

Annex B

Database Entity Relationship Diagrams

1. Overview


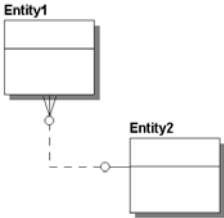
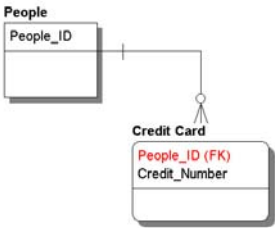
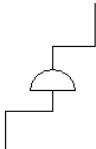
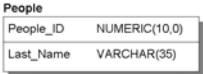
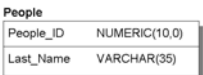
The data model presented in this annex represents a logical view of the database design for the ITL. It does not include all the entities needed for the ITL administrator application, which might include additional report and job catalogs. The logical data model may also include entities and attributes that will not be represented by tables and columns in the physical data model, depending on the way functions are implemented. For example, if the built-in functions of a database system or another 3rd party software are used for user and privileges management, then tables for the entities PEOPLE_SECURITY and PEOPLE_SECURITY_HISTORY may not be needed.

This Entity Relationship Diagram (ERD) and all its submodels are logical data models, not physical database design. Therefore, these models are normalised and may require some denormalisation and other optimization when designing the physical database. These logical data models represent the possible data requirements for the ITL. They do not include the business processing rules that supplement the data model, which can be found in Annex E.

1.1 Conventions and Standards

The following figure describes the naming standards and diagramming conventions used in these models.

Figure B1: Model Conventions and Standards

Element	Name	Description
	Entity	An entity represents a set of real or abstract things (people, places, events) that have common attributes or characteristics. Entities may be either independent or dependent and are the logical equivalent to a table. An independent entity is called a "parent" and the dependent tables to it are "children."
	Relationship	Relationships define how two entities are associated with each other. Relationships may be either optional or mandatory. A dotted line means the relationship is optional and a continuous line means that the relationship is mandatory.
	Cardinality	The small circle at the end of a relationship line shows the ratio of parent entity to child entities. The presence of the circular dot defines where there is more than one occurrence of a dependent entity. For example, for each person (in the People entity) there is at least one or more Credit Cards associated with that person.
	Subtype	A subtype is a relationship in which information is stored about a specific type of some other entity. For example, a SALARIED EMPLOYEE is a specific type of EMPLOYEE. Subtypes are used for expressing relationships that are only valid for that specific subtype.
	Attributes	An attribute represents a type of characteristic or property about an entity. An attribute is described as having a datatype and length. Datatypes can be numeric, date and/or time, or variable character (Varchar).
	Primary Key	When the attribute uniquely defines a single set of elements within an entity, that attribute (or set of attributes) is referred to as a Primary Key. Primary keys are shown at the top of the entity above the dividing line which distinguishes it from non-primary attributes.

1.2 Overview Model and Submodels

Due to the size of the ERD, the model is divided into subsections. The overview model (Figure B2) is an entity-only view of all entities and their relationships. For the purpose of clarity, all lookup tables which serve as foreign keys in the child tables have been removed from this model. Subsequent submodels may show relevant lookup tables as space provides. The remaining submodels provide attribute, datatype, and cardinality information, supporting the major processing types as defined in Section 3.5 of the ITL Technical Specification.

Figure B2: Logical Model

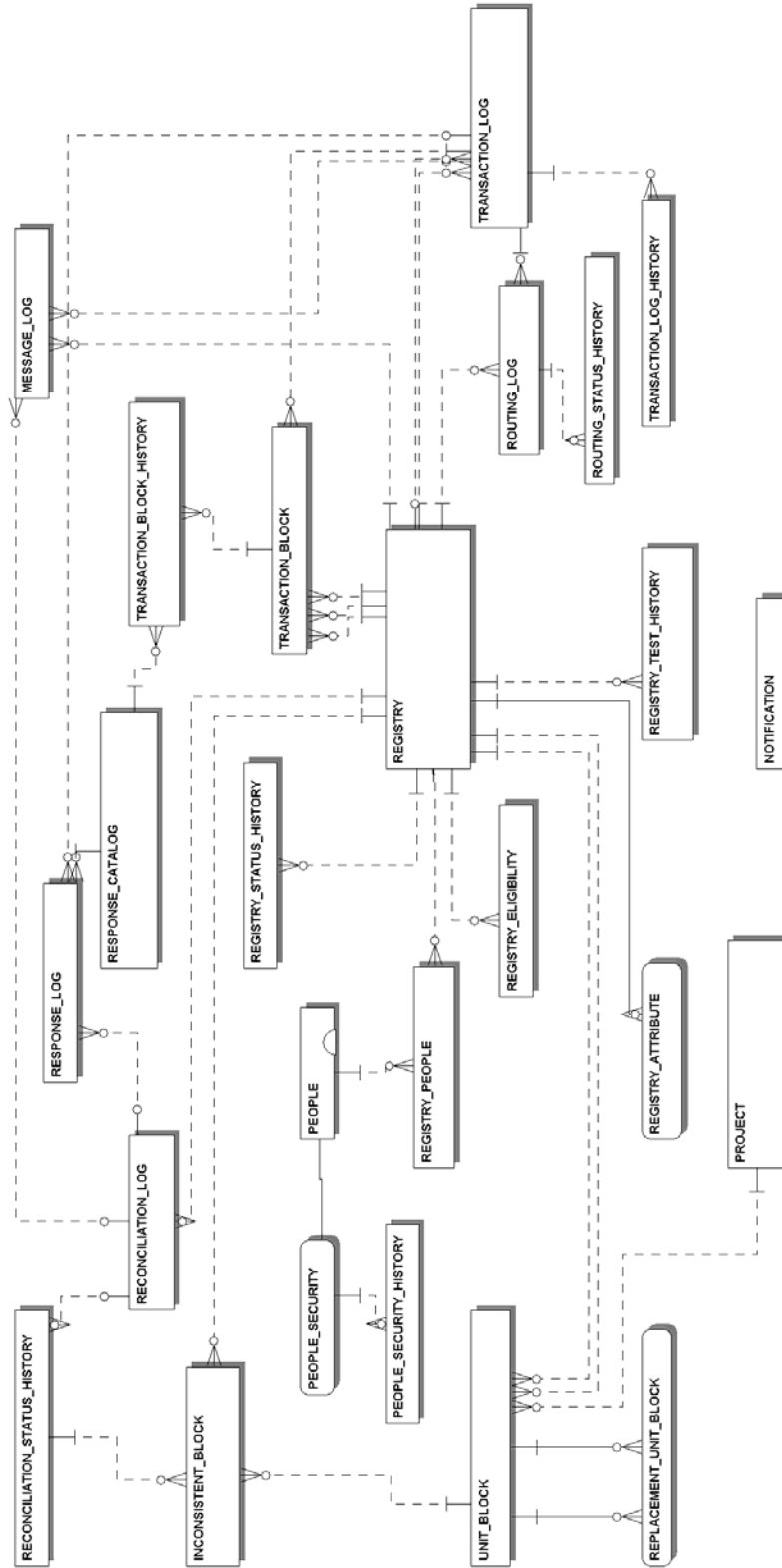


Figure B3: Registry Submodel

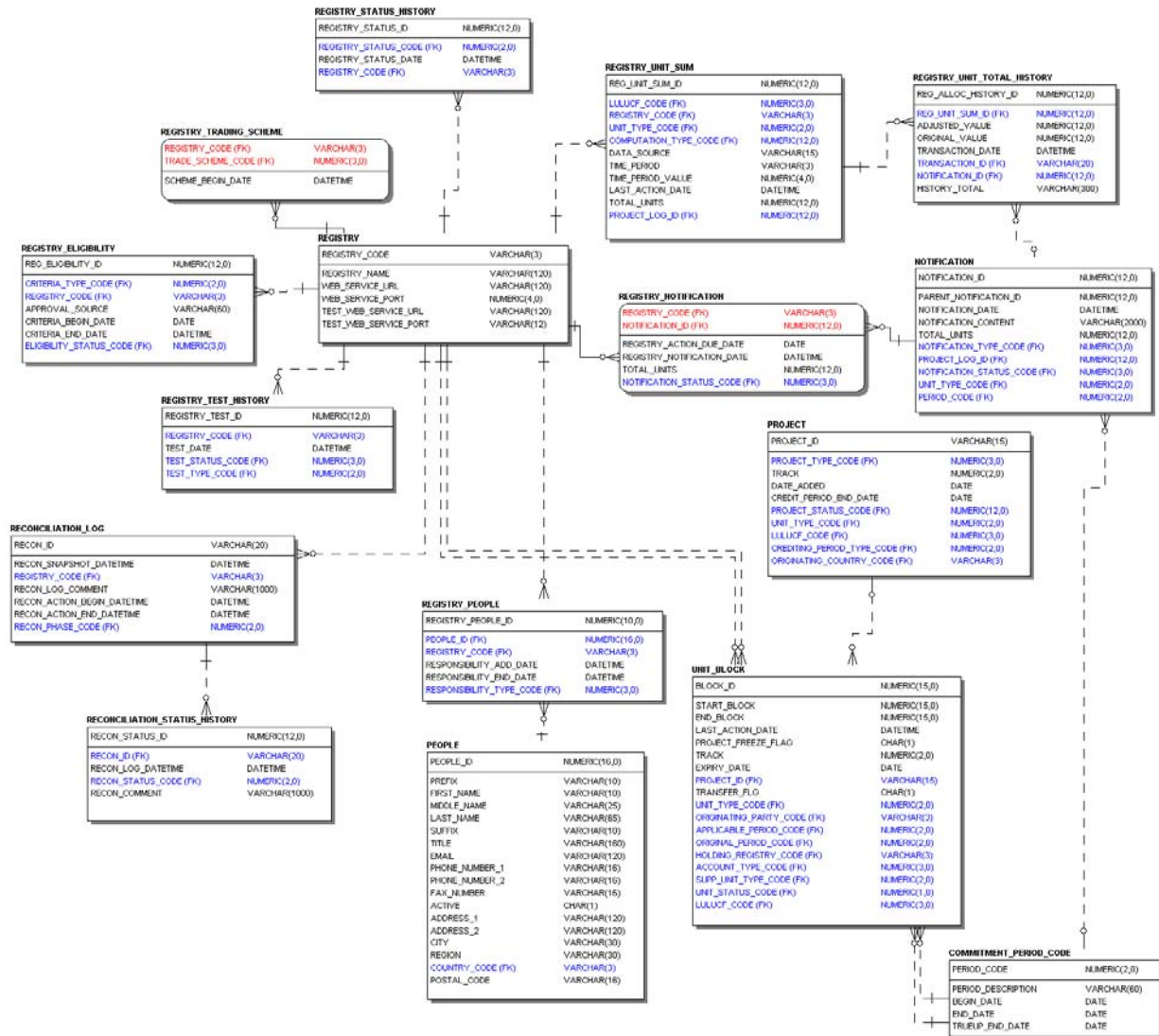


Figure B4: Transaction Process Submodel

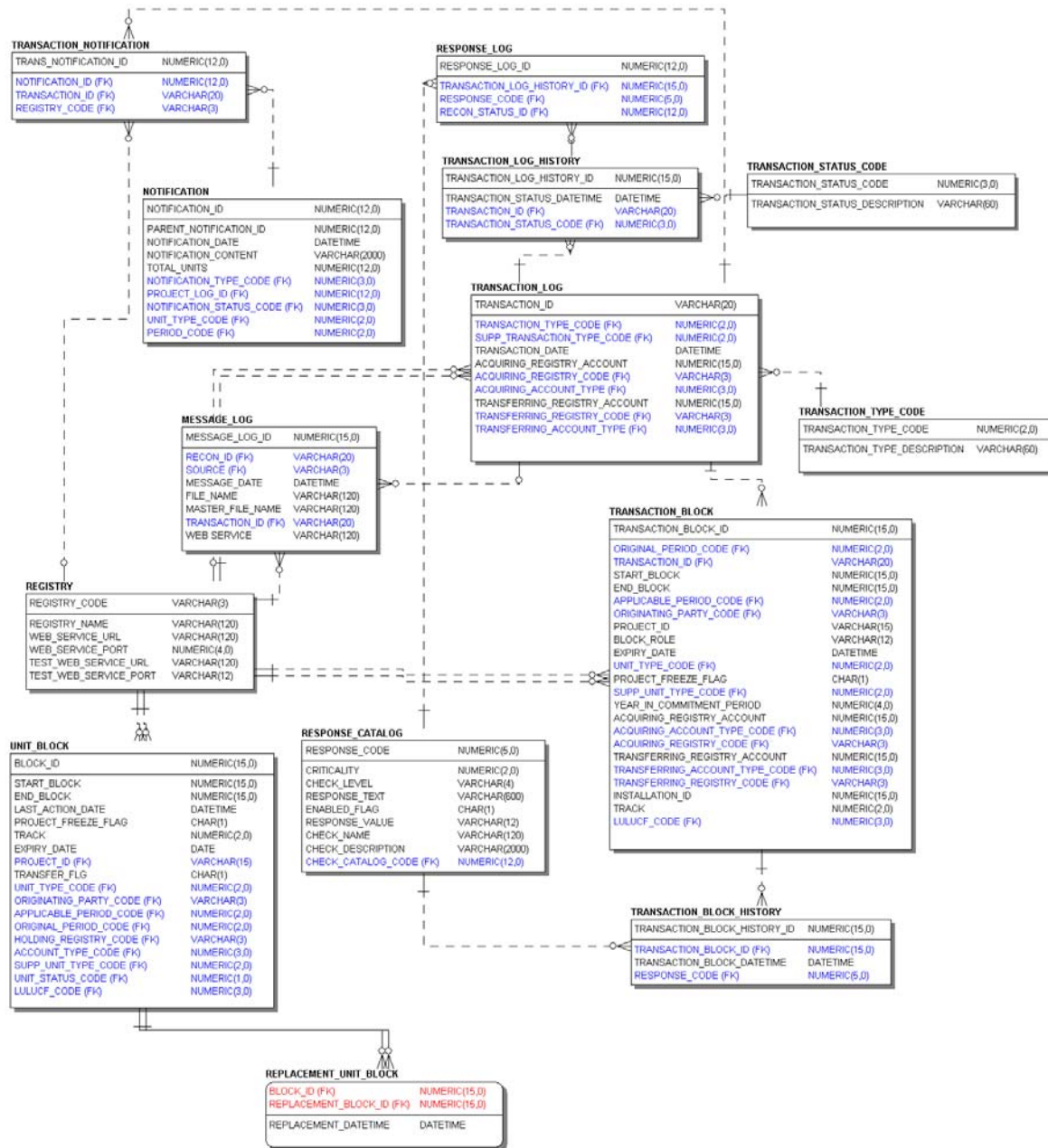


Figure B5: Reconciliation Submodel

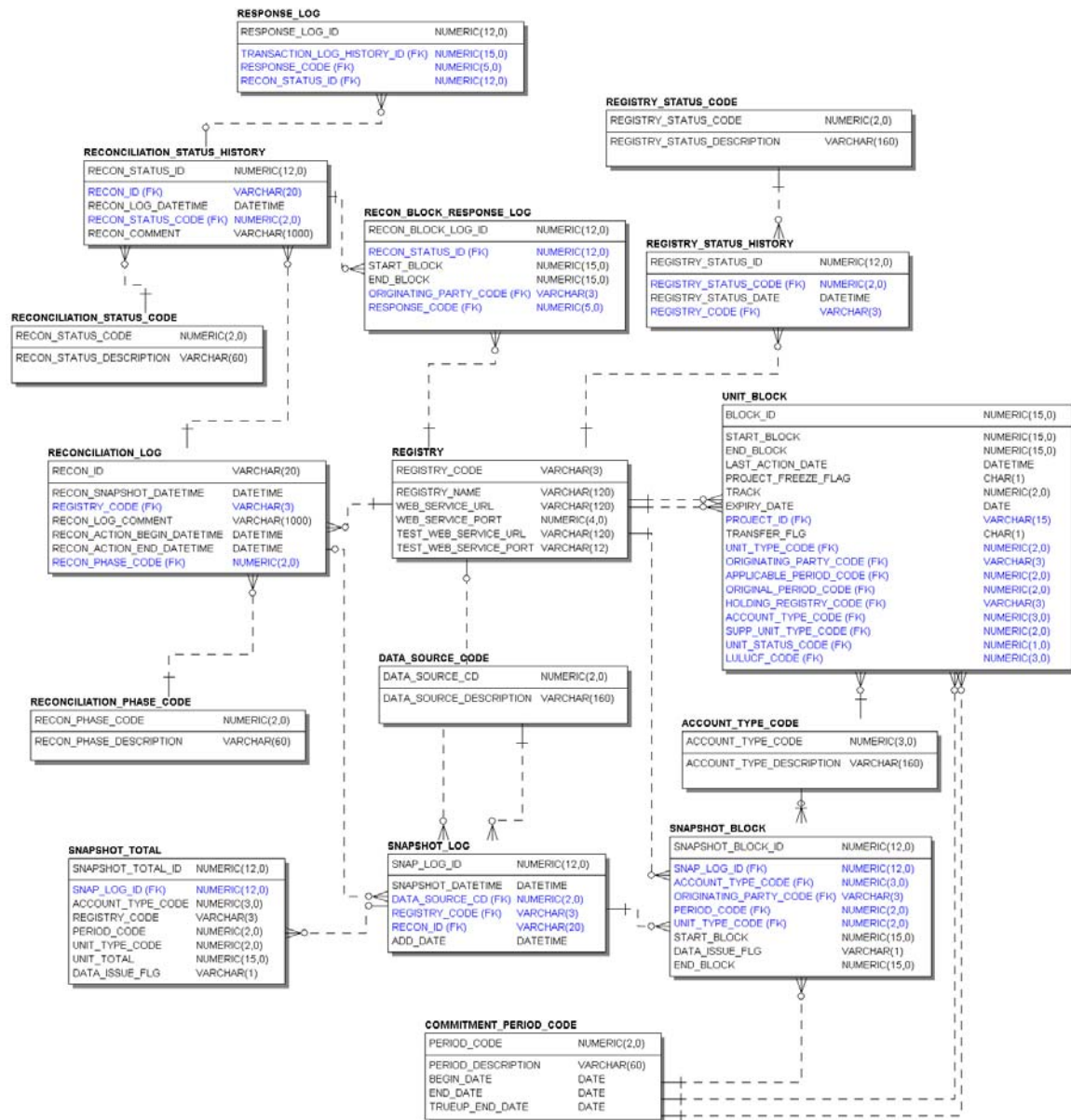


Figure B6: System Data Submodel

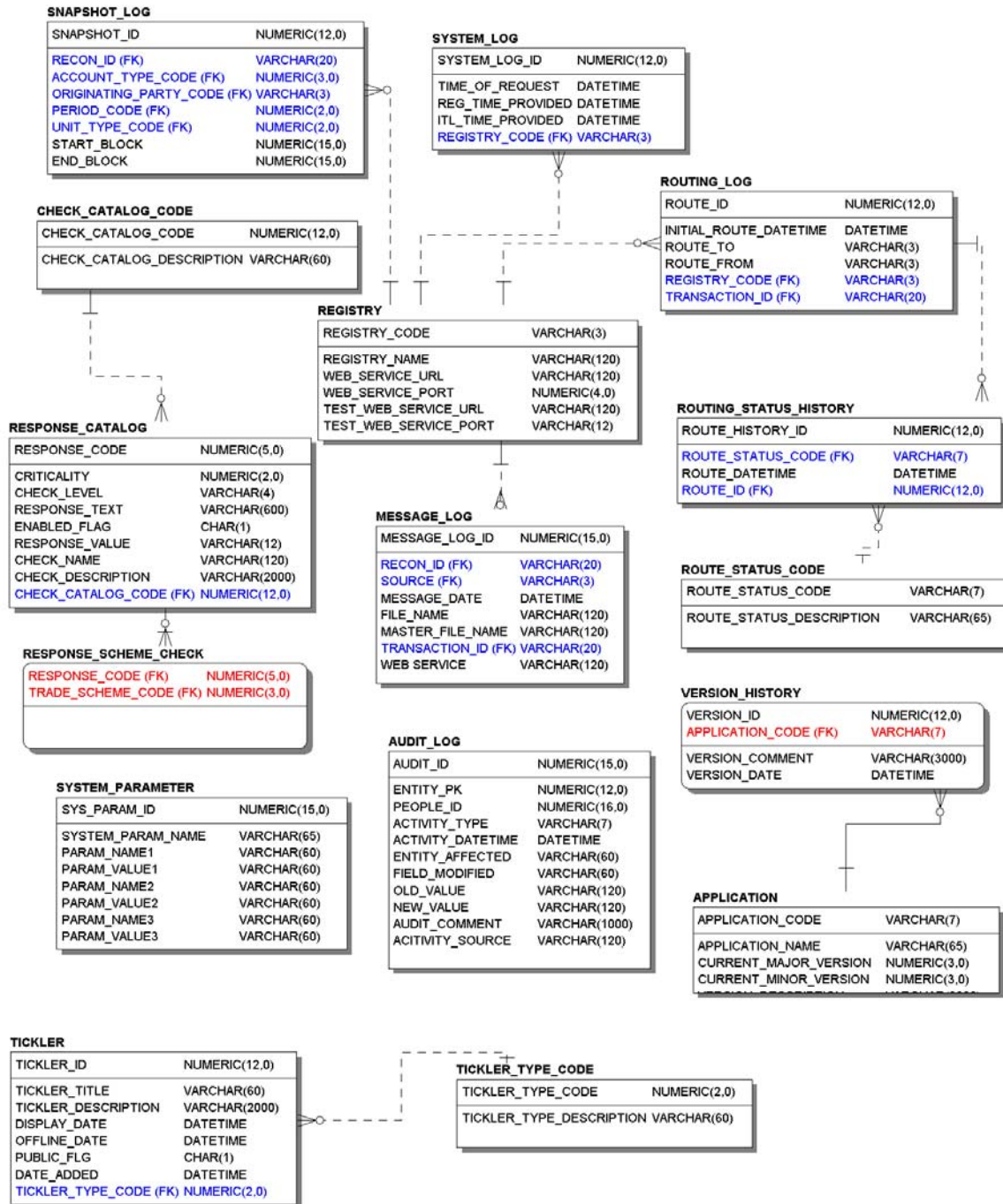


Figure B7: Projects and Notifications Submodel

