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STN	**Vesmír** **Monitorovanie situácie vo vesmíre** **Časť 30-03: Správa s údajmi o pozorovacom systéme (OSDM)**	**STN** **EN 16604-30-03** 31 0544

Space - Space Situational Awareness Monitoring - Part 30-03: Observation System Data Message (OSDM)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English version

Space - Space Situational Awareness Monitoring - Part 30-03: Observation System Data Message (OSDM)

Espace - Surveillance de la représentation situationnelle de l'espace - Partie 30-03 : Message de données des systèmes d'observation (OSDM)

Raumfahrt - Überwachung der Weltraumlageerfassung - Teil 30-03: Beobachtungssystembeschreibungs-Nachricht

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European foreword

This document (EN 16604-30-03:2020) has been prepared by Technical Committee CEN/CLC/JTC 5 “Space”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2021, and conflicting national standards shall be withdrawn at the latest by January 2021.

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1 Scope

1.1 Purpose:

The Observing System Data Message (OSDM) is a standard message format to be used in the exchange of optical telescope, laser ranging station, and radar (*observing systems*) information between Space Situational Awareness (SSA) data providers, owners/operators of observing systems, and other parties. These messages can inform SSA data providers, which are the consumers of observing system output data, on the parameters of the observing systems.

The OSDM standard will:

a) enable consistent data exchange between observation data providers and SSA systems;

b) facilitate data exchange automation and ingestion of observation data from different providers;

c) facilitate SSA system architecture performance simulations; and

d) provide a quick way to estimate the expected performance from one observing system.

1.2 Applicability:

The Observing System Data Message standard is applicable to all SSA activities, especially Space Surveillance and Tracking (SST) as well as near-Earth objects (NEO), and other fields where the acquisition of astrometric and photometric data plays a role (e.g. space debris, observational astronomy). The standard contains a message designed to contain observing system parameters exchanged between producers and consumers of astrometric and/or photometric data. These data include observing system name, location, type (optical/radar), operator and tracking/survey performance.

The OSDM is suitable for both manual and automated interaction, but will not contain a large amount of data. The message is self contained and can be paired with several Tracking Data Messages (TDM – specified reference [1]), FITS images (specified in reference [2]), or other formats containing the observation data.

The OSDM standard only applies to the message format, structure and content. The exchange method is beyond the scope of the standard, and it is due to be specified in an ICD, though an ICD is not always required. The methods used to produce the data in the message are also beyond the scope of the standard.

1.3 Document structure:

Clause 5 provides an overview of the OSDM.

Clause 6 described the structure and content of the 'keyword = value' (KVN) version of the OSDM.

Clause 7 described the structure and content of the XML version of the OSDM.

Clause 8 describes the data and syntax of OSDM messages, in both KVN and XML.

Annex A lists agreed values for some of the OSDM keywords.

Annex B presents some examples of OSDMs.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 17107, *Space data and information transfer systems — XML specification for navigation data messages*

Paul V. Biron and Ashok Malhotra, eds. *XML Schema Part 2: Datatypes*. 2nd ed. W3C Recommendation. N.p.: W3C, October 2004