

Infraestructures del Transport Aeri

Introduction to airspace classes and ATS units

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Introduction

VFR: Visual Flight Rules

- *Visibility better than (5-)8 km (Special VFR)*
- *ATS flight plan optional (in «aeronautically developed» states...)*
- *Fewer training and equipments required*

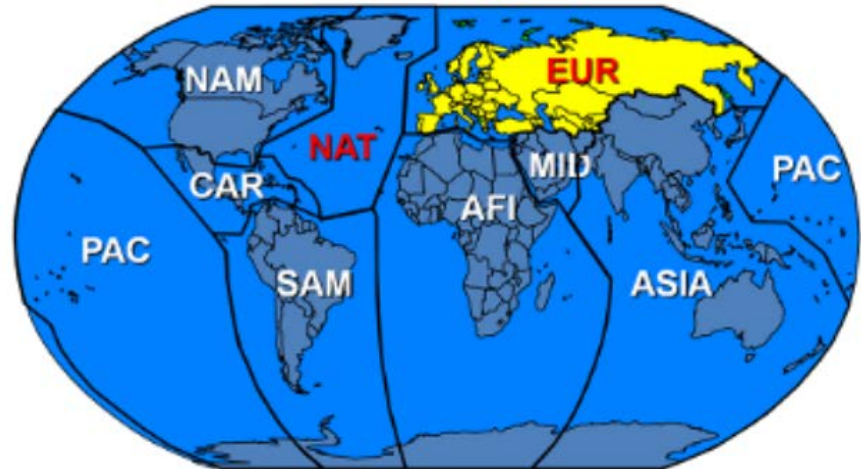
IFR: Instrumental Flight Rules

- *Use of Radionavigation means*
- *ATS flight plan must be filed AND approved*
- *More training/equipage is required*

ATS units

*ICAO (International Civil Aviation Organisation) divides the Earth in 9 **FIR** (Flight Information Regions):*

- **PAC** (Pacific)
- **NAM** (North America)
- **CAR** (Central America)
- **SAM** (South America)
- **NAT** (North Atlantic)
- **EUR** (Europe)
- **AFI** (Africa)
- **MID** (Middle East)



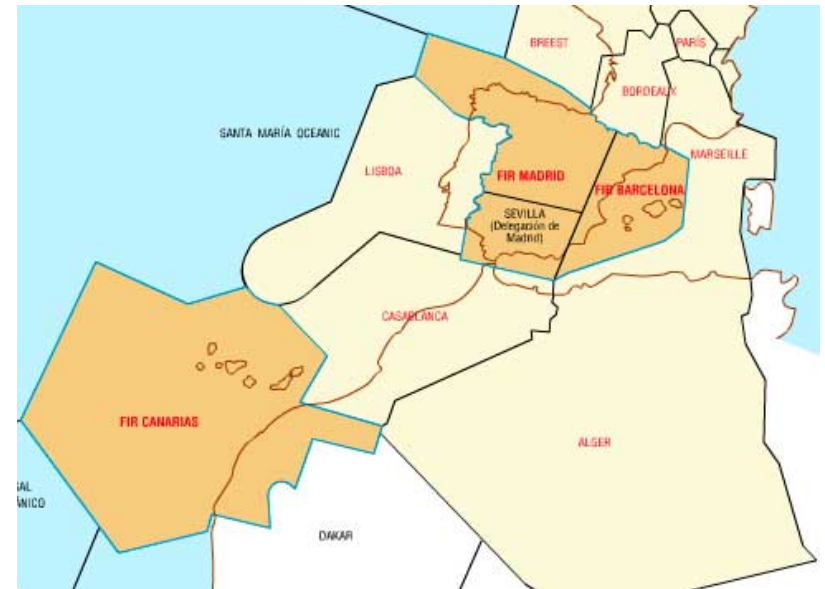
The limits of these FIRs do not correspond to the borders of the countries

ATS units

*Each of the previous FIR is also **sub-divided in more FIR.***

*In **Spain**, there are **three FIR:***

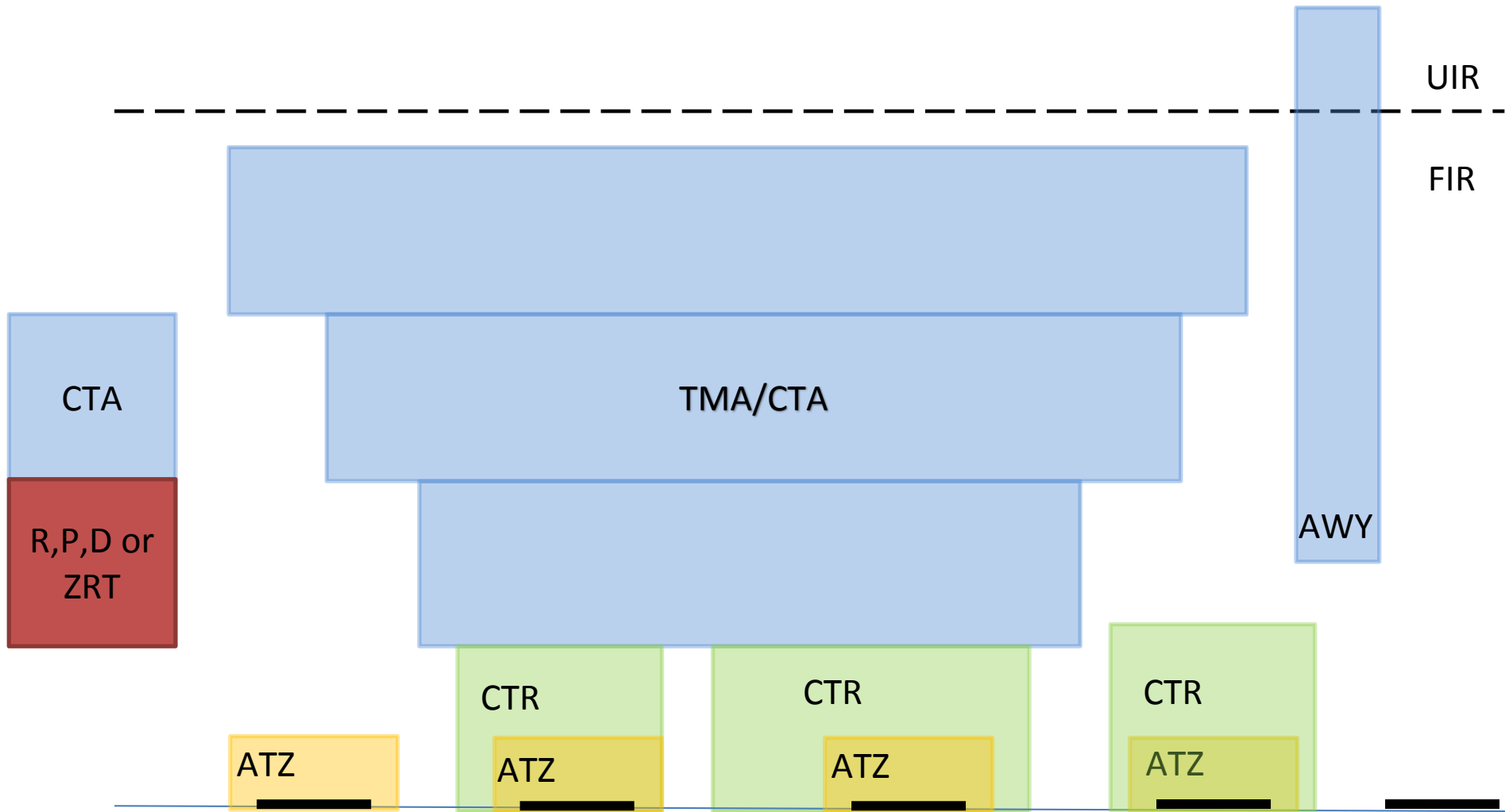
- ***FIR Madrid.***
- ***FIR Barcelona.***
- ***FIR Canarias.***
- ***(FIR Sevilla is a delegation of FIR Madrid).***



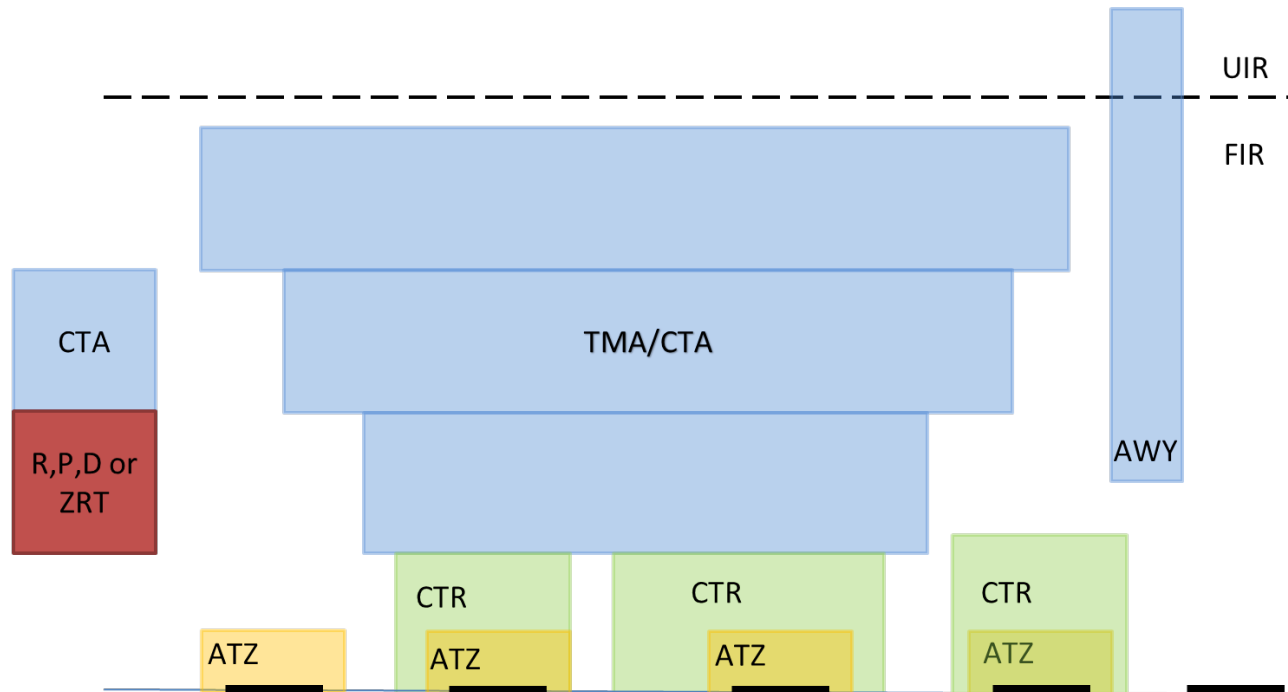
Vertically, each FIR is already sub-subdivided:

- ***Lower airspace (FIR) – 0 to FL245.***
- ***Upper Information Region (UIR) – FL245 to FL460.***

ATS units



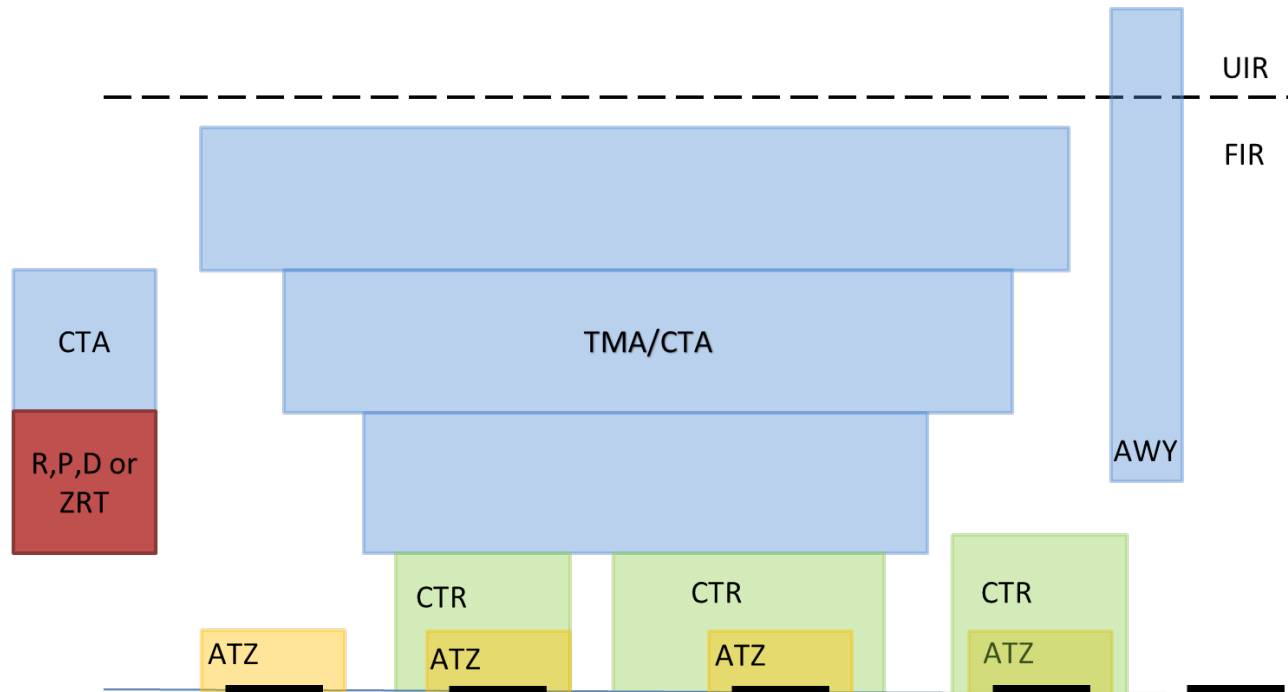
ATS units



ATZ (Aerodrome Traffic Zone)

- *Dedicated to the movement of aircraft in the vicinity of an aerodrome.*
- *It may be inside a CTR (Controlled Traffic Region).*

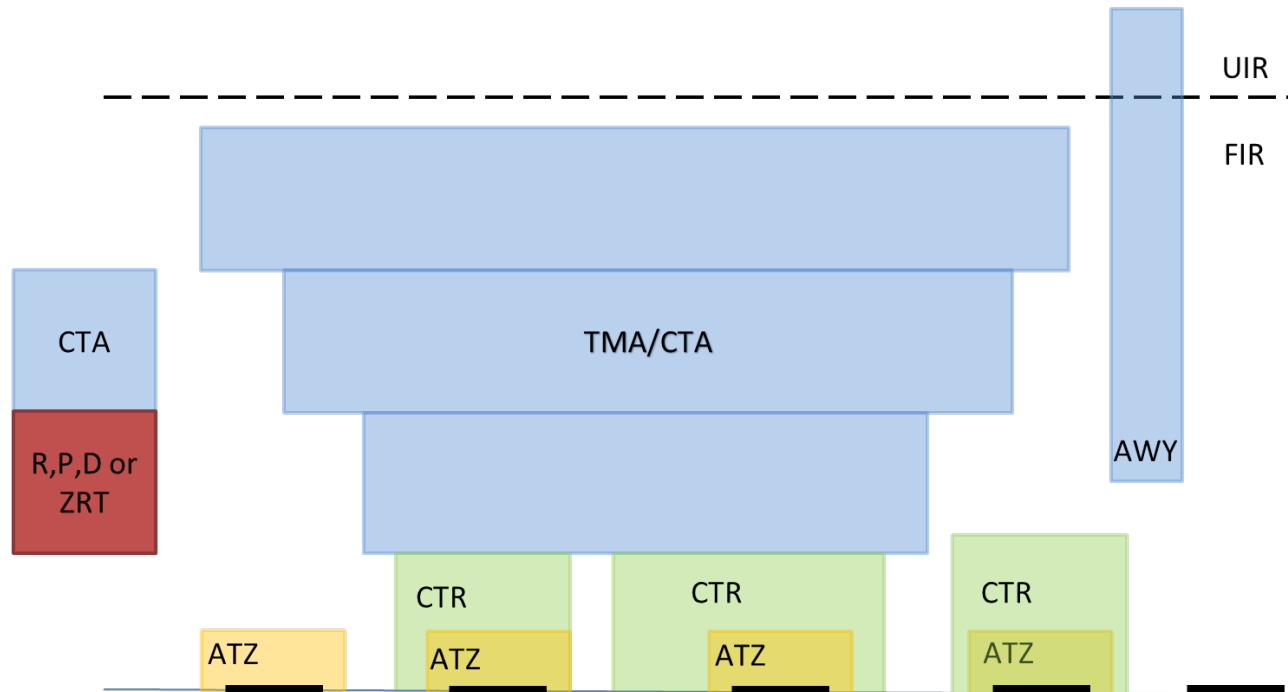
ATS units



CTR (Controlled Traffic Region)

- *Associated to one aerodrome in order to protect the IFR movements.*
- *One CTR can be used for more than one aerodrome.*

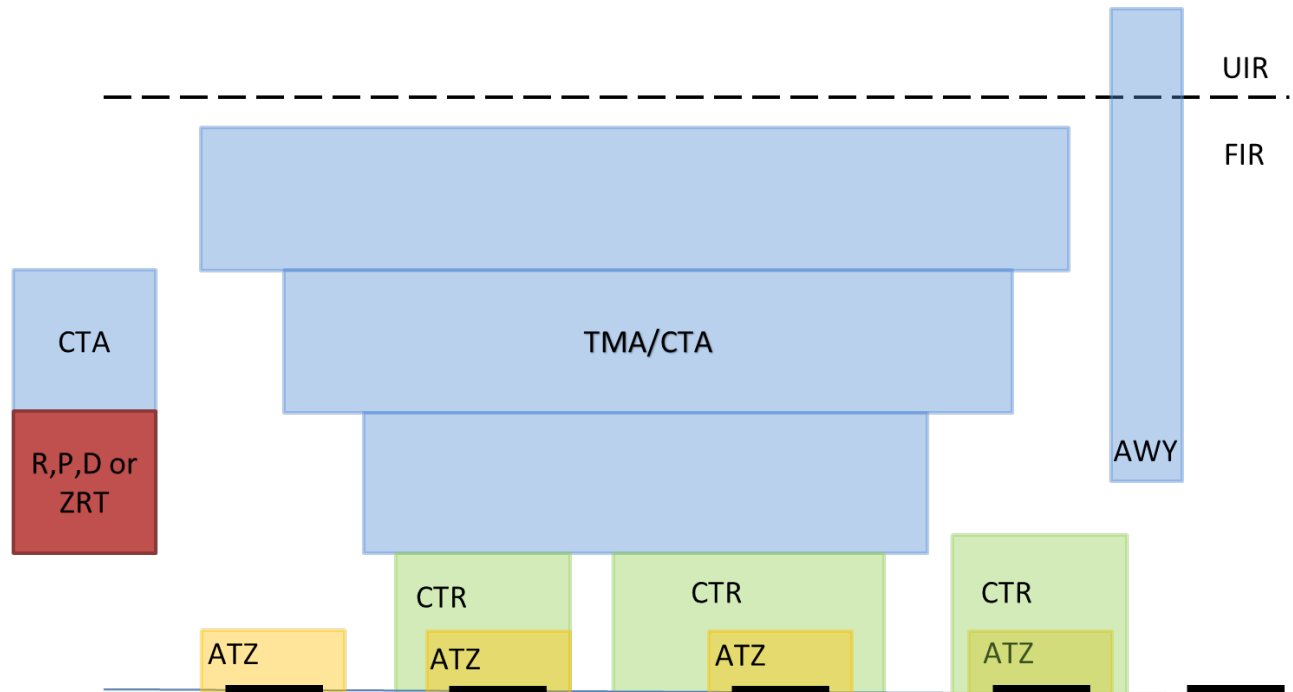
ATS units



TMA (Terminal Manoeuvring Area)

- *Typically above one or more airports where airways and departure/arrival procedures converge.*

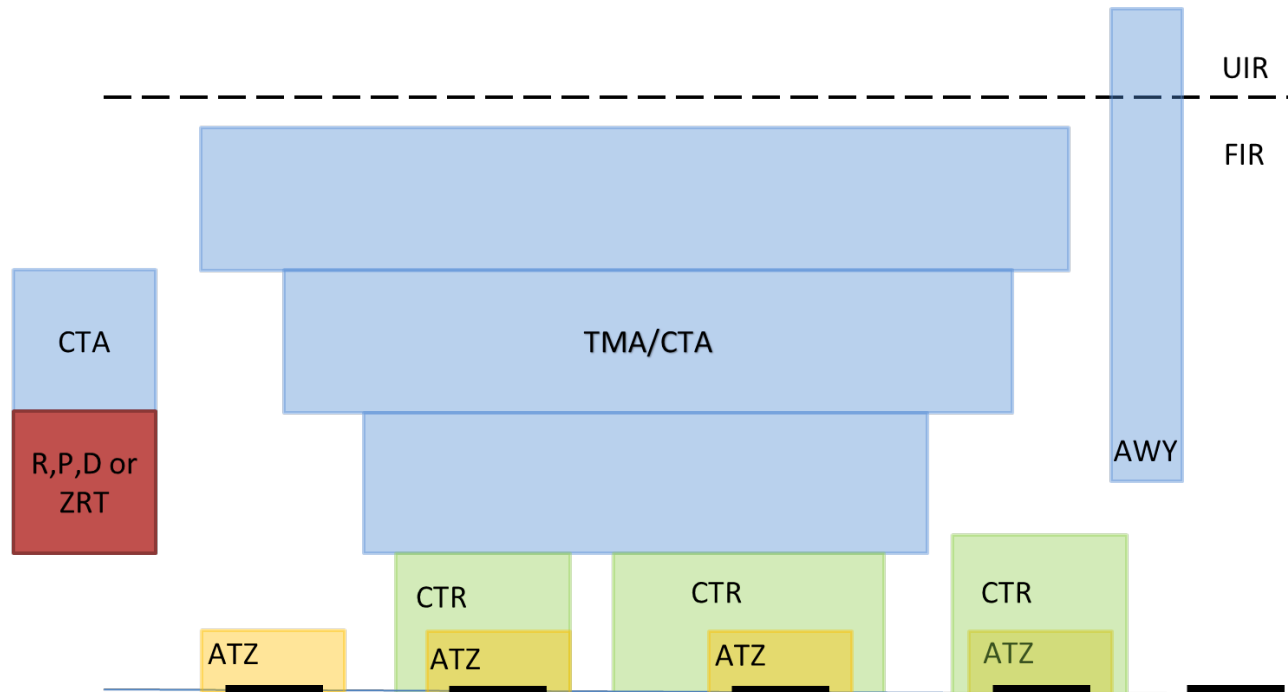
ATS units



CTA (Controlled Traffic Area)

- *Similar to TMA.*
- *Zone to be controlled because of an specific region.*
- *Can be set up over an airport or not.*

ATS units



- *Prohibited (“P”) – Forbidden.*
- *Restricted (“R”) – Restricted to specific conditions.*
- *Dangerous (“D”) – Some activities may affect aircraft.*
- *Zones Restricted Temporarily (ZRT) – Need of reservation for specific users.*

ICAO airspace classes

Airspace	Controlled					Non-Controlled	
Class	A	B	C	D	E	F	G
IFR allowed	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SVFR Allowed	Yes	Yes	Yes	Yes	Yes	No	No
VFR Allowed	No	Yes	Yes	Yes	Yes	Yes	Yes
Separation	IFR / IFR	IFR / IFR				IFR / IFR if possible	NONE
		IFR / (S)VFR		IFR / SVFR			
		(S)VFR / (S)VFR	SVFR/SVFR				
Traffic information	N/A		VFR / VFR	IFR / VFR	if possible	if possible	NONE
				VFR / VFR			
Clearance Required	Yes	Yes	Yes	Yes	Only for IFR	No	No

National regulations may differ from ICAO standards!



Thank you!!
Gràcies!!



References



<http://www.controladoresaereos.org/2016/05/25/como-se-divide-y-organiza-el-espacio-aereo-firctrmtaatzcta-video/>

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