International Civil Aviation Organization

EIGHTEENTH MEETING OF THE COMMUNICATIONS/NAVIGATION AND SURVEILLANCE SUB-GROUP (CNS SG/18) OF APANPIRG

Asia and Pacific Regional Sub-Office, Beijing, China
(21 – 25 July 2014)

Agenda Item 5: **Aeronautical Mobile Service (AMS)**

5.1) Discuss RCP/RSP Implementation Framework (APANPIRG Decision 24/33)

EASA REPORT ON TECHNICAL ISSUES AFFECTING VDL2 AND THE ATN BASELINE 1 DATA LINK IMPLEMENTATION IN EUROPE

(Presented by New Zealand)

SUMMARY

This paper presents recommendations around the need for implementation of a robust reporting and resolution process extracted from the EASA report on data link implementation in Europe.

1. INTRODUCTION

1.1 The EASA report on data link implementation in Europe is available at http://ec.europa.eu/transport/modes/air/single_european_sky/doc/implementing_rules/2014-04-23-easa-datalink-report.pdf

1.2 The EASA report has identified several major technical issues that render the current ATN/VDL2 technology unsustainable in support of the European Commission's Data Link Services Implementing Rule. These issues are not covered in this paper.

1.3 However, the EASA report does identify the need for the implementation of a robust reporting and resolution process which we see as pertinent to the discussion of an Asia/Pacific Performance Based Communication and Surveillance RCP/RSP framework.

2. DISCUSSION

2.1 In page 40 of the report EASA notes:

*"*The **deployment risks associated to a single channel for competing AOA and ATN protocols has not been properly identified and managed**. Moreover, no decision process for problems' identification and resolution was implemented.

The process for error **reporting** and **resolution** from [GOLD] should have been executed.*"*

2.2   In page 40 of the report EASA makes the following recommendation:

"Action 7: ACSP performance monitoring
This action should assess the status of the process, the metrics and the tools already developed by CRO/ACSPs and their adequacy to assess network performance and the ACSP services in general. It should propose modifications or new developments suitable to continuously monitor the criteria alerting on a necessary activity before the degradation of the overall network below the required performance. This analysis should take into account the way that the ACSPs provide services for both the AOC and ATN traffic over the same channel(s)"

2.3   GOLD notes that all stakeholders should be actively involved in the problem reporting and resolution process as depicted in Figure 1 below. It is essential that all air operators in a region have the opportunity to become involved in the process and CRA's should be pro-active in getting all air operators and other stakeholders to register and participate in the process.

2.4   While we have a number of CRA's in the region it is Airways New Zealand's experience that we struggle to get buy in from all stakeholders. For example, the number of airlines that have registered for the ISPACG CRA problem reporting site is well below the number actually operating in the region. Additionally, it is our experience that while the CSPs monitor their network performance, notification of any performance deterioration may not be made to the CRA by the CSP. In our experience when performance deterioration is reported to the CRA by an ANSP it is sometimes already known by the CSP but has not been reported.
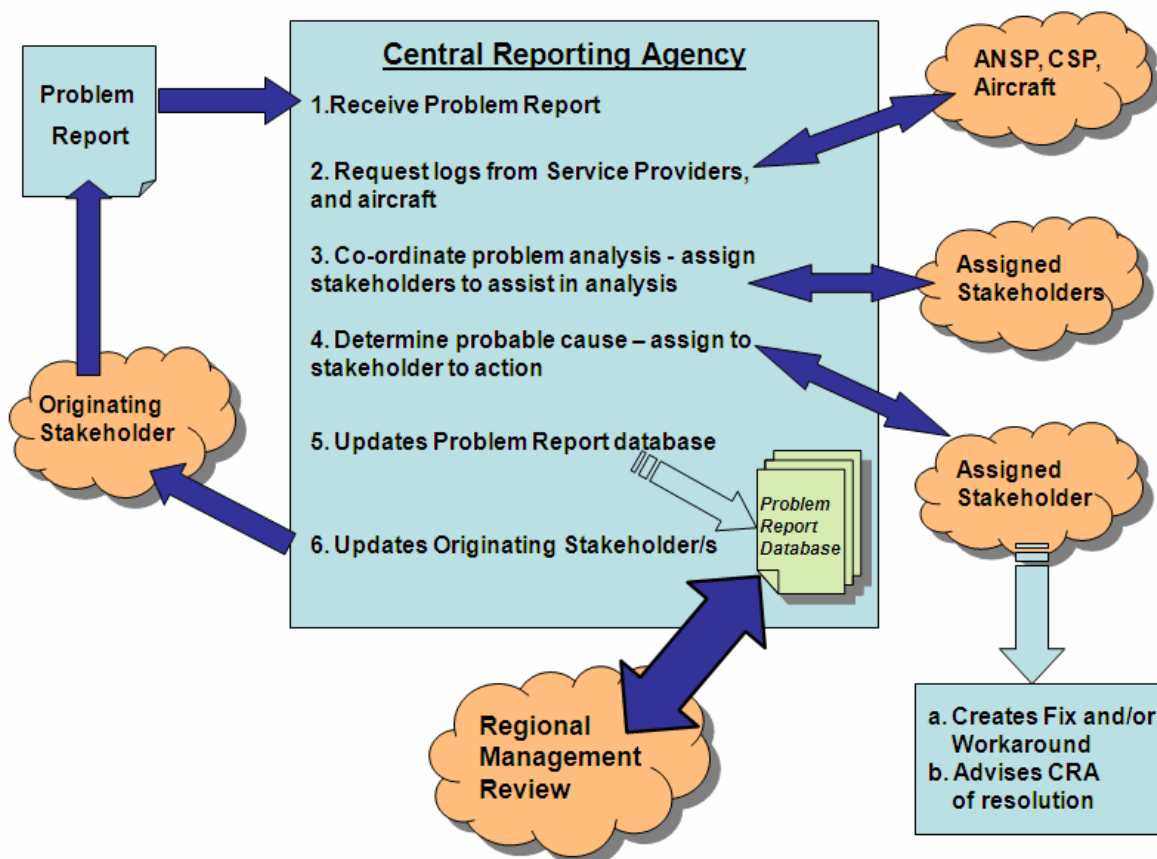

Figure 1: Problem reporting and resolution process

2.5   The problem reporting and resolution process is an important part of any PBCS RCP/RSP framework. While guidance material has been available for many years and the process is being used in the Asia/Pacific region we feel that improvements can still be made.

2.6   We believe that the Annex/PANS proposal for amendment (PfA) and supporting guidance material, under development by the Operational Data Link Panel (OPLINKP), will provide improvement through standards and recommended practices for local and regional monitoring programs, including problem reporting and resolution and global exchange of information.

2.7   While post-implementation monitoring is generally required for safety management of air traffic services, per Annex 11, paragraph 2.27, the OPLINKP is developing a proposal for amendment to Annexes to include a specific provision to require local and regional monitoring programs, and global exchange of information supporting PBCS implementation. The Annex PfA is based on the experience from data link operations since 1995 and the necessity of a robust problem reporting and resolution system to ensure continued safe operations.

   a) Annex 11 would require ANSPs to prescribe appropriate specifications in State AIP (or equivalent publication) and establish the PBCS monitoring programs at the local and regional levels;

   b) Annex 6 would require operators to obtain authorization for PBCS operations from State of the Operator or State of Registry, in accordance with the specifications and require the operator to participate in ANSP monitoring programs; and

   c) To support the Annex provision, guidance material in a revised Doc 9869, Performance-Based Communication and Surveillance (PBCS) Manual, to facilitate the implementation of the Annex PfA provision.

2.8   The States will need to support the PfA package and the regions will need to use the material in planning and implementation. OPLINKP is targeting publication of Annex/PANS PfA in November of 2016, and publication of the guidance material as early as the first quarter of 2015. A complete PfA package (including guidance material) is expected to be available by the end of OPLINKP's October meeting. Much of this work is based on early implementations of problem reporting and resolution as provided in the GOLD. The following is highlighted:

   a) The Annex/PANS PfA and guidance material include provisions for problem reporting and resolution as part of ANSP (local) and regional monitoring programs. Web-based facilities, such as the website mentioned above, hosted by New Zealand, support both the ISPACG CRA and NAT DLMA, and already provide means to report and track problem reports, and enable regional and global exchange of the results of investigations. This approach has been proven to be useful, particularly for problems that are general in nature, and not specific to a particular control area or region; and

   b) In addition to operational personnel (e.g. pilots and controllers) reporting problems, the monitoring programs, some of which are already in place, will include collection of operational data in a standard formatted *.csv file for analysis to further identify problems for resolution. Collecting the data and generating the file are intended to be supported by ground automation within the ATS unit. Support tools, such as the GOLD performance analysis tool (G-PAT),

developed by the U.S., also facilitates analysis of operational data to identify problems for corrective action that otherwise might not be reported. Currently, the website facilities and G-PAT are available to stakeholders without any cost.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

a)   note the information contained in this paper; and

b)   discuss ways to involve all stakeholders in the problem resolution process.

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