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IFAIMA Global AIM 2017 Kampala, Uganda

Summary

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We came to Uganda…

- **Attendance**
  - **350+** registered participants
  - **61** States, **5** Intl ORG
  - **13** Industry Exhibitors
- **Organizing partners**
  - IFAIMA//ICAO/Eurocontrol/UCCA
  - **27** presentations, **25** presenters

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Our hosts

Uganda:

- Government of Uganda
- Civil Aviation Authority

INTERNATIONAL FEDERATION OF AERONAUTICAL INFORMATION MANAGEMENT ASSOCIATIONS
IFAIMA
GLOBAL AIM KAMPALA
UGANDA
23-25 MAY 2017

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Memories…

Huge participation!

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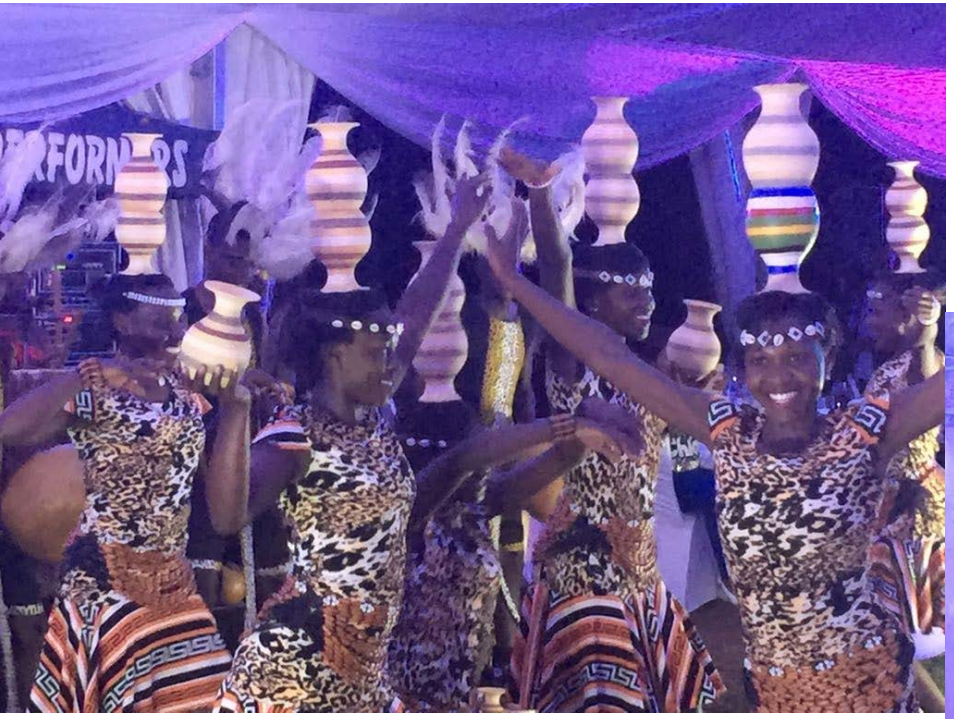
Memories…



Exceptional Kampala welcome!

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Thank you IFAIMA!

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What we heard

- ICAO Global and Regional Developments
- Regulatory Framework best practices
- Understanding AIS to AIM – end to end
- AIS / AIM Phase I & II - Open Questions
- Importance of training
- Looking into the future

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No AIS Left Behind (what we have)

- The **global initiatives**
  - State Letter 2017/22: **new global framework for AIM!**
  - New PANS-AIM: the daily book for AIM practitioners
  - New expanded "AIM" manual coming soon
  - Implementation strategy to address non compliances on aeronautical charts
- The **regional initiatives**
  - Regional guidance publicly available
  - Regional templates to support national AIM implementation plan & roadmap
  - Regional workshops and conferences
  - Centralized resources and regional databases
- **Industry and International organizations** support
  - Intl. organizations providing guidance and tools to support implementation
  - Industry offering the technological means and training to go operational now

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No AIS Left Behind (what we have)

- Several examples of **best practices**…
  - Kenya, Senegal and Nigeria experiences in establishing a reg. framework and oversight
  - Uganda example on steps taken to transition to AIM
  - Kenya example on how to maintain the standards across the chain
  - Belgium integration of civil-military information
  - Czech Republic model for training
  - Technological solutions, experiences and advice shared by the industry and agencies

…ICAO website sharing examples and best practices to address the various aspects of the transition?

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No AIS Left Behind (what we miss)

- Institutional challenges:
  - Lack of understanding that multiple and uncoordinated rules can be extremely costly and potentially catastrophic
  - Lack of clear requirements for the stakeholders involved: it increases friction and impacts quality of services
  - Inability of service providers to understand the role of the oversight function in the Civil Aviation Administration;
  - Need for more cooperation between regulators and ANSPs
  - Placement of the AIS in the Civil Aviation Administration
  - Lack of competent staff/Inadequate training

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No AIS Left Behind (what we miss)

- Service provision challenges:
  - AIM officer not recognized as a profession
  - Risk of working as “amateurs” to this sensitive profession is not realized
  - Need for ICAO specific training programmes and more guidance
  - Issues with English language proficiency
  - Provision of raw data to the AIS must be strengthened
  - Digital datasets are still considered immature for implementation
  - Reliable exchange of data between stakeholders is still a challenge

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Technological challenges

- Technological challenges:
  - AIXM poses challenges in terms of data exchanges due to its verbosity
  - Mapping rules to convert AIXM to the ARINC data formats do not exist
  - It is difficult to make AIXM data available for airborne applications
  - eTOD is hardly used in avionics systems
  - No incremental AIXM updates (UUIDs issues)
  - AIXM is still too permissive; major bilateral coordination is required

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Some initial steps…

1. New interoperability rules", "coding rules" and "business rules"

- to reduce the number of AIXM options, where necessary;
- to define precise coding rules for practical situations; and
- to facilitate the verification of the datasets

2. Facilitate the implementation of AIP data sets
3. Plan to create mapping AIXM→ARINC
4. Wiki for suggestions

… Still more is needed

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The “Kampala Recommendations”

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Regulatory aspects

- Regulate AIM: To enjoy its benefits: clear guidance for stakeholders, major shift in economic value, more robust and sophisticated use of aeronautical information
- Think different: "AIS" is about the service, "AIM" is about data quality across different domains
- Make the primary legislation effective: Separation between the Regulatory and the Service Provision functions shall be spelt out right from primary legislation
- Encourage Cooperation between CAAs and ANSPs to ensure more effective audits, inspections and follow-ups;
- Make the current regulatory process more "resilient". To protect from ambiguity potentially coming from the digital environment

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AIS to AIM transition… end to end

- AIM Transition Without Strong AIS Foundation is not effective
  - Eliminate the deficiencies in processes & quality issues in your existing products;
  - Understand fully how a "legacy AIS" is provided;
  - Do a complete quality management review of the existing AIS
- Need for a cultural change:
  - If the input is garbage, the output is garbage
  - Communicate, talk, discuss, with your data originators… and then learn how to listen to each other and reach the compromise to meet the common objective
  - Understand that AIS and data originators need each other
- Automation reduces human errors but plan for fall-back procedures: Automation reduces human errors but increases the possibility for machine errors; ensure staff competency and operator proficiency (even in case of machine failure)
- More cooperation among States to share best practices

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Interoperability … way forward…

- We don`t know… yet!
- We need to solve it asap.
- Need to create more forums for discussion to find a concrete solution
- Need of a joint effort of all stakeholders which include ICAO, International Organizations, Industry and Service Providers
- Encourage discussions to the ICAO Information Management Panel (IMP), that is working on creating the basis for interoperability of data exchange
- Need for an **ICAO AIM working group**
  - *GLOBAL data and information-systems standards?*
  - *GLOBAL standardization and certification (FMS)?*
  - *Leverage existing international standards for data systems?*
  - *Leverage of other information domains examples (WIXXM)?*

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Looking into the future

- Procedural/radar control to trajectory based management →we can know and share the information of the aircraft
- Situational awareness becomes important (or more important than today)
- At the heart of this is INFORMATION SHARING through SWIM
- The development an and growing of concepts such as ATFM, CDM, PBN has created a far richer information environment
- And this requires the need to share and aggregate and harmonize a huge amount of information
- So let`s take the right steps today to strive for harmonization and alignment across systems

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Panel session

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Learn from experience…

- Let `s listen to the users!
  - NOTAM Challenges (no timely notifications, partial information)
  - AIRAC Adherence (information does not reach the data houses in time, effective dates outside common dates)
  - No answers on clarification
- Let`s allow the AIS to do the right validation and verification of data
  - AIS does not question the data;
  - if AIS questions, the originator feels “undermined” in his role;
  - Validation and verification is needed on both sides and communication is essential;
  - AIRAC cycles are tight : AIS needs to be organized to do all the verification and validation .

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Learn from experience…

- NOTAM proliferation needs to be addressed:
  - Sensitize the originators to the issues
  - Not having information on status and condition of infrastructure on time
  - Better understand what information qualifies NOTAM
  - Training
- Certification requirements for AIS/AIM personnel… is it the highest priority?
  - Need to prioritize the issues we are facing
  - Maintenance of certification is costly and time-consuming
  - For future deliberations
- Interoperability issues, need for global standards and certification of aircraft: we need to act!

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CONCLUSIONS

The future of aeronautical information management and ultimately SWIM looks good from where we stand…

The challenges of yesterday must be addressed today if we are to reach tomorrow…

We can not AIM if we have not served and we can not SWIM if we can't AIM.

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Thank You