**Twenty Third Meeting of the**
**Informal South Pacific ATS Co-ordinating Group (ISPACG/23)**

**Santiago, Chile, 26-27 March 2009**

---

**Agenda Item 4: Review Open Action Items**

**AIDC TRUNCATION ISSUES**

(Presented by Airservices Australia)

**SUMMARY**

Incorrectly truncated AIDC messages are a continuing problem. This working paper attempts to highlight various types of errors that have been detected on occasions.

1. **INTRODUCTION**

1.1 On occasions an ATS Unit may not be able to automatically process a submitted flight plan due to some inconsistency in Field 15 (route information). This inconsistency could occur for a number of reasons, the more common ones being unknown (or duplicated) waypoints or routes. Flight planning errors can also result in the rejection of the flight plan by the ATS Unit.

1.2 Some modification must be made to the flight plan to permit it to be processed, but due to the nature of AIDC messaging – where flight plan information is exchanged between adjoining units – it is important that the actual route details are not changed in any way.

2. **DISCUSSION**

2.1 The AIDC protocol provides a means to "truncate" the route information in a flight plan to allow correct processing by a downstream ATS Unit that may receive this route information in an AIDC message (e.g. ABI). Truncation involves:

- Identifying the waypoint/route causing the flight plan rejection;
- Replacing the offending element including all Field 15 (route) information that follows it with a truncation indicator "T"

2.2      On a number of occasions, incorrectly truncated AIDC messages have been received from adjoining units that have incorrectly updated the ATS flight plan held by Brisbane Centre. Sometimes this causes a gross error, which is readily detected by the controller (see Figures 1 & 2). Others are more subtle, especially in a UPR environment (see Figures 3 & 4). Others are almost undetectable, but can cause other ATSU processing problems (see Figures 5 and 6).
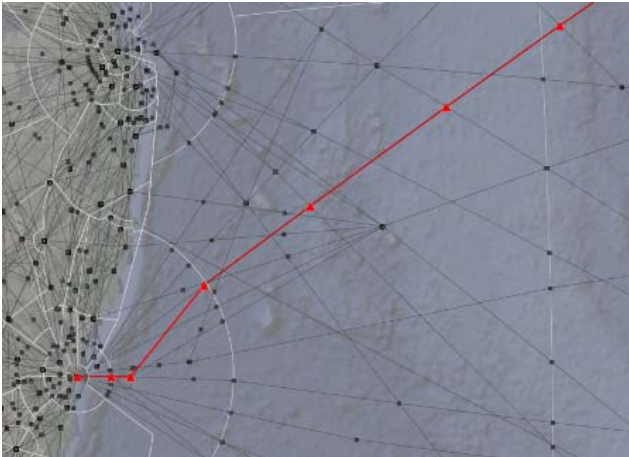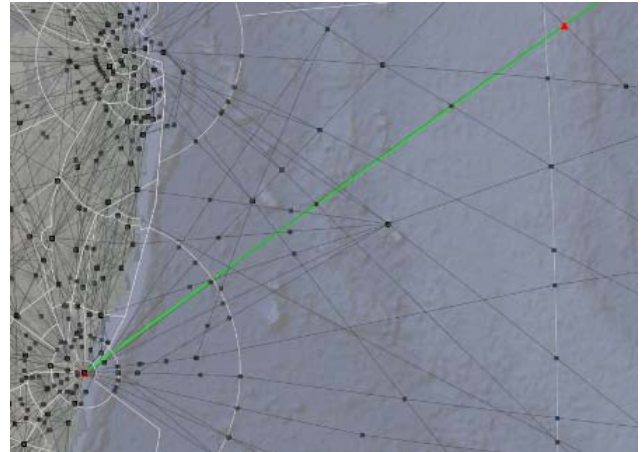


**Figure 1**



**Figure 2**

**Figure 1** shows the originally flight planned route of the aircraft. **Figure 2** shows the route after processing of the ABI. This route has been incorrectly truncated by an upstream FIR (the route details have been simply deleted from the FIR boundary onwards). The route details now held by Brisbane are from the FIR boundary direct to destination. This type of gross error is relatively easy to detect by the receiving controller.
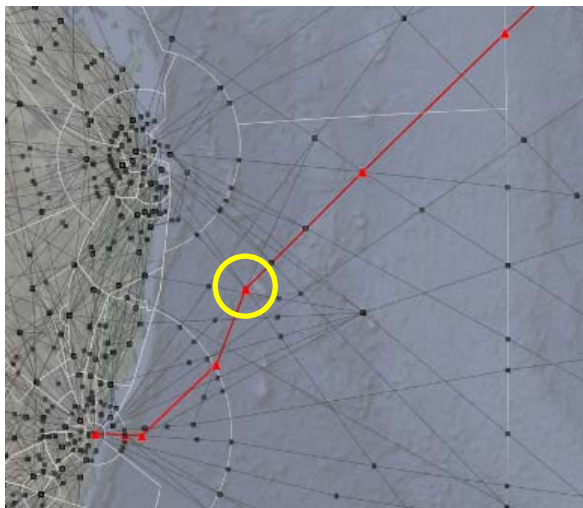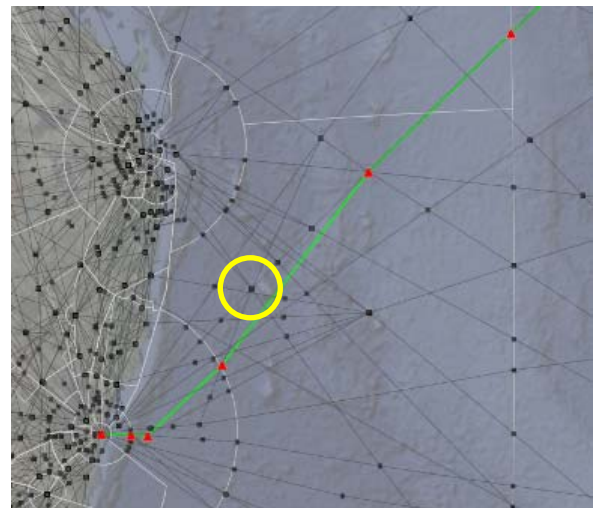


**Figure 3**



**Figure 4**

**Figure 3** shows the originally flight planned route of the aircraft. **Figure 4** shows the route after processing of the ABI. This route has been incorrectly truncated by an upstream FIR (the waypoint MISLY" (yellow circle) has been simply deleted). The route details now held by Brisbane are from TABAL direct to GORDO. This type of subtle error is difficult to detect by the receiving controller, especially in a UPR environment where the aircraft can actually flight plan such a route.
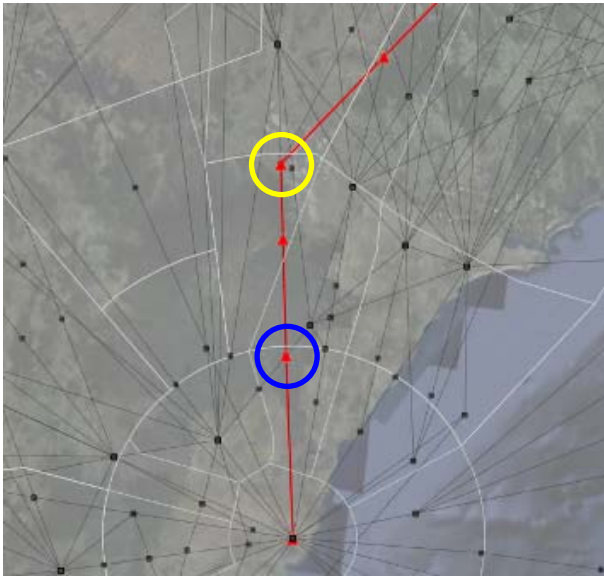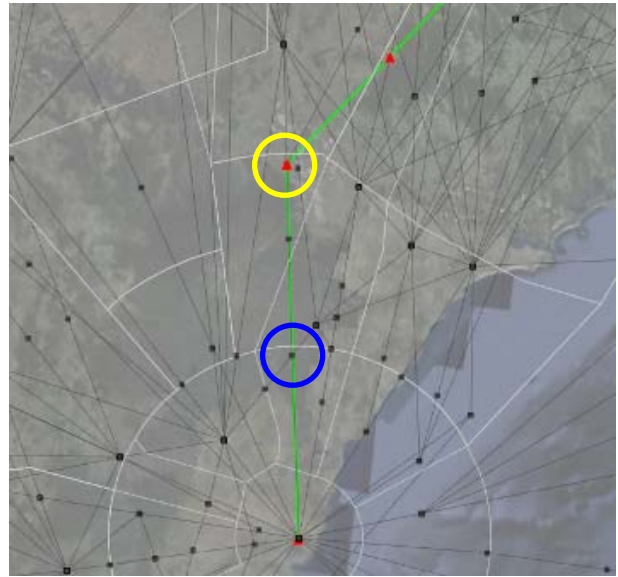
| **Figure 5** | **Figure 6** |

**Figure 5** shows the originally flight planned route of the aircraft. **Figure 6** shows the route after processing of the ABI. This route has been incorrectly truncated by an upstream FIR (the route "CORKY H39 SY YSSY" has been replaced with CORKY (yellow circle) YSSY). The route details now held by Brisbane are from CORKY direct to YSSY. This route is fully within radar coverage, and there has been no change to the actual trajectory that the aircraft will fly. But this subtle change has removed BOREE (blue circle) which is a sequencing "feeder fix" for flights arriving at Sydney.

2.3    On at least one occasion, the deletion of a waypoint by an upstream ATS Unit was not detected at all by Brisbane Centre, and the error was subsequently passed on in an ABI to Melbourne Centre. The flight was over two hours into Melbourne's airspace before the error was detected when the flight diverged from the route held in their ATS flight plan.

2.4    While our air traffic software has some capacity to filter (and reject) ABIs that do not meet certain criteria, this filtering is not fail-safe and has also the potential to cause the rejection of valid route changes that have been initiated by an upstream ATS Unit.

2.5    Truncation is not a difficult concept - errors should not be occurring to the extent that has been identified.


3.    **ACTION BY THE MEETING**

3.1    The meeting is invited to discuss (yet again) the issues associated with flight plan truncation.