



International Civil Aviation Organization

Ninth Meeting of the Communications/Navigation/Surveillance and Meteorology Sub-Group (CNS/MET/SG/9) of APANPIRG

Bangkok, Thailand, 11 – 15 July 2005

Agenda Item 13(2): Review CNS/ATM systems planning and implementation: MET related issues

Terminal Meteorological Forecast (TerMET)

(Presented by Hong Kong, China)

SUMMARY

This paper introduces a new MET product being developed by Hong Kong, China, in support of ATM operations.

1. INTRODUCTION

1.1 Para. 9 of Report of the Chairman of the METATM TF at CNS/MET SG/7 and CNS/ATM IC SG/10 recommended that the MET authorities/providers considered supplementing ATM with meteorological information that can be provided with little development. To expedite its provision, the Task Force suggested the utilization of readily available systems.

1.2 The recommendation was subsequently included as part of the programme of CNS/ATM Systems in Hong Kong, China to study the provision of terminal weather information for ATM. It was recognized that the existing forecast products, such as TAF, were not always sufficient to meet the ATM requirements. In order to support ATM operations, Hong Kong, China is in the process of developing new MET products, tailored from existing products where possible, to support ATM operations.

2. DISCUSSION

2.1 Consultation with ATM users was made to understand the ATM specific MET requirements with the aim of increasing the efficiency of ATM. One of the planned new products by Hong Kong, China is the “Terminal Meteorological Forecast (TerMET), which is a sequential aerodrome forecast for the meteorological variables (wind, visibility, cloud, significant weather) having aviation impact. In particular, based on ATM requirement, the forecast MET variables would be displayed in textual format with red colour highlighting those forecast figures reaching thresholds that would affect ATM operations. A sample product display is provided in the Appendix.

2.2 This product would be generated basically from existing MET information and forecasts, including METAR, TREND forecast, forecast for take-off and TAF every hour. The algorithm is being developed to automatically generate a “first guess” product from these reports and forecasts. Forecasters would then modify the “first guess” as necessary.

3. ACTION BY THE MEETING

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

SAMPLE of Terminal Meteorological Forecast (TerMET) (under development)

Appendix

TerMet
 Hong Kong International Airport
 Runway 07

| Issue time: 05090415Z | | Present | 0500 | 0600 | 0700 | 0800 |
|-----------------------|--|---------|------------|------------|--------|--------|
| Time (UTC) | | 0400 | | | | |
| Wind | | 220/16 | 220/16 | 220/16 | 210/15 | 210/15 |
| TEMPO | | | VRB25 | VRB25 | -- | -- |
| Tailwind (kt) | | 14 | 14 | 14 | 11 | 11 |
| TEMPO | | | -- | -- | -- | -- |
| Crosswind (kt) | | +8 | +8 | +8 | +10 | +10 |
| TEMPO | | | -- | -- | -- | -- |
| Prevailing Visibility | | 10km | 10km | 10km | 8km | 8km |
| TEMPO | | | 1500m | 1500m | 3000m | 3000m |
| Cloud ceiling | | 8000 | 8000 | 8000 | 8000 | 8000 |
| TEMPO | | | 4000 | 4000 | 4000 | 4000 |
| Cloud base | | 600 | 600 | 600 | 600 | 600 |
| TEMPO | | | 400 | 400 | 400 | 400 |
| SIGWX | | | -- | -- | -- | -- |
| TEMPO | | SHRA | TSRA +SHRA | TSRA +SHRA | SHRA | SHRA |

Criteria for highlighting the data in red

| | |
|---------------|-------------------|
| Tailwind | exceeding 5 kts |
| Crosswind | exceeding 20 kts |
| Visibility | less than 5000m |
| Cloud Ceiling | 1000 ft or below |
| Cloud Base | less than 1500 ft |