



Agenda Item 3: Review of the improvements made to the GANDD and new data base working method

(Presented by the Secretariat)

SUMMARY

Considering the Decision 14/60, this Working Paper presents information regarding the improvements implemented to operate in a more efficient and effective manner the GANDD as well as future perspectives of development for a new system. Action by the ASB is presented in paragraph 3.

References:

- ASB/7 Meeting Report
- GREPECAS/14 Meeting Report.

1. Introduction

1.1 As indicated by the ICAO Council (and also the ALLPIRG/5 Meeting), the RPGs should consider the establishment of a data base on Deficiencies related to the Air navigation Services. Based on these directives, GREPECAS/12 Meeting (Conclusion 12/71) requested to ICAO the approval of a Special Implementation Project to the ICAO Council. The SIP was approved in 2005 to develop the first version of the GREPECAS Air Navigation Deficiencies Data Base (GANDD).

2. Analysis

2.1 The GANDD version 2.0 developed during 4th quarter of 2007 is based on work flow model. It has the following scenario:

- a) A Web application (Web App) hosted in a third-party provider can be reached by Contracting States, Territories and International Organizations (end users) through <http://www.mexico.icao.int/bases>. According to the established procedures a Username and Password is supplied by the corresponding Regional Office in order to access the Web App. End users review and notify if necessary changes in the Regional deficiencies. The notification is revised by the Regional Office to update the GANDD.

- b) A secure Desktop application used by the Regional Offices by which the Regional Officers of each deficiency area, can review and update the data base according to the notification received through e-mail by the Web App to show the information on the Web for dissemination among States and International Organizations.

2.2 The GANDD represent a very useful tool for States and ICAO to manage deficiencies, but States were not using the benefits of the same. It was noted from the beginning of its operation, some problems, which would not permit to the States an adequate access as well as notification of amendments. Likewise the desktop application was not designed in a convenient manner to handle the data in an efficient way and the presentation of Deficiencies status to GREPECAS, as indicated in WP/03, required numerous reports to analyze deficiencies data by the Group making the process difficult and cumbersome.

2.2.1 In the other hand, the criteria to classify deficiencies, as per GREPECAS evaluation, were not defined in a clear manner especially in respect to the “U” deficiencies. Likewise, procedures for follow-up and responsibilities were also not so clear defined introducing additional difficulties in the deficiencies treatment.

2.3 Considering the above indicated matters, the GREPECAS/14 meeting discussed in detail the current problems with the deficiencies treatment and recommended to States to be more involved in the deficiencies management by the nomination of a focal point as National Coordinator (Conclusion 14/59) and requiring ICAO the development of criteria to classify “U” deficiencies and the corresponding development of procedures and responsibilities for the deficiencies treatment (Decision 14/60).

2.3.1 The status of implementation of the Conclusion 14/59 and Decision 14/60 was presented in WP/03. ICAO took advantage of the Decision 14/60 to fully review the GANDD operation and introduced several improvements as follows:

Web Application

1. Option “Language” now available.
2. Data display according to the new formats of the desktop application.
3. Validation of the updating information received by ICAO and copy to the corresponding Regional Officer.
4. Visit COUNTER new feature.
5. Complete revision of passwords and usernames.
6. GANDD Training Presentation and User Manual on line.

Desktop Application

1. Implementation of a multi-user environment allows online update by the Regional Officer of the data in the Host.
2. Integration of Tables of each area in only one data base.
3. Redesign of the Data Base.

4. Design new standard format for data input.
5. Implementation of validation criteria for the data input.
6. Development of new Report Formats (now only one instead of 4).
7. Development of deficiencies statistical tables.
8. Develop of Reports menu and criteria.
9. Automatic conversion of MS-Access database to text format used to update my-SQL database used by Web App.

2.4 **Appendix A** presents a revised version of the GANDD User Manual for the Web application considering the above indicated improvements. As part of the Manual it is indicated the data flow taking place in the GANDD operation. This Manual should be used in conjunction with the new procedures presented in WP/03, as indicated, with the Web application, States interact with the GANDD. The application was tested several times from the Regional Offices encounter that due to the service is based on ICAO third-party Host, some times to obtain access, the user should insist with the access procedure, beside of this, the application operates in a adequate manner. Technical support to States is provided by the ICT areas of each Regional Office (Appendix A refers). Likewise, the User Manual and a Power Point presentation is available in the GANDD site for training and Information purposes, links also are provided in the NACC and SAM Regional Offices Web sites to access this information.

2.4.1 Responsibilities to manage the deficiencies data using the GANDD are defined in the new procedures complementing the Uniform Methodology approved by the Council and contained in Appendix A to WP/03. In this regard, it should be noted that responsibilities are defined for the States and the ICAO Regional Offices, however, it should be noted that the resolution of the deficiencies are in hands of States.

2.5 Although the current version 2 of the GANDD presents good improvements compared with the previous it should be noted that considering modern Data Base handler software it is being considered to develop a new version of the GANDD maintaining the multi-user environment but using software such as SQL/my-SQL with a Web application with ASP or PHP programming. This development will further improve the management of deficiencies, however is subject to the availability of funds in ICAO.

3. **Action Suggested**

3.1 The meeting is invited to consider the information presented in this working paper concerning the implementation of a new GANDD version with new procedures and defined responsibilities (States/ICAO) to manage CAR/SAM Air Navigation deficiencies, as well as to present information concerning their experience in using the GANDD.

APPENDIX A



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**GREPECAS AIR NAVIGATION DEFICIENCIES
DATABASE**

GANDD

Version 2.0

USER'S GUIDE

December 2007

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INTERNATIONAL CIVIL AVIATION ORGANIZATION

GREPECAS AIR NAVIGATION DEFICIENCIES DATABASE

(GANDD)

Version 2

User's Guide

1. Background

1.1 This document has been prepared to assist “Focal Points” named by States, Territories and International Organizations with updating the GREPECAS Air Navigation Deficiencies Database (GANDD).

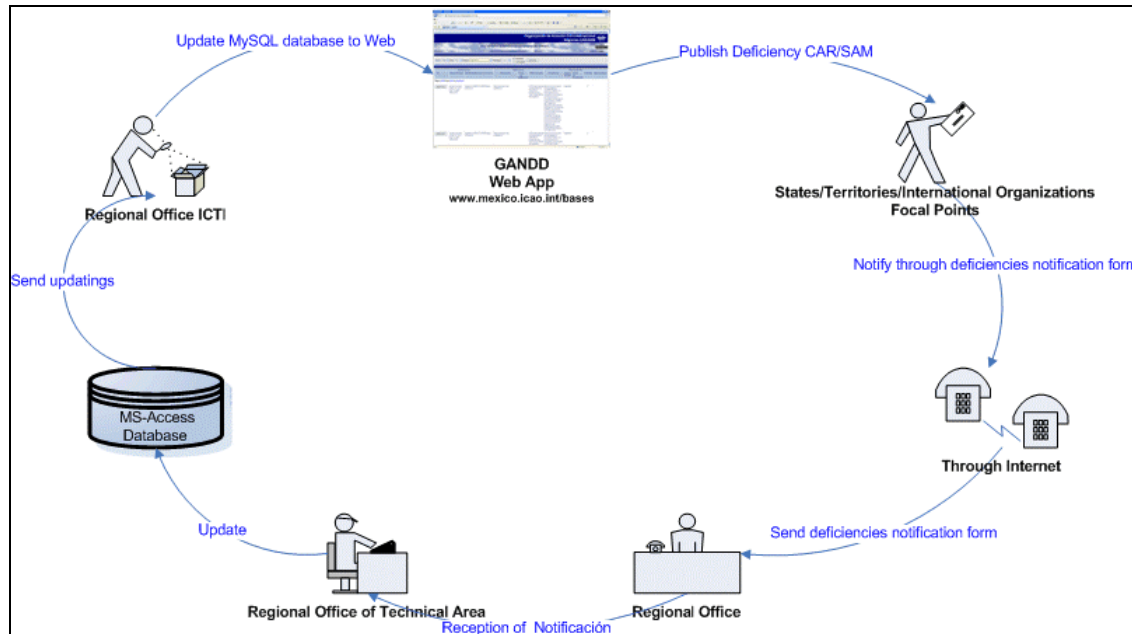
1.2 The second edition of the guidance material for using the database (<http://www.mexico.icao.int/bases>) in accordance with new “Procedures for the Treatment of the Solution of “U” Deficiencies in the Air Navigation Field,” has been developed by the SAM and NACC Regional Offices, in response to GREPECAS/14, Decision 14/60.

2. Technical Requirements

2.1 Basic technical requirements are: a personal computer connected to the Internet, Pentium 4, 1Ghz, 5Gb of available hard disk space, 512Mb of main memory, preferably XP “Professional,” Internet Explorer 6 or higher.

3. CAR/SAM Deficiencies Updating Diagram

3.1 The diagram below presents the flow of information, in order to serve as feedback to the GANDD. Actors involved are clearly identified in this process: GANDD Web App, States/Territories/International Organizations (Focal Points), Regional Offices, Regional Officers and ICT (Information and Communications Technology).



CHANGES TO THE DIAGRAM:

SHOULD IDENTIFY THE STARTING POINT

Add “Starting Point”

Published Deficiencies CAR/SAM (Publish Deficiency CAR/SAM)

Receipt of Notification (Reception of Notification)

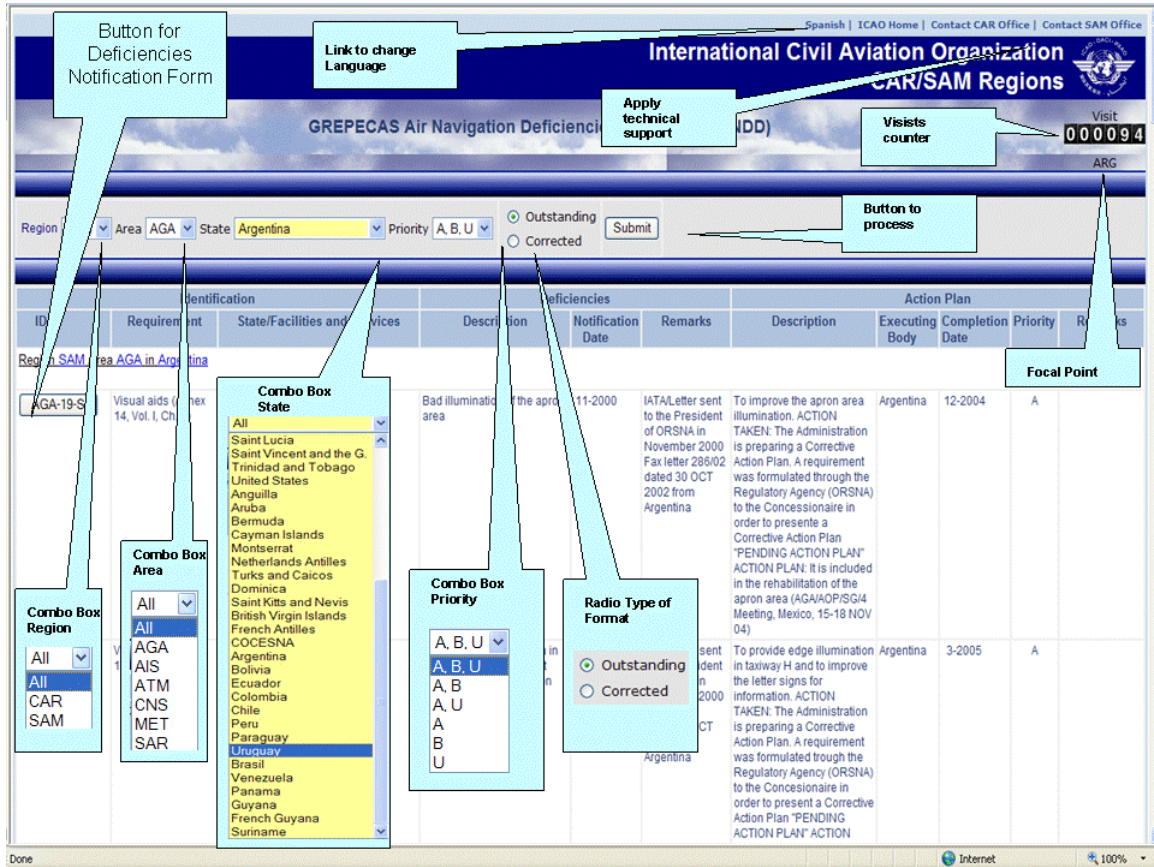
Regional Office Technical Area (Regional Office of Technical Area)

Send updated (Send updatings)

Update MySQL database in Web (Updated My SQL database to Web)

4. Description of the Main Web Form

4.1 The following figure shows the web form for queries to the GANDD. This form shall serve as main guidance for the Focal Point to view, select and report deficiencies.



4.2 In this same figure, the control types of the web form used in this interphase, are shown as follows:

Control type	Name	Graphical Representation	Purpose
Combo Box	Region	Region SAM	Select the Region
Combo Box	Area	Area AGA	Select the Area
Combo Box	State	State Argentina	Select the State
Combo Box	Priority	Priority A, B, U	Select the Priority

Control type	Name	Graphical Representation	Purpose
Radio	Type of query	<input checked="" type="radio"/> Outstanding <input type="radio"/> Corrected	Select the type of query for the deficiencies
Button	Present	<input type="button" value="Submit"/>	Execute the selection criteria
Button	ID Area	<input type="button" value="AGA-296-C"/>	Execute the deficiencies reporting form
Enlace	Language	<input type="button" value="English"/>	Change the language of the interphase and results
Label	Visits counter	<div style="border: 1px solid black; padding: 2px;"> Visit 000094 </div>	Shows number of visits to the GANDD Web App. (http://www.mexico.icao.int/bases)
Label	User	<input type="button" value="ARG"/>	Identifies the user of the website.
Link	Request technical contact	<input type="button" value="Contact CAR Office Contact SAM Office"/>	Request technical support in the handling of GANDD Web App.

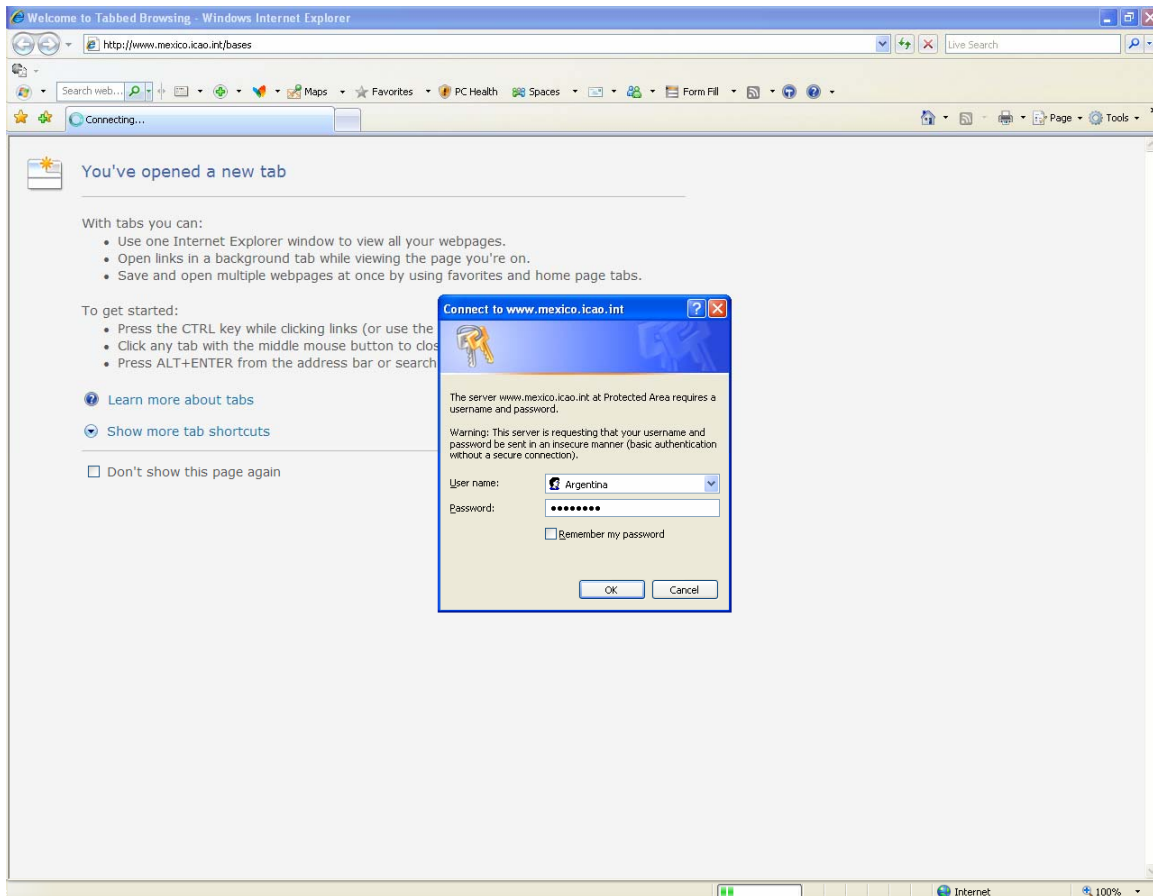
5. Procedure for Access to the GANDD Web Application

5.1 According to the Technical Requirements mentioned in item 2. for using the GANDD Web application, and in addition to State Letter LT 1/19-SA1185 dated 13 December 2004, where the name and password of the user are mentioned, (Username, Password), the Focal Point shall execute the following steps for initial access to the GANDD each time this tool is used.

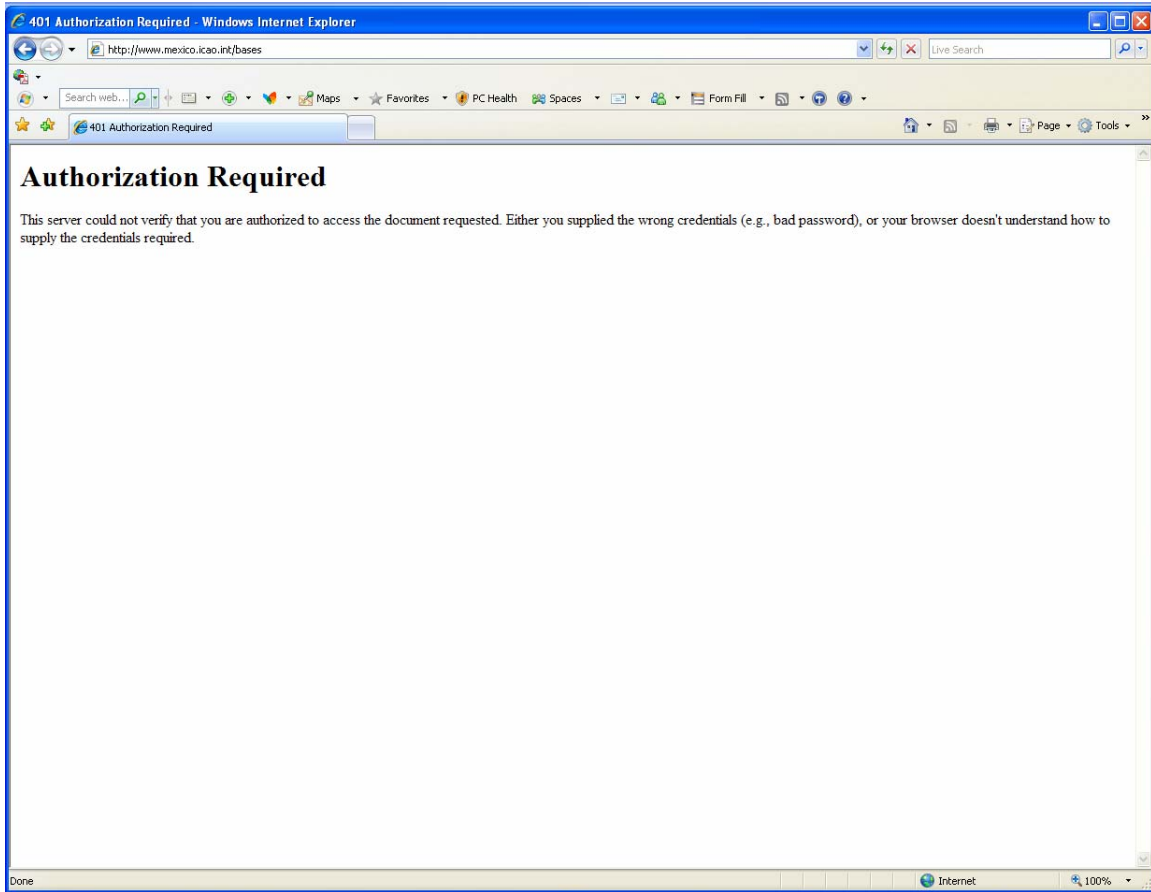
Note: the Username and Password are obtained by contacting the corresponding Regional Office.

5.2 Open a Microsoft Internet Explorer window (MS-IE) and enter the following URL address: <http://www.mexico.icao.int/bases> and press ENTER.

5.3 The MS-IE will request the “Username” and “Password” corresponding to the State, Territory or International Organization as indicated in the figure shown below with the example of the username: Argentina and corresponding Password:



5.3.1 This process is termed “Authentication.” Once the Focal Point enters the correct data, the application will show the first results as depicted below. If the Focal Point does not enter the correct data, the MS-IE will show an error message as indicated in the following figure:



6. Procedure for the Selection of Query Criteria

6.1 Once authenticated with the procedure in item 5., the Focal Point shall obtain the Web form (for explanation, please refer to 4.1 and 4.2) shown below. Through this form, Focal Points will be able to view all CAR/SAM deficiencies.

International Civil Aviation Organization
CAR/SAM Regions

GREPECAS Air Navigation Deficiencies Database (GANDD)

Visit: 000094
ARG

Region: SAM Area: AGA State: Argentina Priority: A, B, U Outstanding Corrected

Identification			Deficiencies			Action Plan				
ID	Requirement	State/Facilities and Services	Description	Notification Date	Remarks	Description	Executing Body	Completion Date	Priority	Remarks
Region: SAM Area: AGA in Argentina										
AGA-19-S	Visual aids (Annex 14, Vol. I, Ch. 5)	Argentina, BUENOS AIRES/Ezeiza Aerodrome	Bad illumination of the apron area	11-2000	IATA/Letter sent to the President of ORSNA in November 2000 Fax letter 286/02 dated 30 OCT 2002 from Argentina	To improve the apron area illumination. ACTION TAKEN: The Administration is preparing a Corrective Action Plan. A requirement was formulated through the Regulatory Agency (ORSNA) to the Concessionaire in order to present a Corrective Action Plan "PENDING ACTION PLAN" ACTION PLAN: It is included in the rehabilitation of the apron area (AGAAOP/SGI4 Meeting, Mexico, 15-18 NOV 04)	Argentina	12-2004	A	
AGA-20-S	Visual aids (Annex 14, Vol. I, Ch. 5)	Argentina, BUENOS AIRES/Ezeiza Aerodrome	Lack of edge illumination in taxiway H and insufficient letter signs for information	11-2000	IATA/Letter sent to the President of ORSNA in November 2000 Fax 285/02 dated 30 OCT 2002 from Argentina	To provide edge illumination in taxiway H and to improve the letter signs for information. ACTION TAKEN: The Administration is preparing a Corrective Action Plan. A requirement was formulated through the Regulatory Agency (ORSNA) to the Concessionaire in order to present a Corrective Action Plan "PENDING ACTION PLAN" ACTION PLAN: ACTION	Argentina	3-2005	A	

6.2 The Focal Point shall select with a “click” the corresponding information, making use of the Web controls listed in the table in 4.2. These controls are “combo box,” and “radio” to select and process.press the button “Submit.”

6.3 The combination of this selection criteria shall produce the visualization of the information requested. In item 9., some practical cases are shown.

6.4 International Organizations participating in the GREPECAS mechanism will also be able to view deficiencies.

7. Procedure for Reporting Changes to Deficiencies

7.1 In order to update deficiencies, the Focal Point shall use the deficiencies reporting form. Access by pressing the button which identifies (column ID) the deficiency with the nomenclature “Area-ID-Region” of the deficiency. In doing so, the following screen shall be displayed:

[Spanish](#) | [ICAO Home](#) | [Contact CAR Office](#) | [Contact SAM Office](#)

International Civil Aviation Organization
CAR/SAM Regions

GREPECAS Air Navigation Deficiencies Database (GANDD)

Visit
000094
 ARG

Id	Area	Region	Subregion	Requirement	State	Corrected
142	AGA	SAM			Argentina/BUENOS AYRES/Aeródromo Ezeiza	2000 <input type="button" value="v"/>

Requirements	
Physical characteristics (Doc 8733, Vol. II, FASID)	
States/Facilities	Argentina/BUENOS AYRES/Ezeiza Aerodrome
Description	
RWY 11/29 length is 3300 m. The Regional ANP recommends 3700 m	
Date First Reported	4-6 DEC 2002
Remarks	
Detected during mission conducted by ICAO Secretariat	
Description/Corrective Action	
Inform the SAM Office when the remaining 400 m will be constructed "PENDING ACTION PLAN" COMMENTS: Information from Argentina indicates that the revised Master Plan considers rwy length of 3300 m, which is adequate for the operation of	
Executing Body	Argentina
Completion_date	TBD
Priority	B
<input type="button" value="Submit"/>	

7.2 The Focal Point has access to the green fields depicted in the figure in 7.1, in order to report changes to deficiencies. These fields include “Corrected” to indicate the year in which the deficiency was corrected, “Remarks,” “Description,” “Executive Body” and “Completion Date” in the format month and year.

7.3 When changes in the fields are completed, the Focal Point shall submit the changes by clicking the “Submit” button. The Regional Office will receive the update as an e-mail, with a copy to the corresponding field (AGA, ATM, MET, CNS and SAR).

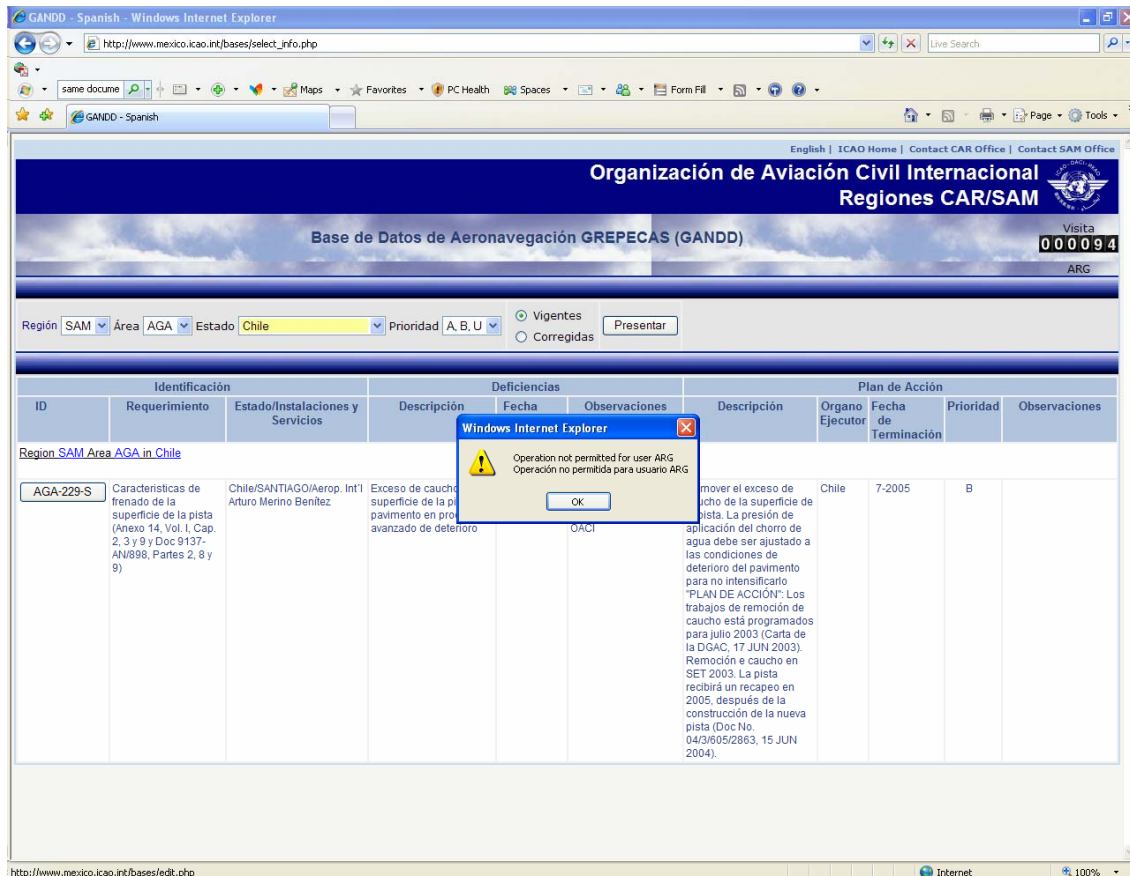
7.4 The Web form will finally show a message informing that the request is being processed as shown in the following figure below:

The screenshot shows the header of the ICAO website for the CAR/SAM region, titled "Organización de Aviación Civil Internacional Regiones CAR/SAM". Below the header is a navigation bar with "Base de Datos de Aeronavegación GREPECAS (GANDD)" and a visitor count of 000090. The main content area displays a table with the following data:

Id	Área	Región	Subregión	Requerimiento	Estado	Corregido
24	AGA	SAM		ANNEX	Paraguay, Aerodrome of Asuncion/Silvio Pettirossi	2000

Your request has been processed. Thank you.

7.5 The button to report deficiency updates only operates with the deficiencies corresponding to the State in which the Focal Point has access. For example the focal point for Argentina will be able to see all CAR/SAM deficiencies, but will only be able to report those of Argentina. Otherwise, an error message will be received indicating that “the operation is not available” as shown in the following figure:



7.6 Through these changes, the State is able to report the Regional Offices with changes for updating deficiencies registered in the GANDD and is able to see them reflected in the documentation for revision by the GREPECAS mechanism meetings or other air navigation meetings.

8. Requesting Technical Support

8.1 The Focal Point will be able to request technical support by using the link shown in the upper right part of the form, as shown in figure in 4.1.

8.2 E-mail will be addressed to the ICT area of the corresponding Regional Office, to Messrs:

- Gabriel Meneses gmeneses@mexico.icao.int for the CAR Region.
- Arturo Martínez amartinez@lima.icao.int for the SAM Region.

9. Case Studies

9.1 Please note 4.1 and 4.2 for case selection of data criteria and reference.

9.2 Form for Outstanding Deficiencies for a Specific State and Area is shown below. State: Argentina, Area: AGA.

The screenshot shows the GANDD web application interface. At the top, there is a navigation bar with links for Spanish, ICAO Home, Contact CAR Office, and Contact SAM Office. The main header displays the International Civil Aviation Organization (ICAO) logo and the text 'International Civil Aviation Organization CAR/SAM Regions'. Below this, the title 'GREPECAS Air Navigation Deficiencies Database (GANDD)' is shown, along with a visit counter '000094' and the country code 'ARG'.

The search filters are set to: Region: SAM, Area: AGA, State: Argentina, Priority: A, B, U. There are radio buttons for 'Outstanding' (selected) and 'Corrected', and a 'Submit' button.

Identification			Deficiencies			Action Plan				
ID	Requirement	State/Facilities and Services	Description	Notification Date	Remarks	Description	Executing Body	Completion Date	Priority	Remarks
Region SAM Area AGA in Argentina										
AGA-19-S	Visual aids (Annex 14, Vol. I, Ch. 5)	Argentina, BUENOS AIRES/Ezeiza Aerodrome	Bad illumination of the apron area	11-2000	IATA Letter sent to the President of ORSNA in November 2000 Fax letter 286/02 dated 30 OCT 2002 from Argentina	To improve the apron area illumination. ACTION TAKEN: The Administration is preparing a Corrective Action Plan. A requirement was formulated through the Regulatory Agency (ORSNA) to the Concessionaire in order to present a Corrective Action Plan "PENDING ACTION PLAN". ACTION PLAN: It is included in the rehabilitation of the apron area (AGA/AOP/SG/4 Meeting, Mexico, 15-18 NOV 04)	Argentina	12-2004	A	
AGA-20-S	Visual aids (Annex 14, Vol. I, Ch. 5)	Argentina, BUENOS AIRES/Ezeiza Aerodrome	Lack of edge illumination in taxiway H and insufficient letter signs for information	11-2000	IATA Letter sent to the President of ORSNA in November 2000 Fax 286/02 dated 30 OCT 2002 from Argentina	To provide edge illumination in taxiway H and to improve the letter signs for information. ACTION TAKEN: The Administration is preparing a Corrective Action Plan. A requirement was formulated through the Regulatory Agency (ORSNA) to the Concessionaire in order to present a Corrective Action Plan "PENDING ACTION PLAN". ACTION PLAN: ACTION	Argentina	3-2005	A	

9.3 Form for Corrected Deficiencies for a Specific State and Area is shown below.
 State: Argentina, Area: AGA.

Spanish | ICAO Home | Contact CAR Office | Contact SAM Office

International Civil Aviation Organization
CAR/SAM Regions

GREPECAS Air Navigation Deficiencies Database (GANDD)


Visit **000096**
 ARG

Region: SAM Area: AGA State: Argentina Priority: A, B, U Outstanding Corrected

Identification	State/Facilities and Services	Notification Date	Priority	Completion Date	Executing Body	Remarks
Region SAM Area AGA in Argentina						
AGA-18-S	Visual aids (Annex 14, Vol. I, Ch. 5)	Argentina, BUENOS AIRES/Ezeiza Aerodrome	1996	U	2002	Argentina
AGA-141-S	Bird Hazard Committee (Annex 14, Vol. I Ch. 9.5 and its Amendment No. 5)	Argentina/All international airports	DEC-2002	B	2004	Argentina
AGA-143-S	Visual aids (Doc 8733, Vol. II, FASID and Annex 14, Vol. I, Ch. 5)	Argentina/BUENOS AYRES/San Fernando Aerodrome	DEC-2002	B	TBD	Argentina
AGA-147-S	RVR (Doc 8733, Vol. II, FASID)	Argentina/CATARATAS DEL IGUAZU/My. Carlos Eduardo Krause Aerodrome	DEC-2002	B	DEC-2005	Argentina
AGA-149-S	Visual aids (Doc 8733, Vol. II, FASID and Annex 14, Vol. I, Ch. 5)	Argentina/COMODORO RIVADAVIA/General Moscón Aerodrome	DEC-2002	B	TBD	Argentina
AGA-151-S	RVR (Doc 8733, Vol. II, FASID)	Argentina/COMODORO RIVADAVIA/General Moscón Aerodrome	DEC-2002	B	2006	Argentina
AGA-152-S	RFF (Doc 8733, Vol. II, FASID and Annex 14, Vol. I, Ch. 9.2)	Argentina/CORDOBA/Ing. Aer. Taravella Aerodrome	DEC-2002	B	2004	Argentina
AGA-155-S	RVR (Doc 8733, Vol. II, FASID)	Argentina/CORDOBA/Ing. Aer. Taravella Aerodrome	DEC-2002	B	DEC-2005	Argentina
AGA-156-S	RFF (Doc 8733, Vol. II, FASID and Annex 14, Vol. I, Ch. 9.2)	Argentina/FORMOSA	DEC-2002	B	TBD	Argentina
AGA-157-S	Visual aids (Doc 8733, Vol. II, FASID and Annex 14, Vol. I, Ch. 5)	Argentina/FORMOSA	DEC-2002	B	TBD	Argentina
AGA-158-S	Visual aids (Doc 8733, Vol. II, FASID and Annex 14, Vol. I, Ch. 5)	Argentina/FORMOSA	DEC-2002	B	TBD	Argentina

Internet 100%

9.4 Form for reporting deficiencies.

Spanish ICAO Home Contact CAR Office Contact SAM Office						
International Civil Aviation Organization CAR/SAM Regions						
GREPECAS Air Navigation Deficiencies Database (GANDD)						Visit 000094
						ARG
Id	Area	Region	Subregion	Requirement	State	Corrected
19	AGA	SAM		ANNEX	Argentina, BUENOS AIRES/Ezeiza Aeródromo	2000

Requirements	
Visual aids (Annex 14, Vol. I, Ch. 5)	
States/Facilities	Argentina, BUENOS AIRES/Ezeiza Aerodrome
Description	
Bad illumination of the apron area	
Date First Reported	11/2000
Remarks	
IATA/Letter sent to the President of ORSNA in November 2000 Fax letter 286/02 dated 30 OCT 2002 from Argentina	
Description/Corrective Action	
To improve the apron area illumination. ACTION TAKEN: The Administration is preparing a Corrective Action Plan. A requirement was formulated through the Regulatory Agency (ORSNA) to the Concessionaire in order to present a Corrective Action Plan	
Executing Body	Argentina
Completion_date	DEC 04
Priority	A
<input type="button" value="Submit"/>	

- END -