

Sector Subject Area

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Document Version History

Version	Status	BDS Approval Date	TDS Issue Date	Modified by	Description
1.0	Approved: Recommended	17/02/2014	07/04/2014	ISB	New TDS
2.0	Deprecated	19/08/2015	26/10/2015	ISB	Deprecated. Replaced by Subject Classification.

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1 DATA STANDARD

1.1 Introduction

1.1.1 Application

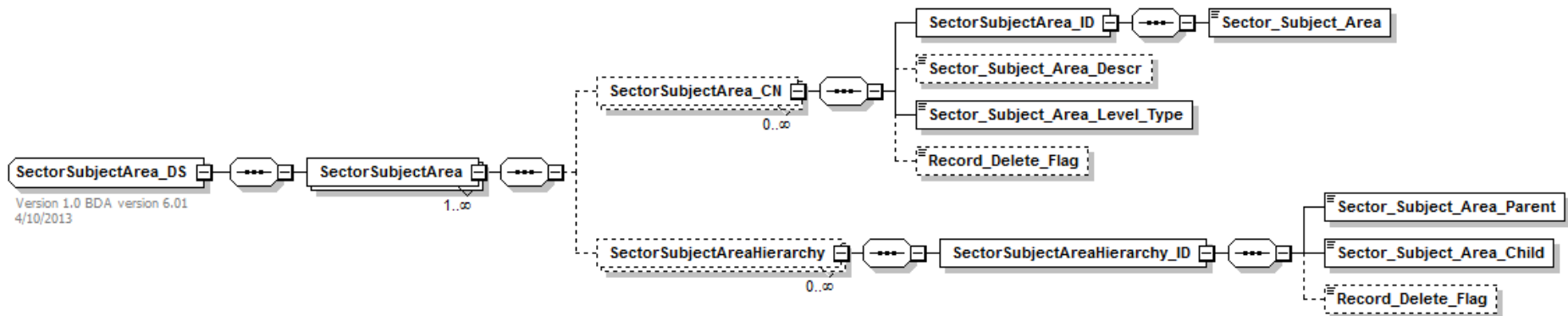
This Technical Data Standard (TDS) binds the Sector Subject Area Business Data Standard (BDS) to an XML Schema (XSD) representation.

A Sector Subject Area is a topic within a classification system maintained by Ofqual. All qualifications regulated by Ofqual and Learning Aims defined by the Skills Funding Agency are assigned a Sector Subject Area.

1.1.2 Compatibility with non-ISB standards

There are no known compatibility issues related to this standard.

2 XSD



3 XSD NORMALISATION

3.1 Introduction

This section defines normalisation that has been applied. The Business Data Standard data model may contain multiple entities that inherit primary keys from a parent entity. In this situation the same primary keys will occur in multiple entities. If this pattern was translated directly to the xsd then the same primary key element(s) would be repeated within the xsd. When parsing the xml, if the element was referenced without xpath then the particular instance of the repeated primary key element could not be determined.

If all instances of the repeated primary key element(s) contained the same value then there would not be an issue. However, if there were different values in the repeated primary key element(s) then the value to be returned would be indeterminate. To prevent this situation the conversion from the Entity Relationship Diagram (ERD) model to the xsd involved normalisation to remove the repetition. This results in nodes being created in the xsd to define primary keys once and sub-nodes created that inherit those keys. This section will identify any normalisation that has taken place and how it has been implemented in the schema.

3.2 Details of Normalisation specific to Sector Subject Area

The Sector Subject Area model consists of a primary entity Sector Subject Area with an associated hierarchy entity Sector Subject Area Hierarchy with compound keys.

The Sector Subject Area Hierarchy inherits the single primary key from the Sector Subject Area for its dual relationship. However, the attribute is role named and therefore there is no requirement to normalise the keys for the Sector Subject Area Hierarchy

4 XSD OPTIMISATION

4.1 Introduction

This section defines optimisation that has been applied to the xsd. The Business Data Standard data model may contain compound keys made up from a number of attributes. The sequence of the attributes in the Business Data Standard data model is defined to identify any opportunities for optimisation in encodings that can accommodate that capability.

An example is where the primary key contains the values of Party_Id and then Event_Id. This implies that a single Party_Id may have many Event_Ids. Encodings that can accommodate optimisation can define the Party_Id once and then under that have many Event_Ids. For xml encoding, a single Party_Id element node can be defined with an unbounded list under that node for the Event_Ids. This reduces the amount of data redundancy.

4.2 Details of Optimisation specific to Sector Subject Area

Due to the simplicity of the primary key structure of the Sector Subject Area, no optimisation is possible

The Sector Subject Area Hierarchy has not had any optimisation applied as there is no requirement for it based on its design.

5 CHANGES FROM PREVIOUS VERSION

None.

6 REFERENCES

The following references are specific to this Technical Data Standard:

- ESCS ISB Consolidated XML (XSD) Schema, version 1.16
- ESCS ISB Business Data Architecture Entity Relationship Diagram, version 6.02
- ESCS ISB, Business Data Standard, Sector Subject Area

The following references apply to all Technical Data Standards:

- ESCS ISB Standards Overview and Context
- ESCS ISB “System“ Enterprise Architecture - Business Data Architecture
- ESCS ISB Business Data Architecture Data Types
- ESCS ISB BDA Data Architecture Modelling Standards
- ESCS ISB Management Process

7 NOTES

None.

8 COPYRIGHT NOTICE

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