

**REGIONAL FRAMEWORK FOR
THE IMPLEMENTATION OF A
GLOBAL ATM SYSTEM**

PROGRESS AND CHALLENGES

Ref: AN-Conf./11 –WP/27
AN-Conf./11 –WP/04

AT REGIONAL LEVEL

- REGIONAL AIR NAVIGATION PLAN (DOC. 8733)
- ATM FUNCTIONS IMPLEMENTATION PROGRAMME DEVELOPED BY GREPECAS
- SUBREGIONAL PLANS
- NATIONAL AIR NAVIGATION PLANS

**VISION STATEMENT ON ATM OPERATIONAL
CONCEPT**

To achieve an interoperable global air traffic management system for all users during all phases of flight that meets agreed to levels of safety, provides for optimum economic operations, is environmentally sustainable, and meets national security requirements.

**HOW AND WHY ACHIEVE
HARMONIZATIONS?**

- ICAO ELABORATES CONCEPTS, STRATEGIES, PROCEDURES, STANDARDS AND GUIDANCE MATERIAL
- PLANNING AND IMPLEMENTATION UNDER RESPONSIBILITY OF STATES/INTERNATIONAL ORGANIZATIONS MUST BE ORGANIZED AND HARMONIZED

**ICAO PARTICIPATION TO ACHIEVE
OBJECTIVES**

- GLOBAL CNS/ATM PLAN (DOC. 9750)
- ATM OPERATIONAL CONCEPT (AN-Conf/11 WP4)
- ELEVENTH AIR NAVIGATION CONFERENCE

WHY HARMONIZE

- FRAGMENTED AIRSPACE AND DIVERSITY IN ATC INFRASTRUCTURE
- LACK OF SIMILAR FUNCTIONALITY
- DIFFERING REQUIREMENTS AT THE NATIONAL, SUBREGIONAL AND REGIONAL LEVELS
- MULTIPLE OPERATIONAL AND TECHNICAL OPTIONS
- DIFFERING TIME FRAMES FOR IMPLEMENTATION

HOW HARMONIZE

- IMPLEMENTATION STRATEGY
- IMPLEMENTATION PROCESS
- IMPLEMENTATION MECHANISM

IMPLEMENTATION MECHANISM

- AT STRATEGIC LEVEL:
GLOBAL PLAN PROVIDES GLOBAL FRAMEWORK
- AT FUNCTIONAL LEVEL:
REGIONAL PLANNING AND IMPLEMENTATION PROCESS IS THE PRINCIPAL ENGINE

IMPLEMENTATION STRATEGY

- GENERAL STRATEGY WITHIN ATM GLOBAL CONCEPT FRAMEWORK
- COMBINATION OF METHODS (UP-DOWN DOWN-UP)
- GRADUAL CHANGES AT AGREED PERIOD
- COLLECTIVE COMMITMENT

PROGRESS ACHIEVED

- GLOBAL ENVIRONMENT
- CAR/SAM REGIONAL ENVIRONMENT

IMPLEMENTATION PROCESS

- POLITICAL PLANE
- INSTITUTIONAL ASPECTS
- OPERATIONAL MATTERS
- TECHNICAL ISSUES

IMPLEMENTATION PROGRAMMES

- *RNAV ROUTES*
- *RNP*
- *RVSM*
- *ATS SAFETY MANAGEMENT AND QUALITY ASSURANCE*

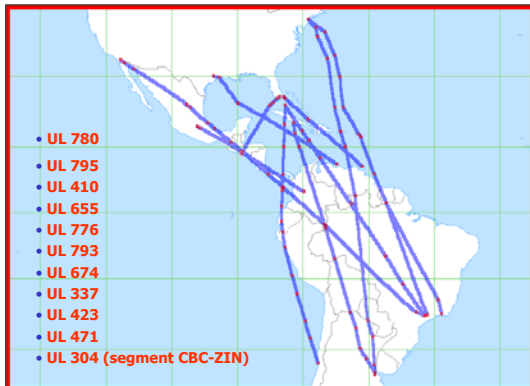
RNAV ROUTES

- 11 RNAV ROUTES IMPLEMENTED IN THE LAST THREE YEARS
- 13 RNAV ROUTES TO BE IMPLEMENTED DURING 2003
- 17 RNAV ROUTES PENDING FOR NEXT YEARS
- RNAV ROUTES WERE IMPLEMENTED IN THE SOUTH ATLANTIC IN COORDINATION WITH NACC, WACAF, ESAF AND EUR/NAT ROs:
 - ✓ Atlanta/Capetown
 - ✓ Atlanta/Johannesburg
 - ✓ Antigua/Ascension Island

ATLANTA CAPE TOWN – ATLANTA JOHANNESBURG AND ANTIGUA/ASCENSION ISLAND



11 RNAV ROUTES IMPLEMENTED



BENEFITS IN IMPLEMENTATION OF RNAV ROUTES

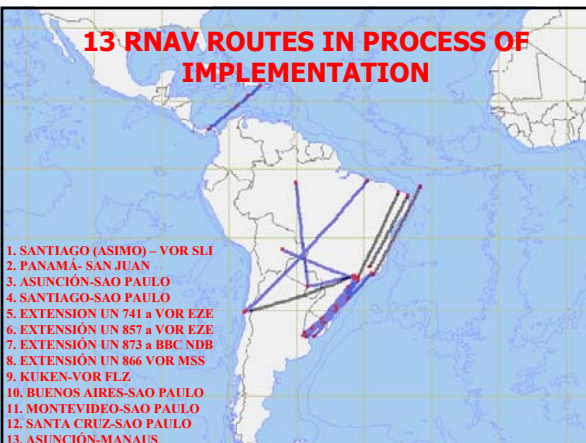
- ANNUAL SAVINGS IN 11 RNAV ROUTES IMPLEMENTATION AMOUNTS TO:
(Source: IATA)

MORE THAN US \$ 9 Million

- WHEN ALL RNAV ROUTES ARE IMPLEMENTED, ANNUAL SAVINGS WOULD BE:
(Source: RLA/98/003 Project)

APPROXIMATELY US \$ 30 Million

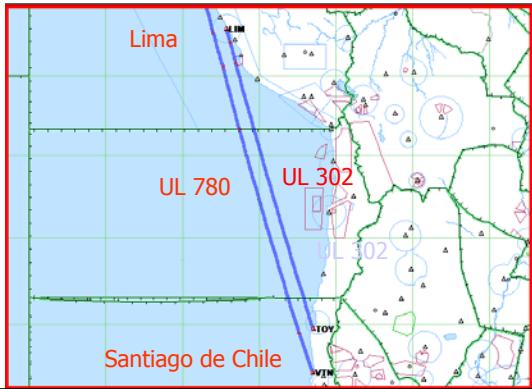
13 RNAV ROUTES IN PROCESS OF IMPLEMENTATION



RNP IMPLEMENTATION

- PRE-OPERATIONAL IMPLEMENTATION OF RNP10 IN SANTIAGO/LIMA SEGMENT RNAV ROUTES UL 780 AND UL 302 :
22 January 2004
- RNP IMPLEMENTATION PROGRAMME IN CAR/SAM REGIONS: IN DEVELOPMENT THROUGH GREPECAS

RNAV ROUTES RNP 10 PARALLEL



ATS QUALITY ASSURANCE PROGRAMME IN THE CAR/SAM REGIONS

- 2 CAR/SAM QA SEMINAR: **Mexico 2000 - Lima 2002**
- 3 WORKSHOPS:
Trinidad & Tobago 2001 - El Salvador 2002 - Lima 2003
- NACC QA SIP TO ASSIST 6 CAR STATES IN ITS IMPLEMENTATION
- SAM QA SIP TO HARMONIZE THE CAR/SAM ATS QA PROGRAMME WITH ISO 9001:2000 STANDARDS
- IN THE REGION, 7 SAM STATES HAVE STARTED ACTIVITIES TO IMPLEMENT QA PROGRAMMES
- IFFAS : PROJECT WAS PRESENTED TO ASSIST SAM STATES IN IMPLEMENTATION OF QA PROGRAMMES

RVSM IMPLEMENTATION

- WILL BE IMPLEMENTED ON 20 JANUARY 2005
- AS PER CBA ELABORATED BY RVSM/TF's :
 - EXPECTED SAVINGS IN CAR/SAM REGIONS:
US \$ 312' 095, 523.54
 - CAR/SAM COST-BENEFIT RATIO:
4.42

CHALLENGES AND PLANS FOR THE FUTURE

- ADOPT MEASURES FOR INTERPHASE
- ELABORATE NEW ATM REQUIREMENTS
- PROMULGATE SARPS
- HARMONIZE AIR NAVIGATION SYSTEMS BETWEEN ICAO AND CNS/ATM PARTNERS TO ACHIEVE A GLOBAL ATM SYSTEM

ATS SAFETY MANAGEMENT AND ATS QUALITY ASSURANCE PROGRAMMES

OBJECTIVES:

- REDUCE ATS CONTRIBUTION TO THE MINIMUM POSSIBLE IN INCIDENTS AND/OR ACCIDENTS
- SOLVE THE DEFICIENCIES IDENTIFIED AT ATS UNITS
- ENSURE THE QUALITY OF ATS PROVISION THROUGH THE CONTINUOUS DECREASE OF ATS INCIDENT RATES PURSUING CUSTOMERS SATISFACTION