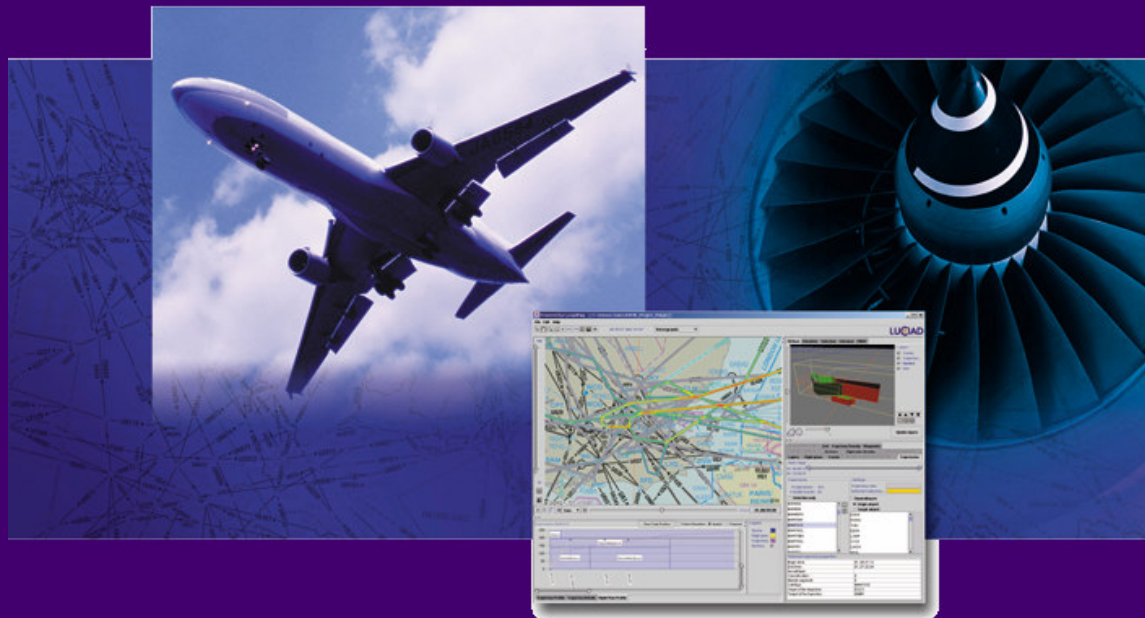


Luciad

Next generation visualization tools for AIXM 5



Frank Suykens, Product Manager

LUCIAD - High performance visualization

LUCIAD

Overview

- **Luciad introduction**
- **LuciadMap & AIXM 5**

About Luciad

- Software product company
 - Software components for ATC/ATM
 - High performance visualization
 - Standards

Who are Luciad customers in ATM ?



LUCIAD - High performance visualization

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Luciad Products

LuciadMap

Software platform for ATM application development

- High performance visualization (2D & 3D)
- Open, object-oriented architecture
- On-the-fly merging of different data sources
- Direct support for Aeronautical Data Standards: ARINC424, AIXM, DAFIF, AMXS, ASTERIX, ASDI-ETMS
- Terrain and Weather
- Web and SOA enabled
- High-precision geographical calculation
- Support for mission critical applications

Luciad Products

Standards compliant

- OGC Compliant (WMS, WFS, WCS)
- Support for OGC GML, SLD, Filter specifications
- Multiple data formats and database support
- OGC clients, from thin to rich



Luciad Products

ATCPlayback

End user application for analysis and playback of recorded and simulated flights

- High-performance visualization of ATC fast-time simulations
- Direct support for TAAM, RAMS and SIMMOD
- Intuitive and highly interactive graphical analysis capabilities
- Graphical reporting capability to stakeholders

Luciad Professional Services

- Consultancy
- Custom software application development
- Training & Coaching

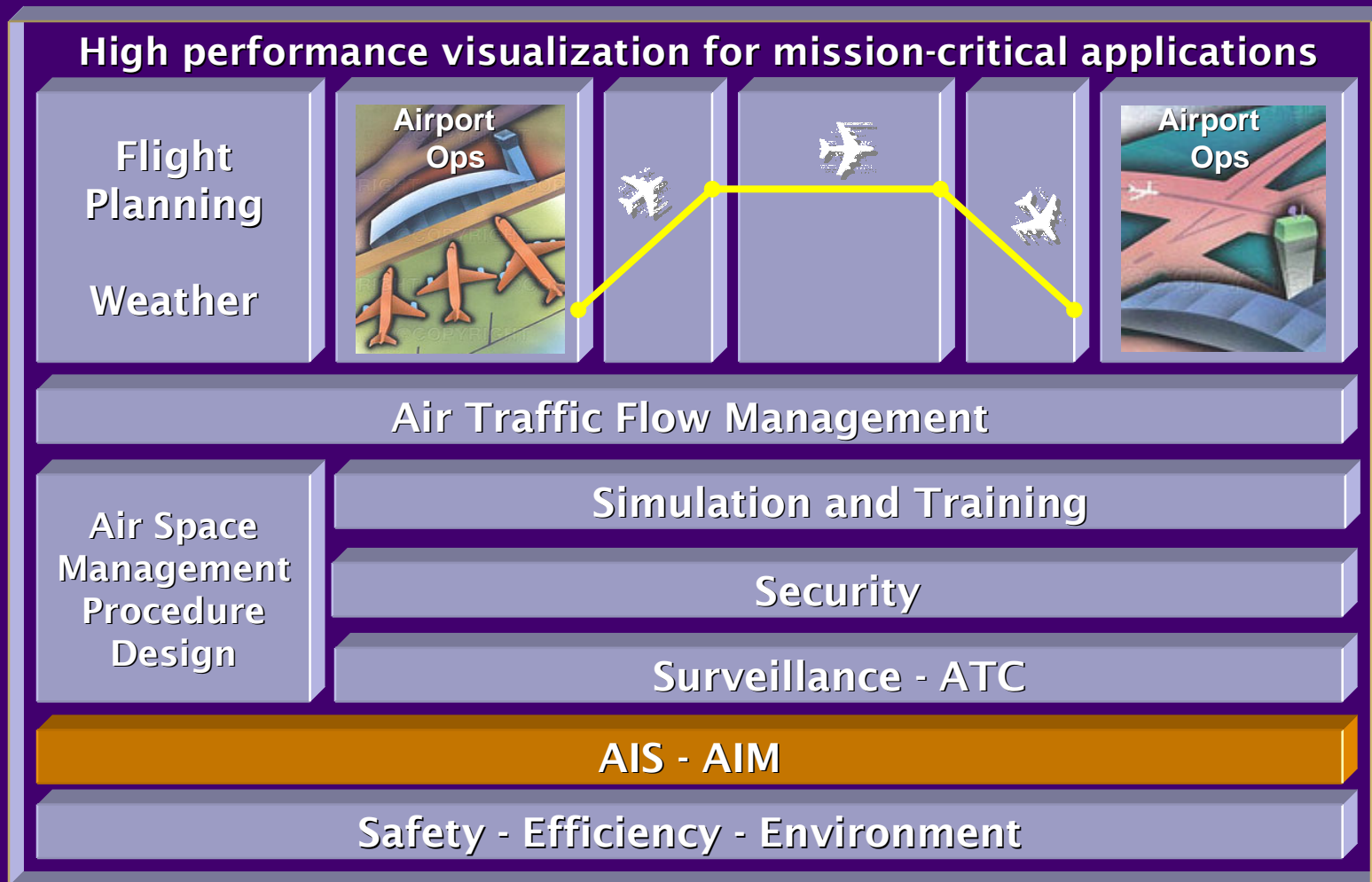


- Advanced product knowledge
- ATM Domain expertise
- Knowledge transfer
- On- and Off-site
- Networking
- Security clearance

LUCIAD - High performance visualization

LUCIAD

Expertise and Strengths in ATM



Overview

- Luciad introduction
- **LuciadMap & AIXM 5**

LuciadMap & AIXM 5

- LuciadMap strengths for AIXM 5
 - Standards support
 - GML 3
 - ISO 19115/ISO 19139
 - XML
 - Knowledge and support for aeronautical formats
 - ARINC 424, DAFIF, AIXM 3.3, AIXM 4.5
 - High performance visualization
 - Dynamic data

LuciadMap AIXM 5 package

- Detailed domain object model
 - Programmatic access to all AIXM 5 features & attributes
 - Generated directly from XML Schema
 - Reuse support for GML 3 & ISO 19115
- AIXM 5 Decoder
 - Read AIXM 5 baseline files
 - Read updates & NOTAMs (Delta's) on top of baseline
- Visualization
 - ICAO Symbology

LuciadMap AIXM 5 package

- Temporality
 - Full support for temporality (timeslices)
 - Two types of models
 - Full model: has all time slices available
 - Snapshot model: snapshot at a specific time
- Currently supported: AIXM 5 RC 2
 - Eurocontrol Digital NOTAM trials

Demo

The screenshot displays the LUCIAD software interface. The main map view shows a 3D visualization of an airport runway with a red dashed line indicating a closure. The interface includes a map view, object properties panel, playback controls, and a temporal view table.

Object properties

Feature name	Value
BeginPosition	2008-03-26T18:00:00
EndPosition	2008-03-28T14:00:00
Interpretation	SNAPSHOT
Type	NORMAL
HasSurfaceDescribedBy	
HasExtent	
HasAnnotations	
Feature 0	
Note	
PropertyName	[A0002/08] RWY 9R-27L CLOSED
AirportHelpportUsage	

Preview

Models

Model	Start	End
RunwayElement	03/23 14:00:00	03/30 15:00:00

Playback

Stopped | 70% | 1x

Time control

03/23 14:00:00 | **03/27 16:26:53** | 03/30 15:00:00

Time range

03/23 14:00:00 | 03/30 15:00:00

Map Layers

- Chicago O'Hare.xml
- Area of Interest
- RunwayElement (snapshot)
- Grid
- Chicago O'Hare.tiff
- world

RunwayElement

RunwayElement	Baseline	Event	Start	End
RunwayElement 4R-22L RE10	BASELINE 1	TEMPDELTA 2 (NOTAM)	2008.03.23 2:00 PM	2008.03.24 2:00 PM
RunwayElement 4R-22L RE11	BASELINE 1		2008.03.23 2:00 PM	2008.03.26 6:00 PM
RunwayElement 4L-22R RE12	BASELINE 1		2008.03.23 2:00 PM	2008.03.28 2:00 PM
RunwayElement 4L-22R RE13	BASELINE 1		2008.03.23 2:00 PM	2008.03.30 3:00 PM
RunwayElement 9R-27L RE14	BASELINE 1		2008.03.23 2:00 PM	2008.03.26 6:00 PM
RunwayElement 9R-27L RE15	BASELINE 1	TEMPDELTA 2 (NOTAM)	2008.03.26 6:00 PM	2008.03.28 2:00 PM

LUCIAD - High performance visualization



LuciadMap AIXM 5 future

- AIXM 5 & LuciadMap
 - Follow closely AIXM 5 evolution
 - Work with customers from early developments up to operational systems
 - Use lessons learned from Digital NOTAM trials, ...

Flexible, high performance AIXM 5 software platform

Questions?

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