DIN SPEC 91391-2:2019-04 (E)

Common Data Environments (CDE) for BIM projects - Function sets and open data exchange between platforms of different vendors - Part 2: Open data exchange with Common Data Environments

Contents

Page

Foreword ... 4

Introduction ... 5

1 Scope ... 6

2 Normative References ... 6

3 Terms and Definitions ... 6

4 Specification of the openCDE Interface ... 7
4.1 General ... 7
4.2 Base Principles ... 7
4.3 Meta-Information about information containers ... 8
4.4 Connection Establishment ... 10
4.5 Container Types ... 10

5 Example for the Implementation of an openCDE-compliant Interface ... 11
5.1 General ... 11
5.2 Query supported API version numbers ... 11
5.3 Establish Connection ... 11
5.4 Close Connection ... 12
5.5 Find Accessable Projects ... 12
5.6 Information about a Project ... 12
5.7 Query Container Types ... 12
5.8 Query Information Containers ... 12
5.9 Upload Information Containers ... 13
5.10 Query for Information Containers ... 13
5.11 Update Information Containers ... 13

6 openCDE API Use Cases ... 14
6.1 General ... 14
6.2 Query Information Containers ... 15
6.3 Filtering und Sorting of Information Containers ... 15
6.4 Delivery of Information Containers ... 16
6.5 Updating Information Containers ... 16

Annex A (informative) Use Cases ... 17
A.1 General ... 17
A.2 Example: Facility Management — Maintenance of Fire Protection Systems and Equipment ... 17
A.2.1 General ... 17
A.2.2 Document Structure ... 18
A.3 Risk Protection (RP) ... 20
A.3.1 General ... 20
A.3.2 Document Structure ... 22

Bibliography ... 28

Figures

Figure 1 — Splitting metadata of a container into mandatory and optional parameters 8

Figure 2 — Information container in a project: a) Abstract structure of an information container, b) Container with with two internal structures (IFC, DWG), c) Multi-container containing sub-structures (IFC, IFC), d) Multi-container with references to further containers (1004, 1005, etc.) 11

Figure 3 — BPMN swimlane diagram. Procedure in general for the compilation and provision of an application-specific information container 14

Figure A.1 — BPMN swimlane diagram — Creation of an openCDE information container for facility management information 19

Figure A.2 — BPMN Swimlane diagram — Creation of an openCDE information container for risk information. The creation of the information container is repeated, if necessary, for the reassessment of risks 21

Tables

Table 1 — Predefined Parameters in the first part of conatiner metadata 9