

Headquarters U.S. Air Force

Integrity - Service - Excellence

“State Aircraft Issues”

ICAO’s 1st RVSM Seminar for CAR/SAM Region

Lima, Peru



Allan D. Storm

Air Force Flight Standards Agency

U.S. AIR FORCE

Civil/Military Aviation Issues



U.S. AIR FORCE

Global Air Navigation Plan for CNS/ATM Systems

- **All airspace users should have access to airspace based on flexible use concept**
- **State aircraft must be considered and accommodated to the maximum extent possible**
- **State aircraft operating extensively in an area should equip to the extent possible**
- **Close coordination required among all airspace users**



ICAO Doc 9574 (RVSM)

U.S. AIR FORCE

...The following factors, where applicable, should be considered in the process of reaching a decision to implement RVSM:

a) the costs that operators will incur in order to meet RVSM MASPS;

b) system users: types/mix of aircraft (military and civil); origin and destination of flights; primary routes and flight levels; aircraft passing frequency...



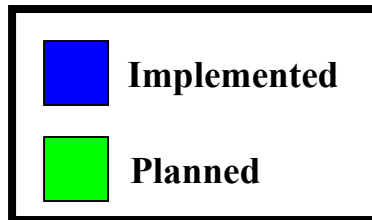
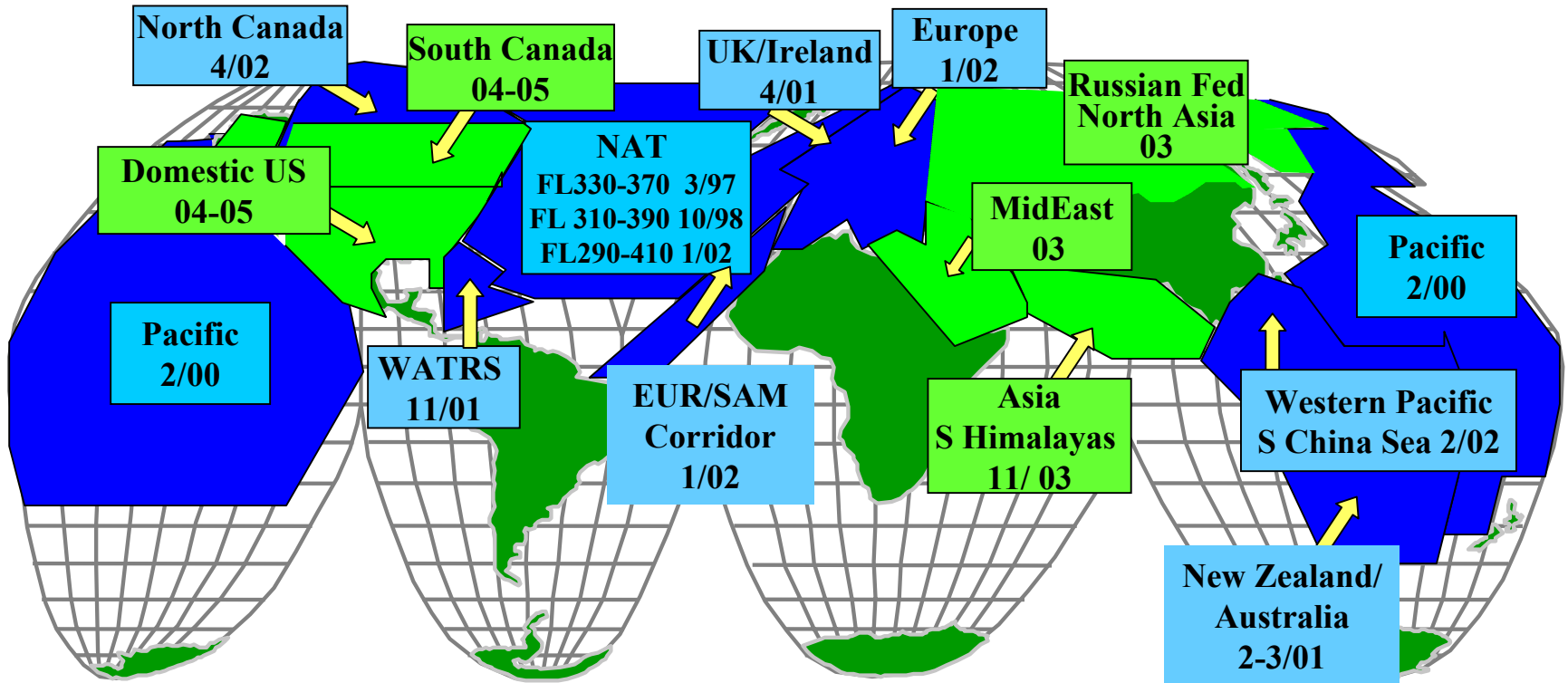
“State” Aircraft

- **ICAO provides State aircraft definition guidance**
 - **Generally: military, customs, and police/firefighter aircraft**
- **Nations have varying legal definitions of State aircraft**
 - **Some nations also consider: aircraft ownership, operators, type of passengers/cargo, etc.**
- **Military aircraft universally considered State aircraft unless operated for commercial purposes**
- **“State” designation does not preclude compliance with civil airspace access rules and procedures -- State aircraft can be restricted/denied access to civil controlled airspace**
- **Frequent users of civil airspace expected to comply -- State aircraft can be accommodated for some requirements when safety, procedures and workload permit**



RVSM Implemented & Planned

U.S. AIR FORCE





U.S. AIR FORCE

North Atlantic/MNPS

- **First implemented March 27, 1997 -- FL 330 to FL 370**
- **October 8, 1998 extended to FL 310 to 390**
- **January 24, 2002 further expanded FL 290 to FL 410**
- **Exclusionary Airspace**
- **No military exemption**
 - **Aircraft must file ALTRV**
- **Causes difficulty for “State” Aircraft who have to fly utilizing less-economical altitudes if cannot meet ALTRV time requirements**



- **First implemented 24 February 2000; FL 290 to FL 390**
 - **1 October 2000 expanded to FL 410 (non-exclusionary)**
 - **Exclusionary Airspace**
 - **Non-RVSM “State” Aircraft accommodated**
 - **Initially prior notification required (4-72 hour coordination)**
 - **Anchorage and Oakland ARTCC/Naha and Tokyo ACC**
 - **FAX Form developed**
 - **No problems associated with notification procedures**
 - **Modified so no advance coordination required**
 - **Filing of flight plan suffices for notification**
 - **No problems associated with accommodation**
-



Western Atlantic (WATRS)

U.S. AIR FORCE

- **Phased implementation; FL 310 to FL 390**
 - **Phase 1: 30 September 2000**
 - **Non-exclusionary/mixed**
 - **Phase 2: 1 November 2001**
 - **Exclusionary Airspace**
- **24 January 2002 expanded to match NATS; FL 290 to FL 410**
- **Non-equipped “State” Aircraft accommodated**
 - **Filing of a routine flight plan suffices for the advance notification of non-RVSM equipped aircraft**
- **No problems associated with accommodation**



- Implemented 24 January 2002; FL 290 to FL 410
 - 39 European States
- Due to the physical limitations of certain aircraft – “State” aircraft are exempted
 - No advance coordination required
 - Military operators shall insert “M” in item 8 of the ICAO Flight Plan
- Civil registered aircraft used in military, customs and police service, shall qualify as “State” aircraft
- Non-RVSM Military aircraft being accommodated
 - Some cases of Non-RVSM aircraft not being accommodated within France’s airspace



U.S. AIR FORCE

South Atlantic EUR/SAM Corridor

- **First implemented 24 January 2002; FL 290 to FL 410**
- **Exclusionary Airspace**
- **Non-RVSM “State” Aircraft accommodated**
 - **Aircraft indicate Non-RVSM in Flight Plan**
 - **No advance notification required**
 - **Specific procedures in place for Non-RVSM aircraft crossing corridor**
- **No problems identified**



- **Phased Implementation**
 - **Phase 1: 24 February 2000, East Coast Oceanic**
 - **FL 290 to FL 390**
 - **Phase 2: 22 March 2001**
 - **Expanded from FL 290 to FL 410**
 - **Phase 3: 1 November 2001**
 - **RVSM for all domestic and oceanic airspace**
- **Oceanic is exclusionary**
 - **Domestic non-exclusionary (mixed environment)**
- **“State” aircraft accommodated**
- **No problems associated with accommodation**



U.S. AIR FORCE

Middle East

- **Planned implementation for November 2003**
- **Proposal that filing of a routine flight plan will suffice for the advance notification of Non-RVSM aircraft**
- **Sample AIP allows for military accommodation**



South China Sea/Bay of Bengal

U.S. AIR FORCE

- **Implemented February 2002**
- **Exclusionary Airspace**
- **Non-RVSM “State” Aircraft accommodated**
 - **Initially prior notification required (4-72 hour)**
 - **FAX Form used**
 - **No problems associated with notification procedures**
- **Modified so no advance coordination required**
 - **Filing of flight plan suffices for notification**



- **Planned implementation for December 2004**
- **FAA and DoD collaborate on the development and implementation DRVSM**
- **MOU between FAA and DoD**
 - **FAA will accommodate non-compliant U.S. military aircraft operation within RVSM airspace**
 - **Military to flight plan and fly within exclusionary RVSM airspace**



“State” Aircraft Perspective

U.S. AIR FORCE

- **Military authorities must be comprehensively involved from the outset; ensuring military requirements**
- **Applicability and accommodation provisions for State aircraft must be accepted within the entire region**
- **Operators of State aircraft (military, customs or police service) that are not RVSM compliant may flight plan within FIR RVSM airspace**
- **Filing of a routine flight plan suffices for the advance notification of Non-RVSM equipped State aircraft**
- **Relevant air traffic control staff and appropriate tools and training required for the accommodation of State aircraft must be provided where necessary**
- **The safe and efficient co-existence of civil and military activity in a common airspace**



U.S. AIR FORCE

Conclusion

The global air traffic architecture is changing to meet current and future demands

**Emerging Requirements
Demand New Equipment and Procedures**

GOAL

Preserve State Aircraft Access to Global Airspace