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S.R. CWA 16874:2015

Verification of performance levels of EGNOS Enabled mass-market receivers

S.R. CWA 16874:2015

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Údarás um Chaighdeáin Náisiúnta na hÉireann

CEN

WORKSHOP

AGREEMENT

CWA 16874

March 2015

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English version

Verification of performance levels of EGNOS Enabled mass-market receivers

This CEN-CENELEC Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN and CENELEC but neither the National Members of CEN and CENELEC nor the CEN-CENELEC Management Centre can be held accountable for the technical content of this CEN-CENELEC Workshop Agreement or possible conflicts with standards or legislation.

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CWA 16874:2015 (E)

Contents

This is a free page sample. Access the full version online.
S.R. CWA 16874:2015

CWA 16874:2015 (E)

CWA 16874:2015 (E)

Foreword

The CEN-CENELEC Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on 2015-02-20, the constitution of which was supported by CEN-CENELEC following the public call for participation made on 2014-05-30. However, this CEN-CENELEC Workshop Agreement does not necessarily include all relevant stakeholders.

This CEN-CENELEC Workshop Agreement has been developed in accordance with the CEN-CENELEC Guide 29 "CEN/CENELEC Workshop Agreements – The way to rapid consensus" and with the relevant provisions of CEN/CENELEC Internal Regulations - Part 2.

A list of the individuals and organizations which supported the technical consensus represented by the CEN-CENELEC Workshop Agreement is available to purchasers from the CEN-CENELEC Management Centre.

The following organizations and individuals developed and approved this CEN-CENELEC Workshop Agreement:

- Mr. Alberto Santos   ESSP-SAS

  Mr. Miguel Aguilera

- Mrs. Ana Cezón   GMV

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- Mrs. Justyna Redelkiewicz   European GNSS Agency

- Mrs. Antonella Di Fazio   Telespazio

This CWA has been developed in response to the technical, management and financial requirements included in the European Commission Call for Tender reference No 196/PP/ENT/ADM/12/6392 entitled "EGNOS Enabled Labelling and SDK Validation".

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

Although the Workshop parties have made every effort to ensure the reliability and accuracy of technical and non-technical descriptions, the Workshop is not able to guarantee, explicitly or implicitly, the correctness of this document.

The formal process followed by the Workshop in the development of the CEN-CENELEC Workshop Agreement has been endorsed by the National Members of CEN and the CENELEC National Committees. But neither the National Members of CEN nor the CENELEC National Committees, nor the CEN-CENELEC Management Centre can be held accountable for the technical content of the CEN-CENELEC Workshop

Agreement or possible conflict with standards or legislation. This CEN-CENELEC Workshop Agreement can in no way be held as being an official standard developed by CEN-CENELEC and their members.

The final review/endorsement round for this CWA was started on 2015-02-05 and was successfully closed on 2015-02-20. The final text of this CWA was submitted to the CEN-CENELEC Management Centre for publication on 2015-02-25.

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Comments or suggestions from the users of the CEN-CENELEC Workshop Agreement are welcome and should be addressed to the CEN-CENELEC Management Centre.

Anyone who applies this CEN-CENELEC Workshop Agreement shall be aware that neither the Workshop, nor CEN-CENELEC, can be held liable for damages or losses of any kind whatsoever. The use of this CEN-CENELEC Workshop Agreement does not relieve users of their responsibility for their own actions, and they apply this document at their own risk.

1   Introduction

EGNOS (European Geostationary Navigation Overlay Service) is the European SBAS (Satellite Based Augmentation System) designed to enhance the GPS position accuracy and integrity by broadcasting satellite and ionospheric corrections from geostationary satellites (GEO).

EGNOS uses a network of monitoring stations spread inside and outside the European territory to receive the GPS signals which are further processed to estimate the errors applicable to the users (i.e. satellite clock and orbit errors, as well as the ionospheric delay suffered by the GPS signal).

Once these errors are estimated, the corrections are uplinked to the GEO satellites through a network of NLES (Navigation Land Earth Stations) to further broadcast the message to all the users within the service area.

Three services are supported by EGNOS:

— Open Service (OS), freely available to any user and officially declared operational on October 1st 2009.

— Safety of Life (SoL) service, providing the most stringent level of signal-in-space performance. This service, available since 2nd March 2011, is aimed at supporting civil aviation operations although it might also be used in other application domains.

— EGNOS Data Access Service (EDAS) is the single point (beyond the Signal in Space) of access for the data collected and generated by the EGNOS infrastructure. This service has been available since 26th July 2012.

2   Scope

The purpose of this document is to define a technical specification and the test suite in order to perform evaluation processes to guarantee that a product can be labelled as "EGNOS Enabled".

The main goal of the EGNOS labelling scheme is to assess that user equipment uses EGNOS in their location and timing services. Therefore, the essential requirement for a product is to compute the EIPVT (EGNOS Improved Position Velocity Time).

The scope of the document is EGNOS capable products for mass market applications using EGNOS Open Service and/or EDAS. In the context of this CWA, mass market users are understood as non-safety/non-liability critical and non-professional users. The considered products are chipsets, terminals and applications.

3   References

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EGNOSLAB-GMV-D04 v1.2 *EGNOSLAB: EGNOS-improved performance verification blueprint*

EGNOSLAB-GMV-D05 v1.1 *EGNOSLAB: EGNOS enabled markings mock-ups*

EGN – SDD OS v2.0: *EGNOS Open Service Definition Document*

EGN – SDD EDASv2.0: *EGNOS Data Access Service (EDAS) Service Definition Document*

IS-GPS-200G: *GPS Interface Control Document*

RTCA DO-229D: *Minimum Operational Performance Standards for Global Positioning System/Wide Area Augmentation System Airborne Equipment (MOPS)*

E-RD-SYS-E31-010 v3.1: *SISNeT User Interface Document*

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