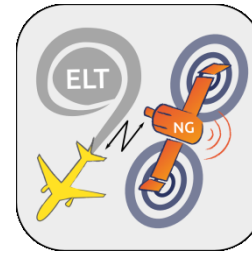




WG-98

“Aircraft Emergency Locator Transmitters (ELTs)”



Specifications for Triggered In-flight ELT(DT)

*Philippe Plantin de Hugues
BEA Senior Safety Investigator
Chairman WG-98
SAI/GAT WebEx 28th March 2018*

Summary

- EUROCAE WG-98 activities
- Specifications of ELT(DT) as in draft of ED-62B
- Complementing specifications





EUROCAE WG-98 Activities



EUROCAE WG-98 Activities on ED-62B

- EUROCAE WG-98 first meeting: Paris end November 2013
- Joint meetings with RTCA SC-229 since the second meeting
- The MOPS ED-62B / DO-204B for Aircraft Emergency Locator Transmitters (ELT(AF), (S), (DT),...) will be technically identical
- Open-Consultation planned on 1st July 2018
- Publication before end of December 2018
 - ➔ ETSO January 2019

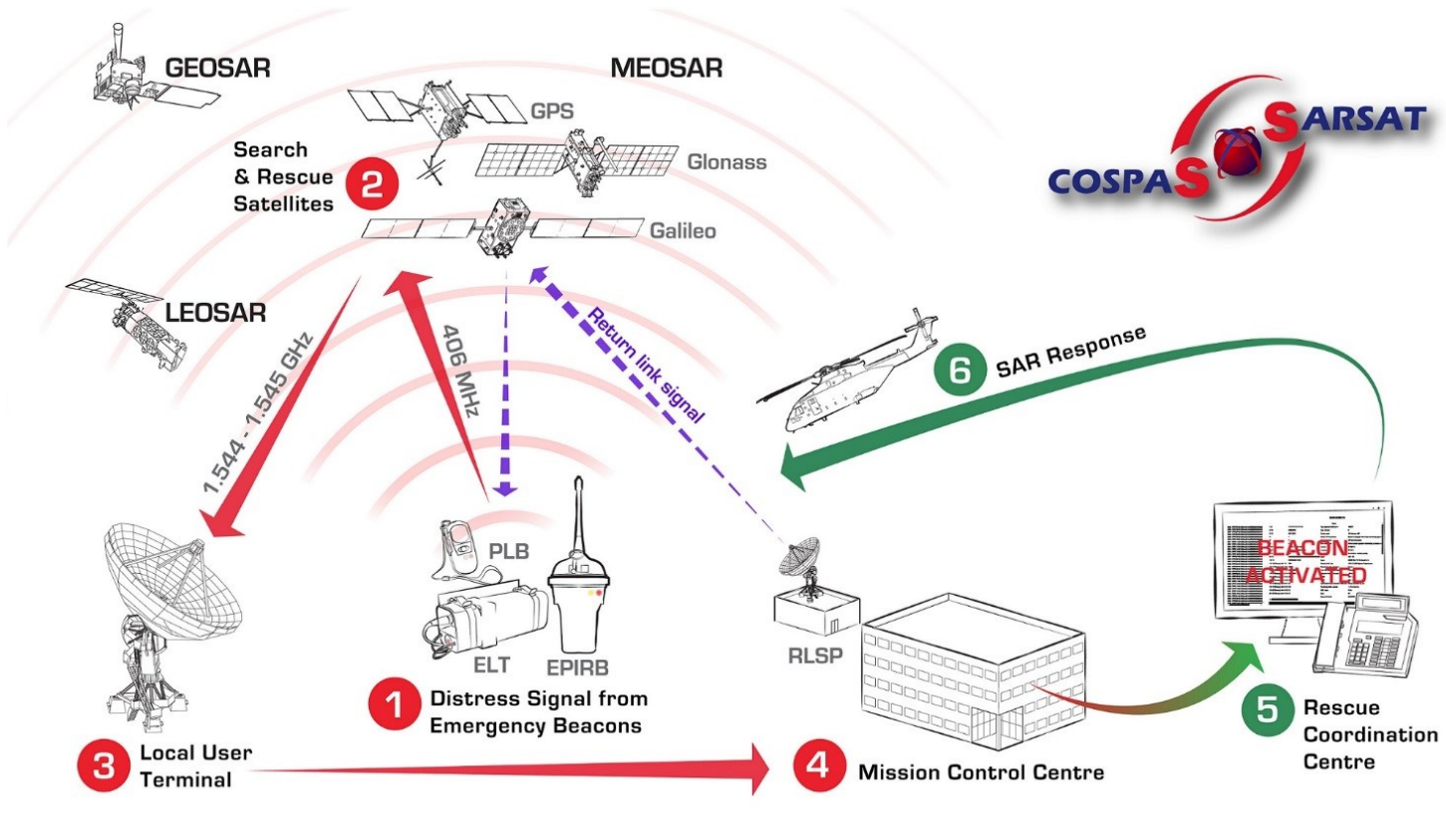


EUROCAE WG-98 Activities

- EUROCAE WG-98 already developed the MASPS ED-237
- Development of MASPS for ELT Return Link Services (RLS)
 - ➔ TORs have been approved on 17 October 2017
 - ➔ Kick-Off meeting 18-19 April 2018
 - ➔ To be completed within 2 years



RLS Concept





Specifications for ELT(DT)



Specifications for ELT(DT) Triggered In-flight

■ General design specifications

- ➔ Remote Control and Monitoring System
- ➔ Fault tolerance
- ➔ **Position source:** transmit a GNSS position in the distress signal
- ➔ **Power Source:** shall not be dependent upon any external power source for operation when transmitting. Reference to appropriate RTCA DO documents
- ➔ **Temperature and Altitude Ranges**



Specifications for ELT(DT) Triggered In-flight

■ General design specifications

- ➔ **Software Control and Electronic hardware:** Ref to appropriate RTCA DO document
- ➔ **External Antenna Cable:** shall meet the MIL-DTL-17 specs or equivalent
- ➔ **ELT(DT) functional specifications:** providing additional requirements
- ➔ **Required Interface Functions:** in line with the TiF Label 202



Specifications for ELT(DT) Triggered In-flight

■ Minimum Performance Specifications Under Environmental Test Conditions

- The environmental tests and performance specifications described in this chapter provide a laboratory means of determining the overall performance characteristics of the ELT(DT) system under conditions representative of those which may be encountered in actual operation.
- Reference to EUROCAE ED-14G/RTCA DO-160G



Specifications for ELT(DT) Triggered In-flight

■ Minimum Environmental Qualification Level Test Sequence

- The ELT(DT) system without crash survivability capability do not have to withstand the crash conditions, but need however to operate without adverse effect on the aircraft operation, and to withstand the normal flight conditions as well as to operate in the degraded environmental conditions experienced between the detection of the distress condition and the crash.
- Tests According EUROCAE ED-14G/RTCA DO-160G
- ED-62B flame test



Specifications for ELT(DT) Triggered In-flight

- **Installed equipment performance**
 - ➔ Use of the installation manual
 - ➔ ELT(DT) Antenna Cable Fire Protection

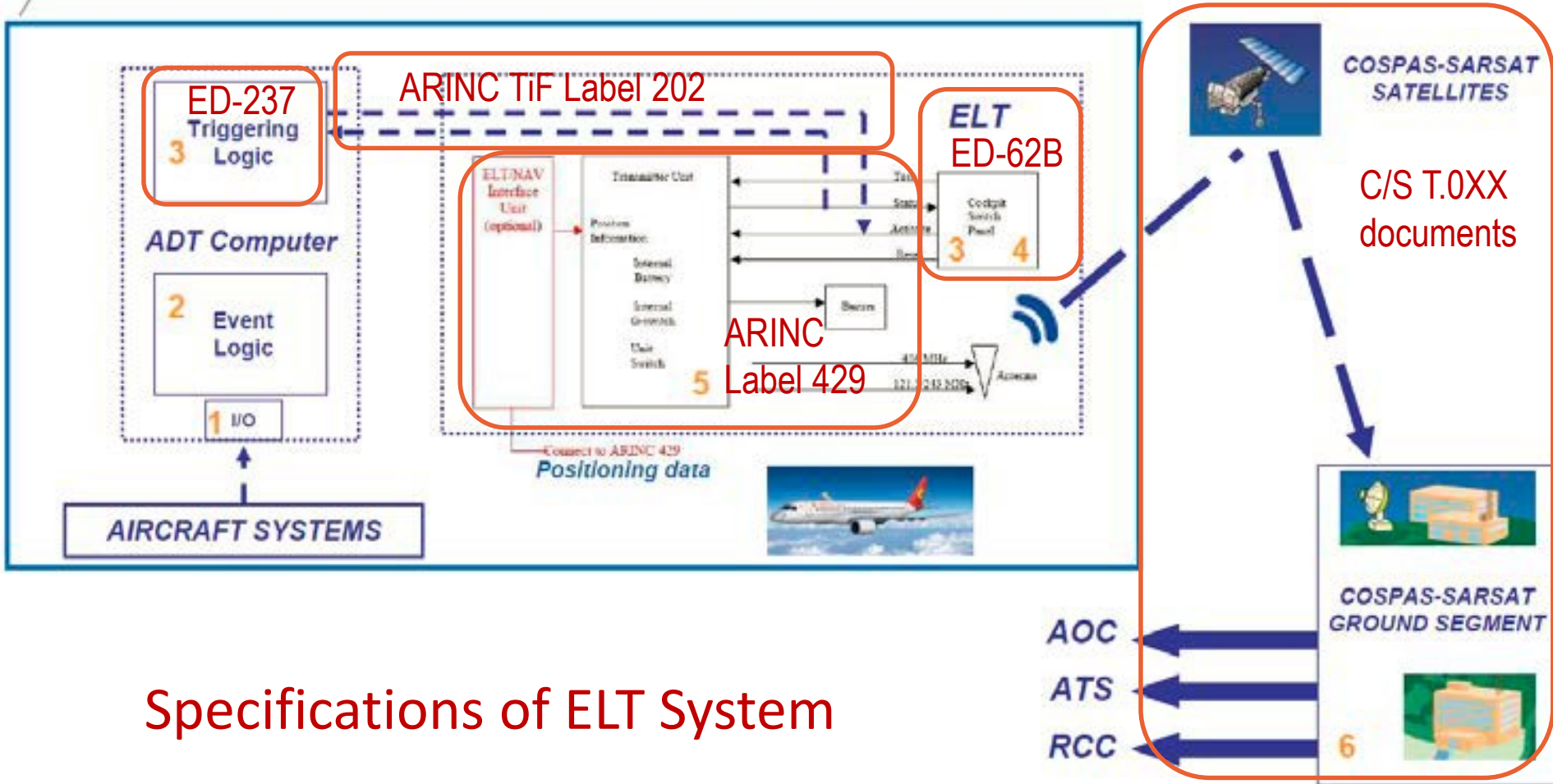




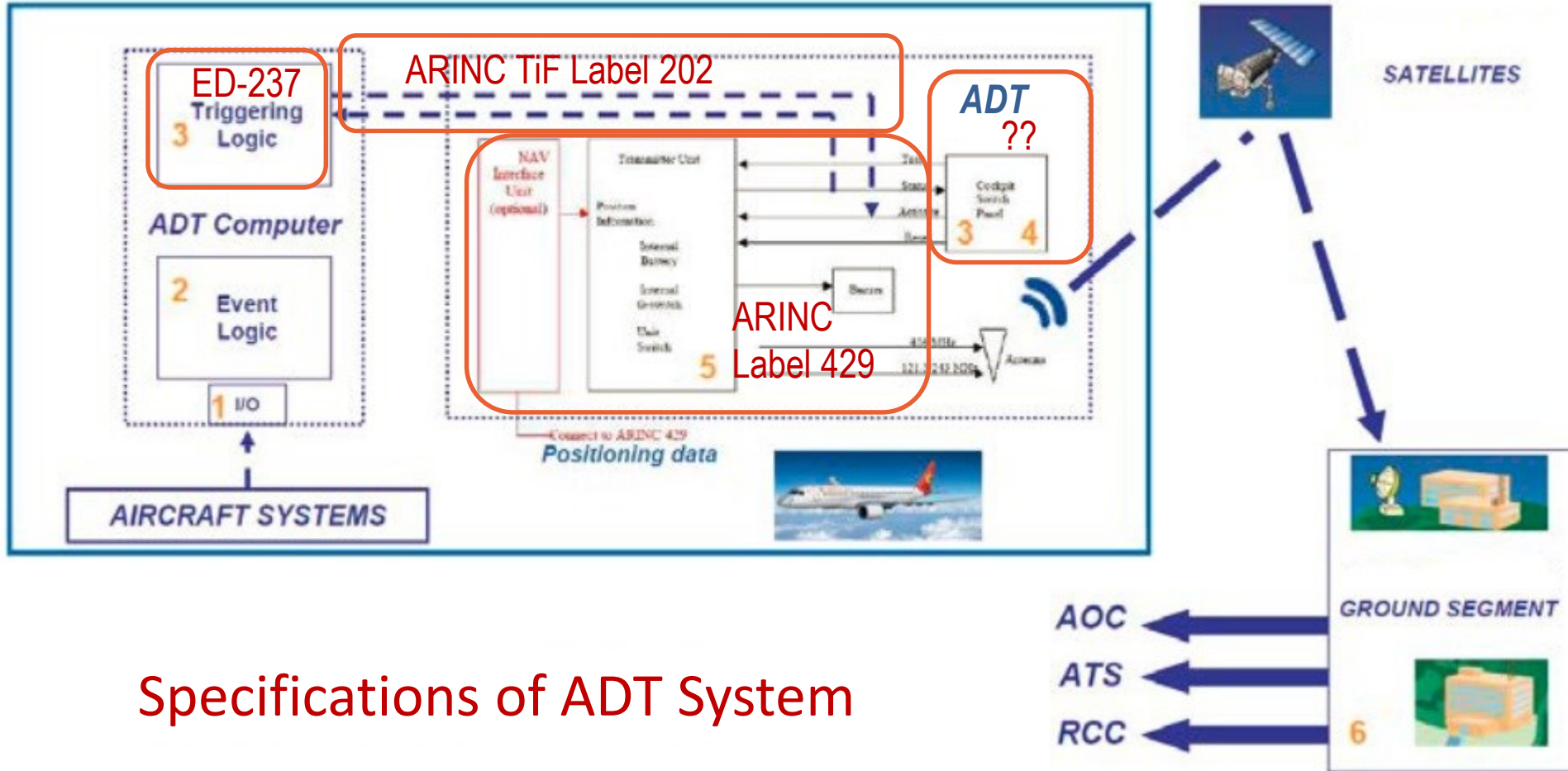
Complementing Specifications



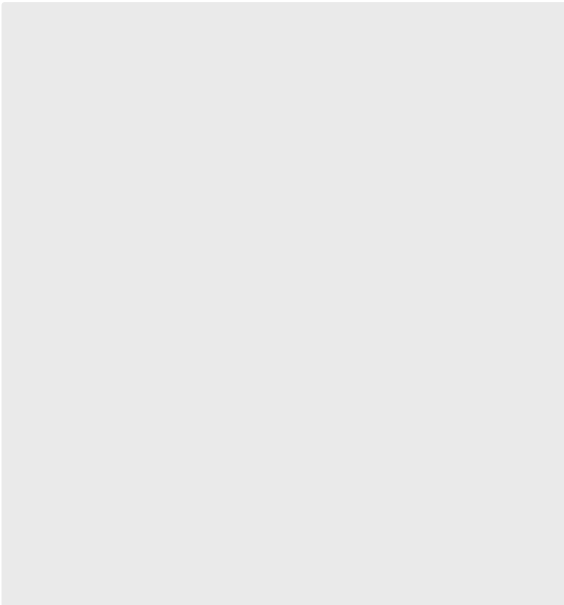
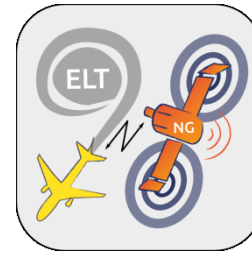
ADT Functional Blocks Implementation Examples



ADT Functional Blocks Implementation Examples



Specifications of ADT System



Thanks for your attention