
Proposed Logical Data Model for SLDS ECIDS


Introduction

As the development of a data model for the SLDS ECIDS progresses from the initial conceptual model to a more concrete model (such as a physical data model), an intermediate logical model has been developed. This model moves beyond conceptual entities to potential tables and the contents of those tables. This logical model is a high-level representation of the Data Dictionary in that it represents entities and how they are related, but also includes content.


Logical Data Models

The logical model uses the Chen¹ Entity-Relationship modelling notation². This is a convenient notation for the logical phase of data model development and is not as complicated as other notations. At the same time, the notation is rigorous and complete.

How to Read the Logical Model Diagram

 Entity

 Attribute

 N-ary Association

(from Enterprise Architect software documentation)

¹ Wikipedia contributors. (2019, October 23). Peter Chen. In Wikipedia, The Free Encyclopedia. Retrieved 07:59, December 10, 2019, from https://en.wikipedia.org/w/index.php?title=Peter_Chen&oldid=922693714

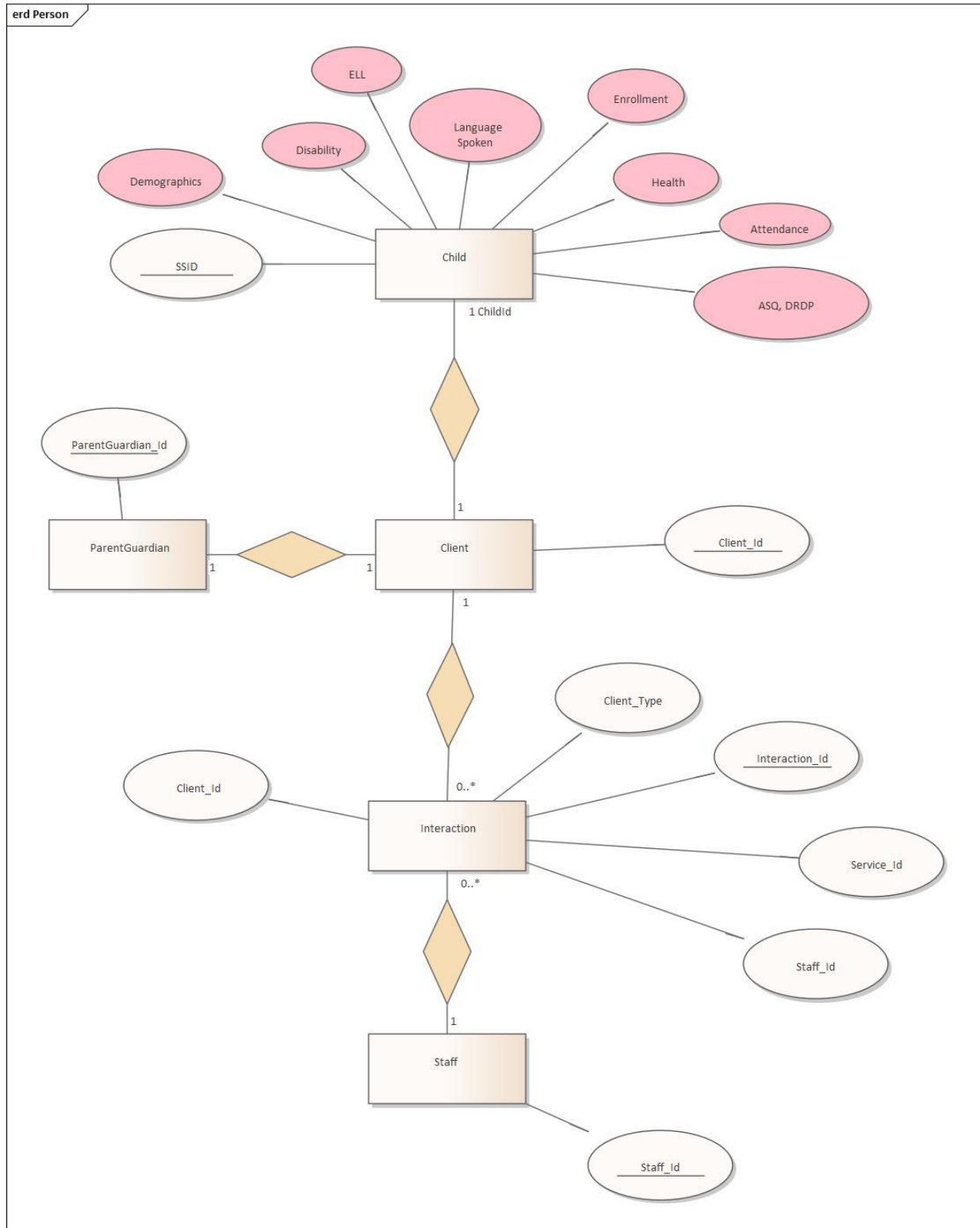
² Wikipedia contributors. (2019, December 9). Entity–relationship model. In Wikipedia, The Free Encyclopedia. Retrieved 08:16, December 10, 2019, from https://en.wikipedia.org/w/index.php?title=Entity%E2%80%93relationship_model&oldid=929952576

The Entity-Relationship notation starts with three basic components:

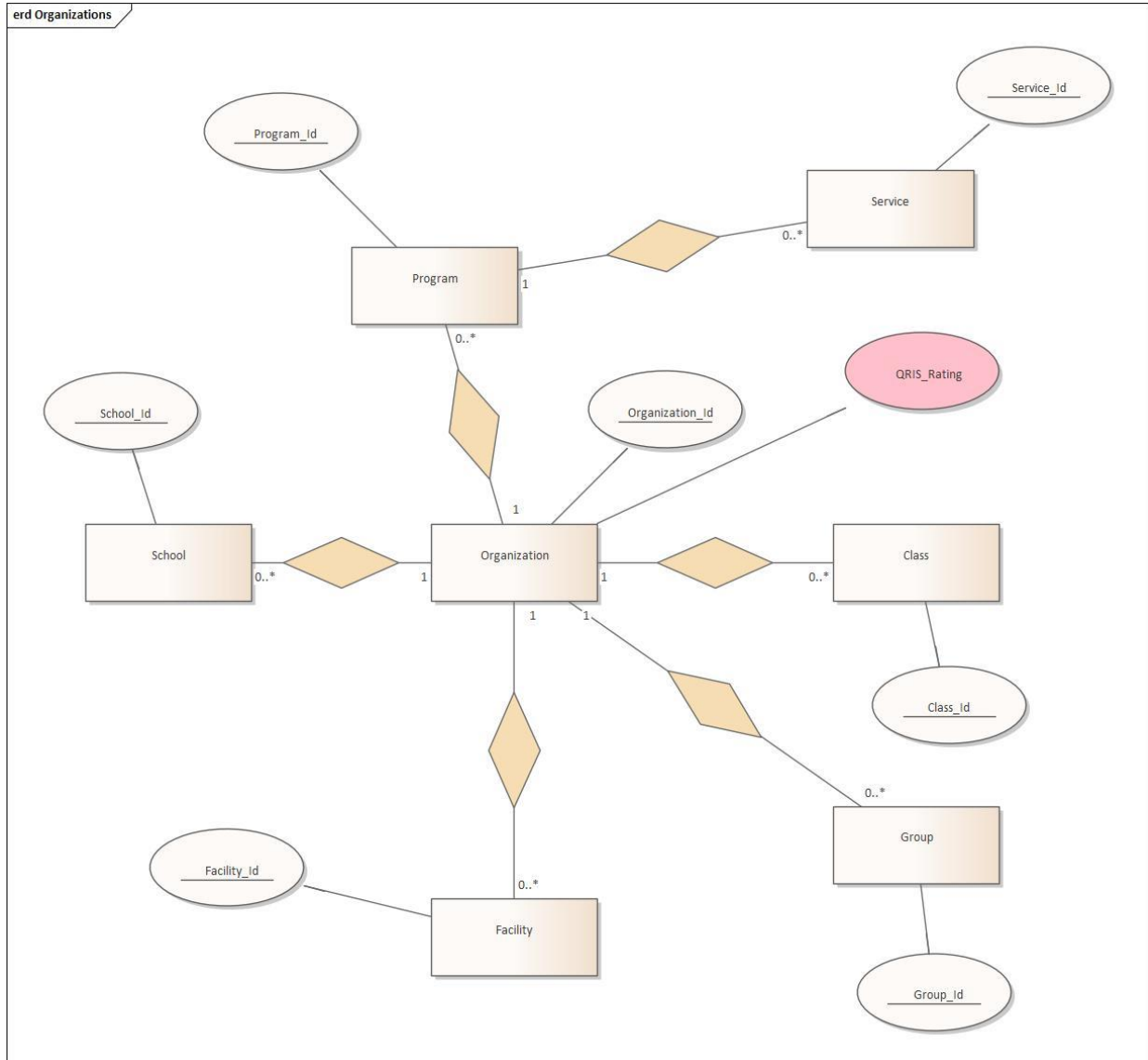
1. In our context, a **rectangle** represents an entity. This corresponds, for example, with a tab in the Data Dictionary.
2. A **line with a diamond shape embedded** is a relationship between two (or more) entities.
3. And an **oval** represents an attribute (or data element) associated with the entity.

In addition, an oval with the text underlined is an identifier for the entity. The ovals colored pink are categories of data elements identified in the Data Dictionary with identified sources at this point in time. Therefore, the diagrams show a quick look at what entities have sources and data identified for them so far.

Submodel: Persons



Submodel: Organizations



Conclusion

As is shown in the diagrams, most of the data sources identified so far are associated with the Child entity. However, more static information such as Facility, School, and Program information

should be available. Some data elements such as those associated with the Group, Service, and Interaction entities might come from operational data in software systems in the field.

See also *Early Childhood Data Source Matrix* by Erika Mathur and the ECIDS *Elements Data Dictionary* for a more detailed look at the data sources currently identified.

Note

The project described was supported by the Preschool Development Grant Birth Through Five Initiative (PDG), Grant Number 90TP0015-01-01 from the Office of Child Care, Administration for Children and Families, U.S. Department of Health and Human Services. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Office of Child Care, the Administration for Children and Families, or the U.S. Department of Health and Human Services.