**GREPECAS Programmes and Projects Committee (PPRC) Third Virtual Meeting
(ePPRC/03)**
Online, 22 – 23 July 2021

Agenda Item 2:   **Follow-up to the updated GREPECAS Programs and Projects**
 2.2   ANS implementation in the CAR/SAM Regions

AIM CONCEPT

(Presented by Secretariat)

<table>
<tr><td colspan="2" align="center">EXECUTIVE SUMMARY</td></tr>
<tr><td colspan="2">This working document presents the global developments related to Aeronautical Information Management (AIM), in particular with the AIM (2.0) Concept.</td></tr>
<tr><td>Strategic Objectives:</td><td>• Air Navigation Capacity and Efficiency
• Safety</td></tr>
<tr><td>References:</td><td>• Annex 15
• PANS AIM
• Doc. 8126 - New Unpublished Edition - Disclaimer
• Guidance Doc "The AIM Operational Concept" – Ver. 1.5, June 2021, Dr. Alexander Pufahl
• Doc 9750 – GANP
• Doc 10039 – SWIM Manual</td></tr>
</table>

1.   Introduction

1.1   In accordance with its Terms of Reference (ToR), the AIM Task Force monitors and addresses relevant global and regional developments in this matter. As context, the Sixth Edition of the Global Air Navigation Plan (GANP) (ICAO Doc 7950) and Aviation System Block Upgrade (ASBU), as well as the Basic Building Blocks Framework (BBBs).

The Sixth Edition of the GANP focuses on significant aspects such as:

• Evolution of the World Air Navigation system
- Promote investment in innovation through research and development activities and align regional research and development programs

• Implementation Support - Global Technical Level
- Securing the pillars of a robust Air Navigation system - BBBs
- Facilitate transformational change - ASBU Framework

-　　　　Optimize the allocation and use of resources for Air Navigation - decision based on performance

1.2　　　　Basic Building Blocks Framework (BBB). The BBB is considered an independent framework and not a block of the ASBU framework, representing a baseline rather than an evolutionary step. This baseline is defined by essential services (ANS), recognized by ICAO contracting States as necessary, as is also the case with AIM, for international civil aviation to develop in a safe and orderly manner. Once these essential services are delivered, they form the baseline for any operational improvement.

1.3　　　　The following is the ASBU Framework, which shows and describes the changes to ASBU in the Sixth Edition of the GANP compared to its previous version. Details on the Sixth Edition of the GANP and ASBU framework could be found at: https://www4.icao.int/ganpportal

	B0 2013-18	B1 2019-24	B2 2025-30	B3 2031-36	B4 2036+ (New)
DAIM Digital Aeronautical Information Management		X (New)	X (New)		
	x (old)	x (old)			

1.4　　　　The Aeronautical Information Management concept encompasses the management, exchange and integration of digital aeronautical information that is time-sensitive in a safe and efficient manner. aeronautical information will be interoperable with other relevant domains to provide shared **situational awareness** to all members of the global ATM community for Collaborative Decision Making (CDM). Gradually, the provision and use of aeronautical information is expected to follow the principles of System-Wide Information Management (SWIM).

2.　　　　Analysis

2.1　　　　The AIM concept encompasses various aspects, and the means for the transition to AIM 2.0, rulemaking and implementation issues, planning processes, Notice to Airmen (NOTAM) enhancements, digitization of aeronautical charts and digital data sets (PANS-AIM). Regarding AIM 2.0 (AIM as a SWIM enabling service), it includes:

a)　　　　acquire aeronautical data from reputable data sources;

b)　　　　processing (validation, verification and management) of aeronautical data and information;

c)　　　　provide access to aeronautical information through information services (in a SWIM context); and

d)　　　　consume aeronautical information with the help of SWIM applications by end users.

2.2　　　　The scope of the Aeronautical Information Management (Operational) Concept encompasses various information management processes as indicated in the red box in Scheme 1 below, including:

•　　　　aeronautical data entry from reputable (source) data sources

•　　　　management, verification and validation of aeronautical information (throughout the process)

•　　　　supply selected AIM-specific products directly to end users, and

    •   offer access to digital aeronautical information through the SWIM network

2.3   Note that although the following Scheme 1 seeks to describe a theoretical holistic view of the information management processes involved from source to end users, the SWIM network, SWIM-compliant applications, and the operational use of the aeronautical information through SWIM-compatible applications by end users is outside the scope of the AIM Operational Concept
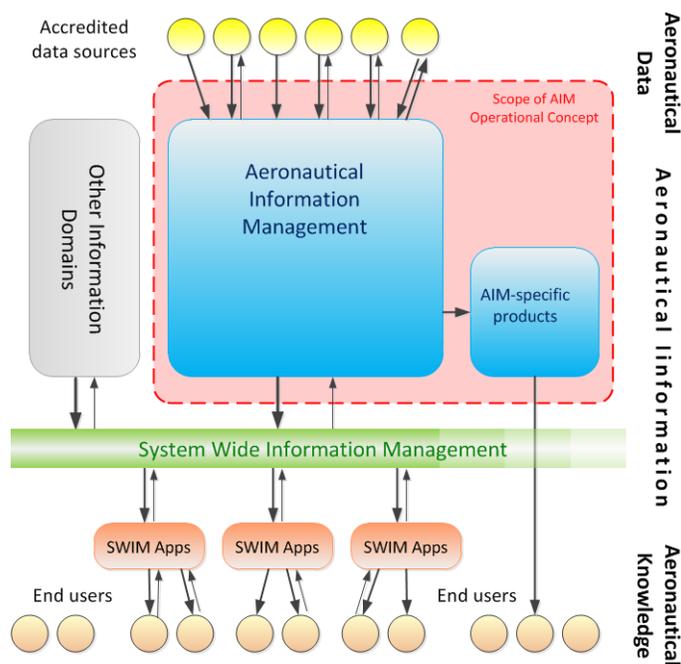
Scheme 1

2.4   The AIM Concept does not explicitly address the SWIM infrastructure, its applications or the definition of the other neighbouring information domains. These topics are covered separately in the System-Wide Information Management Manual - SWIM Concept (Doc. 10039). The AIM operating concept encompasses information management processes, including the entry of accredited data sources, the management, verification and validation of information, the provision of certain specific AIM products, as well as access to aeronautical information to via the SWIM network

2.5   It is recognized that in order to meet the requirements of an increasing number of aeronautical information users (e.g. aircraft operators, airport operators, air traffic services, etc.), aeronautical information services must move to the broader concept of aeronautical information management (AIM Concept).

3.   Conclusion

3.1   The AIM with a data-centric and service-oriented approach, in which reliable aeronautical information is dynamically available (for example, through SWIM information services) for use in applications that perform tasks such as flight planning, management of flights, navigation, separation guarantee, CDM or any other strategic or tactical Air Traffic Management (ATM) activity, it is in a fully operational environment.

3.2   There is an increased emphasis on data distribution and quality, positioning AIM to serve the ATM community in a more efficient and cost-effective manner in terms of its information management requirements. The benefits included are:

a) greater access to timely and meaningful aeronautical information for decision support and more autonomy in decision-making and conflict management;

b) improved safety of flight operations due to access to timely and meaningful aeronautical information services;

c) greater equity in access to airspace; and

d) better business performance based on an adequate safety net.

3.3 In AIM, all parties involved must have a clear understanding of their respective roles and responsibilities in the creation, organization, provision and management of services, as well as the performance of safety oversight. The distribution of aeronautical information under the concept of Aeronautical Information Management (AIM) is listed by means of distribution, distribution channel and type of connection, actors involved and speed of distribution:

Aeronautical Information Products	Distribution medium	Distribution channel	Connection type	Actors involved	Distribution speed
Aeronautical Information Management (AIM)					
All aeronautical information	Digital	Broadband IP		G-G	The entire ATM community	Ultra-fast
All operationally relevant aeronautical information			Data link	A-G	Pilot, controller, dispatch	Very fast

3.4 The Meeting is invited to:

a) take note of the content of this information

b) consider developments related to the AIM Concept (2.0) in regional AIM planning

c) follow-up and be aware of global activities related to AIM 2.0.

— END —