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Three dimensional product data visualization application format

三维产品数据可视化应用格式

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Foreword

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Introduction

With the digital transformation of various industries, 3D models have become the core tools for product expression and data transmission.

It is collectively referred to as three-dimensional product data. It not only provides an intuitive and vivid display method for design and manufacturing information, but also helps to improve the content of data.

However, the native formats of design and simulation are often limited by specific software and its implementation mechanism, and the formats are complex and varied.

With the deepening of digital transformation, the demand for product data full life cycle management and application is increasing.

It is no longer limited to the design and simulation stage, but runs through multiple links such as production, marketing, operation and maintenance, and even destruction, showing a significant cross-industry. With the characteristics of cross-industry, cross-domain, cross-organization and cross-platform, the demand for interoperability of product data has expanded dramatically. In order to resolve this contradiction, we urgently need A unified 3D product data format that is independent of any specific software to ensure broad versatility in product representation and content data Efficient interoperability.

To this end, this document specifies a 3D product data format based on visualization and lightweight content, with the following characteristics.

- High compression rate. Only the result data of modeling or simulation is retained, and the converted file size is small by using redundancy elimination and compression.

The native format is significantly smaller;