

*Global Harmonization
Through Collaboration*

Information Standards

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Date: August 30, 2012



**Federal Aviation
Administration**

**AIR TRANSPORTATION INFORMATION
EXCHANGE CONFERENCE - (FEATURING
AIXM, WXXM AND FIXM)**

August 28, 2012 - August 31, 2012
NOAA Auditorium and Science Center
Silver Spring, Maryland



Standardization?



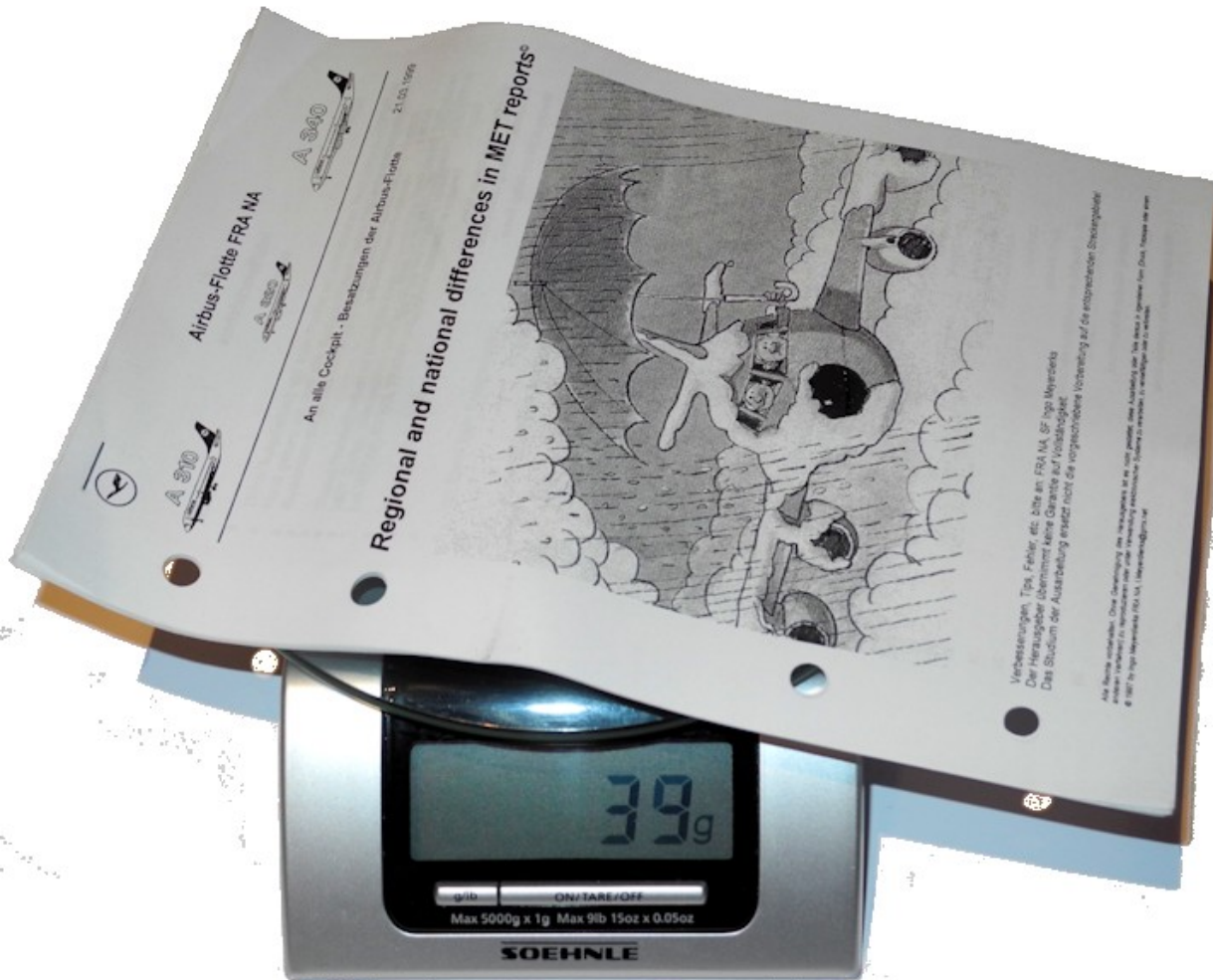
						
North America Grounded NEMA 5-15	Japan Non-grounded JIS C 8303	Europe German style CEE7/4 Schuko	Europe French style Schuko	Europe/Russia Non-grounded CEE7/16 Europlug	Great Britain Grounded BS-1363	Great Britain "Shaver socket" BS-4573
						
Australia/China Grounded AS-3112	Italy Grounded CEI 23-16	Switzerland Grounded SEV-1011	Denmark Grounded SRAF 1962/DB	Israel Grounded SI 32 (IS 16A-R)	India Grounded BS-546 "Small"	South Africa Grounded BS-546 "Large"

Many different regional and national standards...

A Real Life Solution



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Here the “solution” weighs 39g, has 29 pages and comes in A5 format.

Digital information may weigh nothing, but the weightiness of non-harmonized information is much greater.

ICAO Assembly Resolution 37-15 Appendix A



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ICAO Doc 9958 addresses in its Appendix A the formulation of Standards and Recommended Practices (SARPs) and Procedures for Air Navigation Services (PANS) for complex aeronautical systems.

It **creates a three-level hierarchy** of requirements and specifications for complex aeronautical systems:

1. “core” SARPs consisting of broad, high-level requirements in Annexes;
2. technical specifications in appendices to Annexes;

3. and related detailed technical specifications in separate documents.

ICAO Assembly Resolution 37-15 Appendix A cont.



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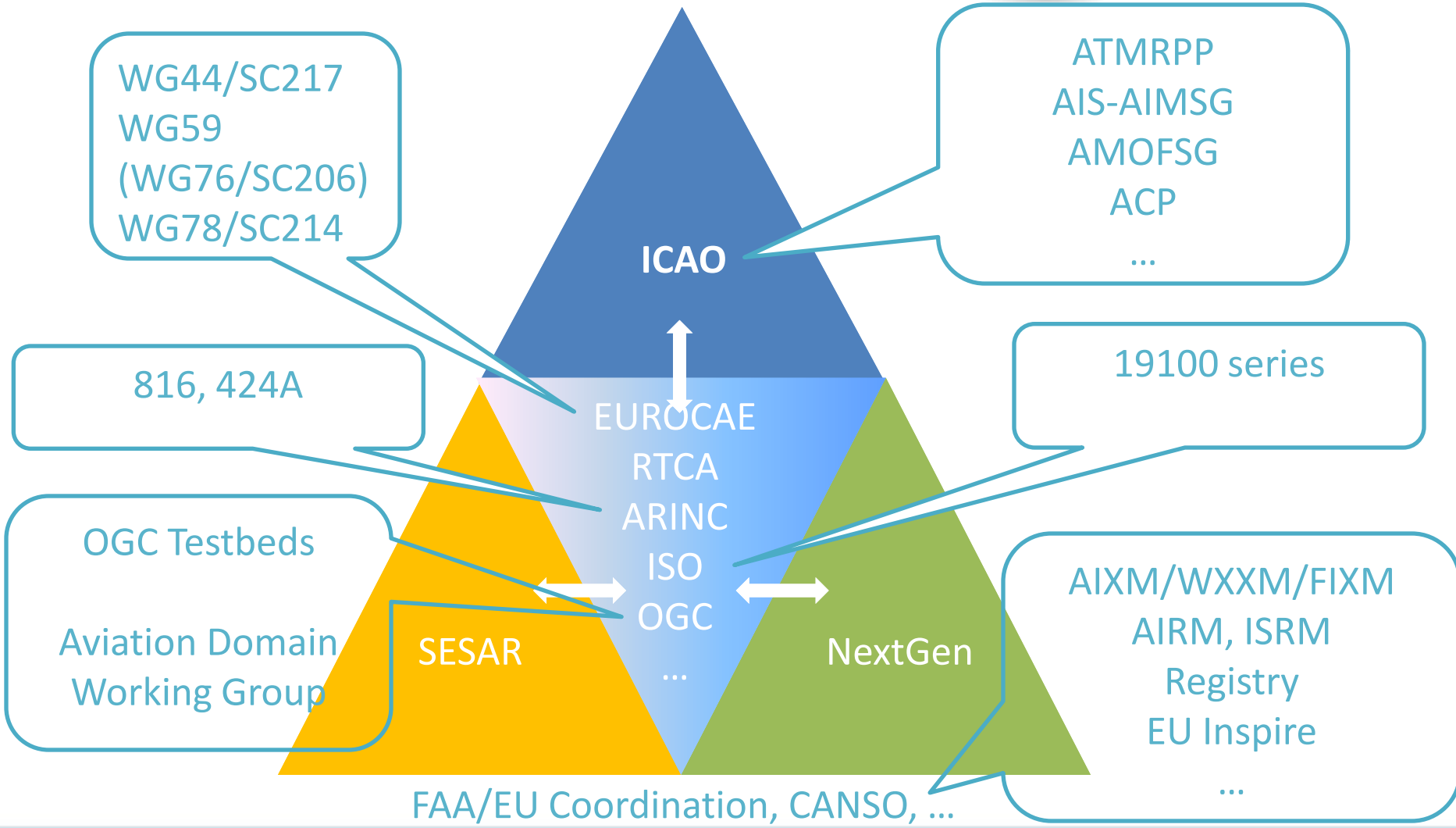
In the development of SARPs, procedures and guidance material, **ICAO should utilize, to the maximum extent**, appropriate and subject to the adequacy of a verification and validation process, the **work of other recognized standards making organizations.**

Material developed by these other standards-making organizations may be deemed appropriate by the Council as meeting ICAO requirements; in this case **such material should be referenced in ICAO documentation;**

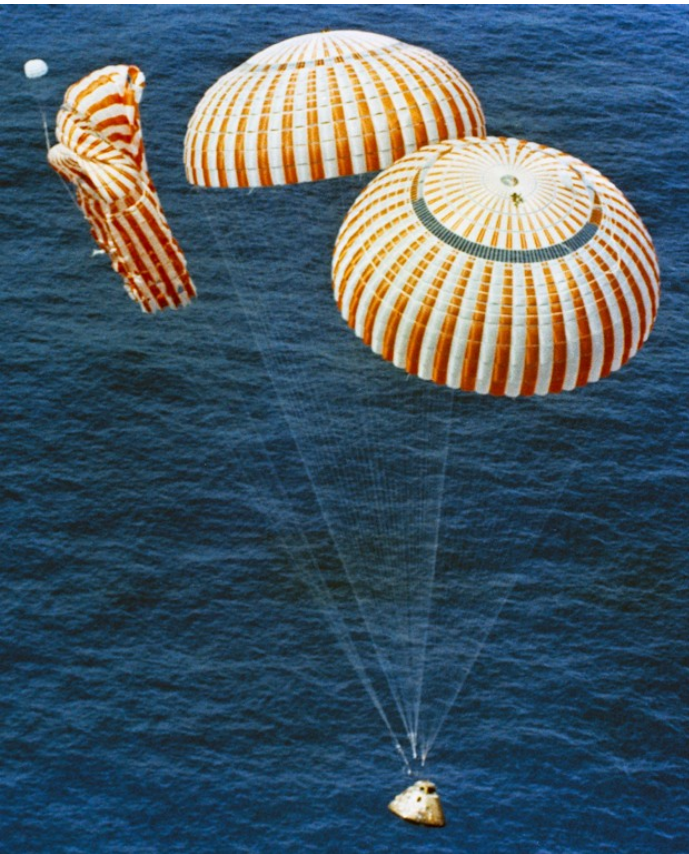
Current Aeronautical Information Global Coordination & Interoperability



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Good Standards



Standards are like parachutes – they work best when they are open!

They should also:

- be accessible
- be inclusive
- provide the right level of interoperability (simple vs. complex)
- not contradict other standards

CANSO Paper to ANC 12



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CANSO will submit a Working Paper asking ICAO to **use the ISO process in collaboration with relevant standards organizations** to develop detailed technical specifications for aeronautical information to:

- give stakeholders an acceptable level of **transparency and participation**
- maintain **global interoperability** objectives
- ensure that aviation specific **specifications** are **open and in congruence with generic international specifications**
- leverage the **global reach and legal status** of the ISO process

ICAO already uses the ISO process with great success to develop and maintain specifications for Machine Readable Travel Documents (MRTDs).

Information Standards Organizations

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OGC[®]
 Making location count.
 www.opengeospatial.org

GeoServer

ISO TC211 (ISO 19100)

ISO

IEC

WMO

OMG[®]
 OBJECT MANAGEMENT GROUP

UNIFIED MODELING LANGUAGE

ICAO • OACI • ICAO

国际民航组织 • ICAO

ARINC

RTCA
 THE GOLD STANDARD FOR AVIATION SINCE 1935

SAE INTERNATIONAL[®]

EUROCAE

W3C[®]

IETF[®]

ANSI
 American National Standards Institute

cen

CENELEC

ETSI

...

- Organizations fully integrated into the ISO process
- Organizations partially integrated into the ISO process

Participation in the ISO Process (examples)



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Which ISO Technical Committee?



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ISO Technical Committee (TC) 20 Aircraft and Space Vehicles with a secretariat provided by OGC is being considered as an appropriate body

The current draft TORs foresee specification activities in the following areas:

AIXM, WXXM, FIXM, reference models (AIRM/ISRM), Systems Engineering (common services, interfaces, information security (assurance), data processing/handling, registry, ...)

Resulting specifications could be directly used to demonstrate regulatory compliance

The Result: Global Detailed Technical Specifications



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EN 13138-1:2012 Buoyant Aids to be Worn

EN 71-1 Safety of Toys Part 1
EN 71-3 Safety of Toys Part 3

EN 20105-A02, ISO 105-A02

EN 15649-1:2010
EN 15649-2:2010

EN ISO 105-E03:1996
EN ISO 105-E04
EN ISO 105-X12



Tests:
EN ISO 3696:1995
EN ISO 12402-9:2006

Summary



CANSO position: Detailed technical specifications for aeronautical information should be developed using the **ISO process in close collaboration with other standardization bodies** in order to:

- give stakeholders an acceptable level of **transparency and participation**
- maintain **global interoperability** objectives
- ensure that aviation specific **specifications** are **open** and in **congruence with generic international specifications**
- leverage the **global reach** and **legal status** of the ISO process

States and stakeholders should actively contribute to the development of detailed technical specifications for aeronautical information as outlined

Questions



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Contact Information



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