Information and documentation — A reference ontology for the interchange of cultural heritage information

Informatiques et documentation — Un ontologie de référence pour l'échange des informations du patrimoine culturelle

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

ISO 21127 was prepared by Technical Committee ISO/TC 46, Computer applications in information and documentation, Subcommittee SC 4, Technical interoperability, in collaboration with the International Council of Museums Committee for Documentation (ICOM CIDOC).
Introduction

Development of ISO 21127 began in 1994 and is primarily the result of work undertaken by members of the ICOM/CIDOC documentation standards group. Throughout its development, the model has been known as the "CIDOC Conceptual Reference Model" or CRM. References to the CRM can be considered throughout as synonymous with ISO 21127.

The primary purpose of ISO 21127 is to offer a conceptual basis for the mediation of information between cultural heritage organizations such as museums, libraries and archives. The standard aims to provide a common reference point against which divergent and incompatible sources of information can be compared and, ultimately, harmonized.

ISO 21127 is a domain ontology \(^1\) for cultural heritage information. As such, it is designed to be explanatory and extensible rather than prescriptive and restrictive. Currently, no specific formalism for semantic models has been widely accepted as standard, nevertheless the semantic deviations between the various available models are minimal. Consequently, the model has been formulated as an object-oriented semantic model, which can easily be converted into other object-oriented models. It is our intention that this presentation format should be both natural and expressive for domain experts, and easily converted to other machine readable formats such as RDF and XML. Considerable effort has gone into achieving these goals; all cross-references and inheritance of properties, for example, are explicitly resolved. This has led to a certain degree of redundancy, but makes the document more readily comprehensible and facilitates its use as a reference document.

The standard is intended to cover all concepts relevant to cultural heritage information, but most particularly those needed for wide area data exchange between museums, libraries, and archives. Due to the diversity of the subject matter and the nature of cultural heritage collections, this goal can ultimately be achieved only by extensions to the standard. However, thanks to its object-oriented nature, the ontology offers a backbone of powerful general concepts, which have a wide application.

Of necessity, some concepts are less thoroughly elaborated than others. This is a natural consequence of focusing on specific functionality in an intrinsically unlimited field. These ‘undeveloped’ concepts can be considered as hook-in points for extensions compatible with the model. However, even without these extensions, this version of the standard is nevertheless ‘complete’ in that, through the use of free text fields, it allows information to be captured which is not modelled explicitly. Indeed, some information has deliberately not been developed into formal properties or links. This approach is preferable when detailed, targeted queries are not expected; a good text description, drawing, or diagram often provides a better source of information. In general, only those concepts on which formal querying is required need to be made explicit, rather than all the information that needs to be stored and retrieved.

\(^1\) In the sense used in computer science i.e. it describes in a formal language the relevant explicit and implicit concepts and the relationships between them.
Information and documentation — A reference ontology for the interchange of cultural heritage information

1 Scope

ISO 21127 applies to all information required for the scientific documentation of cultural heritage collections, with a view to enabling wide area information exchange and integration of heterogeneous sources. This definition requires some explanation.

The term scientific documentation is intended to convey the requirement that the depth and quality of descriptive information which can be handled by the CRM should be sufficient for serious academic research into a given field and not merely that required for casual browsing. This does not mean that information intended for presentation to members of the general public is excluded, but rather that the standard is intended to provide the level of detail and precision expected and required by museum professionals and researchers in the field of cultural heritage information.

The term cultural heritage collections is intended to cover all types of material collected and displayed by museums and related institutions, as defined by ICOM (1). This includes collections, sites, and monuments relating to natural history, ethnography, archaeology, and historic monuments, as well as collections of fine and applied arts.

The detailed description and documentation of collections held by libraries and archives lies outside the scope of the standard. However, the exchange of information relevant to museum collections with libraries and archives falls within the scope of the standard.

The documentation of collections is intended to encompass the detailed description both of individual items within collections as well as groups of items and collections as a whole. The scope of the ontology is the curated knowledge of museums. Information required solely for the administration and management of cultural heritage institutions, such as information relating to personnel, accounting, and visitor statistics, falls outside the intended scope.

The standard is specifically intended to cover contextual information: the historical, geographical, and theoretical background in which individual items are placed and which gives them much of their significance and value.

The goal of enabling information exchange and integration between heterogeneous sources determines the constructs and level of detail of the standard. It also determines its perspective, which is necessarily supra-institutional and abstracted from any specific local context.

The standard aims to leverage contemporary technology while enabling communication with legacy systems.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.
3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply. We have selected these terms from the various terminologies in use for object-oriented models for ease of understanding by non-computer experts:

3.1 Entity
anything that may be called “class”, “entity”, or “node”

3.2 Abstract Entity
an entity which would not normally have any instances and which serves primarily as a means of grouping subentities

3.3 Property
anything that may be called “attribute”, “reference”, “link”, or “property”

3.4 Superclass – Subclass
relations refer to “isA” relations, “subclass – superclass”, “parent class – derived class”, “generalization – specialization”, etc.

3.5 Superproperty – Subproperty
the same hierarchical notion as “superclass – subclass”, when applied to properties

4 Structure and format

4.1 Cardinality constraints

Cardinality constraints are deliberately omitted as they are considered to be implementation details with only minimal explanatory value. By default, all properties (or links) are regarded as optional, and potentially multiple. For example, several persons together may transfer ownership of a set of objects in one legal act to another group of persons. Alternatively, ownership may be acquired from nobody, but by collection. (See entity E8).

4.2 Properties

Properties are strictly inherited to subclasses (entities again). This applies symmetrically to both entities to the connecting link. Any instance of a subclass can instantiate inherited properties, and any instance of a property can reference a subclass of an entity to which it points.
Properties may themselves have properties, which point to other entities. Typically, these property links are used for dynamically modified properties such as roles.

4.3 CRM metamodel

The CRM is formulated in reference to a metamodel, such as that supported by TELOS. "Metaclasses" form sets of entities, typically used to handle lists of entities that form one subclass hierarchy. "Metacategories" are like property links between metaclasses and group properties by related meaning. For the current purposes of the model, references to the metamodel can simply be regarded as comments to assist reading.

4.4 Naming rules:

We have applied the following naming rules:

a) Entities are named using initial capitals.

b) Entities are named using noun phrases (nominal groups).

c) Property links are named using lower case letters and are labelled in both directions.

d) The direction of property links, and hence their names, are in accordance with the following priority list:

- Events
- Objects
- Actors
- Other

e) Property names are to be read from left to right and, in brackets, from right to left. Implementers can choose the appropriate name according to the orientation of their link attachment.

f) Properties are named using verbal phrases. References to states are named in present tense, whereas actions are named in past tense.

g) All entities are assigned a unique identifier of the form Enn. These identifiers are permanent and will not be changed in subsequent revisions of the standard. (These identifiers are also intended to facilitate exchange between different language versions.)

4.5 Format of Entity declarations

Entity declarations use the following format:

- Entity names (terms) are presented as headings in bold face, preceded by the unique identifier.

- The line "Belongs to:" refers to the metaclass the entity is a member of.

- The line "Subclass of:" declares the superclass of the entity, from which it inherits properties.

- The line "Superclass of:" is a cross-reference to the following subclasses of this entity.

- The line "Scope note" contains the textual definition of the concept the entity represents.

- The title "Properties" announces the list of property links.

- Properties are grouped by related meaning under metacategories, i.e. a series of titles. E.g. “classifications” etc., in normal face.

- Each property is represented by its forward and backward name, and the entity it links to, separated by colon.
• Properties declared directly for the entity are given in bold face.

• Inherited properties are given in italics as cross-references to the respective superclasses for better comprehension.

• Inherited properties with a redefined (restricted) target entity are given in bold face italics.

• Each property may be followed by a scope note in indented text and smaller characters.

• Properties of properties are given in an indented position in parenthesis under the respective property.

The title “The entity is referenced by:” indicates the cross-reference list of properties with links pointing to this entity (in the sequence called “incoming links”). In cases where there is no such link, the phrase “The entity is not referenced” is used.

Each incoming property link is represented by the entity it originates from, and its forward and backward name, separated by a colon, in normal face.

The title “The entity inherits references:” indicates the cross-reference list of links pointing to any of the superclasses of this entity (“inherited incoming links”).

Each inherited incoming property link is represented by the entity it originates from, and its forward and backward name, separated by a colon, in italics.
5 Entity hierarchy

5.1 Top level Entity

E1 CRM Entity
Belongs to: Meta Entity
Superclass of: Temporal Entity
Existence
Time-Span
Place
Dimension

Scope note: This is the abstract concept of the entities of our universe of discourse. It carries the rule that all entities can be classified by a type, which further refines the specific subclass an instance belongs to, and a free text field for anything we want to express and that is not captured by formal links.

Properties:
identification
is identified by (identifies): Appellation
property note: this is the superproperty of “E19 Physical Object.(is identified by)”, “E52 Time-Span.(is identified by)”, “E53 Place.(is identified by)”, “E71 Man-Made Stuff.(has title)”.

classifications
has type (is type of): Type

other descriptions
has note: String (has type : Type)

The entity is referenced by:
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
(has type : Type)
5.2 Period Hierarchy

All entities in this hierarchy are instances of the metaclass “Period Type”, which is the container for all these entities.

E2 Temporal Entity
Belongs to: Period Type
Subclass of: CRM Entity
Superclass of: Condition State
Period

Scope note: This is an abstract entity and has no examples. It groups together things such as events, states, and other phenomena which are limited in time. It is specialized into Period, which holds on some geographic area, and Condition State, which holds for, on, or over a certain object.

Properties:
identification
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
temporal definitions
  has time-span (is time-span of): Time-Span
other descriptions
  has note: String
    (has type : Type)

The entity is not referenced.

The entity inherits references:
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
E3 Condition State

Belongs to: Period Type
Subclass of: Temporal Entity

Scope note: The state of an object characterized by a certain condition and a time-span, e.g. "In ruins from 1695 until 1952", where the qualifier "in ruins" is represented as the condition state type.

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
temporal definitions
  has time-span (is time-span of): Time-Span
structures
  consists of (forms part of): Condition State
  falls within (contains): Condition State
other descriptions
  has note: String
  (has type : Type)

The entity is referenced by:
Condition Assessment: has identified (identified by)
Physical Stuff: has condition (condition of)
and itself

The entity inherits references:
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
E4 Period
Belongs to: Period Type
Subclass of: Temporal Entity
Superclass of: Event

Scope note: A period is characterized by a coherent set of phenomena and or manifestations (explicitly intended or not), which are assumed to have taken place over a certain space and time.

Examples: glacial period, bronze period, Ming Dynasty, Impressionism, Neolithic Period, McCarthy Era, The Sixties, Nineveh, 'Sturm und Drang'

There are different opinions as to whether a ‘style’ is defined by physical features or by the historical context.

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
spatial definitions
  took place at (witnessed): Place
  property note: this is the superproperty of “moved to”, “moved from”, spatial definitions, short cut
  took place on or within (witnessed): Physical Object
  property note: It is short cut of the “Section Definition”
temporal definitions
  has time-span (is time-span of): Time-Span
structures
  consists of (forms part of): Period
  falls within (contains): Period
other descriptions
  has note: String
  (has type : Type)

The entity is referenced only by itself.

The entity inherits references:
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
E5  Event
Belongs to:  Period Type
Subclass of:  Period
Superclass of:  End of Existence
Beginning of Existence
Activity

Scope note:  A change of state in cultural, social, or physical systems, regardless of scale, brought about by a series or group of coherent physical, cultural, technological, or legal phenomena. The distinction between an event and a period is partly a question of scale. Viewed at a broad scale, an event is an 'instantaneous' change of state. At a fine scale, the event can be analyzed into its component phenomena within a space and time frame, i.e., a period. The reverse is not necessarily the case; not all periods give rise to a noteworthy change of state.

Examples :  World War II, Battle of Stalingrad, Earthquake in Lisbon, birth of Cleopatra, my birthday celebration 28-6-1995, the Yalta Conference, "a tile fell from my roof", the CIDOC Conference 2005

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
active participants
  had participants (participated in): Actor
    property note: this is the superproperty of "carried out by", "has formed", "by mother", "brought into life", "dissolved", "was death".
passive participants
  occurred in the presence of (was present at): Stuff
    property note: this is the superproperty of "destroyed", "used object", "transferred title of", "moved", "transferred custody of", "has modified", "concerned", "registered", "measured", "has created".
spatial definitions
  took place at (witnessed): Place
  spatial definitions, short cut
    took place on or within (witnessed): Physical Object
temporal definitions
  has time-span (is time-span of): Time-Span
structures
  consists of (forms part of): Period
  falls within (contains): Period
other descriptions
  has note: String
    (has type : Type)

The entity is referenced by:
Physical Man-Made Stuff: depicts event (is depicted by)
  (mode of depiction : Type)

The entity inherits references:
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
E6  Destruction
Belongs to: Period Type
Subclass of: End of Existence
Scope note: An event which causes one or more objects to lose their identity as the current subjects of
documentation. Some destructions are intentional, others are independent of human activity.
The decision as to the point at which an object is destroyed rather than modified may be
arbitrary in some cases. The same event may, in some cases, be documented both as a
destruction of one or more objects and as the creation of others using parts or material from the
original, or, alternatively, as a modification. In the former case, the object record would close; in
the latter, it would continue. For living beings, death is usually more clearly defined.
Examples: the Lisbon Earthquake, the destruction of Nineveh, “I broke a champagne glass yesterday”, the
shooting of the last wolf in Germany in 1729

Properties:
identifications
   is identified by (identifies): Appellation
classifications
   has type (is type of): Type
active participants
   had participants (participated in): Actor
passive participants
   destroyed (was destroyed by): Physical Object
      property note: this is the subproperty of “occurred in the presence of”, “took out of existence”
took out of existence (was taken out of existence by): Existence
   occurred in the presence of (was present at): Stuff
spatial definitions
   took place at (witnessed): Place
spatial definitions, short cut
   took place on or within (witnessed): Physical Object
temporal definitions
   has time-span (is time-span of): Time-Span
structures
   consists of (forms part of): Period
   falls within (contains): Period
other descriptions
   has note: String
   (has type : Type)

The entity is not referenced.

The entity inherits references:
Physical Man-Made Stuff: depicts event (is depicted by)
   (mode of depiction : Type)
Period: falls within (contains)
Period: consists of (forms part of)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
   (has type : Type)
E7 Activity
Belongs to: Period Type
Subclass of: Event
Superclass of: Formation
Conceptual Creation
Modification
Transfer of Custody
Acquisition
Move
Attribute Assignment

Scope note: An action or a series of actions, carried out by actors (people, groups or organizations) which follow a certain explicit or implicit intention and result as a collective effect in some change of state in the cultural, social, or physical systems we are interested in. This notion includes both complex and long lasting actions such as the building of a settlement or a war, as well as simple, short-lived actions such as the opening of a door. It does not include the notion of activity in the sense of professions and other non-targeted notions. These are seen rather as belonging to a part in the hierarchy above, E5 Event.

Properties:
identifications
is identified by (identifies): Appellation
classifications
has type (is type of): Type
active participants
carried out by (performed): Actor
(in the role of: Type)
property note: this is the superproperty of “transferred title to”, “transferred title from”, “custody surrendered by”, “custody received by”, and subproperty of “had participants”.
had participants (participated in): Actor
passive participants
took into account (was taken into account by): Conceptual Object
property note: The equivalent of using something physical. May be better "used: Stuff".
used object (was used for): Physical Object
(mode of use: String)
property note: this is the subproperty of “occurred in the presence of”.
occurred in the presence of (was present at): Stuff
motivations
was motivation for (motivated): Conceptual Object
motivated the creation of (was created for): Conceptual Object
was intended use of (was made for): Man-Made Stuff
(mode of use: String)
had specific purpose (was purpose of): Activity
had as general purpose (was purpose of): Type
spatial definitions
took place at (witnessed): Place
spatial definitions, short cut
took place on or within (witnessed): Physical Object
temporal definitions
has time-span (is time-span of): Time-Span
structures
consists of (forms part of): Period
falls within (contains): Period
other descriptions
has note: String
(has type: Type)

The entity is referenced only by itself.
The entity inherits references:

Physical Man-Made Stuff: depicts event (is depicted by)
  (mode of depiction : Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
E8 Acquisition

Belongs to:  Period Type
Subclass of:  Activity

Scope note: This entity describes the transfer of the legal ownership from one legal person to another. Either one of the actors may be omitted, unknown, or not existing. The entity describes the beginning, the end, or the transfer of an ownership, acquisition from unknown source, or loss of title, depending on the circumstances. It takes a neutral position with respect to the actors involved. The museum notion of ‘accession’ seems to differ between institutions. We preferred therefore to model the notions of legal ownership and physical custody instead, which are well defined in international business. Institutions can choose to model their specific notions as combinations of these. Annexation, donation, purchase, field collection — where legal title is appropriated by the collector, are types of acquisition.

Examples: a fish collected in international waters, a painting bequeathed to a museum

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
active participants
  transferred title to (acquired title of): Actor
    property note: this is the subproperty of “carried out by”
  transferred title from (surrendered title of): Actor
    property note: this is the subproperty of “carried out by”
  had participants (participated in): Actor
    carried out by (performed): Actor
    (in the role of : Type)
passive participants
  transferred title of (changed ownership by): Physical Object
    property note: this is the subproperty of “occurred in the presence of”
    took into account (was taken into account by): Conceptual Object
    occurred in the presence of (was present at): Stuff
    used object (was used for): Physical Object
      (mode of use: String)
motivations
  was motivation for (motivated): Conceptual Object
  motivated the creation of (was created for): Conceptual Object
  was intended use of (was made for): Man-Made Stuff
    (mode of use : String)
  had specific purpose (was purpose of): Activity
  had as general purpose (was purpose of): Type
spatial definitions
  took place at (witnessed): Place
spatial definitions, short cut
  took place on or within (witnessed): Physical Object
temporal definitions
  has time-span (is time-span of): Time-Span
structures
  consists of (forms part of): Period
  falls within (contains): Period
other descriptions
  has note: String
    (has type : Type)

The entity is not referenced.
The entity inherits references:

Activity: had specific purpose (was purpose of)
Physical Man-Made Stuff: depicts event (is depicted by)
  (mode of depiction : Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
E9 Move
Belongs to: Period Type
Subclass of: Activity

Scope note: This entity captures the change of physical location of a museum object for exhibitions, conservation, reorganization, loans, study, etc.

Examples: Taking objects from storage and putting them on display is a type of move.

Properties:
identifications
is identified by (identifies): Appellation

classifications
has type (is type of): Type

active participants
had participants (participated in): Actor
carried out by (performed): Actor
(in the role of: Type)

passive participants
moved (moved by): Physical Object

motivations
was motivation for (motivated): Conceptual Object
motivated the creation of (was created for): Conceptual Object
was intended use of (was made for): Man-Made Stuff
(mode of use: String)

had specific purpose (was purpose of): Activity
had as general purpose (was purpose of): Type

spatial definitions
moved to (occupied): Place
property note: this is the subproperty of “took place at”.

moved from (vacated): Place
property note: this is the subproperty of “took place at”.

took place at (witnessed): Place

spatial definitions, short cut
took place on or within (witnessed): Physical Object

temporal definitions
has time-span (is time-span of): Time-Span

structures
consists of (forms part of): Period
falls within (contains): Period

other descriptions
has note: String
(has type : Type)

The entity is not referenced.

The entity inherits references:
Activity: had specific purpose (was purpose of)
Physical Man-Made Stuff: depicts event (is depicted by)
(mode of depiction : Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
(has type : Type)
E10 Transfer of Custody

Belongs to: Period Type
Subclass of: Activity

Scope note: This entity describes the transfer of physical custody from one legal person to another. Either one of the actors may be omitted, unknown, or not existing. The entity may describe the beginning, the end, or the transfer of custody, field collection, or declared loss of an object, depending on the circumstances. It takes a neutral position with respect to the actors involved.

The distinction between legal and physical custody can be modelled as types.

Some events can simultaneously be considered as acquisition, transfer of custody, and move. For example, purchase of a Polynesian feather hat at a market. In other cases, separate events are involved, e.g. purchase by telephone of an object on auction, physical transportation, and reception by the new owner.

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
active participants
  custody surrendered by (surrendered custody): Actor
    property note: this is the subproperty of “carried out by”
  custody received by (received custody): Actor
    property note: this is the subproperty of “carried out by”
  had participants (participated in): Actor
    carried out by (performed): Actor
      (in the role of : Type)
passive participants
  transferred custody of (custody changed by): Physical Object
    property note: this is the subproperty of “occurred in the presence of”
  took into account (was taken into account by): Conceptual Object
  occurred in the presence of (was present at): Stuff
  used object (was used for): Physical Object
    (mode of use: String)
motivations
  was motivation for (motivated): Conceptual Object
  motivated the creation of (was created for): Conceptual Object
  was intended use of (was made for): Man-Made Stuff
    (mode of use: String)
  had specific purpose (was purpose of): Activity
  had as general purpose (was purpose of): Type
spatial definitions
  took place at (witnessed): Place
spatial definitions, short cut
  took place on or within (witnessed): Physical Object
temporal definitions
  has time-span (is time-span of): Time-Span
structures
  consists of (forms part of): Period
  falls within (contains): Period
other descriptions
  has note: String
  (has type : Type)

The entity is not referenced.
The entity inherits references:
Activity: had specific purpose (was purpose of)
Physical Man-Made Stuff: depicts event (is depicted by)
   (mode of depiction : Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
   (has type : Type)
E11 Modification
Belongs to: Period Type
Subclass of: Activity
Superclass of: Production

Scope note: This entity comprises all activities which intentionally alter physical objects, regardless of the degree of intervention: creation of some item from raw material, restorations, use of ancient objects in jewelry, etc. Since in many cases the distinction between modification and creation is not clear, and the actions implied are basically the same, modification is regarded as the more general (and less ambiguous) concept. This implies that some items may be consumed or destroyed in a modification process and others emerge from it. Typically, objects involved in the process, such as tools, materials, etc., which are foreseen by the applied technique are modelled as attributes of the Design or Procedure, for reasons of efficient data representation. Nevertheless, unusual and remarkable items used for a specific instance of a process should be referred to here.

This entity is thought to be collective, e.g. the printing of a thousand books should be one event. Conservation actions can be modelled as a type of modification.

Properties:
- identifications
  - is identified by (identifies): Appellation
- classifications
  - has type (is type of): Type
- active participants
  - had participants (participated in): Actor
  - carried out by (performed): Actor
    - (in the role of: Type)
- passive participants
  - has modified (was modified by): Physical Man-Made Stuff
    - property note: this is the superproperty of “has produced” and subproperty of “occurred in the presence of”.
  - took into account (was taken into account by): Conceptual Object
  - occurred in the presence of (was present at): Stuff
  - used object (was used for): Physical Object
    - (mode of use: String)

following

used general technique (was technique of): Type
used specific technique (was used by): Design or Procedure

motivations
- was motivation for (motivated): Conceptual Object
- motivated the creation of (was created for): Conceptual Object
- was intended use of (was made for): Man-Made Stuff
  - (mode of use: String)
- had specific purpose (was purpose of): Activity
- had as general purpose (was purpose of): Type

spatial definitions
- took place at (witnessed): Place

spatial definitions, short cut
- took place on or within (witnessed): Physical Object

temporal definitions
- has time-span (is time-span of): Time-Span

structures
- consists of (forms part of): Period
- falls within (contains): Period

other descriptions
- has note: String
ISO/CD 21127

(has type : Type)

The entity is not referenced.

The entity inherits references:
Activity: had specific purpose (was purpose of)
Physical Man-Made Stuff: depicts event (is depicted by)
    (mode of depiction : Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
    (has type : Type)
**E12 Production**

Belongs to: Period Type  
Subclass of: Modification, Beginning of Existence  

Scope note: This entity specializes the notion of modification into production, i.e. activities which are designed to and succeed in creating one or a series of new items—new in the sense that there is no obvious similarity to the consumed items and material.

Examples: painting a watercolor, printing an etching, producing a series of household forks, the recasting of the mermaid in Copenhagen

**Properties:**

identifications  
*is identified by (identifies): Appellation*

classifications  
*has type (is type of): Type*

active participants  
*had participants (participated in): Actor  
(carried out by (performed): Actor  
(in the role of : Type)*

passive participants  
*brought into existence (was brought into existence by): Existence  
took into account (was taken into account by): Conceptual Object  
has produced (was produced by): Physical Man-Made Stuff  
property note: this is the subproperty of “has modified”, “brought into existence”.  
has modified (was modified by): Physical Man-Made Stuff  
occurred in the presence of (was present at): Stuff  
used object (was used for): Physical Object  
(mode of use: String)*

following  
*used general technique (was technique of) : Type  
used specific technique (was used by): Design or Procedure*

motivations  
*was motivation for (motivated): Conceptual Object  
motivated the creation of (was created for): Conceptual Object  
was intended use of (was made for): Man-Made Stuff  
(mode of use: String)  
had specific purpose (was purpose of): Activity  
had as general purpose (was purpose of): Type*

spatial definitions  
*took place at (witnessed): Place  
took place on or within (witnessed): Physical Object*

temporal definitions  
*has time-span (is time-span of): Time-Span*

structures  
*consists of (forms part of): Period  
falls within (contains): Period*

other descriptions  
*has note: String  
(has type : Type)*

The entity is not referenced.

The entity inherits references:  
*Activity: had specific purpose (was purpose of)*
Physical Man-Made Stuff: depicts event (is depicted by)
    (mode of depiction : Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
    (has type : Type)
E13 Attribute Assignment

Belongs to: Period Type
Subclass of: Activity
Superclass of: Condition Assessment
Identifier Assignment
Measurement
Type Assignment

Scope note: This entity comprises the actions of making assertions about properties of an object. It serves the documentation of how the respective assessment came about and whose opinion it was. All the attributes or properties assigned in such an action can also be seen as directly attached to the respective object, possibly as a collection of contradictory values. All cases of direct links from objects to values which are, in this model, also referred to indirectly through an action, are characterized as "short cuts" of this action. This redundant modelling of two alternative views is preferred because many implementations may have good reasons to model either the action or the short cut, and the relation between both alternatives can be captured by simple rules.

In addition, the entity describes the actions of people making propositions and statements during certain museum procedures, e.g. the person and date when a condition statement was made, an identifier was assigned, the museum object was measured, etc. Which kinds of such assignments and statements need to be documented explicitly in schema structures, rather than free text, depends on a museum’s practice. In the latter case shortcuts may be used which refer directly to the museum object.

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
active participants
  had participants (participated in): Actor
    carried out by (performed): Actor
      (in the role of : Type)
passive participants
  took into account (was taken into account by): Conceptual Object
    occurred in the presence of (was present at): Stuff
  used object (was used for): Physical Object
    (mode of use: String)
motivations
  was motivation for (motivated): Conceptual Object
    motivated the creation of (was created for): Conceptual Object
    was intended use of (was made for): Man-Made Stuff
      (mode of use: String)
  had specific purpose (was purpose of): Activity
    had as general purpose (was purpose of): Type
spatial definitions
  took place at (witnessed): Place
spatial definitions, short cut
  took place on or within (witnessed): Physical Object
temporal definitions
  has time-span (is time-span of): Time-Span
structures
  consists of (forms part of): Period
  falls within (contains): Period
other descriptions
  has note: String
    (has type : Type)
The entity is not referenced.

The entity inherits references:
Activity: had specific purpose (was purpose of)
Physical Man-Made Stuff: depicts event (is depicted by)
   (mode of depiction : Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
   (has type : Type)
E14 Condition Assessment

Belongs to: Period Type
Subclass of: Attribute Assignment

Scope note: This entity describes the action of assessing the condition of preservation of an object over a particular period, either by inspection, measurement, or historical studies.

Properties:

identifications
  is identified by (identifies): Appellation

classifications
  has type (is type of): Type

active participants
  had participants (participated in): Actor
  carried out by (performed): Actor
  (in the role of: Type)

passive participants
  concerned (was assessed by): Physical Stuff
  property note: this is the subproperty of "occurred in the presence of".
  took into account (was taken into account by): Conceptual Object
  occurred in the presence of (was present at): Stuff
  used object (was used for): Physical Object
  (mode of use: String)

attributions
  has identified (identified by): Condition State

motivations
  was motivation for (motivated): Conceptual Object
  motivated the creation of (was created for): Conceptual Object
  was intended use of (was made for): Man-Made Stuff
  (mode of use: String)
  had specific purpose (was purpose of): Activity
  had as general purpose (was purpose of): Type

spatial definitions
  took place at (witnessed): Place

spatial definitions, short cut
  took place on or within (witnessed): Physical Object

temporal definitions
  has time-span (is time-span of): Time-Span

structures
  consists of (forms part of): Period
  falls within (contains): Period

other descriptions
  has note: String
  (has type: Type)

The entity is not referenced.

The entity inherits references:

Activity: had specific purpose (was purpose of)
Physical Man-Made Stuff: depicts event (is depicted by)
  (mode of depiction: Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type: Type)
E15 Identifier Assignment

Belongs to: Period Type
Subclass of: Attribute Assignment

Scope note: This entity describes the action of assigning an identifier, such as a museum number, to an object. The interest in this action arises when objects are exchanged and multiple identifiers are used, or the identification system of an organization is changed. In order to cover these cases, it is important to document by whom, when, and for what purpose an identifier is assigned to a museum object.

Properties:
identifications
is identified by (identifies): Appellation
classifications
has type (is type of): Type
active participants
had participants (participated in): Actor
carried out by (performed): Actor
(in the role of : Type)
passive participants
registered (was registered by): Physical Object
property note: this is the subproperty of “occurred in the presence of”.
took into account (was taken into account by): Conceptual Object
occurred in the presence of (was present at): Stuff
used object (was used for): Physical Object
(mode of use: String)

attributions
assigns (is assigned by): Object Identifier
deassigns (is deassigned by): Object Identifier

motivations
was motivation for (motivated): Conceptual Object
motivated the creation of (was created for): Conceptual Object
was intended use of (was made for): Man-Made Stuff
(mode of use: String)
had specific purpose (was purpose of): Activity
had as general purpose (was purpose of): Type

spatial definitions
took place at (witnessed): Place
spatial definitions, short cut
took place on or within (witnessed): Physical Object

temporal definitions
has time-span (is time-span of): Time-Span
structures
consists of (forms part of): Period
falls within (contains): Period

other descriptions
has note: String
(has type : Type)

The entity is not referenced.

The entity inherits references:
Activity: had specific purpose (was purpose of)
Physical Man-Made Stuff: depicts event (is depicted by)
(mode of depiction : Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
(has type : Type)
E16 Measurement
Belongs to: Period Type
Subclass of: Attribute Assignment

Scope note: This entity describes actions of measuring physical properties by counting or use of some tool, whether by simple yardstick or complex radiation detection device. The interest is in the method and care applied in order to decide afterwards on the reliability of the result. For properties which may change value over time, such as length due to shrinkage, the date is of direct relevance as well. Details of methods and devices are best handled as free text, whereas basic methods such as 'C14' should be encoded in the type field.

Properties:
identifications
  is identified by (identifies): Appellation

classifications
  has type (is type of): Type

active participants
  had participants (participated in): Actor
  carried out by (performed): Actor
    (in the role of : Type)

passive participants
  measured (was measured by): Physical Stuff
    property note: this is the subproperty of “occurred in the presence of”.
  took into account (was taken into account by): Conceptual Object
    occurred in the presence of (was present at): Stuff
    used object (was used for): Physical Object
      (mode of use: String)

attributions
  observed dimension (was observed): Dimension

motivations
  was motivation for (motivated): Conceptual Object
  motivated the creation of (was created for): Conceptual Object
  was intended use of (was made for): Man-Made Stuff
    (mode of use: String)
  had specific purpose (was purpose of): Activity
  had as general purpose (was purpose of): Type

spatial definitions
  took place at (witnessed): Place

spatial definitions, short cut
  took place on or within (witnessed): Physical Object

temporal definitions
  has time-span (is time-span of): Time-Span

structures
  consists of (forms part of): Period
  falls within (contains): Period

other descriptions
  has note: String
    (has type : `Type)

The entity is not referenced.

The entity inherits references:
Activity: had specific purpose (was purpose of)
Physical Man-Made Stuff: depicts event (is depicted by)
  (mode of depiction : Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)  
Document: documents (is documented in)  
Conceptual Object: refers to (is referred to by)  
(has type : Type)
E17 Type Assignment

Belongs to: Period Type
Subclass of: Attribute Assignment

Scope note: This entity describes the act of scientifically classifying some entity—an object, a work, an action, etc. The value of classification depends critically on general and personal knowledge and the scientific system used. Therefore the interest lies in the author and date.

Properties:
identifications
  * is identified by (identifies): Appellation
classifications
  * has type (is type of): Type
active participants
  * had participants (participated in): Actor
  * carried out by (performed): Actor
    * (in the role of : Type)
passive participants
  * classified (was classified by): CRM Entity
    * took into account (was taken into account by): Conceptual Object
    * occurred in the presence of (was present at): Stuff
    * used object (was used for): Physical Object
      * (mode of use: String)
attributions
  * assigned (was assigned by): Type
motivations
  * was motivation for (motivated): Conceptual Object
  * motivated the creation of (was created for): Conceptual Object
  * was intended use of (was made for): Man-Made Stuff
    * (mode of use: String)
  * had specific purpose (was purpose of): Activity
  * had as general purpose (was purpose of): Type
spatial definitions
  * took place at (witnessed): Place
spatial definitions, short cut
  * took place on or within (witnessed): Physical Object
temporal definitions
  * has time-span (is time-span of): Time-Span
structures
  * consists of (forms part of): Period
  * falls within (contains): Period
other descriptions
  * has note: String
    * (has type : Type)

The entity is not referenced.

The entity inherits references:
Activity: had specific purpose (was purpose of)
Physical Man-Made Stuff: depicts event (is depicted by)
  * (mode of depiction : Type)
Period: consists of (forms part of)
Period: falls within (contains)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  * (has type : Type)
5.3 Object Hierarchy

All entities in this hierarchy are instances of the metaclass “Object Type”. Two submetaclasses are defined, the “Physical Object Type”—for the hierarchy of the “Physical Objects”, the kinds of things which have weight, are created once and can be destroyed—and the “Concept Type”—for the “Concepts”, the intellectual or other products which are created once, and can exist on multiple carriers, and hence can rather be forgotten or lost than destroyed.

5.3.1 Physical Objects

E18 Physical Stuff

Belongs to: Physical Object Type
Subclass of: Legal Object
Superclass of: Physical Object
Physical Man-Made Stuff
Physical Feature

Scope Note: Physical stuff is an abstract notion that groups all physical objects, man-made and natural, as well as physical features of objects, such as holes. We use the term 'feature' to refer to anything of a material nature, such as scratches, holes, rivers, and stains, which it would be strange to refer to as ‘objects’.

Properties:
identification
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
short cut, legal status
  right held by (has right on): Actor
  (has type : Type)
  (has note : String)
physical status, short cut
  has dimension (is dimension of): Dimension
  property note: It is short cut of the path “Measurement changed by – Dimension – observed dimension”.
  has condition (condition of): Condition State
  property note: It is short cut of the path “Assessment changed by – Condition Assessment – has identified”.
structures
  consists of (is incorporated in): Material
  is composed of (forms part of): Physical Stuff
other descriptions
  had as general use (was use of): Type
  has note: String
  (has type : Type)

The entity is referenced by:
Physical Man-Made Stuff: depicts object (is depicted by)
  (mode of depiction: Type)
Condition Assessment: concerned (was assessed by)
Measurement: measured (was measured by)
and itself

The entity inherits references:
Event: occurred in the presence of (was present at)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
(has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E19 Physical Object

Belongs to: Physical Object Type
Subclass of: Physical Stuff
Superclass of: Biological Object
Man - Made Object

Scope note: A discrete, real item of material nature which constitutes a unit for documentation. The decision as to what constitutes a complete item, rather than parts or components, may be purely administrative.

Examples: John Smith, Aphrodite of Milos, the Palace of Knossos, the Cullinan diamond, Apollo 13 at the time of launch

Properties:

identifications
is identified by (identifies): Object Identifier
property note: this is the subproperty of "E1 CRM Entity.(is identified by)", and superproperty of "E19 Physical Object.(is identified by)".
preferred identifier is (is preferred identifier of): Object Identifier
property note: this is the subproperty of "E19 Physical Object.(is identified by)".

legal status
is subject to (applies to): Right

has former or current keeper (is former or current keeper of): Actor
property note: this is the superproperty of "has current keeper". It is short cut of the path “Custody changed by – Transfer of Custody – custody received / surrendered by”.

has current keeper (is current keeper of): Actor
property note: this is the subproperty of "has former or current keeper". It is short cut of the path “Custody changed by – Transfer of Custody – custody received / surrendered by”.

has former or current owner (is former or current owner of): Actor
property note: this is the superproperty of "has current owner". It is short cut of the path “Acquisition changed by – Acquisition – transferred title from / to”

has current owner (is current owner of): Actor
property note: this is the subproperty of "has former or current owner". It is short cut of the path “Acquisition changed by – Acquisition – transferred title from / to”.

right held by (has right on): Actor
(has type: Type)
(has note: String)

physical status, short cut
has dimension (is dimension of): Dimension
has condition (condition of): Condition State

locations, short cut
has former or current location (is former or current location of): Place
property note: this is the superproperty of “has current permanent location”, “has current location”. It is short cut of the path “Move changed by – Move – moved from / to”.

has current permanent location (is current permanent location of): Place
property note: this is the subproperty of “has former or current location”. It is short cut of the path “Move changed by – Move – moved from / to”.

has current location (currently holds): Place
property note: this is the subproperty of “has former or current location”. It is short cut of the path “Move changed by – Move – moved from / to”.

structures
bears feature (is found on): Physical Feature
has number of parts: Number
has section definition (defines section): Section Definition
is composed of (forms part of): Physical Stuff
consists of (is incorporated in): Material
structures, short cut
has section (is located on or within): Place
property note: It is short cut of the “Section Definition”
other descriptions
had as general use (was use of): Type
has note: String
(has type : Type)

The entity is referenced by:
Period: took place on or within (witnessed)
Destruction: destroyed (was destroyed by)
Activity: used object (was used for)
    (mode of use: String)
Acquisition: transferred title of (changed ownership by)
Move: moved (moved by)
Transfer of Custody: transferred custody of (custody changed by)
Identifier Assignment: registered (was registered by)

The entity inherits references:
Physical Man-Made Stuff: depicts object (is depicted by)
    (mode of depiction : Type)
Physical Stuff: is composed of (forms part of)
Condition Assessment: concerned (was assessed by)
Measurement: measured (was measured by)
Event: occurred in the presence of (was present at)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
    (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E20 Biological Object

Belongs to: Physical Object Type
Subclass of: Physical Object
Superclass of: Person

Scope note: An individual, real item of material nature which lives, has lived, or is a natural product of living organisms. Artificial objects which incorporate biological elements, such as Victorian butterfly frames, can be classified as both natural and man-made objects.

Examples: Me, Tut-Ankh-Amun, Boukephalas

Properties:
identifications
- is identified by (identifies): Object Identifier
- preferred identifier is (is preferred identifier of): Object Identifier
- is identified by (identifies): Appellation

classifications
- has type (is type of): Type

legal status
- is subject to (applies to): Right

legal status, short cut
- has former or current keeper (is former or current keeper of): Actor
- has current keeper (is current keeper of): Actor
- has former or current owner (is former or current owner of): Actor
- has current owner (is current owner of): Actor
- right held by (has right on): Actor
  - (has type: Type)
  - (has note: String)

physical status, short cut
- has dimension (is dimension of): Dimension
- has condition (condition of): Condition State

locations, short cut
- has former or current location (is former or current location of): Place
- has current permanent location (is current permanent location of): Place
- has current location (currently holds): Place

structures
- bears feature (is found on): Physical Feature
- has number of parts: Number
- has section definition (defines section): Section Definition
- consists of (is incorporated in): Material
- is composed of (forms part of): Physical Stuff

structures, short cut
- has section (is located on or within): Place

other descriptions
- had as general use (was use of): Type
- has note: String
  - (has type: Type)

The entity is not referenced.

The entity inherits references:
Activity: used object (was used for)
  - (mode of use : String)
Physical Man-Made Stuff: depicts object (is depicted by)
  - (mode of depiction : Type)
Physical Stuff: is composed of (forms part of)
Event: occurred in the presence of (was present at)
Period: took place on or within (witnessed)
Condition Assessment: concerned (was assessed by)
Destruction: destroyed (was destroyed by)
Identifier Assignment: registered (was registered by)
Move: moved (moved by)
Acquisition: transferred title of (changed ownership by)
Transfer of Custody: transferred custody of (custody changed by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Measurement: measured (was measured by)
Conceptual Object: refers to (is referred to by)
(has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
**E21 Person**

**Belongs to:**  
- Actor Type  
- Physical Object Type

**Subclass of:**  
- Biological Object  
- Actor

**Scope note:**  
A real person, who lives or is assumed to have lived. Legendary figures, such as Ulysses and King Arthur, who may have existed, fall into this class if the documentation refers to them as historical figures. In cases where doubt exists as to whether several persons are in fact identical, multiple instances can be created and linked to indicate their relationship.

**Examples:**  
John Smith, Tut-Ankh-Amun

**Properties:**

**identifications**  
- is identified by (identifies): Object Identifier  
- preferred identifier is (is preferred identifier of): Object Identifier  
- is identified by (identifies): Appellation

**classifications**  
- has type (is type of): Type

**legal status**  
- is subject to (applies to): Right

**legal status, short cut**  
- has former or current keeper (is former or current keeper of): Actor  
- has current keeper (is current keeper of): Actor  
- has former or current owner (is former or current owner of): Actor  
- has current owner (current owner of): Actor  
- right held by (has right on): Actor  
  - (has type: Type)  
  - (has note: String)

**physical status, short cut**  
- has dimension (is dimension of): Dimension  
- has condition (condition of): Condition State

**locations, short cut**  
- has former or current location (is former or current location of): Place  
- has current permanent location (is current permanent location of): Place  
- has current location (currently holds): Place

**structures**  
- bears feature (is found on): Physical Feature  
- has number of parts: Number  
- has section definition (defines section): Section Definition  
- consists of (is incorporated in): Material  
- is composed of (forms part of): Physical Stuff

**structures, short cut**  
- has section (is located on or within): Place

**other descriptions**  
- is member of (has members): Legal Body  
- has gender (is gender of): Gender  
- has current or former residence (is current or former residence of): Place  
- had as general use (was use of): Type  
- possesses (is possessed by): Right  
- has contact points (provides access to): Contact Point  
- has note: String  
  - (has type: Type)

**The entity is referenced by:**

- Birth: by mother (gave birth)
Birth: from father (was father for)
Birth: brought into life (was born)
Death: was death of (died in)

The entity inherits references:
Activity: carried out by (performed)
   (in the role of : Type)
Legal Object: right held by (has right on)
   (has type : Type)
   (has note : String)
Activity: used object (was used for)
   (mode of use : String)
Physical Man-Made Stuff: depicts object (is depicted by)
   (mode of depiction : Type)
Physical Object: has current owner (is current owner of)
Physical Object: has former or current owner (is former or current owner of)
Physical Object: has current keeper (is current keeper of)
Physical Object: has former or current keeper (is former or current keeper of)
Physical Stuff: is composed of (forms part of)
Event: had participants (participated in)
Event: occurred in the presence of (was present at)
Period: took place on or within (witnessed)
Condition Assessment: concerned (was assessed by)
Destruction: destroyed (was destroyed by)
Identifier Assignment: registered (was registered by)
Move: moved (moved by)
Acquisition: transferred title from (surrendered title of)
Acquisition: transferred title to (acquired title of)
Acquisition: transferred title of (changed ownership by)
Transfer of Custody: custody received by (received custody)
Transfer of Custody: custody surrendered by (surrendered custody)
Transfer of Custody: transferred custody of (custody changed by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Measurement: measured (was measured by)
Conceptual Object: refers to (is referred to by)
   (has type : Type)
Group: had member (was member of)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E22 Man-Made Object

Belongs to: Physical Object Type
Subclass of: Physical Object
Physical Man-Made Stuff
Superclass of: Iconographic Object

Scope note: A discrete real item of material nature, which is an artifact of technological actions.

Examples: my car, chassis no. AMT-9566-XXX9384; the Portland Vase, the Coliseum, the Parthenon

Properties:
identifications
- is identified by (identifies): Object Identifier
- is identified by (identifies): Appellation
- preferred identifier is (is preferred identifier of): Object Identifier
- has title (is title of): Title
  - (has type : Type)
classifications
- has type (is type of): Type
legal status
- is subject to (applies to): Right
legal status, short cut
- has former or current keeper (is former or current keeper of) : Actor
- has current keeper (is current keeper of) : Actor
- has former or current owner (is former or current owner of): Actor
- has current owner (is current owner of): Actor
- right held by (has right on): Actor
  - (has type: Type)
  - (has note: String)
intellectual contents
- depicts concept (is depicted by): Type
  - (mode of depiction : Type)
- depicts event (is depicted by): Event
  - (mode of depiction : Type)
- depicts object (is depicted by): Physical Stuff
  - (mode of depiction : Type)
physical status, short cut
- has dimension (is dimension of): Dimension
- has condition (condition of): Condition State
locations, short cut
- has former or current location (is former or current location of) : Place
- has current permanent location (is current permanent location of): Place
- has current location (currently holds) : Place
structures
- bears feature (is found on): Physical Feature
- has number of parts: Number
- is composed of (forms part of): Physical Stuff
- shows visual item (is shown by): Visual Item
- has section definition (defines section): Section Definition
- consists of (is incorporated in): Material
structures, short cut
- has section (is located on or within): Place
other descriptions
- was intended for (was intention of): Type
- had as general use (was use of): Type
- has note: String
  - (has type : Type)
The entity is not referenced.

The entity inherits references:

Activity: used object (was used for)
  (mode of use : String)
Activity: was intended use of (was made for)
  (mode of use : String)
Physical Man-Made Stuff: depicts object (is depicted by)
  (mode of depiction : Type)
Physical Stuff: is composed of (forms part of)
Event: occurred in the presence of (was present at)
Period: took place on or within (witnessed)
Condition Assessment: concerned (was assessed by)
Destruction: destroyed (was destroyed by)
Identifier Assignment: registered (was registered by)
Move: moved (moved by)
Acquisition: transferred title of (changed ownership by)
Transfer of Custody: transferred custody of (custody changed by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Production: has produced (was produced by)
Modification: has modified (was modified by)
Measurement: measured (was measured by)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E23 Iconographic Object

Belongs to: Physical Object Type
Subclass of: Man-Made Object Information Object

Scope note: This entity comprises objects which are designed primarily or in addition to another functionality to represent or depict something in an optical manner, be it concrete or abstract.

This entity has a certain pragmatic value in the fine arts since it conveniently groups together objects such as paintings, drawings, watercolors, and other similar objects. From a philosophical point of view, representation is an 'intentional' act. Natural objects may resemble other objects by chance but they can represent only as a result of intervention by some fairly sophisticated semiotic arrangements.

Examples: paintings, sculpture, a vase in form of a head, a decoration on a medieval gun

Properties:

identifications
  - is identified by (identifies): Object Identifier
  - is identified by (identifies): Appellation
  - preferred identifier is (is preferred identifier of): Object Identifier
  - has title (is title of): Title
    (has type: Type)

classifications
  - has type (is type of): Type

legal status
  - is subject to (applies to): Right

legal status, short cut
  - right held by (has right on): Actor
    (has type: Type)
    (has note: String)
  - has former or current keeper (is former or current keeper of): Actor
  - has current keeper (is current keeper of): Actor
  - has former or current owner (is former or current owner of): Actor
  - has current owner (is current owner of): Actor

intellectual contents
  - refers to concept (is referred to by): Type
    (has type: Type)
  - refers to (is referred to by): CRM Entity
    (has type: Type)
  - depicts concept (is depicted by): Type
    (mode of depiction: Type)
  - depicts event (is depicted by): Event
    (mode of depiction: Type)
  - depicts object (is depicted by): Physical Stuff
    (mode of depiction: Type)

physical status, short cut
  - has dimension (is dimension of): Dimension
  - has condition (condition of): Condition State

locations, short cut
  - has former or current location (is former or current location of): Place
  - has current permanent location (is current permanent location of): Place
  - has current location (currently holds): Place

structures
  - bears feature (is found on): Physical Feature
  - has number of parts: Number
  - shows visual item (is shown by): Visual Item
  - is composed of (forms part of): Information Object
has section definition (defines section): Section Definition
consists of (is incorporated in): Material
is composed of (forms part of): Physical Stuff
structures, short cut
has section (is located on or within): Place
other descriptions
was intended for (was intention of): Type
had as general use (was use of): Type
has note: String
(has type : Type)

The entity is not referenced.

The entity inherits references:
Activity: used object (was used for)
   (mode of use : String)
Activity: was intended use of (was made for)
   (mode of use : String)
Physical Man-Made Stuff: depicts object (is depicted by)
   (mode of depiction : Type)
Physical Stuff: is composed of (forms part of)
Event: occurred in the presence of (was present at)
Conceptual Creation: has created (was created by)
Period: took place on or within (witnessed)
Condition Assessment: concerned (was assessed by)
Destruction: destroyed (was destroyed by)
Identifier Assignment: registered (was registered by)
Move: moved (moved by)
Acquisition: transferred title of (changed ownership by)
Transfer of Custody: transferred custody of (custody changed by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Production: has produced (was produced by)
Modification: has modified (was modified by)
Measurement: measured (was measured by)
Activity: motivated the creation of (was created for)
Information Object: is composed of (forms part of)
Activity: took into account (was taken into account by)
Conceptual Object: refers to (is referred to by)
   (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
Activity: was motivation for (motivated)
E24  Physical Man-Made Stuff

Belongs to:  Physical Object Type
Subclass of:  Physical Stuff
Man-Made Stuff
Superclass of:  Man-Made Object
Man-Made Feature

Scope Note:  Man-Made Stuff is a general class that groups man-made objects and features. The distinction between 'objects' and 'features' is useful since it avoids referring to things like holes and texture as objects. Features and objects share many common characteristics however, hence the need for a general class of man-made things.

Properties:
identifications
  is identified by (identifies): Appellation
  has title (is title of): Title
    (has type : Type)
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
short cut, legal status
  right held by (has right on): Actor
    (has type : Type)
    (has note : String)
intellectual contents
  depicts object (is depicted by): Physical Stuff
    (mode of depiction : Type)
  depicts event (is depicted by): Event
    (mode of depiction : Type)
  depicts concept (is depicted by): Type
    (mode of depiction : Type)
physical status, short cut
  has dimension (is dimension of): Dimension
  has condition (condition of): Condition State
structures
  shows visual item (is shown by): Visual Item
    consists of (is incorporated in): Material
    is composed of (forms part of): Physical Stuff
other descriptions
  was intended for (was intention of): Type
  had as general use (was use of): Type
    has note: String
    (has type : Type)

The entity is referenced by:
Modification: has modified (was modified by)
Production: has produced (was produced by)

The entity inherits references:
Activity: was intended use of (was made for)
  (mode of use : String)
Physical Man-Made Stuff: depicts object (is depicted by)
  (mode of depiction : Type)
Physical Stuff: is composed of (forms part of)
Event: occurred in the presence of (was present at)
Type Assignment: classified (was classified by)
Condition Assessment: concerned (was assessed by)
Measurement: measured (was measured by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
(has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E25 Man-Made Feature

Belongs to: Physical Object Type
Subclass of: Physical Man-Made Stuff
Physical Feature

Scope Note: Man-Made Features are those physical features which result from human intervention. (Cf. E27 Physical Feature.)

Properties:
identifications
  is identified by (identifies): Appellation
  has title (is title of): Title
  (has type : Type)
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
short cut, legal status
  right held by (has right on): Actor
  (has type : Type)
  (has note : String)
intellectual contents
  depicts concept (is depicted by): Type
  (mode of depiction : Type)
  depicts event (is depicted by): Event
  (mode of depiction : Type)
  depicts object (is depicted by): Physical Stuff
  (mode of depiction : Type)
physical status, short cut
  has dimension (is dimension of): Dimension
  has condition (condition of): Condition State
structures
  shows visual item (is shown by): Visual Item
  consists of (is incorporated in): Material
  is composed of (forms part of): Physical Stuff
other descriptions
  was intended for (was intention of): Type
  had as general use (was use of): Type
  has note: String
  (has type : Type)

The entity is not referenced.

The entity inherits references:
Activity: was intended use of (was made for)
  (mode of use : String)
Physical Man-Made Stuff: depicts object (is depicted by)
  (mode of depiction : Type)
Physical Stuff: is composed of (forms part of)
Condition Assessment: concerned (was assessed by)
Measurement: measured (was measured by)
Physical Object: bears feature (is found on)
Event: occurred in the presence of (was present at)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Production: has produced (was produced by)
Modification: has modified (was modified by)
Conceptual Object: refers to (is referred to by)
(has type : Type)

Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E26 Physical Feature

Belongs to: Physical Object Type
Subclass of: Physical Stuff
Superclass of: Man-Made Feature
Site

Scope Note: This class was introduced in order to avoid the counter-intuitive sense of referring to holes and similar features of objects as physical objects. Features are logically or physically attached to a particular physical object, and they share many of the attributes of physical objects—they can be measured and dated, and we can sometimes say who was responsible for them. However, you can't pick up a hole and put it in your pocket—Yellow Submarine not withstanding. Physical feature groups together all features of physical objects. (Cf. E25 Man-Made Features for the results of human intervention.)

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
short cut, legal status
  right held by (has right on): Actor
    (has type : Type)
    (has note : String)
physical status, short cut
  has dimension (is dimension of): Dimension
  has condition (condition of): Condition State
structures
  consists of (is incorporated in): Material
  is composed of (forms part of): Physical Stuff
other descriptions
  had as general use (was use of): Type
  has note: String
    (has type : Type)

The entity is referenced by:
Physical Object: bears feature (is found on)

The entity inherits references:
Physical Man-Made Stuff: depicts object (is depicted by)
  (mode of depiction : Type)
Physical Stuff: is composed of (forms part of)
Condition Assessment: concerned (was assessed by)
Measurement: measured (was measured by)
Event: occurred in the presence of (was present at)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E27  Site

Belongs to: Physical Object Type
Subclass of: Physical Feature

Scope Note: A site is a recognizable place that can be represented by an iconographic object, such as a photograph, painting, or map. A site is composed of relatively immobile material items and features in a particular configuration at a particular location.

Properties:
identifications
   is identified by (identifies): Appellation
classifications
   has type (is type of): Type
legal status
   is subject to (applies to): Right
short cut, legal status
   right held by (has right on): Actor
      (has type : Type)
      (has note : String)
physical status, short cut
   has dimension (is dimension of): Dimension
   has condition (condition of): Condition State
structures
   consists of (is incorporated in): Material
   is composed of (forms part of): Physical Stuff
other descriptions
   had as general use (was use of): Type
      has note: String
      (has type : Type)

The entity is not referenced.

The entity inherits references:
Physical Man-Made Stuff: depicts object (is depicted by)
   (mode of depiction : Type)
Physical Stuff: is composed of (forms part of)
Condition Assessment: concerned (was assessed by)
Measurement: measured (was measured by)
Physical Object: bears feature (is found on)
Event: occurred in the presence of (was present at)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
   (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
5.3.2 Conceptual Objects

All object types of double nature, physical and conceptual, are already listed under the physical object types.

E28 Conceptual Object
Belongs to: Concept Type
Subclass of: Man-Made Stuff
Superclass of: Right
Information Object

Scope note: This entity is the attempt to group the non-material products of our minds and specifically to allow for reasoning about their identity, circumstances of creation, and historical implications. Characteristically, these things are created, invented, or thought and somehow documented or communicated between persons. Conceptual objects need not have a particular carrier, but may be found on several different carriers, such as paper, electronic signals, marks, audio media, paintings, photos, human memory, etc. They cannot be destroyed as long as they exist on at least one carrier or in memory. A greater distinction could be made between products having a clear identity, such as a specific text or photograph, and the ideas and concepts shared and traded by groups of people.

Examples: texts, maps, photos, music, sounds, fairy tales, signs, patterns, symbols, plans, rights, and rules.

Properties:
identifications
is identified by (identifies): Appellation
has title (is title of): Title
(has type : Type)
classifications
has type (is type of): Type
intellectual contents
refers to concept (is referred to by): Type
refers to (is referred to by): CRM Entity
(has type : Type)
property note: this is the superproperty of “documents”.
other descriptions
was intended for (was intention of): Type
had as general use (was use of): Type
has note: String
(has type : Type)

The entity is referenced by:
Activity: took into account (was taken into account by)
Activity: was motivation for (motivated)
Activity: motivated the creation of (was created for)
Conceptual Creation: has created (was created by)

The entity inherits references:
Activity: was intended use of (was made for)
(mode of use : String)
Event: occurred in the presence of (was present at)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
(has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E29  Design or Procedure

Belongs to: Concept Type
Subclass of: Information Object

Scope note: An established plan for execution of a series or group of technological actions, which result in a physical change of state in certain pieces of material and/or any physical object.

Examples: all elements of the AAT "processes and techniques" facets, a plan for a building, conservation procedures, complex editing techniques, flint napping, etc.

Properties:
identifications
  is identified by (identifies): Appellation
  has title (is title of): Title
    (has type : Type)
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
legal status, short cut
  right held by (has right on): Actor
    (has type: Type)
    (has note: String)
intellectual contents
  refers to concept (is referred to by): Type
  refers to (is referred to by) : CRM Entity
    (has type: Type)
structures
  is composed of (forms part of): Information Object
other descriptions
  usually employs (is usually employed by): Material
  is associated with: Design or Procedure
    had as general use (was use of): Type
    was intended for (was intention of) : Type
    has note: String
      (has type: Type)

The entity is referenced by:
Modification: used specific technique (was used by) and itself

The entity inherits references:
Activity: was intended use of (was made for)
  (mode of use : String)
Event: occurred in the presence of (was present at)
Conceptual Creation: has created (was created by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Activity: motivated the creation of (was created for)
Information Object: is composed of (forms part of)
Activity: took into account (was taken into account by)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
Activity: was motivation for (motivated)
E30 Right
Belongs to: Concept Type
Subclass of: Conceptual Object
Scope Note: Rights are used in the sense of legal privileges such as the right of property, reproduction rights, etc.

Properties:
identifications
  is identified by (identifies): Appellation
  has title (is title of): Title
    (has type : Type)
classifications
  has type (is type of): Type
intellectual contents
  refers to concept (is referred to by): Type
  refers to (is referred to by): CRM Entity
    (has type : Type)
other descriptions
  was intended for (was intention of): Type
  had as general use (was use of): Type
  has note: String
    (has type : Type)

The entity is referenced by:
Legal Object: is subject to (applies to)
Actor: possesses (is possessed by)

The entity inherits references:
Activity: was intended use of (was made for)
  (mode of use : String)
Event: occurred in the presence of (was present at)
Conceptual Creation: has created (was created by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Activity: motivated the creation of (was created for)
Activity: took into account (was taken into account by)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
Activity: was motivation for (motivated)
E31 Document
Belongs to: Concept Type
Subclass of: Information Object
Superclass of: Authority Document

Scope note: This entity comprises items which make propositions about reality, whether intentionally or by chance. The means may be text, graphics, images, sound, or video.

Examples: books on history, maps, photos

Properties:
identifications
  is identified by (identifies): Appellation
  has title (is title of): Title
    (has type : Type)
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
short cut, legal status
  right held by (has right on): Actor
    (has type : Type)
    (has note : String)
intellectual contents
  documents (is documented in): CRM Entity
    property note: this is the subproperty of "refers to".
    refers to concept (is referred to by): Type
    refers to (is referred to by): CRM Entity
      (has type : Type)
structures
  is composed of (forms part of): Information Object
other descriptions
  was intended for (was intention of): Type
  had as general use (was use of): Type
    has note: String
    (has type : Type)

The entity is not referenced.

The entity inherits references:
Activity: was intended use of (was made for)
  (mode of use : String)
Event: occurred in the presence of (was present at)
Conceptual Creation: has created (was created by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Activity: motivated the creation of (was created for)
Information Object: is composed of (forms part of)
Activity: took into account (was taken into account by)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
Activity: was motivation for (motivated)
E32  Authority Document

Belongs to:  Concept Type
Subclass of:  Document

Scope note:  This entity describes encyclopedia, thesauri, and authority lists—all documents which define terminology or conceptual systems for consistent use.

Examples:  Webster's, Getty Art and Architecture Thesaurus, MDA Archaeological Objects Thesaurus, this document, etc.

Properties:
identifications
  is identified by (identifies): Appellation
  has title (is title of): Title
  (has type : Type)
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
short cut, legal status
  right held by (has right on): Actor
  (has type : Type)
  (has note : String)
intellectual contents
  refers to concept (is referred to by): Type
  refers to (is referred to by): CRM Entity
  (has type : Type)
  documents (is documented in): CRM Entity
structures
  contains (is part of): Type
  is composed of (forms part of): Information Object
other descriptions
  was intended for (was intention of): Type
  had as general use (was use of): Type
  has note: String
  (has type : Type)

The entity is not referenced.

The entity inherits references:
Activity: was intended use of (was made for)
  (mode of use : String)
Event: occurred in the presence of (was present at)
Conceptual Creation: has created (was created by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Activity: motivated the creation of (was created for)
Information Object: is composed of (forms part of)
Activity: took into account (was taken into account by)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
Activity: was motivation for (motivated)
E33 Linguistic Object

Belongs to: Concept Type
Subclass of: Information Object
Superclass of: Inscription

Scope note: This entity comprises texts of all kind, be they written or recorded speech, in any physical language.

Properties:
identifications
  is identified by (identifies): Appellation
  has title (is title of): Title
    (has type : Type)
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
short cut, legal status
  right held by (has right on): Actor
    (has type : Type)
    (has note : String)
intellectual contents
  has translation (is translation of): Linguistic Object
  refers to concept (is referred to by): Type
  refers to (is referred to by): CRM Entity
    (has type : Type)
structures
  is composed of (forms part of): Information Object
other descriptions
  has language (is language of): Language
  was intended for (was intention of): Type
  had as general use (was use of): Type
  has note: String
    (has type : Type)

The entity is only referenced by itself.

The entity inherits references:
Activity: was intended use of (was made for)
  (mode of use : String)
Event: occurred in the presence of (was present at)
Conceptual Creation: has created (was created by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Activity: motivated the creation of (was created for)
Information Object: is composed of (forms part of)
Activity: took into account (was taken into account by)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
Activity: was motivation for (motivated)
E34  Inscription
Belongs to: Concept Type
Subclass of: Linguistic Object
Mark

Scope note: This entity comprises texts attached to a physical object. The attributes of the entity could be extended to include alphabet used, rather than documenting these features in the note. Note: The entity does not describe idiosyncratic characteristics of individual physical embodiments of an inscription but the underlying prototype, e.g. Dürer’s signature.

Properties:
identifications
   is identified by (identifies): Appellation
   has title (is title of): Title
      (has type : Type)
classifications
   has type (is type of): Type
legal status
   is subject to (applies to): Right
short cut, legal status
   right held by (has right on): Actor
      (has type : Type)
      (has note : String)
intellectual contents
   refers to concept (is referred to by): Type
   refers to (is referred to by): CRM Entity
      (has type : Type)
   has translation (is translation of): Linguistic Object
structures
   is composed of (forms part of): Information Object
other descriptions
   has language (is language of): Language
   was intended for (was intention of): Type
   had as general use (was use of): Type
   has note: String
      (has type : Type)

The entity is not referenced.

The entity inherits references:
Activity: was intended use of (was made for)
   (mode of use : String)
Event: occurred in the presence of (was present at)
Conceptual Creation: has created (was created by)
Linguistic Object: has translation (is translation of)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Physical Man-Made Stuff: shows visual item (is shown by)
Activity: motivated the creation of (was created for)
Information Object: is composed of (forms part of)
Activity: took into account (was taken into account by)
Conceptual Object: refers to (is referred to by)
   (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
Activity: was motivation for (motivated)
E35 Title
Belongs to: Concept Type
Appellation Type
Subclass of: Linguistic Object
Appellation

Scope note: This entity comprises the short pieces of texts that are used, by the creator or tradition, to characterize or identify a work, often alluding to its subject. The work may be linguistic, musical, iconographic, or other.

Examples: Giaconda, La Joconde, Mona Lisa, Die Dreigroschenoper, La Pie, La Marseillaise

Properties:
identifications
  is identified by (identifies): Appellation
  has title (is title of): Title
    (has type : Type)
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
short cut, legal status
  right held by (has right on): Actor
    (has type : Type)
    (has note : String)
intellectual contents
  refers to concept (is referred to by): Type
  refers to (is referred to by): CRM Entity
    (has type : Type)
  has translation (is translation of): Linguistic Object
structures
  is composed of (forms part of): Information Object
other descriptions
  has language (is language of): Language
  was intended for (was intention of): Type
  had as general use (was use of): Type
  has note: String
    (has type : Type)

The entity is referenced by:
Man-Made Stuff: has title (is title of)
  (has type : Type)

The entity inherits references:
Activity: was intended use of (was made for)
  (mode of use : String)
Event: occurred in the presence of (was present at)
Conceptual Creation: has created (was created by)
Linguistic Object: has translation (is translation of)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Activity: motivated the creation of (was created for)
Information Object: is composed of (forms part of)
CRM Entity: is identified by (identifies)
Activity: took into account (was taken into account by)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
Activity: was motivation for (motivated)
E36 Visual Item

Belongs to: Concept Type
Subclass of: Information Object
Superclass of: Mark
Image

Scope Note: Visual Item refers to the intellectual or conceptual aspect of recognizable marks and images. When we identify a trademark, say the ICOM logo, we are generally prepared to say that the same logo is used on any number of publications. The size, orientation, and color may change, but something uniquely identifiable remains. The same can be said of images which are reproduced many times. What these examples highlight is that visual items are independent of their physical support. The Visual Items class provides a means of identifying and linking together objects which carry the same visual symbols, marks, images, etc.

Properties:
identifications

  is identified by (identifies): Appellation
  has title (is title of): Title
  (has type : Type)

classifications

  has type (is type of): Type

legal status

  is subject to (applies to): Right

short cut, legal status

  right held by (has right on): Actor
  (has type : Type)
  (has note : String)

intellectual contents

  refers to concept (is referred to by): Type
  refers to (is referred to by): CRM Entity
  (has type : Type)

structures

  is composed of (forms part of): Information Object

other descriptions

  was intended for (was intention of): Type
  had as general use (was use of): Type
  has note: String
  (has type : Type)

The entity is referenced by:

Physical Man-Made Stuff: shows visual item (is shown by)

The entity inherits references:

Activity: was intended use of (was made for)
  (mode of use : String)

Event: occurred in the presence of (was present at)

Conceptual Creation: has created (was created by)

Type Assignment: classified (was classified by)

Document: documents (is documented in)

Activity: motivated the creation of (was created for)

Information Object: is composed of (forms part of)

Activity: took into account (was taken into account by)

Conceptual Object: refers to (is referred to by)
  (has type : Type)

Beginning of Existence: brought into existence (was brought into existence by)

End of Existence: took out of existence (was taken out of existence by)

Activity: was motivation for (motivated)
### E37 Mark

**Belongs to:** Concept Type  
**Subclass of:** Visual Item  
**Superclass of:** Inscription  

**Scope note:** Symbols, signs, signatures, or short texts applied to physical objects by arbitrary techniques in order to indicate the creator, owner, dedications, purpose, etc. This entity specifically does not include marks such as scratches, which have no semantic significance; those cases should be documented as physical features.

**Examples:** Minoan double axe mark, ©, ©, STOP!

**Properties:**

**identifications**
- is identified by (identifies): Appellation  
  has title (is title of): Title  
    (has type: Type)

**classifications**
- has type (is type of): Type

**legal status**
- is subject to (applies to): Right

**short cut, legal status**
- right held by (has right on): Actor  
  (has type: Type)  
  (has note: String)

**intellectual contents**
- refers to concept (is referred to by): Type  
  refers to (is referred to by): CRM Entity  
    (has type: Type)

**structures**
- is composed of (forms part of): Information Object

**other descriptions**
- was intended for (was intention of): Type  
  had as general use (was use of): Type  
    has note: String  
    (has type: Type)

**The entity is not referenced.**

**The entity inherits references:**

**Activity:** was intended use of (was made for)  
  (mode of use: String)  
**Event:** occurred in the presence of (was present at)  
**Conceptual Creation:** has created (was created by)  
**Type Assignment:** classified (was classified by)  
**Document:** documents (is documented in)  
**Physical Man-Made Stuff:** shows visual item (is shown by)  
**Activity:** motivated the creation of (was created for)  
**Information Object:** is composed of (forms part of)  
**Activity:** took into account (was taken into account by)  
**Conceptual Object:** refers to (is referred to by)  
  (has type: Type)  
**Beginning of Existence:** brought into existence (was brought into existence by)  
**End of Existence:** took out of existence (was taken out of existence by)  
**Activity:** was motivation for (motivated)
E38 Image
Belongs to: Concept Type
Subclass of: Visual Item

Scope note: This entity refers to distributions of form and color which may be found on surfaces such as photos, paintings, prints, sculptures, etc. or directly on electronic media. The degree to which variations in the distribution of form and color are tolerated depends on a given purpose.

The ‘depiction’ links between objects and depicted subjects may be regarded as short cuts of an intermediate image node capturing the optical features of the depiction. (Cf. E25 Man-Made Features.)

Examples: the front side of all 20 Frs notes

Properties:
identifications
  is identified by (identifies): Appellation
  has title (is title of): Title
    (has type : Type)
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
short cut, legal status
  right held by (has right on): Actor
    (has type : Type)
    (has note : String)
intellectual contents
  refers to concept (is referred to by): Type
  refers to (is referred to by): CRM Entity
    (has type : Type)
structures
  is composed of (forms part of): Information Object
other descriptions
  was intended for (was intention of): Type
  had as general use (was use of): Type
  has note: String
    (has type : Type)

The entity is not referenced.

The entity inherits references:
Activity: was intended use of (was made for)
  (mode of use : String)
Event: occurred in the presence of (was present at)
Conceptual Creation: has created (was created by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Physical Man-Made Stuff: shows visual item (is shown by)
Activity: motivated the creation of (was created for)
Information Object: is composed of (forms part of)
Activity: took into account (was taken into account by)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
Activity: was motivation for (motivated)
5.4 Actors Hierarchy

All entities in this hierarchy are instances of the metaclass “Actor Type”.

Only one subclass has been defined, the physical person. As this class also has a physical nature, it is listed under physical objects (in a passive sense, as patient, mummy, etc.). Social organizations should be treated as subclasses in the Actor hierarchy.

E39 Actor
Belongs to: Actor Type
Subclass of: Existence
Superclass of: Group
Person

Scope note: People, either individuals, a group of persons, or organizations, under the aspect of their role in activities. An informal group, such as a school of artists, may acquire an identity and perform actions without ever becoming an officially established legal entity. Such cases should be documented as instances of Actors, using an appropriate sub type.

Examples: the ISO central committee; the Benaki Museum in Athens, Greece; the Bauhaus in Weimar, Germany; Monet, Me

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
other descriptions
  has current or former residence (is current or former residence of): Place
  possesses (is possessed by): Right
  has contact points (provides access to): Contact Point
  has note: String
    (has type : Type)
The entity is referenced by:
Activity: carried out by (performed)
  (in the role of : Type)
Acquisition: transferred title to (acquired title of)
Acquisition: transferred title from (surrendered title of)
Transfer of Custody: custody surrendered by (surrendered custody)
Transfer of Custody: custody received by (received custody)
Legal Object: right held by (has right on)
  (has type : Type)
  (has note : String)
Physical Object: has former or current keeper (is former or current keeper of)
Physical Object: has current keeper (is current keeper of)
Physical Object: has former or current owner (is former or current owner of)
Physical Object: has current owner (is current owner of)
Event: had participants (participated in)
Group: had member (was member of)

The entity inherits references:
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E40  Legal Body
Belongs to: Actor Type
Subclass of: Group

Scope Note: A legal body is any institution or group of people which can act collectively as an agent, i.e. it can perform actions, own property, create or destroy, and be held responsible for its actions. The term ‘personne morale’ is often used in French.

Examples: MDA (Europe) Ltd., Green Peace

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
structures
  consists of (belongs to): Legal Body
  had member (was member of): Actor
other descriptions
  has current or former residence (is current or former residence of): Place
  possesses (is possessed by): Right
  has contact points (provides access to): Contact Point
  has note: String
  (has type : Type)

The entity is referenced by:
Person: is member of (has members) and itself.

The entity inherits references:
Activity: carried out by (performed)
  (in the role of : Type)
Acquisition: transferred title to (acquired title of)
Acquisition: transferred title from (surrendered title of)
Transfer of Custody: custody surrendered by (surrendered custody)
Transfer of Custody: custody received by (received custody)
Type Assignment: classified (was classified by)
Legal Object: right held by (has right on)
  (has type : Type)
  (has note : String)
Physical Object: has former or current keeper (is former or current keeper of)
Physical Object: has current keeper (is current keeper of)
Physical Object: has former or current owner (is former or current owner of)
Physical Object: has current owner (is current owner of)
Event: had participants (participated in)
Document: documents (is documented in)
Formation: has formed (was formed by)
Dissolution: dissolved (was dissolved by)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Group: had member (was member of)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E21 Person (repetition from E20 Biological Object hierarchy)

Belongs to:  Actor Type
Physical Object Type
Subclass of:  Biological Object
Actor

Scope note:  A real person, who lives or is assumed to have lived. Legendary figures, such as Ulysses and King Arthur, who may have existed, fall into this class if the documentation refers to them as historical figures. In cases where doubt exists as to whether several persons are in fact identical, multiple instances can be created and linked to indicate their relationship.

Examples :  John Smith, Tut-Ankh-Amun

Properties:

identifications

- is identified by (identifies): Object Identifier
- preferred identifier is (is preferred identifier of): Object Identifier
- is identified by (identifies): Appellation

classifications

- has type (is type of): Type

legal status

- is subject to (applies to): Right

legal status, short cut

- has former or current keeper (is former or current keeper of) : Actor
- has current keeper (is current keeper of) : Actor
- has former or current owner (is former or current owner of): Actor
- has current owner is (current owner of): Actor
- right held by (has right on): Actor
  - (has type: Type)
  - (has note: String)

physical status, short cut

- has dimension (is dimension of): Dimension
- has condition (condition of): Condition State

locations, short cut

- has former or current location (is former or current location of) : Place
- has current permanent location (is current permanent location of): Place
- has current location (currently holds) : Place

structures

- bears feature (is found on): Physical Feature
- has number of parts: Number
- has section definition (defines section): Section Definition
- consists of (is incorporated in): Material
- is composed of (forms part of): Physical Stuff

structures, short cut

- has section (is located on or within): Place

other descriptions

- is member of (has members): Legal Body
- has gender (is gender of): Gender
- has current or former residence (is current or former residence of): Place
- had as general use (was use of): Type
- possesses (is possessed by): Right
- has contact points (provides access to): Contact Point
- has note: String
  - (has type : Type)

The entity is referenced by:

Birth: by mother (gave birth)
Birth: from father (was father for)
Birth: brought into life (was born)
Death: was death of (died in)

The entity inherits references:
Activity: carried out by (performed)
(in the role of : Type)
Legal Object: right held by (has right on)
(has type : Type)
(has note : String)
Activity: used object (was used for)
(mode of use : String)
Physical Man-Made Stuff: depicts object (is depicted by)
(mode of depiction : Type)
Physical Object: has current owner (is current owner of)
Physical Object: has former or current owner (is former or current owner of)
Physical Object: has current keeper (is current keeper of)
Physical Object: has former or current keeper (is former or current keeper of)
Physical Stuff: is composed of (forms part of)
Event: had participants (participated in)
Event: occurred in the presence of (was present at)
Period: took place on or within (witnessed)
Condition Assessment: concerned (was assessed by)
Destruction: destroyed (was destroyed by)
Identifier Assignment: registered (was registered by)
Move: moved (moved by)
Acquisition: transferred title from (surrendered title of)
Acquisition: transferred title to (acquired title of)
Acquisition: transferred title of (changed ownership by)
Transfer of Custody: custody received by (received custody)
Transfer of Custody: custody surrendered by (surrendered custody)
Transfer of Custody: transferred custody of (custody changed by)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Measurement: measured (was measured by)
Conceptual Object: refers to (is referred to by)
(has type : Type)
Group: had member (was member of)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
5.5 Appellations Hierarchy

All entities in this hierarchy are instances of the metaclass “Appellation Type”. This hierarchy is thought to capture all kinds of social or technical identifiers, names, numbers, codes, etc. To what degree there is an overlap with conceptual objects should be discussed.

E41 Appellation

Belongs to: Appellation Type
Subclass of: Existence
Superclass of: Object Identifier
Place Appellation
Time Appellation
Title
Conceptual Object Appellation

Scope note: This entity comprises all names in the proper sense—codes or words, meaningless or meaningful, in the script of some group or encoding of an electronic system, used solely to identify a specific instance of some category within a certain context. These words do not identify the object by their meaning but by convention, tradition, or agreement.

Properties:

identifications
  is identified by (identifies): Appellation

classifications
  has type (is type of): Type

other descriptions
  has note: String
  (has type : Type)

The entity is referenced by:

CRM Entity: is identified by (identifies)

The entity inherits references:

Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E42 Object Identifier

Belongs to: Appellation Type
Subclass of: Appellation

Scope note: Unique codes assigned to objects in order to identify them uniquely within the context of one or more organizations. Typically alphanumeric sequences.

Examples: MM.GE.195, 13.45.1976, etc.

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
other descriptions
  has note: String
  (has type : Type)

The entity is referenced by:
Identifier Assignment: assigns (is assigned by)
Identifier Assignment: deassigns (is deassigned by)
Physical Object: is identified by (identifies)
Physical Object: preferred identifier is (is preferred identifier of)

The entity inherits references:
CRM Entity: is identified by (identifies)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E44 Place Appellation

Belongs to: Appellation Type
Subclass of: Appellation
Superclass of Address
Section Definition
Spatial Coordinates
Place Name

Scope Note: A place appellation is any sort of identifier used to refer to a place. Place appellations may vary over time and the same appellation may be used to refer to several places, either because of cultural shifts or because things move around. These unstable aspects of place appellations are dealt with in the more general "Appellation" class. Place appellations can be extremely varied in form—postal addresses, spatial coordinates, and parts of buildings can all be considered as place appellations.

Examples: Vienna, Wien, Aquae Sulis Minerva, Bath, Cambridge, “The Other Place”, “The City”

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
other descriptions
  has note: String
  (has type : Type)

The entity is referenced by:
Place: is identified by (identifies)

The entity inherits references:
CRM Entity: is identified by (identifies)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E45  Address
Belongs to:  Appellation Type
Subclass of:  Place Appellation
Contact Point

Scope Note:  An address is generally a postal address used for mailing. An address can be considered both as the name of a place and as a contact point for an actor. This dual aspect is reflected in the multiple inheritance.

Example :  1-29-3 Otsuka, Bunkyo-ku, Tokyo, 121, Japan

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
other descriptions
  has note: String
    (has type : Type)

The entity is not referenced.

The entity inherits references:
CRM Entity: is identified by (identifies)
Type Assignment: classified (was classified by)
Actor: has contact points (provides access to)
Place: is identified by (identifies)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E46  Section Definition

Belongs to:  Appellation Type
Subclass of:  Place Appellation
Superclass of  

Scope Note:  Section definition groups together names used to refer to parts of objects. The ‘prow’ of a boat, the ‘frame’ of the picture, the ‘basement’ of the building are all section definitions. The entity highlights the fact that parts of objects can be treated as locations. (Cf. E53 Place.) In answer to the question ‘where is the signature?’, one might reply ‘on the lower left corner’.

Example:  the entrance lobby to MDA House, Matthew’s bedroom, the poop deck of H.M.S. Victory, the Venus de Milo’s left buttock, “left inner side of the box”

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
other descriptions
  has note: String
    (has type : Type)

The entity is referenced by:
Physical Object: has section definition (defines section)

The entity inherits references:
CRM Entity: is identified by (identifies)
Type Assignment: classified (was classified by)
Place: is identified by (identifies)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E47 Spatial Coordinates

Belongs to: Appellation Type
Subclass of: Place Appellation

Scope Note: Coordinates are a specific form of place appellation, that is, a means of referring to a particular place. (Cf. E53 Place.) Coordinates are not restricted to longitude, latitude, and altitude. Any regular system of reference that maps onto a physical object can be considered as coordinates.

Examples: 6°5′29″N 45°12′13″W
Black queen’s bishop 4

Properties:
identifications

is identified by (identifies): Appellation

classifications

has type (is type of): Type

other descriptions

has note: String
(has type : Type)

The entity is not referenced.

The entity inherits references:

CRM Entity: is identified by (identifies)
Type Assignment: classified (was classified by)
Place: is identified by (identifies)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
(has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
**E48 Place Name**

**Belongs to:** Appellation Type  
**Subclass of:** Place Appellation

**Scope Note:** A place name is a particular and common form of place appellation. ‘Greece’, ‘Athens’, ‘Geneva’, are all place names. Place names may shift their meaning over time. (Cf. E44 Place appellations.) ISO codes should be used for names of countries and former names (ISO 3166:1998, *Codes for the representation of names of countries and their subdivisions*).

**Properties:**
- **identifications**
  - *is identified by (identifies): Appellation*
- **classifications**
  - *has type (is type of): Type*
- **other descriptions**
  - *has note: String*
  - *(has type : Type)*

**The entity is not referenced.**

**The entity inherits references:**
- **CRM Entity:** *is identified by (identifies)*
- **Type Assignment:** *classified (was classified by)*
- **Place:** *is identified by (identifies)*
- **Document:** *documents (is documented in)*
- **Conceptual Object:** *refers to (is referred to by)*
  - *(has type : Type)*
- **Beginning of Existence:** *brought into existence (was brought into existence by)*
- **End of Existence:** *took out of existence (was taken out of existence by)*
E49 Time Appellation

Belongs to: Appellation Type
Subclass of: Appellation
Superclass of: Date

Scope Note: Time appellation groups all forms of names or codes, such as historical periods, and dates, which are used to refer to specific time frames. Time appellations may vary in their degree of precision and they may be relative to other time frames, 'prehistoric' for example. These aspects of time appellations are dealt with in the more general "Appellations" class.

In contrast to cultural periods, proper names are seldom given to particular time-spans, hence it was decided to exclude a specific entity "Time-spans name". Time-spans are often referred to in association with cultural periods, and events e.g. 'the duration of Ming Dynasty'. (Cf. E52 Time-span.)

Examples: Meiji, 1st half of the XX century, Quaternary, 1215 Hegira, Last century

Properties:
identifications

  is identified by (identifies): Appellation

classifications

  has type (is type of): Type

other descriptions

  has note: String

(has type : Type)

The entity is referenced by:

Time-Span: is identified by (identifies)

The entity inherits references:

CRM Entity: is identified by (identifies)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)

(has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
**E50 Date**
Belongs to: Appellation Type
Subclass of: Time Appellation
Superclass of:

Scope Note: Dates are a specific form of time appellation. Dates may vary in their degree of precision.

Examples: 1900, 4-4-1959, 19640604

**Properties:**
identifications
  * is identified by (identifies): Appellation
classifications
  * has type (is type of): Type
other descriptions
  * has note: String
  (has type : Type)

The entity is not referenced.

The entity inherits references:

*CRM Entity: is identified by (identifies)*
*Type Assignment: classified (was classified by)*
*Time-Span: is identified by (identifies)*
*Document: documents (is documented in)*
*Conceptual Object: refers to (is referred to by)*
  *(has type : Type)*
*Beginning of Existence: brought into existence (was brought into existence by)*
*End of Existence: took out of existence (was taken out of existence by)*
E35 Title (Repetition from E33 Linguistic Object hierarchy)

Belongs to: Concept Type
Appellation Type

Subclass of: Linguistic Object
Appellation

Scope note: This entity comprises the short pieces of texts that are used, by the creator or tradition, to characterize or identify a work, often alluding to its subject. The work may be linguistic, musical, iconographic, or other.

Examples: Giaconda, La Joconde, Mona Lisa, Die Dreigroschenoper, La Pie, La Marseillaise

Properties:
identifications
  is identified by (identifies): Appellation
  has title (is title of): Title
    (has type : Type)
classifications
  has type (is type of): Type
legal status
  is subject to (applies to): Right
short cut, legal status
  right held by (has right on): Actor
    (has type : Type)
    (has note : String)
intellectual contents
  refers to concept (is referred to by): Type
  refers to (is referred to by): CRM Entity
    (has type : Type)
  has translation (is translation of): Linguistic Object
structures
  is composed of (forms part of): Information Object
other descriptions
  has language (is language of): Language
  was intended for (was intention of): Type
  had as general use (was use of): Type
  has note: String
    (has type : Type)

The entity is referenced by:
Man-Made Stuff: has title (is title of)
  (has type : Type)

The entity inherits references:
Activity: was intended use of (was made for)
  (mode of use : String)
Event: occurred in the presence of (was present at)
Conceptual Creation: has created (was created by)
Linguistic Object: has translation (is translation of)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Activity: motivated the creation of (was created for)
Information Object: is composed of (forms part of)
CRM Entity: is identified by (identifies)
Activity: took into account (was taken into account by)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
Activity: was motivation for (motivated)
5.5.1 Appellation associated entities

**E51 Contact Point**

Belongs to: Meta Entity  
Subclass of: CRM Entity  
Superclass of: Address

Scope Note: This entity comprises identifiers used to communicate with Actors. Note: postal addresses can be considered both as "Place Appellations" and "Contact Points".

Examples: E-mail addresses, telephone numbers, post office boxes, Fax numbers, etc.

**Properties:**

- identifications
  - is identified by (identifies): Appellation
- classifications
  - has type (is type of): Type
- other descriptions
  - has note: String
  - (has type : Type)

**The entity is referenced by:**

Actor: has contact points (provides access to)

**The entity inherits references:**

- Type Assignment: classified (was classified by)
- Document: documents (is documented in)
- Conceptual Object: refers to (is referred to by)
  - (has type : Type)
- Beginning of Existence: brought into existence (was brought into existence by)
- End of Existence: took out of existence (was taken out of existence by)
E45 Address (Repetition from E44 Place Appellation)

Belongs to: Appellation Type
Subclass of: Place Appellation, Contact Point

Scope Note: An address is generally a postal address used for mailing. An address can be considered both as the name of a place and as a contact point for an actor. This dual aspect is reflected in the multiple inheritance.

Example:  1-29-3 Otsuka, Bunkyo-ku, Tokyo, 121, Japan

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
other descriptions
  has note: String
    (has type : Type)

The entity is not referenced.

The entity inherits references:
  CRM Entity: is identified by (identifies)
  Type Assignment: classified (was classified by)
  Actor: has contact points (provides access to)
  Place: is identified by (identifies)
  Document: documents (is documented in)
  Conceptual Object: refers to (is referred to by)
    (has type : Type)
  Beginning of Existence: brought into existence (was brought into existence by)
  End of Existence: took out of existence (was taken out of existence by)
5.6 Measures Hierarchy

All entities in this hierarchy are instances of the metaclass “Measure Type”. Three submetaclasses are defined: the “Time Type” for the hierarchy of determinators of a date range in any possible system (e.g., rules of Egyptian kings, Julian dates, C14, etc.), the “Location Type” for the determinators of areas in space, relative to the surface of the earth or other relevant methods, and the “Dimension Types” for all relative measures (e.g., money, lengths, durations, degrees, etc.).

E52 Time-Span

Belongs to: Time Type
Subclass of: CRM Entity

Scope note: A determination of a range of dates or duration without any further connotations to be used to confine periods, events, and any other phenomena valid for a certain time. A time appellation is a verbal form which refers to a time-span. The time-span itself is a temporal extent in the sense of Galilean physics. Different time-appellations may express the same time-span.

Examples: from 12-17-1993 to 12-8-1996, 14h30 – 16h22 4th July 1945, 9.30 am 1.1.1999 to 2.OO pm 1.1.1999, Duration of the Ming Dynasty

Properties:

identifications
  is identified by (identifies): Time Appellation
  property note: this is the subproperty of “E1CRM Entity.(is identified by)”.
  is identified by (identifies): Appellation

classifications
  has type (is type of): Type

numerical values
  begins at qualify: String
  ends at qualify: String
  at least covering: Time Primitive
  property note: the inner bound, can be omitted
  at most within: Time Primitive
  property note: the outer bound (ensuring recall)
  had at least duration: Dimension
  had at most duration: Dimension

structures
  consists of (forms part of): Time-Span
  falls within (contains): Time-Span

other descriptions
  has note: String
  (has type : Type)

The entity is referenced by:

Temporal Entity: has time-span (is time-span of)
and by itself

The entity inherits references:

Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
E53 Place
Belongs to: Location Type
Subclass of: CRM Entity

Scope note: This entity describes extents in space, in particular on the surface of the earth, in the pure sense of physics—independent from temporal phenomena and matter. Places are usually determined by reference to the position of ‘immobile’ objects such as buildings, cities, mountains, and rivers. On a large time-scale however, these things are either not persistent or may actually move, with respect to each other. This motivates the search for a global or absolute system of reference.

However, relative references are more relevant in the context of cultural documentation and records of relative places tend to be more precise. In particular, we are often interested in position in relation to large objects, such as ships, which move. Any object can serve as a reference for place determination; therefore the model foresees the notion of a ‘section’ of a physical object as a place determination of equal validity.

Matching between multiple reference systems is in principle possible for a given moment in time, but depends on the precision and completeness of the information available. However, the resolution of places to ‘absolute’ coordinates is not, in general, necessary in cultural documentation systems, and absolute referencing may be dependent on the present state of global knowledge.

The place at which Nelson died is known with reference to a large mobile object—H.M.S. Victory. A resolution of this place in terms of absolute coordinates requires knowledge about the position of the vessel and the precise time of his death, either of which may be revised. Hence, documenting only an absolute reference effectively removes the possibility of recalculating. It is more relevant to preserve the reasoning behind an assumption than the result.

Hence a place can be determined by combining, one or more times, a frame of reference and a location with respect to this frame. These combinations are modelled by “Place Appellation”. (Instances of place are themselves nameless.)

Examples: The place referred to by the “Fish collected at three miles north of the confluence of the Arve and the Rhone, or N W. (GPS)”, Here -> <-

Properties:
  identifications
    is identified by (identifies): Place Appellation
    property note: this is the subproperty of “E1CRM Entity.(is identified by)”. is identified by (identifies): Appellation
  classifications
    has type (is type of): Type
  structures
    consists of (forms part of): Place
    falls within (contains): Place
  other descriptions
    has note: String
    (has type : Type)

The entity is referenced by:
  Period: took place at (witnessed)
  Move: moved to (occupied)
  Move: moved from (vacated)
  Physical Object: has section (located on or within)
  Physical Object: has former or current location (is former or current location of)
  Physical Object: has current permanent location (is current permanent location of)
  Physical Object: has current location (currently holds)
Actor: has current or former residence (is current or former residence of) and by itself

The entity inherits references:
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
(has type : Type)
E54 Dimension

Belongs to: Measure Type
Subclass of: CRM Entity

Scope note: This entity is an abstract class for properties that are measured by some calibrated means and result in numerical values. Dimensions should be recorded according to ISO standards, or using internationally recognized non SI units whenever possible (ISO 31:1992, Quantities and units; ISO 1000:1992, SI units and recommendations for the use of their multiples and of certain other units).

Examples: currency: £26.00, length: 4 cm, diameter: 26 mm, weight: 150 lbs, density: 0.85 gm/cc, luminescence: 56 ISO lumens, tin content: 0.46 %, "taille au garrot": 5 hands, C14 date: 2460 years, etc.

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
numerical values
  value: Number
  unit: Measurement Unit
other descriptions
  has note: String
  (has type : Type)

The entity is referenced by:
Measurement: observed dimension (was observed)
Physical Stuff: has dimension (is dimension of)
Time-Span: had at most duration
Time-Span: had at least duration

The entity inherits references:
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)

5.7 Types Hierarchy

All entities in this hierarchy are instances of the metaclass “Type Type”. This hierarchy does not belong to the CIDOC Entities in the proper sense as its instances are names for aggregations, sets, or undefined masses of physical items or intellectual constructs. They are thought of as elements of authority files on one side; on the other they are used to refer to entities of the Model or any refinement of it as data elements at appropriate points from within the Model in a consistent way. This implies that the respective authorities must be compatible in structure with the Model. As a rule, every entity of the model gives rise to a “Type Type”, which is not listed here, as they are defined by rule. Only those types of types not generated by the rule are given explicitly.

E55 Type

Belongs to: Type Type
Subclass of: Existence
Superclass of: Language
  Material
  Measurement Unit
Gender

Scope note: This entity captures the names of all entities in the model and any refinements of these entities which do not require further analysis of their formal properties, but which represent typological distinctions important to a given user group. The semantic interpretation of these subtypes is based on the agreement of specific groups. Instances of the "Type" entity have to be formally organized in thesauri, with scope notes, illustrations, etc., to clarify their meaning. In general, it is expected that different domains and cultural groups develop different thesauri in parallel. Consistent reasoning on the expansion of sub terms used in a thesaurus is possible insofar as it conforms to both the entities and the hierarchies of this Model.

Examples: Weight, length, depth are types of measurement. Portrait, sketch, animation could be types of depiction. Oral, written could be types of language. Excellent, good, poor could be types of condition state.

Properties:
identifications
   is identified by (identifies): Appellation
classifications
   has type (is type of): Type
other descriptions
   has note: String
      (has type: Type)

The entity is referenced by:
CRM Entity: has type (is type of)
Physical Man-Made Stuff: depicts event (is depicted by)
   (mode of depiction: Type)
Type Assignment: assigned (was assigned by)
Modification: used general technique (was technique of)
Activity: had as general purpose (was purpose of)
Conceptual Object: refers to concept (is referred to by)
Authority Document: contains (is part of)
Man-Made Stuff: was intended for (was intention of)
Stuff: had as general use (was use of)
CRM Entity: has note: has type
Conceptual Object: refers to (is referred to by): has type
Physical Man-Made Stuff: depicts object (is depicted by): mode of depiction
Physical Man-Made Stuff: depicts concept (is depicted by): mode of depiction
Physical Man-Made Stuff: depicts event (is depicted by): mode of depiction
Activity: carried out by (performed): in the role of
Legal Object: right held by (has right on): has type
Man-Made Stuff: has title (is title of): has type

The entity inherits references:
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
       (has type: Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E56 Language

Belongs to: Type Type
Subclass of: Type

Scope note: This entity comprises the names identifying natural languages. ISO codes should be used (ISO 639:1988 Codes for the representation of names of languages). This type does not correspond to another explicit entity in the Model.

Examples: el Greek, en English, eo Esperanto, es Spanish, fr French

Properties:
identifications
    is identified by: (identifies): Appellation
classifications
    has type: (is type of): Type
other descriptions
    has note: String
    (has type: Type)

The entity is referenced by:
Linguistic Object: has language: (is language of)

The entity inherits references:
CRM Entity: has type: (is type of)
Physical Man-Made Stuff: depicts concept: (is depicted by)
    (mode of depiction: Type)
Type Assignment: assigned: (was assigned by)
Modification: used general technique: (was technique of)
Activity: had as general purpose: (was purpose of)
Conceptual Object: refers to concept: (is referred to by)
Authority Document: contains: (is part of)
Man-Made Stuff: was intended for: (was intention of)
Stuff: had as general use: (was use of)
CRM Entity: has note: has type
Conceptual Object: refers to: (is referred to by): has type
Physical Man-Made Stuff: depicts object: (is depicted by): mode of depiction
Physical Man-Made Stuff: depicts concept: (is depicted by): mode of depiction
Physical Man-Made Stuff: depicts event: (is depicted by): mode of depiction
Activity: carried out by: (performed): in the role of
Legal Object: right held by: (has right on): has type
Man-Made Stuff: has title: (is title of): has type
Type Assignment: classified: (was classified by)
Document: documents: (is documented in)
Conceptual Object: refers to: (is referred to by)
    (has type: Type)
Beginning of Existence: brought into existence: (was brought into existence by)
End of Existence: took out of existence: (was taken out of existence by)
E57 Material
Belongs to: Type
Subclass of: Type

Scope note: This entity comprises the names used to identify materials. Internationally used codes and terminology are recommended. This type does not correspond to any other explicit entity in the Model, because materials do not have well-defined instances, especially after they are used. Discrete pieces of raw materials kept in museums, such as bricks, sheets of fabric, pieces of metal, should be modelled separately just as other objects. Discrete used or processed pieces, such as the stones from Nefer Titi's temple, should be modelled as parts.

Properties:
identifications
is identified by (identifies): Appellation
classifications
has type (is type of): Type
other descriptions
has note: String
(has type : Type)

The entity is referenced by:
Physical Stuff: consists of (is incorporated in)
Design or Procedure: usually employs (is usually employed by)

The entity inherits references:
CRM Entity: has type (is type of)
Physical Man-Made Stuff: depicts concept (is depicted by)
(mode of depiction : Type)
Type Assignment: assigned (was assigned by)
Modification: used general technique (was technique of)
Activity: had as general purpose (was purpose of)
Conceptual Object: refers to concept (is referred to by)
Authority Document: contains (is part of)
Man-Made Stuff: was intended for (was intention of)
Stuff: had as general use (was use of)
CRM Entity: has note: has type
Conceptual Object: refers to (is referred to by): has type
Physical Man-Made Stuff: depicts object (is depicted by): mode of depiction
Physical Man-Made Stuff: depicts concept (is depicted by): mode of depiction
Physical Man-Made Stuff: depicts event (is depicted by): mode of depiction
Activity: carried out by (performed): in the role of
Legal Object: right held by (has right on): has type
Man-Made Stuff: has title (is title of): has type
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
(has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E58  Measurement Unit
Belongs to:  Type  Type  
Subclass of:  Type  

Scope Note:  This entity provides the authority list for all types of measurement units: feet, inches, centimeters, liters, lumens, etc. SI units or internationally recognized non SI terms should be used whenever possible. (ISO 1000:1992 SI units and recommendations for the use of their multiples and of certain other units.)

Properties:  
identifications  
is identified by (identifies): Appellation  
classifications  
has type (is type of): Type  
other descriptions  
has note: String  
(has type : Type)  

The entity is referenced by:  
Dimension: unit  

The entity inherits references:  
CRM Entity: has type (is type of)  
Physical Man-Made Stuff: depicts concept (is depicted by)  
(mode of depiction : Type)  
Type Assignment: assigned (was assigned by)  
Modification: used general technique (was technique of)  
Activity: had as general purpose (was purpose of)  
Conceptual Object: refers to concept (is referred to by)  
Authority Document: contains (is part of)  
Man-Made Stuff: was intended for (was intention of)  
Stuff: had as general use (was use of)  
CRM Entity: has note: has type  
Conceptual Object: refers to (is referred to by): has type  
Physical Man-Made Stuff: depicts object (is depicted by): mode of depiction  
Physical Man-Made Stuff: depicts concept (is depicted by): mode of depiction  
Physical Man-Made Stuff: depicts event (is depicted by): mode of depiction  
Activity: carried out by (performed): in the role of  
Legal Object: right held by (has right on): has type  
Man-Made Stuff: has title (is title of): has type  
Type Assignment: classified (was classified by)  
Document: documents (is documented in)  
Conceptual Object: refers to (is referred to by)  
(has type : Type)  
Beginning of Existence: brought into existence (was brought into existence by)  
End of Existence: took out of existence (was taken out of existence by)
5.8 Other entities

**E59 Primitive Value**
Belongs to: Value Type

Scope Note: This entity is a container for primitive values used as documentation elements which are not further analyzed. As such they are not considered as elements within our universe of discourse. No specific implementation recommendations are made.

The entity is not referenced.

**E60 Number**
Belongs to: Value Type
Subclass of: Primitive Value

Scope Note: Integers, real or complex numbers.

The entity is referenced by:
Physical Object: has number of parts
Dimension: value

**E61 Time Primitive**
Belongs to: Value Type
Subclass of: Primitive Value

Scope Note: This entity is a primitive value that should implement appropriate validation and interval logic for date ranges and precision relevant to cultural documentation. It is not further analyzed in this model.

The entity is referenced by:
Time-Span: at most within
Time-Span: at least covering

**E62 String**
Belongs to: Value Type
Subclass of: Primitive Value

Scope Note: This entity is a primitive value to be used for any kind of documentation which lacks formal structure defined within the model, e.g. free text, bitmaps, vector graphics, etc.

The entity is referenced by:
CRM Entity: has note
Legal Object: right held by (has right on): has note
Activity: used object (was used for): mode of use
Activity: was intended use of (was made for): mode of use
Time-Span: begins at qualify
Time-Span: ends at qualify
E63 Beginning of Existence
Belongs to: Period Type
Subclass of: Event
Superclass of: Conceptual Creation
Production
Formation
Birth

Scope note: Entity for temporal reasoning about things beginning to exist—intellectual products, physical items, groups of people, living beings, a hook for termini postquem and antequem. It may be useful to define more specialization of this entity for Natural History.

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
active participants
  had participants (participated in): Actor
passive participants
  brought into existence (was brought into existence by): Existence
property note: this is the superproperty of “has produced”, “has formed”, “brought into life”, “has created”. occurred in the presence of (was present at): Stuff
spatial definitions
  took place at (witnessed): Place
short cut, spatial definitions
  took place on or within (witnessed): Physical Object
temporal definitions
  has time-span (is time-span of): Time-Span
structures
  consists of (forms part of): Period
  falls within (contains): Period
other descriptions
  has note: String
  (has type : Type)

The entity is not referenced:

The entity inherits references:
Physical Man-Made Stuff : depicts event (is depicted by)
  (mode of depiction : Type)
Period : falls within (contains)
Period : consists of (forms part of)
Type Assignment : classified (was classified by)
Document : documents (is documented in)
Conceptual Object : refers to (is referred to by)
  (has type : Type)
E64  End of Existence

Belongs to:  Period Type
Subclass of:  Event
Superclass of:  Destruction
Dissolution
Death

Scope note:  Entity for temporal reasoning about things ceasing to exist—physical items, groups of people, living beings. A hook for termini postquem and antequem.

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
active participants
  had participants (participated in): Actor
passive participants
  took out of existence (was taken out of existence by): Existence
    property note: this is the superproperty of “destroyed”, “dissolved” “was death of”.
    occurred in the presence of (was present at): Stuff
spatial definitions
  took place at (witnessed): Place
short cut, spatial definitions
  took place on or within (witnessed): Physical Object
temporal definitions
  has time-span (is time-span of): Time-Span
structures
  consists of (forms part of): Period
  falls within (contains): Period
other descriptions
  has note: String
  (has type : Type)

The entity is not referenced:

The entity inherits references:
Physical Man-Made Stuff: depicts event (is depicted by)
  (mode of depiction : Type)
Period: falls within (contains)
Period: consists of (forms part of)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
E65 Conceptual Creation

Belongs to: Period Type
Subclass of: Beginning of Existence
Activity

Scope note: The creation of an immaterial product—text, music, image, movie, law, etc.

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
active participants
  had participants (participated in): Actor
  carried out by (performed): Actor
    (in the role of: Type)
passive participants
  has created (was created by): Conceptual Object
  property note: this is a subproperty of “brought into existence”, “occurred in the presence of”
brought into existence (was brought into existence by): Existence
took into account (was taken into account by): Conceptual Object
occurred in the presence of (was present at): Stuff
used object (was used for): Physical Object
  (mode of use: String)
motivations
  was motivation for (motivated): Conceptual Object
  motivated the creation of (was created for): Conceptual Object
  had specific purpose (was purpose of): Activity
  had as general purpose (was purpose of): Type
  was intended use of (was made for): Man-Made Stuff
    (mode of use: String)
short cut, spatial definitions
  took place on or within (witnessed): Physical Object
spatial definitions
  took place at (witnessed): Place
temporal definitions
  has time-span (is time-span of): Time-Span
structures
  consists of (forms part of): Period
  falls within (contains): Period
other descriptions
  has note: String
    (has type: Type)

The entity is not referenced:

The entity inherits references:
Physical Man-Made Stuff: depicts event (is depicted by)
  (mode of depiction: Type)
Period: falls within (contains)
Period: consists of (forms part of)
Activity: had specific purpose (was purpose of)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type: Type)
E66 Formation

Belongs to: Period Type
Subclass of: Beginning of Existence
Activity

Scope note: The formation or foundation of a formal or informal group of people.

Properties:

identifications
  is identified by (identifies): Appellation

classifications
  has type (is type of): Type

active participants
  had participants (participated in): Actor
  carried out by (performed): Actor
  (in the role of : Type)

passive participants
  has formed (was formed by): Group

property note: this is a subproperty of “brought into existence”, “had participants”.

brought into existence (was brought into existence by): Existence

took into account (was taken into account by): Conceptual Object

occurred in the presence of (was present at): Stuff

used object (was used for): Physical Object
  (mode of use : String)

motivations
  was motivation for (motivated): Conceptual Object
  motivated the creation of (was created for): Conceptual Object
  had specific purpose (was purpose of): Activity
  had as general purpose (was purpose of): Type
  was intended use of (was made for): Man-Made Stuff
  (mode of use : String)

short cut, spatial definitions
  took place on or within (witnessed): Physical Object

spatial definitions
  took place at (witnessed): Place

temporal definitions
  has time-span (is time-span of): Time-Span

structures
  consists of (forms part of): Period
  falls within (contains): Period

other descriptions
  has note: String
  (has type : Type)

The entity is not referenced:

The entity inherits references:

Physical Man-Made Stuff: depicts event (is depicted by)
  (mode of depiction : Type)

Period: falls within (contains)

Period: consists of (forms part of)

Activity: had specific purpose (was purpose of)

Type Assignment: classified (was classified by)

Document: documents (is documented in)

Conceptual Object: refers to (is referred to by)
  (has type : Type)
E67 Birth
Belongs to: Period Type
Subclass of: Beginning of Existence
Scope note: The birth of a human being.

Properties:
identifications
is identified by (identifies): Appellation
classifications
has type (is type of): Type
active participants
by mother (gave birth): Person
property note: this is the subproperty of “had participants”.
from father (was father for): Person
had participants (participated in): Actor
passive participants
brought into life (was born): Person
property note: this is a subproperty of “brought into existence”, “had participants”.
brought into existence (was brought into existence by): Existence
occurred in the presence of (was present at): Stuff
spatial definitions
took place at (witnessed): Place
short cut, spatial definitions
took place on or within (witnessed): Physical Object
temporal definitions
has time-span (is time-span of): Time-Span
structures
consists of (forms part of): Period
falls within (contains): Period
other descriptions
has note: String
(has type : Type)

The entity is not referenced:

The entity inherits references:
Physical Man-Made Stuff: depicts event (is depicted by)
(mode of depiction : Type)
Period: falls within (contains)
Period: consists of (forms part of)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
(has type : Type)
### E68 Dissolution

**Belongs to:** Period Type  
**Subclass of:** End of Existence

**Scope note:** The formal or informal end of a group of people. If it was a deliberate act, the instance should also be instantiated as an activity.

**Properties:**
- **identifications**
  - *is identified by (identifies):* Appellation
- **classifications**
  - *has type (is type of):* Type
- **active participants**
  - *had participants (participated in):* Actor
- **passive participants**
  - *dissolved (was dissolved by):* Group
    - **property note:** this is a subproperty of "took out of existence", “had participants”.
  - *took out of existence (was taken out of existence by):* Existence
  - *occurred in the presence of (was present at):* Stuff
- **short cut, spatial definitions**
  - *took place on or within (witnessed):* Physical Object
  - **spatial definitions**
    - *took place at (witnessed):* Place
  - **temporal definitions**
    - *has time-span (is time-span of):* Time-Span
  - **structures**
    - *consists of (forms part of):* Period
    - *falls within (contains):* Period
  - **other descriptions**
    - *has note: String*
    - *(has type : Type)*

**The entity is not referenced:**

**The entity inherits references:**
- Physical Man-Made Stuff: depicts event *(is depicted by)*  
  - *(mode of depiction : Type)*
- Period: falls within *(contains)*
- Period: consists of *(forms part of)*
- Type Assignment: classified *(was classified by)*
- Document: documents *(is documented in)*
- Conceptual Object: refers to *(is referred to by)*  
  - *(has type : Type)*
E69 Death

Belongs to: Period Type
Subclass of: End of Existence

Scope note: The death of a human being. If the person was killed, the instance should also be instantiated as an activity.

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
active participants
  had participants (participated in): Actor
passive participants
  was death of (died in): Person
    property note: this is a subproperty of “took out of existence”, “had participants”.
  took out of existence (was taken out of existence by): Existence
  occurred in the presence of (was present at): Stuff
spatial definitions
  took place at (witnessed): Place
short cut, spatial definitions
  took place on or within (witnessed): Physical Object
temporal definitions
  has time-span (is time-span of): Time-Span
structures
  consists of (forms part of): Period
  falls within (contains): Period
other descriptions
  has note: String
    (has type : Type)

The entity is not referenced:

The entity inherits references:

Physical Man-Made Stuff: depicts event (is depicted by)
  (mode of depiction : Type)
Period: falls within (contains)
Period: consists of (forms part of)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
E70 Stuff
Belongs to: Object Type
Subclass of: Existence
Superclass of: Man-Made Stuff
Physical Stuff

Scope note: An identifiable, discrete, persistent item which constitutes a unit for documentation, be it an intellectual product or a physical thing. Such items are characterized by a relative stability, i.e. either a solid physical form, an electronic encoding, a reproducible pattern, or a logical concept or structure. It introduces the concept of being used. Excluded are liquids flowing, gases moving around, etc. A packaged liquid however fits this entity.

Properties:
identifications
   is identified by (identifies): Appellation
classifications
   has type (is type of): Type
other descriptions
   had as general use (was use of): Type
      has note: String
         (has type : Type)

The entity is referenced by:
Event: occurred in the presence of (was present at)

The entity inherits references:
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
   (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E71 Man-Made Stuff
Belongs to: Object Type
Subclass of: Stuff
Superclass of: Physical Man-Made Stuff
Conceptual Object

Scope note: An identifiable, discrete, persistent item deliberately produced, invented, or created by humans which constitutes a unit for documentation, be it an intellectual product, idea, or a physical thing.

Properties:
identifications
  has title (is title of): Title
    (has type : Type)
    (taken over from E19 Physical Object)
    property note: this is the subproperty of "E1CRM Entity.(is identified by)"
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
other descriptions
  was intended for (was intention of): Type
    (moved up from E22 Man-Made Object)
  had as general use (was use of): Type
    has note: String
    (has type : Type)

The entity is referenced by:
Activity: was intended use of (was made for)
  (mode of use : String)

The entity inherits references:
Event: occurred in the presence of (was present at)
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
**E72 Legal Object**

Belongs to: Object Type
Subclass of: Existence
Superclass of: Information Object
Physical Stuff

Scope note: An identifiable item which can be owned or concerning which people may have rights. It is not restricted to Stuff. Legal Bodies should be included.

Examples: Charles Galland 2, Geneva (a building), “Strategies for self improvement” (an article), The Bath Camerata (an orchestral ensemble)

**Properties:**

identifications
  * is identified by (identifies): Appellation

classifications
  * has type (is type of): Type

legal status
  * is subject to (applies to): Right

short cut, legal status
  * right held by (has right on): Actor
    * (has type : Type)
    * (has note : String)
      * property note: It is short cut of the “Right”.

other descriptions
  * has note: String
    * (has type : Type)

The entity is not referenced:

The entity inherits references:

* Type Assignment: classified (was classified by)
* Document: documents (is documented in)
* Conceptual Object: refers to (is referred to by)
  * (has type : Type)

* Beginning of Existence: brought into existence (was brought into existence by)
* End of Existence: took out of existence (was taken out of existence by)
**E73 Information Object**

Belongs to: Concept Type

Subclass of: Conceptual Object
Legal Object

Supersclass of: Iconographic Object
Linguistic Object
Visual Item
Document
Design or Procedure

Scope note: An identifiable immaterial item which constitutes a unit for documentation and has an objectively recognizable structure. E73 does not include types, ideas, etc.

Examples: data sets, images, texts, procedure prescriptions

**Properties:**

identifications

* is identified by (identifies): Appellation
* has title (is title of): Title
  (has type : Type)

classifications

* has type (is type of): Type

legal status

* is subject to (applies to): Right

short cut, legal status

* right held by (has right on): Actor
  (has type : Type)
  (has note : String)

intellectual contents

* refers to concept (is referred to by): Type
  refers to (is referred to by): CRM Entity
  (has type : Type)

structures

* is composed of (forms part of): Information Object

other descriptions

* was intended for (was intention of): Type
* had as general use (was use of): Type
* has note: String
  (has type : Type)

**The entity is referenced only by itself.**

Information Object: is composed of (forms part of)

**The entity inherits references:**

Activity: was intended use of (was made for)
  (mode of use : String)

Event: occurred in the presence of (was present at)

Conceptual Creation: has created (was created by)

Type Assignment: classified (was classified by)

Document: documents (is documented in)

Activity: motivated the creation of (was created for)

Activity: took into account (was taken into account by)

Conceptual Object: refers to (is referred to by)
  (has type : Type)

Beginning of Existence: brought into existence (was brought into existence by)

End of Existence: took out of existence (was taken out of existence by)

Activity: was motivation for (motivated)
**E74 Group**

Belongs to: Actor Type
Subclass of: Actor
Superclass of: Legal Body

Scope note: A group is any gathering of people that acts collectively or in a similar way due to any kind of social bounds or contact. Nationality can be handled as a link to a group of appropriate type. Note the distinction between citizenship and ethnic group and other subtleties not easily expressible by nationality adjectives.

Examples: a group of people painting together at some happening, a tribe of indigenous people, an artist workshop, a museum, “Those at the Bastille”, a nation, a government, a company

Properties:
- identifications
  - is identified by (identifies): Appellation
- classifications
  - has type (is type of): Type
- structures
  - had member (was member of): Actor
    - property note: Any kind of belonging to a group. May be seen as shortcut of a respective temporal entity
- other descriptions
  - has current or former residence (is current or former residence of): Place
  - possesses (is possessed by): Right
  - has contact points (provides access to): Contact Point
  - has note: String
    - (has type : Type)

The entity is referenced:
- Dissolution: dissolved (was dissolved by)
- Formation: has formed (was formed by)

The entity inherits references:
- Activity: carried out by (performed)
  - (in the role of : Type)
- Legal Object: right held by (has right on)
  - (has type : Type)
  - (has note : String)
- Physical Object: has current owner (is current owner of)
- Physical Object: has former or current owner (is former or current owner of)
- Physical Object: has current keeper (is current keeper of)
- Physical Object: has former or current keeper (is former or current keeper of)
- Event: had participants (participated in)
- Acquisition: transferred title from (surrendered title of)
- Acquisition: transferred title to (acquired title of)
- Transfer of Custody: custody received by (received custody)
- Transfer of Custody: custody surrendered by (surrendered custody)
- Type Assignment: classified (was classified by)
- Document: documents (is documented in)
- Conceptual Object: refers to (is referred to by)
  - (has type : Type)
- Group: had member (was member of)
- Beginning of Existence: brought into existence (was brought into existence by)
- End of Existence: took out of existence (was taken out of existence by)
E75 Conceptual Object Appellation

Belongs to: Appellation Type
Subclass of: Appellation

Scope note: Specific identifiers of an intellectual product or standardized pattern. ISO identifiers should be used whenever possible (ISO 2108, ISBN; ISO 3297, ISSN; ISO 15707, ISWC, etc.)


Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
other descriptions
  has note: String
  (has type : Type)

The entity is not referenced:

The entity inherits references:
  Type Assignment: classified (was classified by)
  Document: documents (is documented in)
  CRM Entity: is identified by (identifies)
  Conceptual Object: refers to (is referred to by)
    (has type : Type)
  Beginning of Existence: brought into existence (was brought into existence by)
  End of Existence: took out of existence (was taken out of existence by)
E76 Gender
Belongs to: Appellation Type
Subclass of: Type

Scope note:

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
other descriptions
  has note: String
  (has type : Type)

The entity is not referenced:
Person: has gender (is gender of)

The entity inherits references:
CRM Entity: has type (is type of)
Physical Man-Made Stuff: depicts concept (is depicted by)
  (mode of depiction : Type)
Type Assignment: assigned (was assigned by)
Modification: used general technique (was technique of)
Activity: had as general purpose (was purpose of)
Conceptual Object: refers to concept (is referred to by)
Authority Document: contains (is part of)
Man-Made Stuff: was intended for (was intention of)
Stuff: had as general use (was use of)
CRM Entity: has note: has type
Conceptual Object: refers to (is referred to by): has type
Physical Man-Made Stuff: depicts object (is depicted by): mode of depiction
Physical Man-Made Stuff: depicts concept (is depicted by): mode of depiction
Physical Man-Made Stuff: depicts event (is depicted by): mode of depiction
Activity: carried out by (performed): in the role of
Legal Object: right held by (has right on): has type
Man-Made Stuff: has title (is title of): has type
Type Assignment: classified (was classified by)
Document: documents (is documented in)
Conceptual Object: refers to (is referred to by)
  (has type : Type)
Beginning of Existence: brought into existence (was brought into existence by)
End of Existence: took out of existence (was taken out of existence by)
E77 Existence

Belongs to: MetaEntity
Subclass of: CRM Entity
Superclass of: Legal Object
Stuff
Contact Point
Type
Appellation
Actor

Scope note: This is an abstract entity, which comprises the kinds of things that have the potential to exist for a relevant time-span preserving their identity. It comprises physical items and intellectual products, groups of people, living beings, etc. Types are included by virtue of their nature as intellectual products, in particular in natural history, where types are based on the finding of a prototypical specimen. Appellations are included in their nature as creations of the people using them.

Examples: ISBN 3-00-007556-9, me, Arethusa ophioglossoides, Shakespeare's Hamlet, Aphrodite of Milos

Properties:
identifications
  is identified by (identifies): Appellation
classifications
  has type (is type of): Type
other descriptions
  has note: String
  (has type : Type)

The entity is not referenced:
End of Existence: took out of existence (was taken out of existence by)
Beginning of Existence: brought into existence (was brought into existence by)

The entity inherits references:
  Type Assignment: classified (was classified by)
  Document: documents (is documented in)
  Conceptual Object: refers to (is referred to by)
    (has type : Type)
Annex A
(informative)

Entities presented as a mono-hierarchy

E1  CRM Entity
E2   -   Temporal Entity
E3   -   Condition State
E4   -   Period
E5   -   Event
E7   -   Activity
E8   -   Acquisition
E9   -   Move
E10  -   Transfer of Custody
E11  -   Modification
E12  -   Production
E13  -   Attribute Assignment
E14  -   Condition Assessment
E15  -   Identifier Assignment
E16  -   Measurement
E17  -   Type Assignment
E18  -   Conceptual Creation
E19  -   Formation
E20  -   Beginning of Existence
E21  -   Birth
E22  -   Production
E23  -   Conceptual Creation
E24  -   Formation
E25  -   End of Existence
E26  -   Destruction
E27  -   Dissolution
E28  -   Death
E29  -   Existence
E30  -   Stuff
E31  -   Physical Stuff
E32  -   Physical Object
E33  -   Biological Object
E34  -   Person
E35  -   Man-Made Object
ISO/CD 21127

E23 - - - - -  Iconographic Object
E24 - - - - - Physical Man-Made Stuff
E22 - - - - - Man-Made Object
E23 - - - - - Iconographic Object
E25 - - - - - Man-Made Feature
E26 - - - - - Physical Feature
E27 - - - - - Site
E21 - - - - - Person
E25 - - - - - Man-Made Feature
E71 - - - Man-Made Stuff
E24 - - - - - Physical Man-Made Stuff
E22 - - - - - Man-Made Object
E23 - - - - - Iconographic Object
E25 - - - - - Man-Made Feature
E28 - - - Conceptual Object
E73 - - - Information Object
E23 - - - - - Iconographic Object
E29 - - - - - Design or Procedure
E31 - - - - - Document
E32 - - - - - Authority Document
E33 - - - - - Linguistic Object
E34 - - - - - Inscription
E35 - - - - - Title
E36 - - - - - Visual Item
E37 - - - - - Mark
E34 - - - - - Inscription
E38 - - - - - Image
E30 - - - - - Right
E72 - - Legal Object
E18 - - - Physical Stuff
E19 - - - Physical Object
E20 - - - - Biological Object
E21 - - - - - Person
E22 - - - - - Man-Made Object
E23 - - - - - Iconographic Object
E24 - - - - - Physical Man-Made Stuff
E22 - - - - - Man-Made Object
E23 - - - - - Iconographic Object
E25 - - - - - Man-Made Feature
E26 - - - - - Physical Feature
E27 - Site
E25 - Man-Made Feature
E73 - Information Object
E23 - Iconographic Object
E29 - Design or Procedure
E31 - Document
E32 - Authority Document
E33 - Linguistic Object
E34 - Inscription
E35 - Title
E36 - Visual Item
E37 - Mark
E34 - Inscription
E38 - Image
E39 - Actor
E74 - Group
E40 - Legal Body
E26 - Physical Feature
E21 - Person
E25 - Man-Made Feature
E27 - Site
E41 - Appellation
E42 - Object Identifier
E44 - Place Appellation
E45 - Address
E46 - Section Definition
E47 - Spatial Coordinates
E48 - Place Name
E49 - Time Appellation
E50 - Date
E75 - Conceptual Object Appellation
E35 - Title
E51 - Contact Point
E45 - Address
E55 - Type
E56 - Language
E57 - Material
E58 - Measurement Unit
E76 - Gender
E52 - Time-Span
E53 - Place
E54 - Dimension
E59 - Primitive Value
E60 - Number
E61 - Time Primitive
E62 - String
# Annex B
(informative)

## Index of the properties by alphabetical order

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(informative)

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