

ATS B2 CONOPS Workshop

(13 September 2022 13.00 - 17.00 CET, Meeting Room Neo and WebEx)

Summary of discussions, Conclusions, Recommendations and Actions

**Chairmen: Eivan CERASI (EUROCONTROL), Cristian PRADERA (SDM) – Co-leaders
Operational Excellence Programme Workstream Topic 12.2**

Secretaries: Michel BORELY (EUROCONTROL NM), Sandra PETER (EUROCONTROL)

Item 1: Welcome Address, Workshop Agenda, Objectives and Expectations, and presentation of the Rationale for the CONOPS Development (Eivan CERASI and Cristian PRADERA).

The General Overview of the CONOPS content with its 4 themes: CM Logon, Service Transitions and Evolutions, ADS-C Common Service and Procedures was given by the contributors to the workshop (Cristian PRADERA, Didier VELAY/DSNA, Thierry Salée/EUROCONTROL MUAC, Hendrik OBERHEID/DFS, Jean BOUCQUEY/EUROCONTROL, Thomas KOERBER/SDM) – Slides 1-69

Item 2: Open discussion on the Content of the CONOPS, including Q&A (All workshop attendees & Co-chairs, as well as presenting contributors) – Slides 70-76

The discussion was launched through an online questionnaire, comprising multiple choice questions to evaluate the workshop attendees' level of understanding and satisfaction with the CONOPS document, its rationale and its orientations. They were questioned on such aspects as the adequacy of the ADS-C Common Service (ACS) as a means to support the implementation of CP1 AF6, and the benefits which they perceive ANSPs and AUs can derive from the proposed Logon Service.

Attendees were also surveyed to assess the degree of interest and preparedness of their organisations to implement and use the ACS, with a final open response question to address any elements which might be missing from the 4 themes and from the CONOPS document itself. The results to these questions are displayed on slides 70-76.

Cristian PRADERA noted that the answers coming from ANSPs were very positive, with a considerable proportion of the ANSPs surveyed showing interest in implementing and the need to learn from ANSPs plans. Eivan CERASI noted that the proposed CONOPS content was well supported and that follow-up actions should be taken with a few participants.

Item 3: The floor was then opened to questions from the attendees, which addressed the following topics:

- On data validation, what analysis and methodologies were used:
 - The data analysed emanated from more than 20'000 flights and was analysed according to multiple technical metrics, including the number of dialogues established; it also included an operational analysis, focussing e.g. on FMS predictions. There is no way to determine whether the EPP trajectory data is better or worse than the available ground trajectory, this increases the need for data sharing. (Jean BOUCQUEY)

- How will compatibility of ATN B1 aircraft be ensured with 81+Logon addresses?
Does the ADS-C Common Service (ACS) contain all logons?
 - An objective of the CONOPS is that ATN B1 and ATS B2 aircraft can be handled equally by the Logon Service. One of the solutions proposed was to reuse an existing unused address with having to add another one. (Thomas KOERBER)
- The ACS isn't mandated by the CP1 Regulation and therefore should not have to be used by stakeholders who don't wish to do so. How complicated will it be to share data if not all stakeholders participates?
 - The aim is to encourage all Airspace Users (AUs) and Air Navigation Service Providers (ANSPs) in Europe to adopt this orientation. It is likely that not all ANSPs will be ready by the target date. 60% of the ANSPs attending the workshop have confirmed in the online survey that they are interested in implementing the ACS. 40% don't know yet.
 - Theme 2 of the CONOPS addressed transitions (and service holes) but this needs to be part of a deployment plan that would be addressed in the SDP (Cristian PRADERA).
 - There will be a need for a critical mass of ANSPs to implement before the AUs can be encouraged to connect. (Eivan CERASI)
- Data Governance: Who will define which data are used and who shall manage it?
 - User data governance is indeed needed on top of the technical aspects of the ACS. Service agreements, defining how data can be used will be drawn up, as this is a critical condition for AUs. (Jean BOUCQUEY)
 - It is also envisaged as part of the ACDLS governance (Eivan CERASI)
- It was proposed that the OEP WST should approach avionics manufacturers (not only airframe manufacturers) to find out the level of maturity and readiness of their avionics developments. The avionics manufacturers' level of preparedness will greatly influence the airframe manufacturers' plans.
- What sort of validation and verification activities are foreseen before publication of the related standards? In the past, some validation activities conducted through research projects were insufficient. How will this risk be managed?
 - CP1 does not detail any specific technology for AF6. In terms of interoperability, the CONOPS and the intended standards are based on years of major validation projects through Pegase, PJ31 and PJ38 and current operations in MUAC. The only aspect not validated by PJ38 is the SWIM request from the ANSP to the Logon Service which will be prototyped by EUROCONTROL (SESAR PJ38 makes use of CM-contact), CM-forward which is identical to a CM-logon message. (Eivan CERASI)
 - Part of the drafting process of EUROCONTROL specifications is the informal stakeholder consultation and the 3-month public consultation starting mid-2023, which is also considered as contributing to validation. (Sasho NESHEVSKI/ EUROCONTROL)
- How long will it take to implement the ACS, including all its verification and certification aspects?
 - By the December 2027 target date, a large percentage of ANSPs interested will foreseeably have achieved implementation. 2027-2030 will see the accommodation of AUs by those interested ANSPs and is a reasonable implementation date for the ACS. (Cristian PRADERA)
 - Each ANSP will have a major project to complete to achieve implementation of CP1 AF6. The scope of this CONOPS is only part of the picture, ANSPs

will need to update their ground COM systems, FDPs, HMIs, to train ATCOs, etc. (Eivan CERASI) Thierry Salée/ EUROCONTROL MUAC confirmed this and recounted the MUAC experience in implementing the ADS-C, highlighting that establish a set of common requirements will help accelerate implementation.

- The structure of the ADS-C Common Service and the infrastructure: what is the process once the option retained has been confirmed?
 - In 2 weeks, CONOPS edition 1.0 will be published which outlines the specification content. The SWIM specification drafting is already progressing in view of the maturity of the SESAR PJ38 deliverable. The standard in itself is only a document, which needs implementation work to be brought to life. (Eivan CERASI)
 - PJ38 are extremely confident about the ADS-C. The ACS / proto CM service running at DFS demonstrates that the ACS works and breeds confidence. (Jean BOUCQUEY)
 - It should be noted that the HERON Digital Sky Demonstrator is actually a continuation of the PJ38 work. It appears very desirable to transition to the use of the ADS-C Common Service immediately, rather than first implementing another service which would oblige each ANSP to enter into their own contract. (Hendrik OBERHEID)
- In regard to the questions concerning the Auto-Logon functionality:
 - This functionality has been identified as something that could be beneficial in the future and recommended in the CONOPS to be studied by SDOs. It will not change the need for a 'converged scenario'. Existing standards should better reflect the notion of ACS Common Service (Eivan CERASI).
- In regard to questions concerning the business case for the ACS:
 - For the ACS, the aim is to define how to develop it and then, in coordination with ANSPs, to address the business case. The first step is to ensure that a sound CONOPS is available for all stakeholders, before the following phases of the work can begin. (Cristian PRADERA)
 - It is important to remember that the ACS is an enabler for the implementation of CP1 AF6 and that, as past experience has shown, enablers don't always show a positive business case, whereas the technologies and functionalities that they enable later on do. The CONOPS and PJ38 identify numerous benefits.

Item 4: Workshop outcome questionnaire

The outcomes of the questionnaire can be found in Slides 77-80 and show considerable understanding of the CONOPS and satisfaction with the content of the workshop.

Item 5: Next Steps and Conclusions - Slides 81-83

The feedback collected during the workshop will be reviewed carefully and all open questions will be answered. Bilateral meetings will be held with those stakeholders who wish to engage with the co-leaders of the workshop and the OEP WST 12.2, who expressed their thanks to the OEP team and the Contributors to the workshop.