



**IPTC Standards DRAFT**

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# **NewsML 2 Architecture**

**Version 1.0**

# **Power Extensions Model**

**Document Revision 4**



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# 1 Introduction

## 1.1 Abstract

This document describes the **IPTC NewsML 2 Architecture Power Extensions Model**, i.e. the extensions of the Core Model which are applicable to the Power Conformance Level of the NewsML 2 Architecture (NAR).

The document describes the data types, properties and constructs shared by all new IPTC standards, the way metadata are expressed, the way items of news-related information are structured, managed and referenced.

This model is independent of the XML implementation of the NAR. It may be as easily implemented via object oriented software, in Java or C#. For this reason, UML diagrams illustrate the document, and the corresponding XMI (XML Metadata Interchange) files are available for software implementers.

This model is also compatible with the orientations of the Semantic Web. Therefore, the RDF model [RDF] associated with the metadata framework is added to this document.

The IPTC NewsML 2 Architecture Model builds on:

- The **NewsML 2 Business Requirements** [NML-BR] edited by the NewsML WG,
- The **EventsML Business Requirements** [EVT-BR] edited by the EventsML WG.
- The **News Metadata Framework Business Requirements** [NMDF-BR] edited by the NMDF WG.
- The **Implementation Guidelines for the IPTC Standards Architecture using W3C XML Schema** [NAR-IG] edited by Jay Cousins (RivCom) and Ulf Wingstedt (CNet) for the NAR WP.
- The current generation of IPTC standards, namely **NewsML 1.x**, **SportsML 1.x**, **NITF 3.x**.
- The work of other standards bodies, which have taken a similar modelling approach.

This document complements the **IPTC NewsML 2 Architecture Core Model** [NAR-CM], which exposes the model applicable to the Core Conformance Level of the NAR.

This document is complemented by the **IPTC NewsML 2 Technical Specification** [NAR-TS], which details the XML implementation of the NAR, element by element, attribute by attribute. After reading the model document, implementers of the NAR shall use the Technical Specification as a reference for the development of NewsML 2 processors.

All IPTC NewsML2 specifications are complemented by the **IPTC NewsML 2 Architecture Glossary** [NAR-GL] which provides an extensive set of terms and definitions.

## 1.2 Status of this document

This document is under development by the IPTC News Architecture Working Party (NAR WP).

Comments from IPTC members which are intended to be visible to IPTC members only should be sent to the mailing list described at:

<http://groups.yahoo.com/group/iptc-news-architecture-dev/>

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### 1.3 Conformance levels

Different Conformance Levels are defined in the model, each of them related to a level of complexity (at the conceptual and processing level) of the related Items. This feature adds **modularity** to the model.

The current model defines two conformance levels named “**core**” (aka CCL) and “**power**” (aka PCL). The core conformance level is focused on simplicity and interoperability. The power conformance level gives more flexibility to providers who choose it, but the recipient processors are more complex to program, and interoperability is lower than in the first case as not all recipients will implement the power level.

A NewsML2 processor can therefore be labelled as supporting either “core” or “power” functionality.

A NewsML2 “power” processor must provide all of the “core” functionality, plus the functionality marked as “power conformance level feature” in this document.

As the “power” features are only an extension of the “core”, a NewsML2 “core” processor can process “power level” Items, simply ignoring the information he’s not able to process. As rights management is part of the power conformance level, a provider must be careful not to send to “core” processors rights-protected information.

This document details the NAR Power Conformance Level, i.e. power user extensions of the NAR model. Many references to the two conformance levels occur in the document, therefore:

- **CCL** will be used as an acronym for Core Conformance Level.
- **PCL** will be used as an acronym for Power Conformance Level.

In the UML diagrams, components defined at the power conformance level only are displayed in green, and components already existing at the core conformance but with modifications are displayed in orange.





## 2 Building Blocks

### 2.1 Extensions to News Metadata

#### 2.1.1 Base information on metadata

In a professional news workflow, metadata may be initialized in real time and later updated (e.g. before archiving the information). Therefore it may be needed to reference a piece of metadata locally in order to act on it individually.

Also, in such a collaborative environment, metadata is not always entered by one person at one time, but may be entered by different people, organisations or systems at different time. Therefore it may be needed to keep track of who is assigned the editing of specific properties, and when and by whom a property has been given a value.

All PCL properties share the following qualifiers:

- A **Local Identifier**: unique within the XML document and supported by all properties. Local references to this element may be expressed using this identifier. This qualifier may especially be used for partial updates.
- A **Creator**: if the supporting element is empty, the creator qualifier specifies which entity (person, organisation or system) will create the property. If the element is non-empty, it specifies which entity (person, organisation or system) has created the property. There is no default value for this qualifier.
- A **Date Created**: the date (and, optionally, the time) when the property was created or updated. There is no default value for this qualifier.

#### 2.1.2 Internationalization

*I18N* properties – language indicator (*lang*) and direction indicator (*dir*) – are supported by any element supporting free-format text (*IntlStringType*, *LabelType* or *BlockType*), and any ancestor of such an element. Note that apart from internationalized strings, labels and text blocks, the only CCL element supporting *I18N* properties is *AnyItem*.

#### 2.1.3 Property with controlled values

Controlled properties support the indication of the *type* of the concept used as a controlled or literal value for the property. For example, the Subject of a news story may be a theme (e.g. sport or football), a person, an organisation, a geographical area, a point of interest, an event, a business sector, a currency etc. The Creator, Contributor and Source of Information of an Item may be a person or an organisation, and, the Location Content Created may be a geographical area or a point of interest.

Controlled properties support the indication of the semantic equivalence of the code given as property value with one or more alternative codes taken from other schemes. All codes should identify the same concept.

They also ease the representation of taxonomies, by supporting the indication of one or more broader concepts. Such information makes possible a hierarchical indexing of Items, and the constitution of *breadcrumbs*, i.e. the display of a hierarchy of tokens like “culture > literature > fiction” where the precise subject of a news story is “fiction”.



## 2.1.4 Role of the concept used as metadata value

Some controlled properties support the indication of a *role* which refines the semantics of the property. For example, the Creator of a picture may be qualified as a photographer, a Contributor may be qualified as a caption writer or a translation author, the Source of Information used for an article may be qualified as an interview, press release, product documentation or SEC filing.

## 2.1.5 Confidence

Some controlled properties – namely Subject, Genre and Bit - support the indication of a *confidence* with which the metadata has been assigned.

Such feature is useful in case of automatic categorization or indexing.

## 2.1.6 Relevance

Some controlled properties – namely Subject, Genre and Bit - support the indication of the *relevance* of the metadata to the piece of news to which it is attached.

A high relevance indicates that this piece of metadata truly expresses what the piece of news is about, while a low relevance indicates a low correlation between the metadata and the essence of the piece of news.

## 2.1.7 Why present

A concept used as a property value may be:

- **Directly extracted from the content** by a tool and/or by a person, eg Paris or Sport.
- **An ancestor of some other concept**, e.g. the concepts France and Europe are ancestors of the concept Paris.
- **Derived by look-up** in some taxonomy/database, e.g. the concept Pharmaceutical Industry Sector may be derived from the concept Merck.

Therefore, some controlled properties – namely Subject, Genre and Bit - support the indication of the reason *why* the metadata has been included, expressed as a level of indirection. The allowed values are detailed in [NAR-TS].

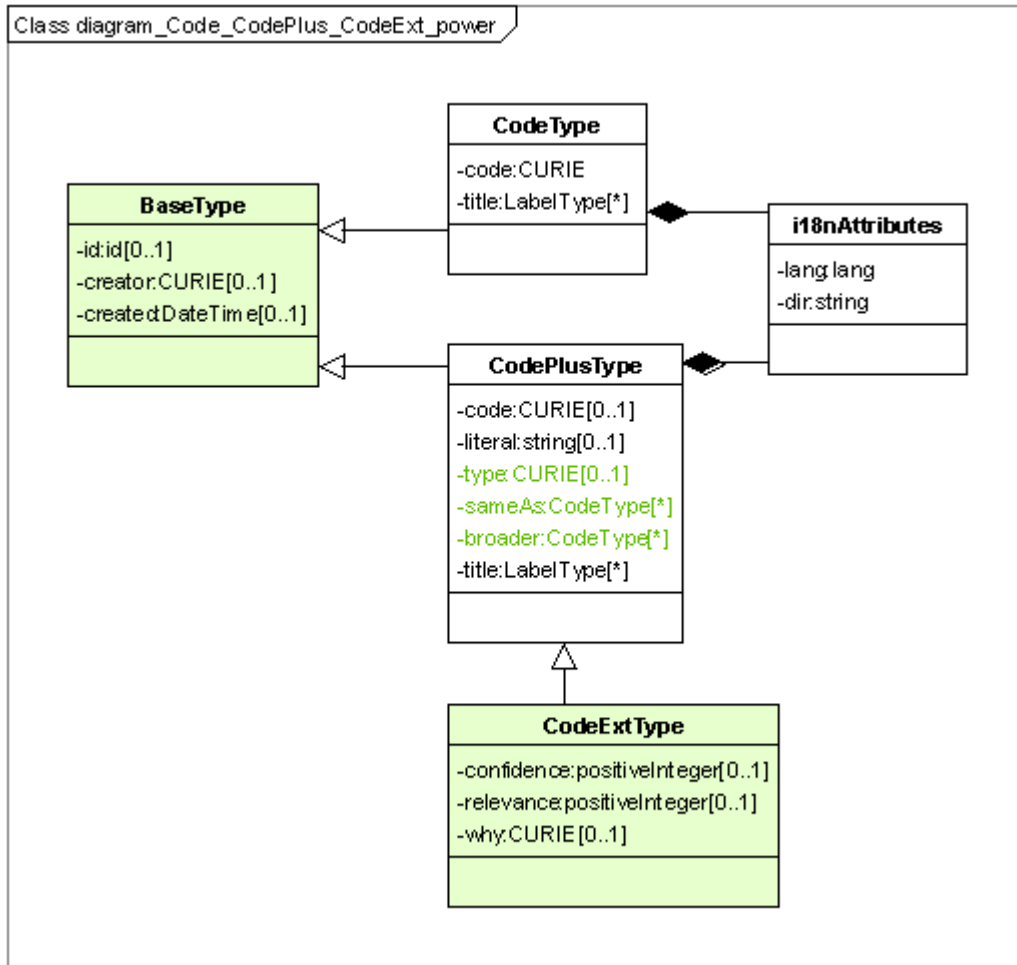
## 2.1.8 About

Some controlled properties – namely Subject and Genre - support an explicit specification of the subject being described. This feature is used when the content being described is not the complete content of the Item.

As an example, take the headline of a story stating that “While in New Orleans, *President George Bush* said that ...”. A Subject property may provide information about this “*President George Bush*” string. For this purpose, it will use the *about* attribute to refer to this substring inside the headline, via a relative URI. It may then indicate that the president may be “George W. Bush” with a confidence of 60%, but may be “George Herbert Walker Bush” with a confidence of 40%.

## 2.1.9 Diagrams and definitions

News metadata properties are modelled after:



### 2.1.9.1 Base Type

BaseType is defined as:

card.	name	title	definition
0..1	<i>id</i>	<b>Local Identifier</b>	The local identifier of the property. <i>datatype: Id</i>
0..1	<i>creator</i>	<b>Creator</b>	If the element is empty, specifies which entity (person, organisation or system) will edit the property. If the element is non-empty, specifies which entity (person, organisation or system) has edited the property. <i>datatype: CURIE</i>
0..1	<i>created</i>	<b>Date Created</b>	The date (and, optionally, the time) when the property was edited. <i>datatype: DateTime</i>
-	-	<b>Extension Point</b>	Any set of provider-defined qualifiers.

**XML implementation note:** provider-defined qualifiers may only be added as XML attributes defined in another namespace.



### 2.1.9.2 Code Type

*CodeType* *extends* *BaseType* and additionally supports *i18nAttributes*. No other extension from the CCL is defined.

### 2.1.9.3 Code Plus Type

*CodePlusType* *extends* *BaseType* and supports *i18nAttributes*. PCL extensions are:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0.. 1	<i>type</i>	<b>Concept Type</b>	The type of the concept identified by the property value. <i>datatype: CURIE</i>
0..∞	<i>sameAs</i>	<b>Semantic Equivalence</b>	A concept identifier that is a semantically equivalent to the controlled value of the property. <i>datatype: CodeType</i>
0..∞	<i>broader</i>	<b>Broader</b>	An identifier of a concept that is a broader in scope than the concept represented by the controlled value of the property. <i>datatype: CodeType</i>

### 2.1.9.4 Code Ext Type

*CodeExtType* *extends* *CodePlusType*. Base information is complemented by:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0.. 1	<i>confidence</i>	<b>Confidence</b>	The confidence with which the metadata has been assigned. <i>datatype: positive Integer, 1 to 100</i>
0.. 1	<i>relevance</i>	<b>Relevance</b>	The relevance of the metadata to the piece of news to which it is attached. <i>datatype: positive Integer, 1 to 100</i>
0.. 1	<i>why</i>	<b>Why</b>	Why the metadata has been included. <i>datatype: CURIE</i>

## 2.2 Associated RDF model

As the NAR aims to be compatible with the Semantic Web of the W3C it is also compatible with their underlying technology, the Resource Description Framework (RDF). But the IPTC model and syntax implementation of metadata do not require any knowledge about RDF, any transformation from the IPTC metadata model to RDF will be done by means beyond the NAR. Transforms to RDF/XML will be achieved by using a mechanism like GRDDL [GRDDL], so that those who wish to convert the metadata to RDF triples can do so.

The *subject* of the statement is usually the current Item. It may be changed by the use of the *about* qualifier.

The *predicate* is represented by the property itself.



The *object* is the metadata value: it may be a literal or a resource.

In the following examples we are using the [N3] notation.

### 2.2.1 Simple statement with a literal value

The *object* of the triple is a literal represented by a *literal* attribute..

Example: the provider of an Item is defined as “iptc.org”::

```
@prefix newsml: <http://iptc.org/std/newsml/2006-05-01/ >
<> newsml:provider "iptc.org" .
```

### 2.2.2 Simple statement with a resource as value

The *object* of the triple is an RDF URI Reference represented by a *code* attribute.

Example: the subject of an Item is defined as “cat:01011001”, which is the IPTC category code for “art > music > classical music”:

```
@prefix cat: <http://iptc.org/newscodes/category# >
<> newsml:subject cat:01011001 .
```

### 2.2.3 Refinement of the subject of the triple

The role qualifier defines a refinement of the semantics of a property.

Example: the caption writer and the photo editor are two specific contributors in a photo workflow. This can be expressed as:

```
@prefix team: <http://iptc.org/members#>
<> newsml:captionWriter team:cp .
<> newsml:photoEditor team:pe .
```

### 2.2.4 Properties of the object of the triple

Some features – sameAs, broader, title – are properties of the object of the triple. For example *classical music* has *music* for broader concept, has "classical music" as English title, and is an abstract concept :

```
@prefix ctp: < http://iptc.org/newscodes/ctp#>
cat:01011001 newsml:broader cat:01011000 .
cat:01011001 newsml:title "classical music" .
cat:01011001 newsml:type ctp:abstract .
```

### 2.2.5 Properties of the reified statement

Some features – creator, created, confidence, relevance, why – are properties of the reified statement.

Example: the subject of an Item is “diplomacy”; this was edited at “2005-11-11T08:00:00Z” by an editor registered as “team:md”:

```
{<> newsml:subject "diplomacy"} newsml:creator team:md ;
```



```
newsml:created "2005-11-11T08:00:00Z" .
```

Example: a categorization engine may state that a story is about classical music with a confidence of 70%, and that this subject is of medium relevance vis-à-vis the story:

```
{<> newsml:subject cat:01011001} newsml:confidence 70 ;
newsml:relevance 50 .
```

Example: a provider may indicate that a story is about Maria Callas, and infer from this that it is about classical music:

```
@prefix diva: <http://en.wikipedia.org/wiki/Diva>
{<> newsml:subject diva:MariaCallas} newsml:why why:direct.
{<> newsml:subject cat:01011001} newsml:why why:derived.
```

## 2.2.6 Redirection of the subject of a statement

The about attribute modifies the subject of the statement.

Example: if a story about a soccer match contains the string "... Zizou ..." locally identified as *id-player1*, then it is possible to state that this particular string has "Zinedine Zidane" for subject:

```
<# id-player1> newsml:subject team:zinedine.zidane .
```

Example: if a video about a soccer match contains a sequence on Zinedine Zidane, and if this sequence can be identified by a IRI, then it is possible to state that this particular sequence has "Zinedine Zidane" for subject:

```
<IRI-videoSequence1> newsml:subject team:zinedine.zidane .
```

## 2.3 Labels and Blocks

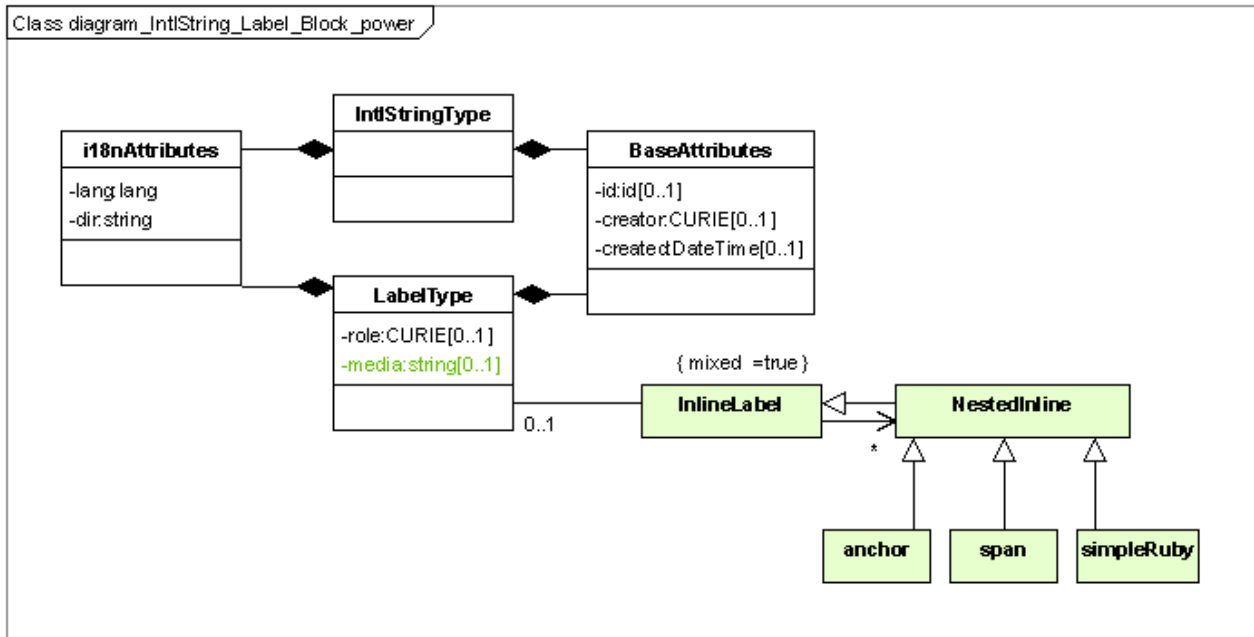
### 2.3.1 Markup

Labels support an indication of the target media type(s), as defined by the Cascading Style Sheets specification [CSS]. Several media types can be given a space separated values.

All labels and blocks support rich text, i.e. text interspersed with some specific markup, identical to XHTML1.1 markup: the anchor for the inclusion of hyperlinks, the span for semantic markup and simple ruby markup used in Japanese publications.

### 2.3.2 Diagrams and definitions

Labels and blocks are modelled after:



**Note:** *NestedInline* is a modelling artefact, which indicates that the sub-properties are themselves mixed text.

### 2.3.2.1 IntlStringType

*IntlStringType* supports *baseAttributes*. No other extension from the CCL is defined.

### 2.3.2.2 Label Type

*LabelType* supports *baseAttributes*. PCL extensions are:

card.	name	title	definition
0..1	<i>media</i>	<b>Media Indicator</b>	An indication of the target media type(s), as defined by the Cascading Style Sheets specification [CSS]. <i>datatype: String</i>
0..1	-	<b>Text</b>	The content of the label. <i>datatype: InlineLabel</i>

*InlineLabel* is defined as {mixed} content, ie text interspersed with:

card.	name	title	definition
0..∞	<i>a</i>	<b>Anchor</b>	An anchor. <i>datatype: anchor</i>
0..∞	<i>span</i>	<b>Span</b>	A generic mechanism for adding structure to documents. <i>datatype: span</i>
0..∞	<i>ruby</i>	<b>Ruby</b>	Ruby annotation useful in East Asian documents. <i>datatype: simpleRuby</i>



*anchor*, *span* are modelled after there XHTML 1.1 counterparts.  
*simpleRuby* is modelled after the W3C model, using elements *rb*, *rt* and *rp*.

### **2.3.2.3 Block Type**

*BlockType* supports *baseAttributes*. No other extension from the CCL is defined.





### 3 Information about a concept

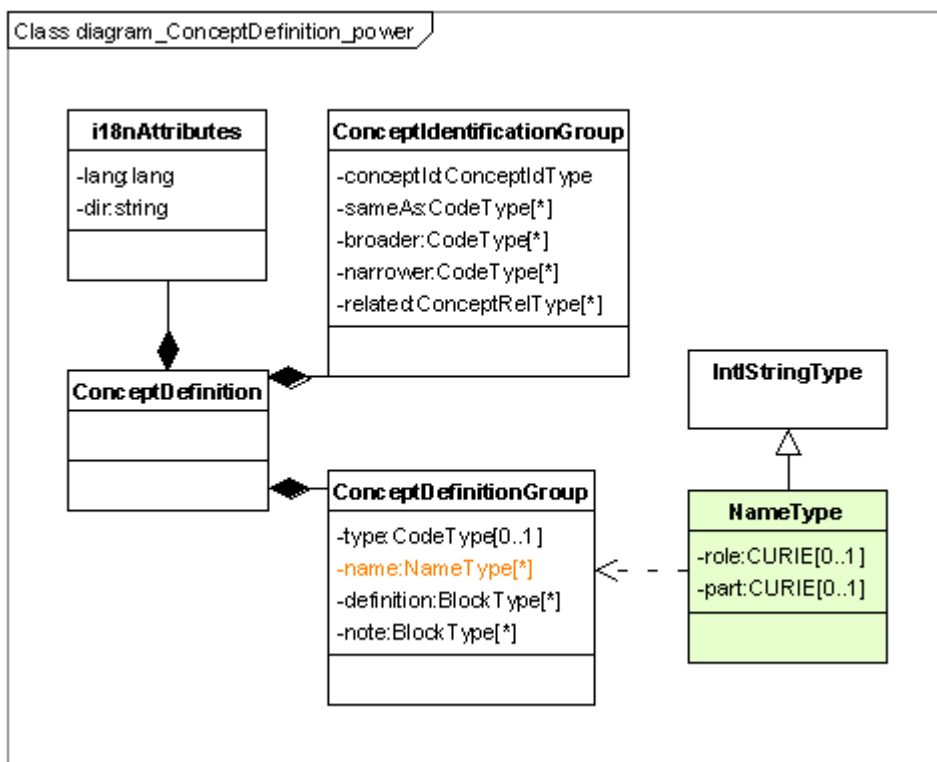
#### 3.1 Extensions to the Concept Definition component

Different variants of a name are allowed, using *role* and *part* qualifiers. The *role* takes values like "usual", "official", "married" (for a person) "acronym" (for an organisation), "synonym", "adjectival" (for an abstract concept). The *part* identifies the part of the name conveyed by the property, and takes values like "given", "family" (for a person). A "full" name is the default.

Definitions and notes support a *role*, which refines the semantic of the property, and takes values like "history", "change" (for a description), "editorial", "scope" (for a note).

##### 3.1.1 Diagrams and definitions

*ConceptDefinition* is modelled as:



##### 3.1.1.1 Concept Definition

*ConceptDefinition* supports *i18nAttributes*. *ConceptIdentificationGroup* is not extended from the CCL.

*ConceptDefinitionGroup* is modified as following:

card.	name	title	definition
0.. ∞	name	Concept Name	A name for the concept. datatype: NameType, see below



*NameType* extends *IntlStringType*. Base information is complemented by:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0..1	<i>role</i>	<b>Role</b>	A refinement of the semantics of the name. <i>datatype: CURIE</i>
0..1	<i>part</i>	<b>Part</b>	A qualifier which specifies the part of a name conveyed by this property. <i>datatype: CURIE</i>

### 3.2 Extensions to the Entity components

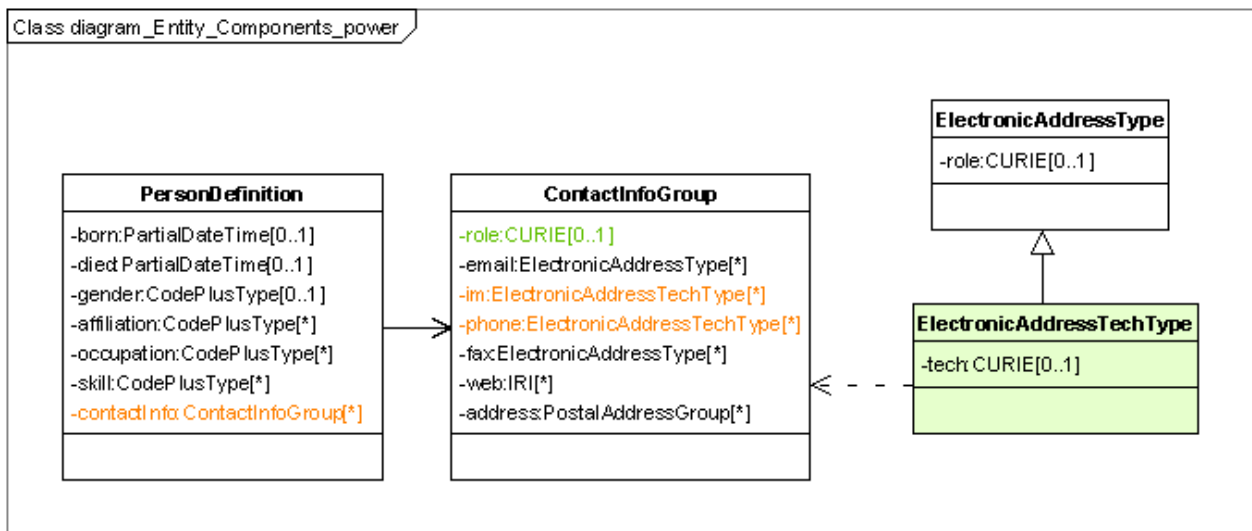
#### 3.2.1 Person, organisation and contact information

Contact information is repeatable in the definition of a Person, an Organisation and a Point of Interest, and each set of properties supports a *role* qualifier. Therefore it is possible to group together all information belonging of the same nature, eg *home* or *work* contact information.

A new qualifier appears of the Instant Messaging and Phone properties of Contact Information: in the case of an Instant Messaging address, the technical variant indicates the provider of the service (*Yahoo!*, *Google* etc.). In the case of a phone number, the technical variant indicates a *land-line*, *cellular* etc. service.

#### 3.2.2 Diagrams and definitions

The extensions are modelled as:



##### 3.2.2.1 Named Entity Definitions

All entity definitions support:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0..∞	<i>contactInfo</i>	<b>Contact</b>	Contact information associated with the person.



		<b>Information</b>	<i>datatype: ContactInfoGroup, see section below</i>
--	--	--------------------	--

*@@ It could be finally constrained to cardinality 1 after EP2, if it finally seems easier to use only discrete individual property roles to express the nature of these properties.*

### 3.2.2.2 Contact Information Group

*ContactInfoGroup* is extended as following:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0..1	<i>role</i>	<b>Role</b>	The role of this component in its container. <i>datatype: CURIE</i>
0..∞	<i>im</i>	<b>Instant Messaging Address</b>	An instant messaging address. <i>datatype: ElectronicAddressTechType</i>
0..∞	<i>phone</i>	<b>Phone Number</b>	An international phone number. <i>datatype: ElectronicAddressTechType</i>

*ElectronicAddressTech* *extends* *ElectronicAddress*. Base information is complemented by:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0..1	<i>tech</i>	<b>Technical Variant</b>	A qualifier which specifies the technical variant associated with the electronic address. <i>datatype: CURIE</i>

### 3.2.2.3 Usage Notes

- **ContactInfo:** A special value of **role** may indicate that this set of information is not used to make contacts but e.g. is the registered address of a company.



## 4 Any Item – The model shared by all Items

### 4.1 Extensions to Any Item

#### 4.1.1 Signature Component

A digital signature may be associated with the whole Item, or only parts of it. It is for example possible to sign each individual News Content Component of a News Item, using their local identifiers as a local reference.

A digital signature is a unique seal placed on data. It is very difficult to forge and assures that any change made to the signed data cannot go undetected.

The NAR supports the model and syntax defined by the W3C in [XMLDSIG], and introduced by the following: “XML Signatures provide *integrity, message authentication, and/or signer authentication* services for data of any type, whether located within the XML that includes the signature or elsewhere”.

The NAR model excluded two functionalities defined by the W3C’s XML-Signature Processing Recommendation. These are: “Signed content included within an XML Signature Construct “ and “Detached Signatures”.

Therefore this component offers the following features:

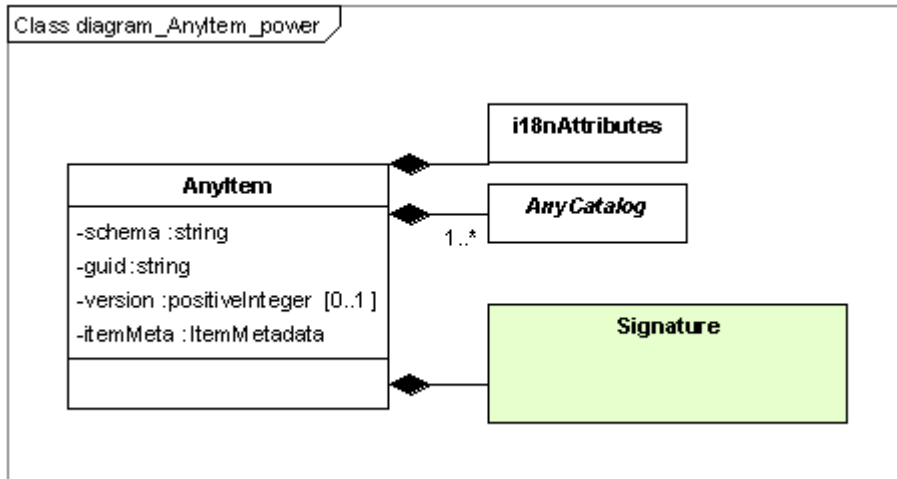
- A Signature is “enveloped” (the Signature Component is contained within the Item being signed).
- The Signature cannot be “enveloping” (it cannot sign content found within the signature itself)
- A Signature cannot be “detached” (a detached Signature Component would not be contained within the Item being signed and could be external to the containing document).
- A Signature shall sign the Item containing the Signature Component or child Components of the Item containing the Signature.
- A Signature shall not be related to Items and Components external to the enclosing document (via references).

#### 4.1.2 GRDDL extension

A mapping from Item metadata to RDF/XML can be obtained by applying a specific transform to the Item. The path to this transform may be indicated as a GRDDL reference, included at the root of the Item.

#### 4.1.3 Diagrams and definitions

*AnyItem* is modelled after:



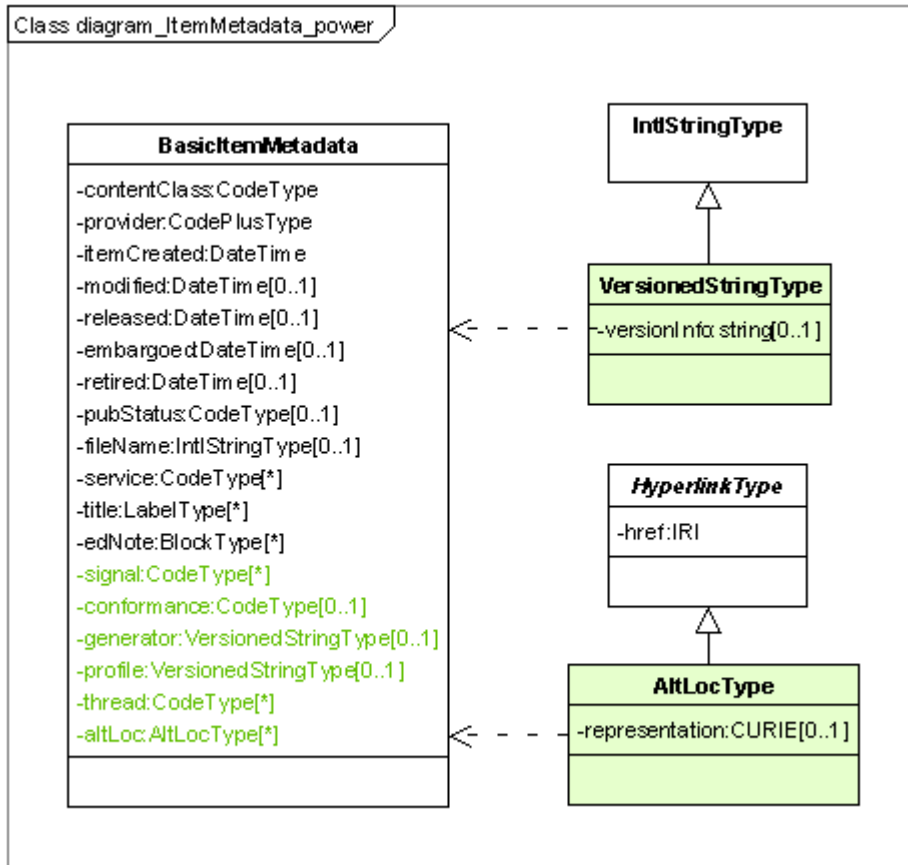
## 4.2 Extensions to Item Metadata

The **Basic Item Metadata Group** is extended by the explicit indication of the conformance level, the name of the software tool used to generate the Item, the name of the structural template (aka profile) used for the generation of the Item, flags indicating that the content is of particular interest, an indication that this Item is an instance of a specified recurring report (also known as a fixture). The constraints of time and space as well as the demands of specific applications and delivery environments make it necessary to support different physical representations of the same Item. Also added are the locations from where one can pull a backup of this instance, possibly with a different physical representation.

The **Rights Metadata Group** is extended by properties of a standard Rights Expression Language. The standard is still to be chosen at the time of writing.

### 4.2.1 Diagrams and definitions

*BasicItemMetadata* is modelled after:



#### 4.2.1.1 Basic Item Metadata

BasicItemMetadata is extended by the following properties:

card.	name	title	definition
0..∞	signal	<b>Editorial signal</b>	An indication that the content is of particular interest. <i>datatype: CodeType</i>
0..1	conformance	<b>Conformance</b>	The conformance level with which the Item is conformant. <i>datatype: CodeType</i>
0..1	generator	<b>Generator Tool</b>	The name of the software tool used to generate the Item. <i>datatype: VersionedStringType</i>
0..1	profile	<b>Profile</b>	The name of the structural template (aka profile) used for the generation of the Item. <i>datatype: VersionedStringType</i>
0..∞	thread	<b>Thread</b>	An indication that this Item is an instance of the specified recurring report (also known as a fixture). <i>datatype: CodeType</i>
0..∞	altLoc	<b>Alternative Location</b>	An IRI which, when dereferenced, provides an alternative representation of the Item. <i>datatype: AltLocType</i>



*VersionedStringType* *extends* *IntlStringType*. Base information is complemented by:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0..1	<i>versionInfo</i>	<b>Version Information</b>	The version of a processing resource. <i>datatype: String</i>

*AltLocType* *extends* *IRI*. Base information is complemented by:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0..1	<i>representation</i>	<b>Representation</b>	A qualifier which specifies the way the target Item is represented at this location. <i>datatype: CURIE</i>

## 4.3 Item Links

### 4.3.1 Validity period

Additional properties supported by a Link are the date (and, optionally, the time) *before* which the link is not valid, and the date (and, optionally, the time) *after* which the link is not valid.

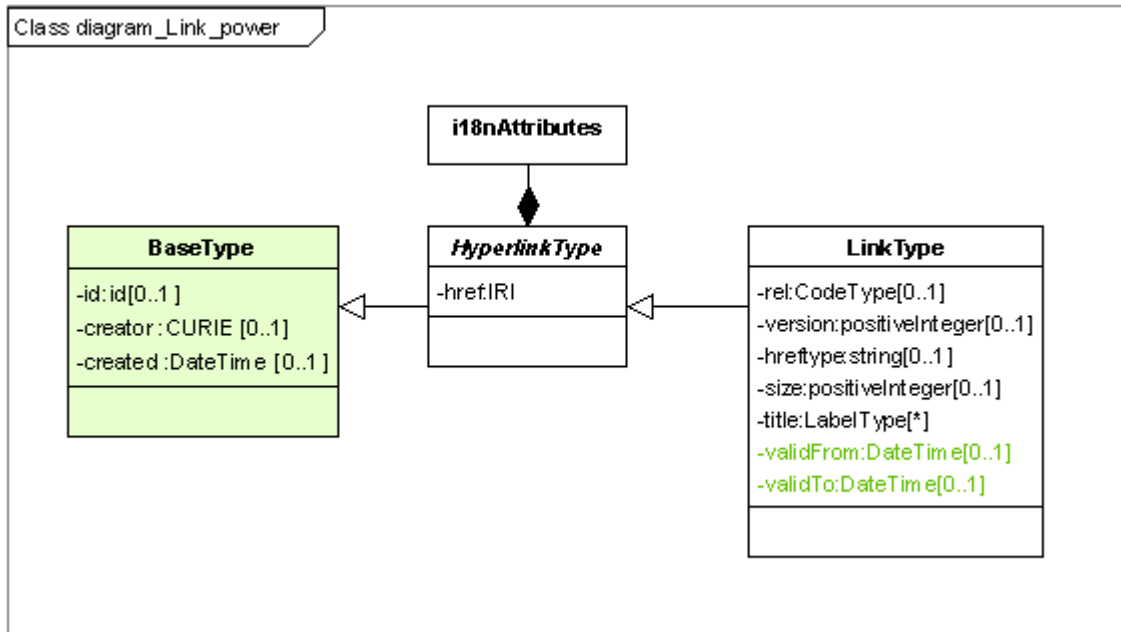
### 4.3.2 Properties of the target resource

Supplemental metadata extracted from the target resource may be added to the linking information. Such feature is especially useful if the target on the link is an Item.

Such information is not constrained by the model. It may be part of the target Item Metadata (e.g. Publish Status, Alternative Location ...), Content Metadata ( e.g. Intended Audience, Subject, Genre ...) or Characteristics of the content (e.g. Size, Content Type, Format, or specific characteristics like the Height and Width of a picture). Different sets of characteristics may be provided, corresponding to specialized content components.

### 4.3.3 Diagrams and definitions

*LinkType* is modelled after:



#### 4.3.3.1 Hyperlink Type

*HyperlinkType* extends *BaseType* and additionally supports *i18nAttributes*. No other extension from the CCL is defined.

#### 4.3.3.2 Link Type

*LinkType* extends *HyperlinkType*. PCL extensions are:

card.	name	title	definition
0..1	<i>validFrom</i>	<b>Valid From</b>	The date <i>before</i> which the link is not valid. <i>datatype: DateTime</i>
0..1	<i>validTo</i>	<b>Valid To</b>	The date <i>after</i> which the link is not valid. <i>datatype: DateTime</i>
-	-	<b>Extension Point</b>	Any set of hints, ie properties extracted from the target resource.

#### 4.3.3.3 Usage Notes

- **Extension Point:** a particular hint is a title, already defined at the CCL as a short human-readable name representing the link and displayed to the users.

### 4.4 Extensions to Content Metadata

#### 4.4.1 Extensions to the Administrative Metadata Group

The **Administrative Metadata Group** is extended by the support of a *role* qualifier, which refines the semantics of the property, on *infoSource*, *creator* and *contributor*.





The audience is expressed as a set of "positive" values and a set of "negative" values. The logic is to make the content available to the audience identified by the positive values, but keep this content away from the audience identified by the negative values.

Also added is a set of alternative identifiers (*altId*) for the content, for the case where such an identifier was set before the content was wrapped and identified by an Item. A *type* qualifier may specify the context within which the alternative identifier has been allocated. For example the name of a system or of a URI scheme.

#### 4.4.2 Assertions

Assertions provide information about a concept identified by a {scheme, code} pair. The information is given as a set of properties relative to the concept. Such a feature is particularly useful when a concept used as the value of a metadata property, like the subject of news content, and supplemental information about the concept is perceived useful for the recipient.

An example is the creator of the content of an Item: in some situations a provider decides to make available contact information associated with the creator party (person or organisation). Such contact information is not handled as part of the creator property, but can be expressed as content of an assertion.

Another example is an organisation declared as the subject of a News Item, for which a provider decides to expose the business sector the company operates in.

Note that this information is given as hints about the concept, and is only up to date at the time of last modification of the Item.

The Assertion component supports Item Titles and a Concept Definition component, or a component defined as an extension of the Concept Definition component as defined in section 3.

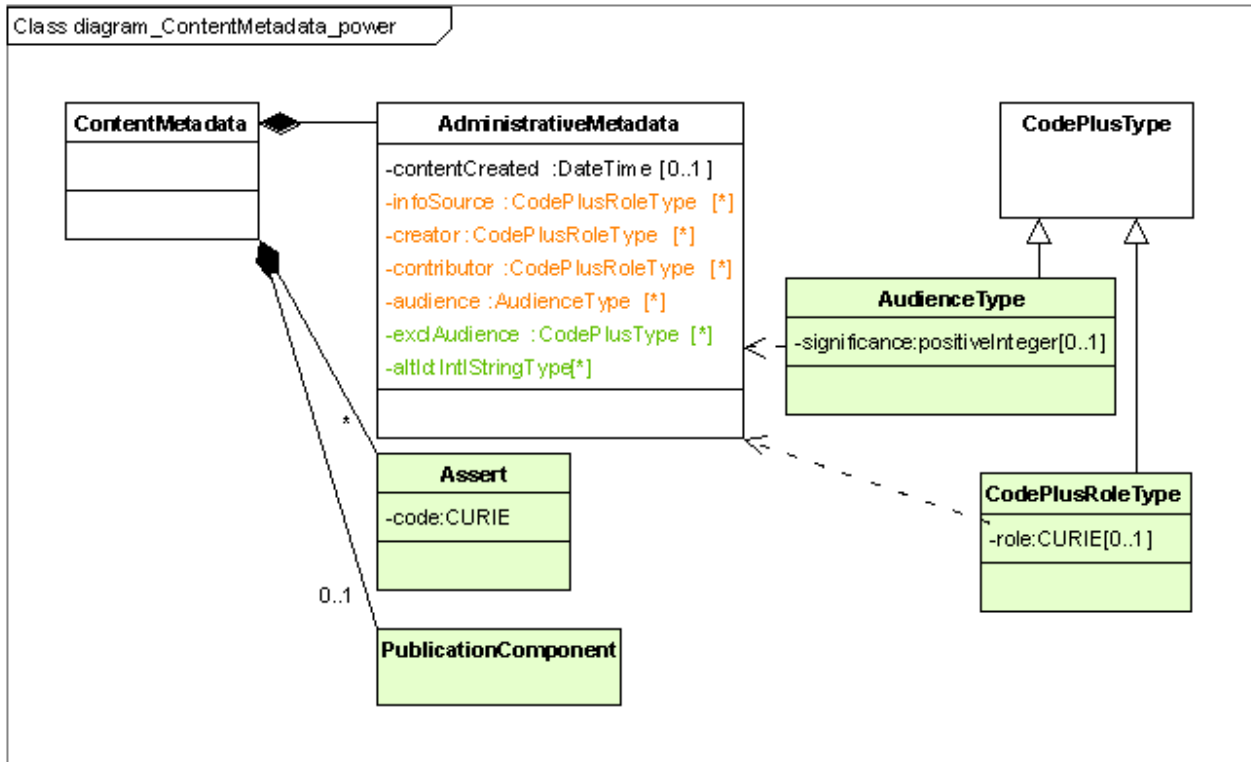
#### 4.4.3 Publication Component

The Publication Component is a set of properties associated with the publication of content:

*This component is still to be defined.*

#### 4.4.4 Diagrams and definitions

*ContentMetadata* is modelled after:



#### 4.4.4.1 Content Metadata

ContentMetadata is extended by:

card.	name	title	definition
0.. ∞	assert	<b>Assertion</b>	An assertion about a concept. datatype: AssertType, see below
0..1	-	<b>Publication</b>	A set of properties associated with the publication of the content. datatype: PublicationComponent, tbd

#### 4.4.4.2 Administrative Metadata

AdministrativeMetadata is extended by:

card.	name	title	definition
0.. ∞	infoSource	<b>Source of Information</b>	A party (person or organisation) which originated some information used to create or enhance the content. datatype: CodePlusRoleType, see below
0.. ∞	creator	<b>Creator</b>	A party (person or organisation) which created the content, preferably the name of a person (e.g. a photographer for photos, a graphic artist for graphics, or a writer for textual news). One may specify the role the party plays in the creation of the



			content. <i>datatype: CodePlusRoleType</i>
0.. ∞	<i>contributor</i>	<b>Contributor</b>	A party (person or organisation) which modified or enhanced the content, preferably the name of a person. One may specify the role the party plays in the creation of the content (e.g. a caption writer for photos). <i>datatype: CodePlusRoleType</i>
0.. ∞	<i>audience</i>	<b>Audience</b>	An intended audience for the content. <i>datatype: AudienceType, see below</i>
0.. ∞	<i>exclAudience</i>	<b>Excluded Audience</b>	An excluded audience for the content. <i>datatype: CodePlusType</i>
0.. ∞	<i>altId</i>	<b>Alternative Identifier</b>	Alternative Identifier of the content, before it was expressed as an Item. <i>datatype: IntlStringType</i>

*CodePlusRoleType* *extends* *CodePlusType*. Base information is complemented by:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0..1	<i>role</i>	<b>Role</b>	A refinement of the semantics of the property. <i>datatype: CURIE</i>

#### 4.4.4.3 Audience Type

*AudienceType* *extends* *CodePlusType*. Base information is complemented by:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0.. 1	<i>significance</i>	<b>Significance</b>	A qualifier which indicates the expected significance of the content for this specific audience. <i>datatype: positive Integer, range 1 to 100</i>

#### 4.4.4.4 Assert Type

*AssertType* is defined as:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
1	<i>code</i>	<b>Code</b>	A concept identifier. <i>datatype: CURIE</i>
-	-	<b>Extension Point</b>	Any property extracted from the concept definition.



## 5 News Item

### 5.1 Extensions to News Content Metadata

The **Descriptive Metadata Group** is extended by the support of a *role* qualifier, which refines the context of use of the *language* property. It may take values like *voice over* in a video clip.

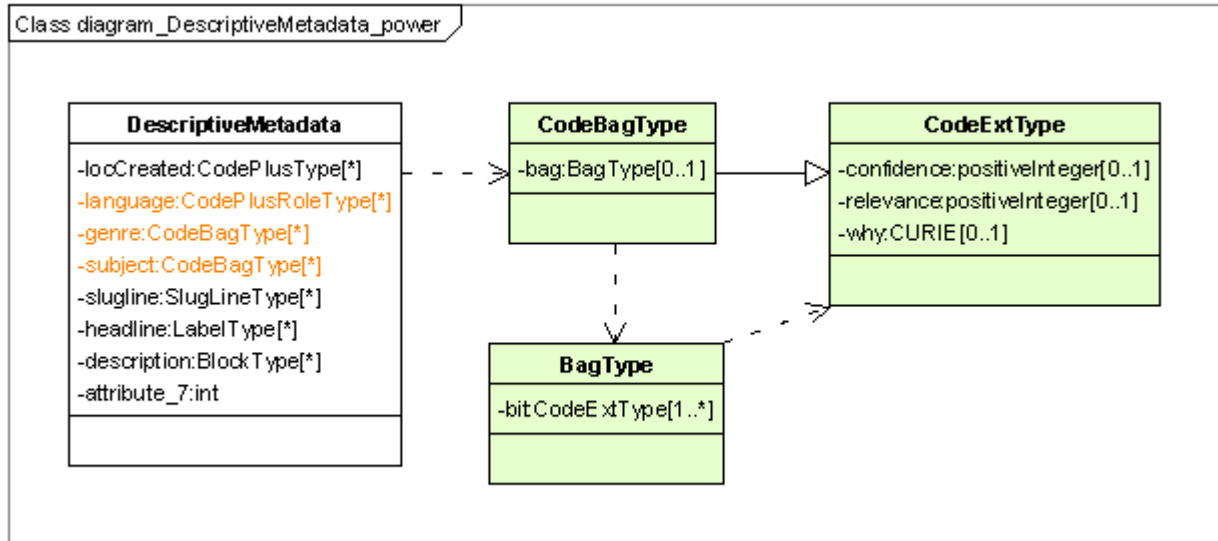
Subject and Genre support composite values. As an alternative to the code value, the *bag* property is used to express a new concept, composed from multiple existing concepts. The description of each existing concept is placed in a *bit* child property of the *bag*. Examples of possible bags are:

- Women’s 100m Swimming Final {Women + Swimming + 100m + Final}
- Positive pre-announcement by Citigroup {Citigroup + Pre-announcement + Positive}
- Microsoft’s share price has moved up {Microsoft + Share price + Up}
- the Clintons {Bill Clinton + Hillary Clinton}

Specific rights may be associated with each individual content component. For that purpose, the **Core Rights Metadata Group** - supported in the Item Metadata component - may have a section dedicated to a specific News Content Component. The mechanism is similar to the digital signature mechanism when applied to sub-parts of the Item.

### 5.2 Diagrams and definitions

*DescriptiveMetadata* is modelled after:



#### 5.2.1.1 Descriptive Metadata

*DescriptiveMetadata* is extended by:

card.	name	title	definition
0..∞	language	Language	A language used along the content. datatype: CodePlusRoleType



0.. ∞	<i>genre</i>	<b>Genre</b>	The nature, intellectual or journalistic characteristics of the content. <i>datatype: CodeBagType</i>
0.. ∞	<i>subject</i>	<b>Subject</b>	What the content is about. <i>datatype: CodeBagType</i>

### 5.2.1.2 Code Bag Type

*CodeBagType* *extends* *CodeExtType*. Base information is complemented by:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
0.. 1	<i>bag</i>	<b>Bag</b>	A group of existing concepts which express a new concept. <i>datatype: BagType</i>

### 5.2.1.3 Bag Type

*BagType* *extends* *BaseType* and additionally supports *i18nAttributes* plus:

<i>card.</i>	<i>name</i>	<i>title</i>	<i>definition</i>
1.. ∞	<i>bit</i>	<b>Bag item</b>	An individual concept, part of a composite concept expressed in a bag. <i>datatype: CodeExtType</i>



## 6 References

### 6.1 IPTC documents

<b>NML-BR</b>	IPTC NewsML 2 Business Requirements <a href="http://newsml.org/dl.php?fn=NewsML_2.0-spec-BusinessRequirements_1.pdf">http://newsml.org/dl.php?fn=NewsML_2.0-spec-BusinessRequirements_1.pdf</a>
<b>EVT-BR</b>	IPTC EventsML Business Requirements <a href="http://www.iptc.org/download/dliptc.php?fn=EventsML/1.0-draft/specification/EventsML_1.0_spec_BusinessRequirements_4.pdf">http://www.iptc.org/download/dliptc.php?fn=EventsML/1.0-draft/specification/EventsML_1.0_spec_BusinessRequirements_4.pdf</a>
<b>NMDF-BR</b>	IPTC News Metadata Framework Business Requirements <a href="http://www.iptc.org/NAR/">http://www.iptc.org/NAR/</a>
<b>NAR-TS</b>	IPTC NewsML 2 Architecture Technical Specification <a href="http://www.iptc.org/NAR/">http://www.iptc.org/NAR/</a>
<b>NAR-GL</b>	IPTC NewsML 2 Architecture Glossary <a href="http://www.iptc.org/NAR/">http://www.iptc.org/NAR/</a>
<b>NAR-IG</b>	Implementation Guidelines for the IPTC Standards Architecture using W3C XML Schema NAR_1.0-doc-ArchitectureImplementationGuidelines_2, <i>not public</i>
<b>NAR-CM</b>	IPTC NewsML 2 Core Model <a href="http://www.iptc.org/NAR/">http://www.iptc.org/NAR/</a>

### 6.2 Other references

<b>CSS</b>	Cascading Style Sheets, level 2 revision 1 <a href="http://www.w3.org/TR/CSS21">http://www.w3.org/TR/CSS21</a>
<b>CURIE</b>	Internal draft produced by the W3C RDF-in-HTML task force <a href="http://www.w3.org/2001/sw/BestPractices/HTML/2005-10-27-CURIE">http://www.w3.org/2001/sw/BestPractices/HTML/2005-10-27-CURIE</a>
<b>GRDDL</b>	Gleaning Resource Descriptions from Dialects of Languages (GRDDL) <a href="http://www.w3.org/2004/01/rdxh/spec">http://www.w3.org/2004/01/rdxh/spec</a>
<b>N3</b>	Notation 3 <a href="http://www.w3.org/DesignIssues/Notation3.html">http://www.w3.org/DesignIssues/Notation3.html</a>
<b>RDF</b>	Resource Description Framework (RDF) <a href="http://www.w3.org/RDF/">http://www.w3.org/RDF/</a>
<b>Wikipedia</b>	“the free encyclopedia that anyone can edit”. <a href="http://en.wikipedia.org/wiki">http://en.wikipedia.org/wiki</a>



## 7 Change Log

Draft 2 to Draft 4: Several properties previously defined with a CodePlusType value now defined with a CURIE value. CodeExtType and CodeBagType created. UML graphs updated.

==== END of document ====