# Discussion on harmonization LRM with FRBoo on 40th meeting

## Deleting F14 Individual Work, F15 Complex Work

The crm-sig decided to merge F14 and F15 and delete R9 realizes and revise R10. Reserve judgment on R50 etc. related to representative expression.Thus the accepted changes results in changing the subclasses of F1 work

Change the Domain and the scope note of R10

Change the Range and the scope note of R50

## Making F22 Self-Contained Expression => F2 Expression, deleting F23 Expression Fragment:

The crm-sig accepted that all expressions are self-contained. The idea is that any Expression is self-contained. Not-self-contained parts are more generally E90 Symbolic Objects or Information Objects. The Expression Fragment is not needed, but the property is useful. An Expression Creation creates only self-contained content. If interrupted or in between, we talk about E65 Creation events as part of the overall Expression Creation.

This decision results in deleting the F23 expression fragment.

This change affect the subclasses of F2 Expression. Thus the subclasses of the F2 are F24 Publication Expression = F3 Manifestation, F25 Performance Plan, F26 Recording, F34 KOS

The F35 Nomen Use Statement and F43 Identifier Rule are not F2. They are probably E90 or E89. It should be discussed in the next meeting

In addition, it is decided the substitution of E90 for places where F23 used. Thus the range of R3 is changed.

A discussion point was if a work have to have an expression. In library world, it is the case that there must have been an expression. It is an open question, in wider historical context is it possible to have a Work that DOES NOT have expression. CEO proposed to make this a separate discussion.

The range of R3 is realised in (realises) [=LRM-R4] changed to F2 Expression

The domain and range of R5 has component (is component of) changed to F2 Expression. In order to cover situations like paging in digitization, we made R5 subroperty of P106 (E90 Symbolic Object. P106 is composed of (forms part of): E90 Symbolic Object). It remains open to add the P106 note in scope note, saying that when it has to do with symbolic decomposition that one ought to use this property and not R5.

The range of R15 has fragment (is fragment of) changed to E90 Symbolic Object

The range of R17 created (was created by) changed to F2 expression and it is decided that the scope note should be formluated such that R17 pertains to a self contained content. Scope note should be consistent with the self contained form of F2. To consider in looking at scope note of F2.

Another discussion point was the idea that a “representative fragment” is a fragment of the supposed-to-be-lost self-contained expression. This means, that the representative manifestation may not carry the whole expression, but only a fragment of it.

For the time being the range of all properties related to representativeness has changed to F2 Expression and the consolidation of these postponed for later discussion along with the consideration of the above statement. The properties related to representativeness are:

* R40 has representative expression (is representative expression for)
* R41 has representative manifestation product type (is representative manifestation product type for)
* R42 is representative manifestation singleton for (has representative manifestation singleton)
* R48 assigned to (was assigned by)
* R51 assigned (was assigned by)

## Merging F3 Manifestation Product Type with F24 Publication Expression

Martin proposed the idea: Carrier Production Events are more general than the Product Types. F3 and F24 appear as parallel paths. I propose to reuse the properties of F24 for F3, rename properties and rename F3 to Manifestation. If we accept original manuscripts to be Manifestations (not manually copied books), we cannot distinguish the Expression from the Manifestation, as long as we regard it as immaterial. Therefore, Manifestation MUST be a kind of Expression.

The following discussion points are accepted as principles:

* Manifestation pertains to fixing the sensory signal level of the expression (needs to be formulated).
* Manifestation is a kind of expression.
* We need to differentiate the level of symbolic specificity by which the identity of an expression is defined.
* Distinction between manifestation singleton and product type disappears.
* Product type becomes a special aspect of manifestation. Possible specific product types that are also subtypes of manifestations.
* We must reconsider the following CLP properties/statements of the new class F3 Manifestation (previous F3 Manifestation Product Type).

[CLP2](#_CLP2_should_have_type_(should_be_ty) should have type (should be type of): [E55](#_E55_Type_) Type

[CLP43](#_CLP43_should_have) should have dimension (should be dimension of): [E54](#_E54_Dimension_) Dimension

[CLP45](#_CLP45_should_consist) should consist of (should be incorporated in): [E57](#_E57_Material_) Material

[CLP46](#_CLP46_should_be) should be composed of (may form part of): [F3](#_F3_Manifestation_Product) Manifestation Product Type

[CLP57](#_CLP57_should_have) should have number of parts: [E60](#_E60_Number_1) Number

This raises whole questions of whether individual item contains what it should. It should be raised as separate discussion. We should consider epigraphist position.

About the reintroduction of the incorporate property, the sig decided to consider the specialization of p165 incorporates property in order to handle levels of symbolic specificity, and to discuss bearing on concept of carrying and the role of R4 and whether it is deleted, reused or no.

* It is decided to delete R6 carries (is carried by) and rename R7 is example of (has example) to R7 is materialization of (is materialized in).

Question by PLB about how this property can be P128 carries (is carried by) was a discussion point. It is agreed that this potentially a ‘should’ relation and another discussion should be had related to the deviation that can exist between the individual items and the manifestation. In addition, question of comparing carriers and their defects with the symbolic object is a discussion that could be opened with the epigraphists. Finally, the sig concluded that there are two solutions: Two solutions: either R7 is not a carries relation or we change the definition of property P128 in CRM itself. All carriers are defective. It is decided to postpone to discussion to consider if we should NOT make this subproperty of P128 or if we revise P128. Also P2 is not supeproperty of this ‘new’ **R7**  **is materialization of (is materialized in) [=LRM-R4 Is Exemplified by/Exemplifies]**

* The sig reviewed the F32 Carrier Production Event. Additional comments are:
* F32 is more general than F3
* R26 and R27 could be optionally or necessarily
* There is inconsistency between R28, F54 and R27, F3
* It is required further elaboration and take into consideration consistency between manifestation and the specificity of the produced things. Possible distinctions between industrial processes, reproduction and other ways to produce carriers.
* The sig reviewed the R26 produced things of type (was produced by) and decided the following:
* The quantification changed from (1,n:0,n) to (0,1:0,n). It becomes optional.
* It leaves open the degree to which the manifestation and the product type are identical.
* The sig decided to change the name of the property from R27 used as source material (was used by) to R27 materialized (was materialized by) and decided the following:
* The range of property changed from F24 Publication Expression to F3 Manifestation.
* The scope note changed from:
* The scope note needs further elaboration with respect to the publisher

## F19 Publication Work and Manifestation Creation must pertain to the optical and material form of a distributable item. Rewrite scope note of F30

Comments, actions and decisions taken during this discussion are:

* The concept of publication is ill defined in itself. To control this, we should consider as the bringing into the final communicable material form that would contain signals optical, audio etc. that were intended. Must be communicable and persistent.
* We should revised the scope note of F30 Publication Event with respect to being consistent with the new definition of manifestation. How to express the concept of publication independently from the actual process of making a manifestation and what their relations are (between publication and process of making a manifestation).
* If F19 not needed anymore then R23 should be deleted.
* The range of its property R24 created (was created through)changed from [F24](#_F24_Publication_Expression) Publication Expression to F3 Manifestation. The scope note updated.

We continued with Pat’s HW

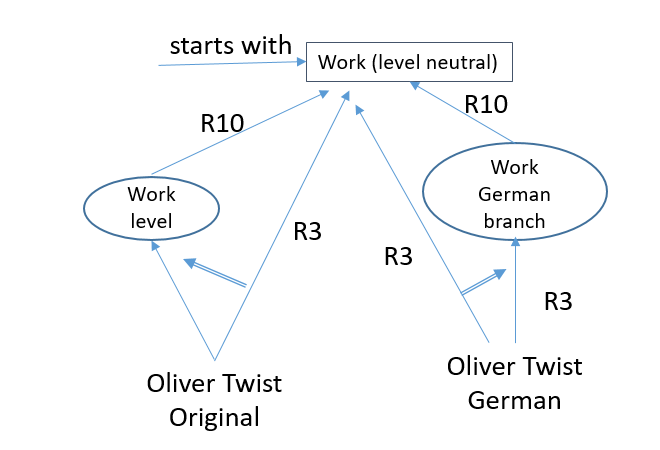
## F1 Work

1. Pat Riva commented that we usually have intellectual and artistic, should we reverse it in the following sentence?

“*This class comprises distinct concepts or combinations of concepts identified in artistic and intellectual expressions*”

1. Pat Riva suggested that members is not the best term. It is better to say components (as in the super property) or just simply parts. The crm-sig agreed that R10 should be a subproperty for ‘strucural parts’ in the sense of components, distinct from general memebership. Thus, we need better examples of R10.

Martin drew on the flipchart the following figure with the translations of Oliver Twist in German



1. The crm-sig discussed that the sentence “A work only exists if at least one expression exists” should be “A work only exists if at least one expression have existed”, since it might be a confusion of evidence and being. The sig assigned HW to Pat and Maja to revise the whole paragraph: “ A Work comes into existence with the creation of its first expression. A work only exists if at least one expression exists. Additional expressions of the work can continue to be created over time. “
2. Revising the scope note of F1 Work we discussed about translations. There was a discussion about the work of a translation.

## Comments on Entities Mappings

### LRM-E5 Item

The definition in LRMer of item seems more general than the LRMoo Item. This sense of item as in FRBRoo is not what we need here. This definition here should be mapped to F54.

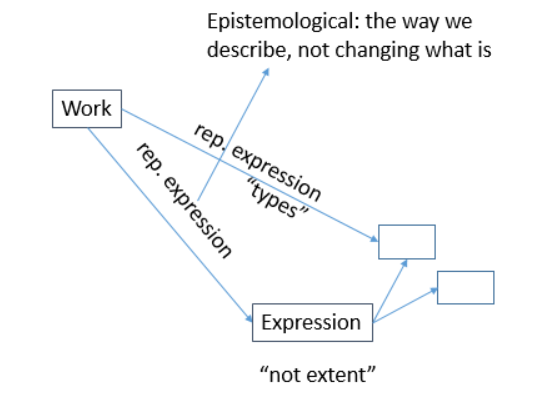
### LRM-E8 Collective Agent

This works but then intended audience cannot be mapped as E74 as it is later on. To be reviewed CIDOC-CRM 40

## Comments on Attributes Mappings

### LRM-E2-A2 Work - Representative expression attribute

This continue to need to be worked out. The cataloguer often will not know what the actual representative expression was. But they know attributes it should have. Not only this but the examples point to different types of attributes which might be given. This would require different paths in CRM. Potentially need a shortcut. Following MD drawing, shortcut would be representative expression “type”



Sometimes we don't even know the original, the types are deducted from analyzing the set. Martin argues that there must have existed at least one which had all the types that are associate to it. The 'has representative expression relation' is epistemological. The way we describe the thing. It does not change what the thing actually is.

### LRM-E3-A3 Expression Intended audience

Decision: is to use P103 E55 and make a particular subtype in LRM for Audience Type

Final analysis: this is a long path, which would be hard to explain to users. Since it is an important attribute then we would need some sort of new subtyping in LRM.

The relation here is incorrect. The Range here should be a type for an actor. Make a subtype of P21 or so. To be done.

### LRM-E3-A8 Expression Medium of performance

We need a new class called musical expression. It is a subclass of expression. This musical expression is either a performance or an annotation. We decided that this needs more thinking and we can discuss this more. Mapping is fine for now, but we should discuss and see the work Pierre Chofee before making final decision.

Create a subclass of expression musical expression to give these attributes. Then would need to make new properties to express these long paths.

### LRM-E4-A3 Manifestation Intended audience

Manifestation will inherit the solution of see P103 specialization can be used as above. Expression mapping that was used above.

### LRM-E4-A4 Manifestation Manifestation statement

This can simply be a note and indicate the type of note using typing on the relation. This is because in the source the data is in free text. A Principle is: if original is free text, no more analysis.

### LRM-E4-A5 Manifestation Access conditions

MD commented that it is an interesting category of things not accessible to human senses that require some mediation to be rendered to the human being. Can be digital such as in these examples but also mechanical like a hurdie gurdie.

Looking at the LRM standard, the definition and the examples do not seem to be in synch. The one talks about how to obtain the manifestation, the other gives examples of preconditions for running a digital object. Need to know which one to interpret.

Pat said that it seems like the examples are the thing to interpret. MD argued that LRM group should look at this field and make a decision on the definition vs examples. This might be exclusively for digital objects/media.

Potentially this can be dropped given the discussion around what is an access condition.

### LRM-E5-A2 Item Use rights

Make sure that mapping of the Item in LRMer to LRMoo F5 is contingent on the final definition of F5. The question will be whether the F5 is a physical object or not.

### LRM-E9-A1 Nomen Category

Case a: the function of the nomen needs example - SS in order for it to make sense

### LRM-E9-A4 Nomen Intended audience

This mapping has to be reconsidered. We can follow the pattern seen above for intended audience. If Nomen Use Statement is an Expression it could inherit this solution. Pat argued that she is not sure that it is an expression. It has no work. R39 anyhow would need to be revised. MD argues that the intended audience is misleading. The real statement is that it is for these actors that the nomen is appropriate. So R39 really has to be revised. Can this also be related to P103 as a sub relation? Anyhow, the range of Group is definitely not correct.

### LRM-E10-A1 Place Category

MD should check the mapping E53 Place. P2 has type: E55 Type {Place:Category} against CRMgeo

### LRM-E10-A2 Place Location

MD should check the mapping E53 Place. P168 is defined by: E94 Space Primitive against CRMgeo

## Comments on Relationships Mappings

### LRM-R3 Expression is embodied in (embodies)

This is an open discussion because this should be some formulation of incorporates. LRM R43 will map to properties still to be defined probably a specialization of incorporates. This will specify a change of symbolic specificity

### LRM-R4 Manifestation is exemplified by (exemplifies) Item

Anything referencing items has to be considered again once the F5 Item is re defined in LRMoo. not yet done.

### LRM-R5 Work was created by (created) Agent

For the next meeting MD will consider different possible ways to express the creation of the work

LRM-R13 Res has appellation (is appellation of) NomenIn the specification, the definition and the examples are not in synch. Here we have mapped what the examples say and not what the definition says.

### LRM-R14 Agent assigned (was assigned by) Nomen

With regards to the LRMer definition it seems that the definition could be sharpened. It seems to refer to a name, but it should refer to an F35. Also the examples have some problems.

This example seems too broad: The term 'proton' *was assigned by* Ernest Rutherford to the hydrogen nucleus in 1920

### LRM-R18 Work has part (is part of) Work

Calls for a specialization in order to indicate structural parts in the sense of the component elements of a work. So we have to create a specialization of membership just for components. We need a good distinction between structural vs temporal component.

MD proposes to keep R10 for any kind of structural OR temporal relationship between works in a hierarchy. Then we should work on a definition in order to be able to create a subproperty which will define a structural component in the sense of temporal simultaneity and how evidence for this is provided. Use of this is not only for FRBRoo but also for buildings and so on. Things that evolve. Also the body and so on.

There is a generic problem here with the part of relation.

### LRM-R20 Work accompanies/complements (is accompanied/complemented by) Work

We need to formulate a mapping that will be used together this concept of intention. HW unassigned.

### LRM-R21 Work is inspiration for (is inspired by) Work

The first comment here was to the definition that not necessarily all the content of the first will be used as the source of ideas for the second. F1 Work R16i was initiated by F27 Work Conception P15 was influenced by F1 Work: a shortcut for this will be created in LRMoo

### LRM-R24 Expression is derivation of (has derivation) Expression

For making this mapping we should create a sub property of P16 in LRM 'derivation source' that would capture just the expressions that were used in an expression concept and are transferred into the product expression, creating derivation chain. Same problem should be faced as in CRMdig and software inputs and outputs etc.

### LRM-R25 Expression was aggregated by (aggregated) Expression

Postpone IFla team still working on

### LRM-R29 Manifestation has alternate (has alternate) Manifestation

Needs a formulation based on intended use

HW is assigned to PAT to look representative and publication event

Scope note of work is HW for Martin

# APPENDIX A : Classes and properties of LRM-FRBRoo discussed

#### F1 Work

Subclass of: [E89](#_E1_CRM_Entity) Propositional ObjectSuperclass of: [F21](#_F21_Recording_Work) Recording Work

[F17](#_F17_Aggregation_Work) Aggregation Work

[F18](#_F18_Serial_Work) Serial Work

Scope note: This class comprises distinct concepts or combinations of concepts identified in artistic and intellectual expressions, such as poems, stories or musical compositions. Such concepts may appear in the course of the coherent evolution of an original idea into one or more expressions that are dominated by the original idea. The conceptual content of a Work can evolve over time, such as through revised editions, translations or other derivatives. A Work may be elaborated by one or more Actors simultaneously or over time. The substance of Work is ideas. A Work may have members that are works in their own right.

A Work comes into existence with the creation of its first expression. A work only exists if at least one expression exists. Additional expressions of the work can continue to be created over time.

A Work is the product of an intellectual process of one or more persons, yet only indirect evidence about it is at our hands. This can be contextual information such as the existence of an order for a work, reflections of the creators themselves that are documented somewhere, and finally the expressions of the work created. As ideas normally take shape during discussion, elaboration and implementation, it is not reasonable to assume that a work starts with a complete concept. In some cases, it can be very difficult or impossible to define the whole of the concept of a work at a particular time. The objective evidence for such a notion can only be based on a stage of expressions at a given time. In this sense, the sets of ideas that constitute particular expressions may be regarded as a kind of “snap-shot” of a work.

Bibliographic and cultural conventions play a crucial role in determining the exact boundaries between similar instances of *works*. User needs are the basis for determining whether instances of *expression* are considered to belong to the same instance of *work*. When the majority of users, for most general purposes, would regard the *expression* instances as being intellectually equivalent, then these *expressions* are considered to be *expressions* of the same *work*.

Generally, when a significant degree of independent intellectual or artistic effort is involved in the production of an *expression*, the result is viewed as a new *work* with a derivation relationship to the source *work*. Thus paraphrases, rewritings, adaptations for children, parodies, musical variations on a theme and free transcriptions of a musical composition are usually considered to represent new *works*. Similarly, adaptations of a *work* from one literary or art form to another (e.g., dramatizations, adaptations from one medium of the graphic arts to another, etc.) are considered to represent new *works*. Abstracts, digests and summaries are also considered to represent new *works*.

The essence of the *work* is the constellation of concepts and ideas that form the shared content of what we define to be *expressions* of the same *work*. A *work* is perceived through the identification of the commonality of content between and among various *expressions*. However, similarity of factual or thematic content alone is not enough to group several *expressions* as realizing the same instance of *work*. For example, two textbooks both presenting an introduction to calculus, or two oil paintings of the same view (even if painted by the same artist), would be considered distinct *works* if independent intellectual or artistic effort was involved in their creation.

A Work may include the concept of aggregating expressions of other works into a new expression. For instance, an anthology of poems is regarded as a work in its own right that makes use of expressions of the individual poems that have been selected and ordered as part of an intellectual process. This does not make the contents of the aggregated expressions part of this work.

Examples: Abstract content of Giovanni Battista Piranesi’s ‘Carcere XVI: the pier with chains: 1st state’ (F14)

‘La Porte de l’Enfer’ by Auguste Rodin conceived between 1880 and 1917 (F15)

‘Hamlet’ by William Shakespeare (F15)

Properties**:** [R1](#_R1_is_logical_1) is logical successor of (has successor): [F1](#_F1_Work_1) Work

Rn is inspiration for (was inspired by): F1 Work

[R2](#_R2_is_derivative) is derivative of (has derivative): [F1](#_F1_Work_1) Work (R2.1 has type: [E55](#_E55_Type_) Type)

[R3](#_R3_is_realised_1) is realised in (realises): [F22](#_F22_Self-Contained_Expression) Self-Contained Expression (this is exactly the same)

[R40](#_R40_has_representative_expression_() has representative expression (is representative expression for): [F22](#_F22_Self-Contained_Expression) Self-Contained Expression we should preserve in some form

#### F2 Expression

Subclass of: [E73](#_E73_Information_Object_) Information Object

Superclass of: [F24](#_F24_Publication_Expression) Publication Expression = F3 Manifestation

[F25](#_F25_Performance_Plan) Performance Plan

[F26](#_F26_Recording) Recording

F34 KOS

Scope note: This classcomprises distinct combinations of signs of any form or nature (including visual, aural or gestural signs) intended to convey intellectual or artistic content and identifiable as such. F2 Expressions are the intellectual or artistic realisations of *works* in the form of identifiable immaterial objects, such as texts, poems, jokes, musical or choreographic notations, movement pattern, sound pattern, images, multimedia objects, or any combination of such forms that have objectively recognisable structures. The substance of F2 Expression is signs.

An F2 Expression comes into existence simultaneously with the creation of its first manifestation. Expressions cannot exist without a physical carrier, but do not depend on any specific physical carrier and can exist on one or more carriers simultaneously. Carriers may include human memory.

Inasmuch as the form of an F2 Expression is an inherent characteristic of the F2 Expression, any change in form (e.g., from alpha-numeric notation to spoken word, a poem created in capitals and rendered in lower case) is a new F2 Expression. Similarly, changes in the intellectual conventions or instruments that are employed to express a *work* (e.g., translation of a text from one language to another) result in the creation of a new F2 Expression. Thus, if a text is revised or modified, the resulting F2 Expression is considered to be a new F2 Expression. Minor changes, such as corrections of spelling and punctuation, etc., are normally considered variations within the same F2 Expression. On a practical level, the degree to which distinctions are made between variant *expressions* of a *work* will depend to some extent on the nature of the F1 Work itself, and on the anticipated needs of users. [have not added (from LRM): and on what the cataloguer can reasonably be expected to recognize ...]

The genre of the F1 Work may provide an indication of which features are essential to the F2 Expression. In some cases, aspects of physical form, such as typeface and page layout, are not integral to the intellectual or artistic realisation of the *work* as such, and therefore are not distinctive criteria for the respective expressions. For another work, features such as layout may be essential. For instance, the author or a graphic designer may wrap a poem around an image.

[Notes from October meeting, seem to be covered, do not see any need to add text: The identity of an expression has different levels, and depend on the level at which the symbols are relevant—to cover the criteria varying depending on characteristics. More specific identity criteria can be included in less specific criteria. The level of specificity of symbols cannot be globally defined (typeface, etc is not globally significant, nor is spelling]

[Expressions may be extant, fragmentary or lost. This affects how we determine identity conditions: if extant, we use the symbolic content of the expression; if fragmentary: we are reconstructing based on the fragments we have; if expressions are lost, we have only evidence in historical sources]

An expression of a work which is composed of structural or logical parts that are themselves works, will realise these works, and the resulting larger expression will be composed of expressions of these component works.

However, the expression of an aggregating work, which consists only of the plan for the selection, arrangement, etc. of specific pre-existing expressions of other works, does not contain those expressions. For instance, an aggregating work behind the creation of an anthology of poems is regarded as a work in its own right. TThe aggregating expression makes use of expressions of the individual poems that have been selected and ordered as part of an intellectual process. This does not make the aggregated expressions component parts of this expression of an aggregating work, but only parts of the resulting F24 Publication expression(?).

[Notes from October meeting, not done: Critical edition: we should take a position for digital humanities. It is needed to be described that this work is the bridge between library work and scholarly work, we need to find someone to apply FRBRoo to critical editions—Christian-Emil]

If an instance of F2 Expression is of a specific form, such as text, image, etc., it may be simultaneously instantiated in the specific classes representing these forms in CIDOC CRM. Thereby one can make use of the more specific properties of these classes, such as language (which is applicable to instances of E33 Linguistic Object only).

…….

Properties**:** [R4](#_R4_carriers_provided) carriers provided by (comprises carriers of): [F3](#_F3_Manifestation_Product) Manifestation Product Type

[R5](#_R5_has_component) has component (is component of): F2 Expression

[R15](#_R15_has_fragment_) has fragment (is fragment of): E90 Symbolic Object

[R41](#_R41_has_representative_manifestatio) has representative manifestation product type (is representative manifestation product type for): [F3](#_F3_Manifestation_Product) Manifestation Product Type (it might be not needed, or should be reworked)

Merging F3 Manifestation Product Type with F24 Publication Expression

The idea: Carrier Production Events are more general than the Product Types. F3 and F24 appear as parallel paths. I propose to reuse the properties of F24 for F3, rename properties and rename F3 to Manifestation. If we accept original manuscripts to be Manifestations (not manually copied books), we cannot distinguish the Expression from the Manifestation, as long as we regard it as immaterial. Therefore, Manifestation MUST be a kind of Expression.

#### F3 Manifestation

Subclass of: F2 Expression

[E72](#_E72_Legal_Object_1) Legal Object

Scope note: This class comprises the definitions of publication products.

An instance of F3 Manifestation Product Type is the “species”, and all copies of a given object are “specimens” of it. An instance of F3 Manifestation Product Type defines all of the features or traits that instances of F5 Item normally display in order that they may be recognised as copies of a particular publication. However, due to production problems or subsequent events, one or more instances of F5 Item may not exhibit all these features or traits; yet such instances still retain their relationship to the same instance of F3 Manifestation Product Type.

The features that characterise a given instance of F3 Manifestation Product Type include: one instance of F24 Publication Expression, containing one or more than one instance of F2 Expression, reflecting the authors’ content of the manifestation and all additional input by the publisher; and the appropriate types of physical features for that form of the object. For example, hardcover and paperback are two distinct publications (i.e. two distinct instances of F3 Manifestation Product Type) even though authorial and editorial content are otherwise identical in both publications. The activity of cataloguing aims at the most accurate listing of features or traits of an instance of F3 Manifestation Product Type that are sufficient to distinguish it from another instance of F3 Manifestation Product Type.

…………

Properties**:** [CLP2](#_CLP2_should_have_type_(should_be_ty) should have type (should be type of): [E55](#_E55_Type_) Type

[CLP43](#_CLP43_should_have) should have dimension (should be dimension of): [E54](#_E54_Dimension_) Dimension

[CLP45](#_CLP45_should_consist) should consist of (should be incorporated in): [E57](#_E57_Material_) Material

[CLP46](#_CLP46_should_be) should be composed of (may form part of): [F3](#_F3_Manifestation_Product) Manifestation Product Type

[CLP57](#_CLP57_should_have) should have number of parts: [E60](#_E60_Number_1) Number

We should reconsider the CLP104/105

We should reintroduce the “incorporates” property! Possibly R4? ***Or delete R4***

#### F14 Individual Work deprecated- merged

#### F15 Complex Work deprecated- merged

Delete F23 Expression Fragment – replace by E90 Symbolic Object

#### F23 Expression Fragment (deprecated)

#### F24 Publication Expression (is merged with F3 Manifestation Product Type => F3 Manifestation)

#### F30 Publication Event [=LRM-R7 manifestation creation]

Subclass of: [F28](#_F31_Expression_Creation) Expression Creation

Scope note: This class comprises the activities of publishing. Such an event includes the creation of an F24 Publication Expression and setting up the means of production. The end of this event is regarded as the date of publication, regardless of whether the carrier production is started. Publishing can be either physical or electronic. Electronic publishing is regarded as making an instance of F24 Publication Expression available in electronic form on a public network. Electronic Publishing does not mean producing a physical instance of F5 Item by partially electronic means. Making an electronic file available on a physical carrier can be regarded as equivalent to setting up the means of production; downloading the file is regarded as the electronic equivalent of F32 Carrier Production Event.

Examples: Publishing Amerigo Vespucci’s ‘Mundus novus’ in Paris ca. 1503-1504

Establishing in 1972 the layout, features, and prototype for the publication of ‘The complete poems of Stephen Crane, edited with an introduction by Joseph Katz’ (ISBN ‘0-8014-9130-4’), which served for a second print run in 1978

Making available online the article by Allen Renear, Christopher Phillippe, Pat Lawton, and David Dubin, entitled ‘An XML document corresponds to which FRBR Group 1 entity?’ <<http://conferences.idealliance.org/extreme/html/2003/Lawton01/EML2003Lawton01.html>>

Properties**:** [R23](#_R23_created_a) created a realisation of (was realised through): [F19](#_F19_Publication_Work) Publication Work

[R24](#_R24_created_(was) created (was created through): F3 Manifestation

#### F32 Carrier Production Event [= LRM-R8 manufactured]

Subclass of: [E12](#_E12_Production_) Production

Scope note: This class comprises activities that result in instances of F54 Utilised Information Carrier coming into existence. Both the production of a series of physical objects (printed books, scores, CDs, DVDs, CD-ROMS, etc.) and the creation of a new copy of a file on an electronic carrier are regarded as instances of F32 Carrier Production Event.

Typically, the production of copies of a publication (no matter whether it is a book, a sound recording, a DVD, a cartographic resource, etc.) strives to produce items all as similar as possible to a prototype that displays all the features that all the copies of the publication should also display, which is reflected in property *R27 used as source material* F24 Publication Expression.

Examples: The printing of copies of the 3rd edition of ‘Codex Manesse: die Miniaturen der großen Heidelberger Liederhandschrift, herausgegeben und erläutert von Ingo F. Walther unter Mitarbeit von Gisela Siebert’, Insel-Verlag, 1988 [a fac-simile edition of an illuminated mediaeval manuscript]

The printing of copies of the ‘Ordnance Survey Explorer Map 213, Aberystwyth & Cwm Rheidol’, ISBN 0-319-23640-4 (folded), 1:25,000 scale, released in May 2005 [a cartographic resource]

The production of copies of the sound recording titled ‘The Glory (????) of the human voice’, RCA Victor Gold Seal GD61175, containing recordings of musical works performed by Florence Foster Jenkins [a sound recording; the question marks in parentheses belong to the original title]

My clicking now on the link <<http://cidoc.ics.forth.gr/docs/cidoc_crm_version_4.0.pdf>>, and thus downloading on my PC a reproduction of the electronic file titled ‘Definition of the CIDOC Conceptual Reference Model… version 4.0’ that is stored on the ICS FORTH’s servers in Heraklion, Crete

The second print run, in 1978, of ‘The complete poems of Stephen Crane, edited with an introduction by Joseph Katz’ (ISBN ‘0-8014-9130-4’), a publication dated 1972 [publication of a printed text]

Properties**:** [R26](#_R26_produced_things) produced things of type (was produced by): E99 Product Type

[R27](#_R27_used_as) materialized (was materialized by) F3 Manifestation

[R28](#_R28_produced_(was) produced (was produced by): [F54](#_F54_Utilized_Information) Utilised Information Carrier (there is an inconsistency between R28-F54 with R27-F3)

#### F33 Reproduction Event

Subclass of: [E12](#_E12_Production_) Production

Scope note: This class comprises activities that consist in producing items of a new instance of Fn Manifestation that preserve both the content and layout found on items of a pre-existing instance of Fn Manifestation. The individual instance or instances of F5 Item that was or were used as a source for this process may be precisely identified or not. Such activities result in products known as facsimiles, reproductions, reprints, reissues, or new releases.

Examples: The 2014 publication of Daniel Wilson's 'Caliban: the missing link' by Cambridge University Press (a facsimile edition of the 1873 publication by Macmillan)

The 2015 publication of Harry Partch's 'Two studies on ancient Greek scales' by Schott (which reproduces Harry Partch's holograph manuscript)

Properties**:**

[R30](#_R30_produced_(was) produced (was produced by): Fn Manifestation

Rn reproduced object: E84 Information Carrier

Rn reproduced publication: Fn Manifestation

#### F35 Nomen Use Statement

Subclass of:

[E29](#_E29_Design_or_) Design or Procedure

Scope note: This class comprises statements relating an instance of E1 CRM Entity with a particular instance of F12 Nomen and its usage in a given context.

Examples: 'Definition of 'poison''…'1. variable noun: Poison is a substance that harms or kills people or animals if they swallow it or absorb it.' [Part of the definition of the English term 'poison' from the Collins English dictionary, <https://www.collinsdictionary.com/dictionary/english/poison>, as of 2 December 2017]

‘010 **\_\_** |a sh 85082387’…‘450 \_\_ |aEquations, Maxwell’ [MARC 21 encoding of a variant subject access point, from the same source]

‘PTBNP|20891’…‘200 1‎‡a Whitman,‏ ‎‡b Walt,‏ ‎‡f 1819-1892‏’ [UNIMARC encoding of the preferred access point for a personal name, from the authority file of the National Library of Portugal, as found on VIAF, <http://www.viaf.org/processed/PTBNP%7C20891>, on 28 September 2015]

‘001  FRBNF119547493’…‘100  w.0..barus.$aGončarova$mNatalʹâ Sergeevna$d1881-1962’ [INTERMARC encoding of the preferred access point for a personal name, from the authority file of the National Library of France, [http://catalogue.bnf.fr/ark:/12148/cb119547494/ INTERMARC](http://catalogue.bnf.fr/ark:/12148/cb119547494/INTERMARC), as of 15 June 2012]

‘001  FRBNF119547493’…‘100  w.0..c.rus.$aГончарова$mНаталья Сергеевна$d1881-1962’ [INTERMARC encoding of a parallel access point from the same source]

‘001  FRBNF119547493’…‘400  $w....b.eng.$aGoncharova$mNatalia$d1881-1962’ [INTERMARC encoding of a variant access point from the same source]

‘<eac-cpf […]> <control> <recordId>beinecke.7h44jbj</recordId> […] </control>’ … ‘<cpfDescription> <identity> <entityType>family</entityType> <nameEntry xml:lang="eng" scriptCode="Latn"><part localType="100a">Boswell family</part> […] </nameEntry> […] </identity> </cpfDescription> […] </eac-cpf>’ [EAC encoding of the preferred access point for a family]

Properties**:** [R32](#_R32_is_warranted) is warranted by (warrants): [F52](#_F52_Name_Use_Activity) Name Use Activity

[R35](#_R35_is_specified) is specified by (specifies): [F34](#_F34_KOS) KOS

(R35.1 has status: [E55](#_E55_Type_) Type)

[R36](#_R36_uses_script) uses script conversion (is script conversion used in): [F36](#_F36_Script_Conversion) Script Conversion

[R37](#_R37_states_as) states as nomen (is stated as nomen in): [F12](#_F12_Nomen) Nomen

[R38](#_R38_refers_to_thema_(is_thema_of)) refers to thema (is thema of): [E1](#_E1_CRM_Entity_) CRM Entity

[R39](#_R39_is_intended) is intended for (is target audience in): [E74](#_E74_Group_) Group

[R54](#_R54_has_nomen) has nomen language (is language of nomen in): [E56](#_E56_Language_1) Language

[R55](#_R55_has_nomen) has nomen form (is nomen form in): [E55](#_E55_Type_) Type

[R56](#_R56_has_related) has related use (is related use for): [F35](#_F35_Nomen_Use_Statement) Nomen Use Statement

(R56.1 has type: [E55](#_E55_Type_) Type)

#### F43 Identifier Rule

Subclass of: [E29](#_E29_Design_or_) Design or Procedure

[F2](#_F2_Expression) Expression

Scope note: This class comprises sets of instructions relating to the formulation of a unique identifier.

Examples: AACR2R 25.25-25.35F1

RAK-Musik (Revidierte Ausgabe 2003), Chapter 6

AFNOR Z 44-079

#### F54 Utilised Information Carrier

Subclass of: [E84](#_E84_Information_Carrier_) Information Carrier

Superclass of: [F53](#_F53_Material_Copy) Material Copy

[F5](#_F5_Item_1) Item

[Use of the Storage Unit class to also express the situation when the Item is “smaller” than the physical object, as in multiple digital files on a single medium. It's also the "bound with" situation]

Scope note: This class comprises physical objects that carry one or more instances of Fn Manifestation.

Examples: The physical features created on my PC’s hard drive when I clicked on the link <<http://cidoc.ics.forth.gr/docs/cidoc_crm_version_4.0.pdf>>, and thus downloaded a reproduction of the electronic file titled ‘Definition of the CIDOC Conceptual Reference Model… version 4.0’ that is stored on the ICS FORTH’s servers in Heraklion, Crete (F53)

Any copy of the modern reprint publication of Marin Mersenne’s ‘Harmonie universelle’, Paris, 1986, ISBN ‘2-222-00835-2’ (F5)

Properties: [R6](#_R6_carries_(is) carries (is carried by): Fn Manifestation

[Should we deprecate this class? There is nothing now in its new Scope note that distinguishes it from F5 Item.]

#### R3 is realised in (realises) [=LRM-R4]

Domain: [F1](#_F1_Work_1) Work

Range: [F2](#_F22_Self-Contained_Expression) Expression

Superproperty of: [F14](#_F16_Rules) Individual Work. [R9](#_R9_is_realised) is realised in (realises): [F22](#_F22_Self-Contained_Expression) Self-Contained Expression [deleted]

[F20](#_F20_Performance_Work) Performance Work. [R12](#_R12_is_realised_1) is realised in (realises): [F25](#_F25_Performance_Plan) Performance Plan

[F21](#_F21_Recording_Work) Recording Work. [R13](#_R13_is_realised_1) is realised in (realises): [F26](#_F26_Recording) Recording

[F1](#_F1_Work_1) Work. [R40](#_R40_has_representative_expression_() has representative expression (is representative expression for): [F22](#_F22_Self-Contained_Expression) Self-Contained Expression

Subproperty of: [E70](#_E70_Thing_1) Thing. [P130](#_P130__shows_) shows features of (features are also found on): [E70](#_E70_Thing_1) Thing

Quantification: (0,n:1, n)

Scope note: This property associates an instance of F22 Self-Contained Expression with an instance of F1 Work.

This property expresses the association that exists between an expression (F22) and the work that this expression conveys. The semantics of the association will be different depending on what specific subtype of F1 Work the work is an instance of. If the work is an instance of F14 Individual Work, the F22 Self-Contained Expression completely conveys the individual work. If the work is an instance of F15 Complex Work, the F22 Self-Contained Expression conveys an alternative member of the complex work.

Our factual knowledge of how a given work is realised into an expression is often limited and this property makes it possible to express the association between instances of F22 Self-Contained Expression and the work it conveys without using the more developed paths.

The property *R3.1 has type:* E55 Type allows for specifying the role played by the referred to expression in the overall bibliographic history of the work (e.g., ‘progenitor expression’, on which all other expressions of the same work are based; ‘reference for canonical citations’, in the sense of the HuCit ontology developed by Matteo Romanello and Michele Pasin; ‘earliest draft’, ‘intermediate draft’, ‘final clean draft’, ‘princeps edition’, etc.).

Examples: Dante’s work entitled ‘Inferno’ (F15) *R3 is realised in* the Italian text of Dante’s ‘Inferno’ as found in the authoritative critical edition *La Commedia secondo l’antica vulgata a cura di Giorgio Petrocchi*, Milano: Mondadori, 1966-67 (= Le Opere di Dante Alighieri, Edizione Nazionale a cura della Società Dantesca Italiana, VII, 1-4) (F22) *R3.1 has type* authoritative critical edition (E55)

Mozart’s work entitled ‘Il dissoluto punito ossia il Don Giovanni’ (F15) *R3 is realised in* the notated music of the Prague version, as found on manuscript Ms 1548 of the National Library of France (F22) *R3.1 has type* autograph version (E55)

Properties: R3.1 has type: [E55](#_E55_Type_) Type

#### R5 has component (is component of)

Domain: [F2](#_F22_Self-Contained_Expression) Expression

Range: [F2](#_F22_Self-Contained_Expression) Expression

Subproperty of: [E89](#_E89_Propositional_Object) Propositional Object. [P148](#_P148_has_component_1) has component (is component of): [E89](#_E89_Propositional_Object) Propositional Object

[E90](#_E90_Symbolic_Object_1) Symbolic Object. [P106](#_P106_is_composed_) is composed of (forms part of): [E90](#_E90_Symbolic_Object_1) Symbolic Object

Quantification: (0,n:0,n)

Scope note: This property associates an F2 Expression X with a structural component Y that conveys in itself the complete concept of a work that is a component of the overall work realized by X.

the overall work realized by X.

It does not cover the relationship that exists between pre-existing expressions that are re-used in a new, larger expression and that new, larger expression. Such a relationship is modelled by *P165 incorporates*.

Examples: The Italian text of Dante’s textual work entitled ‘Divina Commedia’ (F22) *R5 has component* the Italian text of Dante’s textual work entitled ‘Inferno’ (F22)

The musical notation of Mozart’s Singspiel entitled ‘Die Zauberflöte’ (F22) *R5 has component* the musical notation of Mozart’s aria entitled ‘Der Hölle Rache’, also known as ‘The Queen of the Night’s Aria’ (F22)

The visual content of the map entitled ‘Wales – The Midlands – South West England’, scale 1:400,000, issued by Michelin in 2005 (F22) *R5 has component* the visual content of the inset entitled ‘Liverpool’, scale 1:200,000, set within the compass of the map titled ‘Wales – The Midlands – South West England’, scale 1:400,000, issued by Michelin in 2005 (F22)

#### R6 carries (is carried by) (deprecated)

#### R7 is materialization of (is materialized in) [=LRM-R4]

Domain: [F5](#_F5_Item_1) Item

Range: [F3](#_F3_Manifestation_Product) Manifestation

Subproperty of: [E1](#_E1_CRM_Entity_) CRM Entity. [P2](#_P2_has_type_) has type (is type of): [E55](#_E55_Type_) Type

Subproperty of: [E24](#_E24_Physical_Man-Made_1) Physical Man-Made Thing. [P128](#_P128_carries_(is_1) carries (is carried by): [E73](#_E73_Information_Object_) Information Object

Quantification: (1,1:0,n)

Scope note: This property associates a publication with one of its exemplars.

It is a shortcut of the more developed path: F5 Item *R28i was produced by* F32 Carrier Production *R26 produced things of type (was produced by):* F3 Manifestation Product Type.

Examples: The item held by the National Library of France and identified by shelf mark ‘Res 8 P 10’ (F5) *R7 is example of* the edition of Amerigo Vespucci’s textual and cartographic work entitled ‘Mundus novus’ issued in Paris ca. 1503-1504 (F3)

#### R9 is realised in (realises) (deprecetd)

Domain: [F14](#_F16_Rules) Individual Work

Range: [F22](#_F22_Self-Contained_Expression) Self-Contained Expression

Subproperty of: [F1](#_F1_Work_1) Work. [R3](#_R3_is_realised_1) is realised in (realises): [F22](#_F22_Self-Contained_Expression) Self-Contained Expression

Quantification: (1,1:1,1)

Scope note: This property associates an F14 Individual Work with the unique F22 Self-Contained Expression that completely conveys it.

It is a shortcut for the more developed path: F14 Individual Work *R19i was realised through* F28 Expression Creation *R17 created* F22 Self-Contained Expression.

Examples: Abstract content of Giovanni Battista Piranesi’s graphic work entitled ‘Carcere XVI: the pier with chains: 2nd state’ (F14) *R9 is realised in* Giovanni Battista Piranesi’s graphic work entitled ‘Carcere XVI: the pier with chains: 2nd state’ (F22)

Abstract content of the English text of the 1855 edition of Walt Whitman’s textual work entitled ‘Leaves of Grass’ (F14) *R9 is realised in* the English text of the 1855 edition of Walt Whitman’s textual work entitled ‘Leaves of Grass’ (F22)

#### R10 has member (is member of)

Domain: [F1](#_F1_Work_1) Work

Range: [F1](#_F1_Work_1) Work

Subproperty of: [E89](#_E1_CRM_Entity) Propositional Object. [P148](#_P148_has_component_1) has component (is component of): [E89](#_E1_CRM_Entity) Propositional Object

Quantification: (0,n:0,n)

Scope note: This property associates an instance of F1 Work with another instance of F1 Work that forms part of it.

Examples: Dante’s textual work entitled ‘Divina Commedia’ (F15) *R10 has member* Dante’s textual work entitled ‘Inferno’ (F15)

Dante’s textual work entitled ‘Inferno’ (F15) *R10 has member* the abstract content of the pseudo-old French text of Émile Littré’s translation entitled ‘L’Enfer mis en vieux langage françois et en vers’ [a 19th century translation of Dante’s ‘Inferno’ into old French] published in Paris in 1879 (F14)

Giovanni Battista Piranesi’s graphic work entitled ‘Carceri’ (F15) *R10 has member* Giovanni Battista Piranesi’s graphic work entitled ‘Carcere XVI: the pier with chains’ (F15)

Giovanni Battista Piranesi’s graphic work entitled ‘Carcere XVI: the pier with chains’ (F15) *R10 has member* the abstract content of Giovanni Battista Piranesi’s graphic work entitled ‘Carcere XVI: the pier with chains: 2nd state’ (F14)

ISSUE: Deprecate F23 Expression Fragment, use E90 Symbolic Object. Modify property R15 in LRMoo to link an F2 Expression to an E90 Symbolic Object which is its fragment.

#### R15 has fragment (is fragment of)

Domain: [F2](#_F2_Expression) Expression

Range: [E90](#_E90_Symbolic_Object_1) Symbolic Object

Subproperty of: [E90](#_E90_Symbolic_Object_1) Symbolic Object. [P106](#_P106_is_composed_) is composed of (forms part of): [E90](#_E90_Symbolic_Object_1) Symbolic Object

Quantification: (0,n:0,n)

Scope note: This property associates an E90 Symbolic Object with the F2 Expression of which it is a fragment. The fragment is not itself an instance of F2 Expression as it does not express any F1 Work. When the fragment consists of intelligible words it is an instance of E33 Linguistic Object.

An E90 Symbolic Object can be extracted from an F2 Expression due to an accident, such as loss of material over time, e.g. the only remaining manuscript of an ancient text being partially eaten by worms, or due to deliberate isolation, such as excerpts taken from a text by the compiler of a collection of excerpts.

An E90 Symbolic Object is only considered a fragment of an F2 Expression when related to its occurrence in a known or assumed whole by the R15 property. The size of an instance of the E90 Symbolic Object ranges from more than 99% of an instance of F2 Expression to tiny bits (a few words from a text, one bar from a musical composition, one detail from a still image, a two-second clip from a movie, etc.).

Examples: The ancient Greek text of the four stanzas from an ode by Sappho that were quoted by Pseudo-Longinus in his textual work entitled ‘On the sublime’ (E33) *R15 is fragment of* the complete ancient Greek text, now irremediably lost, of Sappho’s ode currently identified as Sappho’s poem #2 (F2)

The statement ‘fasc. 111’ (abridgement for ‘fascicle no. 111’) indicating the sequential position of the publication identified by ISBN ‘2-7018-0037-4’ within the series entitled ‘Bibliothèque des Écoles françaises d’Athènes et de Rome’ and identified by ISSN ‘0257-4101’ (E33) *R15 is fragment of* the overall content of the publication identified by ISBN ‘2-7018-0037-4’ (F24) (or F3??)

The phrase ‘Beati pauperes spiritu’ (E33) *R15 is fragment of* the Latin text of the Gospel according to St. Matthew (excerpt from Matthew 5,3)

The stanza ‘Nel mezzo del cammin di nostra vita / mi ritrovai per una selva oscura / ché la diritta via era smarrita’ (E33) *R15 is fragment of* the Italian text of Dante’s ‘Inferno’ and ‘Divina Commedia’ (F2)

(add an example of an E90 that is not an E33?)

(add an example of a single page from a larger text—to show that the fragment breaks at symbol boundaries and not necessarily at word or sentence boundaries)

See this discussion for why we should add a page example:

[Issue of paging, relevant to digitisation, finding the identity criteria—matching the page to the expression that it belongs to. Can use P106 is composed of, to relate the text on a page to the whole. The text found on a page breaks at symbol boundaries, not necessarily at word or sentence boundaries. It is an E90. Relates to the F24 Publication Expression. Two structure systems ongoing: symbolic structuring (pages, lines etc) and also logical structuring (chapters, paragraphs, sections of content)

#### R17 created (was created by)

Domain: [F28](#_F31_Expression_Creation) Expression Creation

Range: [F2](#_F2_Expression) Expression

Superproperty of: [F29](#_F33_Identifier_Assignment) Recording Event. [R21](#_R21_created_(was_1) created (was created by): [F26](#_F26_Recording) Recording

[F30](#_F30_Publication_Event) Publication Event. [R24](#_R24_created_(was) created (was created through): [F24](#_F24_Publication_Expression) Publication Expression

Subproperty of: [E65](#_E65_Creation_1) Creation. [P94](#_P94_has_created_) has created (was created by): [E28](#_E28_Conceptual_Object_) Conceptual Object

Quantification: (1,1:1,n)

Scope note: This property associates the F2 Expression that was first externalised during a particular F28 Expression Creation event with that particular creation event.

Examples: Richard Wagner’s writing the original manuscript of his opera entitled ‘Der fliegende Holländer’ (F28) *R17 created* the notational content of the original manuscript of Richard Wagner’s opera entitled ‘Der fliegende Holländer’ (F2)

Oscar Wilde’s writing the original manuscript of his poem entitled ‘The ballad of the Reading gaol’ (F28) *R17 created* the English text of Oscar Wilde’s poem entitled ‘The ballad of the Reading gaol’ (F2)

#### R23 created a realisation of (was realised through)

Domain: [F30](#_F30_Publication_Event) Publication Event

Range: [F19](#_F19_Publication_Work) Publication Work

Subproperty of: [F28](#_F31_Expression_Creation) Expression Creation. [R19](#_R19_created_a) created a realisation of (was realised through): [F1](#_F1_Work_1) Work

Quantification: (0,1:0,n)

Scope note: This property associates an instance of F30 Publication Event with the instance of F19 Publication Work it realised.

Examples: Establishing in 1972 the layout, features, and prototype for the publication of Stephen Crane’s complete poems (F30) *R23 created a realisation of* Cornell University Press’s concepts for an edition of Stephen Crane’s complete poems (F19)

#### R24 created (was created through)

Domain: [F30](#_F30_Publication_Event) Publication Event

Range: [F24](#_F24_Publication_Expression) Publication Expression F3 Manifestation

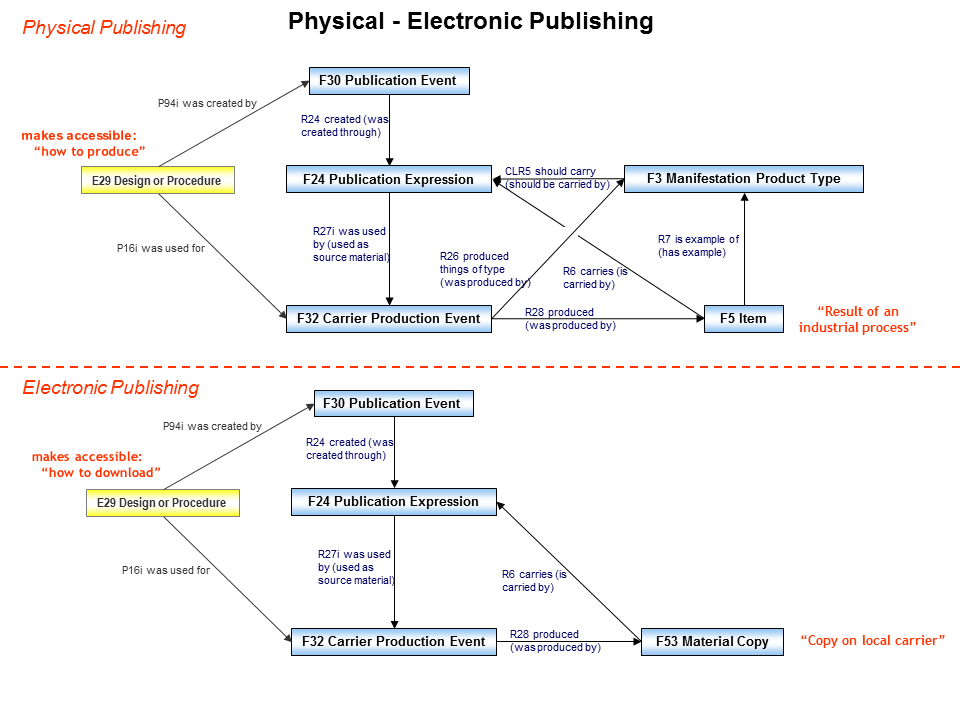
Subproperty of: [F28](#_F31_Expression_Creation) Expression Creation. [R17](#_R22_has_created) created (was created by): [F2](#_F2_Expression) Expression

Quantification: (1,n:1,n)

Scope note: This property associates the instance of F24 Publication Expression F3 Manifestation that was created during a particular F30 Publication Event with that F30 Publication Event.

Examples: Establishing in 1972 the layout, features, and prototype for the publication of Stephen Crane’s complete poems (F30) *R24 created* the set of signs and instructions as to manufacturing established by Cornell University Press for a publication of Stephen Crane’s complete poems (F24)

The following figure will become symmetric:

The following image becomes clear: F24 becomes F3

**F4 Manifestation**

**Singleton**

**F28 Expression Creation**

R6 carries (is

carried by)

R18 created

(was created by)

**F24 Publication Expression**

**E12 Production**

**From Expression to Publication**

**E70 Thing**

**F2 Expression**

**F3 Manifestation**

**Product Type**

R4 carriers provided by

(comprises carriers of )

**F5 Item**

R7 is example of

(has example)

**F32 Carrier**

**Production Event**

R26 produced

things of type (was

produced by )

R27 used as source

material (was used by )

R28 produced

(was produced by)

**F33 Reproduction Event**

R17 created

(was created by)

R29 reproduced (was

reproduced by)

**E84 Information**

**Carrier**

R30 produced (was produced by)

P165 incorporates

(is incorporated in)

#### R26 produced things of type (was produced by)

Domain: [F32](#_F32_Carrier_Production) Carrier Production Event

Range: [F3](#_F3_Manifestation_Product) Manifestation Product Type

Subproperty of: [E12](#_E12_Production_) Production. P186 produced thing of product type (is produced by): E99 Product Type

Quantification: (1,n:0,n) ***becomes optional!***

Scope note: This property associates an instance of F32 Carrier Production Event with the instance of F3 Manifestation Product Type it produced items of.

Examples: The production of copies of the publication entitled ‘Codex Manesse: die Miniaturen der großen Heidelberger Liederhandschrift, herausgegeben und erläutert von Ingo F. Walther unter Mitarbeit von Gisela Siebert’, 3rd edition, Insel-Verlag, 1988 (F32) *R26 produced things of type* the publication identified as ‘Codex Manesse: die Miniaturen der großen Heidelberger Liederhandschrift, herausgegeben und erläutert von Ingo F. Walther unter Mitarbeit von Gisela Siebert’, 3rd edition, Insel-Verlag, 1988 (F3)

The production of copies of the publication entitled ‘Ordnance Survey Explorer Map 213, Aberystwyth & Cwm Rheidol’, ISBN ‘0-319-23640-4’ (folded), 1:25,000 scale, released in May 2005 (F32) *R26 produced things of type* the publication identified by ISBN ‘0-319-23640-4’ (F3)

The production of copies of the sound recording entitled ‘The Glory (????) of the human voice’, RCA Victor Gold Seal GD61175, containing recordings of musical works performed by Florence Foster Jenkins (F32) *R26 produced things of type* the publication entitled ‘The Glory (????) of the human voice’ and identified by the label and label number ‘RCA Victor Gold Seal GD61175’ (F3)

The production of a second print run, in 1978, of the publication titled ‘The complete poems of Stephen Crane, edited with an introduction by Joseph Katz’ (identified by ISBN ‘0-8014-9130-4’) (F32) *R26 produced things of type* the publication, dated 1972, entitled ‘The complete poems of Stephen Crane, edited with an introduction by Joseph Katz’ (identified by ISBN ‘0-8014-9130-4’) (F3)

#### R27 materialized (was materialized by)

Domain: [F32](#_F32_Carrier_Production) Carrier Production Event

Range: [F24](#_F24_Publication_Expression) Publication Expression [F3](#_F3_Manifestation_Product) Manifestation

Subproperty of: [E7](#_E7_Activity_) Activity. [P16](#_P16__used_) used specific object (was used for): [E70](#_E70_Thing_1) Thing

Quantification: (0,n:0,n)

Scope note: This property associates an instance of F32 Carrier Production Event with the set of signs provided by the publisher to be carried by all of the produced items and any other foreseen physical feature..

Examples: The production of copies of the publication identified by ISBN ‘1-86197-612-7’ (F32) *R27 used as source material* the final set of signs sent by the publisher named ‘Profile Books’ to their printer for the production of copies of the publication identified by ISBN ‘1-86197-612-7’ (F24)

**The idea: F19** Publication Work and Manifestation Creation must pertain to the optical and material form of a distributable item. Rewrite scope note of F30. I would keep “Publication Work” as label.

#### R40 has representative expression (is representative expression for)

Domain: [F1](#_F1_Work_1) Work

Range: [F2](#_F22_Self-Contained_Expression) Expression

Subproperty of: [F1](#_F1_Work_1) Work. [R3](#_R3_is_realised_1) is realised in (realises): [F2](#_F22_Self-Contained_Expression) Expression

Quantification: (0,n:0,n)

Scope note: This property identifies an instance of F22 Self-Contained Expression that has been chosen as the most characteristic expression of the instance of F1 Work of which it is an expression. There is no other semantic implication to this notion of being characteristic than to be an adequate candidate to uniquely identify the Work realized by it. Prototypically, this is the instance of F22 Self-Contained Expression that is deemed characteristic of an instance of F15 Complex Work.

Typically, any expression that is not regarded as “representative” for the work it expresses, would require a controlled access point, with qualifiers specifying the differences between that expression and a representative expression, although this may not always be done in practice. The title of a Work may not be one taken from a representative expression.

A given work can have more than one representative expression, provided the differences between these expressions are not deemed “substantial.” If the anticipated needs of users are not considered to call for bibliographic distinctions between variant expressions of a work, then even expressions that differ significantly from each other can be regarded as equally representative for the work. (See *FRBR: Final Report,* p. 19-20).

A given expression can be deemed representative for a work with regard to some of its aspects (e.g., the text contained in an edition the title proper of which reads ‘The tragicall historie of HAMLET Prince of Denmarke’, and the language of that text), and not representative for it with regard to some other aspects (e.g., the title proper ‘The tragicall historie of HAMLET Prince of Denmarke’ itself, which, being different from the title that is regarded as “representative” for Shakespeare’s work, will require the use of a controlled access point).

*R40 has representative expression* is a shortcut of the more developed path F1 Work *R50i was assigned by* F42 Representative Expression Assignment *R51 assigned* F2 Expression.

Examples: Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’ (F15) *R40 has representative expression* the linguistic content of the 1775 edition of Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’, mentioned in the ‘Encyclopaedia Britannica’, 15th edition, cited as the source for the authority record created for that work by the Library of Congress (F22)

John Tavener’s musical work entitled ‘The Eternal Sun’ (F15) *R40 has representative expression* the notational content embodied in the 2007 edition of John Tavener’s ‘The Eternal Sun’ cited as the source for the authority record created for that work by the National Library of France (F22)

The series entitled ‘Headline series’ (F18) *R40 has representative expression* the overall content of the publication entitled ‘Vietnam, the war nobody won’ by S. Karnow, which belongs to the series entitled ‘Headline series’ and was used by the Library of Congress as the basis for creating the authority record for that series (F24)

The periodical entitled ‘The New Courier’, released by UNESCO, and described by the National Library of France in a bibliographic record that contains the following statement: ‘Notice réd. d’après le n° d’octobre 2002’ (i.e., ‘description based on the issue dated October 2002’) (F18) *R40 has representative expression* the overall content of the October 2002 issue of UNESCO’s periodical entitled ‘The New Courier’ (F24)

#### R41 has representative manifestation product type (is representative manifestation product type for)

Domain: [F2](#_F2_Expression) Expression

Range: [F3](#_F3_Manifestation_Product) Manifestation Product Type

Subproperty of: [F2](#_F2_Expression) Expression. [R4](#_R4_carriers_provided) carriers provided by (comprises carriers of): [F3](#_F3_Manifestation_Product) Manifestation Product Type

Quantification: (0,n:0,n)

Scope note: This property identifies an instance of F3 Manifestation Product Type that has been chosen as the most characteristic Manifestation Product Type of the instance of F2 Expression of which it is a manifestation.

Identifying an instance of F3 Manifestation Product Type that is representative for an instance of F2 Expression makes it possible in turn to identify an instance of F2 Expression that is representative for an instance of F1 Work, and to decide what should be regarded as the title of the work.

The title of an Expression may not be one taken from a representative Manifestation Product Type or Manifestation Singleton.

A given expression can have more than one Representative Manifestation Product Type.

*R41 has representative manifestation product type* is a shortcut of the more developed path F2 Expression *R48i was assigned by* F41 Representative Manifestation Assignment *R49 assigned* F3 Manifestation Product Type.

Examples: The original text of Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’ (F22) *R41 has representative manifestation product type* the 1775 edition of Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’, mentioned in the ‘Encyclopaedia Britannica’, 15th edition, cited as the source for the authority record created for that work by the Library of Congress (F3)

The original notation of John Tavener’s musical work entitled ‘The Eternal Sun’ (F22) *R41 has representative manifestation* the 2007 edition of John Tavener’s ‘The Eternal Sun’ cited as the source for the authority record created for that work by the National Library of France (F3)

The textual content of the series entitled ‘Headline series’ (F2) *R41 has representative manifestation* the publication entitled ‘Vietnam, the war nobody won’ by S. Karnow, which belongs to the series entitled ‘Headline series’ and was used by the Library of Congress as the basis for creating the authority record for that series (F3)

The textual content of the periodical entitled ‘The New Courier’ (F2) *R41 has representative manifestation* the October 2002 issue of the periodical entitled ‘The New Courier’ (F3), which was used as the source for the bibliographic record created by the National Library of France

#### R42 is representative manifestation singleton for (has representative manifestation singleton)

Domain: [F4](#_F4_Manifestation_–_Singleton) Manifestation Singleton

Range: [F2](#_F2_Expression) Expression

Subproperty of: [E24](#_E24_Physical_Man-Made_1) Physical Man-Made Thing. [P128](#_P128_carries_(is_1) carries (is carried by): [E73](#_E73_Information_Object_) Information Object

Quantification: (0,n:0,n)

Scope note: This property identifies an instance of Manifestation Singleton that has been declared as the unique representative for an instance of F2 Expression by some bibliographic agency.

This property identifies an instance of F4 Manifestation Singleton that has been chosen as the most characteristic Manifestation Singleton of the instance of F2 Expression of which it is a manifestation.

Identifying an instance of F4 Manifestation Singleton that is representative for an instance of F2 Expression makes it possible in turn to identify an instance of F2 Expression that is representative for an instance of F1 Work, and to decide what should be regarded as the title of the work.

The title of an Expression may not be one taken from a representative Manifestation Product Type or Manifestation Singleton.

A given expression can have more than one representative Manifestation Singleton.

It is a shortcut for the more developed path: F2 Expression *R48i was assigned by* F41 Representative Manifestation Assignment *R53 assigned* F4 Manifestation Singleton.

Examples: The musical text of Stanislas Champein’s opera ‘Vichnou’ (F22) *R42 has representative manifestation singleton* the manuscript identified by shelfmark ‘MS-8282’ within the collections of the National Library of France, Department for Music (F4) [explanation: the BnF’s Department for Music holds 3 manuscript scores (identified by shelfmarks ‘MS-8282’, ‘MS-13778’, and ‘MS-17321’) for this opera; the title inscribed on MS-8282 is ‘Vichnou’, while MS-13778 and MS-17321 are titled ‘Vistnou’; the authorised form chosen by cataloguers and reference tools such as the Grove Dictionary for Opera is ‘Vichnou’, while ‘Vistnou’ is recorded in the BnF’s authority file as a variant form only]

#### R48 assigned to (was assigned by)

Domain: [F41](#_F41_Representative_Manifestation) Representative Manifestation Assignment

Range: [F2](#_F2_Expression) Expression

Subproperty of: [E13](#_E18_Physical_Thing_) Attribute Assignment. [P140](#_P140_assigned_attribute_1) assigned attribute to (was attributed by): [E1](#_E1_CRM_Entity_) CRM Entity

Quantification: (1,1:0,n)

Scope note: This property associates the event of assigning a representative instance of F3 Manifestation Product Type or F4 Manifestation Singleton with the expression to which it was assigned.

Examples: Selecting the 1775 edition of Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’ as the representative manifestation for the text of Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’ (F41) *R48 assigned to* the text of Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’ (F22)

Selecting the 2007 edition of John Tavener’s musical work entitled ‘The Eternal Sun’ as the representative manifestation for the notation of John Tavener’s musical work entitled ‘The Eternal Sun’ (F41) *R48 assigned to* the notation of John Tavener’s musical work entitled ‘The Eternal Sun’ (F22)

Selecting the 1983 edition of Stanley Karnow’s textual work entitled ‘Vietnam, the war nobody won’ as the representative manifestation for a partial expression of the series entitled ‘Headline series’ (F41) *R48 assigned to* the content of the series entitled ‘Headline series’ (F22)

Selecting the issue dated October 2002 of the periodical entitled ‘The New Courier’ as the representative manifestation for a partial expression of the periodical entitled ‘The New Courier’ (F41) *R48 assigned to* the content of the periodical entitled ‘The New Courier’ (F22)

Selecting the manuscript held by the National Library of France and identified by shelf mark ‘MS-8282’ as the representative Manifestation Singleton for the notation of Stanislas Champein’s opera ‘Vichnou’ (F41) *R48 assigned to* the notation of Stanislas Champein’s opera ‘Vichnou’ (F22)

#### R50 assigned to (was assigned by)

Domain: [F42](#_F42_Representative_Expression) Representative Expression Assignment

Range: [F1](#_F1_Work_1) Work

Subproperty of: [E13](#_E18_Physical_Thing_) Attribute Assignment. [P140](#_P140_assigned_attribute_1) assigned attribute to (was attributed by): [E1](#_E1_CRM_Entity_) CRM Entity

Quantification: (1,1:0,n)

Scope note: This property associates the event of assigning a representative instance of F2 Expression with the instance of F1 Work to which it was assigned.

Examples: Selecting the text embodied in the 1775 edition of Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’ as the representative expression for Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’ (F42) *R50 assigned to* Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’ (F15)

Selecting the musical notation embodied in the 2007 edition of John Tavener’s musical work entitled ‘The Eternal Sun’ as the representative expression for John Tavener’s musical work entitled ‘The Eternal Sun’ (F42) *R50 assigned to* John Tavener’s musical work entitled ‘The Eternal Sun’ (F15)

Selecting the publication expression of the 1983 edition of Stanley Karnow’s textual work entitled ‘Vietnam, the war nobody won’ as the representative expression for the series entitled ‘Headline series’ (F42) *R50 assigned to* the series entitled ‘Headline series’ (F18)

Selecting the publication expression of the issue dated October 2002 of the periodical entitled ‘The New Courier’ as the representative expression of the periodical entitled ‘The New Courier’ (F42) *R50 assigned to* the periodical entitled ‘The New Courier’ (F18)

Selecting the content of the manuscript identified by shelfmark ‘MS-8282’ within the collections of the National Library of France, Department for Music, as the representative expression of Stanislas Champein’s musical work entitled ‘Vichnou’ (F42) *R50 assigned to* Stanislas Champein’s musical work entitled ‘Vichnou’ (F15)

The idea:

An Expression realizes a work, it is not specified if it is the exclusive set of propositions of the expression or a more general set of ideas. This leaves the decision to the curator, which level is relevant. This changes the cardinality of R3.

#### R51 assigned (was assigned by)

Domain: [F42](#_F42_Representative_Expression) Representative Expression Assignment

Range: [F2](#_F2_Expression) Expression

Subproperty of: [E13](#_E18_Physical_Thing_) Attribute Assignment. [P141](#_P141_assigned_(was) assigned (was assigned by): [E1](#_E1_CRM_Entity_) CRM Entity

Quantification: (1,n:0,n)

Scope note: This property associates the event of assigning a representative instance of F2 Expression with the F2 Expression which has been assigned.

Examples: Selecting the representative expression for Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’ (F42) *R51 assigned* the text embodied in the 1775 edition of Richard Brinsley Sheridan’s textual work entitled ‘St. Patrick’s Day’ (F22)

Selecting the representative expression for John Tavener’s musical work entitled ‘The Eternal Sun’ (F42) *R51 assigned* the musical notation embodied in the 2007 edition of John Tavener’s musical work entitled ‘The Eternal Sun’ (F15)

Selecting the representative expression for the series entitled ‘Headline series’ (F42) *R51 assigned* the publication expression of the volume of the series entitled ‘Headline series’ that consists of the 1983 edition of Stanley Karnow’s textual work entitled ‘Vietnam, the war nobody won’ (F24)

Selecting the representative expression of the periodical entitled ‘The New Courier’ (F42) *R51 assigned* the publication expression of the issue dated October 2002 of the periodical entitled ‘The New Courier’ (F24)

Selecting the representative expression of Stanislas Champein’s musical work entitled ‘Vichnou’ (F42) *R51 assigned* the content of the manuscript identified by shelfmark ‘MS-8282’ within the collections of the National Library of France, Department for Music (F22)

**The idea:** Any Expression is self-contained. Not-self-contained parts are more generally E90 Symbolic Objects or Information Objects. The Expression Fragment is not needed, but the property is useful. An Expression Creation creates only self-contained content. If interrupted or in between, we talk about E65 Creation events as part of the overall Expression Creation.

The “representative fragment” is a fragment of the supposed-to-be-lost self-contained expression. This means, that the representative manifestation may not carry the whole expression, but only a fragment of it.

# APPENDIX B: LMRer to LRMoo mapping

## Entities

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| LRM ID | Name | Definition | Condition | Name | Note/Comment |
| LRM-E1 | Res | Any entity in the universe of discourse |  | E1 CRM entity | CIDOC-CRM 39 |
| LRM-E2 | Work | The intellectual or artistic content of a distinct creation |  | F1 Work | CIDOC-CRM 39 |
|  | F16 Container work | Previous mapping |
|  | F18 Serial work | Previous mapping |
|  | F19 Publication work | Previous mapping |
|  | F20 Performance work | Previous mapping |
|  | F21 Recording work | Previous mapping |
| LRM-E3 | Expression | A distinct combination of signs conveying intellectual or artistic content |  | F2 Expression | CIDOC-CRM 39 |
|  | F26 Recording | Previous mapping |
|  | F25 Performance plan | Previous mapping |
| LRM-E4 | Manifestation | A set of all carriers that are assumed to share the same characteristics as to intellectual or artistic content and aspects of physical form. That set is defined by both the overall content and the production plan for its carrier or carriers | If it is a published item, or something that is produced as multiple copies | F3 Manifestation | CIDOC-CRM 39: new class merging F3 and F24. |
| If it is a unique manifestation (most particularly a manuscript) |  | Previous mapping |
| LRM-E5 | Item | An object or objects carrying signs intended to convey intellectual or artistic content |  | F54 Utilized Information Carrier | Previous mapping |
|  | F5 Item | Previous mapping |
| LRM-E6 | Agent | An entity capable of deliberate actions, of being granted rights, and of being held accountable for its actions |  | E39 Actor | CIDOC-CRM 39 |
| LRM-E7 | Person | An individual human being |  | E21 Person | CIDOC-CRM 39 |
| LRM-E8 | Collective Agent | A gathering or organization of *persons* bearing a particular name and capable of acting as a unit |  | E74 Group | CIDOC-CRM 39  To be reviewed CIDOC-CRM 40 |
| LRM-E9 | Nomen | An association between an entity and a designation that refers to it |  | F35 Nomen Use Statement | CIDOC-CRM 39 |
| LRM-E10 | Place | A given extent of space |  | E53 Place | CIDOC-CRM 39 |
| LRM-E11 | Time-span | A temporal extent having a beginning, an end and a duration |  | E52 Time-span | CIDOC-CRM 39 |

Discussion : aside from noted issues above, mapping correct

## Attributes

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| LRM ID | Category | Name | Definition | Condition | Mapping | Note/Comment |
| LRM-E1-A1 | Res | Category | A type to which the res belongs |  | E1 CRM Entity. P2 has type: E55 Type {Res:Category} | Proposition MR |
| LRM-E1-A2 | Res | Note | Any kind of information about a res that is not recorded through the use of specific attributes and/or relationships |  | E1 CRM Entity. P3 has note: E62 String | Previous FRSAD mapping for Scope note |
| LRM-E2-A1 | Work | Category | A type to which the work belongs |  | F1 Work. P2 has type: E55 Type {Work:Category} | Based on previous mapping for Form of Work |
| LRM-E2-A2 | Work | Representative expression attribute | An attribute which is deemed essential in characterizing the work and whose values are taken from a representative or canonical expression of the work |  | F1 Work. R40 has representative expression: F2 Expression | Proposition MR  To be discussed - CIDOC-CRM 40 |
| LRM-E3-A1 | Expression | Category | A type to which the expression belongs |  | F2 Expression. P2 has type: E55 Type {Expression:Category} | Previous mapping |
| LRM-E3-A2 | Expression | Extent | A quantification of the extent of the expression |  | F2 Expression. P43 has dimension: E54 Dimension | Previous mapping |
| LRM-E3-A3 | Expression | Intended audience | A class of users for which the expression is intended |  | F2 Expression P103 was intended for E55 Type {Typ} | Proposition MR |
| LRM-E3-A4 | Expression | Use rights | A class of use restrictions to which the expression is submitted |  | F2 Expression. P104 is subject to: E30 Right | Previous mapping for Use restrictions on expression |
| LRM-E3-A5 | Expression | Cartographic scale | A ratio of distances in a cartographic expression to the actual distances they represent |  | F2 Expression (instantiated as E36 Visual Item). P2 has type: E55 Type {Cartographic image}. P138 represents {P138.1 has type E55 Type = “scale”}: E1 CRM Entity | Previous mappping |
| LRM-E3-A6 | Expression | Language | A language used in the expression |  | F2 Expression (instantiated as E33 Linguistic Object). P72 has language: E56 Language | Previous mapping |
| LRM-E3-A7 | Expression | Key | A pitch structure (musical scale, ecclesiastic mode, raga, maqam, etc.), that characterizes the expression |  | F2 Expression. P2 has type: E55 Type {key} | Proposition MR  To be discussed - CIDOC-CRM 40 |
| LRM-E3-A8 | Expression | Medium of performance | A combination of performing tools (voices, instruments, ensembles, etc.) stated, intended, or actually used in the expression | if musical notation or recorded sound | F2 Expression. P2 has type: E55 Type {Medium of performance} | Previous mapping |
| if recorded sound | F26 Recording. R21i was created through: F29 Recording Event. R20 recorded: F31 Performance. P125 used object of type: E55 Type {Medium of performance} | Previous mapping |
| if musical notation | F2 Expression. P103 was intended for: E55 Type {being performed on medium of performance [insert here relevant name for a type of voice or instrument]} | Previous mapping |
| LRM-E4-A1 | Manifestation | Category of carrier | A type of material to which all physical carriers of the manifestation are assumed to belong |  | F3 Manifestation. CLP2 should have type: E55 Type {Category of carrier} | Previous mapping for form of carrier |
|  |  | Previous mapping for form of carrier |
| LRM-E4-A2 | Manifestation | Extent | A quantification of the extent observed on a physical carrier of the manifestation and assumed to be observable on all other physical carriers of the manifestation as well |  | F3 Manifestation. P3 has note {P3.1 has type: E55 Type = “Extent of the carrier”}: E62 String | Previous mapping for Extent of carrier |
|  | F4 Manifestation Singleton. P3 has note {P3.1 has type: E55 Type = “Extent of the carrier”}: E62 String | Previous mapping for Extent of carrier |
|  | F3 Manifestation. CLP57 should have number of parts: E60 Number | Previous mapping for Extent of carrier |
|  | F4 Manifestation Singleton. P57 has number of parts: E60 Number | Previous mapping for Extent of carrier |
| LRM-E4-A3 | Manifestation | Intended audience | A class of users for which the physical carriers of the manifestation are intended |  | F3 Manifestation. | Proposition MR |
| LRM-E4-A4 | Manifestation | Manifestation statement | A statement appearing in exemplars of the manifestation and deemed to be significant for users to understand how the resource represents itself |  | F3 Manifestation. P3 has note P3.1 has type: E55 Type {“Manifestation Statement”} | Proposition MR |
| LRM-E4-A5 | Manifestation | Access conditions | Information as to how any of the carriers of the manifestation are likely to be obtained | coded form | F3 Manifestation. CLP2 should have type: E55 Type {Access conditions} | proposition MR based on FRBR mapping for “System requirements of manifestation” |
| descriptive form | F3 Manifestation. P3 has note {P3.1 has type E55 Type = “Access conditions”}: E62 String | proposition MR based on FRBR mapping for “System requirements of manifestation” |
| LRM-E4-A6 | Manifestation | Use rights | A class of use and/or access restrictions to which all carriers of the manifestation are assumed to be submitted |  | F3 Manifestation. P104 is subject to: E30 Right | Proposition MR |
| LRM-E5-A1 | Item | Location | The collection and/or institution in which the item is held, stored, or made available for access |  | If normal shelf location documented:  a)F5 Item. P54 has current permanent location: E53 Place  If collection documented:  b) F5 Item. P46i forms part of: E78 Collection  If institution documented:  d) F5 Item. P50 has current keeper: E39 Actor | Proposition MR based on FRAD mapping for Item location. |
| LRM-E5-A2 | Item | Use rights | A class of use and/or access restrictions to which the item is submitted |  |  | Previous mapping for Access restrictions on item |
|  | F5 Item. P104 is subject to: E30 Right | Previous mapping for Access restrictions on item |
| LRM-E6-A1 | Agent | Contact information | Information useful for communicating with or getting in contact with the agent |  | E39 Actor. P76 has contact point: E51 Contact Point | Proposition MR based on FRAD mapping |
| LRM-E6-A2 | Agent | Field of activity | A field of endeavour, area of expertise, etc., in which the agent is engaged or was engaged |  | a) E39 Actor. P14i performed: F51 Pursuit. P2 has type: E55 Type  b) E39 Actor. P14i performed: F51 Pursuit. R59 had typical subject:  E1 CRM Entity | From FRAD mapping for Field of activity of Person |
| LRM-E6-A3 | Agent | Language | A language used by the agent when creating an expression |  | E39 Actor. P14i performed: F51 Pursuit. R60 used to use language: E56 Language | From FRAD mapping for Language of person |
| LRM-E7-A1 | Person | Profession/Occupation | A profession or occupation in which the person works or worked |  | a) E21 Person. P2 has type: E55 Type  b) E21 Person. P14i performed {P14.1 in the role of: E55 Type}: F51 Pursuit. P2 has type: E55 Type | Previous mapping |
| LRM-E9-A1 | Nomen | Category | A type to which the nomen belongs  c) the type of thing named (personal name, *work* title, etc.),  b) the source in which the *nomen* is attested (spine title, running title),  a) the function of the *nomen* |  | a) F35 Nomen Use Statement P2 has type: E55 Type {Nomen:Category}  {  b) F35 Nomen Use Statement R37 states as nomen E41 Appelation  c) F35 Nomen Use Statement R38 refers to thema E1 CRM Entity  }  the brackted were considered ways of mapping but considered more precise than necessary within the context. Can just mapping a | Proposition MR |
| LRM-E9-A2 | Nomen | Nomen string | The combination of signs that forms an appellation associated with an entity through the nomen |  | F35 Nomen Use Statement R37 states as nomenE41 Appellation. R33 has content {R33.1 has encoding E55 Type}: E62 String | Proposition based on FRAD mapping for Name string |
| LRM-E9-A3 | Nomen | Scheme | The scheme in which the nomen is established |  | F35 Nomen Use Statement. R35 is specified by: F34 KOS | Previous mapping |
| LRM-E9-A4 | Nomen | Intended audience | A class of users for which the nomen is considered appropriate or preferred |  | F35 Nomen Use Statement. R39 is intended for: E74 Group | Previous mapping |
| LRM-E9-A5 | Nomen | Context of use | Information as to the context(s) in which a nomen is used by the agent who is referred to through it |  | F35 Nomen Use Statement R32 is warranted by F52 Name Use Activity. R61 occurred in kind of context: E55 Type | Proposition MR based on FRAD mapping for Scope of usage of Name |
| LRM-E9-A6 | Nomen | Reference source | A source in which there is evidence for the use of the nomen |  | F35 Nomen Use Statement. R32 is warranted by: F52 Name Use Activity P70i documented in E31 Document | Previous mapping |
| LRM-E9-A7 | Nomen | Language | The language in which the nomen is attested |  | F35 Nomen Use Statement R37 states as nomen E41 Appellation (instantiated as E33 Linguistic Object). R54 has nomen language: E56 Language | Previous mapping |
| LRM-E9-A8 | Nomen | Script | The script in which the nomen is notated |  | F35 Nomen Use Statement R37 states as nomen E41 Appellation P2 has type: E55 Type | Previous mapping |
| LRM-E9-A9 | Nomen | Script conversion | The rule, system, or standard that was used to create a nomen that is derived on the basis of another, distinct nomen notated in another, distinct script |  | F35 Nomen Use Statement. R36 uses script conversion: F36 Script Conversion | Previous mapping |
| LRM-E10-A1 | Place | Category | A type to which the place belongs |  | E53 Place. P2 has type: E55 Type {Place:Category} | Proposition MR |
| LRM-E10-A2 | Place | Location | A delimitation of the physical territory of the place |  | E53 Place. P168 is defined by: E94 Space Primitive | Proposition MR |
| LRM-E11-A1 | Time-span | Beginning | A value for the time at which the time- span started, expressed in a precise way in an authoritative external system to allow temporal positioning of events |  | E52 Time-Span. P82a begin of the begin: E61 Time Primitive/xsd:DateTime | CIDOC-CRM 39 (MR: not sure)  To be discussed - CIDOC-CRM 40 |
| LRM-E11-A2 | Time-span | Ending | A value for the time at which the time- span ended, expressed in a precise way in an authoritative external system to allow temporal positioning of events |  | E52 Time-Span. P82b end of the end: E61 Time Primitive/xsd:DateTime | CIDOC-CRM 39 (MR: not sure)  To be discussed - CIDOC-CRM 40 |

## Relationships

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| LRM ID | Domain | Name (inverse name) | Range | Definition | Condition | Mapping | Note/Comment |
| LRM-R1 | Res | is associated with (is associated with) | Res | This relationship links two res that have an association of any kind |  |  | MR: could not find a general relationship between E1 and E1 |
| LRM-R2 | Work | is realized through (realizes) | Expression | This relationship links a work with any of the expressions which convey the same intellectual or artistic content |  | F1 Work. R3 is realized in: F2 Expression | Proposition MR based on previous mapping |
| LRM-R3 | Expression | is embodied in (embodies) | Manifestation | This relationship links an expression with a manifestation in which the expression appears |  | F2 Expression. R4 carriers provided by: F3 Manifestation | Proposition MR based on previous mapping |
| LRM-R4 | Manifestation | is exemplified by (exemplifies) | Item | This relationship connects a manifestation with any item that reflects the characteristics of that manifestation |  | F3 Manifestation. R7i has materialization: F5 Item | Proposition MR based on previous mapping |
| LRM-R5 | Work | was created by (created) | Agent | This relationship links a work to an agent responsible for the creation of the intellectual or artistic content |  | F1 Work. R16i was initiated by: F27 Work Conception. P14 carried out by {P14.1 in the role of: E55 Type = “creator”}: E39 Actor | Previous mapping |
| LRM-R6 | Expression | was created by (created) | Agent | This relationship links an expression to an agent responsible for the realization of a work |  | F2 Expression. R17i was created by: F28 Expression Creation. P14 carried out by {P14.1 in the role of: E55 Type = “creator”}: E39 Actor | CIDOC-CRM 39 |
| LRM-R7 | Manifestation | was created by (created) | Agent | This relationship links a manifestation to an agent responsible for creating the manifestation |  | F3 Manifestation. R24i was created through: F30 Publication Event. P14 carried out by: E39 ~~Agent. P131 is identified by: E82 Actor Appellation~~ | CIDOC-CRM 39  E82 deprecated |
| LRM-R8 | Manifestation | was manufactured by (manufactured) | Agent | This relationship links a manifestation to an agent responsible for the fabrication, production or manufacture of the items of that manifestation |  | F3 Manifestation R26i was produced by: F32 Carrier Production Event. P14 carried out by: E39 Agent~~. P131 is identified by: E82 Actor Appellation~~ | Previous mapping for manifestation: Fabricator/manufacturer  E82 deprecated |
|  |  | Previous mapping for manifestation: Fabricator/manufacturer  E82 deprecated |
| LRM-R9 | Manifestation | is distributed by (distributes) | Agent | This relationship links a manifestation to an agent responsible for making items of that manifestation available |  |  | Model for distribution falls into general model for services to be circulated later. |
| LRM-R10 | Item | is owned by (owns) | Agent | This relationship links an item to an agent that is or was the owner or custodian of that item |  | F5 Item. P51 has former or current owner: E39 Actor | CIDOC-CRM 39 |
|  | F5 Item. P50 has current keeper: E39 Actor | Previous mapping |
| LRM-R11 | Item | was modified by (modified) | Agent | This relationship links an item to an agent that made changes to this particular item without creating a new manifestation |  | F5 Item. P31i was modified by: E11 Modification. P14 carried out by: E39 Actor. ~~P131 is identified by: E82 Actor Appellation~~ | CIDOC-CRM 39  E82 deprecated |
| LRM-R12 | Work | has as subject (is subject of) | Res | This relationship links a work to its topic(s) |  | F1 Work. P129i is about: E1 CRM Entity | Proposition MR |
| LRM-R13 | Res | has appellation (is appellation of) | Nomen | This relationship links an entity with a sign or combination of signs or symbols through which that entity is referred to within a given scheme or context |  | E1 CRM Entity. is thema of F35 Nomen use statement R37 states as nomen E41 Appellation  E1 CRM Entity P1 is identified by E41 Appellation | Proposition MR based on mapping for Thema |
| LRM-R14 | Agent | assigned (was assigned by) | Nomen | This relationship links an agent with a particular nomen that was assigned by this agent |  | E39 p14i performed E65 Creation Event p94 created F35 Nomen Use Statement | CIDOC-CRM 39 (MR: not sure) |
|  | F35 Name Use Statement | CIDOC-CRM 39 (MR: not sure) |
|  | F52 Nomen Use Activity | CIDOC-CRM 39 (MR: not sure) |
| LRM-R15 | Nomen | is equivalent to (is equivalent to) | Nomen | This is the relationship between two nomens which are appellations of the same res |  | F35 Nomen Use Statement. R56 has related use {R56.1 has type E55 Type = “equivalence”}: F35 Nomen Use Statement | From FRAD mapping for Nomen equivalence |
| LRM-R16 | Nomen | has part (is part of) | Nomen | This relationship indicates that one nomen is constructed using another nomen as a component | Related to | F12 Nomen. P142 used constituent: F12 Nomen | CIDOC-CRM 39 |
| LRM-R17 | Nomen | is derivation of (has derivation) | Nomen | This relationship indicates that one nomen was used as the basis for another nomen, both of which are appellations of the same res |  | F12 Nomen. P142 used constituent: F12 Nomen | CIDOC CRM 39 |
| LRM-R18 | Work | has part (is part of) | Work | This is the relationship between two works, where the content of one is a component of the other |  | F1 work. R10 has member: F1 Work | Proposition MR |
| LRM-R19 | Work | precedes (succeeds) | Work | This is the relationship of two works where the content of the second is a logical continuation of the first |  | F1 work. R1i has successor: F1 Work | Previous mapping |
| LRM-R20 | Work | accompanies/complements (is accompanied/complemented by) | Work | This is the relationship between two works which are independent, but can also be used in conjunction with each other as complements or companions | Related to | F1 Work F1 Work | CIDOC-CRM 39 |
| LRM-R21 | Work | is inspiration for (is inspired by) | Work | This is the relationship between two works where the content of the first served as the source of ideas for the second |  | F1 Work R16i was initiated by F27 Work Conception P15 was influenced by F1 Work | CIDOC-CRM 39 |
| LRM-R22 | Work | is a transformation of (was transformed into) | Work | This relationship indicates that a new work was created by changing the scope or editorial policy (as in a serial or aggregating work), the genre or literary form (dramatization, novelization), target audience (adaptation for children), or style (paraphrase, imitation, parody) of a previous work |  | F1 Work. R2 is derivative of {R2.1 has type E55 Type = Transformation}: F1 Work | CIDOC-CRM 39 |
| LRM-R23 | Expression | has part (is part of) | Expression | This is a relationship between two expressions where one is a component of the other |  | F2 Expression. R5 has component: F2 Expression | Proposition MR |
| LRM-R24 | Expression | is derivation of (has derivation) | Expression | This relationship indicates that of two expressions of the same work, the second was used as the source for the other |  | F2 Expression. R17i was created by: F28 Expression Creation. P16 used specific object: F2 Expression | CIDOC-CRM 39 |
| LRM-R25 | Expression | was aggregated by (aggregated) | Expression | This relationship indicates that a specific expression of a work was chosen as part of the plan of an aggregating expression |  | F2 Expression. P165i is incorporated in: F2 Expression | Proposition MR |
| LRM-R26 | Manifestation | has part (is part of) | Manifestation | This is a relationship between two manifestations where one is a component of the other |  | F3 Manifestation. CLP46 should be composed of: F3 Manifestation | Previous mapping |
|  |  | Previous mapping |
| LRM-R27 | Manifestation | has reproduction (is reproduction of) | Manifestation | This is the relationship between two manifestations providing the end-user with exactly the same content and where an earlier manifestation has provided a source for the creation of a subsequent manifestation, such as facsimiles, reproductions, reprints, and reissues | [generic case] | [F3 Manifestation or F4 Manifestation Singleton] P130i features are also found on {P130.1 kind of similarity: E55 Type = “Reproduction”} [F3 Manifestation or F4 Manifestation Singleton] | Previous mapping |
| [from F3 to F3] | F3 Manifestation. P125 was type of object used in: F33 Reproduction Event. R30 produced: E84 Information Carrier P128 carries E90 Symbolic Object P165i is incorporated in F3 Manifestation | CIDOC-CRM 39 |
| [from F3 to F4] | F3 Manifestation. P125 was type of object used in: F33 Reproduction Event. R30 produced: E84 Information Carrier (also instantiated as F4 Manifestation Singleton) | Previous mapping |
| [from F4 to F3] | F4 Manifestation Singleton. P16i was used for {P16.1 mode of use: E55 Type = “reproduced source”}: F33 Reproduction Event. R30 produced: F3 Manifestation | Proposition MR based on previous mapping |
| [from F4 to F4] | F4 Manifestation Singleton (also instantiated as E84 Information Carrier). R29i was reproduced by: F33 Reproduction Event. R30 produced: E84 Information Carrier (also instantiated as F4 Manifestation Singleton) | Previous mapping |
| LRM-R28 | Item | has reproduction (is reproduction of) | Manifestation | This is the relationship between an item of one manifestation and another manifestation providing the end-user with exactly the same content and where a specific item has provided a source for the creation of a subsequent manifestation | Generic case | F5 Item. P130i features are also found on {P130.1 kind of similarity: E55 Type = “Reproduction”}: [F3 Manifestation or F4 Manifestation Singleton] | Previous mapping |
| From F5 to F3 | F5 Item. R29i was reproduced by: F33 Reproduction Event. R30 produced: F3 Manifestation | CIDOC-CRM 39 |
| From F5 to F4 | F5 Item. R29i was reproduced by: F33 Reproduction Event. R30 produced: F4 Manifestation Singleton | Previous mapping |
| LRM-R29 | Manifestation | has alternate (has alternate) | Manifestation | This relationship involves manifestations that effectively serve as alternatives for each other |  | PXX has alternate  GB suggests : Eg incorporates Expression incoporated by Manifestation | CIDOC-CRM 39. Maybe subproperty of P130 to categorise the level of similarity |
| LRM-R30 | Agent | is member of (has member) | Collective Agent | This a relationship between an agent and a collective agent that the agent joined as a member |  | E39 Actor. P107i is current or former member of: E74 Group | Proposition MR based on FRSAD mapping for affiliation of Person |
| LRM-R31 | Collective Agent | has part (is part of) | Collective Agent | This is a relationship between two collective agents where one is a component of the other |  | E74 Group. P107: has current or former member: E74 Group | Proposition MR  To be discussed - CIDOC-CRM 40 |
| LRM-R32 | Collective Agent | precedes (succeeds) | Collective Agent | This is a relationship between two collective agents where the first was transformed into the second |  | E74 Group. P124i was transformed by: E81 Transformation. P123 resulted in: E74 Group | Proposition MR |
| LRM-R33 | Res | has association with (is associated with) | Place | This relationship links any entity with a given extent of space |  |  | No high-level relationship found for E1 |
| LRM-R34 | Place | has part (is part of) | Place | This is a relationship between two places where one is a component of the other |  | E53 Place. P172 contains: E53 Place | Proposition MR |
| LRM-R35 | Res | has association with (is associated with) | Time-span | This relationship links any entity with a temporal extent |  |  | No high-level relationship found for E1 |
| LRM-R36 | Time-span | has part (is part of) | Time-span | This is a relationship between two time-spans where one is a component of the other |  | E52 Time-Span. P86i contains: E52 Time-Span | Proposition MR |