ADM: Architecture Driven Modernization

- Big Picture: ADM vs MDA for ATC
  - Safety critical domain: ATC
  - MDA vs ADM
- What we want?
  - Future: MDA for safety critical systems
  - Today: Closed to Software Chaos
  - ADM To fill the gap between future and today
- ADM process
- ADM standards
- ADM Tools
  - Short term: code optimization
  - Medium term: language translation
  - Long term: architecture excavation
ADM for Large Distributed Safety Critical Systems

Why do we need ADM?

ADM to fill the gap between tomorrow and yesterday technologies

Emmanuel FUCHS
ADM: Architecture Driven Modernization

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Safety Critical Command and Control System

- ATC
- Power
- Medical
- Industrial
- (Trading)
Air Traffic Control process

- Radar Data Processing
- Flight Data Processing
- Transmitter Receiver

Filled Flight Plan

Date and references: 31/03/03
Air Traffic Control process

- Radar
- Radar Data Processing
- Flight Data Processing
- Flight Plan
- Transmitter Receiver
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MDA transformation flow

- **Model**
  - PIM (Platform Independent Model)
  - Transformation
  - PSM (Platform Specific Model)
  - Transformation
  - Code
MDA transformation flow

**PIM**
Platform Independent Model

**PSM**
Platform Specific Model

**Domain Model**

**Middleware Model**

Transformation
MDA transformation flow

PIM
Platform Independent Model

Transformation

PSM
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ADM transformation flow

Model

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THALES