International Civil Aviation Organization
CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
Sixth Meeting of the Air Traffic Management / Communications, Navigation and Surveillance Subgroup (ATM/CNS/SG/6)
Boca Chica, Dominican Republic, 30 June - 4 July 2008

Agenda Item 2: Based on the AGC/7 meeting results, review of proposals for GREPECAS/15 concerning the future treatment of ATM and CNS matters

THE IMPORTANCE OF INTEGRATING AIR TRAFFIC MANAGEMENT WITH COMMUNICATIONS, NAVIGATION, AND SURVEILLANCE OPERATIONALLY, TECHNICALLY, AND ORGANIZATIONALLY

(Presented by the United States of America)

SUMMARY

This paper is respectfully submitted to address the draft AGC/7 decision to disband the Air Traffic Management/Communications, Navigation, and Surveillance Subgroup (ATM/CNS/SG) while concurrently elevating the existing ATM and CNS Committee structures to Subgroup status under GREPECAS. The basis of the decision appears to include perceived gains in administrative efficiency. Such gains, however, cannot be achieved at the expense of the technical and operational integration envisioned by ICAO and the global community over a decade ago with the establishment of the first CNS/ATM Plan. The current ATM/CNS Subgroup structure can instead be optimized to increase efficiency and improve coordination without separating these two key areas. In lieu of a more effective joint Subgroup, U.S. support for the aforementioned draft decision is contingent upon a clearly documented means for the two new proposed Subgroups to perform the CNS/ATM integration so necessary for the successful implementation of a clear majority of the ICAO Global Plan Initiatives.

1. Introduction

1.1. The AGC/7 Meeting held in Lima, Peru, from 3-4 March 2008 yielded Draft Decision AGC/7/03, which proposes the disbanding of the ATM/CNS mechanism as it stands today, accomplishing its work plan by establishing separate ATM and CNS Subgroups. The Draft Decision is being proposed in order to streamline the consideration of ATM and CNS issues in GREPECAS.

1.2. Over a decade ago, ICAO recognized the inextricable connection between CNS and ATM. Their integration was desired in order to provide synergistic benefits not achievable by either on its own, and was required to support the significant changes envisioned regarding the role of the aircraft in ATM.

1.3. The ICAO *Global Air Navigation Plan*, which provides the foundation for all regional initiatives, was formally known as the *Global Air Navigation Plan for CNS/ATM Systems*. The importance of CNS/ATM integration for the majority of the Initiatives contained therein cannot be overstated.

1.4. It is recognized that every Planning and Implementation Regional Group (PIRG) is structured differently for many reasons; however, the GREPECAS ATM/CNS/SG should be viewed as a model for other regions to emulate.

1.5. There are other ways to streamline the consideration of ATM and CNS issues in GREPECAS. Administrative efficiency cannot come at the expense of technical and/or operational integration. A clear understanding of the integration mechanism envisioned to link the two new proposed Subgroups is required before the United States can support the Draft Decision.

2. CNS/ATM and the Global Air Navigation Plan

2.1. Of the 23 Global Plan Initiatives (GPIs) outlined in the *Global Air Navigation Plan*, 14 require at least CNS/ATM coordination, and at most, operational/technical integration. These 14 GPIs are listed below:

- GPI-2. Reduced Vertical Separation Minima
- GPI-5. Performance-Based Navigation
- GPI-6. Air Traffic Flow Management
- GPI-7. Dynamic and Flexible ATS Route Management
- GPI-8. Collaborative Airspace Design and Management
- GPI-9. Situational Awareness
- GPI-11. RNP and RNAV SIDs and STARs
- GPI-12. Functional Integration of Ground Systems with Airborne Systems
- GPI-14. Runway Operations
- GPI-15. Match IMC and VMC Operating Capacity
- GPI-17. Data Link Applications
- GPI-18. Aeronautical Information
- GPI-19. Meteorological Systems
- GPI-21. Navigation Systems

2.2. Successful regional implementation, therefore, requires that the CNS and ATM aspects of each GPI are planned, developed, and implemented in an integrated manner, in close coordination with one another.

3. CNS/ATM and the U.S. Next Generation Air Transportation System (NextGen)

3.1. The Federal Aviation Administration takes an integrated CNS/ATM approach, teaming resources from air traffic operations, technology development, and aircraft systems to develop and implement improvements to oceanic operations, airspace design, data communications, automatic dependent surveillance, and performance-based navigation procedures.

3.2. NextGen is based on the provision of performance-based operations and services, including key capabilities such as collaborative ATM, trajectory-based operations and separation management,

modernized surface operations, weather impacted operations, and dynamic resource and aerospace management.

3.3. Every one of these capabilities includes a CNS and an ATM component, which the United States intends to integrate from the outset. Global harmonization and regional coordination will also reflect this integrated approach.

4. GREPECAS is the Model, not the Exception

4.1. The decision to merge the ATM and CNS Subgroups at GREPECAS/2 was predicated on the need to jointly discuss issues common to both groups. Since that time, and in light of the global adoption of the CNS/ATM concept, such a dialogue is even more important now than it was when that decision was made.

4.2. It is recognized that GREPECAS is the only PIRG to combine ATM and CNS, but the United States considers that reality to be a credit to the region and a model for the world. The United States supports the notion that cross-PIRG collaboration is improved when there are common organizational constructs and work plans, but recognizes that such commonality does not necessarily exist at this time. To accomplish this goal, GREPECAS should encourage others to follow its lead.

4.3. Other PIRGs have used various mechanisms to coordinate their respective ATM and CNS activities with mixed results. Any such mechanism requires resources, however, which could offset the perceived savings from disbanding the current, already integrated construct.

4.4. The administrative efficiency issues associated with the current structure are well understood, but their root cause is attributable to the fact that the ATM/CNS/SG operates as two separate committees instead of as one integrated entity. This results in the need to organize, staff, and report on three separate meetings.

4.5. Reducing the amount of ATM/CNS/SG work performed by separate ATM and CNS committees and increasing the amount of time spent working together with their respective experts, cross-pollinating as a single integrated Subgroup will effectively reduce the need for such formal administrative infrastructure at the Committee level, freeing up resources for the Subgroup as a whole.

4.6. The result is a fully integrated, singular Subgroup that improves technical coordination while concurrently improving administrative efficiency.

5. Conclusion

5.1. The United States fully supports the need to maximize the efficiency of GREPECAS by utilizing its limited resources in the most effective manner.

5.2. Consistent with the intent of the *Global Air Navigation Plan* and the integrated approach required to complete 61 percent of its associated GPIs, regional ATM and CNS issues must be resolved, and decisions and conclusions integrated at some level. The GREPECAS plenary meeting is not where that should occur. Also, because this integration is technical and operational rather than merely administrative, it is much more than a function of the Secretariat(s).

5.3. Hence, there is risk that the administrative efficiencies to be gained by replacing one Subgroup and two Committees with two new Subgroups may be offset by whatever is established to fill the still-

outstanding need to integrate them. Hence, U.S. support for the proposed restructuring is dependent upon a more thorough understanding of the integration process envisioned.

6. Recommendation

6.1. The Meeting is invited to:

a) State clearly the process by which regional planning and implementation for CNS and ATM elements will be integrated technically and operationally; and

b) Consider the information contained in this paper before adopting or otherwise supporting the Draft Decision as proposed by the AGC/7 report.

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