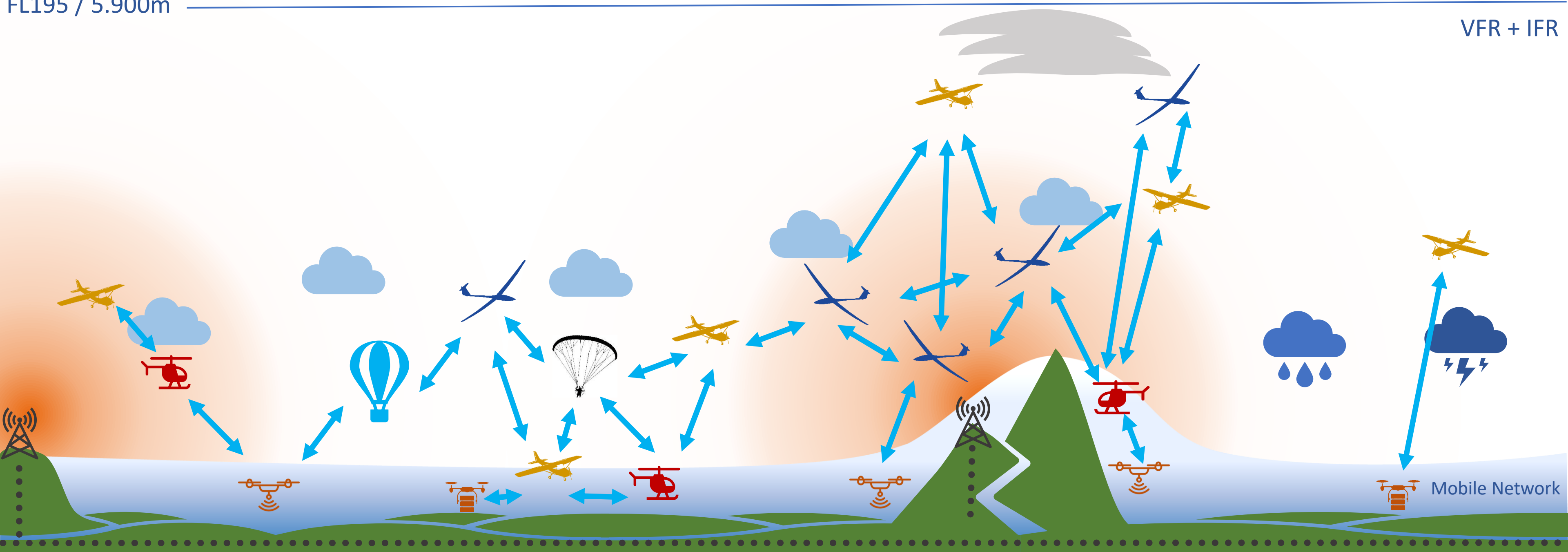




1km

IFR

VFR + IFR



Authorities already supporting the Declaration



EASA



Czech Republic



France



Greece



Latvia



Lithuania



Netherlands



Republic of North Macedonia



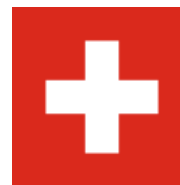
Romania



Slovenia



Spain



Switzerland

iConspicuity Declaration

Commitment to foster the development of *iConspicuity* devices and their use and utilization of related data with the intention of improving aviation safety, fostering innovation and enhancing operational efficiency through collaborative analysis

iConspicuity Declaration

Key principles:

- Promoting Safety Culture
- System-wide insights
- 360-Degree Collaboration
- Transparent Monitoring
- Data protection

i*Conspicuity* Declaration

Expected Benefits:

- Broader Equipage by Electronic Conspicuity Devices
- Lower Risk of Airborne Collisions
- Improved Access to Airspace
- Comprehensive Exposure Data
- Faster Response to Emergencies
- Near Real-Time Analysis of Incidents

Panel 2

ADS-L *Coalition*

- Urban Mäder, CEO, FLARM
- Marc Förderer, COO, AIR Avionics
- Keith Vinning, Business Developer, PilotAware
- Ralf Heckhausen, Director and Co-Owner, Avionix
- Tristan Fily, CEO, SafeSky
- Marco Festa, Director Avionic Products, f.u.n.k.e Avionics





ADS-L *Coalition*



The Evolution of Electronic Conspicuity in GA

Creating the Ecosystem

- Crowdfunding
- Demonstrate feasibility of technology
- Strong scaling effects

Broad Adoption

- PowerFLARM – for powered aircraft
- Interoperability with XPDR / ADS-B
- Radio diversity
- OEM products

Drones

- A dash of Silicon Valley
- Push for miniaturization
- More interoperability
- Lack of regulation

Standardization

- U-Space needs conspicuity
- ADS-L as a new standard
- Challenges: Interoperability and transition

2004

2010

2019

Starting now



ADS-L and Aviation Certification

- Certification bases and -standards today mostly cover sophisticated traffic systems for IFR.
- iConspicuity solutions will be „uncertified“ from an aviation certification perspective.
- We expect a diverse ecosystem of products, from small portables to robust integrated avionics.



AIR Avionics AT-1 and ATD-80. “Uncertified” traffic system. It is used in thousands of installations and can be installed into many aircraft using CS-STAN or MCA/STC. It is designed just the way we design certified avionics.

Uncertified systems – Why does it matter?

- Quicker time-to-market. More innovation, use of latest technologies.
- More affordable (order of magnitude), leading to quicker adoption, even voluntarily.
- Uncertified must not mean unreliable. Systems provide aid to "see and avoid".
- Result: Safety benefit for GA community

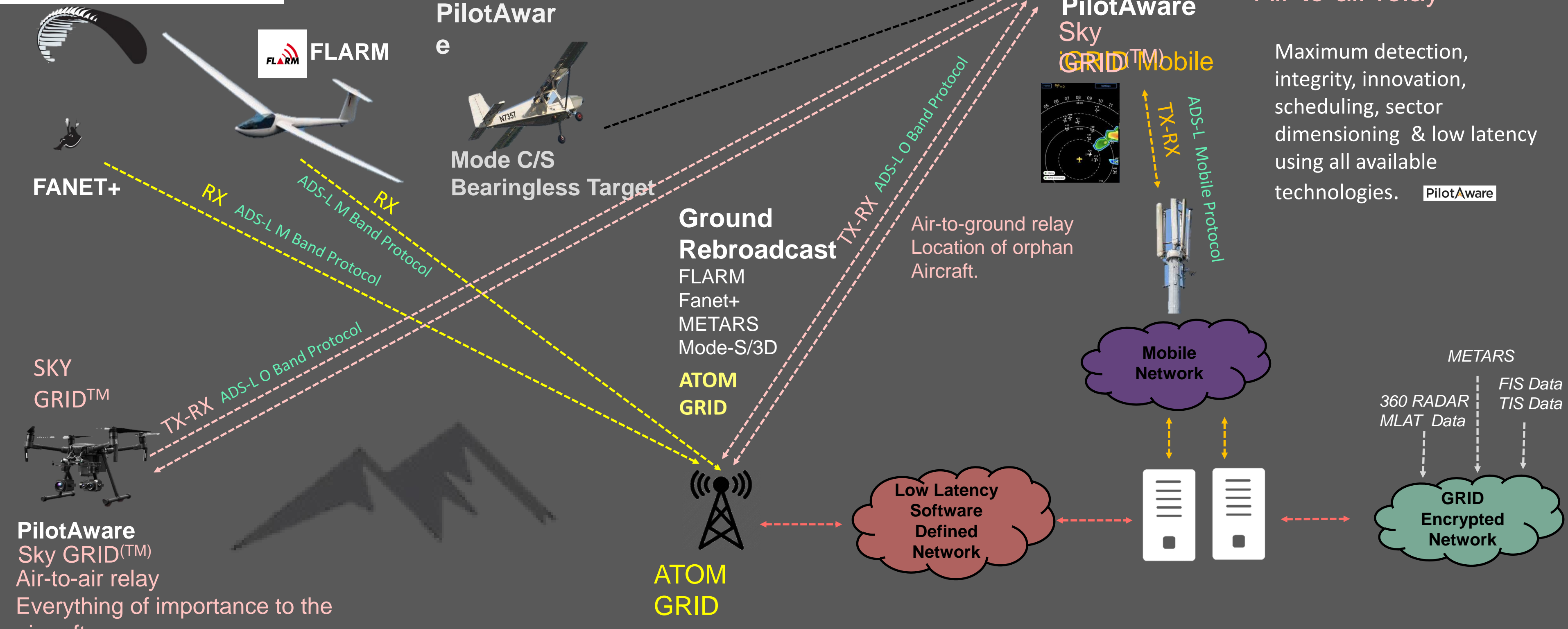


AIR Avionics ATD-80 showing traffic and weather data

The Current Art of the Possible

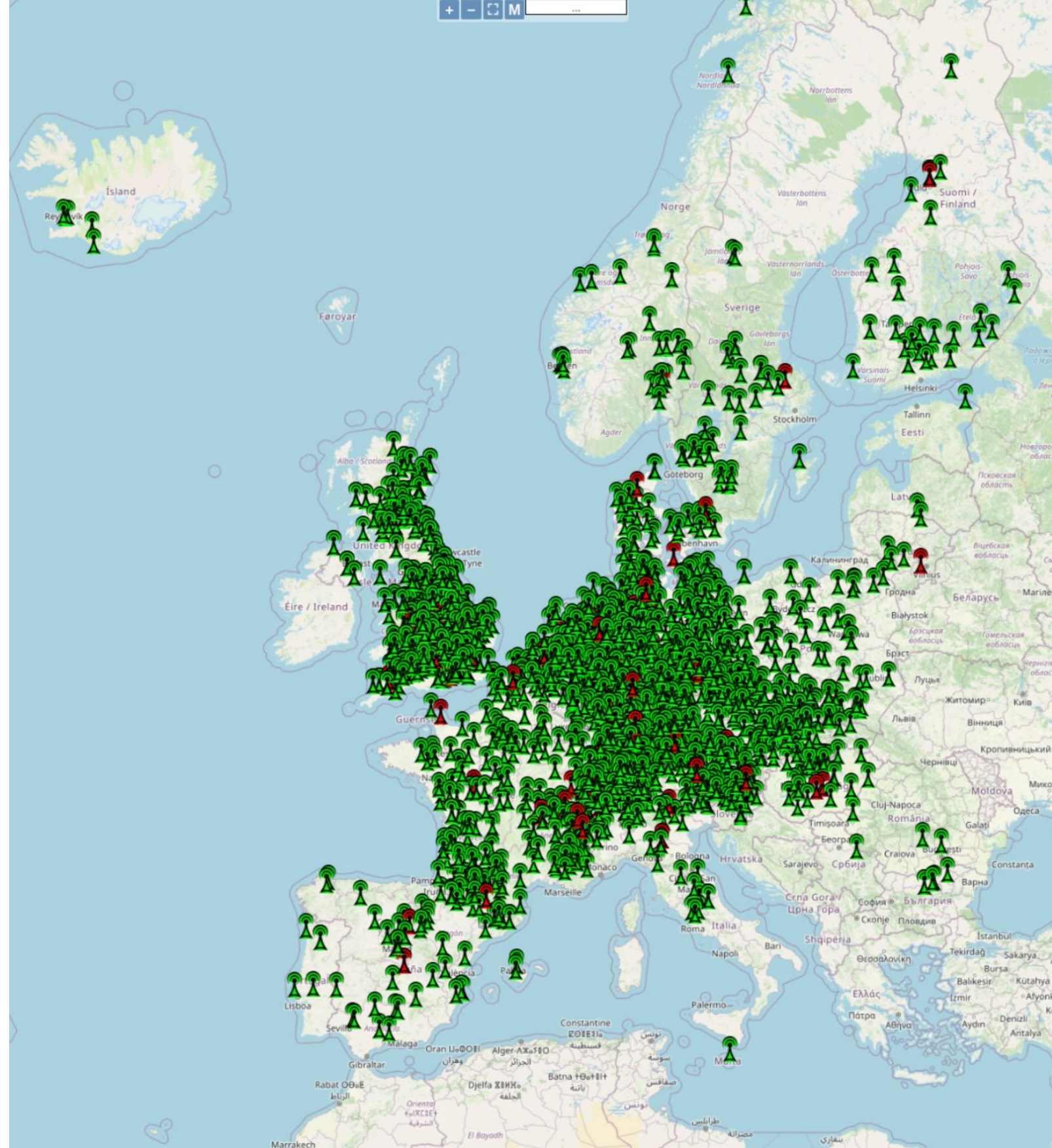
Technical Specification for ADS-L transmissions using SRD-860 frequency band (ADS-L 4 SRD-860)

ACCEPTABLE METHODS, TECHNIQUES AND PRACTICES FOR CARRYING OUT ADS-L TRANSMISSIONS USING SRD-860 FREQUENCY BAND AS PERMITTED PURSUANT TO AMC1 SERA.6005(c) POINT (a)(3)(i)

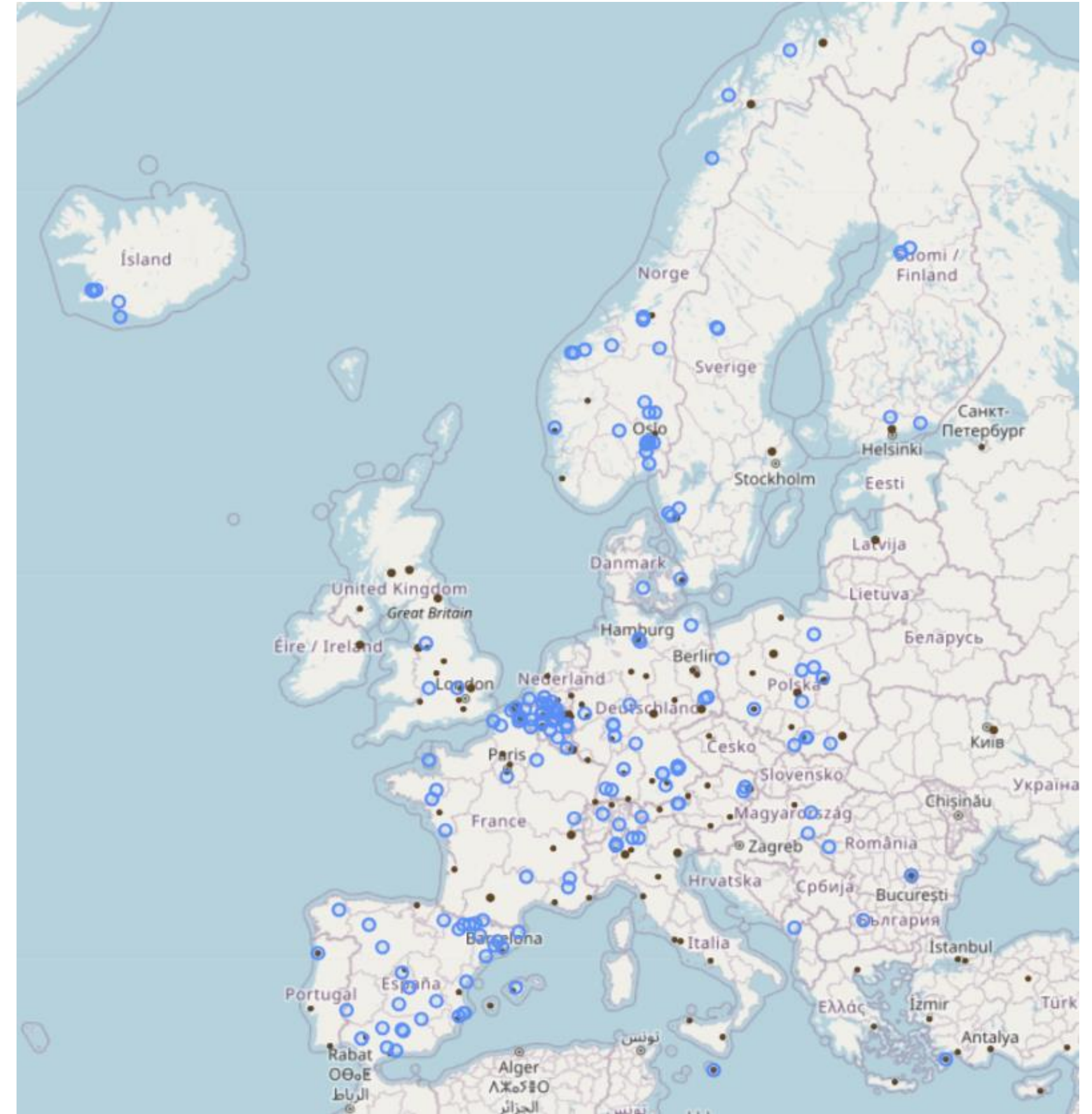


AVIONIX ENGINEERING contribution to ADS-L





Open Glider Network



AERO Network



ADS-L 4 Mobile

- Cheap to implement with existing hardware and software
- Easy to use and affordable for all pilots classes
- Ready for cooperative and non-cooperative drones
- Available today: 100k+ pilots, available when you need it (below 5000 feet AGL)
- Get better tomorrow: LTE over LEO (Low Earth Orbit)
- Already in flight with leading aviation actors:



ADAC Luftrettung



ADS-L 4 Mobile is more visible pilots



SafeSky App

85 000 pilots
45 000 aircrafts
14 aircraft classes
40 countries

Re-broadcast:
SkyEcho 2
PowerFLARM Fusion
PilotAware
Levil

8 000+ ground station in Europe

ADS-B
FLARM
Mode-S (MLAT)
ADS-L
FANET

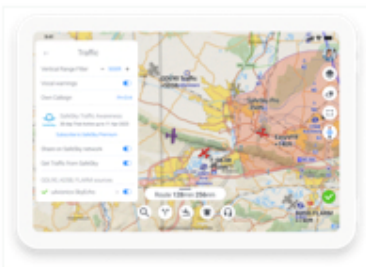
Flying Neuron
Pilot Aware
MicroTrack
OGN-Tracker
Remote ID



Navigation softwares

EasyVFR
Air Navigation Pro
XC-Track
Gaggle
eVario
Wing-It

TheFlightVario
airports.no
XC-Guide
CloudDash
SwissNavX



Drone manufacturers and operators

Norsk Luftambulans	Field Group	DroneSense
Norwegian police	Naviation	DroneMatrix
Cavok-UAS	Romvesen	Wis
SkeyDrone	Aviant	AirDodge
Helicus	Anra	



Electronic devices

Aero tracker
FlyMaster
Syride

SkyRecon
SkyTraxx



ADS-L 4 SRD860 Issue 2: Multiband and Multisystem FIS-B and TIS-B

Platforms

- GA Aircraft
- UAS
- Ground

Frequencies

- O-Band HDR
- Mode C/MLS (5,2 GHz)
- LoRaWAN ready

Data

- FIS-B Weather
- FIS-B Info and TIS-B ready

Test Conditions

- Ground to Air, Air to Ground
- Air to Air
- 8/20 km range

Equipment

- Ground Station
- Standalone Module
- Extended TM350 Traffic Monitor for aircraft interface

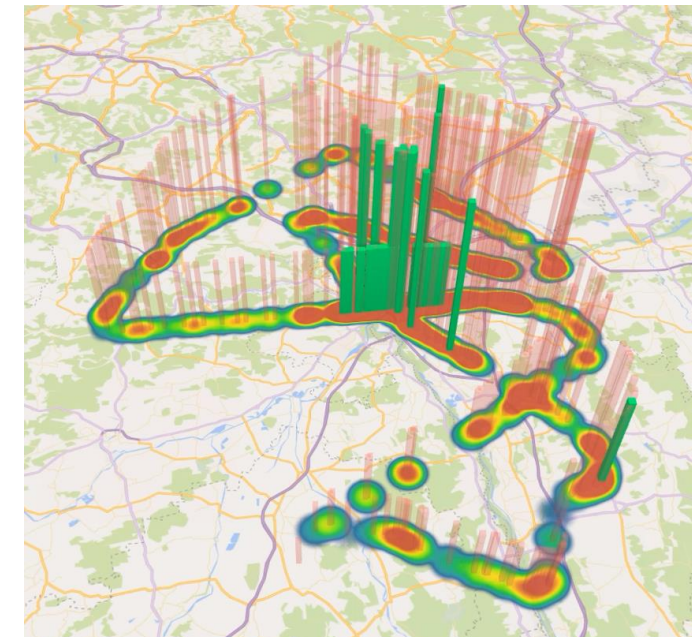


Figure 1: Example of Test Flight on SRD



Figure 2: TM350 Traffic Monitor with Integrated Weather Module

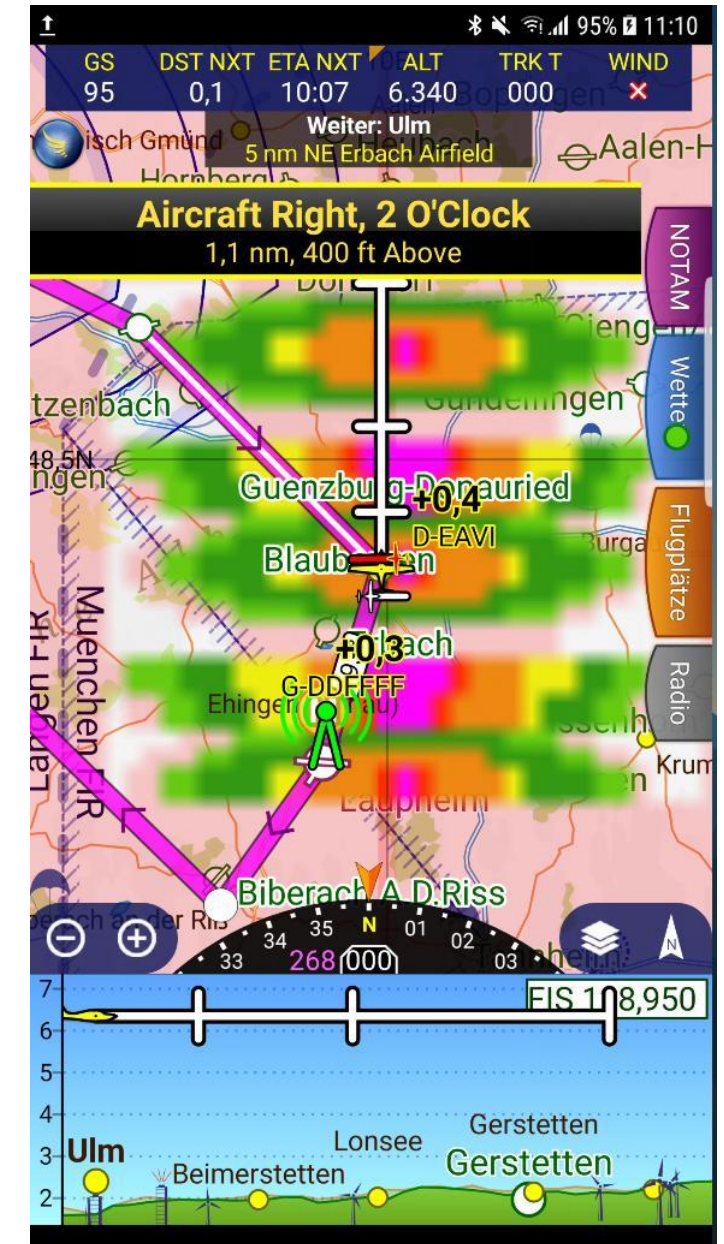
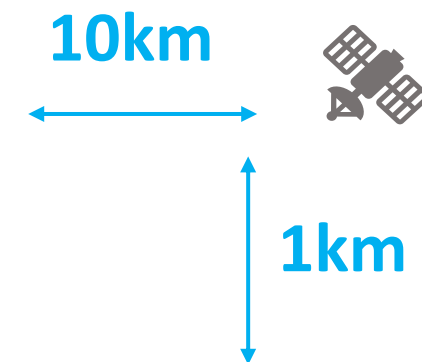


Figure 3: Visualization of Results in aircraft



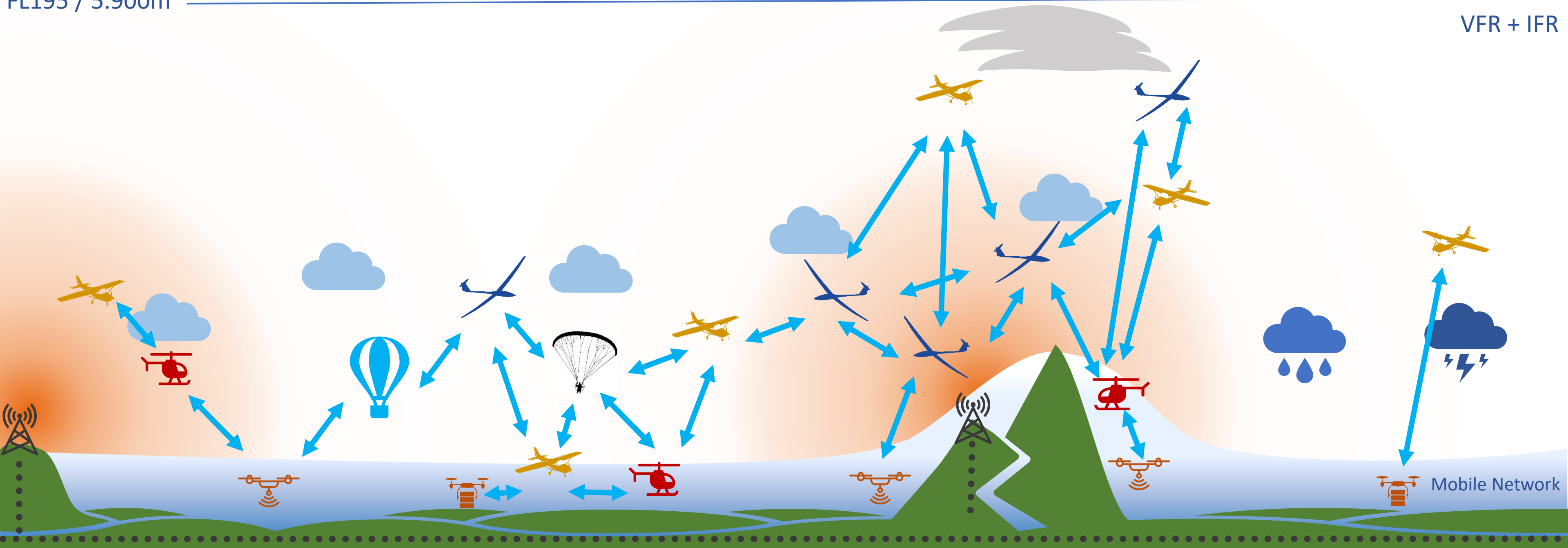
ADS-L for General Aviation and Drones



FL195 / 5.900m

IFR

VFR + IFR



Questions?

sli.do - #Beseen