

PBN (Performance based navigation) in Romania

Viorel SĂLIȘTEAN
Head of CNS – ROMATSA

European Interparliamentary Space Conference (EISC)
Sinaia, Romania 2016

ROMATSA

Romanian Air Traffic Services Administration

- is the Romanian ANSP (Air Navigation Services Provider)
- is placed under the authority of the Ministry of Transport
- provides air traffic services for civil aircrafts overflying the national airspace or landing at / taking off from the airports in Romania
- create a safe operational environment for the air traffic in the Romanian airspace, on the background of the dynamical development of the civil aviation industry and of the permanent changes occurring in the international transport

ICAO (International Civil Aviation Organization)

Assembly Resolution 37-11

- refers to the Performance based navigation implementation
- it urges States to implement by 2016 :
 - RNAV (*Radio Navigation*) and RNP (*Required Navigation Performance*) operation for en-route and terminal areas
 - approach procedures with vertical guidance (APV) (Baro-VNAV and/or augmented GNSS - *Global Navigation Satellite Systems*), including LNAV only minima, for all instrument runway ends, either as primary approach or as back-up for precision approaches
- where aircraft not suitably equipped for APV operations or augmented GNSS (*for Europe is EGNOS*) not offering APV performances, States shall implement LNAV (*Lateral Navigation*) procedures
- Romania it's an ICAO Member State and shall comply with this ICAO Resolution

First LPV Cluj-Napoca Airport

(localizer performance with vertical guidance)

- all three minima LNAV, LNAV/VNAV and APV-I for both runway ends to **improve the safety of flights**, due to the continuously increasing of the aircraft movements
- procedure designed in 2014 is linked with the NAPOC TMA (Terminal Management Area) – new airspace concept design, based on conventional navaids and GNSS, which should be operational this year
- ROMATSA has signed EGNOS Working Agreement (EWA) in 2014 with ESSP (European Satellite Services Provider) including legal recording and performances monitoring for the EGNOS and GPS systems to fulfill ICAO SARPs (Standard and Recommended Practices).



SPICE program

(Synchronised PBN Implementation Cohesion Europe)

- most struggling issues is the lack of obstacle surveys for the area (airports and TMAs)
- to overcome this issue and to implement RNP procedures on all Romanian instrument runway ends, ROMATSA and Romanian Civil Aviation Authority (RCAA) gathered most important stakeholders of the Romanian airspace to apply to a common project to implement the PBN in Romania in a European SPICE program
- Main activities of the Romanian Project are:
 - collection of obstacle data for RNP procedures design , conducted by the Airport Association from Romania (AAR)
 - RNP procedures design, coding, flight check, maintenance, nav aids installation and commissioning, conducted by ROMATSA
 - Approval of RNP procedures, conducted by RCAA
 - Equipage of aircraft and authorization of aircraft, flight crew and maintenance personnel to operate RNP procedures, conducted by RAS and BluAir Romanian
- coordinated by Eurocontrol (*European Organisation for the Safety of Air Navigation*), applied for INEA approval (*Innovation and Networks Executive Agency*)



Conclusions

Romania planned to implement PBN in its airspace, and consequently, fulfill the ICAO Resolution 37-11, but there are some threats for this implementation:

- lack of EGNOS coverage in East Europe
 - stops the implementation of RNP procedures (with APV-I minima) and the only solution is the publication of RNP procedures (with LNAV minima) procedures
 - APV-I performances improved in October 2015, but not yet accepted to be included in the EGNOS SoL (Safety of Life) Service Definition Document (SDD)
 - LPV200 performances are not yet estimated for EGNOS V3 (only West half of Romania is covered, now)
 - the extension of the EGNOS coverage is more intended to the South (towards Africa), that to the East (to fully cover EU28)
- legal issue raised by RCAA regarding Regulation (EC) No 550/2004 (SES services provision regulation)
 - exclusion of GPS (USA Global Positioning System), as not being a European ANSP, to comply with Articles 8 and 10 referring to designation of air traffic services providers
 - GPS is used for the implementation of LNAV minima only
 - Some EU States allow the use of GPS in their airspace, and few States are not

www.romatsa.ro



Thank you!

Viorel SĂLIȘTEAN
viorel.salistean@romatsa.ro

April 18, 2016

EISC
Sinaia, Romania

7