

Data Link Services Airworthiness and Conformance to Commission Regulation (EC) No 29/2009

Guidance to Applicants



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PURPOSE AND BACKGROUND INFORMATION

This document is intended as guidance to Applicants (Airspace Users, Original Equipment Manufacturers (OEMs), Supplemental Type Certificate Developers etc.) seeking **Data Link Services Airworthiness** and **Conformance to Commission Regulation (EC) No 29/2009**.

There are two sets of applicable regulations; the **European Commission Regulation (EC) No 29/2009** concerning interoperability and **EASA** regulations for Airworthiness. The fact that two sets of regulation co-exist has given rise to confusion within the Airspace User community on how to comply with the various requirements of two separate regulatory processes.

As Certificates issued by EASA will be accepted as an EC Declaration of Conformity or an EC Declaration of Verification this document provides guidance on how Applicants may obtain **EASA** Airworthiness Approval and at the same time demonstrate Compliance with **European Commission Regulation (EC) No 29/2009** using one single application process.

The implementation of Controller Pilot Data Link Communications (CPDLC) is identified in the European ATM Master Plan as a key improvement that will alleviate voice channel congestion. The **EUROCONTROL LINK 2000+ Programme** (Ref. 1*) was created to co-ordinate the implementation of CPDLC in Europe.

Implementation of CPDLC in Europe in airspace above FL285 became mandatory with the publication of **Commission Regulation (EC) No.29/2009** on January 16 2009 (Ref. 2*).

Commission Regulation (EC) No 29/2009 is Single European Sky (SES) legislation concerning interoperability; it is referred to as the Data Link Services Implementing Rule (DLS IR). The legislation lays down requirements for the implementation of Datalink Services within the EU Region; it applies to ground implementation by Air Navigation Service Providers (ANSPs), Communication Service Providers and Airspace Users operating as general air traffic (GAT) above FL 285. Figure 1 gives an overview of the region and the applicable implementation dates.

Answers to Frequently Asked Questions (Ref. 3*) on the DLS IR are available on the LINK 2000+ website (Ref. 1*).

What are the dates by which aircraft must be data link equipped? The date for forward fit is 1st January 2011; the date for retro fit is 5th February 2015.

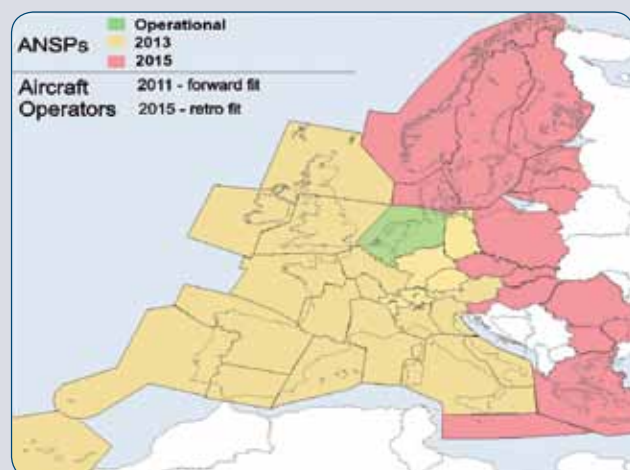


Figure 1: The European Datalink Region

The EUROCONTROL **Specification on Data Link Services** (Ref. 4*) was developed to augment the DLS IR, it provides the information needed by stakeholders to implement CPDLC services and the supporting technical infrastructure.

* See references on page 5

ONE PROCESS FOR DLS AIRWORTHINESS & EC REGULATION COMPLIANCE

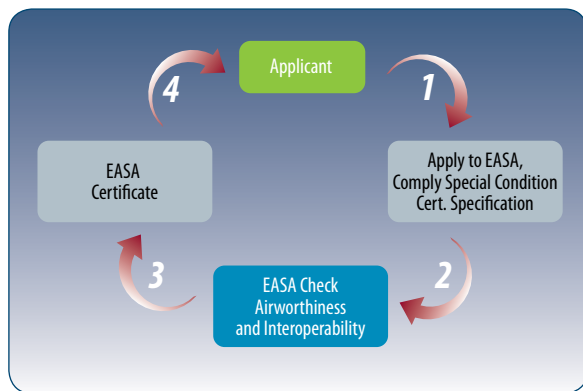


Figure 2: One Single Process for Airworthiness & Compliance to DLS IR

As shown in figure 2, it is possible for Applicants to obtain both an EASA Airworthiness Certificate and Compliance with EC 29/2009 with **One Single Process**.

This has been made possible by institutional arrangements between **EASA** and the **European Commission**. In accordance with the DLS IR Article 11 and Article 6a of the revised Regulation (EC) 552/2004, a **Certificate issued by EASA will also be considered as an EC Declaration**.

As from Q1 2011 the single process will be based on an **EASA Certification Specification** that will in turn be based on material developed for use before that date (see figure 3).

Before Q1 2011 the single process will be based on a **Special Condition**. Special conditions are a mechanism giving EASA the flexibility to act in ad hoc situations that may arise e.g. where a Certification Specification does not yet exist.

What is the Special Condition? At the time of writing EASA have informed the community that the Special Condition may be one of two cases depending on when the first application is received:

- **Case 1:** The Special Condition will be the existing AMC 20-11 for Airworthiness requirements plus additional requirements for Interoperability requirements related to the DLS IR.
- **Case 2:** The Special Condition will be the Notice of Proposed Amendment (NPA) for the EASA Certification Specification.



Figure 3: The EASA Timeline

Which case will apply depends on the date of an application by an Airspace User. Once EASA responds to the first applicant, that case will define the Special Condition to be applied to all applicants before the EASA Certification Specification is published.

Figure 3 summarises the timeline for the EASA processes.

Note: Applicants using the Special Condition will not need to re-apply once the Certification Specification is published.

APPLICANT ACTIONS

Applicants must show compliance to EASA Airworthiness requirements and conformance to the European Commission Interoperability requirements in the DLS IR. They will typically use Design Organisation Approvals (DOAs) to make the applications and demonstrate compliance but may also apply directly if the change can be considered as minor.



Before the EASA Certification Specification is published (expected Q1 2011) applicants may apply using the Special Condition, by doing so they can obtain an EASA certificate that also provides Compliance with the DLS IR.

Note: *This is not compulsory; Applicants are free to use other means to demonstrate compliance to EASA Airworthiness requirements and conformance to European Commission Interoperability requirements.*

Publication of the EASA Certification Specification (expected Q1 2011) will supersede the use of special conditions.

After obtaining the EASA certificate Airspace Users should update their operational manuals and if applicable obtain Operational Authorisation from their National Aviation Authority.

REFERENCES

Ref #	
1	The LINK 2000+ Programme http://www.eurocontrol.int/link2000
2	Commission Regulation (EC) No 29/2009 of 16 January 2009 laying down requirements on data link services for the single European sky: http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:013:0003:0019:EN:PDF
3	FAQ on Commission Regulation (EC) No 29/2009 http://www.eurocontrol.int/link2000/public/faq/faq_dlsir.html
4	EUROCONTROL Specification on Data Link Services, Edition 2.1, 28 January 2009: http://www.eurocontrol.int/link2000/public/site_preferences/display_library_list_public.html

FAQ

Commission Regulation (EC) No 29/2009 is Single European Sky (SES) legislation concerning interoperability; it is referred to below as the Data Link Services Implementing Rule (DLS IR):



What must be implemented?

Controller Pilot Data Link Communications services compliant with the interoperability provisions as defined in the DLS IR and as further elaborated in Eurocontrol Specification on Data Link Services V2.1 – 28/01/2009.
http://www.eurocontrol.int/link2000/public/site_preferences/display_library_list_public.html#1



What is the EASA Certification Specification?

The Certification Specification for Data Link Services (CSxxx – number not yet allocated) will be the standard means for Applicants to use in order to ensure compliance to both Airworthiness standards and Interoperability requirements. Before the CSxxx is published applicants can expect that special conditions will be applied.

Note: EASA Certification Specifications should not be confused with European Commission Community Specifications which are often also called C.



What is the Special Condition?

The Special Condition is a mechanism giving EASA the flexibility to act in ad hoc situations that may arise e.g. where an appropriate Certification Specification does not yet exist and an application has been received.

In the case of Data Link Services, EASA will develop Special Condition for an applicant to show compliance to the DLS IR and to EASA Airworthiness standards before the Certification Specification (CSxxx) has been published. This Special Condition will be based either on the existing AMC 20-11 for Airworthiness requirements plus additional requirements for Interoperability requirements or the Notice of Proposed Amendment (NPA) for the CSxxx. The special condition to be applied will depend upon when EASA receives the first application.

Note: The NPA will be functionally identical to AMC20-11 plus the additional requirements for interoperability.



What are EC Declarations of Conformity (DoC), Declarations of Suitability for Use (DSU) and Declarations of Verification (DOV)?

These are documents referred to by Regulation (EC) No. 552/2004 articles 5&6. They are declarations for conformity to EC legislation. DOVs are only relevant for ANSPs. DSU and DoC are applicable to airborne constituents. DSU is required when there is NO Community Specification on the subject in question; DoC is required when there is a Community Specification on the subject in question.

Airspace Users using the Special Condition or the EASA Certification Specification do not need to prepare these declarations since the EASA certificate will be considered as the DoC or DSU.



When is the Special Condition available?

The Special Condition will be available shortly after EASA receives the first application – an Application is required for EASA to develop the Special Condition. Applications can be made now.



When is the Certification Specification available?

Expected end Q1 2011.



Does the Special Condition imply changes to the AMC 20-11?

There will be no changes to the AMC 20-11. The AMC 20-11 will stay as it is. However the special condition will add the interoperability requirements to the AMC.



Once an Airspace User or OEM has shown compliance to CSxxx or to the Special condition is there any more work to be done?

If the Airworthiness approval has been received through the Special Condition, there is no additional certification to be performed once CSxxx has been issued. However the Applicant must approach their National Aviation Authority (NAA) for Operational Authorisation showing the EASA approvals obtained.



Are there additional costs related to the Special Condition?

The general "pricing policy" of EASA applies to the Special Conditions, see http://www.easa.eu.int/ws_prod/g/rg_regulations_fnc.php



Are there agreements between EASA and FAA on the Special Condition and the CSxxx??

There are agreements between EASA and FAA. The Special Condition will be communicated to the FAA who may then use it in their processes.



What is the MEL Policy for DLS equipage?

Data Link equipment is classed as a category C item. Items in this category shall be rectified within ten consecutive calendar days, excluding the day of discovery.



What tests must be performed by an Applicant to obtain Airworthiness?

Any specific tests that are required will be specified in the Special Condition and CSxxx.



Do the Special Condition and CSxxx apply to non-EU Applicants?

The DLS IR applies to all flights operating as general air traffic in accordance with instrument flight rules within member states airspace above FL 285. Non-EU operators should apply to their state (e.g. FAA). Alternatively applicants may apply to EASA for a certificate and hence compliance to the DLS IR, however, such applicants will be responsible to ensure their state's recognition of the EASA certificate. Non-EU States may adopt EASA documents/processes.



What are the consequences of an aircraft not being Data Link capable?

According to the DLS IR - if the aircraft is exempted there will be no operational restrictions; they will be controlled via voice. If the aircraft is not exempted they should be operated below FL285.



How do I get OPS Approval/Authorisation following Airworthiness?

The Applicant must approach their National Aviation Authority (NAA) showing the EASA approvals obtained.



Can I get Airworthiness without multi-frequency?

Airworthiness with limitations may be granted but that does not imply that Operational Approval to use Data Link will be granted.

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