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Automation systems and integration — Industrial data — Visualization elements of digital twins

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National foreword

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A list of organizations represented on this committee can be obtained on request to its committee manager.

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Foreword

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This document was prepared by Technical Committee ISO/TC 184, *Automation systems and integration*, Subcommittee SC 4, *Industrial data*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document analyses visualization elements to be shared or integrated between an avatar (digital replica) and a physical asset. Three component models of the digital twin, which are physical asset, avatar, and realtime interface, are adopted and elaborated in this document. The fidelity measure of the interface between the avatar and the physical asset is discussed.

TECHNICAL REPORT **ISO/TR 24464:2020**

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1 Scope

This document analyses visualization elements that are key components of the interface between the physical asset and the avatar (digital replica of the physical asset).

2 Normative references

There are no normative references in this document.

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1.1
administration shell
bridge between a tangible asset and the IoT world

3.1.2
asset
economic resource, or something of value

3.1.3
avatar
digital replica of a physical asset

3.1.4
digital twin
compound model composed of a physical asset, an avatar and an interface

3.1.5
fidelity
level of accuracy whereby a copy reproduces its source

3.1.6
level of detail
decrease in complexity of a 3D model representation as it moves away from the viewer or according to other metrics such as object importance, viewpoint-relative speed or position

3.1.7
physical asset
asset which exist in the real world