ISB Technical Data Standard ISB-000338

Personal Group

Version: 1.0 **Issue Date:** 26/10/2015

Document Version History

Version	Status	BDS Approval Date	TDS Issue Date	Modified by	Description
1.0	Approved: Recommended	19/08/2015	26/10/2015	ISB	New Standard

Contents

1 DATA STANDARD

1.1 Introduction

1.1.1 Application

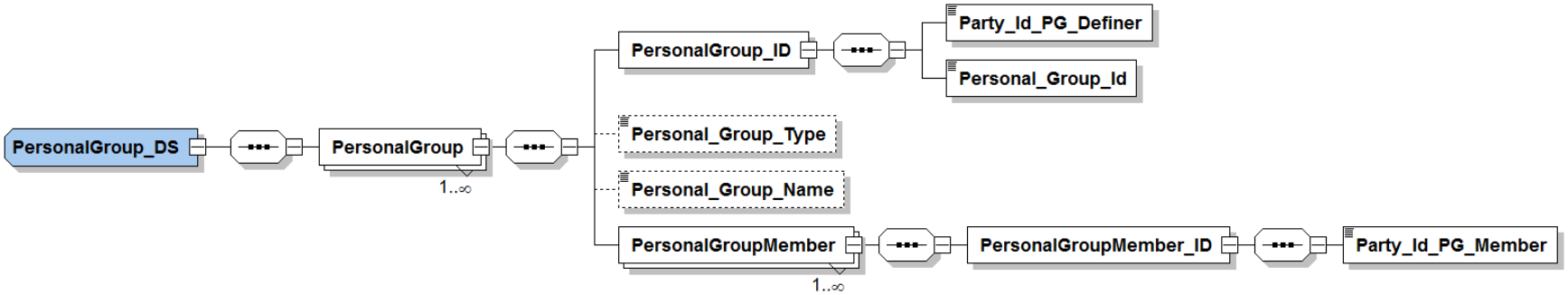
This Technical Data Standard (TDS) binds the Personal Group Business Data Standard (BDS) to an XML Schema (XSD) representation.

This standard can be used to store or exchange data that covers the data about PERSONAL GROUPs. A PERSONAL GROUP is a group of people located, gathered, or classed together for a personal purpose. The PERSONAL GROUP does not behave as an ORGANISATION ie it cannot be considered as PARTY and carry out events or other activities. Its purpose is simply to identify a collective group of PERSONs and the reason for the group

1.1.2 Compatibility with non-ISB standards

There are no known compatibility issues related to this standard.

2 XSD


PersonalGroup_DS
PersonalGroup
1..∞
PersonalGroup_ID
Party_Id_PG_Definer
Personal_Group_Id
Personal_Group_Type
Personal_Group_Name
PersonalGroupMember
1..∞
PersonalGroupMember_ID
Party_Id_PG_Member

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 Personal Group

The Personal Group design is a parent/child entity pair The Personal Group being the parent and the Personal Group Member being the child. The Personal Group Member is an associate entity to the Party entity.

The Personal Group has a compound key made up of a Party Id role named from the Party entity to Party_Id_PG_Definer.

- Party_Id_PG_Definer
- Personal_Group_Id

The associate entity Personal Group Member inherits the above compound key plus the primary key from Party role named to Party_Id_PG_Member

- Party_Id_PG_Member

The result is that only a single instance of the

- Party_Id_PG_Definer
- Personal_Group_Id

is held in the xsd under the node PersonalGroup_ID under the main The Personal Group Member inherits these two as it is an unbounded element under the main Personal Group node.

The Personal Group Member additional primary key is held under the PersonalGroupMember_ID node

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 Personal Group

Details of Optimisation applied to this model -

The Party Relationship structure is optimised by having a single instance of Party_Id_Group_Definer/Personal_Group_Id

Under the PersonalGroup node and multiple instances of

- Party_Id_PG_Member

Under the PersonalGroupMember node.

4.3 Applying the Optimisation within the Application Program Interface -

When creating data for the Personal Group primary keys there are two options available that both satisfy the xsd

- Option 1 – One Party_Id_Group_Definer/Personal_Group_Id with many Party_Id_PG_Member
- Option 2 – One Party_Id_Group_Definer/Personal_Group_Id with one Party_Id_PG_Member

Option 1 utilises the optimisation as there will be one Personal Group with all its Personal Group Members.

Option 2 does not use the optimisation and repeats the Personal Group against each of its Personal Group Members.

Providing Option 1 is coded for in the Application then either Option 1 or 2 Option can be supported. However, this is not true if Option 2 only is coded for as the program will not hold the Party_Id_Group_Definer/Personal_Group_Id pair in memory for use against each of its Personal Group Member nodes.

The recommendation is always to code for the optimisation method Option 1.

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 4.0
- ESCS ISB Business Data Architecture Entity Relationship Diagram, version 11.1
- ESCS ISB XML Content Model, version 1.0
- ESCS ISB, Business Data Standard, Party Relationship

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