



EASA
European Aviation Safety Agency



AERODROMES WORKSHOP

Podgorica, Montenegro

6 – 7 November 2014

Certification Specifications (CS)

Predrag Sekulic, Airports Regulations Officer

Your safety is our mission.

An agency of the European Union 

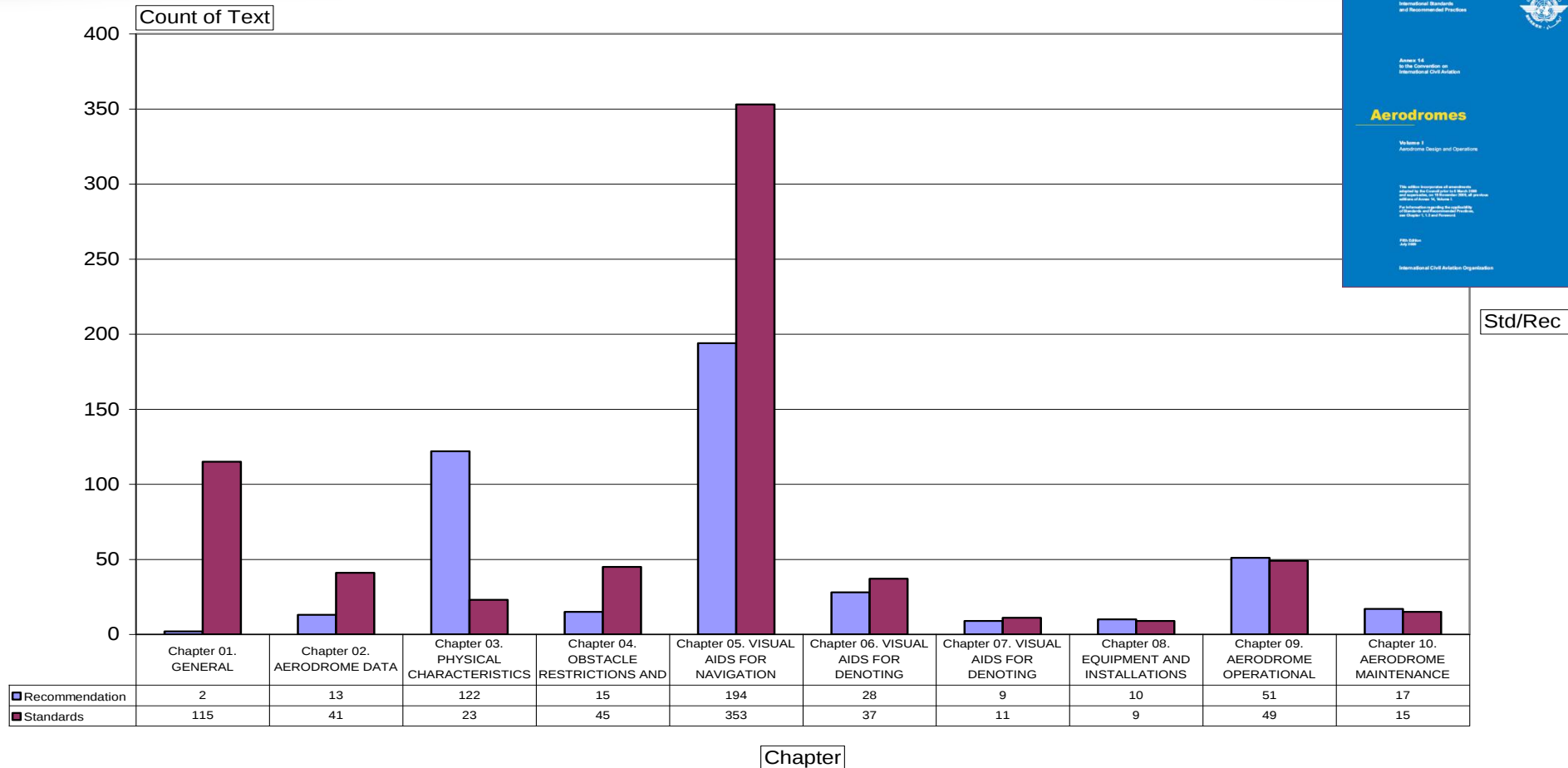
TE.GEN.00409-001

Certification Specifications (CS) are technical standards for aerodrome design





Annex 14 SARPs statistics

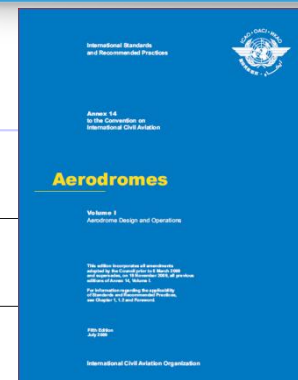
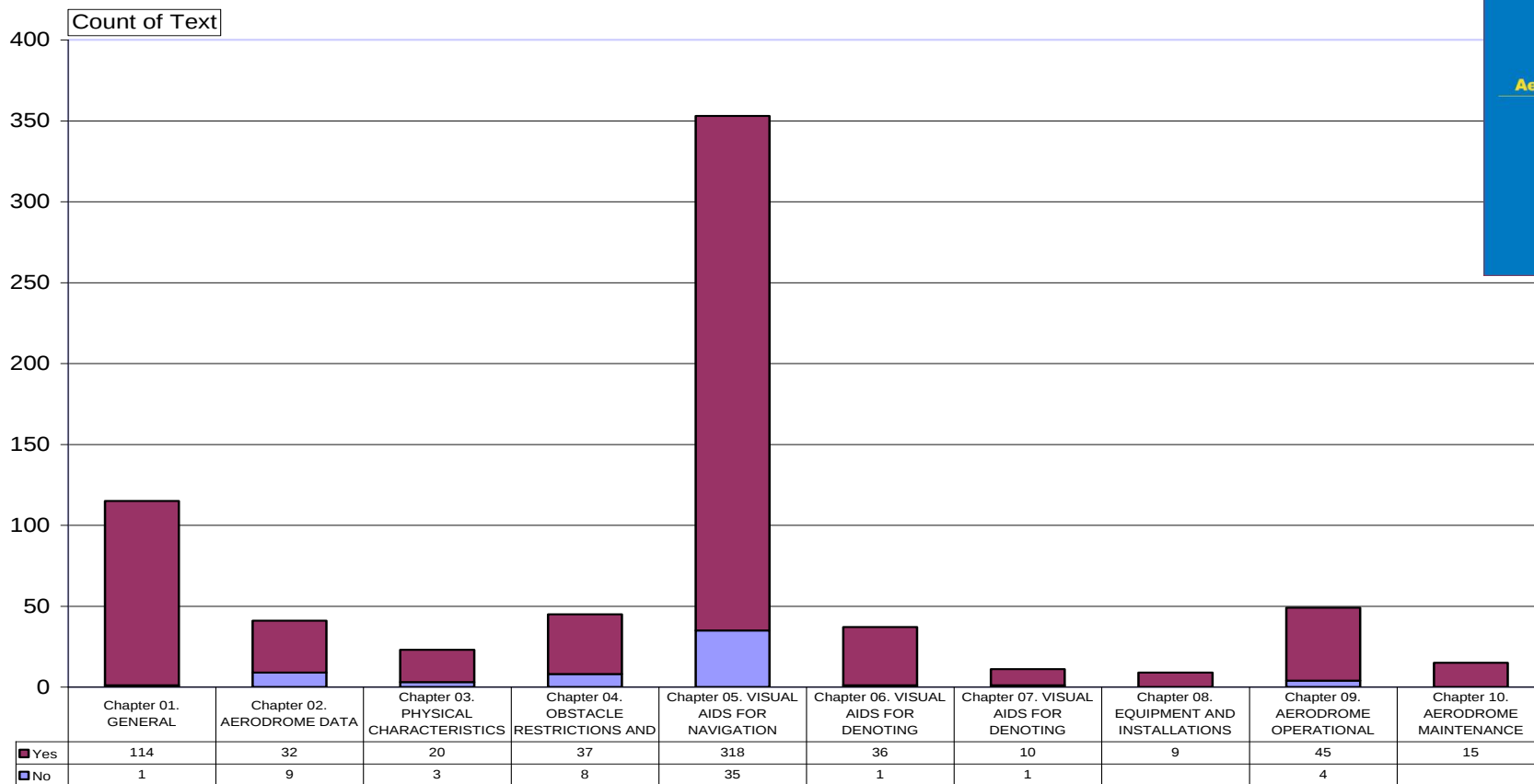


The number of **Standards and Recommendations** contained in the ICAO Annex 14, per Chapter among EASA Member States



Annex 14 SARPs statistics

Std/Rec Standards

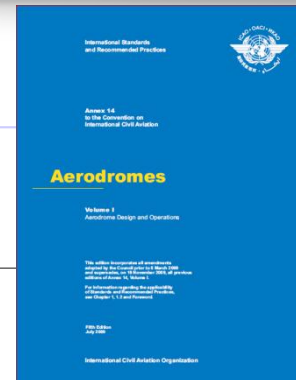


Chapter

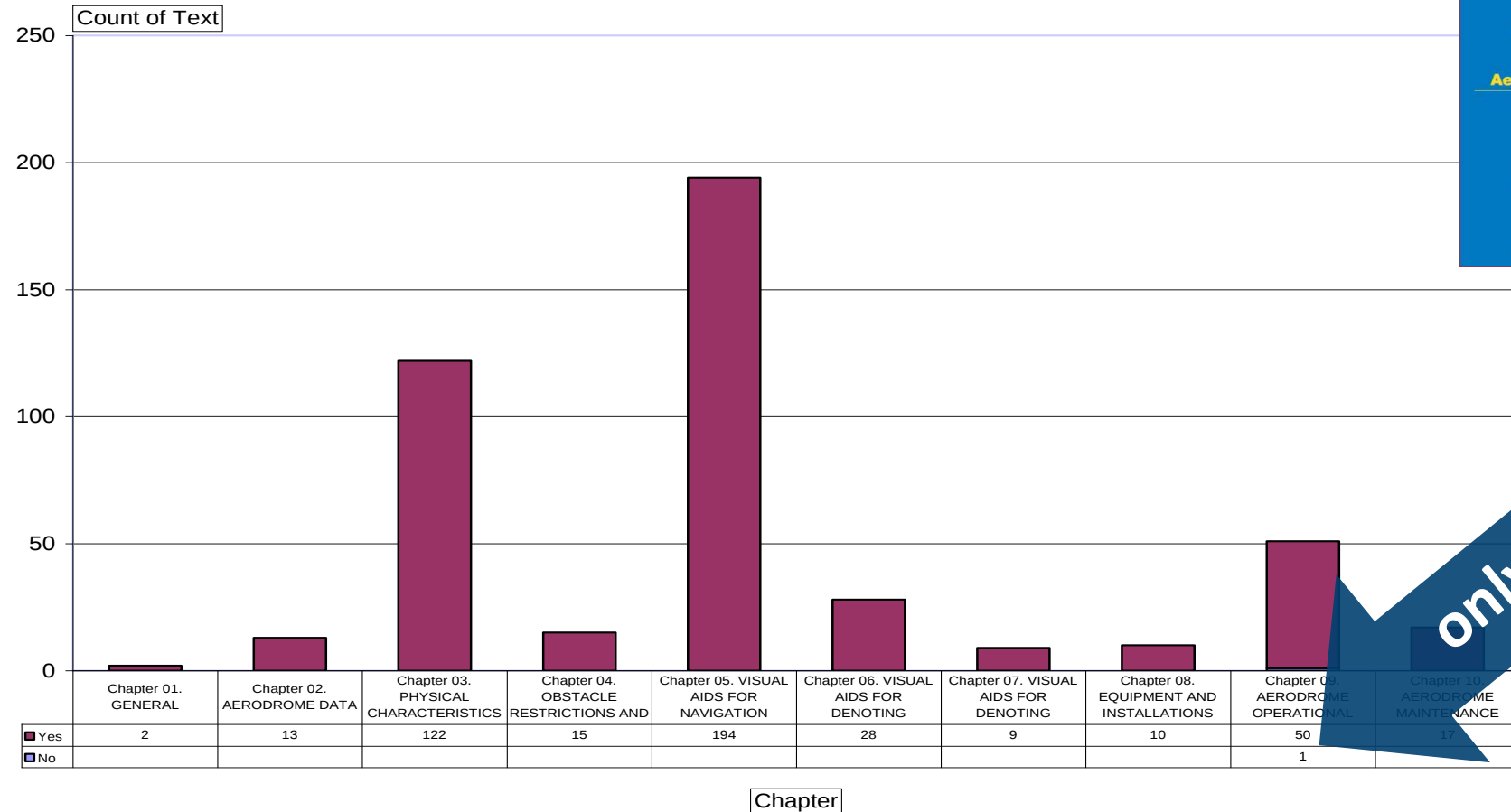
The number of **Standards** of Annex 14 for which a differences have been found among EASA Member States



Annex 14 SARPs statistics



Std/Rec Recommendation



The number of **Recommendations** of Annex 14 for which a differences have been found among EASA Member States



New aerodrome rules are only evolution and **harmonisation**





ICAO Standards: any specification for physical characteristics, configuration, equipment, performance, personnel or procedure ... and to which Contracting States will conform in accordance with the Convention;

impossibility of compliance: notification to the Council is compulsory under Article 38.



5.2.7 Runway side stripe marking

Application

5.2.7.1 A runway side stripe marking shall be provided between the thresholds of a paved runway where there is a lack of contrast between the runway edges and the shoulders or the surrounding terrain.

5.2.7.2 **Recommendation.** — *A runway side stripe marking should be provided on a precision approach runway irrespective of the contrast between the runway edges and the shoulders or the surrounding terrain.*

(ICAO Annex 14 Standard and Recommendation)



EASA Certification Specifications (CS) are technical standards adopted by the Agency indicating means to show compliance with the essential requirements of Annex Va and, if applicable, Annex Vb to Regulation (EC) No 216/2008 (*definition*).

- Annex Va - Essential requirements for aerodromes
- Annex Vb - Essential requirements for ATM/ANS and air traffic controllers



(EASA ADR CS Book 1)

ADR

CS ADR-DSN.L.550 Runway side stripe marking

(a) Applicability:

- (1) A runway side stripe marking should be provided between the thresholds of a runway where there is a lack of contrast between the runway edges and the shoulders or the surrounding terrain.
- (2) A runway side stripe marking should be provided on a precision approach runway irrespective of the contrast between the runway edges and the shoulders or the surrounding terrain.

(b) Location and characteristics:



ICAO Recommended Practice: any specification for physical characteristics, configuration, equipment, performance, personnel or procedure, ... is recognized as desirable in the interest of safety, ... and to which Contracting States will endeavour to conform in accordance with the Convention.



5.2.5 Aiming point marking

5.2.5.3 Recommendation.— *An aiming point marking should be provided at each approach end of:*

- a) a paved non-instrument runway where the code number is 3 or 4;*
- b) a paved instrument runway where the code number is 1; when additional conspicuity of the aiming point is desirable.*

(ICAO Annex 14 Recommendation)



EASA Guidance material (GM) is non-binding explanatory and interpretation material on how to achieve the requirements contained in the Basic Regulation, the IRs, the AMCs and the CSs.



information and examples only
to assist the user in the interpretation



(EASA ADR GM Book 2)

GM1 ADR-DSN.L.590 Aircraft stand marking

- (a) The distances to be maintained between the stop line and the lead-in line may vary according to different aircraft types, taking into account the pilot's field of view.
- (b) Apron markings are installed to support the safe operation of aircraft on stands and apron areas. Where appropriate procedures are employed, markings may not be required, giving flexibility of operations. Examples would include situations where aircraft marshallers are used or where aircraft are required to self-park on an open apron where different combinations of aircraft preclude dedicated markings. Specific markings/stands are normally more applicable for larger aircraft.



EASA CS, GM v/s ICAO SARPs

	ICAO	EU	
„Will conform“ *	Standard	(IR)	Binding
„Will endeavour to conform“ *	Recommendation	CS	Non-Binding
Assistance	Documents	GM	Assistance

* Reference: Annex 14, Foreword, 1.a



ICAO SARPs vs. EASA CSs

➤ Key differences

➤ ICAO

- Standard: shall
- Recommendation: *should*

➤ EASA

- No standards and recommendations
- Only “*should*” is used
- CSs become binding when included in the **Certification Basis (CB)**



EASA CS, example no. 1

CS-ADR-DSN.D.260 Taxiway minimum separation distance

- (a) The safety objective of minimum taxi separation distances is to allow safe use of taxiways and taxi lanes to prevent possible collision with other aeroplanes operating on adjacent runways or taxiways, or collision with adjacent objects.
- (b) The separation distance between the centre line of a taxiway and the centre line of a runway, the centre line of a parallel taxiway or an object should not be less than the appropriate dimension specified in Table D-1

Table D-1

(CS is composed of (a) Safety objective and of (b) the ICAO A14 Rec. text No. 3.9.8 that the separation distances are given in the Table. The remaining text of ICAO Rec No. 3.9.8 and 4 Notes have been moved to GM.)



EASA CS, example no. 1

Taxiway minimum separation distances

3.9.8 Recommendation.— *The separation distance between the centre line of a taxiway and the centre line of a runway, the centre line of a parallel taxiway or an object should not be less than the appropriate dimension specified in Table 3-1, except that it may be permissible to operate with lower separation distances at an existing aerodrome if an aeronautical study indicates that such lower separation distances would not adversely affect the safety or significantly affect the regularity of operations of aeroplanes.*

Note 1.— *Guidance on factors which may be considered in the aeronautical study is given in the Aerodrome Design Manual (Doc 9157), Part 2.*

Note 2.— *ILS and MLS installations may also influence the location of taxiways due to interferences to ILS and MLS signals by a taxiing or stopped aircraft. Information on critical and sensitive areas surrounding ILS and MLS installations is contained in Annex 10, Volume I, Attachments C and G (respectively).*

Note 3.— *The separation distances of Table 3-1, column 10, do not necessarily provide the capability of making a normal turn from one taxiway to another parallel taxiway. Guidance for this condition is given in the Aerodrome Design Manual (Doc 9157), Part 2.*

Note 4.— *The separation distance between the centre line of an aircraft stand taxilane and an object shown in Table 3-1, column 12, may need to be increased when jet exhaust wake velocity may cause hazardous conditions for ground servicing.* **(ICAO Annex 14)**



EASA CS, example no. 2

CHAPTER E APRONS

CS-ADR-DSN.E.345 — General

Aprons should be provided to permit the safe loading and off-loading of passengers, cargo or mail as well as the servicing of aircraft without interfering with the aerodrome traffic.

CHAPTER E — APRONS

GM-ADR-DSN.E.345 — General

Intentionally blank

(CS is composed of the amended text of the ICAO A14 Rec. No. 3.13.1)



3.13 Aprons

General

3.13.1 Recommendation.— *Aprons should be provided ~~where necessary~~ to permit the **safe load** on- and off-loading of passengers, cargo or mail as well as the servicing of aircraft without interfering with the aerodrome traffic.*

(ICAO Annex 14)



CS-ADR-DSN.L.520 General – Colour and conspicuity

Markings should be of a conspicuous colour and contrast with the surface on which they are laid.

- (a) Runway markings should be white.
- (b) Markings for taxiways, runway turn pads and aircraft stands should be yellow.
- (c) Apron safety lines should be of a conspicuous colour which should contrast with that used for aircraft stand markings. When it is operationally necessary to apply temporary runway or taxiway markings, those markings should comply with the relevant CS.

GM-ADR-DSN.L.520

(CS is composed of the amended text of the ICAO A14 'Standards' text No. 5.2.1.4 – 5.2.1.7, the remaining text and 4 Notes + Rec. have been moved to GM)



EASA CS, example no. 3

Colour and conspicuity

5.2.1.4 Runway markings shall be white.

Note 1.— *It has been found that, on runway surfaces of light colour, the conspicuity of white markings can be improved by outlining them in black.*

Note 2.— *It is preferable that the risk of uneven friction characteristics on markings be reduced in so far as practicable by the use of a suitable kind of paint.*

Note 3.— *Markings may consist of solid areas or a series of longitudinal stripes providing an effect equivalent to the solid areas.*

5.2.1.5 Taxiway markings, runway turn pad markings and aircraft stand markings shall be yellow.

5.2.1.6 Apron safety lines shall be of a conspicuous colour which shall contrast with that used for aircraft stand markings.

5.2.1.7 Recommendation.— *At aerodromes where operations take place at night, pavement markings should be made with reflective materials designed to enhance the visibility of the markings.*

Note.— *Guidance on reflective materials is given in the Aerodrome Design Manual (Doc 9157), Part 4.*
(ICAO Annex 14)



Beware of low
flying aircraft

There is no adequate CS for this sign!



EUROPEAN AVIATION SAFETY AGENCY
AGENCE EUROPÉENNE DE LA SÉCURITÉ AÉRIENNE
EUROPÄISCHE AGENTUR FÜR FLUGSICHERHEIT



Thank you!

predrag.sekulic@easa.europa.eu

Your safety is our mission.
easa.europa.eu