MetaModel:

Arrangement of layered typed CSPO quads statements in which each CSPO role / type plays the role of "aggregating" previous layer abstract knowledge into more concrete aggregated contexts (statements) instances until a "reference model" CSPO type arrangement is achieved, which is the root of all other layers hierarchy.

The purpose of this is to achieve some ontology matching capabilities over an upper abstraction set of layers and to enable a Functional Knowledge Base Interaction APIs integration / virtualization overlay for matching and consumption of distributed datasets via endpoints dataflows.

**Reference Model:**

ID : URL;

Occurrence: Context;

Context : ID (Context / ID : intension, Object / Occurrence, Sign / Kind / Metaclass / Attribute, Value / Role / Class : extension);

Root of MetaModel hierarchy.

**Notation:**

[LayerType] : [LayerSuperType] ([ContextType], [SubjectType], [PredicateType], [ObjectType]);

**Layers:**

Resource : Statement (Resource, Resource, Resource, Resource);

Statement : Role (Statement: c, Resource, Resource, Resource);

Role / Class : Kind (Role: b, Statement, Resource / Attribute, Resource / Value);

Role / Class aggregating CSPO Resource (IDs) sharing Attributes for their Objects / Values.

Kind / Metaclass : Relation (Kind: a, Role, Statement, Resource);

Kind: Aggregated similar Roles occurring as Resources (Object) in Statements (Predicate).

Relation / Entity : Mapping (Relation, Kind, Role, Statement: c);

Rel type (Relationship) instance / bindings. An Entity (Relation: intension) and their Statements for its Kind / Role occurrences (occurrences: kinds / roles Relation plays in statements. Matching. Object: extension). Data (DCI)[1].

Mapping : Relationship (Mapping, Relation, Kind, Role: b);

Rel players types / bindings scenarios. Information. Interaction (DCI)[1]. Mapping Role and Relation Kind: dataflow promoted types / order: relationships players domain / range. Entity alignment.

Relationship : Value (Relationship, Mapping, Relation, Kind: a);

Rel type declaration, player types. Knowledge. Context (DCI)[1].

Value : Sign (Value, Relationship, Mapping, Relation);

Sign : Object (Sign, Value, Relationship, Mapping);

Object : Context (Object, Sign, Value, Relationship);

Context : ID (Context, Object, Sign, Value);

Reference Model:

Root of MetaModel hierarchy.

**Matching / Relations / Attributes:**

One of the intentions of having all this layered infraestructure is to be able to inspect "relations", being them "reified" into a Relationship construct, or being them single attributes and values for a subject enabling the possibility of "align" one into another for ontology matching purposes.

(a, b, c: Kind, Role, Statement): Reified Rel. to / from expanded Attributes / Values. Matching / roles (intension / extension).

Context DOM: parent / child; previous / next siblings; attribute / value (determined by CSPO roles). Class / instance DOM relation for parent / children layers instances.

**Ontologies:**

Context layers instances. Levels. Example: Dimensional ontology. Ontologies should be able to be built upon Reference Model layer CSPO types arrangements.

Dimension, Unit, Measure, Value.

Axis, Behavior, Flow (state change), etc.

Primitives: dimensional upper ontology. In / Out, Prev / Next, Pick / Drop, etc. Opposites. State change (current). Events, state flows. Marriage example.

**Message Dataflow:**

Relationship, Mapping, Relation streams / signatures. Messages: Context instances. Functional Knowledge Base Interaction APIs.

Aggregation: Browse / Transform.

Alignment: Inference.

Activation: Dataflow type (signatures). Message dispatch (domain / range ordered). Aggregation.