

APPENDIX A

DIFFICULTIES ENCOUNTERED IN THE EFFECTIVE IMPLEMENTATION OF THE WGS-84 SYSTEM

Based on paragraph 3.3 of this working paper, some significant difficulties encountered in the implementation of the system in the area of concern are listed below for consideration by the meeting:

- need for a proper level of understanding of the direct benefits that air navigation will obtain from the transition from local and/or regional geodetic reference systems to the World Geodetic System 1984 (WGS-84);
- lack of capacity of some civil aviation administrations to carry out geodetic work and need to coordinate such type of activity with other state institutions that have the necessary resources and experience to carry out these activities as part of their normal functions;
- need for some civil aviation administrations to develop implementation plans, as well as lack of specific timetables for an effective WGS-84 implementation;
- need to assign priorities for the economic resources to finance WGS-84 implementation directly;
- need to acquire appropriate, reliable and specialised equipment to carry out field work, data post-processing and the conversion of geographic coordinate data using the required precision parameters to meet the various precision requirements of WGS-84 data;
- lack of a high level of coordination among the different government bodies (DCA, national and/or military geographic institutes) responsible for geodetics and national and aeronautical mapping;
- need to pay more attention to the training of aeronautical/geodetic personnel in charge of the direct implementation of the WGS-84 system, mainly with respect to the interpretation of field work documentation and data and post-process calculations and conversions;

- lack of specialised technical units within civil aviation administrations, capable of directly carrying out the activities of mapping and/or production of all the required aeronautical charts;
- need to produce all of the required aeronautical charts under the WGS-84 system in an effective manner;
- need for proper publication in the respective AIPs of the geoid undulation data required for each runway threshold at international airports;
- need for regional and/or sub-regional coordination to identify the gravimetric studies required to define with precision the geoid (MSL/gravimetric) models and their direct relationship with the WGS-84 system, and thus have certain, reliable and precise elevation, height and geoid undulation data; and
- need for adequate links among SAM States for the effective determination and publication of WGS-84 geographic coordinate data for ATS reporting points at common FIR boundaries and for geographic coordinates that constitute common boundaries of flight information regions (FIRs).
