



AIS / AIM-Brazil

Objective

To inform the audience about the implementation process of the AIM-BR system at ICA.

Script

- **Background**
- **Challenges**
- **Actual Situation**
- **Future Goals**

Script

- **Background**
- Challenges
- Actual Situation
- Future Goals

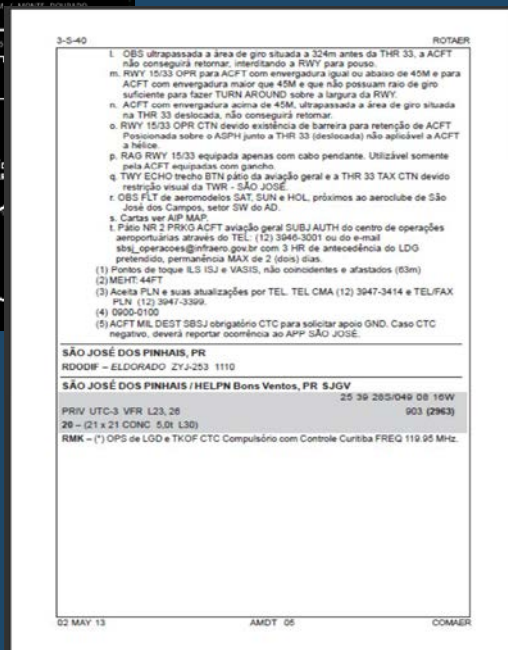
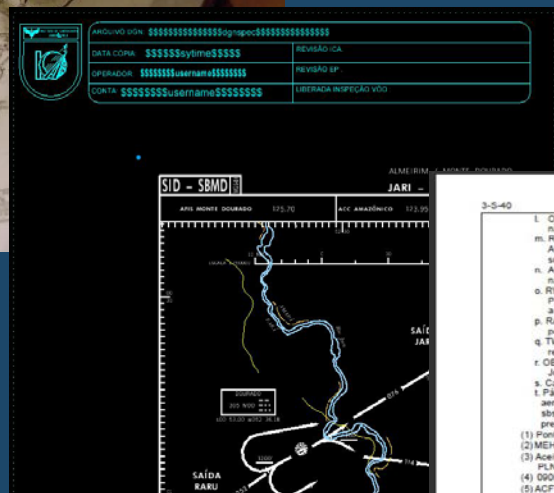
Background



The Institute of Aeronautical Cartography (ICA) is an Organization of the Brazilian Air Force whose mission is planning, managing, controlling and executing activities related to cartography, aeronautical information, air navigation procedures and airspace design.

Background

- Too much time was spent to update charts and manuals;
- There was low productivity;
- Focus was higher on products than on the information itself;
- Low quality of the information produced; and
- Incompatibility between charts and manuals.



Script

- Background
- **Challenges**
- Actual Situation
- Future Goals

Challenges

- Requirements Definition;
- Information Compatibility;
- System Complexity; and
- Information Management.



Script

- Background
- Challenges
- **Actual Situation**
- Future Goals

Actual Situation - Systems

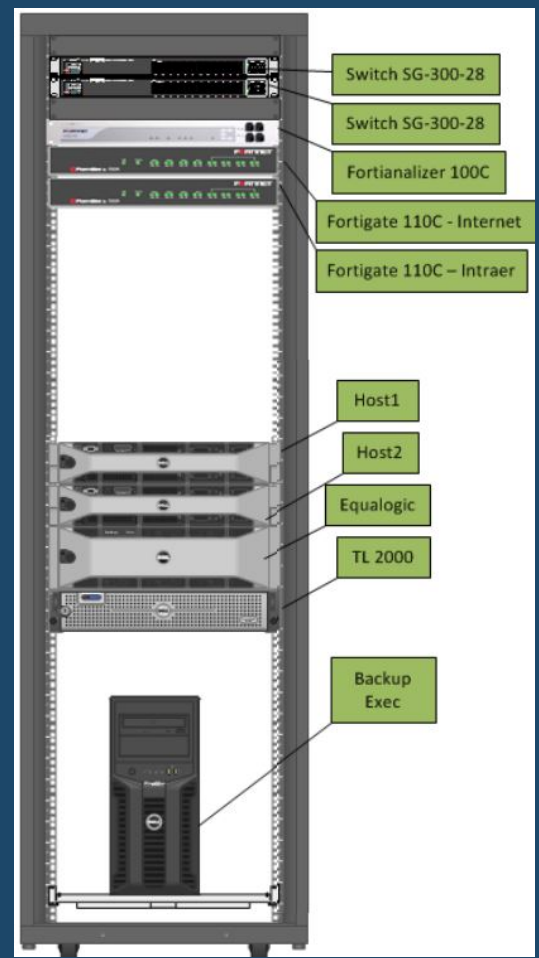
AIM-BR



Windows 7 Professional – Operational System
IDS FPDAM ICAO – Procedure Design System
IDS Project Manager – Airspace and routes project management system
IDS FPDAM Airspace - Airspace design system
IDS FPDAM Aerochart – Charts creation system
IDS FPSAT – Procedures simulation system
IDS IAS SpecMan – Specification system
IDS IAS G/FeaMan – Aeronautical data insertion system
IDS IAS RuleMan – rules definition system
IDS IAS RepMan- Report system
IDS IAS Chart Manager – Chart management system
IDS IAS Chart Editor – Chart edition system
IDS AMS – Chart editor module
IDS AeroPub Manager EAIP – e-AIP management system
IDS AeroPub Manager – AIP/ROTAER management system
IDS AeroPub Editor – Publication editor
DataLift- System utilized to merge information between scenarios
IDS AeroTranslators – Data import/export tool
IDS AeroCatalog – Version Control System
IDS Data Extraction Manager – Data extraction tool
IDS IAS Administrator – User access control system
Intergraph Geomedia – Base Software utilized to manage and edit geospatial information
Altova XML SPY 2011 r2 – Base Software to define rules and specifications of exportable XML files
Adobe FrameMaker Professional 12 - Base Software to create and edit publications
Bentley Microstation 08.11.07.443 – Base Software to create and edit charts

Actual Situation - Hardware

AIM-BR →



RACK

Network Equipment: 2x Switches SG-300-28

Firewall: 2x Fortigate 110C / 1x Fortianalyzer 100C

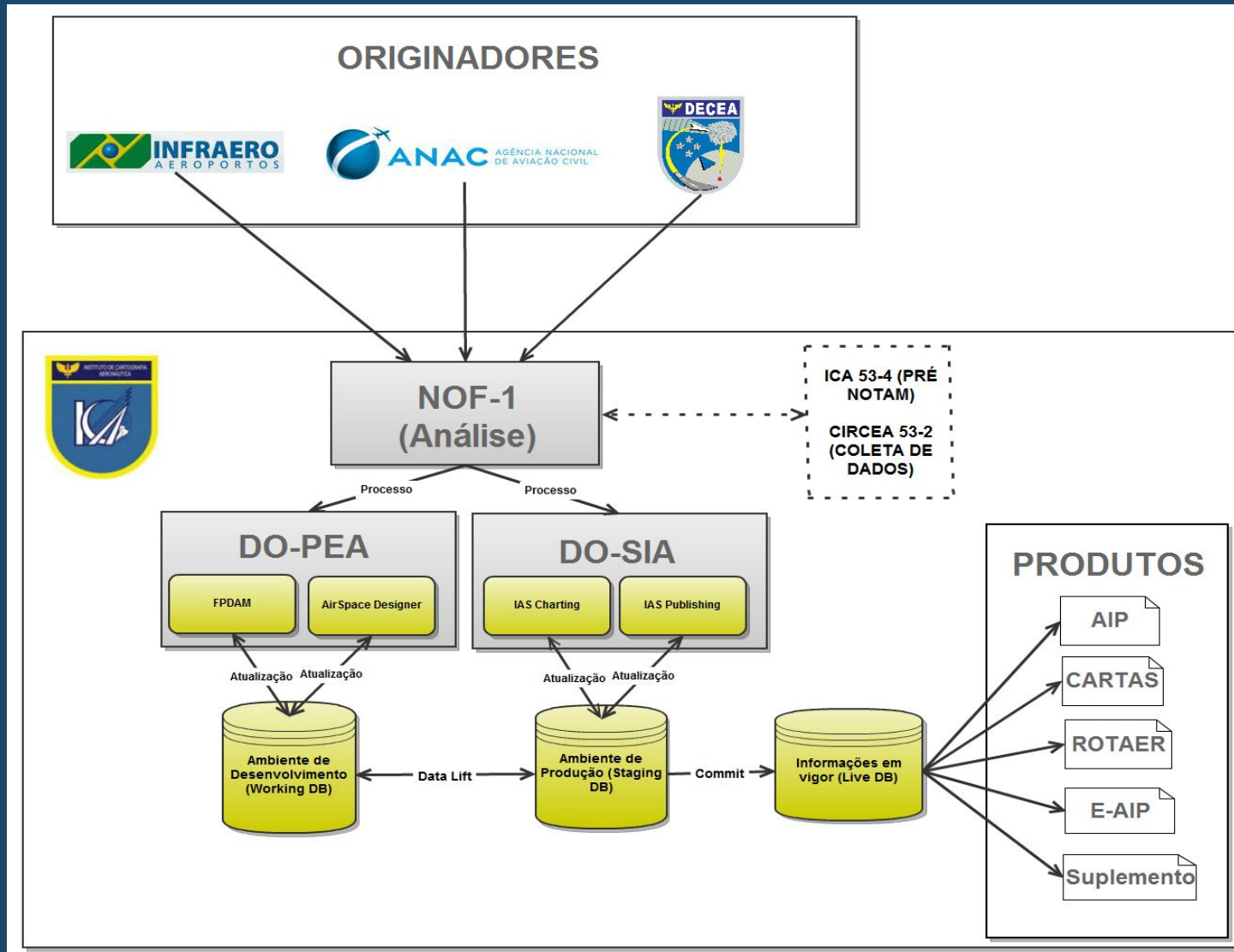
Servers: 2x Host hosting all virtual servers

Storage: 1x server to storage all aeronautical data (4.7 TB Capacity)

TL 2000: Backup robot

Backup Exec: Backup management machine

Actual Situation – Information Flow



Actual Situation - Databases



Working Database: Security copy of the staging database, its purpose is making the procedure design activity faster and avoid that procedures still in elaboration phase affect the production database;

Staging Database: Where the current publications and charts are produced; and

Live Database: Where all validated information is stored for search.

Actual Situation - Samples

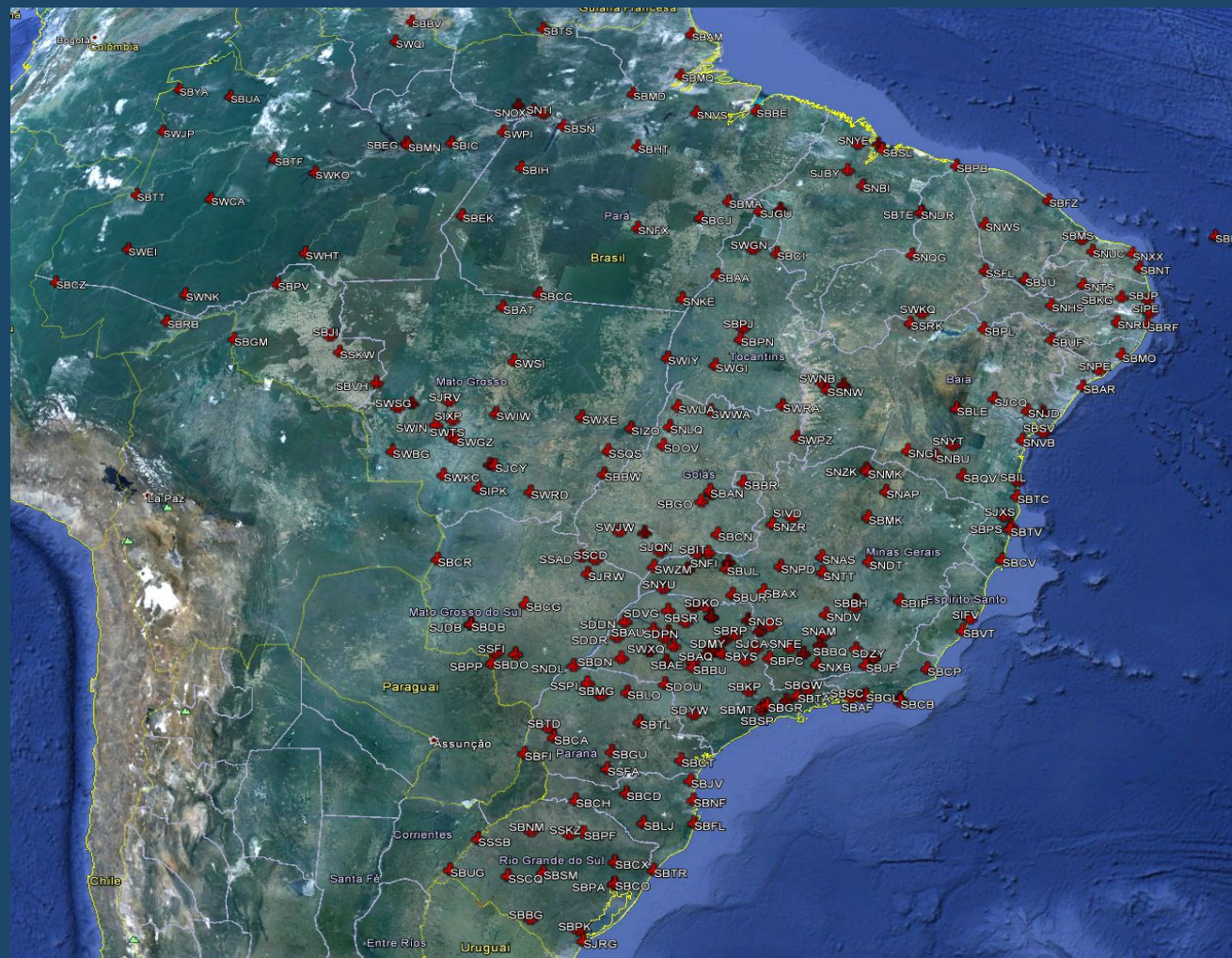
STATE	AERODROME	HELIPORT	TOTAL	% of TOTAL
AC	11	0	11	0.32%
AL	16	7	23	0.66%
AM	51	8	59	1.69%
AP	9	1	10	0.29%
BA	163	30	193	5.54%
CE	21	43	64	1.84%
DF	7	13	20	0.57%
ES	10	10	20	0.57%
GO	145	20	165	4.74%
MA	55	20	75	2.15%
MG	195	63	258	7.41%
MS	373	2	375	10.77%
MT	432	2	434	12.46%
PA	154	6	160	4.59%
PB	9	1	10	0.29%
PE	18	43	61	1.75%
PI	28	3	31	0.89%
PR	83	40	123	3.53%
RJ	34	133	167	4.79%
RN	12	2	14	0.40%
RO	34	6	40	1.15%
RR	113	0	113	3.24%
RS	85	17	102	2.93%
SC	34	48	82	2.35%
SE	1	1	2	0.06%
SP	294	528	822	23.60%
TO	49	0	49	1.41%
TOTAL	2436	1047	3483	100%

AIRSPACE	TOTAL
FIR	5
CTR	44
TMA	43
DANGEROUS	26
PROHIBITED	52
RESTRICTED	244

NAVAID	TOTAL
NDB	162
DME	124
VOR	93
VOR/DME	88
ILS	15
ILS/DME	21

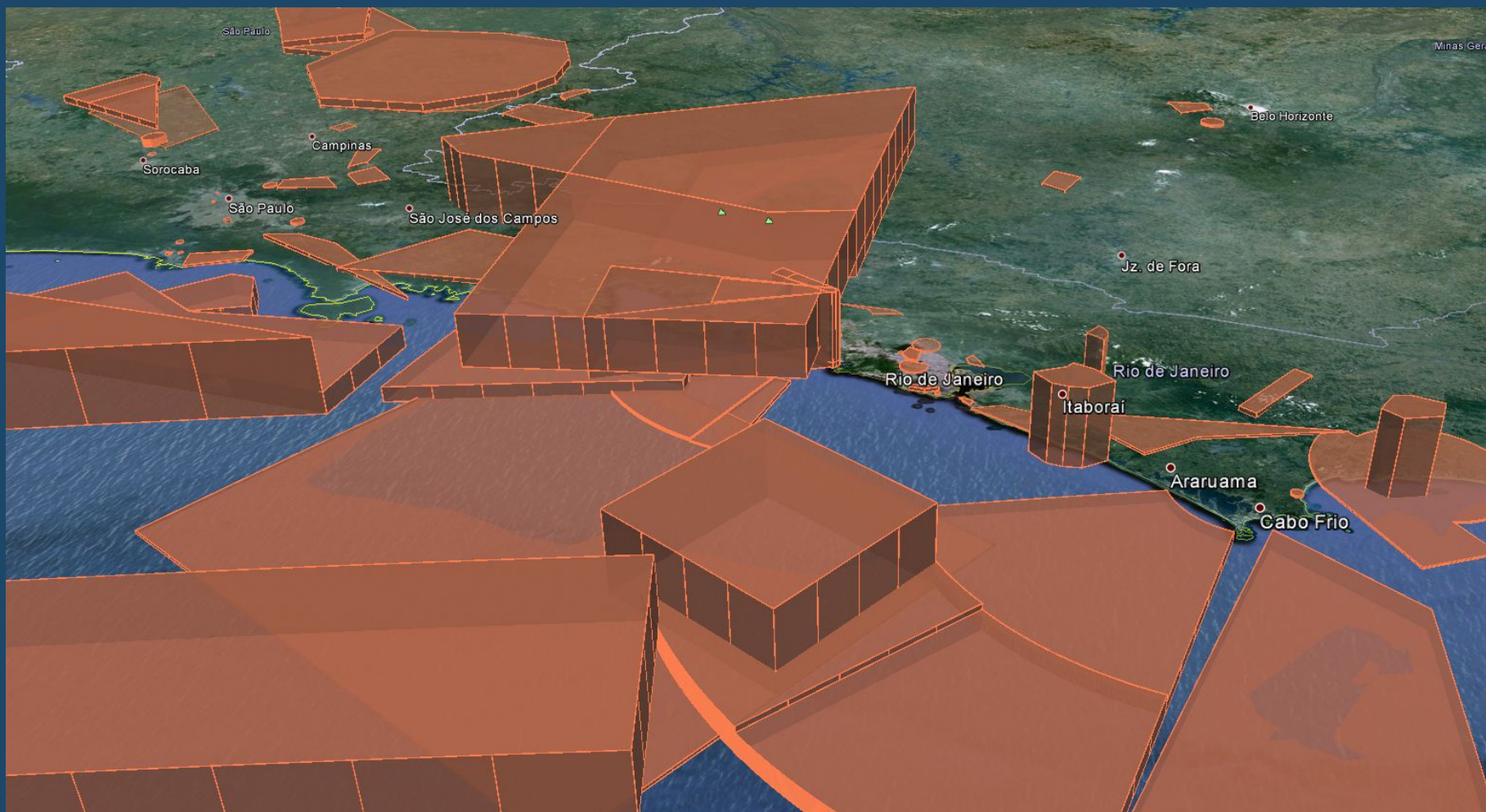
INFORMATION	TOTAL
Waypoint	5050
Airway	255
Obstacle	24971

Actual Situation - Samples



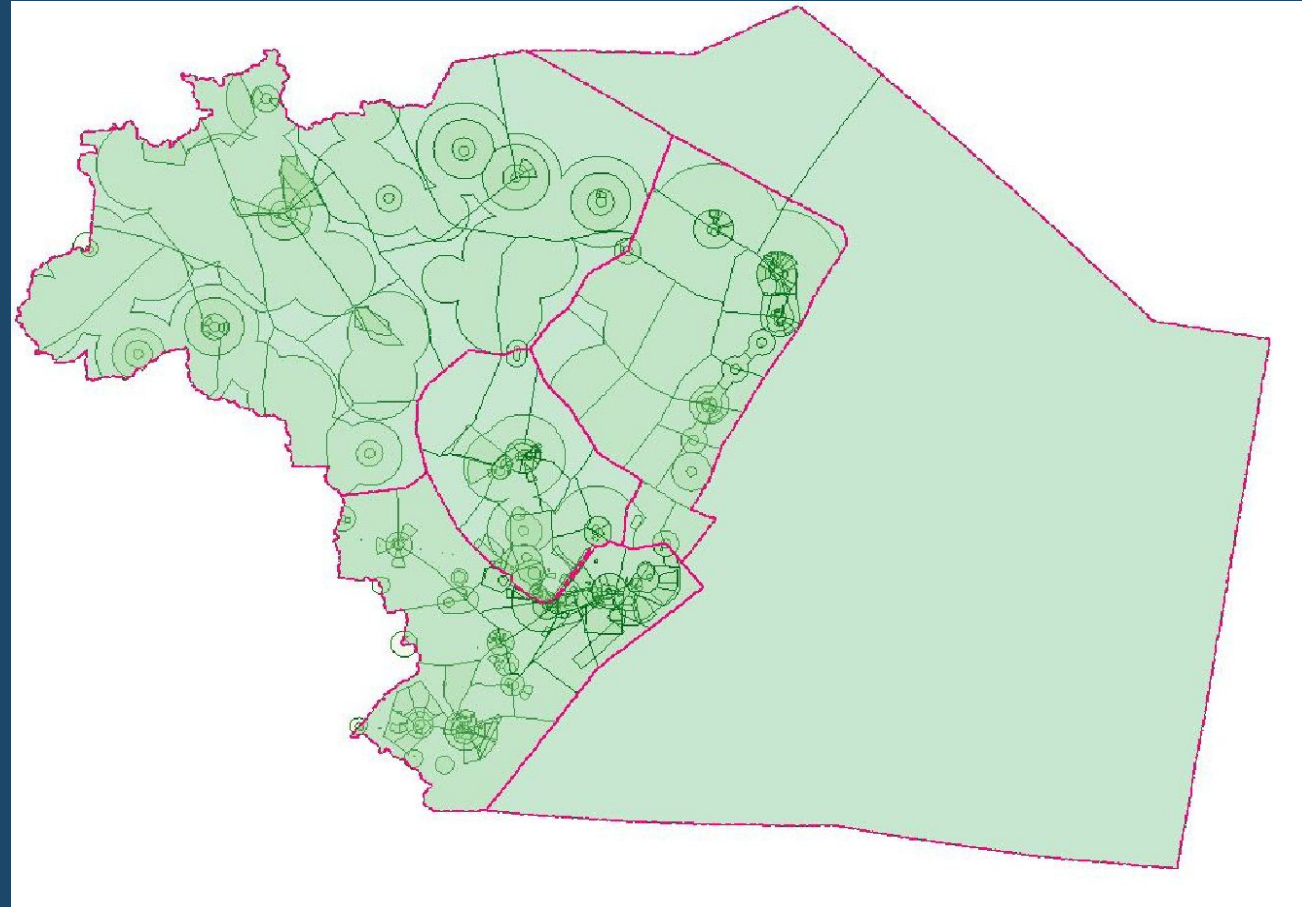
1500m asphalt / concrete runways

Actual Situation - Samples



Airspaces

Actual Situation - Samples



Flight Information Regions

Script

- Background
- Challenges
- Actual Situation
- **Future Goals**

Future Goals - AISWEB

The screenshot shows the AISWEB website with the following elements:

- Header:** AIS Aeronautical Information Service logo on the left, and language options "Português" and "English" on the right.
- Navigation:** A menu bar with links for "Home", "AIP Supplements", "Charts", "NOTAM", and "Publications".
- Main Content:**
 - Safety, regularity and efficiency:** A section stating "AISWEB is the official source of Aeronautical Information provided by Department of Airspace Control (DECEA)." Below this are icons for "NOTAM" (Notices to Airmen), "AIC" (Aeronautical Information Circular), "Charts" (Aeronautical Charts), and "AIP" (Aeronautical Information Publication).
 - Pre Flight Information:** A section with the instruction "Insira no campo abaixo o indicador de localidade (OACI) do Aeródromo, TMA ou FIR desejada." Below this is a search box labeled "AERODROME, TMA OR FIR" with a magnifying glass icon and a link "Clique aqui" for users who don't know the indicator.
- Footer:** A row of utility links: "Subscribe", "Contact Us", "Error Notification", "API", "Terms of Service", "Developed by", and "Assinar Publicações". On the right, the DECEA logo and text "Departamento de Controle do Espaço Aéreo www.decea.gov.br" are displayed.

<http://www.aisweb.aer.mil.br>

Future Goals - CRONOS

Home Administration Applications Event Messages eAIP ENQUIRY admin

Query Panel

Start date: 03/03 Days: 29/05
 01/04/13 00:00 00:00 Hours: 23:00

End date: 03/03 Days: 29/05
 30/04/13 23:00 00:00 Hours: 23:00

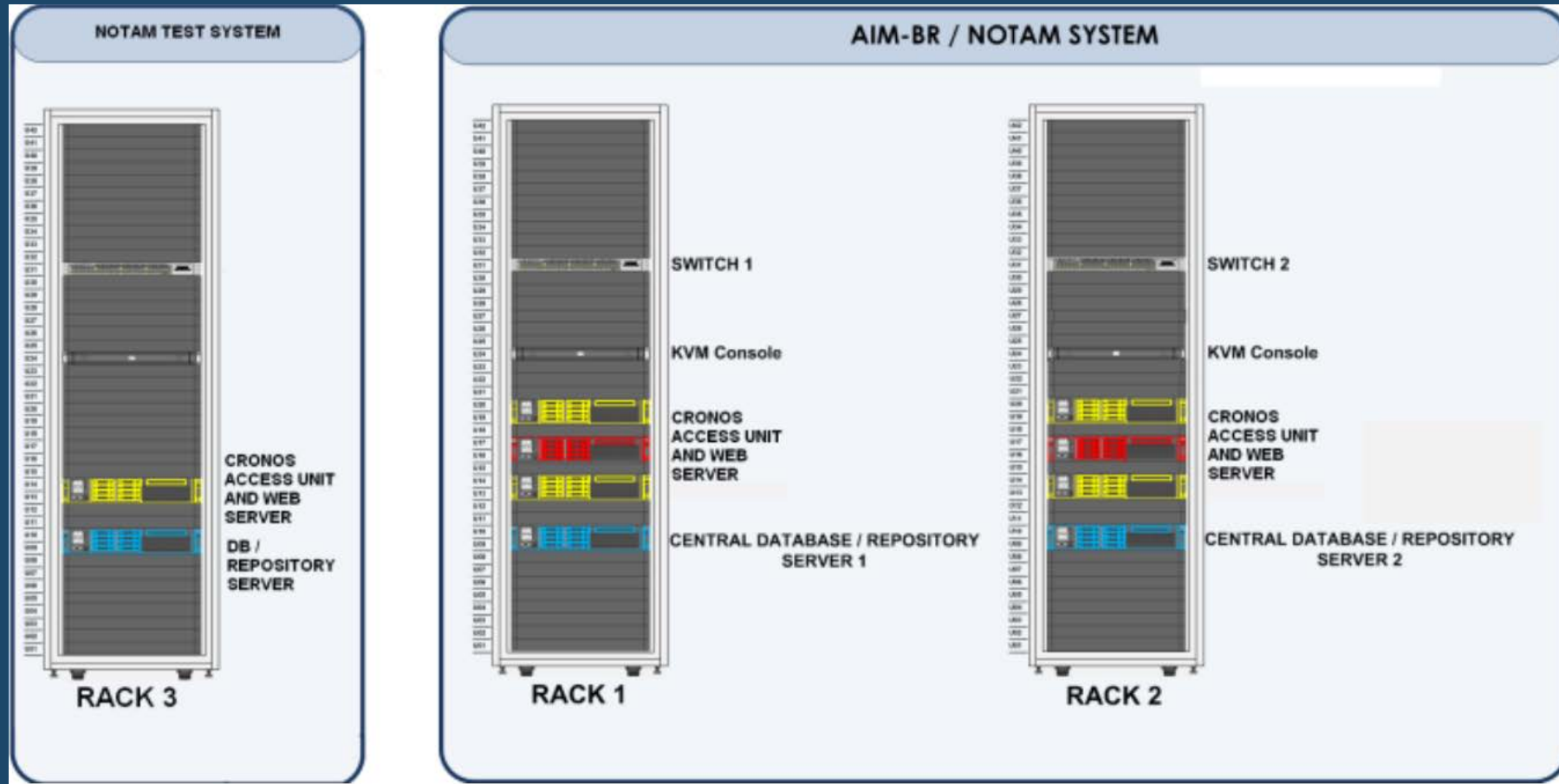
Advanced options

Altitude 2 km Off Globe Layers Panel WorldWind Menu

NOTAM SNOWTAM

Notam	Location	Q Code	Emission date	Start date	End date
NOTAM	LOCATION	Q CODE	EMISSION DATE	START DATE	END DATE
A-null-2013	LICG	QFALC	11-04-2013 08:58	11-04-2013 08:58	11-04-2013 09:58
C-null-2013	LFKF	QFALC	11-04-2013 09:20	11-04-2013 09:20	11-04-2013 09:20
R-null-2013	LIRR	QNDCS	11-04-2013 17:58	22-04-2013 17:58	24-04-2013 17:58 EST
H-null-2013	LIRR	QNBCS	11-04-2013 17:57	26-04-2013 15:30	26-04-2013 15:30

Future Goals - CRONOS



Script

- Background
- Challenges
- Actual Situation
- Future Goals

Objective

To inform the audience about the implementation process of the AIM-BR system at ICA.

Contact

1st Lt. Luiz Carlos Mendes Souza

Instituto de Cartografia Aeronáutica

Avenida General Justo, 160

Rio de Janeiro – RJ

CEP: 20021-200

Emails: luizlcms@decea.gov.br / luiz.souza@gmail.com

Phone: +55 (21) 2101-6937 / +55 (21) 99819-2240