International Civil Aviation Organization

NINETEENTH MEETING OF THE COMMUNICATIONS/NAVIGATION AND SURVEILLANCE SUG-GROUP (CNS SG/19) OF APANPIRG

Bangkok, Thailand, 21 – 25 July 2015

Agenda Item 5.3: **Review outcome of Fifth Meeting of Ionospheric Studies Task Force (ISTF/5)**

PUBLICATION AND INTELLECTUAL PROPERTIES OF IONOSPHERIC THREAT MODELS

(Presented by Chairman, Ionospheric Studies Task Force)

SUMMARY

This paper discusses on the way of publication and intellectual properties of ionospheric threat models as outcomes of the Ionospheric Studies Task Force.

1. INTRODUCTION

1.1 The Ionospheric Studies Task Force (ISTF) has been working on the coordinated ionospheric data collection, analysis and sharing to facilitate ionospheric data collection and sharing in the Asia-Pacific (APAC) region since 2011. The goals of the ISTF activities are to study the need for development of regional ionospheric threat models for GBAS and SBAS, to develop them if the need is identified, and to investigate the effects of space weather on CNS systems in the APAC Region.

1.2 ISTF is working on six tasks identified related to the terms of reference of ISTF. Currently, the need of local threat models has been identified, and ISTF is working on further analysis of collected data to deliver the threat models by the CNS subgroup meeting in 2016.

1.3 Before the threat models are delivered, it is necessary to consider who will own (or in other words manage) the model, how the models will be made available to those who need them, who will be responsible for the models, and how they will be maintained.

2. DISCUSSION

2.1 The models are being developed by the ISTF with the data collected and shared by contributing States, Administrations, or organizations under the umbrella of the ICAO APAC region. Therefore, the models should be a property of the ICAO.

2.2 The models need to be transferred to those who would like to use them. Possible ways of transferring of the models are as follows:

a) Publishing them in a technical journal which is publicly available as open access or at an affordable cost,

b) Publishing them as an ICAO document, or

c) Keeping the models privately in ICAO and providing them to the regulators States/Administrations upon their request. The ANSPs and manufactures are provided with the models through the regulators.

The ISTF is of the opinion that the option a) is the best choice among them, because it would make the model available for potential users (regulators, ANSPs, and manufacturers) as wide as possible. Option b) can also be taken (publication on the ICAO APAC website) once the model is adopted.

2.3 The models will be available for regulators, ANSPs, and manufacturers who will implement SBAS or GBAS in the APAC region as their reference. It is the responsibility of the regulator of each State/Administration to decide whether they will accept the model for use of SBAS or GBAS in their area. The ICAO or ISTF will not be in a position to approve or guarantee the validity of the models in each State/Administration.

2.4 Once the models have been established, tasks of the ISTF will be completed. However, the models will need continuous maintenance and update with new data. It would not require as much effort as for establishing a new one. But some framework for the future maintenance of the models will be necessary.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) agree that the ionospheric threat models as outcomes of the ISTF is a property of ICAO;

b) discuss and make a decision about the way of publication of the models;

c) agree on the responsibility of ICAO for the models;

d) discuss on the framework to maintain the models; and

e) discuss any relevant matters as appropriate.

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