

# **Global Air Traffic Management (GATM)**



***Capt Gina Hubbard  
Feb 2000***

# OVERVIEW

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- **GATM Defined**
- **Operational Significance**
- **AFMSS Implementation Plans**

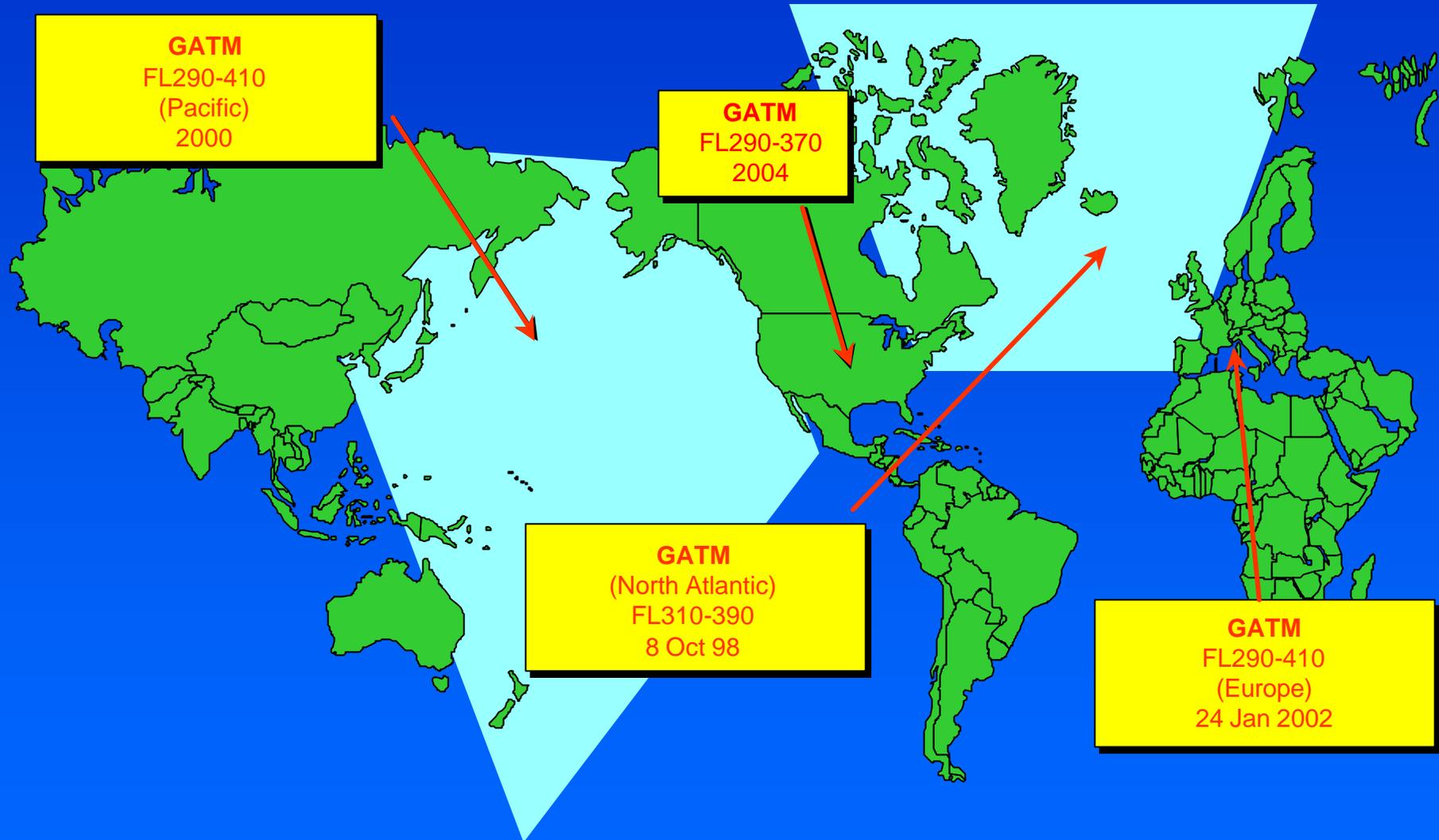
# GATM (Air Force CNS/ATM)

Category	Components	Goal
<b>C</b> <b>Communication</b> Digital Radios to Handle Reduced Channel Spacing and Datalink	<ul style="list-style-type: none"> <li>• 8.33 KHz Radios</li> <li>• CPDL</li> </ul>	<div style="display: flex; align-items: center; justify-content: center;"> <div style="font-size: 4em; margin-right: 20px;">A T M</div> <div> <p><b>Air Traffic Management</b></p> <p>Transition from <u>ATC</u> to <u>ATM</u> With the Ultimate Goal of Free Flight (2010)</p> </div> </div>
<b>N</b> <b>Navigation</b> Better Horizontal/Vertical Position Accuracy to Enable Reduced Separation	<ul style="list-style-type: none"> <li>• RNP</li> <li>• RVSM</li> <li>• FM Immunity</li> </ul>	
<b>S</b> <b>Surveillance</b> Enhanced Situational Awareness, Collision Avoidance, Automatic Position Reporting	<ul style="list-style-type: none"> <li>• ADS-B/A</li> <li>• Mode S</li> <li>• TCAS</li> </ul>	

GATM=Continued Operation IAW New Separation Standards/Procedures

# GATM Airspace by 2003-05

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# 2005... “Non-Compliant” Platform Tasked to Deploy to Europe

- **Trans-Oceanic Impacts: Cross Below FL 290 (Reduced Vertical Separation Minimum - RVSM)**
- **Possible In-Theater GATM Impacts**
  - Restricted from VOR or ILS Approach (FM Immunity)
  - Airspace Access Restricted (FM Immunity, ACAS/TCAS)
  - Restricted Ops to Below FL 245 (8.33 VHF)
  - Unable to Fly General Air Traffic (Mode S)...  
Operational Air Traffic may still be allowed

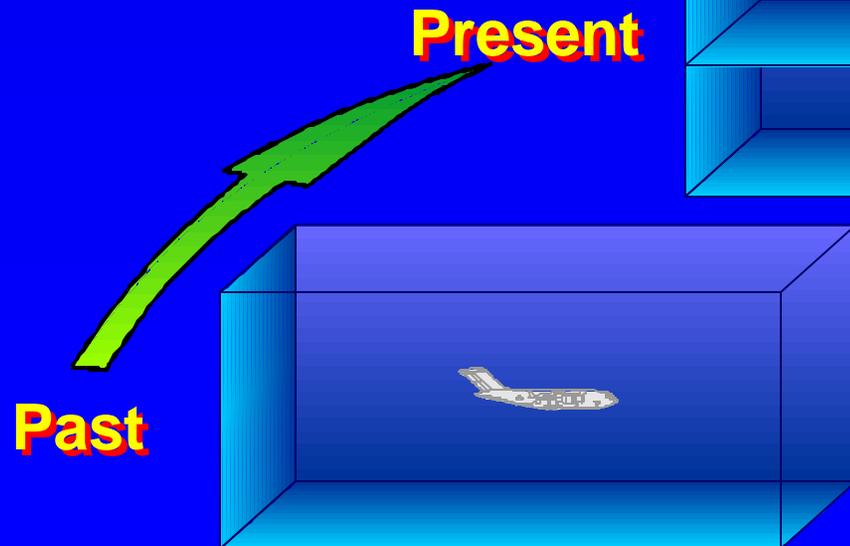
## **German Announcement**

"State aircraft or others without properly protected ILS/VOR receivers...cannot expect to use such equipment for instrument approaches to German aerodromes after 1 January 2001."

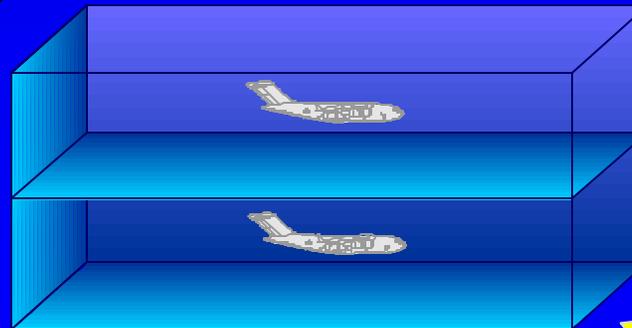
# GATM Example: Aircraft Separation by 2003

## Aircraft Separation Decreases Over Time

- 2000' to 1000' Vertically
- 60 to 30 NM Horizontally

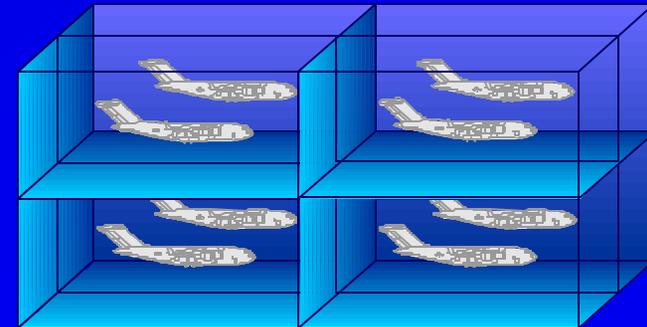


**Present**



**RVSM  
Mar 1997**

**Future**



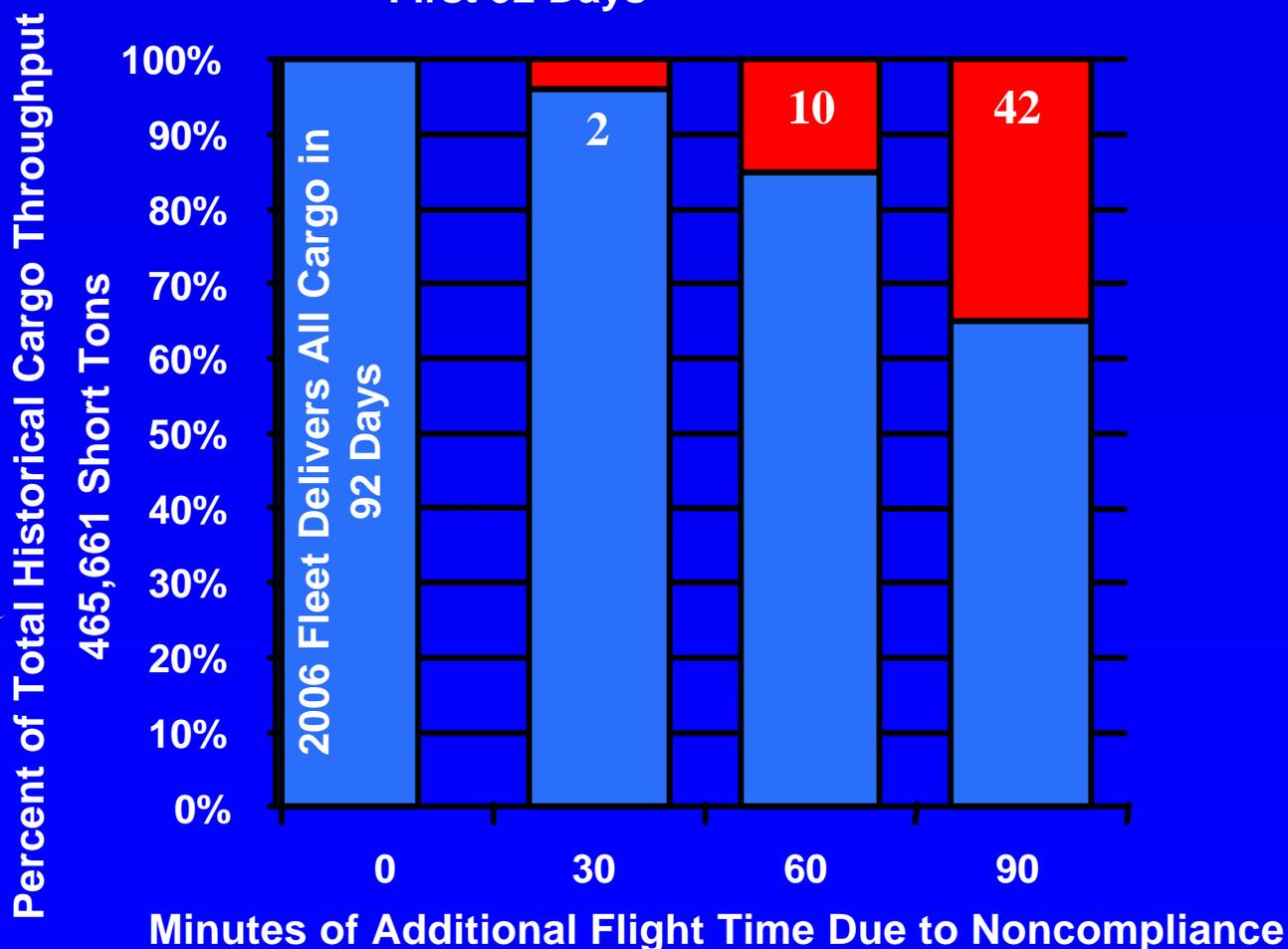
**CNS/ATM  
2003**

**New  
Communication,  
Navigation and  
Surveillance  
Equipment Is  
Needed to Preserve  
Safety and  
Efficiency**

# Impact Of Noncompliance

# = Extra Days to Deliver Shortfall

Replay of DESERT SHIELD/STORM With 2006 Airlift Fleet  
First 92 Days



Assumes  
Compliant  
CRAF

# **IT'S HAPPENING NOW!**

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- **Guard Lift KC-135 Mission to Aviano AFB**
  - **Not RVSM compliant**
    - » **Transoceanic flight restricted to FL 290 and below**
  - **Radios not 8.33KHz compliant**
    - » **Parisian Sector Controller would not allow SRS exempt aircraft into their airspace**
- **ALLIED FORCE B-2 Mission to Kosovo**
  - **Not RVSM compliant**
    - » **Transoceanic flight restricted FL 290 and below**
    - » **Weather a SIGNIFICANT factor**

**BOTTOM LINE: Non-compliance = Less Than  
Optimum Routing = More Time + More Fuel**

# Where Is Mission Planning?

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- **TODAY**
  - **MPS**
    - » Impact not evaluated yet
  - **PFPS**
    - » Changes being incorporated into AWEs for TASM aircraft (C-17, C-141, C-5, KC-10, KC-135, C-9, E-3, E-8)
    - » Other platform's impacts not evaluated yet
  - **JMPS**
    - » Working to add to Version 1 requirements
- **NEAR TERM**
  - AFMSS GATM Tiger Team established Jan 00
  - Jul 00 present Operational Impact Analysis (OIA)
- **FAR TERM**
  - Permanent AFMSS GATM IPT

# **GATM POCs**

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## **HQ AMC**

**Maj Daryl Taylor**

**DSN 576-6459**

## **HQ ACC**

**Maj Brian Howell (Aircraft Reqmts)**

**DSN 574-1077**

**Mr Fred Aronson (Mission Planning)**

**DSN 574-1868**

**LtC Robert Clardy (Ops Issues)**

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## **ESC/ACU**

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