International Civil Aviation Organization

WORKING PAPER

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ASSEMBLY — 37TH SESSION

TECHNICAL COMMISSION

Agenda Item 40: Electronic safety tools

IMPROVED ACCESS TO SAFETY DATA

(Presented by the Council of ICAO)

EXECUTIVE SUMMARY

Safety data is available in various forms and on different platforms, which makes it difficult for States and the international aviation community to access such data and use it effectively. ICAO has embarked on a new initiative to simplify State access to required safety data in order to implement regional and global aviation strategies. This new initiative places the focus on safety requirements, provides improved access to safety data and modernizes the workflow in respect of data collection and data sharing.

This paper provides detailed information on the strategies and efforts employed by ICAO to facilitate access to safety data and reports on the development of electronic safety tools including the ICAO aircraft information system, an international register of Air Operator Certificates, an E-State letter system, and the Electronic Filing of Differences (EFOD) system.

Action: The Assembly is invited to:

a) note the information in this paper; and
b) encourage States to support ICAO's new strategies and provide safety data as required in a timely and reliable manner through the ICAO electronic safety tools.

Strategic Objectives:	This working paper relates to Strategic Objectives A – Safety and E – Efficiency.
Financial implications:	Resources for the activities referred to in this paper are included in the proposed budget for 2011 to 2013.
References:	Doc 9902, *Assembly Resolutions in Force* (as of 28 September 2009) Doc 9935, *Report of the High-level Safety Conference 2010* State letter AN 1/1-10/32

1. INTRODUCTION

1.1 The safe and orderly development of aviation has required objective and consensus-based strategies, which critically rely on accurate and relevant data. In order to meet the need for such data, ICAO has been collecting aviation safety and air navigation planning data, referred to as safety data, and making it available to the international aviation community through a number of documents, databases and websites.

1.2 A set of safety data available in various forms and on different platforms coupled with the increasing complexity and size of aviation has led to some difficulty amongst States and stakeholders.

1.3 In an effort to provide better services to the international aviation community, ICAO has embarked on developing a set of electronic safety tools and maintaining a framework for a seamless electronic interface.

1.4 As part of this initiative, ICAO has developed high-level strategies described below to provide improved access to safety data and modernize the workflow related to the collection and sharing of data, making greater use of information and communication technologies. This should assist States and the international aviation community in the implementation of regional and global aviation strategies such as the Global Aviation Safety Plan (GASP) and the Global Air Navigation Plan (GANP).

2. HIGH-LEVEL STRATEGIES

2.1 **Consolidate ICAO data into fewer database systems:** Data will be made available in an electronic format and consolidated into database systems so that the aviation data provided by States becomes flexible enough to provide seamless and inter-connected services. Currently, the safety data or database systems have been grouped into three main categories: Standards and Recommended Practices (SARPs); aircraft operations; and geo-referencing data.

2.2 **Connect States to electronic safety data:** Workflow related to updating the safety data will be simplified and automated providing States with direct access to electronic data to consult and/or update data in a timely manner. This will also enable States to track the progress of requests for updating information when it requires validation and/or approval by ICAO including planning and implementation regional groups (PIRGs).

2.3 **Encourage clarity and currency of data:** This strategy will be implemented through two primary endeavours. The first one is the creation of a “dashboard”, reflecting data related to the particular State logging on to a specific website, through which the State can monitor the level of accuracy and currency of the data. The second endeavour is the development and delivery of a State user-training package which emphasizes the importance of data currency.

3. GUIDING PRINCIPLES

3.1 To ensure that the new initiative for improved service regarding safety data is implemented in an effective and seamless manner, ICAO’s efforts will be guided by the following principles.

3.1.1 **Traceability to safety objectives and priorities of the regional and global plans:** All ICAO data services and products developed or enhanced under this initiative will be designed to meet defined needs in the regional and global plans including GASP/GANP and will be put in the proper context to facilitate the use of the collected safety data by States and global and regional decision making bodies, including regional aviation safety groups (RASGs) and PIRGs.

3.1.2 **Seamless transition:** Throughout the implementation process, the utmost effort will be made to ensure that interruptions to any existing system will be kept to a minimum. States and other bodies will be advised six months in advance of any plan to replace existing processes with regard to data collection. The plan will not be initiated unless all users are satisfied with the replacement.

3.1.3 **Scope of and access to data:** Only data for which there exists a mandate will be collected and shared and access to the data will be consistent with all existing ICAO policies. As new requirements for collecting and sharing additional data emerge, ICAO will seek endorsement from States, stakeholders and relevant governing bodies.

4. THE INITIAL SET OF SAFETY TOOLS

4.1 For some time, ICAO has been developing a number of electronic safety tools including an ICAO aircraft information system, an international register of Air Operator Certificates (AOC), an E-State letter system, and the Electronic Filing of Differences (EFOD) system. These will be encompassed in the new initiative which will include three sets of electronic tools as follows:

4.1.1 **SMART (SARPs Management and Reporting Tools)** is a set of tools related to the development and amendment of SARPs and composed of three components: e-State letter consultation (State letter AN 1/1-10/32 refers); the management of amendments to Annexes; and the electronic filing of differences. While all components of SMART are expected to be fully operational in 2011, the component for the electronic filing of differences will be ready for States to notify their compliance or their differences with respect to the amendments becoming applicable in November 2010.

4.1.2 **OASIS (Online Aircraft Safety Information Service)** is a set of tools designed to collect and share safety data related to aircraft and air operator information. The ICAO aircraft information system, which supports Article 21 of the Chicago Convention, is being tested for official launch in the third quarter of 2010. Other components of OASIS have been built upon the ICAO aircraft information system in order to ensure that the information required for each component of OASIS need only be entered once and then used multiple times. It is planned that all components of OASIS will become operational in 2011.

4.1.3 **GIS-related tools** integrate existing geo-referencing data onto a single platform that maps multiple layers of safety data including accident and incidents, safety audit results, potential hazards of a given region such as weather, elevation and economic growth. A prototype of the tool has been developed and will be improved for use by States in 2011. From the prototype will evolve sub-tools for consulting and updating data and tables associated with the Air Navigation Plan (ANP).

Table 1. Initial set of the electronic safety tools

Tool	Function and/or information available	Benefits
SMART	E-State letter consultation	- Sharing views with others on the amendment of new SARPs and PANS
	Annex management	- Management and publication of Annex amendments
	Electronic filing and publication of differences	- Easy and real-time access to global compliance and/or differences to SARPs
OASIS	Designators for Aircraft Operating Agencies, Aeronautical Authorities, and Services (Doc 8585)	- One-stop access to safety data related to aircraft and air operators - Entry, modification and validation of data at source
	Aircraft Type Designators (Doc 8643)	
	ICAO aircraft information system	
	Register of Air Operator Certificates	
GIS-related tools	An integrated set of geo-referencing safety data with potential hazards	- Increased situational awareness of the global and regional safety levels - Real-time access to quality assured geo-referencing data
	Air Navigation Plans	
	Location Indicators (Doc 7910)	

5. CONCLUSION

5.1 The importance of safety data to support the implementation of global and regional aviation strategies has long been recognized by the international aviation community, but data usage is continually shifting as new requirements and strategies emerge.

5.2 To better serve the international aviation community, ICAO has embarked on a consolidation and rationalization effort to ensure that safety data collected is current and accessible to all ICAO States.

5.3 It is proposed that States support ICAO's new strategies and provide safety data as required in a timely and reliable manner through ICAO electronic safety tools, which will continue to be improved and expanded to cover increasing demands for different types of data.

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