# CIDOC reference model
# Information Groups

## Introduction

The current document adopts the organisation of the CIDOC Information Categories by presenting the CIDOC reference model as a series of sub models which map directly onto the categories ‘information groups’. In each case brief scope notes are included which explain the thinking behind the reference model and which make explicit the position of individual information items.

The scope of the current model is deliberately restricted in a number of ways.

1. The **conceptual framework** (viewpoints) of the intended users (scholars, museum professionals and museum visitors, etc.)
2. Common museum **activities** (collections management and conservation, research and analysis, promotion and communication). Organisation specific management procedures are not incorporated into the model, although possible implementation schemes are suggested which maintain compatibility with the reference model.
3. The **objects** collected by museums
4. The level of **detail** and **precision** required to provide an adequate level of quality of service.
5. Considerations of **technical complexity**.

It is important to bear in mind that the CIDOC reference model is ongoing work. The present document represents the current state of the model resulting from a working meeting which took place in November 1997 in Washington. Although the broad outlines are now well established, many questions of detail still need to be dealt with the work needs to be ratified by the DSG as a whole. Your comments and suggestions are welcome.

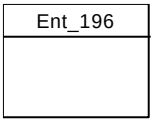
Nick Crofts
Pat Reed
CIDOC Documentation Standards Group

14 December 1997

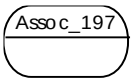
## Symbols used in the model

The symbols used in this document are derived from the French analysis and design methodology Merise.

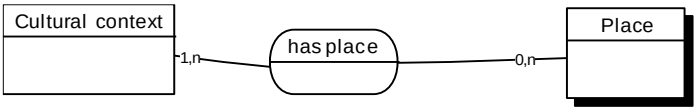
Classes are represented as rectangles. The name of the class is at the top of the class and the attributes are listed beneath it, separated by a horizontal line.



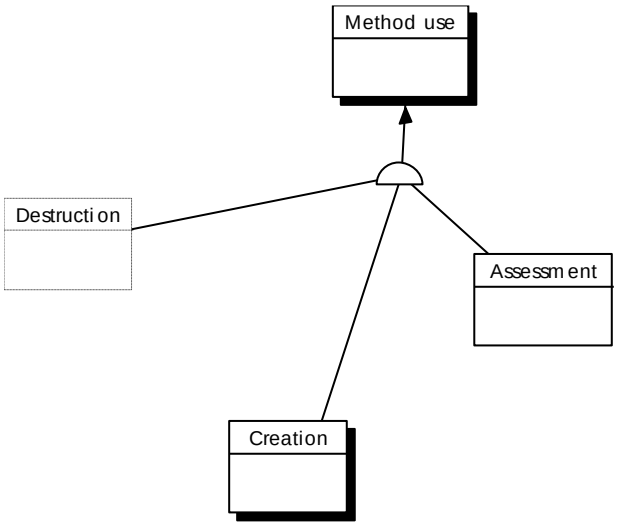

Relations, or links, are represented by ovals and lines drawn between classes. The name of the representation is at the top of the oval and the attributes are listed beneath it, separated by a horizontal line.



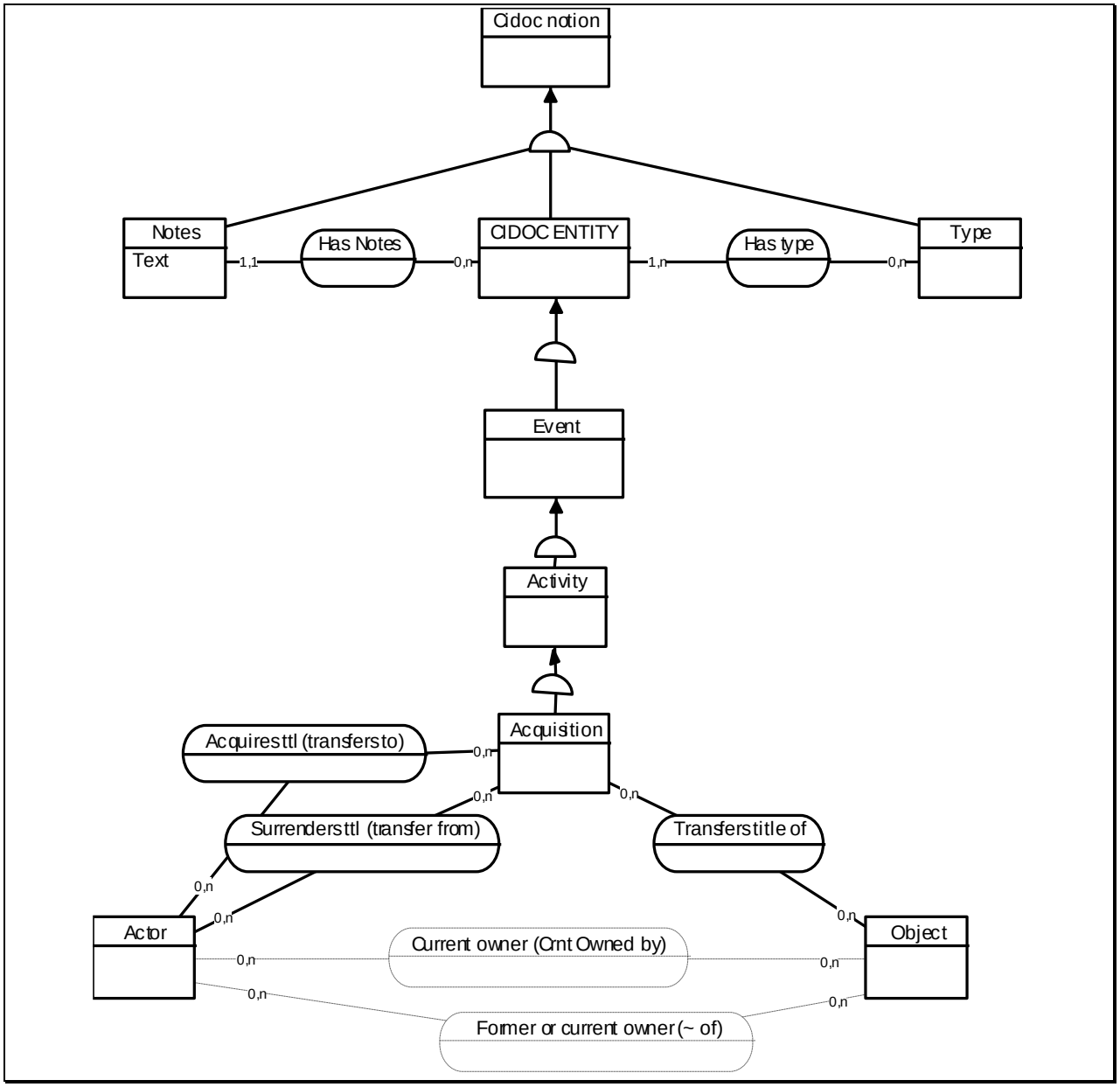

Cardinalities are represented as pairs of numbers, written on links between entities. Common values are o,n (none or many), 1,n (at least one), 1,1 (exactly one).




Inheritance (Isa) relations between classes are represented by lines drawn between classes and a half circle. A cross in the half circle indicates that the inheritance is exclusive.

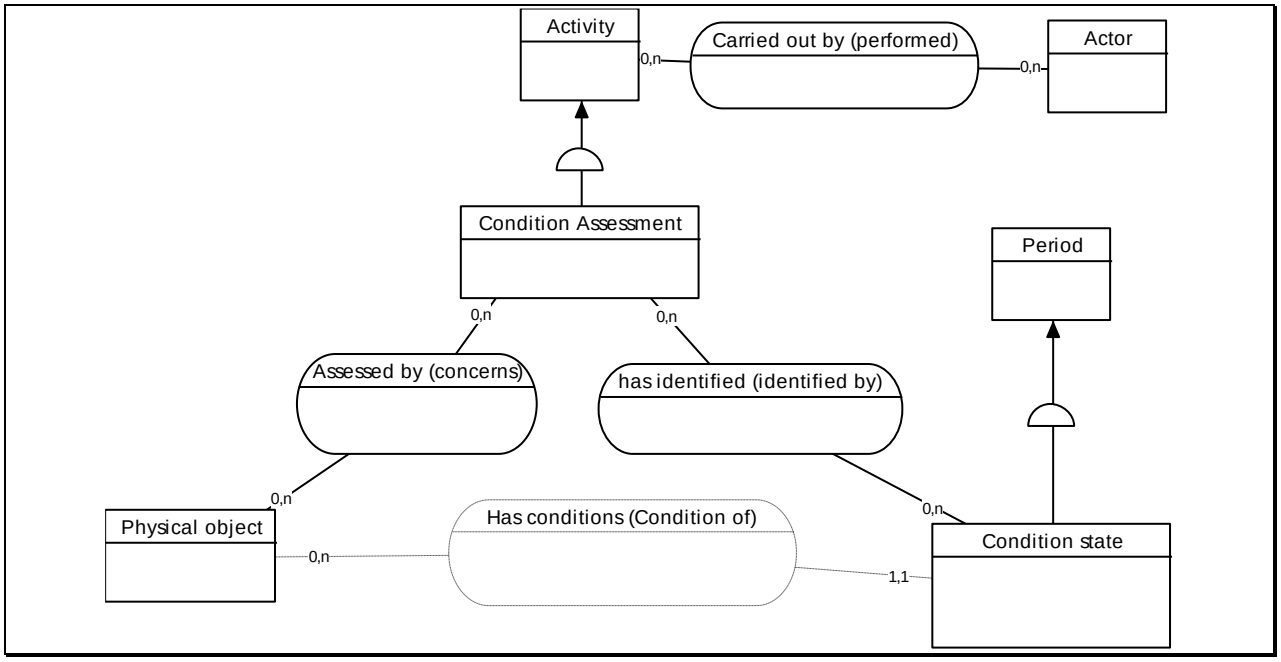


## Acquisition Information




| | | |
|---|---|---|
| **Acquisition Information** | | Acquisition by the institution is an instance of transfer of legal title. |
| | Acquisition method | Acquisition method is the acquisition type, inherited from CIDOC ENTITY. |
| | Acquisition date | Time-span attribute inherited from Period |
| | Acquisition source | Source is the transfers title from link |

## Condition Information




| | | |
|---|---|---|
| **Condition Information** | | **The model includes the notion of condition assessment as an *activity,* which is not present in the CIDOC Information Categories.**<br>**NB** Reason for or purpose of activity is absent. |
| | Condition | Type attribute of condition state |
| | Condition summary | Textual note on condition state, inherited from CIDOC ENTITY. |
| | Condition date | Time-span of condition state inherited from Period. |

## Deaccession and Disposal Information

| No model |
|---|

| | | |
|---|---|---|
| **Deaccession and Disposal Information** | | We propose the following distinctions :<br>• Legal title (ownership)<br>• Physical custody (who keeps the object)<br>• Accessioned - formally recognised as part of the collection.<br>We have decided *not* to model accessioning explicitly. Accessioning is best modelled as an extension in order to reflect local practice. (e.g. does the museum 'accession' objects to which it does not have legal title ?) It is the responsibility of each institution and local implementation to declare how their notions of accession and disposal imply transfer of legal title and or physical custody, in order to maintain compatibility. |
| | Deaccession date | |
| | Disposal date | |
| | Disposal method | |
| | Disposal recipient | |

## Description Information

| No model |
|---|

| **Description Information** | | |
|---|---|---|
| | Physical description | Text attribute of the object. (All CIDOC entities automatically inherit a text field attribute.) |
| | Specimen status | Type, holotype, paratype, etc. This notion is specific to natural history and is currently beyond the scope of the model. NB does not depend on physical attributes of the object.<br>Could be considered as the type attribute of the object. However, this usually involves identifying the author of the taxon and, or the determination.<br>Specimen status is a candidates for domain specific extensions for the future. |

## Image Information

| No model |
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| | | |
|---|---|---|
| **Image Information** | | Images are specialised cases of objects. (A collection object may be an image of another object).<br><br>The implicit prescription that objects should be photographed is not represented in the model. However, constraints *could* be included to enforce good practice.<br><br>Sound recordings are a sub-class of reproduction. Reproduction or reference are two types of relation between objects. |
| | Image type | See note on Type meta-class. Specialisation of object type. |
| | Image reference number | Images are objects related to museum objects. A persistent link exists between the two. This link effectively means that a photo or picture is a good picture. (Information about the event leading to the creation of the photo is implicit, ie author and date, etc.). The reference number itself is a specialisation of object number. |

## Institution Information

| No model |
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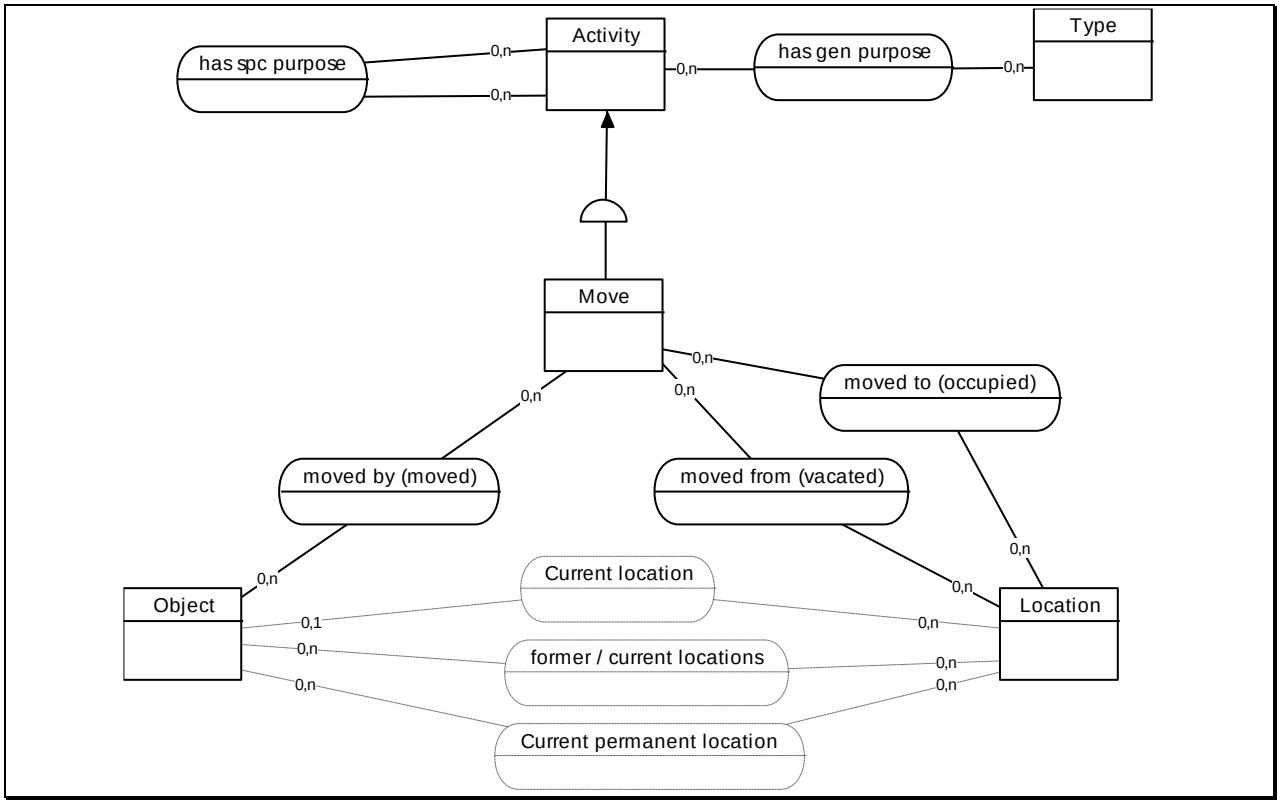
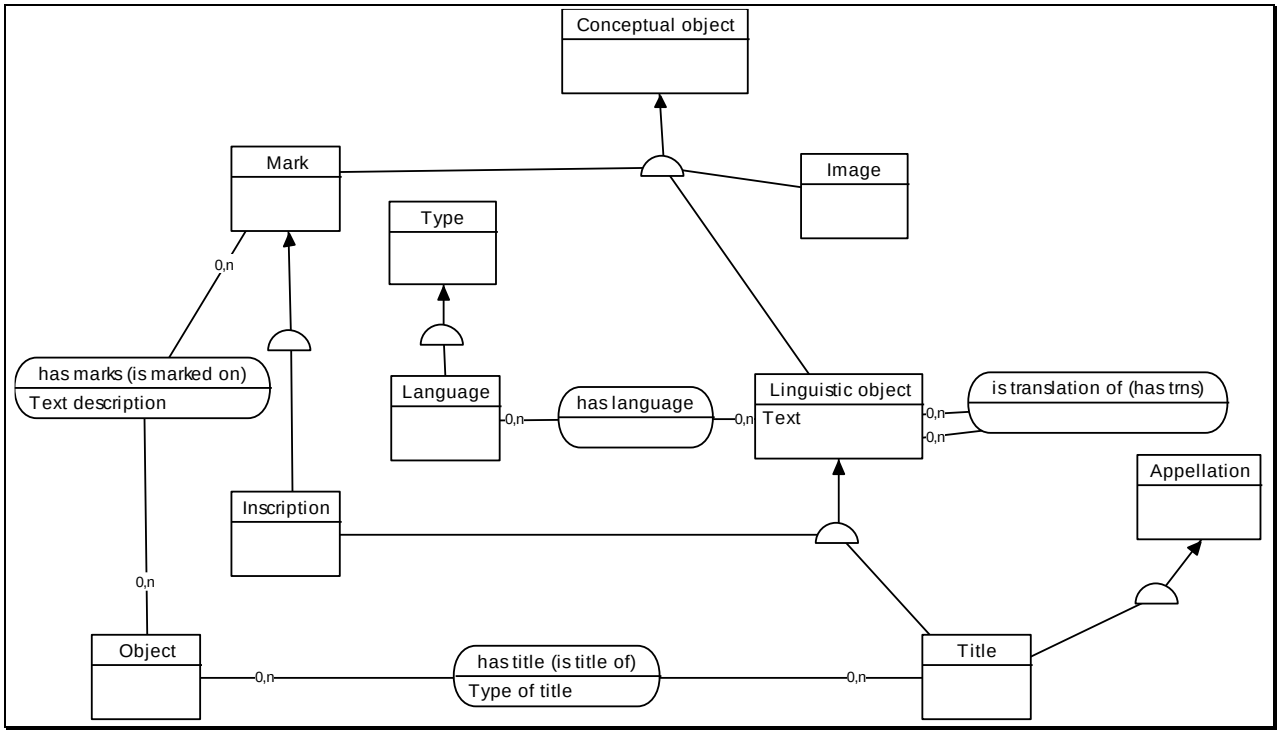
|---|---|---|
| **Institution Information** | | This is either the current owner of the object, the current keeper of the object, or possibly, the recorder of the object information. All of these are modelled elsewhere. |
| | Institution name | Name attribute of the actor |
| | Institution sub-body name | idem |
| | Institution address | Place (Address) attribute of the actor |
| | Institution country | idem |

## Location information




| **Location Information** | | A history of ‘move’ events. |
|---|---|---|
| | Current location | Derived from the location history or as a ‘short-cut’ relation between object and location. |
| | Current location date | Time-span attribute of *Move* event |
| | Current location type | *Type* attribute of location (!) |
| | Normal location | Current permanent location short cut link. |

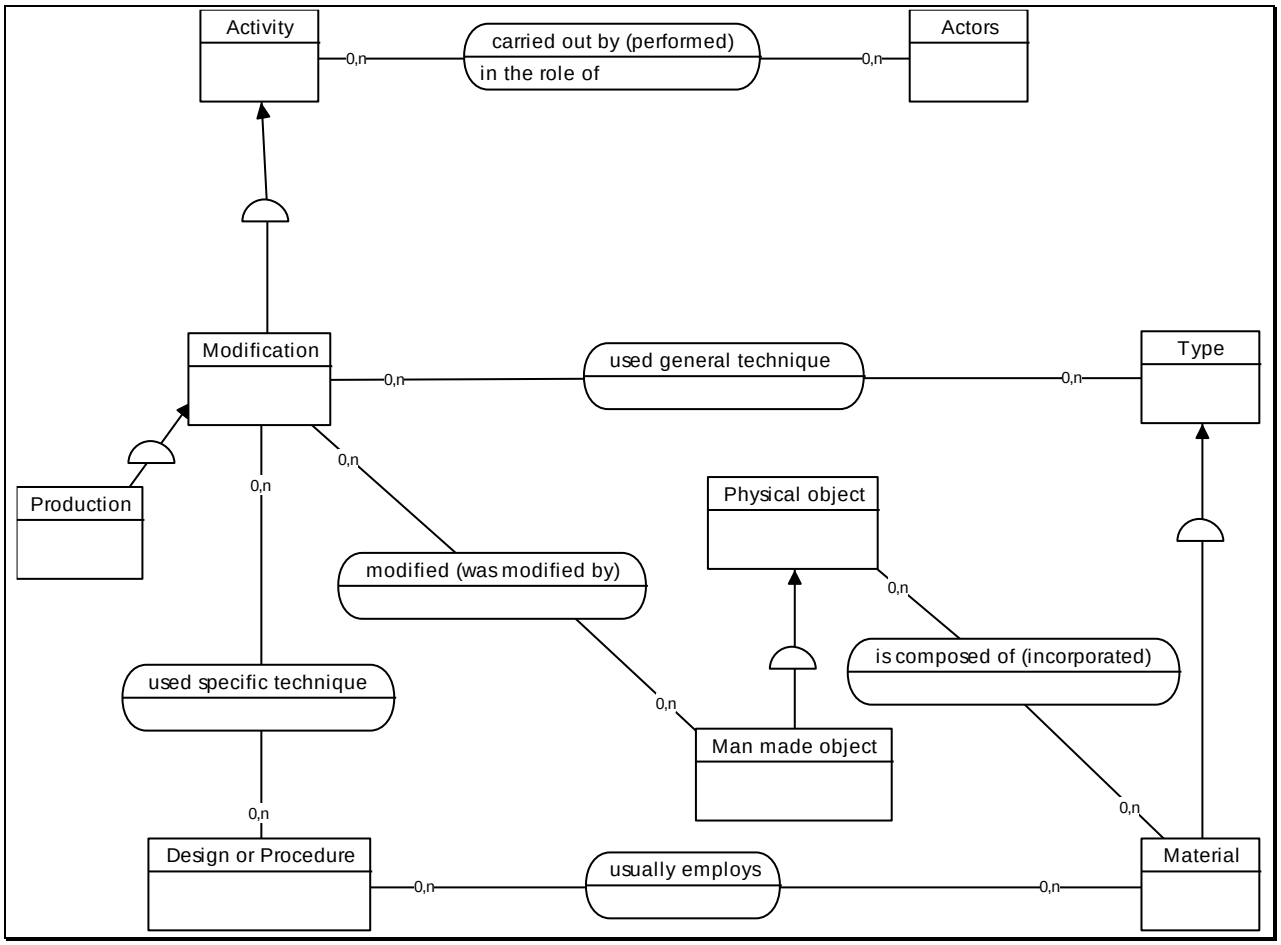
## Mark and Inscription Information




| | | |
|---|---|---|
| **Mark and Inscription Information** | | Marks and inscriptions are interpreted as 'conceptual objects' ie intellectual information which is carried by a physical object. |
| | Mark/inscription text | Textual transcription of the mark or inscription. Clear rules need to be stated as to how marks should be transcibed.<br><br>Attribut multiple de l'objet de type 'objet intellectuel'. Les attributs, position, technique etc. sont dans le lien. NB Une inscription n'est pas, en générale, associée à n objets. |
| | Mark/inscription type | A distinction is made in the model between marks in general and inscriptions, which have linguistic attributes. Further classification of inscription types could use the class 'type' field. |
| | Mark/inscription description | Text field attribute of the mark. |
| | Mark/inscription | This information could be included as part |

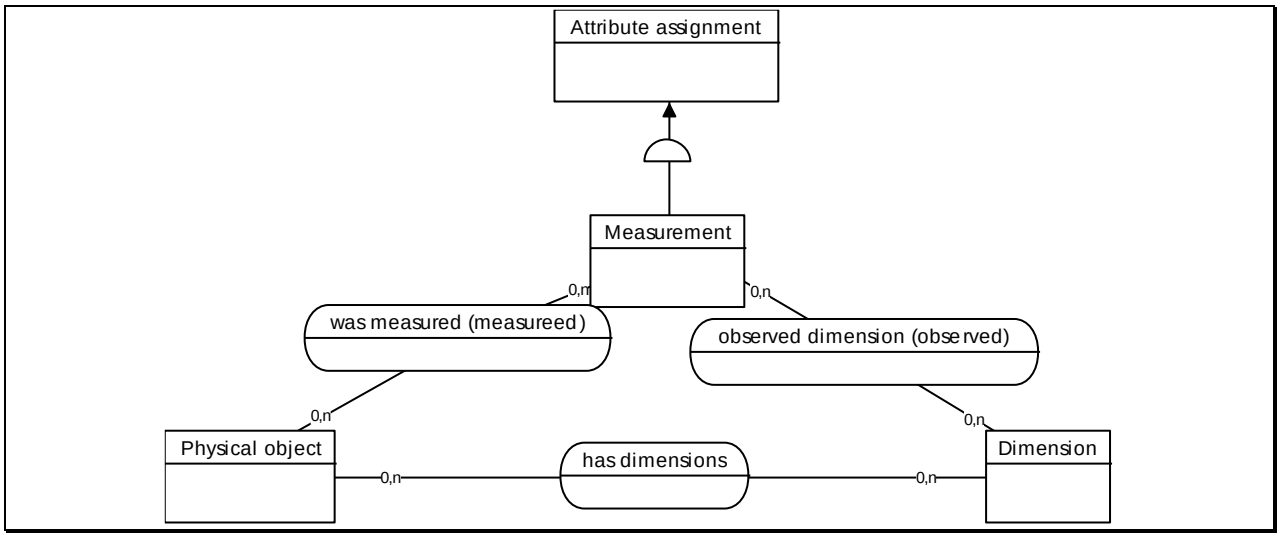
| | | |
|---|---|---|
| | technique | of the text attribute of the ‘has marks’ link. Alternatively a specific attribute might be used if the information is used as an access point. |
| | Mark/inscription position | This information could be included as an attribute of the ‘has mark’ link. A specialised piece of information if used as an access point. |
| | Mark/inscription language | Language attribute of the inscription. |
| | Mark/inscription translation | Translation attribute of the inscription. |

## Material and technique Information



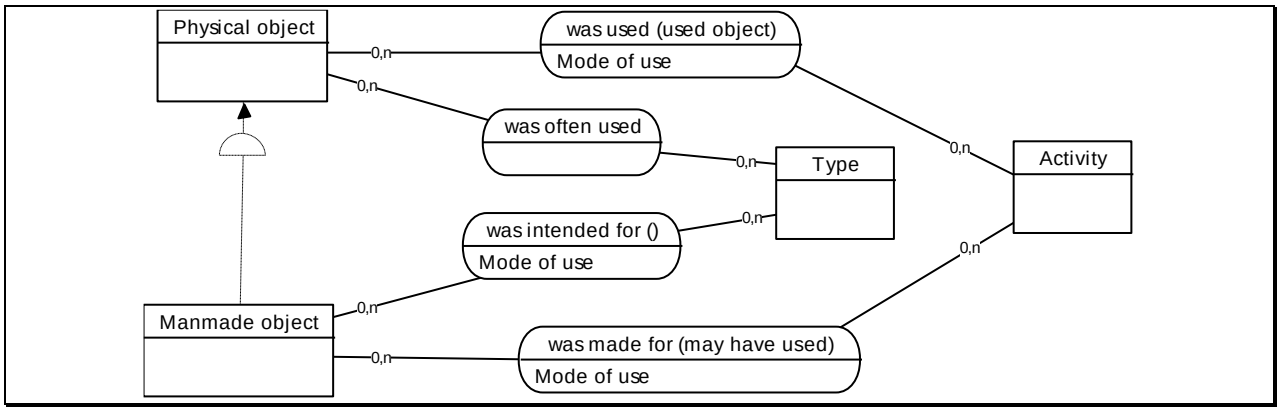

| **Material and Technique Information** | | |
|---|---|---|
| | Material | materials class |
| | Technique | Common techniques can be handled through the *general technique* link as *Types*. Specific techniques can be documented using the *Design or Procedure* class. This defines or describes the way in which a production activity is carried out and the materials used.<br><br>e.g. architectural plans, assembly instructions, recipes, designs, traditional techniques. |
| | Part or component description | Parts can be of different types.. integral, separable, etc. |

## Measurement Information




| **Measurement Information** | | Measuring something is seen as an act of attribute assignment. |
|---|---|---|
| | Dimension | |
| | Measurement | |
| | Measurement unit | |
| | Measured part | feature measured |

## Object Association information



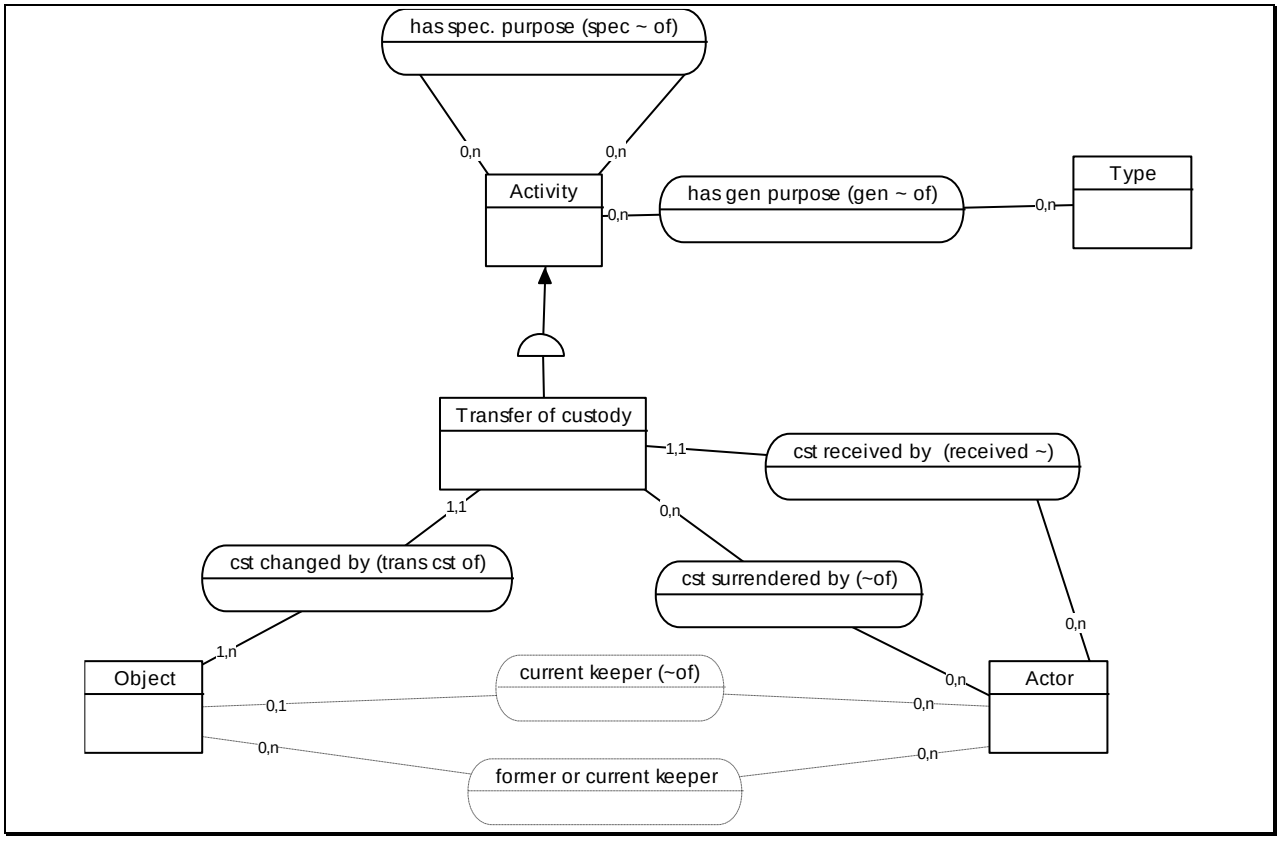

| **Object Association Information** | | History of events associated with the object. Open to specialisation. |
|---|---|---|
| | Associated place | |
| | Associated date | |
| | Associated group/person name | |
| | Association type | |
| | Original function | ‘original’ ? points to type in type hierarchy.<br>Used for - activity type (actual use)<br>used for once - event instance<br>made for - event instance (intended use)<br>made for - activity type.(intended use)<br>See diagram below... (function use) |

## Object collection information

No model

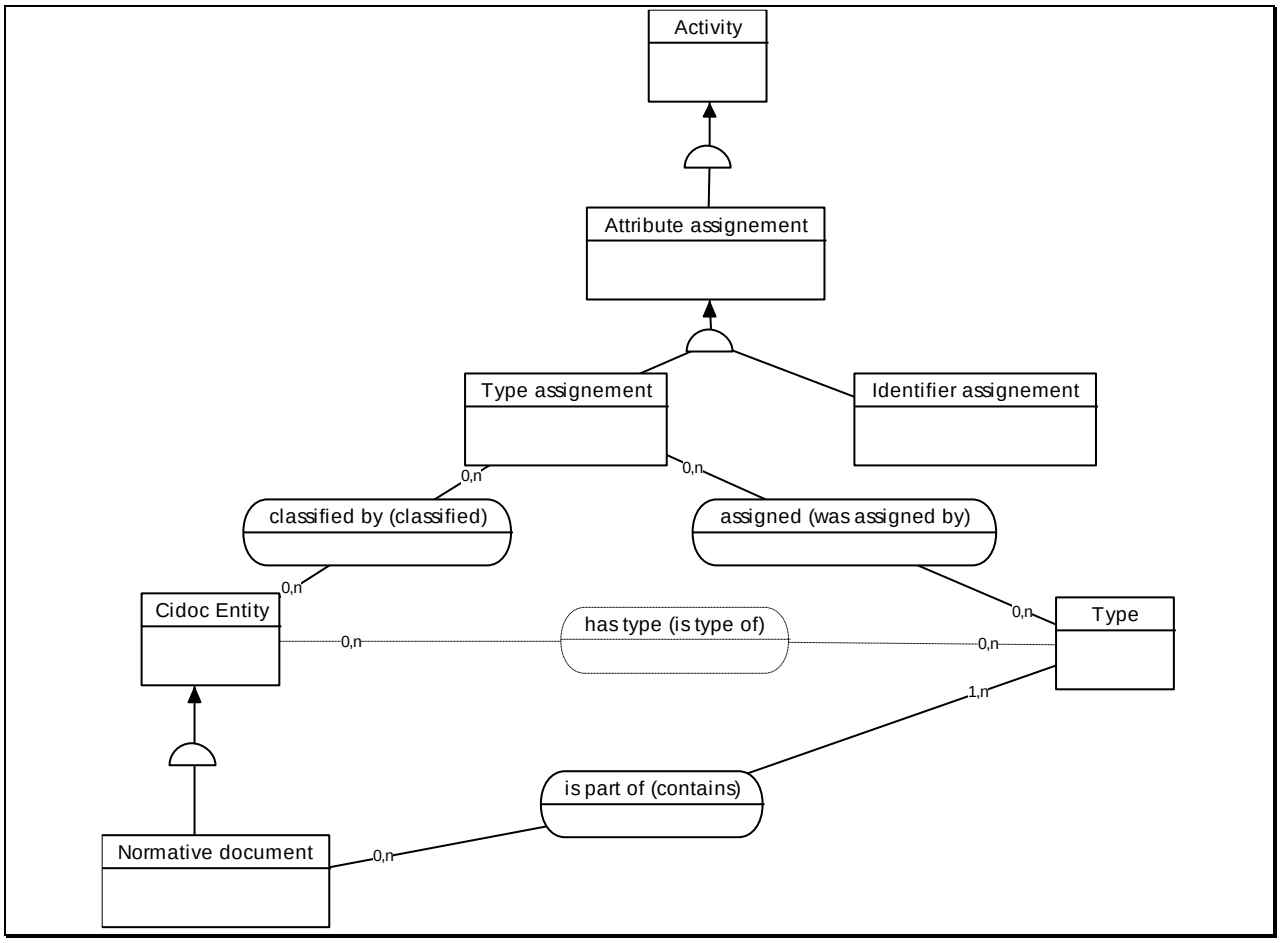
| | | |
|---|---|---|
| **Object Collection Information** | | Could be seen as initial event in ownership history (provenance). (Collecting is a specialisation (type) of an acquisition event.) Or as initial transfer of physical custody, or both. |
| | Collection place | inherited from *Physical Context* |
| | Collection date | *Time-Span* inherited from *Period*. |
| | Collector | *Actor* who acquires the object |
| | Collection method | type of collection method - link to *Type* hierarchy. (eg excavation, trapped, stolen) |

## Object Entry Information




| **Object Entry Information** | | Transfer of physical custody of an object.<br>Object entry and exit are two views of transfer of custody. |
|---|---|---|
| | Current owner | Interpreted as current owner at moment of transfer. Iff data consistency is guaranteed, current owner may be derived from the ownership history. Otherwise a specific link is needed. |
| | Depositor | Actor who surrenders custody of the object |
| | Entry date | Time-span attribute of *Transfer of custody* |
| | Entry number | Object identifier assigned as a result of the transfer event. Either multiple instantiation or multiple inheritance (*transfer of custody* and *identifier assignment*) depending on the organisation's practice. Another possibility : two events grouped by *consists of* link. |
| | Entry reason | General and specific reasons for the transfer taking place : an activity type and a specific activity. NB The specific purpose of an activity should not usually be the same instance as the activity itself. |

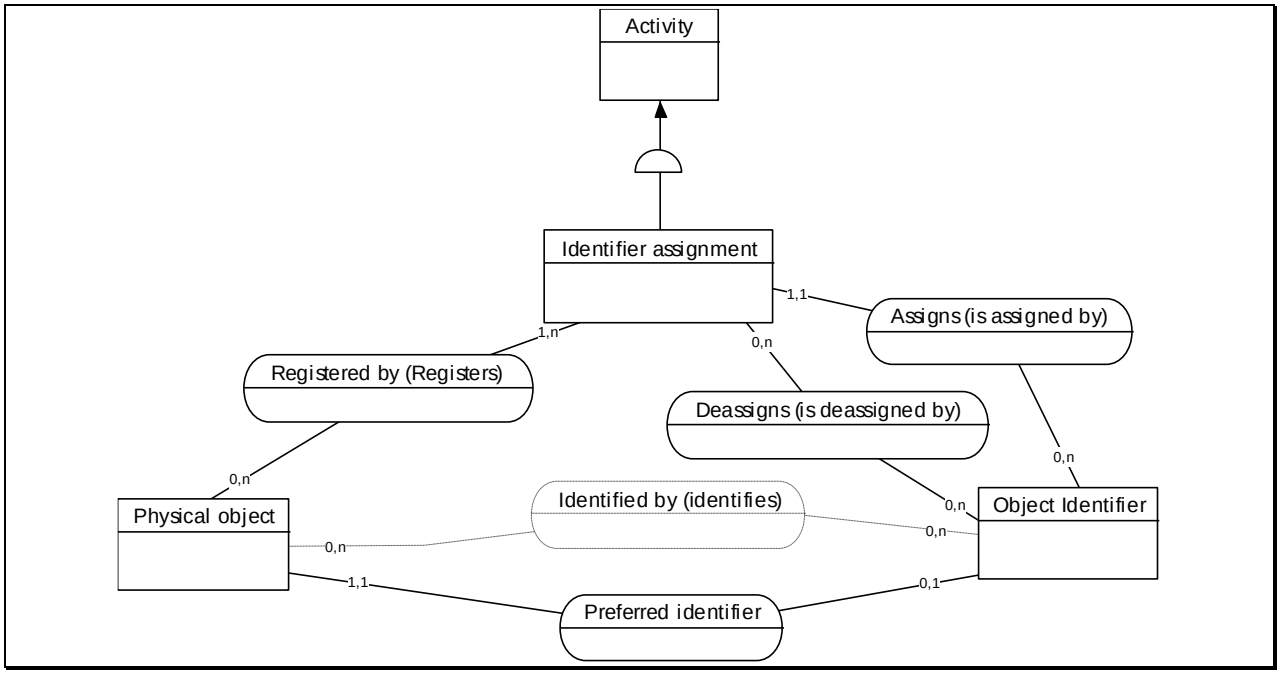
## Object Name Information




| | | |
|---|---|---|
| **Object Name Information** | | The term 'name' is ambiguous. It can be interpreted as the *proper name* or *title* of an individual item, or as a *type* or *class* of items. A proper name arbitrarily identifies a particular item, whereas a class identifies a set of items with common characteristics. e.g. 'La tour Eiffel' is a proper name, whereas *tower* is the class of all towers, which can would be expected to share common properties.<br><br>We propose to use Object *Type* (instead of object name, category, classification, etc.) to refer to classes of objects. Object *Appellation* refers to arbitrarily assigned names, titles, numbers or other tokens used to refer to an individual item. If an appellation refers uniquely, within a certain context, to an individual item, it can be considered as an *Identifier*. |
| | Object name | *CIDOC Type* of an object |

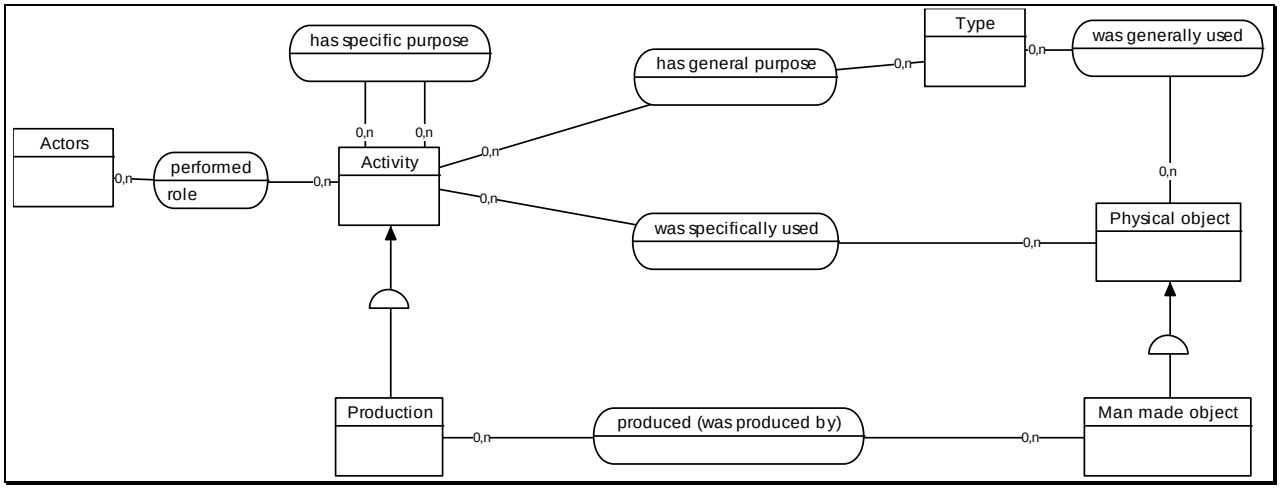
| | | |
|---|---|---|
| | Object name type | The *Type* of the *Reference Document* used.<br><br>In order to enable interoperability, it is essential that type systems refer to a specific *Reference Document*. (This can be stated a) for the entire scope of the database or b) for individual database fields or c) per term, as modelled here.) It is strongly recommended that local, 'ad hoc' systems correlate their terms to a known reference system. (Within the context of the CIDOC reference model, ad hoc systems are considered to be *Reference Documents*.) |
| | Object name authority | *Actor* responsible for the *Type Assignment* |

## Object Number Information



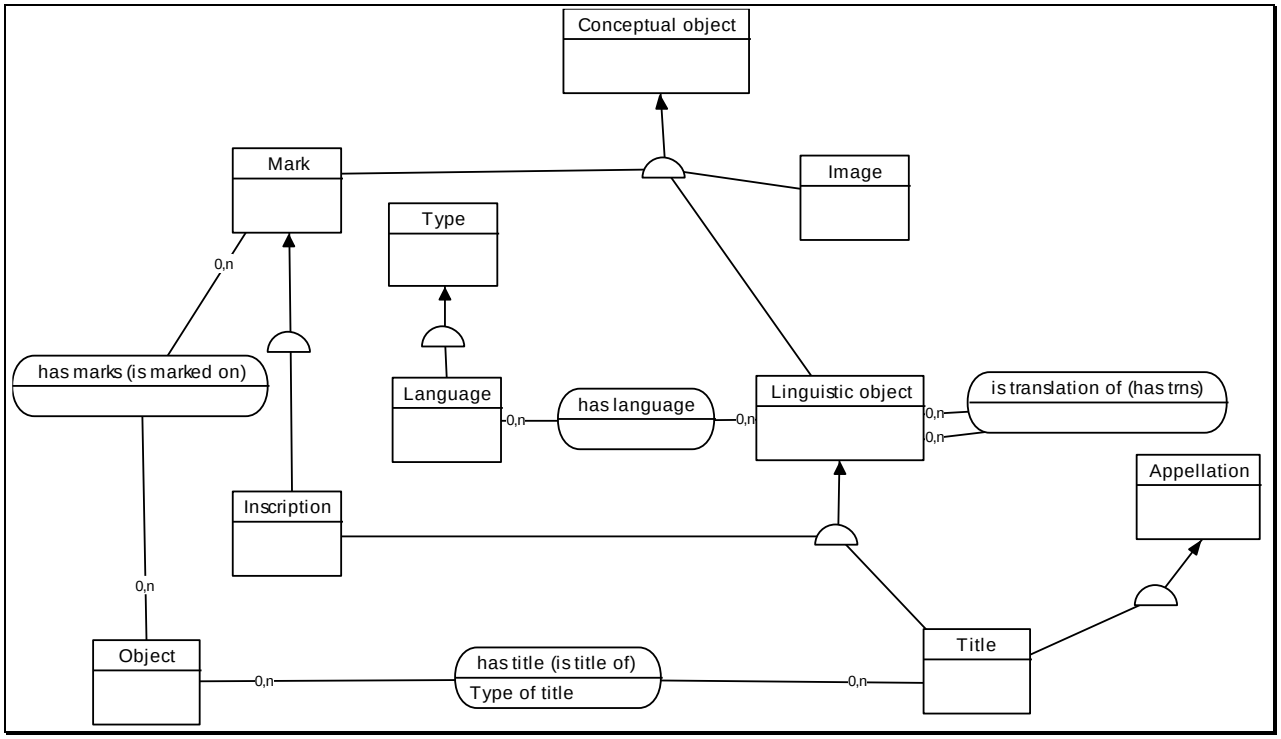

| | | |
|---|---|---|
| **Object Number Information** | | Only one identifier should be used. Associating date and type complexifies the identifier. Should be separated into other, non preferred, numbers. |
| | Object number | Object number is an instance of the class Object Identifier. An identifier is a token - a number or string, which is arbitrarily assigned to an object for use as an identifier. An object identifier should be uniquely assigned to each object.<br><br>Each identifier has a certain scope and context - the environment in which it is unique. e.g. The Smithsonian 1956-1996. |
| | Object number type | The object identifier type - inherited from CIDOC-ENTITY |
| | Object number date | Time-span of the identifier assignement |

## Object Production Information



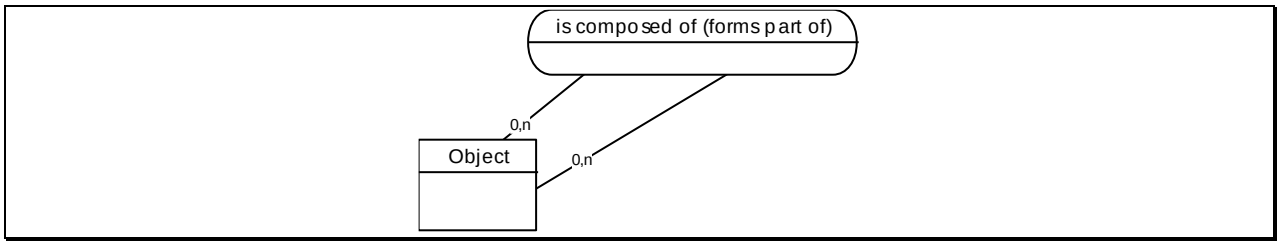

| | | |
|---|---|---|
| **Object Production Information** | | Creation of an object. - in intermediate ‘rôle’ class could be used between production and actor. This would allow for specialisation of the relation. |
| | Production place | Inherited from activity |
| | Production date | idem |
| | Production group/person name | actor |
| | Production role | How someone contributed to the creation. Rôle of the *performed* relation. |

## Object Title information




| **Object Title Information** | | Title is a subclass of linguistic object (itself a sublass of conceptual objects) from which inherits 'linguistic' attributes. Translations are also subclass of intellectual objects (with language attribute). |
|---|---|---|
| | Title | |
| | Title type | Type of title is an attribute of the 'has title' link. |
| | Title translation | Translation attribute inherited from linguistic object. |
| | | |

## Part and component Information

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|---|---|---|
| **Part and Component Information** | | This information could be treated as a sub field of the physical description. |
| | Number of parts or components | |
| | Description of parts and components | |

## Recorder Information

| See model for Object name Information Group |
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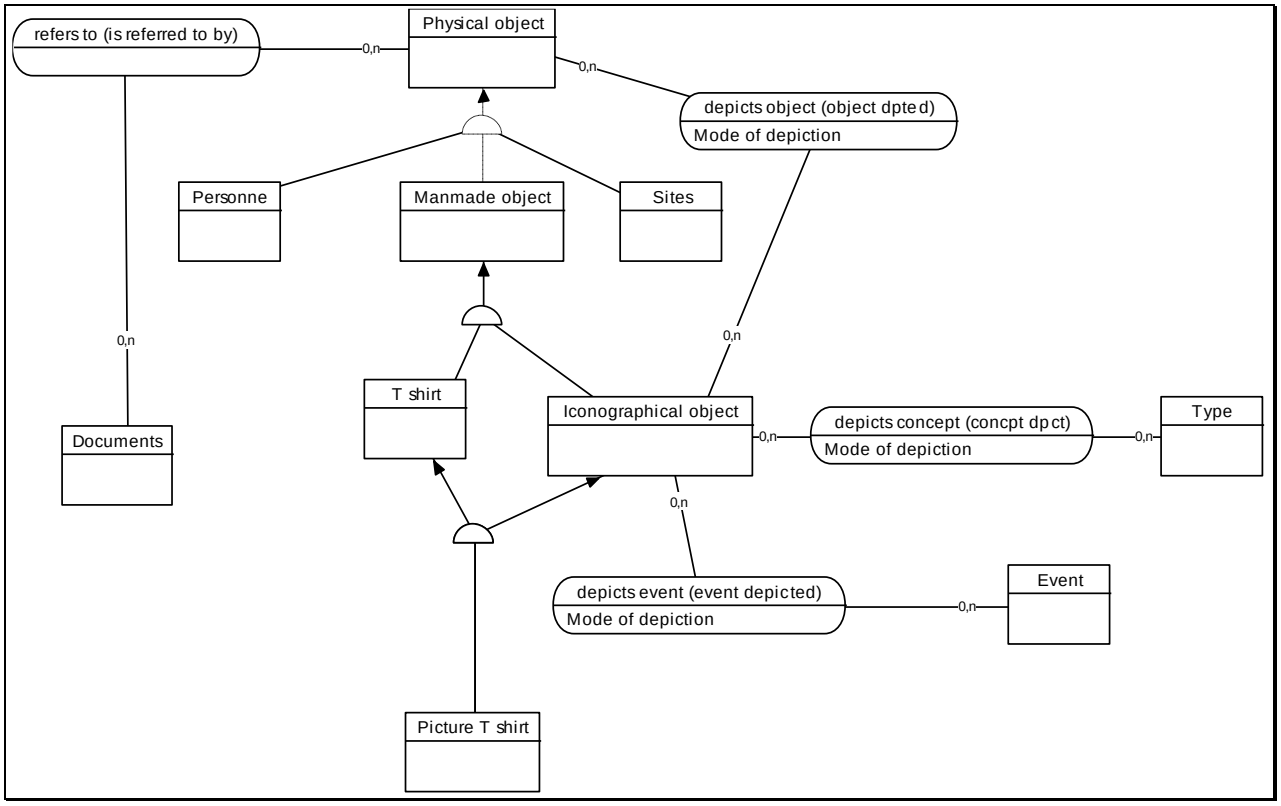
|---|---|---|
| **Recorder Information** | | *Attribute Assignment* is a potential hook in point for information about the recorder of the information. However, using the note field for this purpose is preferred.<br><br>It is recommended that the system should record the author and date of information entry. However, this information need not be available as an access point<br><br>For the purposes of external access, editional information should be generated dynamically as a database 'signature'...<br>• Generate dynamically a 'database' signature : ex SIBIL GENEVA 20/4/1997, at moment of retrieval<br>• Finer granularity ... text format.<br><br>Who is the 'author' ? The authority should be distributed, rather than the data entry person. |
| | Recorder | Optionally per object record<br>Dynamically per database |
| | Record date | |
| | Authority | contrôler, supervisor, |

## Reference information & Subject depicted information




| **Reference Information** | | |
|---|---|---|
| | Reference | Link from *Document* to *Object*. Documents may, of course, refer to things other than objects. However, in the present context, only the documentation of museum objects is of relevance. |
| | Reference type | *Type* attribute of *Document*, inherited from CIDOC entity. |

| **Subject Depicted Information** | | Any man made object which represents or depicts another object, an event, or a concept or a site (place).<br><br>e.g. a photograph, a painting, an engraving, a coin, a T shirt with a design on it.<br><br>NB The scope of the model is restricted to *Objects* which which have iconographical properties. We |
|---|---|---|

| | | |
|---|---|---|
| | | are not dealing here with Barbie impersonators, Patrick Steward in the role of Lear, potatoes that happen to resemble Jimmy Carter and sexually provocative mountains like Twin Peaks. |
| | Subject depicted | Links *depicts concept* (Link to *Type*), *depicts event* and *depicts object.* Each of these links has a Mode of depiction attribute, which allows the *way* in which the iconographic object represents : as main subject, incidental subject, etc. |
| | Subject depicted description | Text attribute of the iconographical object, inherited from CIDOC Entity. |

## Reproduction Rights Information

| No model |
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|---|---|---|
| **Reproduction Rights Information** | | This information could be generalised to include all ‘rights’ granted to an actor concerning an, object or intellectual object, type of right and description. (text) |
| | Reproduction rights note | |
| | Reproduction rights owner | |