

AERONAUTICAL TELECOMMUNICATION NETWORK PANEL

WORKING GROUP 3 (APPLICATIONS AND UPPER LAYERS)

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"Fast Associate" Optimisation

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SUMMARY

This paper presents a proposed optimisation to the connect phase for ATN upper layers and applications. Redundant information exchanged at connect time is eliminated, thus resulting in a significant reduction of overhead on the transport connection. WG3 / SG3 proposes to develop appropriate specifications to allow use to be made of this optimisation in future CNS/ATM Packages. The Working Group is invited to note this future enhancement and endorse the SG3 proposal.

1. Introduction

When establishing an application association (over an underlying transport connection), ACSE and the ATN applications need to exchange initialisation information. In the CNS/ATM-1 SARPs, the information exchanged by Session and Presentation layers has been reduced to a single octet per layer. However, there are still inefficiencies in the ACSE and application information which is interchanged at connection establishment (e.g. inefficient encoding of object identifiers and redundant information).

ISO has recently approved a number of efficiency enhancement amendments to Session, Presentation and ACSE. One of these enhancements, not currently used in the SARPs, is the "Fast Associate" mechanism. This allows the possibility of exchanging a compact "Upper Layers Context Identifier" (ULCTXID) at the same time that the transport connection is established. If successful, the upper layers and applications can then immediately start to exchange useful data. If not successful, then the current establishment mechanisms still apply.

The attached paper gives more details of the Fast Associate mechanism. In order to make use of the mechanism, one or more parameterised ULCTXID specifications needs to be developed, and the identifier must be supported by sending and receiving upper layer entities.

Subgroup 3 of ATNP/WG3 intends to investigate the use of this mechanism in future CNS/ATM Package SARPs.