Agenda Item 4

11-12 May 2022

International Civil Aviation Organization

THE FOURTH MEETING OF THE ASIA/PACIFIC GBAS/SBAS IMPLEMENTATION TASK FORCE (APAC GBAS/SBAS ITF/4)

(Video conference, 11- 12 May 2022)

Agenda Item :

SBAS Training for ATSEP

(Presented by Japan)

SUMMARY

This paper presents information regarding the training on MSAS for ATSEP in Japan

1. INTRODUCTION

1.1 Network Performance Assessment Center (NPAC) was established to monitor, analyse and assess the service level of each CNS system including MSAS (MICHIBIKI Satellite-based Augmentation Service) performance if it meets the required performance specification for PBO in an integrated fashion. The results of these assessments are intended to substantiate advice and recommendations to the JCAB on operations, policy, standard, guidance material and implementation.

2. DISCUSSION

2.1 NPAC implements GNSS performance monitoring and assessments including GNSS augmentation systems for MSAS. These results will be provided to users by being shown on the website for easy reference, while MSAS/RAIM prediction information of Japan was provided at ATMC (Air Traffic Management Center) since January 20th, 2005 and the service was succeeded by NPAC with improvements of its functionality on April 1st, 2020.

2.2 MSAS started its operation with MTSAT GEO for Japan's FIR on September 27th 2007. Then, MSAS using QZSS (Quasi-Zenith Satellite System) GEO has taken over the operation since April 2020.Training for the latter MSAS operation has been conducted in NPAC since April 1st 2019.

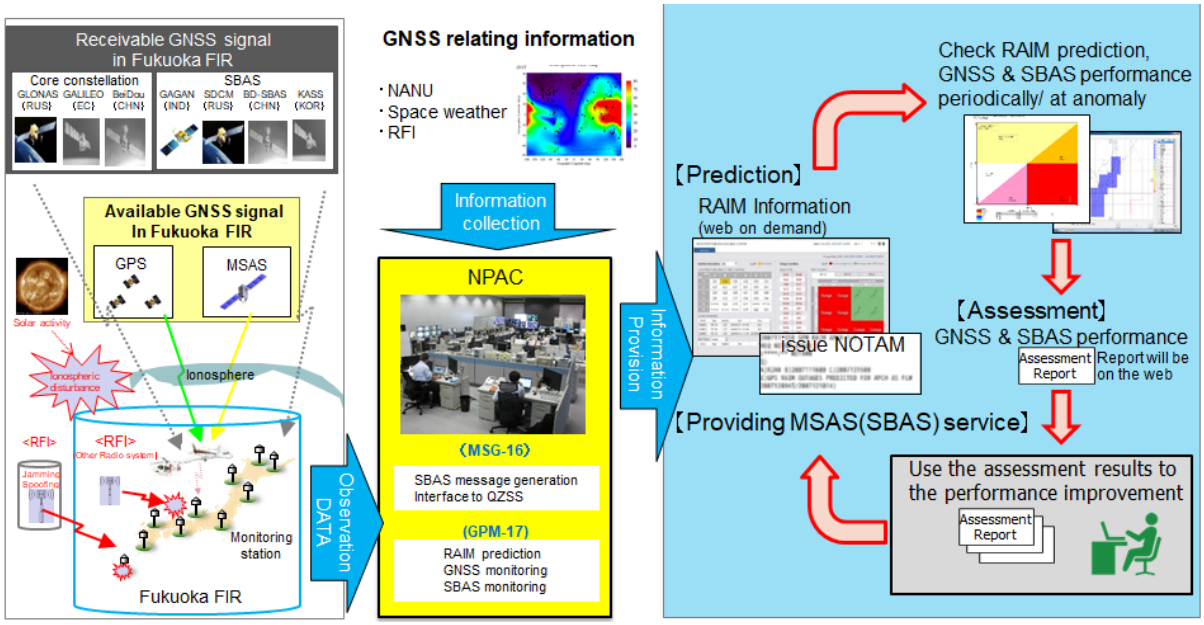
2.3 The training programme was developed in accordance with manual on ATSEP CBT and Assessment of Doc10057.

2.4 Senior CNS personnel who have MSAS rating are assigned as instructor and provide specialized training including theoretical and practical knowledge to the trainees.

2.5 The trainees who have a basic knowledge on GNSS are going to undergo about 8 week-long MSAS training and the rating will be awarded to the trainees whose passing mark are over 70％ in a written and practical exam at the end of the training.

2.6 This training programme is improved every year to support MSAS operation and GNSS monitoring and assessment needs, consequently a total number of 105 MSAS rating awarded ATSEPs were developed to date.

2.7 The MSAS training for ATSEP mainly consists of two core system learnings, one of which is MSG (MSAS Signal Generation and Operation equipment), the other of which is GPM (GNSS Prediction and Monitoring equipment) .



Overview of Performance Monitoring and Assessment for GNSS

2.8 The MSAS training overview is as follows

Training objective				Credits	
To acquire the way of maintenance and operation for MSAS equipment (MSG, GPM) To acquire the technics of GNSS performance monitoring, analysis and assessment To acquire necessary specialized knowledge and technics for addressing in case of MSAS performance degradation				Total of 150.0H (Containing Evaluation of 14.0H) Theoretical Training 80.0H Practical Training 70.0H	
No	Contents	Theoretical Training(H)	Practical Training(H)	Evaluation (H)	Reference
C-MS 0100	System overview, operating principle and function of MSG	5.0		(1.0)	

C-MS 0200	Structure and contents of MSAS message	5.0		(1.0)	
C-MS 0300	Maintenance, control and operations for MSG	5.0	6.0	(1.0)	
C-MS 0400	MSAS integrity assessment and performance monitoring by using MSG	5.0	6.0	(1.0)	
C-MS 0500	Validation and update of each parameter and data provided by MSG	5.0	5.0	(1.0)	
C-MS 0600	Understanding the impact on ATC operation in case of system trouble on MSG Understanding the response procedure to recover the system in case of system trouble on MSG	7.5	7.5	(1.0)	
C-MS 0700	System overview, operating principle and function of GPM	5.0		(1.0)	
C-MS 0800	Maintenance, control and operations for GPM	5.0	6.0	(1.0)	
C-MS 0900	GNSS performance monitoring by using GPM	5.0	6.0	(1.0)	
C-MS 1000	GNSS performance prediction by using GPM	5.0	6.0	(1.0)	
C-MS 1100	Analysis and assessment for GNSS performance and publication of the result as a report	10.0	10.0	(1.0)	

C-MS 1200	Validation and update of each parameter and data provided by GPM	5.0	5.0	(1.0)	
C-MS 1300	Management of the following information provided by GPM on ・Internal and external user information ・Contents of each information published on Web and Security-related knowledge	5.0	5.0	(1.0)	
C-MS 1400	Understanding the impact for functions of prediction and monitoring in case of system trouble on GPM Understanding the response procedure to recover the system in case of system trouble on GPM	7.5	7.5	(1.0)	

3. ACTION REQUIRED BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this papers; and

b) discuss any relevant matters as appropriate.

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