AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL

WORKING GROUP 3 (APPLICATIONS AND UPPER LAYERS)
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Modification to CM for Rejected Logon Definition

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SUMMARY

This paper presents a solution for an identified industry for adding a clarification requirement in Package 1 CM.

1. Introduction

This paper discusses a solution to an operational ambiguity that has been identified by implementers of CM, involving what is considered a "rejected" CM logon. Since different implementers may take different approaches to this aspect of CM, it would seem reasonable to make an explicit definition of a rejected logon. This modification would be to the Package 1 CM SARPs.

2. Discussion

In the ATS Manual of Data Link Operations, an operational requirement of CM is the ability of the ground CM to "reject" a logon, and give an indication back to the aircraft that the logon has been rejected. A rejected logon has been interpreted by the ATN Panel, and WG3/SG2, to mean that no application information is returned to the aircraft. Therefore, if a CM-ground-user wants to reject a logon, the CM-ground-user would simply not supply any application information in the logon response. The CM-air-user would then interpret this as a rejection, either for operational reasons (e.g. optional information that is required for a particular airspace is missing) or technical reasons (e.g. there is a problem with the ground system and the service is not available).

However, as implementations are built, there is confusion as to what constitutes a rejected logon. Since the interpretation of a rejected logon is an implementation detail, it is not explicitly defined in the SARPs. It is mentioned in the guidance, but the guidance has not been widely read for a variety of reasons. And of course, guidance is just that— guidance; it does not have "shall" status. Accordingly, implementers may make different interpretations on rejected logon definitions, and this may lead to interoperability problems. For example, one implementation may choose to interpret a rejected logon as is currently defined in the guidance (responding to a CM-logon request with no data) while another implementation may decide to invoke a CM-user-abort service if a CM-logon is to be rejected.

While operational procedures should cover these cases, operations will become more complex, as this aspect of CM becomes local, not global.

3. Concept

In order to unambiguously define what a rejected logon means, and to possibly avoid unnecessary use of aborts, it is proposed to add a new user requirement in 2.1.7 of CM, to read as follows:

2.1.7.x.x If a CM-ground-user wishes to reject a logon for any reason, the CM-ground-user shall put no information in the CMLogonResponse APDU.

Note. — This may be done for either operational reasons (e.g. optional information that is required for a particular airspace is missing or information for the requested facility is not available) or technical reasons (e.g. there is a problem with the ground system and the service is not available).

This change will have no impact on SARPs interoperability, since this a change in user requirements only and not the "bits on the wire." Therefore, there are no backwards compatibility problems with this proposed solution.

**4.	Conclusion**

This paper gives a low-impact solution to explicitly define what constitutes a "rejected logon". The group is invited to comment on this approach, and its applicability for inclusion into Package 1 CM.