

ST. LUCIA ATM/CNS TRANSITION PLAN

1. BACKGROUND

- 1.1 St. Lucia has recognised the increasing limitations Of Its present Air Navigation system (ANS) and the improvements needed to take Civil Aviation into the 21st century. The limitations of its present system are intrinsic to the system itself and the problems cannot be over unless it embarks on the concepts of the new communications, Navigation and surveillance (CNS) Systems to support future enhancements to Air Traffic Management (ATM). St. Lucia is aware that implementation of the concept would require regional co-ordination and planning, and it has established a Committee to oversee all aspects pertaining to its ATM/CNS transition.

2. INTRODUCTION

- 2.1 The Fourth GREPECAS Meeting held In Panama City September 20-26, 1994 approved the draft CAR/SAM ATM/CNS transition plan prepared by the ATM/CNS sub-group, by means of Conclusion 4/38. Conclusion 4/42 relating to the preparation of national plans for the transition to the new ATM/CNS system, taking into account the General Guidelines established in the Draft ATM/CNS Regional Plan, was also approved, and it was noted that Regional Plans must allow for easy co-ordination within the region and with adjacent regions.

3. SCOPE

- 3.1 The scope of St. Lucia ATM/CNS Transition Plan includes:
1. The airspace overlying the St. Lucia CTR and the adjacent TMAS and CTR namely, the Adams TMA, the Fort-De-France TMA and the E.T. Joshua CTR, also the Piarco CTA/FIR west of the St. Lucia CTR.

4. CURRENT SITUATION SHORTCOMINGS

4.1 COMMUNICATIONS

- 4.1.1 Air/ground communication is effected via VHF radios.

4.2 NAVIGATION

- 4.2.1 VOR/DME and NDB support the ICAO ATS route structure within the St. Lucia CTR and also for purpose of approaches.

4.3 SURVEILLANCE

4.3.1 Surveillance is achieved via voice position reports.

4.4 AIR TRAFFIC MANAGEMENT

4.4.1 Air Traffic Management suffers from:

- (a) Lack of Radar Coverage
- (b) Airspace Configuration
- (c) Dissimilar ATC procedures
- (d) Unreliable communication facilities and language difficulties
- (e) Uncoordinated provision and Implementation of present CNS equipment.

5. FUTURE ATM/CNS SYSTEM

5.1 St. Lucia accepts in principle the ICAO ATM/CNS concept.

5.2 In pursuance of developing St. Lucia's ATM/CNS system, a comprehensive assessment and analysis of the characteristics and capabilities of the present system was undertaken. As a result, the following is proposed for St. Lucia ATM/CNS transition.

5.3 COMMUNICATION

(a) SHORT TERM 1999-2002

Continued use of VHF voice and improved AFS for the E/CAR region.

(b) MEDIUM TERM 2003-2007

Continued use of VHF voice and progressive implementation of SSR Mode S datalink. Progressive Implementation of ATN.

(b) LONG TERM 2008-2012

Continued use of VHF voice.
Implementation of VHF datalink.
Full implementation of ATN.

5.4 NAVIGATION

(a) SHORT TERM 1998-2002

Continued utilisation of NDBs and VOR/DMES.
Continued utilisation of FMS and GPS trials and demonstrations.

(b) MEDIUM TERM 2003-2007

Continued utilisation of NDBS and VOR/DMEs.
Continued utilisation of FMS and OPS trials and demonstrations.
Progressive implementation of RNAV/RNP.
Progressive implementation of GNSS.
Continued use of Barometric Altimetry

(c) LONG TERM 2008-2012

Progressive withdrawal of NDBs and VOR DMES.
Full Implementation of RNAV/RNP.
Progressive Implementation of GNSS.
Continued utilisation of barometric altimetry.

5.5 SURVEILLANCE

(a) SHORT TERM 1998 -2002

Continued use of voice position reports.
Mandatory carriage of transponders.

(b) MEDIUM TERM 2003-2007

Continued use of voice position reports.
Progressive Implementation of SSR (Mode A/C).

(c) LONG TERM 2008-2012

Continued utilisation of voice position reports.
Full utilisation of SSR (Mode A/C).

5.6 AIR TRAFFIC MANAGEMENT

5.6.1 **Short Term**

Evaluation of Current ATM Capacity
Dissemination of Info ATM/CNS Concepts
Dissemination of Human Aspects of ATM/CNS
Instruction and Training of ATM/CNS

5.6.2 **Medium Term**

Evaluation of Current ATM Capacity
Continued Dissemination of Info ATM/CNS Concepts
Continued Dissemination of Human Aspects of ATM/CNS

Continued Instruction and Training of ATM/CNS
Windshear Detection

5.6.3 **Long Term**

Evaluation of Current ATM Capacity
Continued Dissemination of Info ATM/CNS Concepts
Continued Dissemination of Human Aspects of ATM/CNS
Continued Instruction and Training of ATM/CNS
Windshear Detection
Air/Ground Data Applications

Commensurate with the developments in CNS and Plan for progressive automation combined with improved planning will allow for more dynamic airspace and air traffic management in the St. Lucia CTR.

5.7 EVALUATION OF RESULTS

The following are guiding principles which the Plan must recognise.

- (a) The plan must be practical and progressive in its implementation.
- (b) Each step of the transition will necessarily undergo a trial and demonstration phase followed by a certification process, which produces an operational introduction phase.
- (c) Early benefits must be achievable, measurable and in reasonable step with investment.
- (d) Synchronisation of the airline plan with the ICAO, ATM/CNS CAR/SAM Regional implementation plan must be maintained to ensure that benefits will materialise.
- (e) The real regional environment and operating realities must be recognised.
- (f) Controller training must be achieved prior to implementation.
- (g) Operators should provide information including pilot training activity, equipment installation status/plans, the number of GNSS routes/approaches flown, the efficiency gained vs. conventional routes/approaches, problems encountered and any suggestions for enhancements to the plan.
- (h) St. Lucia CAA shall provide information including Controller training activity, impact of GNSS operations, controller workload, Air Traffic Management, and any suggestions for enhancements to the Plan.

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20th February, 2002