



## Safety Information Bulletin

<b>CAAS SIB No.</b>	2015-09
<b>Issued</b>	25 May 2015
<b>Subject</b>	Potential Irregularities in Implementation of Leap Second Adjustments in GNSS Receivers
<b>Ref. Publications</b>	IERS Bulletin C49, US NAVCEN "Leap Second Statement"
<b>Applicability</b>	All Singapore Air Operator Certificate (AOC) Holders
<b>Description</b>	<p>The International Earth Rotation and Reference Systems Service (IERS) had announced the introduction of a leap second, to come into effect at 23:59:59 UTC on 30 June 2015. This update is pushed out to Global Navigation Satellite Systems (GNSS) receivers to ensure that systems relying on GNSS timing information remain up to date on the latest UTC time. The GNSS receiver's system software should correctly interpret this adjustment data and apply the leap second at the correct time.</p> <p>The U.S. Coast Guard Navigation Center (NAVCEN) had issued an alert stating that there are several brands/models of GNSS receivers that seemed to be mishandling this information and applied the leap second too early. This is creating a negative one-second offset in faulty receivers. NAVCEN has had reports of these receivers causing synchronization issues with radios, computer systems, and data logging equipment.</p>
<b>Recommendation(s)</b>	<p><b>AOC holders are recommended to verify with the OEMs or the GNSS receiver manufacturer on whether there is any consequential impact with their latest firmware or software patch and whether these can correct the issue.</b> Singapore AOC holders are encouraged to contact their respective Principal Operations Inspectors (POIs) or Principal Maintenance Inspectors (PMIs) to share any additional information regarding this issue.</p>
<b>Contact(s)</b>	For further information, contact respective POIs, PMIs or CAAS A/FO Division Infocenter at 6595 6764 or <a href="mailto:CAAS_AFO_Infocenter@caas.gov.sg">CAAS_AFO_Infocenter@caas.gov.sg</a>