EIDR - DOI Mapping Table

While EIDR records will usually be resolved in a native EIDR format, some interoperable applications may choose to use DOI format, which maps the EIDR fields to the DOI standard kernelMetadata fields as described below. Note that some of the mappings are not always precise, such as:

- referentCreation.character is not fully correct for films without dialog that have a musical score
- Information about the components of Composites and Compilations is not fully carried in the DOI metadata
- Manifestation tracks are not carried in the DOI metadata
- Original and VersionLanguage information is not carried in DOI metadata, though the fact that a content record has a different language from its parent is known.

The DOI metadata does contain some information not currently in the EIDR metadata format:

- EIDR IDs and Alternate IDs are expressed in both standard form and URI form (when the URI form is available).
- DOI metadata contains relationships and their inverses. For example, an Episode contains a reference to its containing Season, but the Season also has a reference to its contained episodes. Similarly, Compilations and Composites have links to their components, and each component contains a link to the compilation. NOTE: Links to items not explicitly included in the Referent object's metadata contain only the type of the link and the endpoints. Links to an explicitly known item (e.g. the Parent field in ExtraObjectMetadata) may have extra information. For example, the DOI representation of the links from a Season to its Episodes contain only the link type and the Season and Episode IDs; a link from an Episode to its parent Season will also contain sequence information, since it is directly available in the referent object's metadata.

DOI field values are taken from EIDR fields using

- XPATH expressions
- literal strings, given in double quotes
- more complex rules.

DOI kernelMetadata Field	DOI Kernel Subfield	EIDR Content Records	EIDR Parties	EIDR Video Services
referentDoiName		/BaseObjectData/ID	/Party/ID	/Service/ID
primaryReferentType		"Creation"	"Party"	"Party"
registrationAgencyDoiName		"10.1000/ra-5"	"10.1000/ra-5"	"10.1000/ra-5"
issueDate		/Provenance/LastModificationDate	/Provenance/ LastModificationDate 01-01-0001 if not known	/Provenance/LastModificationDate 01-01-0001 if not known
issueNumber		/Provenance/IssueNumber	/Provenance/IssueNumber 0 if not known	/Provenance/IssueNumber 0 if not known
referentCreation.name	primary Language	/BaseObject/ResourceName@lang		
	Value	/BaseObject/ResourceName		
	Type	Always "Title" In future versions, derived from /BaseObject/ResourceName@titleClass		
referentCreation.identifier		See below for use with AlternateIDs See below for use with Aliases		
referentCreation.structuralType		/BaseObject/StructuralType		
referentCreation.mode		/BaseObject/Mode Note: AudioVisual results in two DOI mode Elements, "Audio" and "Visual"		

DOI kernelMetadata Field	DOI Kernel Subfield	EIDR Content Records	EIDR Parties	EIDR Video Services
referentCreation.character		Based on /BaseObject/Mode Audio -> "Language" Video ->"Image" AudioVisual -> "Language" and "Image" Exception: object of ReferentType InteractiveMaterial -> "Other"		
referentCreation.type		/BaseObject/ReferentType Movie->"Film" TV->"TvProgramme" Short->"ShortFilm" Web->""WebResource" AND "MovingImage" Series ->" Series" Season -> "Season" Supplemental->"SupplementalResource" AND "MovingImage" Interactive->"InteractiveResource" Composite, Compilation -> "MovingImage" NOTE: If web and supplemental are audio-only, do not include "MovingImage"		
referentCreation.PrincipalAgent NOTE: these are generated from EIDR AssociatedOrg, Director, and Actor elements.	name.value	If based on AssociatedOrg use /BaseObject/AssociatedOrg/DisplayName If based on Director, use /BaseObject/Credits/Director/DisplayName If based on Actor, use /BaseObject/Credits/Actor/DisplayName		

DOI kernelMetadata Field	DOI Kernel Subfield	EIDR Content Records	EIDR Parties	EIDR Video Services
	name.type	"Name"		
	identifier.value (if based on AssociatedOrg)	/BaseObject/AssociatedOrg@id		
	identifier.type (if based on AssociatedOrg)	/BaseObject/AssociatedOrg@idType		
	Role	If based on AssociatedOrg, derived from AssociatedOrg@role broadcaster, distributor -> "Publisher" all others -> "CorporateCreator" If based on Director, use "Director" If based on Actor, use "Actor"		
referentCreation.linkedCreation		See "Linked creations" below		
referentParty.name	value		/Party/PartyName/DisplayName	/Service/ServiceName/ DisplayName
	type		"PrincipalName"	"PrincipalName"
referentParty.name Note: 0 or more	value		/Party/AlternateName	/Service/AlternateName
	type		"Name"	"Name"
referentParty.name Note: 0 or 1	value		--	/Service/Abbreviation
	type		--	"AbbreviatedName"

DOI kernelMetadata Field	DOI Kernel Subfield	EIDR Content Records	EIDR Parties	EIDR Video Services
referentParty.identifier			*Reserved for future use*	*Reserved for future use*
referentParty.structuralType			"Organization"	"Organization"
referentParty.associatedPartyRole			"CorporateCreator"	"VideoServiceProvider"
referentParty.dateOfBirthOrFormation			not present	not present
referentParty.dateOfDeathOrDissolution			not present	not present
referentParty.associatedTerritory			not present	/Service/Region if a valid country code; otherwise not present
referentParty.linkedParty			*Reserved for future use based on an object's relationships*	*Reserved for future use based on an object's relationships*

referentCreation.identifier

referentCreation.identifier is a DOI creationIdentifer and is used for identifiers *of the referent itself*. In EIDR, these are expressed as AlternateIDs, but not all AlternateIDs fall in this category – some Alternate IDs count as linkedCreations instead.

referentCreation.identifier elements are generated for:

- The EIDR ID
- AlternateIDs with a relation type that is 'IsSameAs' or <empty>, and are one of the following types:
  - AMG, Baseline, DOI, IMDB, ISAN, IVA TRIB, TVG, UUID, URN
  - All Proprietary Alternate IDs except for the following domains:
    - Amazon.com (used as a linkedCreation)
    - Netflix.com (used as a linkedCreation)

EIDR IDs

The EIDR ID is included as the first creationIdentifer, and expressed like this:

```
<doi:identifier>
  <doi:nonUriValue>10.5240/E390-998B-EC63-028D-80D8-A</doi:value>
    <doi:uri returnType="text/html">https://ui.eidr.org/view/content?id=10.5240/E390-998B-EC63-028D-80D8-A</doi:uri>
    <doi:uri returnType="application/xml">http://doi.org/10.5240/E390-998B-EC63-028D-80D8-A </doi:uri>
  <doi:type>EIDRContentID</doi:type>
</doi:identifier>
```

This is the form that is used whenever an EIDR ID is expressed as a <doi:identifier> element, e.g. in a <doi:linkedCreation> element.

Alternate IDs

Standard IDs generate a doi:identifier element with <doi:nonUriValue> as ID and any known URI forms in <doi:uri> elements. <doi:type> is the type of the EIDR Alternate ID.

```
<doi:identifier>
  <doi:nonUriValue>617241</doi:value>
    <doi:uri returnType="text/html">www.videodetective.com/?publishedid=617241</doi:uri>
  <doi:type>IVA</doi:type>
</doi:identifier>
```

For proprietary Alternate identifiers, <doi:type> is “Proprietary” and its validNamespace attribute is the domain attribute of the EIDR Alternate ID. Some examples are:

ID, no URI:

```
<doi:identifier>
  <doi:nonUriValue>X7632000000</doi:value>
  <doi:type validNamespace="spe.sony.com/MPM">Proprietary</doi:type>
</doi:identifier>
```

ID, URI:

```
<doi:identifier>
  <doi:nonUriValue>150009148</doi:value>
  <doi:uri returnType="text/html">http://collections-search.bfi.org.uk/web/Details/ChoiceFilm/150009148<doi:uri>
  <doi:type validNamespace=”bfi.org.uk”>Proprietary</doi:type>
</doi:identifier>
```

ID, multiple URIs:

```
<doi:identifier>
  <doi:nonUriValue>b01l4ldk</doi:value>
  <doi:uri returnType="text/html">http://www.bbc.co.uk/programmes/b01l4ldk <doi:uri>
  <doi:uri returnType="application/xml">http://www.bbc.co.uk/programmes/b01l4ldk.xml <doi:uri>
  <doi:uri returnType="application/rdf+xml">http://www.bbc.co.uk/programmes/b01l4ldk.rdf <doi:uri>
  <doi:uri doesContentNegotiation="true">http://www.bbc.co.uk/programmes/b01l4ldk#programme<doi:uri>
  <doi:type validNamespace="bbc.co.uk/pid">Proprietary</doi:type>
</doi:identifier>
```

These forms are used whenever an EIDR Alternate ID appears as a <doi:identifier>, e.g. in a <doi:linkedCreation> element.

Generating URIs

The URI form is driven from a table in the Registry. Alternate IDs and domains that are not in the table do not generate <doi:uri> values.

NOTE: If "doesContentNegotiation" is true, then the returnType attribute is not present.

NOTE: For DOI, the type and conneg vary by RA, and so are not included in the generated XML.

NOTE: All forms are generated or each ID. For example, a <doi:identifier> for an EIDR ID always has both the HTML and XML URIs.

ID Type	Domain	Return Type	doesContentNegotiation	URI
AMG		text/html	False	http://www.allmovie.com/movie/{ID}/cast-crew
DOI				https://doi.org/{ID}
EIDR		text/html	False	https://ui.eidr.org/view/content?id={ID}
EIDR		application/xml	False	https://doi.org/{ID}

ID Type	Domain	Return Type	doesContentNegotiation	URI
IMDb		text/html	False	http://www.imdb.com/title/{ID}
IVA		text/html	False	http://www.videodetective.com?publishedid={ID}
Proprietary	amazon.com	text/html	False	http://www.amazon.com/s/ref=nb_sb_noss?urlsearch-alias%3Daps&field-keywords={ID}
Proprietary	bbc.co.uk/pid	application/xml	False	http://www.bbc.co.uk/programmes/{ID}.xml
Proprietary	bbc.co.uk/pid	application/rdf+xml	False	http://www.bbc.co.uk/programmes/{ID}.rdf
Proprietary	bbc.co.uk/pid	text/html	False	http://www.bbc.co.uk/programmes/{ID}
Proprietary	bbc.co.uk/pid		True	http://www.bbc.co.uk/programmes/{ID}#programme
Proprietary	bfi.org.uk	text/html	False	http://collections-search.bfi.org.uk/web/Details/ChoiceFilm/{ID}
Proprietary	Flixster.com	text/html	False	http://www.rottentomatoes.com/m/{ID}
Proprietary	netflix.com	text/html	False	https://movies.netflix.com/movie{ID}
Proprietary	videodetective.com	text/html	False	http://www.videodetective.com?publishedid={ID}
Proprietary	dfi.dk/movie	text/html	False	http://www.dfi.dk/faktaomfilm/film/da/{ID}.aspx
Proprietary	dfi.dk/movie	application/xml	False	http://nationalfilmografien.service.dfi.dk/movie.svc/{ID}

ID Type	Domain	Return Type	doesContentNegotiation	URI
Proprietary	dfi.dk/movie	application/json	False	http://nationalfilmografien.service.dfi.dk/movie.svc/json/{ID}

Special Cases

Deleted content records return a structural type of “Restricted" with other field values taken from the standard tombstone object and presented as above.

Aliased content records return `doi:kernelMetadata` where:

- referentDOIName, primaryReferentType, registrationAgencyDoiName, issueDate, and issueNumber as for regular records
- referentCreation.name.value is "aliased"
- referentCreation.name.type is "Title"
- referentCreation.structuralType is "Restricted"
- `referentCreation.identifier.type` is "EidrContentID"
- `referentCreation.identifier.value` is the EIDR Content ID to which the object is aliased.

Linked creations

From Alternate IDs

Alternate IDs that are used for linked creation records are as follows:

- Alternate IDs with a relation type that is not "IsSameAs" or <empty> are translated thus:

EIDR relationship type	DOI
InEntirelyContainedBy	referentCreationRole = "Part"
ContainsAllOf	linkedCreationRole = "Part"
IsPartiallyContainedBy	linkedCreationRole= "TakesContent"
ContainsPartOf	referentCreationRole = "TakesContent"
IsDerivedFrom	referentCreationRole = "Derivation"

IsSourceOf	linkedCreationrole = "Derivation"
hasCueSheet	linkedcreationRole = "CueSheet"

- Standard AltIDs of these types:
  - None for now
- Proprietary IDs with a relation type of IsSameAs or <empty> with these domains:
  - Amazon.com – always use linkedCreationRole "Fixation" [Note: the EIDR relationship should never be 'IsSameAs' if it is on the root abstraction]
  - Netflix.com – always use linkedCreationrole "Fixation" [Note: the EIDR relationship should never be 'IsSameAs' if it is on the root abstraction]
  - Note: It is assumed that studio IDs for edits, mezzanines, encodings, and so on are correctly placed on Edit and Manifestations, meaning the studio ID is indeed an identifier to the EIDR referent itself.

So for example

```
<doi:linkedCreation>
    <doi:identifier>
        <doi:nonUriValue>B003QSEYQY</doi:value>
          <doi:uri returnType="HTML">http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Daps&field-keywords=B003QSEYQY<doi:uri>
        <doi:type validNamespace="amazon.com">Proprietary</doi:type>
     </doi:identifier>
   <doi:linkedCreationRole>Fixation</doi:referentCreationRole>
</doi:linkedCreation>
```

Based on EIDR Relationships

The DOI linkedCreaiton supports EIDR relationships. Since the structure has slots for linkedCreationRole and referentCreationRole the relationships can be described in both directions.

The mapping table for relationships present in the referent object (e.g. an Episode's relationship to its Season, or a Compilation's relationship to its components) is as follows:

EIDR relationship as present in the referent's metadata	**DOI creationToCreationLinkRole**	**linkedCreation (using the canonical representation give above)**

EIDR relationship as present in the referent's metadata	DOI creationToCreationLinkRole	linkedCreation (using the canonical representation give above)
IsSeasonOf	referentCreationRole Season	Parent
IsEpisodeOf	referentCreationRole Episode	Parent
IsEditOf	referentCreationRole Edit	Parent
IsManifestationOf	referentCreationRole Fixation If the Manifestation has VersionLanguages, also add a record with referentCreationRole Translation	Parent Parent
isClipOf	referentCreationRole Clip	Parent
isCompositeOf	referentCreationRole TakesContent	Each item on the composite. Note that composites can have components that are identified with non-EIDR IDs.
isCompilationOf	linkedCreationRole Part	Each item in the compilation
isPackagingOf	referentCreationRole Fixation	ID
isPromotionFor	referentCreationRole PromotionalResource	ID
isSupplementTo	referentCreationRole SupplementalResource	ID
isAlternateContentFor	referentCreationRole AlternateContent	ID

For relationships not included in the referent object (e.g., what a Season would have about each of its Episodes, or what an item in a compilation would have about the compilation itself) it works like this. For these, the referent is the target of a relationship in some other object.

EIDR relationship that includes referent as target	**DOI creationToCreationLinkRole**	**linkedCreation (using the canonical representation given above)**
IsSeasonOf	linkedCreationRole Season	ID of the Season
IsEpisodeOf	linkedCreationRole Episode	ID of the Episode
IsEditOf	linkedCreationRole Edit	ID of the Edit
IsManifestationOf	linkedCreationRole Fixation If the Manifestation has VersionLanguages, also add a record with linkedCreationRole Translation	ID of the Manifestation ID of the Manifestation
isClipOf	linkedCreationRole Clip	ID of the Clip
isCompositeOf NOTE: It may be easier to think of this as 'the relationship that gets added to every item that is included in the Composites Object'	linkedCreationRole TakesContent	ID of the item that is the Composite
isCompilationOf NOTE: It may be easier to think of this as 'the relationship that gets added to every item that is included in the Compilation Object'	referentCreationRole Part	ID of the item that is the Compilation

EIDR relationship that includes referent as target	DOI creationToCreationLinkRole	linkedCreation (using the canonical representation given above)
isPackagingOf	linkedCreationRole Fixation	ID of the item that has the IsPackagingOf relationship
isPromotionFor	linkedCreationRole PromotionalResource	ID of the item that has the IsPromotionFor relationship
isSupplementTo	linkedCreationRole SupplementalResource	ID of the item that has the isSUpplementTo releationship
isAlternateContentFor	linkedCreationRole AlternateContent	ID of the item that has the isAlternateContentFor relationship

Simple example:

EIDR ID 10.5240/5329-355F-AF64-8F2A-BABA-B is an Edit of 10.5240/0AB4-3FF8-77BF-4983-656C-9. It should have a linkedCreation element like this, which says the referentCreation (the item for which we have generated the DOI metadata) is an Edit of the linkedCreation.

```
<doi:linkedCreation>
    <doi:identifier>
        <doi:nonUriValue>10.5240/0AB4-3FF8-77BF-4983-656C-9</doi:value>
          <doi:uri returnType="text/html">https://ui.eidr.org/view/content?id=10.5240/0AB4-3FF8-77BF-4983-656C-9</doi:uri>
          <doi:uri returnType="application/xml">http://doi.org/10.5240/0AB4-3FF8-77BF-4983-656C-9 </doi:uri>
        <doi:type>EIDRContentID</doi:type>
     </doi:identifier>
  <doi:referentCreationRole>Edit</doi:referentCreationRole>
</doi:linkedCreation>
```

This is easy to do, because everything needed is in the original EIDR record.

The DOI metadata for the parent has the information going the other way. In that case, the root object 10.5240/0AB4-3FF8-77BF-4983-656C-9 has this as a linkedCreation:

```
<doi:linkedCreation>
    <doi:identifier>
        <doi:nonUriValue>10.5240/0AB4-3FF8-77BF-4983-656C-9</doi:value>
          <doi:uri returnType="text/html">https://ui.eidr.org/view/content?id=10.5240/5329-355F-AF64-8F2A-BABA-B</doi:uri>
          <doi:uri returnType="application/xml">http://doi.org/10.5240/5329-355F-AF64-8F2A-BABA-B </doi:uri>
        <doi:type>EIDRContentID</doi:type>
     </doi:identifier>
  <doi:linkedCreationRole>Edit</doi:linkedCreationRole>
</doi:linkedCreation>
```

Episodic Information

DOI supports general sequence identifiers that can be used to express all of the EIDR season and episode numbering. The rules are:

- For each sub-element of SequenceInfo
    - Generate a doi:referentCreationSequenceidentifier where
        - <doi:value> is the value of the EIDR element
        - <doi:type> is "Proprietary"
        - doi:type@userDefinedType is the name of the EIDR element (e.g. HouseSequence)
        - doi:type@validNamespace is the EIDR element's "domain" attribute
        - doi:type@governingParty is not present.

For instance this EIDR metadata:

```
<EpisodeInfo>
 <Parent>10.5240/CEF0-4860-287D-51D4-E968-U</Parent>
 <SequenceInfo>
  <md:DistributionNumber domain="spe.sony.com">13</md:DistributionNumber>
  <md:HouseSequence domain="spe.sony.com">0213</md:AlternateNumber>
  <md:AlternateNumber domain="spe.sony.com/de">12</md:AlternateNumber>
 </SequenceInfo>
```

```
    </EpisodeInfo>
```

will generate this linkedCreation element:

```
<doi:linkedCreation>
    <doi:identifier>
        <doi:nonUriValue>10.5240/CEF0-4860-287D-51D4-E968-U </doi:value>
          <doi:uri returnType="text/html">…</doi:uri>
          <doi:uri returnType="application/xml">…</doi:rui>
        <doi:type>EIDRContentID</doi:type>
    </doi:identifier>
  <doi:referentCreationRole>Episode</doi:referentCreationRole>
  <doi:referentCreationSequenceIdentifier>
     <doi:value>13</doi:value>
     <doi:type userDefinedType="DistributionNumber" validNamespace="spe.sony.com" governingParty="eidr.org">Proprietary</doi:type>
  </doi:referentCreationSequenceIdentifier >
  <doi:referentCreationSequenceIdentifier >
     <doi:value>0213</doi:value>
    <doi:type userDefinedType="HouseSequence" validNamespace="spe.sony.com" governingParty="eidr.org">Proprietary</doi:type>
  </doi:referentCreationSequenceIdentifier >
  <doi:referentCreationSequenceIdentifier>
     <doi:value>12</doi:value>
    <doi:type userDefinedType="AlternateNumber" validNamespace="spe.sony.com/de" governingParty="eidr.org"”>Proprietary</doi:type>
  </doi:referentCreationSequenceIdentifier>
</doi:linkedCreation>
```

When providing the downward links from a parent, for performance reasons the children are given without extra information (i.e. just the relationship, without sequence numbers).

So the Series that contains the Episode listed above has multiple linkedCreations:

```
<doi:linkedCreation>
    <doi:identifier>
        <doi:nonUriValue>10.5240/28CC-9172-7A6F-8500-9620-F </doi:value>
          <doi:uri returnType="text/html">…</doi:uri>
```

```
                <doi:uri:rteurnType="application/xml">…</doi:uri>
              <doi:type>EIDRContentID</doi:type>
            </doi:identifier>
          <doi:linkedCreationRole>Episode</doi:linkedCreationRole>
        </doi:linkedCreation>
        <doi:linkedCreation>
            <doi:identifier>
              <doi:nonUriValue>10.5240/3AEB-4424-8065-C84D-1AEC-4</doi:value>
                <doi:uri returnType="text/html">…</doi:uri>
                <doi:uri:rteurnType="application/xml">…</doi:uri>
              <doi:type>EIDRContentID</doi:type>
            </doi:identifier>
          <doi:linkedCreationRole>Episode</doi:linkedCreationRole>
</doi:linkedCreation>
```

And so on.

General Notes

The XML is intended to be used by automated systems, not by people. The form seems verbose, but its regularity makes it easy to process. Eventually there may be JSON and RDF+XML forms as well.