Enhancing Aviation Safety through Integration of the Aeronautical English Language Field on SAT OESB Reports:

A Call for Collaboration between Aviation Industry and Language Researchers.

Virginia Mignoni SAT SOG/DECEA



Grupo de Estudos em Inglês Aeronáutico Aeronautical English Research Group

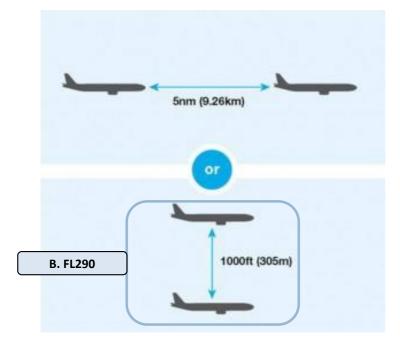


Roadmap

- 1. Separation and RVSM Airspace
- 2. RMAs
- 3. NAT and SAT Region
- 4. NAT OESB
- 5. SAT Region Challenges Regarding Language
- 6. SAT P/T Future Actions



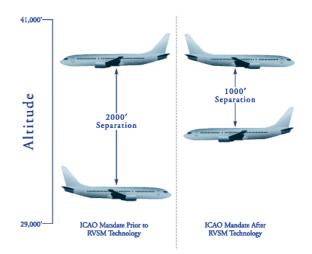
Airspace Separation Standards



Separation standards are based on the provisions of ICAO Doc 4444.

Reduced Vertical Separation Minimum (RVSM)

RVSM was implemented to reduce the vertical separation above flight level (FL) 290 from 2000-ft minimum to 1000-ft minimum.

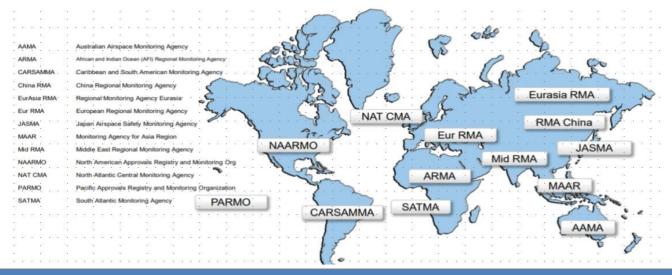


Regional Monitoring Agencies

In all regions where RVSM had been implemented, it would be necessary for ICAO **Planning and Implementation Regional Groups (PIRGs)** to initiate programs for continuously monitoring aircraft height-keeping performance to ensure that risk levels remained below the **Target Level of Safety (TLS)**.

Consequently, oversight bodies termed **Regional Monitoring Agencies (RMAs)** were established worldwide.

There are 13 ICAO-Endorsed RMAs



The RMA will provide Safety Oversight Services in connection with the implementation and continued safe use of RVSM within the designated airspace.

An RMA can be summarized as having five primary functions (as outlined in ICAO Doc 9937):

- 1. Establish and maintain a database of RVSM approvals.
- Monitor aircraft height-keeping performance and the occurrence of large height deviations (LHD), and report results appropriately.
- **3.** Conduct safety and readiness assessments and report results appropriately.
- 4. Monitor operator compliance with State approval requirements after RVSM implementation.
- **5.** Initiate necessary remedial actions if RVSM requirements are not met.

NAT Region

-1997, RVSM was implemented on NAT Region; and

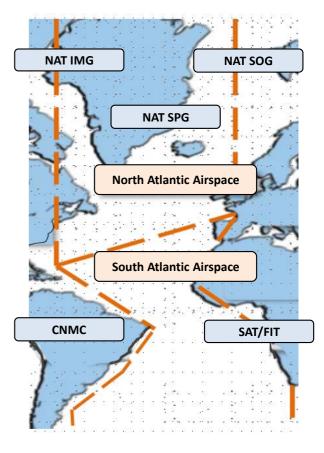
- NAT CMA was established in 1985 by the ICAO North Atlantic System Planning Group (NAT SPG).



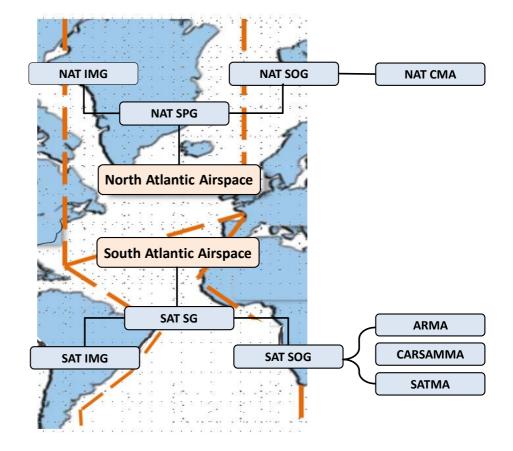
ICAO NAT 2030 Vision Workshop

Need for coordination and harmonization between the North and South Atlantic regions:

The effort encompasses **operations**, **infrastructure**, and **programs** to achieve a safer, more efficient, environmentally responsible, and cost-effective ATS service throughout the Atlantic Ocean region.

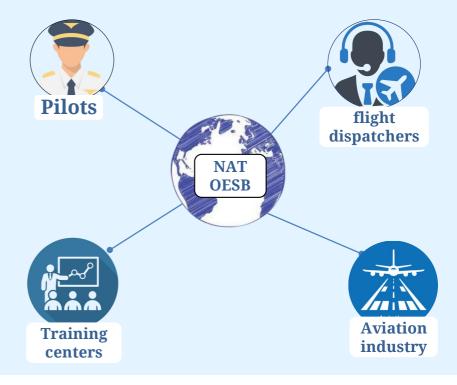


The current version of the **NAT Group** dates to 2009, while a similar version of SAT **Groups was** established in **October 2021.**



NAT Oceanic Errors Safety Bulletin (OESB)

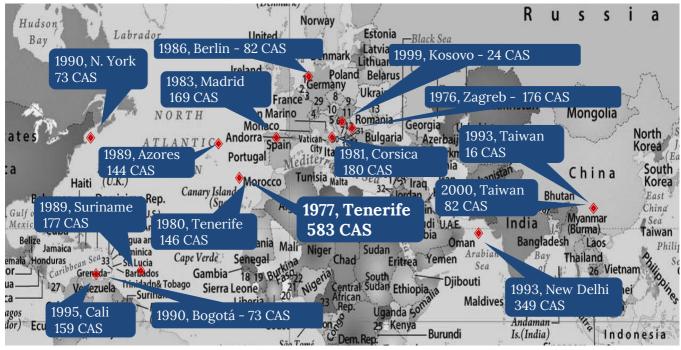
The NAT OESB serves as a valuable resource for disseminating best practices and error-avoidance strategies for operations within the NAT (North Atlantic) Region.



NAT OESB Topics

- Top Tips for Operators
- Large Height Deviations
- Gross Navigation Errors (GNEs)
- Erosion of Longitudinal Separation
- <u>Controller Pilot Data Link Communications (CPDLC)</u>
- Contingencies
- General
- Flight Planning
- SLOP Strategic Lateral Offset Procedures

LHUFT in Aviation Accidents



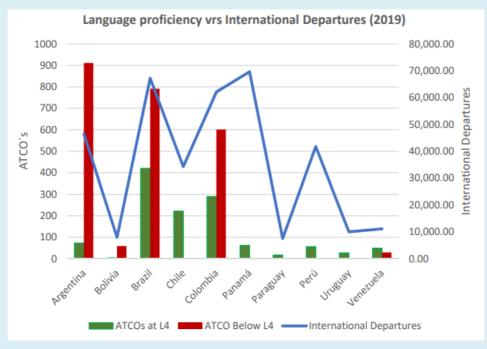
SAT Area - MEMBER STATES

- Lisbon (Portugal)
- Canaries (Spain)
- Casablanca
 - (Morocco)
- SAL (Cape Verde)
- Cayenne (France)

- Dakar (Senegal)
- Abidjan (Ivory Coast)
- Montevideo (Uruguay)
- Luanda (Angola)
- Atlantic (Brazil)

- Piarco (Trinidad and Tobago)
- Accra (Ghana)
- Namibia (Windhoek)
- Johannesburg (South Africa)
- Ezeiza and Comodoro Rivadavia (Argentina)

Thirty Seventh Regional Aviation Safety Group Pan America Executive Steering Committee Meeting (ESC/37)



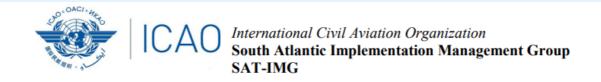
COD	E/COLOR	LHD DESCRIPTION	LOCATIONS OF LHD	LHD Co	CAR	SAM	CAR/
A	0	Flight crew failing to climb or descend the aircraft as cleared	A B C D E1 E2 C D E1 E2 C D E1 E2 C D E1 E2 C D E1 E2 C D E1 E2 C D E1 E2 C D E1 E2 C D C D E1 E2 C D C D E1 E2 C D C D E1 E2 C D C D E1 E2 C D E1 E2 C D D E1 E2 C D E1 E2 C D E1 E2 C D E1 E2 C D E1 E1 C C D E1 E2 C D E1 E2 C D E1 E1 C C D E1 E2 C C C E1 E2 C C C E1 E2 C C E1 E2 C C E1 E2 C C E1 E2 C C E1 E2 C C E1 E2 C C E1 C E2 C E1 C C C E1 C C C E1 C C C C E1 C C C C	B	3 3 2	5	
В		Flight crew climbing or descending the aircraft without ATC clearance			2 36	168	
с	•	Incorrect operation or interpretation of airborne equipment (incorrect operation of FMS, incorrect transcription of clearance, following flight plan or original clearance rather than ATC clearance or re-clearance, etc)		G	26 2	199 1 1	1
D	\circ	ATC system loop error (ATC issues incorrect clearance or flight crew misunderstands clearance message)			4	3	
E1		Coordination error in the ATC-to-ATC transfer of control responsibility as a result of human factors issues (incorrect time estimate/actual, flight level, ATS route, etc)		78	3 383	1	
E2		Coordination error in the ATC-to-ATC transfer of control responsibility as a result of human factors issues (non-existent coordination)	GUAYAQUIL GUAYAQUIL LIMA FIR AMAZONICA BRASILIA ANTOFAGASTA ANTOFAGASTA CORDOBRESISTENCE CURITIBA				
G		Aircraft contingency event leading to sudden inability to maintain assigned flight level (pressurization failure, engine failure, etc)					
н	•	Airborne equipment failure leading to unintentional or undetected change of flight level (altimetry system errors, etc)					
I	•	Turbulence or other weather related causes					
L		An aircraft provided with RVSM separation is not RVSM approved (flight plan indicating RVSM approval but aircraft not approved, ATC misinterpretation of flight plan, etc)	SAM SANTIAGO MENDOR MONTEVIDEO PUERTO MONT				
М	•	Other					
				O RIVADAVIA			

Topics to be considered on SAT OESB

Differences between ICAO and Regional Phraseologies

The use of Plain English in Aviation as a Lingua Franca or as Global Language

Language used during coordination (misunderstanding - lack of proficiency) The need for a more proficient speaker to adapt their language when communicating with someone who is less proficient."



SOUTH ATLANTIC IMPLEMENTATION MANAGEMENT GROUP

SECOND MEETING

(Paris, France, 24 to 27 July 2023)

Agenda Item 5: Any other business

ENHANCING AVIATION SAFETY THROUGH INTEGRATION OF THE AERONAUTICAL ENGLISH LANGUAGE FIELD IN SAT OESB REPORTS: A CALL FOR COLLABORATION BETWEEN AVIATION INDUSTRY AND LANGUAGE RESEARCHERS

(Presented by SAT SOG)



SAT-IMG/02 - WP/17 20/07/2023

Why	To improve aviation safety by addressing language-related factors and enhancing communication practices in the SAT region.	
What	Develop a strategy encompassing: a) Introduce an Aeronautical English language field in SAT OESB reports.	
	b) Establish a collaborative framework with Aviation English researchers.	
Who	Γ IMG/02, SAT SOG, Aviation Industry Stakeholders, Aeronautical English earchers, GEIA and ICAEA.	
When	SAT IMG/02 and SAT SOG/02-03	

By including an Aeronautical English language field on SAT OESB reports, we aim for:



- Integration for Enhanced Identification of Language-Related Safety Concerns;
- Proactive Identification and Mitigation of Language-Related Safety Risks;
- Improved Communication Training Programs;
- Targeted Risk Mitigation Measures; and
- Early Identification and Dissemination of Language-Related Trends.



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Invitation to Kick-off Meeting for Project Team on Aeronautical English Language Field SAT OESB

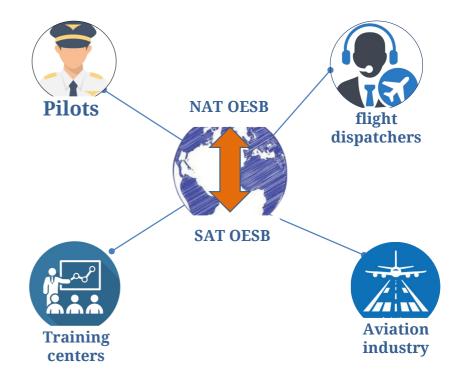
Meeting tentative date: November 14th - Time: 12:00 UTC - MS Teams

Agenda:

- 1. Introduction to the Project Team and Objectives
- 2. Project Overview: Aeronautical English Language Field SAT OESB
- 3. Roles and Responsibilities of Team Members
- 4. Project Timeline and Milestones
- 5. Communication and Collaboration Tools
- 6. Q&A Session



Dedicated Aeronautical Language Field on SAT Oceanic Errors Safety Bulletin (OESB)



"The best way to predict the future is to create it."

(Peter Drucker)

