



# **NFPL IMPLEMENTATION ATS OPERATIONAL ASPECTS**

**International Civil Aviation Organization**

**North American Central American and Caribbean Regional Office**

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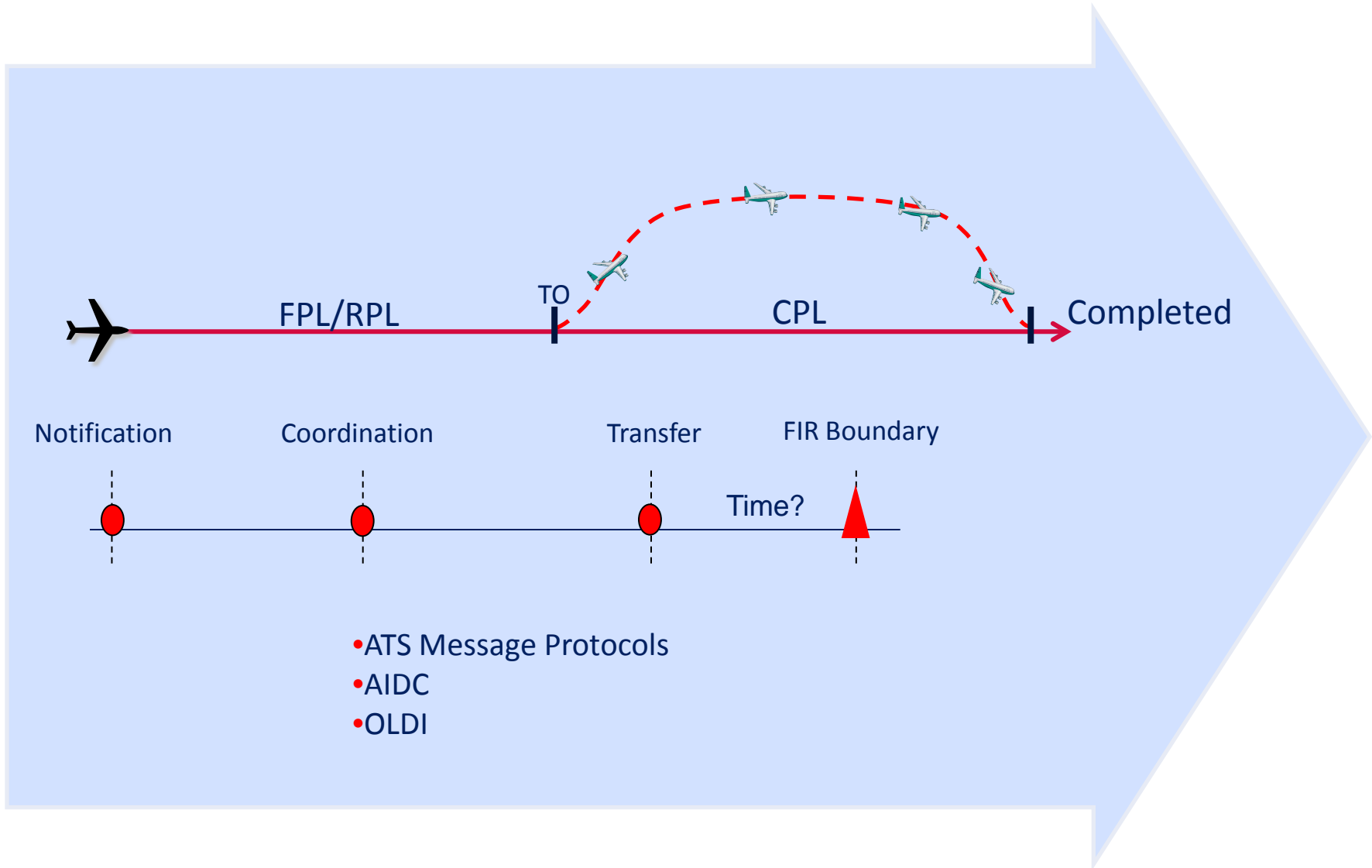
***Mexico City, Mexico, 26/28 March 2012***

# Overview

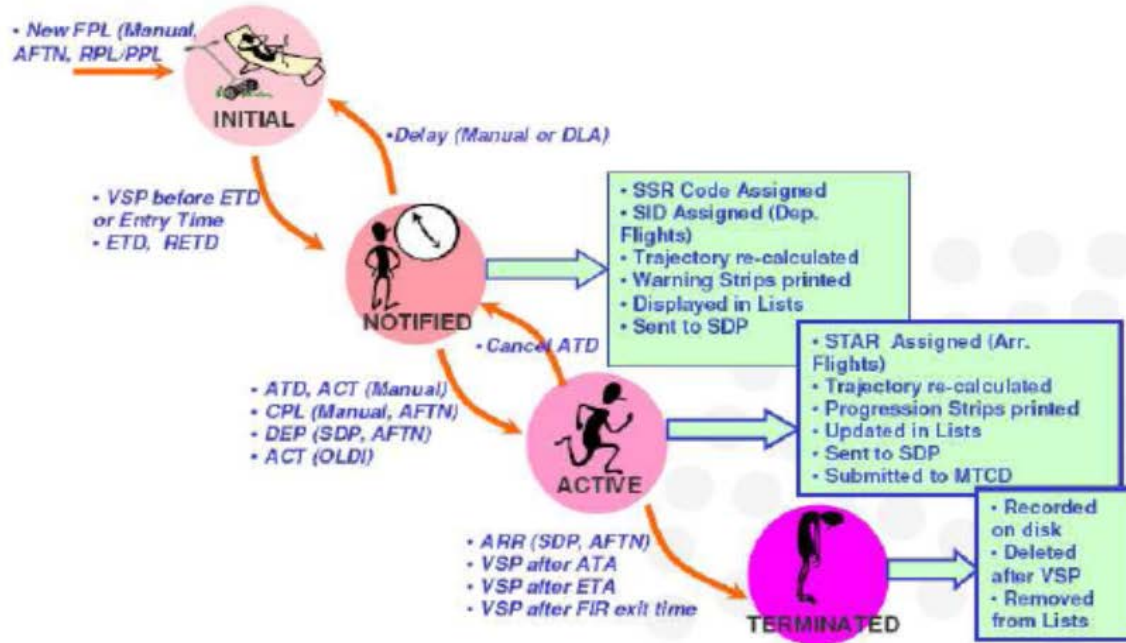


<b>Acciones operacionales de implementación - NFPL – operational implementation aspects</b>		<b>Start / Inicio</b>	<b>Finish / Fin</b>	<b>RESPONSIBLE</b>
✓	<b>Publicar regulaciones y procedimientos FPL</b>	12/11/2012	15/11/2012	E-T-OI
✓	<b>Publish FPL regulations and procedures</b>			
✓	<b>Implementar procedimientos de contingencia para mitigar los riesgos identificados</b>	15/11/2011	30/06/2012	E-T-OI
✓	<b>Implement contingency procedures to mitigate identified risks</b>			
✓	<b>Implementar un plan de cambio</b>	12/11/2012	15/11/2012	E-T-OI
✓	<b>Implement switch-over plan</b>			
✓	<b>Establecer proceso CDM (ANSPs, operadores aéreos, pilotos, ATCO, despachadores, aviación general, etc.)</b>	30/09/2011	15/11/2012	E-T-OI
✓	<b>Implement CDM process (ANSPs, air operators, pilots, ATCOs, dispatchers, GA, etc.)</b>			
✓	<b>Analizar la implementación de una Unidad Central de Coordinación de Plan de Vuelo para cada FIR</b>	30/09/2011	15/11/2012	E-T-OI
✓	<b>Analyze Flight Plan coordination Unit for each FIR</b>			
✓	<b>Implementar plan de capacitación para ATCOs, pilotos, personal AIS y despachadores, según se requiera</b>	30/09/2011	15/11/2012	E-T-OI
✓	<b>Implement training plan for ATCOs, pilors, dispatchers, as required</b>			
✓	<b>Implementar medidas para resolver los problemas por errores, pérdidas y duplicación de planes de vuelo</b>	17/11/2011	30/06/2012	E-T-OI
✓	<b>Implement measures to resolve errors, missing and duplication problems of flight plan</b>			
✓	<b>Implementar un programa de evaluación de la seguridad operacional (monitoreo) antes y después de la implementación</b>	15/01/2012	15/12/2012	E-T-OI
✓	<b>Implement pre and post safety assessment implementation programme</b>			

# Flight Plan evolution



# Flight Plan....





# Publication of FPL regulations and procedures

## Annex 2, FPL Provisions

### 3.3.1 Submission of a flight plan

Flight plan shall be submitted prior to operating:

- a) any flight to be provided with ATC service
- b) any IFR flight within advisory airspace
- c) any flight to facilitate the provision of flight information, alerting and search and rescue services
- d) any flight to facilitate coordination with appropriate military units or with ATS units in adjacent States
- e) **any flight across international borders.**

# Publication of FPL regulations...



## Annex 2, FPL ...

A flight plan shall be submitted:

- To an ATS reporting office (ARO) or to the appropriate ATS unit before departure, unless arrangements have been made for submission of RPL
- At least 60 minutes before departure, or
- At a time which will ensure its receipt by the appropriate ATS unit at least 10 minutes before the aircraft is estimated to reach:
  - a) the intended point of entry into a control area; or
  - b) the point of crossing an airway or advisory route.

# Publication of FPL regulations...



## **Annex 10, FPL transmission**

ATS messages regarding flight plan data shall be transmitted through AFTN, AMHS

- Messages (address, form & content) concerning pre-flight arrangements for air navigation services (ANS)
- AFTN destination stations shall retain, for a period of at least 30 days, a record containing the information necessary to identify all messages received and the action taken



# Implement switch-over plan

Objective: To ensure a safe and effective **changeover from PRESENT to NEW** with minimum impact to the air traffic operations

## Transition for Full Implementation Capability: 01/07/2012 - 15/11/2012

- Planning implementation activities applicable to all Aircraft Operators, ANSPs, pilots, controllers, dispatchers and Regions
- Tests, Trails
- Publication of Regulations, Procedures, AIC, NOTAM, etc.
- Training
- Contingency





# Implement switch-over ...

## Target Implementation Date: 15/11/2012 06:00 UTC onward

- Provide “last minute briefing” to all operational personnel on an ongoing basis at least 24 hours before implementation date
- ACC staffing to be adjusted providing extra personnel, including subject matter experts during the Switch-over period
- Provide “on going briefing”, including contingency plan, to operational personnel reported on duty immediately prior to, and during Switch-over period until 72 hours after implementation
- Implement a monitoring process from Switchover to 3 days and report discrepancies with adjacent FIRs to ICAO NACC Regional Office on daily basis

# Collaborative Decision Making - CDM



- ✓ Achieve acceptable solution according to the expectations and necessities of the ATM community
- ✓ Foreseen conflicts
- ✓ Coordinate acceptable solutions
- ✓ Participation of all stakeholders

# Missing, errors & duplication FPLs



States should:

- urge operators to avoid mixing/duplicating CPL and/or RPL messages, only one should be in force for a particular flight plan;
- establish flight plan procedures for timeline filled, coordination and updating of related changes (altitude, EOBT, route, speed  $\pm$  5%, etc.);
- follow-up provisions related of ATC clearance delivery depicted in ICAO Doc 4444, for flights operating from one FIR to another adjacent FIR;
- Establish training programmes for pilots, ATCOs, dispatchers, etc.

## Programme

- Basic
- Recurrent
- Advanced

## Topics

- Presentation
- FPL - RPL
- NFPL Form
- Changes
- Content

# Annex 11, safety provisions



- States shall implement SMS in ATS
- Any significant safety-related change to the ATS system, such as the implementation of a reduced separation minimum or a new procedure, shall only be effected after a safety assessment has demonstrated that an acceptable level of safety will be met and users have been consulted.
- When appropriate, the responsible authority shall ensure that adequate provision is made for post-implementation monitoring to verify that the defined level of safety continues to be met.
  - *The acceptable level of safety cannot be expressed in quantitative terms, the safety assessment may rely on operational judgement*

# PANS-ATM Safety Management



An ATS safety management programme should include

- ➔ Monitoring of overall safety levels and detection of any adverse trend
- ➔ Safety reviews of ATS units
- ➔ safety assessments in respect of the planned implementation of airspace reorganizations, the introduction of new equipment systems or facilities, and new or changed ATS procedures
- ➔ A mechanism for identifying the need for safety enhancing measures

# PANS-ATM Safety Assessment



→ TLS

→ Trails

→ Simulation

→ Flight validation / verification

# Safety assessment



## ATM Occurrences

- Inability to provide ATM services
- ATM support functions
- Failure of CNS systems
- Failure of FDP & distribution
- Failure of information support

## Performance Indicators

ICAO Annex 10, Doc 8071

- Total ATM specific occurrences per xxx flights
  - Accuracy...
  - Availability...
  - Integrity...
  - Continuity...



# Safety risk index/tolerability



Risk probability	Risk severity				
	Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent 5	5A	5B	5C	5D	5E
Occasional 4	4A	4B	4C	4D	4E
Remote 3	3A	3B	3C	3D	3E
Improbable 2	2A	2B	2C	2D	2E
Extremely improbable 1	1A	1B	1C	1D	1E

# Safety risk management

