



AeroSpace and Defence
Industries Association of Europe

Extension of EASA to ATM/ANS

Regulation of ATM systems and
constituents

*Contribution of **ATM IMG***

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EASA extension to safety aspects of aerodromes and ATM/ANS

Legislative proposal COM 390 of 25 June 08 foresees the adoption of measures that **may** lay down:

- a) a **requirement of certification in respect of organisations** engaged in the design, manufacture and maintenance of ATM/ANS systems, parts and appliances
- b) a **requirement of certification in respect of ATM/ANS systems, parts and appliances.**



EASA extension to safety aspects of aerodromes and ATM/ANS

Aerodromes

- Verification of compliance of aerodrome equipment would be part of the certification of the aerodrome design (e.g. ILS installation) or of the aerodrome operator (e.g. special vehicles), depending on the intended use

Airport landside systems and airside systems

- *Same process for equipment verification might be proposed, whether a system is under responsibility of the ANSP or of the aerodrome operator*
- *Landside systems are subject to National Supervisory Authority certifications procedures, if applicable*



Transitional strategy

- The ATM market is of small size
- Systems and constituents are used almost exclusively for air traffic management purposes (are not intended for the general public) .
- For *constituents* it would be sufficient the manufacturer's **declaration of conformity**
- This does not exclude to have Community Specifications and/or some form of approval of the manufacturer (after proper Regulatory Impact Assessment)
- The full application of the Regulation should be accomplished by means of a **transitional strategy** designed to achieve the objectives of the Regulation
- **Unjustified cost-benefit barriers** to preservation of the existing infrastructure should be avoid.



Possible cases of ATM verification

How to proceed for ATM systems verification? Three cases could be considered:

1 - On board ATM systems will be subject to the EASA procedures already applied to the other on board parts

2 - ATM /CNS ground systems. We could distinguish mainly three type of systems:

a) - **CNS systems** that will be produced in series

b) - **Large and complex infrastructure** (produced not in series) that integrate components HW & SW (e.g. **Area Control Centres** for en-route ATM services),

c) Airside (ATM) integrated Airport systems (for **TWR & or Approach Control Office** services)

3 - Satellite systems : Large complex satellite navigation and communication systems (Galileo, Iris,...)



ATM IMG contribution 1/3

A process for Manufacturing Industry application to EASA to become qualified suppliers of safety related systems (design, manufacture and maintenance) could be based on simple principles:

- 1) **CNS systems** are produced in series and are repetitive in their deployment phase (e.g. GBAS) A sort of “type certification” could be considered and verification at the factory could simplify subsequent on the site verification.

- 2)** ATM large and complex infrastructures (ACCs, TWRs, APPs integrated, automated and interconnected infrastructures) are integrated in only one case and could be considered prototypes “de facto” and would undergo a separate process:
- *the declaration of the safety and suitability for the use of these large and complex systems will be made by the ANSPs that actually already ensures, through an EC verification, that systems meet the essential requirements of the EC Interoperability Regulation n. 552/2004 and the EASA’s safety requirements*
 - The large and complex systems, even if considered prototypes de facto, are made by parts and constituents (controller working positions, Communications Systems, Radar systems, FDPs, etc...) that are produced in series and type certificated. The manufacturer could sign a declaration of conformity (according EASA forms), in order to reduce the work for the verification on the site

3) Large complex satellite navigation and communication systems (Galileo, Iris,...)

- These are also large, complex systems that are produced in one “prototype” but the disproportion between the complexity of the systems and the capability of the ANSP is evident : in such a case, a “*verification*” against a “*certification basis*” could be carried out by a body different from the ANSP (e.g. **ESA**). A “type certificate” is not necessary, since there will be no production in series.
- For instance, ESA has delivered a *system qualification* for EGNOS (the ESSP Grouping will be certified as a service provider of positioning system by National Supervisory Authority).



EUROCAE

For developing detailed technical specifications EASA may rely on EUROCAE (as already today for some airborne parts) which will be required:

- to subsequently generate the ETSO's (European Technical Standing Orders), which are the normally basis for equipment approval
- to draft the 'procedures' to be followed to certify complex interoperable systems



Legacy systems

Legacy systems : *what will the policy be ?*

- Clearly most of the infrastructure both the one off large and complex and the repeated CNS elements exist today
- The approach taken by EASA with respect to this is key to the overall cost.
- It can be assumed that EASA **will not demand the re-certification** of existing systems (already declared safe and suitable for use)
- If such systems are upgraded, modifications should be made to comply with EASA specifications in a way that the practical and cost implications of this could be **cost effective**.

EASA Specifications and ETSOs must be sufficiently flexible!



ASD role

In line with the HLG Report and the principles of “**better regulation**” ASD has a role to play in drafting the EASA implementing rules :

1) Direct ASD-EASA dialogue

2) Participation of ATM Ground/on board Experts in the works of the “EASA Safety Standards Consultative Committee” (SSCC), through a specific ATM/ANS Subgroup