

International Civil Aviation Organization



INFORMATION PAPER

EIGHTH MEETING OF THE ASIA/PACIFIC METEOROLOGICAL SERVICES WORKING GROUP (MET/S WG/8)

Bangkok, Thailand, 21 – 23 March 2018

Agenda Item 3: Planning and implementation of meteorological services

DEVELOPMENT OF AN ELECTRONIC FLIGHT BAG METEOROLOGICAL APPLICATION FOR PAPERLESS COCKPIT

(Presented by Hong Kong, China)

SUMMARY

This paper presents the latest progress in the development of an Electronic Flight Bag Meteorological Application ‘MyFlightWx’ by the Hong Kong Observatory to support the ‘paperless cockpit’ operation concept.

1. INTRODUCTION

- 1.1 As more airlines go for ‘eEnabled’ aircraft to operate in paperless environment, the provision of flight documentation, which is currently paper-based, will see major change in the near future. Noting the looming change on the horizon, the Hong Kong Observatory (HKO) collaborated with Cathay Pacific Airways (CPA) to develop an Electronic Flight Bag (EFB) meteorological application. The app ‘MyFlightWx’ is designed to fit seamlessly with the workflow of pilots and dispatchers. ‘MyFlightWx’ was soft launched on December 2017. While ‘MyFlightWx’ is a collaborative effort of HKO and CPA, all airlines operating in Hong Kong International Airport are eligible to subscribe ‘MyFlightWx’.
- 1.2 The Observatory is preparing for the audit to demonstrate the airworthiness of the application with reference to regulations stipulated by Hong Kong Civil Aviation Department (HKCAD), European Aviation Safety Agency, Federal Aviation Administration and best practices of the industry.

2. DISCUSSION

- 2.1 There exists quite a number of commercially available EFB Meteorological Applications. The collaboration with a Meteorological Authority like the HKO however has a number of advantages, in particular :

- a) First-hand authoritative, fit-for-purpose weather information making possible timely delivery of time-critical information such as warnings and alerts;
 - b) Seamless integration to provide trajectory-based information; and
 - c) Consistency of information – from pre-flight to in-flight and amongst Air Traffic Control, Integrated Operations Centre, dispatchers and pilots.
- 2.2 The current version of ‘MyFlightWx’ runs on iPad, which has been approved to be used inside the cockpit, and provides the latest weather information on a virtual 3D-globe, including graphics and weather maps, for easy consumptions by pilots.
- 2.3 Destination and alternate aerodromes weather, trajectory-based en-route information are prepared based on the flight plan filed. Pilots will be able to download the latest weather information prior to their flights. With inflight connectivity, ‘MyFlightWx’ can retrieve the latest weather information enabling pilots inside the cockpit to keep abreast of the latest weather situations. An electronic copy of the flight documentation would also be available as fallback.
- 2.4 In addition to flight documentation stipulated by the International Civil Aviation Organization, the ‘MyFlightWx’ also provides in-house detection and forecast products (clear air turbulence forecast, the vertical profile along the flight route, etc.) to assist pilots changing cruise levels and flight route when necessary. When a flight deviates from the original flight plan, ‘MyFlightWx’ could provide new weather forecast accordingly.
- 2.5 Before full deployment tentatively scheduled in mid-2018, apart from some final touches to improve the user experience in particular in switching between different EFB applications, ‘MyFlightWx’ will undergo validation and audit by HKCAD, the Civil Aviation Authority in Hong Kong, China, to ensure that the relevant ICAO requirements and that of major regulators are fully met.

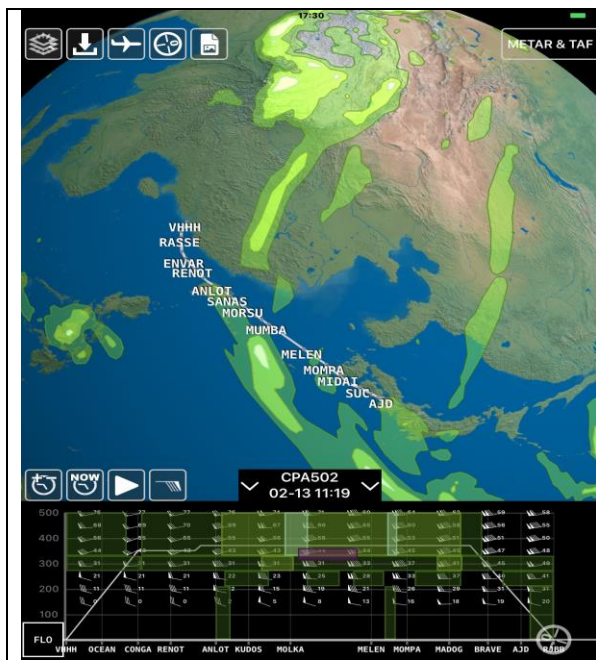


Figure 1 A screen capture of ‘MyFlightWx’. The upper part was a virtual 3D globe for user control and presenting weather forecast in an intuitive way to pilots. The below part was the vertical profile along the flight route which could highlight the potential weather hazards along the planned route.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to note the information contained in this paper.
