Aeronautical Telecommunications Network Panel

WG2

ATN Internet Working Group Meeting

Toulouse, France

March 13-17, 1995

Agenda Item 5.2

Air-Ground Routing Migration Path

Summary:

This paper points out the need for a migration path to IDRP in the air-ground data link.

Canada
Presented by: T.C. Calow

Prepared by: K. Koetter

1

## 1.	Introduction

Use of IDRP over air-ground data links has been prescribed in the ATN Manual 2nd Edition. It was agreed at the Melbourne ATNP/WG2 meeting that implementation of IDRP over A-G data links would be desirable. The question still remains as to what level of IDRP will be targeted for the CNS/ATM-1 package.

## 2.	Level of Implementation

There is no question that IDRP is the preferred method of air-ground packet routing. With this being said, it must also be recognized that backwards compatibility is an important issue. The CNS/ATM-1 package must be flexible enough to allow for compatibility with existing systems and at the same time have a path built in for evolution to full IDRP support.

In the interest of survivability and acceptance of the ATN by CAA's, airlines, and avionics manufacturers, it is important to provide backwards compatibility through an evolutionary path. In its initial implementation, the ATN is likely to have a small number of routing domains. It is reasonable to expect that the number of routing domains will grow with time. In this light, it is feasible to allow for initial support for mobiles without IDRP capability. It is recognised that such support will likely present other technical and programming difficulties. These difficulties could conceivably adversely impact the timing for the availability of the CNS/ATM-1 package.

## 3.	Migration Path

With the goal of full ISO IDRP capability in the air-ground link, a migration path must be defined if continued support of the ATN is to be maintained from avionics manufacturers and users alkie. Such a migration path could include:

> 3.1	initial (package 1) accommodation for aircraft not supporting routing exchange.

> 3.2	initial (package 1) support for an IDRP with relaxed ISO conformance requirements.

> 3.3	as the number of routing domains grows and as airlines have been given a chance to conduct retrofits, discontinue support for non-IDRP mobiles.

> 3.4	upgrade the scaled back version of ATN-IDRP to full ISO-IDRP compliance.

Such a migratory path will ensure the continued interest of CAAs, airlines and avionics manufacturers alike in the success of the ATN.

4. Action by the Meeting

The meeting is invited to consider the issues discussed and take appropriate actions.