



International Civil Aviation Organization

**Thirteenth Meeting of the APANPIRG
ATS/AIS/SAR Sub-Group (ATS/AIS/SAR/SG/13)**

Bangkok, Thailand, 23 – 27 June 2003

**Agenda Item 4: Consider problems and make specific recommendations concerning
the provision of ATS/AIS/SAR in the Asia/Pacific Region**

MANAGEMENT OF WAYPOINT NAME ALLOCATION

(Presented by Australia)

SUMMARY

This paper highlights the issue of waypoint allocation in particular waypoint duplication and suggests courses of action in order to rectify the problem.

1. Background

- 1.1. The advent of automated avionics and computer based Air Traffic Systems have led to the ability to store significant amounts of data to facilitate navigation and the processing of flights by ATC. The utilisation of this data in the one central location has highlighted the issue of same name waypoints. These duplicate points can cause significant issues within these systems, some of which include aircraft tracking to an incorrect waypoint, incorrect depiction of an aircraft's intended route in the ATC system, etc, which in turn can significantly increase pilot and ATC workload. There is also the risk that such an error is not identified by ATC or the flight crew.

2. Problem

- 2.1. Some ICAO regional offices do provide a limited waypoint allocation system however this process is flawed because:
- 2.1.1. The system is not fully computerised and may be subject to errors;
- 2.1.2. Not all states have and/or follow defined procedures for coordination with ICAO when allocating waypoint names.
- 2.2. Ideally, ICAO should be responsible for maintaining a worldwide database of these waypoint names to ensure that duplicate point names do not exist. ICAO must also promulgate guidelines to be adopted by all states to ensure appropriate procedures are in place to ensure the effectiveness of that system.
- 2.3. It is noted that a similar issue was raised at the thirteenth meeting of the ICAO Obstacle Clearance Panel where a brief written by the Australian representative: *“Member States have expressed frustration with the existing ICAO Waypoint naming convention in that nearly all of the “pronounceable” 5 letter identifiers have been used and the remainder are not meeting the existing requirements. The proposal that*

has been put forth is to utilise a combined alpha/numeric system. The U.S.A. advised that by March of 2003 they will require an additional 75,000 waypoints in order to implement future ATC procedures. This notwithstanding, the Panel was advised that this is the task of the ATC/ATM cell within ICAO and that they should deal with it. The Panel endeavoured to leave the message "Please deal with it without delay".

- 2.4. The need to maintain the integrity of these databases cannot be over emphasised. On a number of occasions there have been identified differences in coordinates of waypoints held by us compared to the coordinates held in the avionics. This has been identified by apparently 'erroneous' ADS reports.

3. Solutions

- 3.1. ICAO to design and maintain a regional database.
- 3.2. Interim or long term solution utilise the services of an established system database to manage this task on behalf of ICAO. Airservices Australia has such a system, and (depending of data availability/format) could provide such a service with a minimum of effort.

4. Recommendation

- 4.1. The meeting is invited to:
 - 4.1.1. Indicate support for the centralised management of waypoint name allocation.
 - 4.1.2. Recommended that ICAO ASIA/PAC office take the necessary actions to develop a suitable system and procedures for states to adopt at their soonest convenience.
 - 4.1.3. Consider an invitation to access a locations examination database, using the Airservices Australia web site, from which International waypoint codes can be allocated.
 - 4.1.4. Provide recommendations on how best to manage the naming convention in light of the requirement for additional waypoints as highlighted in paragraph 2.3.

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